



GUM TIPS

December 2021



**Do you know...
WHEN A KOALA
NEEDS HELP?**

**Research
UNDERSTANDING THE
KOALA'S SPECIALISED DIET**

**Magic can happen
TIMOTHY'S
STORY**

MAGIC CAN HAPPEN: TIMOTHY'S STORY



Timothy's leg in the early stage of healing.



In ICU Timothy climbs up into the safety of his gunyah following a treatment in the clinic.



Timothy's injured leg, continuing to heal.

Treating Timothy's injury has been very similar to treating burns.

In early August a mature male koala was hit by a car in a quiet street in Port Macquarie and was dragged under the car. The driver was very upset, but contacted the Koala Hospital immediately and stayed at the scene until our rescuers arrived. The koala was quickly taken to an afterhours vet hospital in town.

Hamlyn Drive Timothy had extensive injuries to his right lower leg where the skin was 'degloved' (lifted right off) along with multiple deep abrasions, lacerations and trauma to the muscle tissue. Overnight he was commenced on pain relief, antibiotics and the entire leg was bandaged.

The following day radiographs (x-rays) showed there were no breaks which was amazing. But the level of trauma was so severe, there was discussion regarding whether it would be kinder to put him to sleep.

Staff decided to attempt what would be a long-term treatment plan. Hamlyn Drive Timothy was placed under a general anaesthetic twice a week to have the wound site cleaned, debrided (damaged tissue removed) and bandaged. Ideally it would be better to change the bandages daily or at least every second day but koalas don't cope with a lot of anaesthesia. Following the same principles as when treating burns, this twice weekly method was undertaken. In fact, treating Timothy's injuries was in many ways similar to treating burns.

Cover image: Hamlyn Drive Timothy enjoying breakfast in his rehabilitation enclosure recently. Note the scar on his leg and the fur growing back.



During the 2019/2020 bushfires, the Koala Hospital purchased a low-level laser device to treat burns injuries, and this procedure was also added to Timothy's treatment plan.

For the first few weeks the healing process was impeded by Timothy moving his leg too much despite very thick bandaging which kept his leg really straight. How do you stop a 10 kg male koala from moving around in his enclosure?!

After about a month the wound site was showing excellent granulation (healing) of the lower leg tissue, the margins of skin were closing in really well and the deep abrasions on his foot were almost healed.

By early October the bandages were removed as the entire leg had healed so well. Timothy was moved to an outside enclosure where we continued to apply burns cream to a very small section of not-completely-healed tissue to be sure of full recovery.

Hamlyn Drive Timothy will be returned to his home range in the very near future which is a very pleasing result for us.



Timothy in the open air rehabilitation area of the Hospital, where life is becoming more normal for him.

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Editor: Becky Harrington

Contributors: Sue Ashton, Cheyne Flanagan, Elyane Byers, Becky Harrington

Photography (unless individually credited): Cheyne Flanagan, Scott Castle, Becky Harrington

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REPORT BY CLINICAL DIRECTOR, CHEYNE FLANAGAN

It's so good to see decent rainfall just prior to summer - it bodes well for kinder conditions from a bushfire perspective, although if it becomes very hot and dry with no summer rain then things can change rapidly.

Work at the Koala Hospital continues, even in spite of the COVID lockdowns - koala patients have still arrived and required treatment and care, so all of our yard volunteers have been amazing keeping koalas fed and enclosures spotless.

Koala admission numbers to the Hospital have certainly been much lower than normal. Is this because life has been so much quieter out there due to COVID or is the decline of koalas getting worse? Sadly we suspect the latter.

There is an enormous amount of development for housing estates, industry and roads occurring up and down the coast of New South Wales (NSW) which is likely to be having major impacts on wild koala populations. Koalas on the Northern Tablelands and Western Plains of NSW are also in serious decline due to changing climatic conditions. Nonetheless there is some good news in all of this - the NSW Government's Koala Strategy is certainly focusing on protecting existing koala habitat particularly on privately owned land in endeavours such as the Biodiversity Conservation Trust.

Work has been going on behind the scenes since 2020 and continues - on putting together the Wild Koala Breeding and Research facility at Cowarra.

There have already been many face to face and virtual meetings with architects, and key partners such as Taronga Conservation, University of Sydney and the Wildlife Genomics at the Australian Museum. It's not a simple process as it involves animal ethics, scientific licences and extensive planning, preparation and design of the facilities which are quite large! At the same time there is an enormous amount of work going into the design of the new Port Macquarie Koala Hospital facility as well. There have been and will continue to be thousands of hours of work in putting all of this together. It is very exciting!

On behalf of the koalas we wish all our readers a safe, healthy and peaceful Christmas and New Year.

MAY YOUR SUMMER BE
MERRY & BRIGHT

Snap Port Macquarie 1/106 Horton St (02) 6583 7544 portmacquarie@snap.com.au

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REPORT BY CHAIR OF THE BOARD, SUE ASHTON

The Port Macquarie Koala Hospital is open ☺ After a gruelling 18 months which started with fires, then COVID, then floods and finally COVID again, the Koala Hospital has reopened, we anticipate, for good.

Coronavirus necessitated the Hospital being closed for the first time in its history. We did this to protect our volunteers and staff and our many visitors.

The reopening now enables our wonderful volunteers to resume doing what they do so well. Our guides will be assisting visitors with check-in and then wandering

amongst those visitors telling the stories of our exhibit koalas and explaining many interesting facts about wild koalas – what they eat, threats, how they spend their days.

Our shop volunteers are also a wealth of knowledge and can answer questions and assist with purchases.

Tours have recommenced and once again bus loads of visitors are arriving at our door. Many visitors haven't been close to a wild koala before and enjoy soaking up information about the permanent koalas. Ruins Way Baz is a

favourite. The only koala treated in the devastating fires of summer 2019/2020 and still in our care, Baz will remain at the Koala Hospital for life. He lost his claws during the fires; however, with determination this little koala has taught himself to climb and scales a eucalypt with thin branches to sway at the top in the breeze.

If you are planning to visit Port Macquarie, please schedule some time to visit the Koala Hospital. You must book online via our website www.koalahospital.org.au. Welcome back to all, we have missed you.



We hope you
can visit us
soon!

MORIPO RESEARCH PLANTATION



Young koala food trees at Moripo, protected by tree guards. Trees are planted following the contours of the land using 'keyline' ploughing.

UNDERSTANDING THE KOALA'S SPECIALISED DIET

Just quietly, some fascinating work is being undertaken on land west of Port Macquarie. A partnership between the Koala Hospital and a charitable foundation has enabled an area of rolling hills between Wauchope and Long Flat to become one of the Hospital's koala food tree plantations.

Moripo research plantation is situated on the banks of

the Hastings River and trees are flourishing here owing to comparatively fertile soil, the expertise of volunteers and excellent rains this year. The rewarding and healthy growth is enabling important research into why koalas select specific leaf, the nutritional value of different leaf and the factors involved. It is hoped that data and research results from Moripo will add to the national bank of knowledge about how to ensure the survival of the species into the future.

Volunteer plantation manager, Paul Goss, has been working here since 2019. He has a strong agricultural

background, having spent many years running his own contract farming business in regional New South Wales. He is happiest when working outdoors, and enjoys contributing to a project for native species. Since the early days of the project, Chris Jones, a local farmer has supported us. His experience and knowledge of farming processes has been immense benefit, and his hard work ploughing keyline trenches throughout the plantation is now facilitating the rapid growth of tubestock. Chris Jones did much of the initial clearing and mowing at Moripo and the installation of the water pipeline. He continues to provide ongoing advice and practical assistance.

'Working at Moripo is a tonic. The bush lifts my spirits, always has and always will.'
Naomi Henry

We are also grateful for the support of Chris Debreceny, from neighbouring Moripo Park. With access to heavy machinery, he often helps with scrub clearing, preparing land for plantings and creating and maintaining access routes.



Paul and regular volunteers Naomi, Rob and Barry are always busy - watering tubestock, planting, checking trees and tree guards, reducing natural debris at the base of trees, mowing, maintenance of plantation vehicles and the workshop. By a network of pickets marking the tree lines, the team ensure the plantation grid remains accurate for research and management.

Local koala favourite species at Moripo include tallowwood, swamp mahogany, grey gum, forest red gum and narrow-leaved black peppermint, which is highly popular despite not being endemic to the region. To minimise insect predation, bird and marsupial attracting native shrubs are also planted throughout the plantation. The



Plantation volunteer, Barry Newsome, places white pickets to mark the tree rows. A great all-rounder, Barry enjoys being part of the friendly Moripo team.

objective is that animals will prey on the insects and naturally keep insect numbers low. Scott Castle, Conservation Manager at the Koala Hospital, explained, 'Collecting data on long term leaf nutrient research will increase our understanding about important seasonal variation and responses to climatic conditions.'

'With the koala population reducing all the time, I want to help the conservation of the species any way I can.'
Paul Goss



Scott Castle and Paul Goss by the Hastings River, discussing the impact of the floods earlier in the year.



Rob Rowe is renowned for the accuracy and speed of his mowing, whippersnipping and general agricultural prowess! He loves the flocks of king parrots and black cockatoos which visit the plantation.



Naomi Henry, painting pickets. Passionate about wildlife and conservation, Naomi has great tree/plant identification skills and manages computer work for the plantation.



MEET TERESA COCHRANE

'There is so much we still don't know about an animal that is such an icon. Really understanding the species is very complex.' Teresa Cochrane

The Koala Hospital is thrilled to be collaborating with Teresa Cochrane, an Honours student at Charles Sturt University, who is conducting research into chemical analysis of koala food trees grown at the Moripo plantation. Data collected on seedling nutrition, soil analysis, chemistry of younger versus older foliage and tree planting methods will be used to compare koala diet selection at the Hospital.

Teresa is a proud Dungutti woman, now living in Birpai country in Port Macquarie. She has long been passionate about koala conservation and recently discovered that the koala was the totem of her great great

grandfather King Bennelong's people, who is an elder of the Gumbaynggir mob. She recognises a strong connection to koalas through her studies at university and First Nations culture.

Currently in her fourth and final year of her Bachelor of Environmental Science and Management (Honours), Teresa is specialising in Ecology Conservation. Her association with the Koala Hospital began when she became a volunteer in 2018, seeking some practical insight to support her academic studies. Teresa soon realised there were opportunities to make a significant contribution through research. She started some work experience at Moripo, assisting the plantation manager in the early days of the project - setting up the grid guide, laying irrigation and organising other volunteers on planting days. Learning more about what koalas will and won't eat both in care and in the wild, Teresa realised there were deep implications about the species' specialised diet.

The low nutritional content of eucalyptus leaves means that

koalas must sleep for long periods day and night to allow their bodies to digest their food. So it's important that during their short periods of wakefulness, they eat the most appropriate diet possible. Even if trees are of the same species, koalas are selective about which tree's leaves they will eat. Teresa hopes her research will be a stepping-stone to further research and a PhD on the ecology of eucalyptus trees and plants, koala feeding behaviour and diet.



Teresa planted the very first tree at Moripo in 2019.





HOW TO KNOW WHEN A KOALA NEEDS HELP

What you do may be critical to saving a koala's life.

We are lucky that despite declining numbers, there are parts of Australia where it is still possible to see wild koalas. However, the fact is that many of these koalas live too close for comfort to people. Land clearing and the development of housing and infrastructure has fragmented and degraded their habitat. Reduction of their range means that many koala populations are vulnerable to disease and are in danger from motor vehicles and dogs.

The most common reasons for a koala to be rescued are the disease chlamydia, motor vehicle accidents and dog attacks. In addition, healthy koalas are sometimes found in unsafe locations and may need to be rescued and checked, then released back to safe habitat.

FIRST QUESTION: IS THE KOALA IN TROUBLE?

Ask yourself, is the koala displaying any signs that it needs human help (see below)? If the koala appears

healthy and is in a safe location, leave the koala alone. People often think human contact and interaction does not cause stress to wild koalas. This is incorrect, and stress on its own can actually create health problems! Note that koalas often rest in trees which are not food trees, therefore seeing a koala in a palm tree or a Norfolk pine for example, is not generally a cause for concern.

SECOND QUESTION: IS THE KOALA DISPLAYING ANY SIGNS THAT IT NEEDS HUMAN HELP?

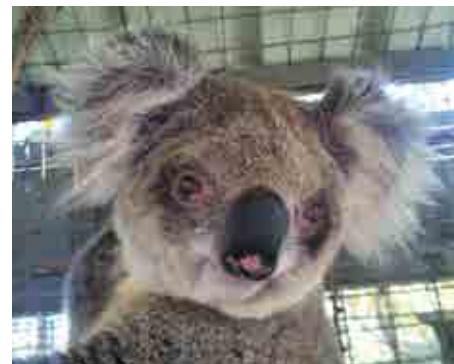
CHLAMYDIA

Check for:

- Large areas of brown stain around the koala's rump
- Diseased eyes - characterised by red, inflamed or overgrown tissue around the eyes, yellow discharge, or eyes crusted shut

All koalas displaying any symptoms of chlamydia need to be rescued and treated for the disease.

Chlamydia is deadly for koalas if left untreated, and causes terrible pain. It is also important in the fight to reduce the spread of chlamydia in wild populations.



MOTOR VEHICLE ACCIDENT

An injured koala may:

- Have obvious bleeding or fractures
- Grind its teeth (a sign of pain)
- Have a fractured jaw – observe whether the upper and lower jaws align
- Walk in circles (indicating head trauma, blindness)

All motor accident victims should be rescued. Injuries are often life-threatening.

DOG ATTACK

An injured koala may:

- Have puncture wounds
- Have obvious bleeding, dried blood, matted wet fur
- Grind its teeth in pain

All victims of dog attacks need to be rescued. A victim may look like they only have minor injuries but internally they can have serious pressure injuries from the dog's teeth and massive damage to their internal organs.

UNSAFE LOCATIONS, UNUSUAL BEHAVIOUR

- Koala sitting by the side of a road
- Koala sitting low in a tree

If you see a koala sitting by the side of a road, but have not witnessed an accident, it is still quite possible the koala has been hit by a car or is sick in some other way. A healthy, wild koala is very unlikely to sit by the side of a road. Similarly koalas which are observed sitting low in the same tree or shrub for longer than 24 hours should be rescued and checked for injury or disease.

- Koala trapped in backyards with a dog present
- Koala in unusual location (inside a building for example)

In these circumstances, koalas should be rescued, and can often be released quickly if they are not sick or injured. We release them into habitat close to the rescue point, otherwise koalas will take more risks crossing roads and backyards to get back to their home range.



REPORT SIGHTINGS OF HEALTHY KOALAS

In the Mid North Coast of NSW, please let us know when and where you see koalas which appear healthy and are not in trouble. This is now quick and easy to do online. To report a sighting, please fill in the online form on the Koala Hospital website <https://www.koalahospital.org.au/form/sighting/>

We enter all sightings into an important database, which increases understanding of our local koala populations.

If you live outside the NSW Mid North Coast, check with your local wildlife organisation as they may also be grateful for information about koala sightings.

Thank you to Hospital volunteer, Joanne Hollis, for helping to write this article.

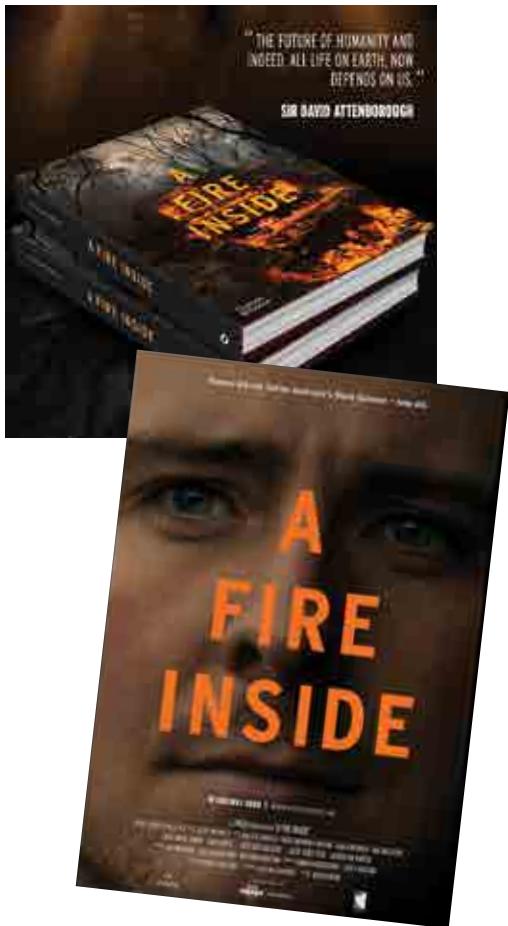


HOW TO GET HELP IF A KOALA IS IN TROUBLE

If you are in the Mid North Coast of NSW, telephone the Port Macquarie Koala Hospital on 02 6584 1522 straightaway. The Koala Hospital rescues koalas from Nambucca Heads in the north, to Johns River in the south, and inland west to Walcha.

Unless it's absolutely impossible for you, please stay at the scene until rescuers arrive, and follow any advice you are given. This can make a big difference to the success of the rescue and the chances of the koala surviving (see the story of Hamlyn Drive Timothy on pages 2 and 3).

If you live in a different area or are travelling, find the contact details of the local wildlife organisation and report the sick or injured animal immediately. Every state and region in Australia has a wildlife rescue organisation. WIRES (Wildlife in Need of Rescue) covers the majority of NSW or can direct you to other organisations in specific areas. For injured wildlife, other than koalas, on the NSW Mid North Coast please call FAWNA on 02 6581 4141.



A FIRE INSIDE

A moving feature-length documentary about the Black Summer bushfires and an accompanying coffee table book have recently been released. Images and stories from the Port Macquarie Koala Hospital during that time are included in both, and part of the proceeds from the book sales will be donated to the work of the Hospital. The film and book have been made possible by our partner, NRMA Insurance.

A Fire Inside captures a unique moment in Australia's history, and illustrates how the power of help galvanised the nation. The documentary and book provide insight into the resilience and selflessness people showed and explore what it means to be human.

The film is scheduled to premiere on Channel 9 television within Australia on 13 December (9.30pm), or on demand at 9Now following the premiere. To order your copy of the book go to <https://bit.ly/AFireInsideBook>

If you are feeling overwhelmed, help is available. Call the Lifeline Bushfire Recovery line on 13 HELP or visit www.lifeline.org.au

NATIONAL KOALA RECOVERY PLAN



Impact of natural disaster on habitat: Crowdy Bay National Park after the Black Summer bushfires.



Human impact on habitat.

In many parts of Australia, koala numbers have been declining for decades, and in 2012 the species was listed as vulnerable in some states. Prolonged drought conditions followed by the devastating bushfires of 2019/2020 severely impacted wild populations, and many conservation groups are campaigning for koalas to be further recognised as endangered.

Koala Conservation Australia supports the draft national plan.

In the meantime, the Australian Government has been working on its National Koala Recovery Plan. Koala Conservation Australia (KCA), along with many other agencies and organisations recently submitted feedback on the draft of this crucial plan.

The core objective of the National Koala Recovery Plan is to have resilient, connected and genetically healthy populations of koalas and to increase the extent, quality and connectivity of occupied habitat. The ultimate goal is to reverse the trending decline in New South Wales, Queensland and the Australian Capital Territory. Currently koalas are not listed as vulnerable in Victoria or South Australia, but this national plan will mutually inform conservation efforts for the species across the country.

The draft plan has six key strategies:

1. Build and share knowledge
2. Strong community engagement and partnerships
3. Increase habitat protection
4. Koala conservation is integrated into policy, and statutory and land-use plans
5. Active management of connected koala populations
6. Strategic habitat restoration

Each strategy will have defined actions, partners and responsibilities, time frames and priorities supported by funding provision and measurements of success. Federal, state and local government will collaborate to secure the conservation of the koala, along with community groups, environmental and wildlife organisations.



New human homes abutting koala habitat.



Wildlife sanctuary cleared for development.

The National Plan has ambitious targets for the next 10 years.

The timelines for the plan recognize the need for speed, the increasing effect of climate change and continued fragmentation and degradation of koala habitat. The plan focusses on minimizing, stopping or offsetting further habitat loss, and reducing physical barriers to the safe movement of koalas such as disruption of wildlife corridors and fencing of land. This will be supported by the mapping and identifying of existing habitat, improving its condition on both

public and private land and increasing protections for koala habitat by registration.

KCA is a strong supporter of the National Koala Recovery Plan and is keen to participate at all stages of its implementation. We hope to be included in the Community Advisory Committee, Recovery Team or both. We offer extensive experience and practical knowledge of the species, and have a strong focus on urgent protection and regeneration of vital habitat. Our support may include collection of data, mapping territories and designing habitat initiatives. Through Gum Tips magazine, we will continue to update readers about the National Koala Recovery Plan.

KCA thanks all members who submitted comments and assisted with the reviews on our submission.

This article was prepared in consultation with Adele Graham, Habitat Protection and Government Liaison Volunteer, KCA.

Koala Kids

WORD Fill

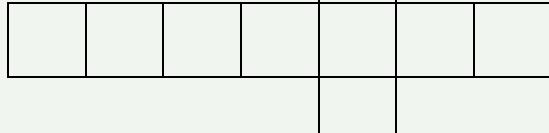
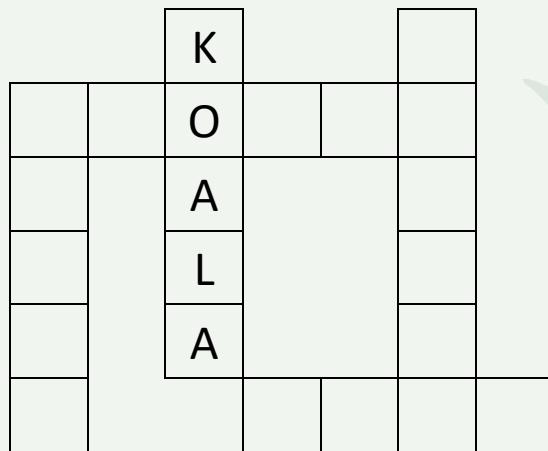
In this puzzle there are no clues. Use the list of words to fill in the grid. We have given you a head start with KOALA.

BELLOW BROWSE

JOEY RELEASE

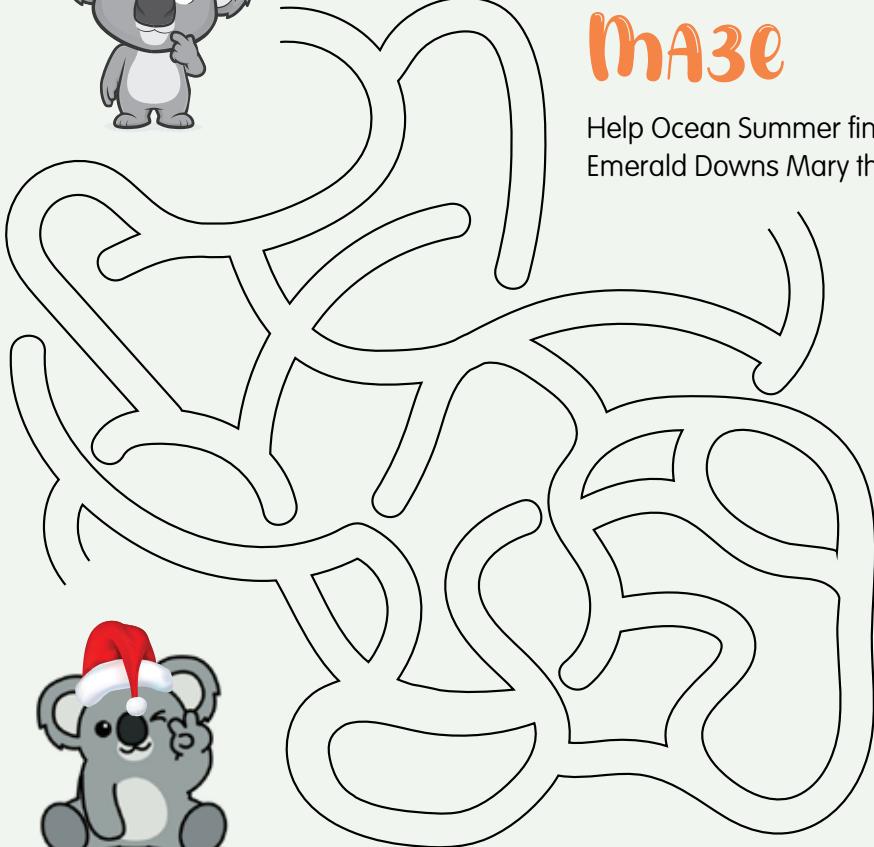
RESCUE PAWS

SCAT



Maze

Help Ocean Summer find her friend Emerald Downs Mary through the maze.

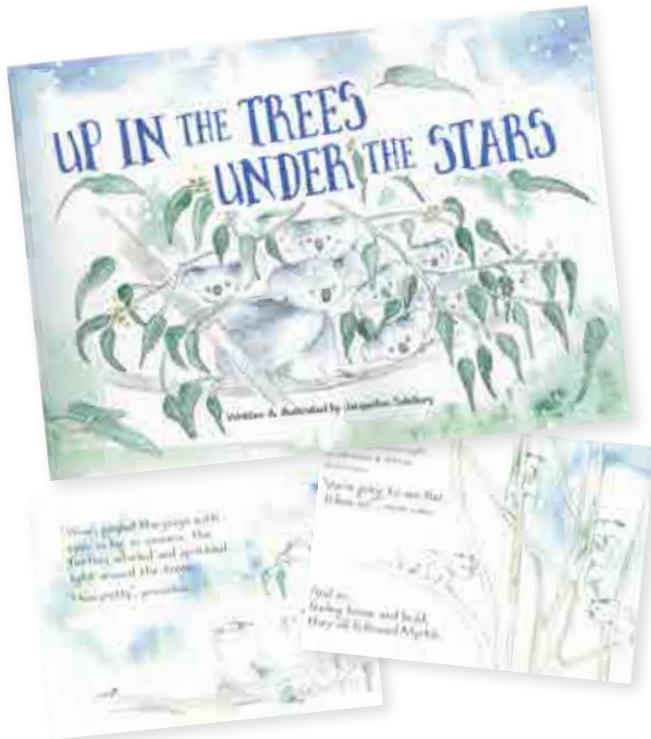


Solution:

T	E	L	E	A	S	E
R	E	L	E	A	C	C
B	R	O	W	S	P	A
K	J	O	E	M	M	S
O	U	N	D	W	Y	S
L	A	I	A	A	A	S
C	C	C	C	C	C	S
E	A	E	A	E	E	S
B	R	O	W	S	R	S
R	E	L	E	A	S	E

KOALA GIFT IDEAS

UP IN THE TREES UNDER THE STARS A children's story book



This delightful book written and illustrated by Jackie Salisbury, one of the volunteers at the Port Macquarie Koala Hospital, explores the question, 'What do koalas do at night?'. The story and heart-warming illustrations feature many of the koalas who live permanently at the Hospital.

Join Myrtle the koala and all her friends for a night-time adventure, as they set out to solve a stormy night mystery.

Suitable for all ages.

On sale online at

<https://shop.koalahospital.org.au/products/up-in-the-trees-under-the-stars>

\$15 each

2022 KOALA HOSPITAL CALENDARS

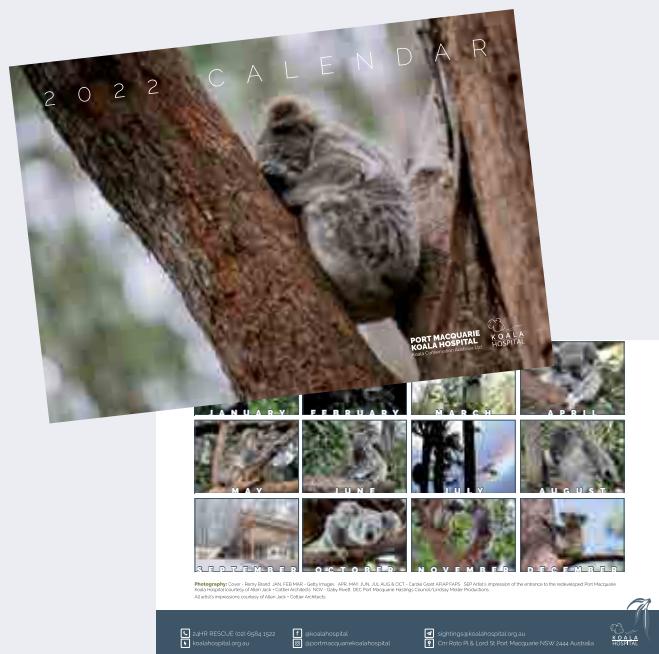
Perfect for those days when you need a gorgeous koala in your life!

Buy a 2022 wall calendar and lower your stress levels whenever the need arises.

Our wall calendars make lovely gifts and proceeds help us continue to treat sick and injured koalas throughout the year.

On sale online at
<https://shop.koalahospital.org.au/products/calendar-2022>

\$15 each



**Both the children's book and calendar are also on sale over the counter
at the Koala Hospital Souvenir Shop.**



Koala Emergency Rescue Line - Phone (02) 6584 1522

If you sight a koala in distress - call our
Rescue Line 24 hours a day / 7 days a week
E: info@koalahospital.org.au
General Enquiries: 02 6584 1522
www.koalahospital.org.au

ADOPT A WILD KOALA

This Christmas, adopt a koala for a friend or family member and your thoughtful gift will contribute to the survival of the species.



Emerald Downs Mary

Mary came into care as a juvenile with advanced glaucoma in one eye. We believe she had experienced physical trauma because this kind of condition is very unusual in a young koala. She would have been in considerable pain and the decision was made to surgically remove the affected eye. Mary has thrived in care and is now one of our older koalas. She shares an enclosure with another easy-going female, Ocean Summer. Despite being blind, Mary is a confident climber and likes to spend much of her time so high in the trees it can be quite a challenge to spot her!



Ruins Way Baz

In late 2019, firefighters in Port Macquarie found a small juvenile koala sitting next to a bush track. His fur was so singed that he resembled a little dark brown ball. Baz was treated for many months at the Koala Hospital, and whilst the burns have healed and his fur has regrown, Baz's claws were so badly burned that they will never be strong enough for life in the wild.



However, with lots of care and smaller trees to climb, this very special survivor of the Black Summer bushfires has become a much-loved permanent resident with us.

eAdoption

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

Adoption Package

Sent by post, includes a certificate, your chosen koala story, a koala reference book, Koala Hospital bookmark and the latest edition of Gum Tips - \$70 within Australia or \$80 for international

Each adoption is a one-off payment valid for 12 months



To view more koalas for adoption go to 'Adopt' on our website www.koalahospital.org.au and follow the links.

The majority of koalas admitted to the Koala Hospital are released once they have undergone checks, and treatment for injury or illness. Wherever humanely possible, animals are returned to the wild.

Koala Conservation Australia Ltd.

ABN 74 060 854 479 | ACN 634 823 368 | PO Box 236, Port Macquarie NSW 2444

Licensed to rehabilitate and release sick, injured and orphaned native fauna under Licence No. 10044