



GUM TIPS

WINTER 2023



It takes a village
Koala home-care

Designing and building
koala yards for WKBP

KCA National
Conference
May 2023

KOALA HOME CARE – IT TAKES A VILLAGE

Dr. Tonia Woodberry

Rescuing injured koalas is so important to the survival of this wonderful species but a more complex aspect of the rescue is saving little koala joeys who have survived their mothers or have been survivors with them. This is where volunteer Koala Conservation Australia (KCA) carers are essential to the success of this mission. This is one carer's story.

I am in the middle of my first experience as a koala home carer and the koala that is training me is Shelly Beach Road Trish.

Quite a few months ago I expressed my long-held desire to participate in home care to assist the clinical team at the Port Macquarie Koala Hospital. I put up my hand to help because our beloved and experienced home carer Barb, the "koala grandma", was retiring and I knew another carer was needed.

I have volunteered in koala care over the past few years and have learnt much about koalas and I am always wanting to learn more to ensure their

conservation. I was told that home care is not easy and I and my family needed to understand that the hardest part is dealing with loss and not becoming attached. My family talked with the vet, then we had a meeting and decided that we could do this.

Two months ago, a night when rough weather tested Port Macquarie, as I sat with my camping lights on because the power was out, I received a call from the koala hospital vet asking me if I was ready to start home care? It was 8pm and a female joey had been rescued. She was at the hospital and would spend the night there and if all went well (if she survived the

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Cover image: W Ashwood - Allunga Ave. Daisy.

night) due to her size and age she would need home care. I thought fast and said 'yes'.

If I am honest, I wasn't sure I was ready, but I said yes because I was needed and now was my time to act. All other carers who had joeys in their homes were at capacity. This koala needed me, so I asked our lovely vet, who as always was calm and reassuring, what I needed to do now to get ready before the morning. My spare room, a study, needed everything up off the floor and we were to be at the hospital in the morning.

Little koala, Trish, was in a washing basket and she was looking like all koala joeys, simply adorable. She came home in the basket with formula, syringes for feeding, towels to line the basket and leaf to eat.

They say it takes a village to raise a child, well here at KCA we are lucky to have a village that rehabilitates koalas and I was learning on a daily basis how awesome our koala village is.

Trish was able to be comfortable in my home because she received twice daily visits over the weekend by the vet who gave injections to ease her pain. Each day I visited the hospital and collected fresh eucalyptus leaves (at least two species and often another species like melaleuca) for her to eat, which had been collected daily by leaf collectors and prepared by the koala care team for me to pick-up.

The recent storm had meant that leaf was in abundance as, sadly, our town had quite a few trees blown down. Thankfully locals had given this fresh eucalyptus to the KCA Koala Hospital and Trish was loving eating Nicholii (a eucalyptus fondly called 'lollies' for koalas because of the sweet leaf).

Every day, I provided clean towels, allowing Trish to stay in a warm and dry basket. The wonderful team at the Koala Hospital took care of the washing. They also made a small self-standing climbing structure (called a gunyah) which Trish climbed onto the moment I brought it home.



Photo: Carole Grant – Koala joey Shelly Beach Rd. Trish

Regularly, I wondered how someone would manage to do all this on their own. I don't think I could.

Setting up a room for a koala, which climbs, takes a bit of consideration and more preparation than needed for a toddler. Trish knows where the door is in the room and she can move quickly to access it. Even with one arm out of action (due to a break) she has managed to climb and access places that I thought she wouldn't be able to.

We have locked windows in place with a small gap (so no escape there) put a child barrier on the door and corflute along the gate because at 3am I woke to find a koala head poking through it.

Trish observes all that happens in her environment and reacts to things that I don't sense.

She also taught me how to deliver formula. It was painstakingly slow at first because Trish only was accepting single drops from a syringe, then, within days began accepting regular feeds of 40 mL, like a star.

I worry, like any carer and I have concerns that I am doing all that I can.

I keep a video log of my daily interactions and my teenager captures footage on an old phone, which is shared, as needed, with the hospital team for input and feedback.

Just recently, her healing progress has been slower than expected and it appears she has an infection in her hand. So again, I have daily visits from the Koala Hospital vet to administer antibiotics. I fear that with the introduction of antibiotics we may be headed into rough waters and hope with all my heart that Trish is not going to teach my family how to deal with the toughest lesson of home care, which is loss.

Antibiotics are tough on koalas as they can destroy their gut bacteria and they are only used when absolutely necessary.

So, we watch and we, the koala team, our village, do all that we can and we are proud of what we do. Just like the koala food trees that my neighbour has planted, home care is full of hope for the future.

Photo: Carole Grant – Homecare gunyah and enclosure.



Photo: Carole Grant – Joey Trish settling into feeding and becoming accustomed to her new gunyah.

Trish has been a good teacher. I am very lucky that she came to our home at 1.5kg meaning that she was weaned from mum and eating leaf. She has shown me how very clever and capable koalas are, even as joeys. Anyone who thinks koalas are sleepy or lethargic just hasn't spent enough time observing them.



GIVEAWAY HELPS REGENERATE BUSHLAND

Scott Castle

Long-established koala food trees are being removed by growing urban development. KCA is helping to increase tree planting via the Koala Food Tree Giveaway program.

Increasing koala habitat has long been an important goal of Koala Conservation Australia (KCA). Koalas need trees in a healthy, diverse and well-connected habitat. Across our region, koala habitat has been fragmented to the point where there is evidence that some koalas are living entirely in the urban landscape. These koalas endure long walks around our busy streets between trees; and one by one even these long-established trees are being removed. Removal of urban trees, means our urban koalas are staying on the ground longer, and we see a continuance of road strikes and dog attacks. During breeding season especially, it's often the healthier koalas travelling longer distances, which are most at risk. Many years

ago, we saw a need to encourage our local residents to repopulate their front yards with koala food trees.

KCA has been offering koala food trees to the public for over a decade. However, our annual koala food tree giveaway began in 2017 when we approached Forestry Corporation of NSW to procure eucalyptus trees to encourage landowners to increase the koala habitat in our local government areas. To our astonishment and delight, Forestry offered to donate 10,000 trees for the initiative. We were unsure whether we would be able to give away so many trees, however after only two weeks the trees were gone. The following year, and each subsequent year, Forestry have gladly donated 25,000 trees.

The seedling trees given away each year, otherwise referred to as tube stock, comprise four eucalypt species, tallowwood, *Eucalyptus microcorys*; grey gum, *E. propinqua*; forest red gum, *E. tereticornis*; and swamp mahogany, *E. robusta*.

These are all popular koala food tree species that occur along the east coast of Australia.



Photo: W Ashwood - Free tube stock available from KCA during the 2023 Tree Giveaway

When koala habitat is cleared, koalas are forced to move into other koalas' home ranges. This compression of a population increases koala interactions, which for a predominantly solitary species, creates conflict, less rest and more activity. Koala populations have a hierarchical structure, in which the less dominant koalas may need to work for longer to browse for food and rest trees. Without proper nutrition, these stressors increase the likelihood of disease and increases their susceptibility to predation. Koalas require over 18 hours of rest and sleep each day to reduce their metabolic rate, and conserve what little they receive from their low energy diet.

The Black Summer bushfires that devastated the east coast of Australia in 2019 and 2020 created unprecedented habitat loss.

The massive bushfires burned a staggering 18.6 million hectares; and in NSW alone, by the end of January 2020, the fires had burnt 5.3 million hectares (6.7% of the State). This included 2.7 million hectares in national parks (37% of the state's national park estate). Therefore, it was a priority for Koala Conservation Australia (KCA), to help regenerate burnt bushland and plant trees in unforested areas.

The hundreds of landowners who have collectively planted the thousands of koala food trees in the Mid-North Coast, have generously donated their planting efforts to support future generations of koalas in the wild. Many of these community members have also offered to further support KCA by allowing our browse collection team to harvest the leaves when their trees mature, to feed the koalas in our care.

We have also donated thousands of trees to other koala rehabilitation organisations and zoos, such as Port Stephens Koalas, Billabong Zoo and Walkabout Wildlife Sanctuary. The plantations they will use to feed their animals, will alleviate the strain on the natural habitat from which they currently collect browse.

KCA will continue to engage the wider community in planting koala food trees, and retaining existing habitat for future generations of koalas...because their future is in our hands.

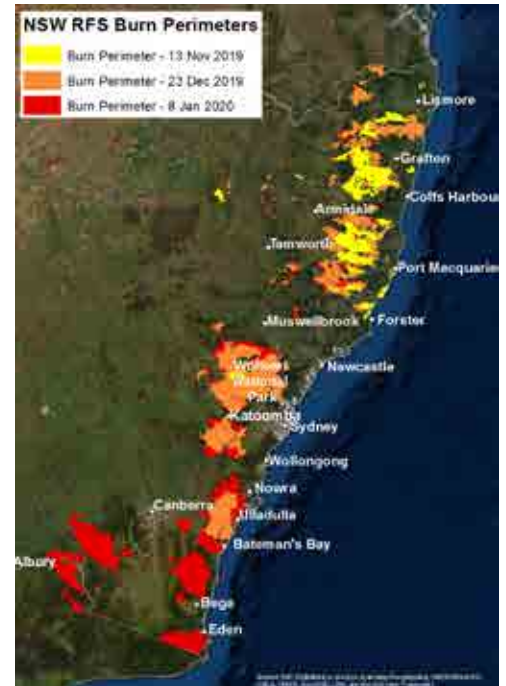


Photo: W Ashwood - Landowner collects tubes stock to plant on his property.

EXPERIMENT TO REUNITE A JOEY WITH HER INJURED MUM SUCCEEDS

Dr Astrid Van Aggelen

Koalas are not very social animals but there is a strong bond between female koalas and their offspring which enables the young to thrive and learn to survive in the wild. However, often, if separated by a violent event, the mother will no longer accept the little joey and its future becomes grim.

Inverell Dee is a 10-year-old female koala who was transferred to our clinic at Koala Conservation Australia's Koala Hospital, Port Macquarie, from WIRES in February, after a motor vehicle injured her.

She sustained a serious head injury, and when she was transported to us she was unconscious and was exhibiting violent seizures. She also had a 'back-young', a little female joey we named Inverell Penny, who weighed 800g, and luckily, did not suffer from any injury.

As Dee needed intensive care, she was unable to look after her joey and could actually harm her during her seizures, so Penny was immediately placed in the hands of an experienced home-carer to take over her mum's role and provide her with the attention that she needed.

After a week of very intensive care at the clinic, Dee regained normal consciousness, did not experience any more seizures and was able to start feeding by herself. For weeks though, when on the ground, she could not walk straight and was walking in large circles instead, always towards the left, which is a sign of neurological damage.

She improved after intensive treatment and was not walking in circles anymore, but to date, still has a

mildly wider stance than normal, which could be an indication that her balance has not fully returned yet.

As for little Penny, she was doing very well in care, and consistently put on over 10% body weight weekly.

No-one but mummy koala can really teach baby koala how to grow up, and, as Dee's health was back on track, we decided to re-unite the pair. To our relief, it was successful and little Penny knew to climb on Dee's back immediately. Dee appeared to completely accept her offspring, even though they had been separated for 7 weeks.



Photo: W Ashwood – Inverell Dee, the mother Koala who suffered injuries after being hit by a car.



Photo: W Ashwood - Joey, Inverell Penny in home care after her mother was hit by a car.



W Ashwood - Joey Penny cuddles into her mother Inverell Dee after being reunited after Dee was well enough.

The clinical decision to try reuniting mother and joey proved to be a wonderful success and worth the risk after assessing mother koala, Dee, would not harm her little joey.

They now spend their time together in the experienced hands of their carer.

They both will need individual attention and feeding formula: milk replacement for Penny, who has not reached weaning age yet, and nutritional

supplements for Dee, who lost weight after her accident and needs to regain that weight.

When old enough, Penny will be released back in Inverell. We don't know yet if Dee will be releasable, as we are not sure yet that she has fully recovered her capacity to fend for herself in the wild. The plan is to keep the pair together, and when the time has come for Penny to be weaned and separated from mum, they will both be put in pre-release yards so that they can practice their climbing skills, which will allow us to judge whether Dee has sufficiently recovered to be released, or if she will stay with us at KCA's Port Macquarie Koala Hospital.

ALLUNGA AVE. DAISY

Our cover photo this quarter is little joey, Allunga Ave Daisy. She was found on 06/12/2022. She only weighed 1.5 kgs. Our rescuers went to look for her when her mother was found drowned in a pool. Daisy went into home care with one of our experienced carers and progressed well. Within the space of 10 weeks, she put on 1.1kgs, and when she reached 2.6kg on 10/02/2023, she did not return to home care and, instead, was put in our joey pre-release yard with another joey, Granite St Peter.

Peter has since been released but Daisy is still a little too small and is spending more time becoming capable of surviving before being released.



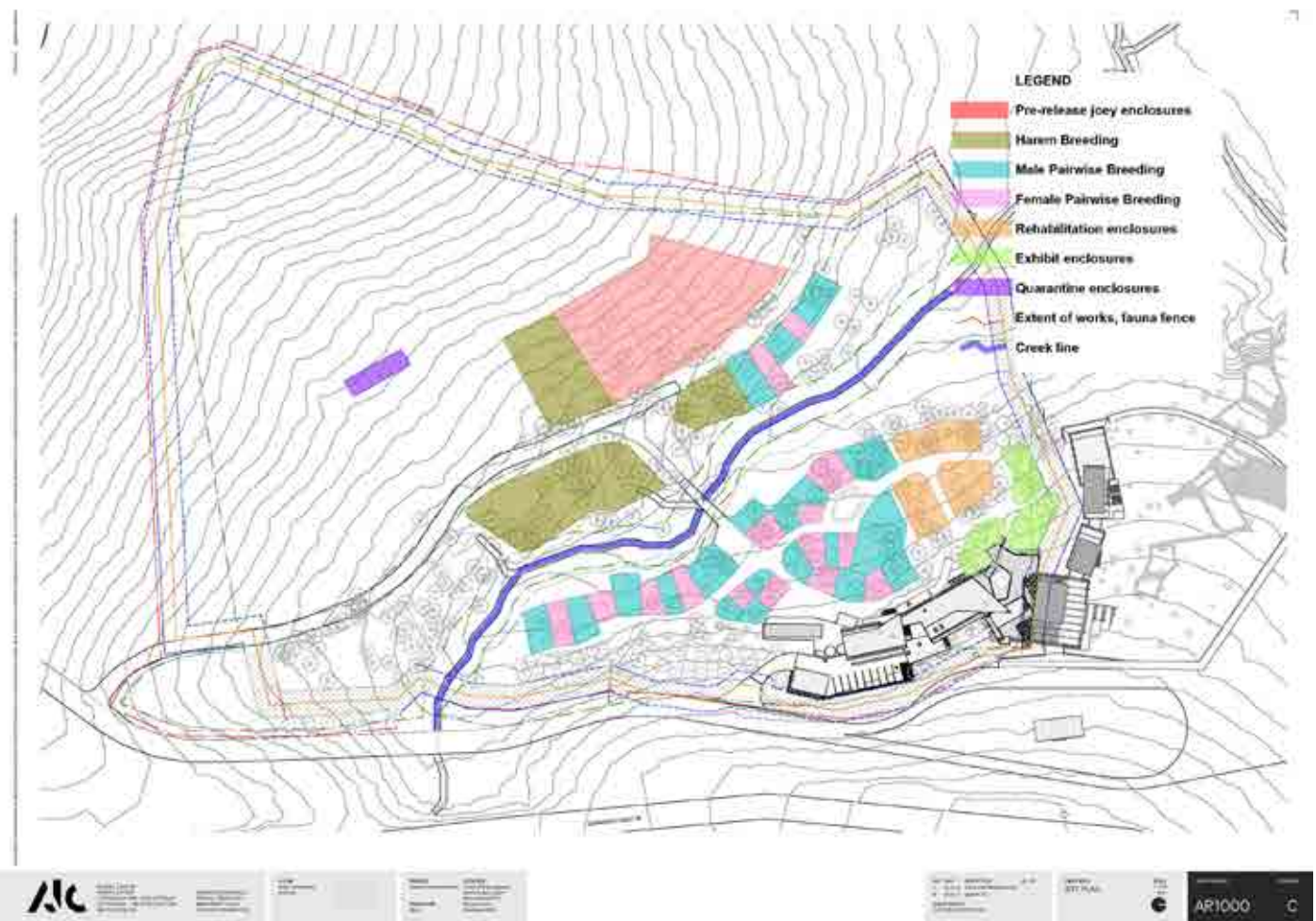
Allunga Ave. Daisy

DESIGNING AND BUILDING KOALA YARDS FOR THE WILD KOALA BREEDING PROGRAM (WKBP)

Matt Whatman & Peter Berecny

The koala yards at the new Wild Koala Breeding Facility located at Guulabaa, Place of Koala, in the Cowarra State Forest, are designed to replicate nature and to facilitate koalas in the breeding program.

To that end, work has been tediously undertaken to create breeding yards that house male and female koalas as well as joey pre-release and rehabilitation yards where the sick and injured koalas from Koala Conservation Australia's (KCA) Port Macquarie Koala Hospital will spend some time climbing and strength-training before being released again into the wild. And finally, exhibition yards for those rescued koalas who have been injured or are impaired by illness to be able to survive on their own.



In partnership with Forestry Corporation NSW, KCA has obtained a Forest Permit to develop this wild koala breeding facility within Guulabaa - Place of Koala, nestled in the Cowarra State Forest. The forest has historic forestry activity, with a diverse ecology and mature trees.

KCA wanted to ensure this forest was protected as much as possible during our development and took many steps to achieve this.

Initial and ongoing planning of the koala yards is being carried out by KCA's Project Manager, Matt Whatman, KCA's Conservation Manager Scott Castle and KCA's Project Arborist, Peter Berecny from 'Port Tree Fella'. Initial tree surveys and tagging had to be achieved by crawling through lantana and old logs and dense undergrowth and documenting tree attributes, retention values, and dimensions.

Every tree larger than 200mm girth was surveyed, and all data on species, height and health was recorded. Whilst KCA was provided an environmental approval that allowed clearing the whole site, obtaining this survey enabled KCA to prioritise the trees first in our planning.

The riparian zone, on either side of a gully that traversed the site, was a sensitive environment with much diversity. Regulations allow clearing up to 10m from the top of banks, however KCA decided, instead, to let the forest be our 'regulator'. This means where there was a distinct change from dry sclerophyll forest to wet sclerophyll forests with grassy sub-

formation to the riparian zone (referred to as, Northern Foothills Blackbutt Grassy Forest), governed the extent of our works. We therefore have a wide riparian zone maintained on the site.

The KCA team spent many days walking around the forest and designing koala fencelines, again, using the forest as the guide to minimise removal of trees. Koalas are naturally good jumpers, so they needed to ensure all structures and trees within enclosures are 3 metres from the fenceline. Koalas are, of course, even more agile up in trees, being able to launch between limbs which are up to 6 metres high. So, it was a long process of finding natural lines through the trees, considering trunks at ground level as well as the interconnected canopies.

Also, during this time, ongoing aerial works and more sensitive pruning was undertaken with a five man crew, from Port Tree Fella, climbing trees up to 60 metres high and pruning where necessary to provide clearance in between fence lines and connected canopies whilst retaining most of the trees for Koala use. All materials have been recycled including large volumes of mulch and logs to be reused onsite. We have been collecting suitable material for koala gunyahs (forked tree limbs) and building climbing-supports where necessary within the yards.

Continuing works have also involved setting out tree protection zones to protect rootzones and regularly advise the construction teams so that the trees can be safely retained. Documentation of all retained trees (around 600) has been completed and ongoing maintenance programs will be informed and documented through the Tree-Plotter Software.



Photo: W. Ashwood – Tree canopy after aerial works by 'Port Tree Fella'

Currently, works involve replanting areas and creating a plantation for future wild koala breeding yards. Endemic species are being used from the local Landcare group. Their manager, Estelle Gough, has been instrumental in identifying and supplying the best endemic species and Forestry has provided large volumes of Primary Koala Browse species trees.

These conservation initiatives made developing this site much more complex, time consuming and costly. However, developing in this manner has resulted in maximising the retention of trees. This has created a special and natural place for the koalas at this world's first wild breeding facility.

KCA needs to ensure that the breeding koalas remain wild, and don't become accustomed to humans. As such there will be lots of planting to ensure dense

screening of these koalas from the public, as well as further planting within the koala enclosures.



Photo: W. Ashwood – newly erected fence around the periphery of the project site to prevent wildlife entering or koalas leaving.

PETER BERECRY - PROJECT ARBORIST

Arborist, Peter Berecry, with his Port Tree Fella business, is heavily involved, as Project Arborist, with the planning and development of the KCA's Wild Koala Breeding Project (WKBP) at the Cowarra State Forest site.

He has been a committed volunteer with KCA for nearly 20 years, participating in koala rescues and leaf collection and advising on koala tree care and maintenance, types of eucalypts and location. His work with the new WKBP commenced with its initial vision inspired by the 2019 bushfires that devastated the koala population in the Port Macquarie area and surrounding regions. A crowd funding appeal by KCA for public donations to help fund the enormous work they were doing to rescue koalas produced an extraordinary response and the Wild Koala Breeding Project became a reality.

Peter's company, Port Tree Fella, has been undertaking tree removal and pruning works over the last 12 months, initially setting out tree protection zones and contracting larger machinery to establish the building site and create the feral fence lines.

Peter, like many others contributing, is extremely committed to the project.

In his words..." I am really passionate about the project and concerned about what is happening to our Koala population. The official recognition that



Photo: W. Ashwood – Peter Berecry, KCA Project Arborist.

Koalas are now a threatened species is alarming. I have always been dedicated to assist wherever possible over the years but since the fires of 2019 it has become far more important to me. It is what I do now. It is who I am. The devastation was matched with an enormous amount of focus and support from around the world. The enormous commitment of KCA volunteers and many people from overseas who came to help has created a bond that will never be broken. We are fortunate that through all this dedication and support, the Wild Koala Breeding Facility at Cowarra can really help our koala population.

I feel that the project is going to be a huge success. Thousands of people have contributed to the idea and now it's becoming reality. It is very exciting to be a part of this project and be part of the KCA team."

SOURCING FOUNDER KOALAS FOR THE WILD KOALA BREEDING PROGRAM

Cheyne Flanagan

Koala Conservation Australia's Wild Koala Breeding Program (WKBP) is not only a world first, but it is such an important project that it will set the standard for other organisations who may wish to do conservation breeding of wild koalas well into the future.

Every single component of this program will be undertaken with great care. It will follow rigorous scientific principles and will meet all the permitting and animal welfare protocols set in place by the NSW Government.

The plan will be to obtain founder breeding koalas from two sources. We aim to have approximately 50% of the breeding animals coming from within the hospital system and 50% collected from the wild.

Koalas coming from the KCA Koala Hospital

Koalas coming in "via the hospital system" will be koalas aged between 2 -12 years of age who are clinically clean and healthy but who have been brought in from potentially high-risk sites such as heavy traffic locations with minimal habitat nearby, or young dispersing koalas who are struggling to find unoccupied urban or peri urban vegetation to live in. These koalas will undergo rigorous health and behavioural screening plus biological samples will be collected to determine genetic fitness and ultimate suitability.



Photo: Carole Grant – Koalas at KCA Port Macquarie Hospital

Koalas collected from wild bushland.

The other 50% will come from populations of wild koalas located in forested environments up and down the mid coast of NSW. Over the last few years, Koala Conservation Australia, Taronga Conservation Society, the University of Sydney and the Australian Wildlife Genomics department of the Australian Museum have had multiple meetings to discuss and develop the framework of the entire project. One of the major outcomes of all these meetings has been the question, *where do we source wild koalas?*

For the first few years of this project, we will be collecting and releasing wild koalas from within the NSW National Parks estate only. This is to ensure that all released joeys will be safely protected into the future, instead of going onto private land which has the potential to be sold or developed at some point.

Genetic data will allow us to collect founder koalas from quite an expansive range rather than focusing on a small area.

The Australian Museum, through many years of collection of koala genetic data, has found there is what is called a “metapopulation” of koalas that occupy from north of Grafton to south of the Myall Lakes that have similar but also quite diverse genetics. This genetic data would operate under similar principles in other locations throughout Australia as well. This vitally important information will allow us to collect founder koalas from quite an expansive range rather than focusing on a small area.

Desk top analysis, (using ARC Gis) of koala habitats in this metapopulation locale, has allowed us to pinpoint particular National Parks that require further investigation.

“Ground truthing” is used to determine those sites that need further investigation.

Several flagged sites have been followed up with what is called “ground truthing” which is comparing the mapping data to literally standing on site. We compare tree species, look for koala activity, look at suitable terrain, assess accessibility for personnel, (some areas are so remote they are just too difficult to get to) consider threatening processes such as fire history, access to roads, evidence of dogs and connectivity to other habitats outside the National Park boundaries. This work is quite complex and time consuming. From this we have been able to lock in various sites that require further investigation and discard others that had difficult terrain, poor accessibility, high fire history and other problems.



Photo: Carole Grant – young joeys at KCA Port Macquarie Hospital



Photo: Carole Grant – koala in wild bushland

Drone surveys

This is where the drone surveys really begin to shine (see previous Autumn Gum Tips 2023 article) as this can tell us whether koalas are indeed occupying the site or not, whether they are there in high number, low in number or not in the site at all. If they are in low numbers then further work is required to determine why this is so.

If sites are offering quality habitat but have low or no occupancy and we can determine why, then, these sites are potentially flagged for future release of joeys from the breeding program to bolster or to repopulate these parks.

In sites where there is a high occupancy of koalas (and yes, they do still exist which is so encouraging) we will collect some founder koalas.

Ensuring genetic relationships are quite distant

To ensure we don't collect koalas who are likely to be closely related to each other, there will be a five-kilometre radius - a "no collect zone" around each koala collected for the program. In other words, not many koalas will be collected from each National Park chosen to ensure the genetic relationship is quite distant and to also, not interfere with the social structure and thus the population dynamics of the overall population that resides in that park.

Even though the Cowarra Wild Koala Breeding Program facility is quite large, and situated in a semi wild forested environment that has enormous trees (some are 30-40 metres high) and very large enclosures, we are very mindful that not all koalas collected and brought to the facility will be suitable.

All the collected koalas will undergo a quarantine health screening period and, will undergo a rigorous behavioral process to ensure that each koala will be suitable for this amazing journey.

In the rare event that a koala is deemed unsuitable, he or she will be returned to the National Park they came from (and will return with a bit of bling aka an eartag/microchip for identification into the future) and of course to the tree that the koala was originally captured from.

Koalas that "pass all the tests" will then be entered into this exciting, wonderful program and like all the koalas who come into our care – they will not only receive five-star service but will play a major role in this vitally important process.

The outcome? We want to see lots of healthy, viable, very wild and very tough joeys produced that can be released into identified sites and who will be monitored for 12 months post release with more follow up monitoring after that.

Repopulation of these sites will play a major role in not only reversing the decline of this iconic species but is a vital tool in koala conservation overall.

VOLUNTEERS – AN ESSENTIAL COMPONENT OF OUR SUCCESS

During its 50 years of operations, Koala Conservation Australia has relied on its hard-working volunteers to perform many tasks. The volunteers work alongside KCA staff providing essential services, all of which contribute to keeping the organisation going.

Volunteers' knowledge enrichment.

Our enthusiastic volunteers are supported by training in the areas they work in with the aim of providing positive outcomes for the precious animals in our care. For people who apply to volunteer we aim to match a person's availability, abilities, skillset, and interests and provide on the job training for all our different roles. We usually seek volunteers who can work at least one half day shift each week on a regular roster. There are many roles for volunteers including: koala care, souvenir shop, visitor guides, business support, project roles, tree plantation work, grounds maintenance and general koala hospital yard maintenance.

Koala care based on respecting wild animals

Most volunteer applicants are interested in working with koalas. People who join a koala care team can experience the basic care needed to maintain clean and safe living environments for our koalas in clinical yards and for those in the public exhibition yards, who have not been able to be released due to lifelong injuries and impairments. During training, volunteers learn to clean out debris and keep the yards clean. They learn how to safely install browse (gum leaves on long stems) – to feed koalas the eucalyptus leaf collected from koala leaf plantations.

Because at KCA we respect the fact that these rescued animals are wild by nature we do not encourage close

To enrich community experiences and knowledge we have special programs - short term placements for students undertaking studies related to animal welfare or conservation, such as veterinary students. High School students are also given the opportunity to learn about the conservation of this precious species via the Duke of Edinburgh scheme.

There is also a strong international interest in the experiences we can offer in sharing the knowledge we have acquired over our years of operation. The International Volunteer Program reaches out to all our overseas readers and those who are interested in applying for a month-long, hands-on experience with Koala Conservation Australia.

contact that may tame the koalas and make them vulnerable when released again into their natural habitat. They are not pets. We aim to give them the best care possible and rehabilitate them to be able to survive as they should, naturally, in our Australian bushland.

All volunteers have an allocated manager or coordinator who ensures they receive role specific training. We aim for best practice in our training programs and regularly review our communication and education methods for volunteers.

Volunteer Human Resources and Membership Coordinator Elizabeth Casey, manages this important aspect of our organisation. More information about our volunteer roles, and the application form, can be found on our website www.koalahospital.org.au.



Our amazing volunteers at work.



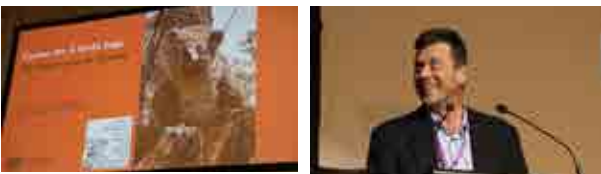
KCA CONFERENCE 2023 – A GREAT GATHERING OF KOALA EXPERTS

Maria Doherty

Koala Conservation Australia's 2023 conference presented Port Macquarie with over 50 of the top expert minds in Koala research.

The rich gathering of 270 delegates from around Australia and from overseas, provided valuable opportunities to hear the latest research in koala conservation and to network with the top academics, practitioners, and carers in this field.

The conference's keynote speaker, from the University of Sydney, Prof. Mark Krockenberger, opened the conference with his presentation, *Koalas on a Knife Edge*, highlighting the urgency of addressing the imminent extinction of koalas in Australia.



Keynote speaker address by Prof. Mark Krockenberger- 'Koalas on a Knife Edge'

Prof. Stephen Johnston suggested a new approach that may need to be utilised to stem koala extinction, the utility of a frozen koala sperm bank being researched at the University of Queensland.



Prof. Stephen Johnston, Prof. Michelle Power, Dr. Fiona McDougall

Koalas and climate change was also a prominent topic as well as presentations from Macquarie University academics, Prof. Michelle Power, and Dr. Fiona McDougall, related to the problems associated with koalas' immune system rejection of antibiotic treatment and approaches being trialled to address this.

Several vets gave clinical overviews of the issues they are facing with treatments, and how hard it is to know when a koala has been released and appears to be cured of chlamydia, whether it truly will survive or is it just a matter of time before they succumb to the disease again. We also heard how being a vet in the koala industry is difficult, as, 75% of the time you are euthanising.

Different treatments of chlamydia were discussed, with one method versus another, noting the pros and cons. We also heard of the 47% success rate of the new chlamydia vaccination, being developed by the Sunshine Coast University, led by Prof. Peter Timms. More clinical trials and government backing are needed to support the research.



Prof. Peter Timms – 'Development Towards a C.pecorum Vaccine for Koalas'

Health and gut bacteria were popular subjects of many presentations with some promising results in studies from Dr. Michaela Blyton who presented "The Koala gut microbiome and its role in Koala Health and Ecology" and Evie Dunstan, who discussed

'Gastrointestinal factors associated with Oxalate Nephrosis in South Australia'.



Dr. Michaela Blyton and Evie Dunstan

An entertaining and valuable presentation by Ass. Professor, Merran Govendir, from the University of Sydney, detailed the latest research for administering and treating koala pain with analgesics.



Associate Professor Merran Govendir

Nutrition of eucalyptus and different leaf types and the transfer of the ever-important beneficial microbes via pap and how to mimic this to help koalas digest better was fascinating - so much valuable research and essential data coming through in studies underway.

Especially poignant was the presentation by Karen Marsh from the Australian National University, whose study investigated the nutritional value of epicormic relative to mature canopy leaves for a variety of eucalypt species after the Black Summer Fires.

Koalas genetics and genome sequencing mapping using the latest technology proved a popular crowd pleaser, especially when learning from Dr. Kate Farquharson (The Koala Genome Survey and koala milk presentation) how hard it is to milk a koala!!



Karen Marsh and Dr. Kate Farquharson

Some case studies of bluegum plantation clearing over the last ten years from Victoria's Mosswood Koala and Wildlife Shelter member, Tracey Wilson, highlighted particularly horrific outcomes showing blatant disregard for koalas and clear animal cruelty.

However that was somewhat counterbalanced by research from within plantations from NSW Forestry Corporation represented by Justin Williams which demonstrated koalas moving back into their habitats, once clearing had occurred and speaking to the preference of koalas for medium sized trees of certain species and demonstrating differences in tree preferences between day and night. Brad Law from the NSW Department of Primary Industries, also indicated that through GPS tracking of koalas after timber harvesting many positive sightings resulted.



Tracey Wilson and Justin Williams

KCA General Manager, Maria Doherty spoke of the great work currently underway for the Wild Koala Breeding Program - the first ever program to breed koalas for release back to the wild. World Wildlife Fund representative, Stuart Blanch, spoke about their efforts to assist koalas and many other conservation groups showed and presented their great work at rehabilitating koalas and restoring koala habitats. Such fantastic work is being conducted all over Australia to try and halt the decline of our beloved koalas.



Left: Conference guest speakers - Robyn Williams and Gregg Borschmann. On the right: Maria Doherty, KCA General Manager

The guest speaker event of the Saturday night Conference Dinner, was an entertaining and informative 'fireside chat' with legendary ABC Science broadcaster, Robyn Williams, in conversation with writer and oral historian, Gregg Borschmann.

The Honourable Penny Sharpe, NSW Minister for the Environment, spoke at the conference on



The Honourable Penny Sharpe NSW Minister for the Environment speaking at the 2023 KCA Koala Conference

Saturday announcing the purchase of a large area of extremely biodiverse and beautiful hinterland west of Wauchope.

It is the largest, ever, piece of land purchased to date to protect natural habitat at over 11,000 acres or 4,000 ha. It adjoins National Park land, so Koala Conservation Australia (KCA) will have another option for release of their newly-bred joeys from next year.

The Minister also spoke to the Koala National Park initiative and said that she is reviewing the NSW Koala Strategy to ensure it hits the mark. She stated that she didn't intend to pull it apart, merely revise and tweak it a little so that it delivers on preventing koalas from becoming extinct by 2050 (the current Predicted statistic for NSW if mitigative measures are not carried out).

The posters on display at the conference gave specific detail to many koala aspects and there was a demonstration area showing huge drones being used by Phil Clare and his company, Trackz-Gumbaynggirr Cultural Inc. and the level of detail they are currently able to detect in searching for koalas in the wild. Technology in this area for monitoring, has grown phenomenally and provides very useful koala detection in the field.

The Golden Leaf Awards of Excellence, presented at the Conference Dinner, are a way for KCA to recognise and acknowledge those who have gone above and beyond the call of duty in many fields of wild koala work.

There was a positive vibe the entire three days and lots of new collaborative research relationships were formed.



Golden Leaf Award Winners for 2023 KCA Koala Conference with Gregg Borschmann, Robyn Williams and the Honourable Penny Sharp

The conference garnered much media attention which was important to see - but who wouldn't want to know, that over 270 participants were gathered in Port Macquarie, sharing, and supporting one another in the fight to save the most Australian of species - our iconic koala.

NEW JOEY AVAILABLE FOR ADOPTION

Adoption packages

Certificate sent by email as a printable file - \$50

Sent by post – Includes a certificate, your chosen koala story, a koala reference book. Also included in the package – a KH bookmark and the latest edition of GUMTIPS - \$70 within Australia or \$80 outside Australia.

Each Adoption is a one-off payment valid for 12 months.

To view more koalas for adoption go to 'Adopt' on the website (koalahospital.org.au) and click on 'Adopt'



SHELLY BEACH ROAD TRISH

Shelly Beach Road Trish is a young female joey who was found in February 2023 after a microburst storm hit Port Macquarie.

She was observed climbing with what seemed to be a paralysed forearm. Koala Conservation Australia's (KCA) team rescued her and brought her back to the Koala Hospital in Port Macquarie.

Trish was not moving her forearm at all but had no visible wounds. X-rays were taken and showed that one of the bones in her front-arm was broken at the junction with the elbow joint and was moderately displaced. This injury healed well, but unfortunately, the fall also caused nerve damage to her shoulder. As a result, Trish has very restricted movement in the injured limb. She can use it to brace herself, but she is unable to lift it and use it to climb, which makes her unable to climb tree trunks.

Luckily, this little koala is comfortable with no remaining pain from her injury. She has developed amazing jumping skills to compensate for her inability to use her forearm, and she can climb up and down gunyah furniture like a real champ!

Trish spent nearly four months in home care. On admission she weighed 1.4kg and was still dependent on milk. She is now weaned, and loves her eucalyptus leaves, and has been transferred to KCA's Koala Hospital.



Please use this QR Code to adopt Trish

24 HOUR KOALA EMERGENCY RESCUE LINE – 02 6584 1522

If you sight a koala call us or go to Report a Sighting on our website - koalahospital.org.au.

For general enquiries please email info@koalahospital.org.au



For donations please use this QR code



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conservation
australia**