



# 2020 YEAR IN REVIEW

Out of the ashes: a golden opportunity



# From the Chief Executive



**A lot has been said of 2020. The summer bushfires devastated many parts of South Australia. The impacts on people, wildlife and the environment were profound. The losses were at a scale so immense that they shocked the world. However, the unprecedented crisis also pushed us all to think and do things differently.**

As you'll see in this report, the International Koala Centre of Excellence (IKCE) rose to the challenge without hesitation.

The bushfires revealed how little we knew about managing animals traumatised by disaster. We realised how potentially disastrous it was to rely on isolated populations in patches of remnant forest as the only mechanism to maintain a species. In addition, we knew little about the depth of feeling in local and international communities around koalas, the threats to nature and the need to protect.

In 2020, IKCE worked fast to refocus and reimagine our purpose in response to the catastrophic bushfires. Out of the ashes of Kangaroo Island, we seized a golden opportunity and also pioneered a new way forward in our approach to conservation.

Our first great achievement in 2020 was directing IKCE's energies to rescue and re-home 28 disease-free koalas at Cleland Wildlife Park. This small population of koalas now form the 'Golden Children' colony.

The Golden Children disease-free captive population preserves one of the nation's most valuable populations and is a significant contribution to the national conservation and management of the koala.

This population also provides exciting scope for research to gain a better understanding of the ecology, disease, vaccinations, and genetics and how to best manage koala populations both locally and nationally.

2020 showed us that relying on isolated pristine wilderness is not enough to protect species if these regions burn, or suffer drought or flood. It is necessary to do more, and to do things differently.

Our second great achievement in 2020 was pioneering the development and implementation of an integrated approach to conservation, which we call 'survival science'.

With this new approach, and the Golden Children colony established, IKCE rebranded to 'Koala Life' with a new ambitious vision: game-changing partnerships in survival science.

Our achievements were only made possible with the engagement, support and activity of a large number of individuals and organisations, including scientists, government, private enterprise, universities, and supporters locally and around the world.

I particularly wish to acknowledge the Department for Environment and Water, the IKCE Board, our patrons and ambassadors, and the staff of IKCE. Without their commitment to the cause, we could not have achieved so much change in response to so much challenge.

**Professor Chris Daniels**  
**BSc (Hons) PhD DSc FAICD**

Chief Executive Officer  
Koala Life  
(International Koala Centre of Excellence)

# From the Chair



**The International Koala Centre of Excellence (IKCE) has been a long time coming – and even longer needed. IKCE**

**formed in response to the need to understand the genetically based renal disease called oxalate nephrosis. This disease can be fatal and plagues many groups of southern koalas, notably South Australian ones.**

IKCE was created initially to raise funds to understand and hopefully cure oxalate nephrosis after public recognition of its impact.

By July 2019, our Board was in place and we were able to develop IKCE into a major player in koala research and education. IKCE was awarded Deductible Gift Recipient status in May 2020.

This report highlights the work IKCE has completed to deliver on its mission to understand and to protect koalas and their forest habitats, and also to refocus and hone its identity.

2020 saw IKCE move to trade as Koala Life, and adopt a new brand and identity. This new focused vision enables us to tell the story of koalas in Australia and identify the research needed to protect and save these amazing animals. Under the leadership of the Board, and with the full support of the Department for Environment and Water and a range of organisations and individuals, and with the tireless input of our outstanding team, Koala Life is now in full operation.

IKCE has raised over \$587,000 in funds, and almost the same value in in-kind support. This funding enabled us to initiate five major and several smaller research projects, and we have also submitted two Australian Research Council (ARC) Linkage Grant project applications.

Perhaps most spectacularly, IKCE, in close partnership with the Hanson Bay Wildlife Sanctuary, Cleland Wildlife Park, and the Department for Environment and Water, established a rescue population of koalas from Kangaroo Island – our Golden Children colony.

To support both the research program and the new Golden Children koala colony, IKCE is establishing a research hub at Cleland Wildlife Park. Breeding a robust colony of disease-free animals ultimately to be placed in sanctuaries around the country is now one of our primary aims. This research hub will be a major step forward in grounding the organisation and creating a platform for future research breakthroughs.

It has been an exciting year. I am proud to be part of a Board and team so committed to achieving success. 2021 will see the fruits of these investments as we take survival science into the conservation of koalas and their forest habitats.



**Ian Drummond**

Chair  
Koala Life  
(International Koala Centre of Excellence)



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# Our story

**Koalas are so much more than just a part of our cultural identity and lifestyle. They're vital to our economy and play an important role in the health of our ecosystems. But habitat loss, life-threatening diseases and rampant bushfires have pushed them to the brink of survival.**

Without a collaborative survival strategy, supported by the best science and research, koalas could disappear within our lifetime.

And because a future without koalas is unthinkable, ensuring their survival and long-term sustainability is an urgent priority for all Australians.

## Supporting science to save an Australian icon

The International Koala Centre of Excellence (IKCE) was first established in 2018 to support research into koala management and conservation.

Bringing together leading advocates and researchers, the centre established strong partnerships and research projects. Then in 2020, the bushfire threats to many koala populations challenged IKCE to develop a new purpose and vision.

We have risen to the challenge. We have refocused our work on survival science, to deliver the understanding needed to protect koala populations. To reflect this approach, we have also rebranded the IKCE as 'Koala Life'.

### OUR PURPOSE

To secure the survival of the koala for Australia

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### OUR VISION

To create game-changing partnerships in survival science





## An integrated strategy to secure the survival of the koala

We have developed a strong, coordinated strategy to achieve our purpose and vision.

### Our 6 pillars of action are:

**1 Raising funds for critical research**



**2 Establishing a national network of knowledge and know-how**



**3 Finding solutions for koala diseases**



**4 Understanding and protecting habitat**



**5 Understanding how koalas live with people**



**6 Being the voice of survival science.**



## Working together to deliver results

Koala Life is a leading voice in koala conservation. But we aren't alone. Together with our partners, we're helping to connect and support an international network of koala experts.

Koala Life helps to link researchers across a range of institutes (local, national and international) and government agencies to collaborate and share research, findings, techniques and management strategies to bridge knowledge gaps and secure the long-term management of koalas across Australia. Our network also involves volunteers and supporters as well as scientists, politicians, universities and organisations.

Everything we do – whether it's raising funds for research, promoting education or using the best survival science to establish healthy, genetically diverse, disease-free populations in protected areas and communities across Australia – we do together.

# A snapshot of 2020

## OPERATIONAL HIGHLIGHTS

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We rebranded as



**New CEO,**

Professor Chris Daniels,  
was appointed



We work with  
**research organisations,**  
**nationally and**  
**internationally**

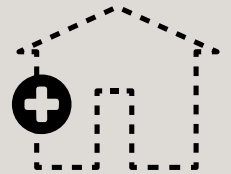
We have

**2 patrons,**  
**10 ambassadors**



We raised **over**  
**\$587,000**  
in donations

We are creating a centre  
for Koala Life operations at  
Cleland Wildlife Park, **the**  
**Koala Research Hub,** to  
be completed mid 2021



We developed a  
**strategic plan**  
to drive operations  
from 2021

Established the  
**Golden Children**  
**colony**  
at Cleland Wildlife Park





# A snapshot of 2020

## RESEARCH HIGHLIGHTS

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We developed a new **focus on survival science** to enable us to prevent and manage disease and improve koala management practices

We are supporting **5 major and several smaller research projects** undertaken by Australian and international researchers



We **rescued 28 koalas from Kangaroo Island**, establishing a **disease-free koala population** at Cleland Wildlife Park, as a once-in-a-generation opportunity to enable innovative genetic research



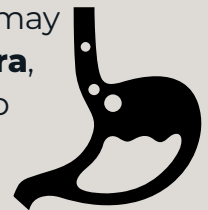
We are investigating **how climate change is affecting koalas**

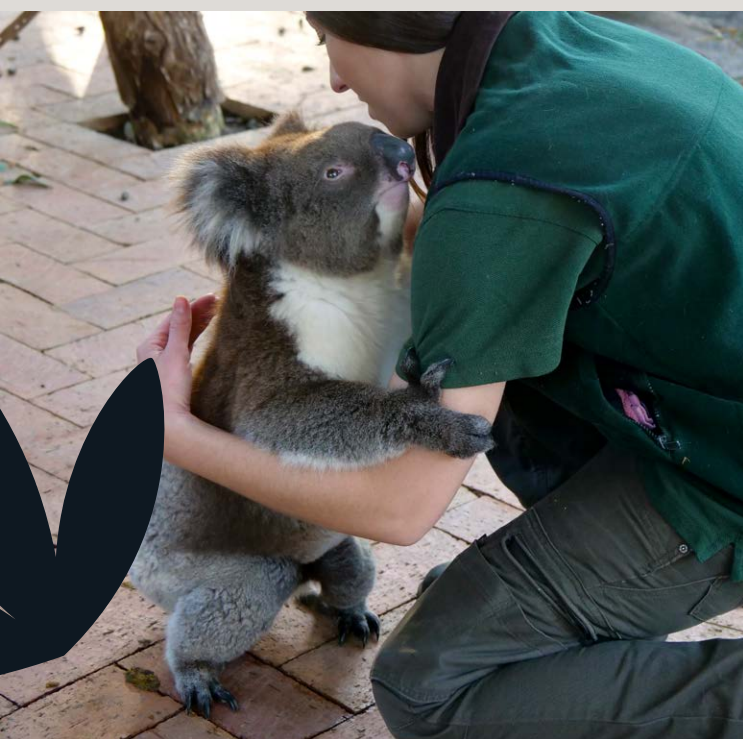
We are researching **answers to oxalate nephrosis**, a fatal kidney disease of koalas



We are improving our understanding of the **role of koalas** in tourism and environmental activism

We discovered that koalas may have **unique gut microflora**, and this discovery may help to reduce the high death rate of rescued koalas





# Our work

## We need best-practice science to ensure koalas survive into the future.

'Survival science' is about the integrated management of species. Protecting small areas of habitat to act as natural sanctuaries is important. But we must also restore damaged habitat, understand and manage parasites and disease, and protect the genetic variation within a population as well as individual animals.

To do this, we will need better understanding and a range of management tools.

We need to understand koala biology, behaviour and reproduction, both in the wild and in captivity. We need to understand their impacts on the landscape and what they need to create stable populations. Finally, we need to understand the human connection to koalas, and how to ensure the actions of our communities are compatible with koala survival.

Koala Life funds, directs and provides collaborative support for ground-breaking research in our understanding and conservation of Australia's best-loved species.

## Current projects

We are currently supporting five major and several smaller research projects, focusing on three key areas:

- Koala health and wellbeing
- Koalas in the landscape
- Koalas and the community.

### Koala health and wellbeing

Our first major project in this area is looking at oxalate nephrosis, a fatal kidney disease of koalas. Oxalate nephrosis is one of three diseases that severely affect koala health and wellbeing. Two diseases are infective (Chlamydia and KoRV) and oxalate nephrosis appears to be genetic. Dr Natasha Speight (University of Adelaide) is leading research to understand the underlying drivers of disease. This will allow us to better manage disease in free-living and captive populations, such as through breeding to improve genetics, and dietary management. The research will also improve the early detection of the disease, allowing for early intervention.

The research is being undertaken in partnership with the University of Alabama (Birmingham), Australia Zoo, and the Adelaide Koala and Wildlife Hospital.



The second major project is looking at the role of gut microflora on the welfare outcomes of rescued free-living koalas. Preliminary evidence from the 2019–20 bushfire season suggests that up to 80% of rescued koalas do not survive long enough to be released. By better understanding the relationship between gut biology, diet and rescue outcomes, we may be able to manage the diet and health of rescued and captive koalas in order to improve their long-term survival.

Dr Raphael Eisenhofer (University of Adelaide) has undertaken preliminary investigations that suggest that individual koalas have distinct gut microbial communities and that these may be specifically adapted to local dietary conditions. This may lead to physiological stress when koalas are separated from their local environment.

Other research into koala health and wellbeing includes a trial for a new treatment of oxalate nephrosis. Historically, the only drug treatment for the disease is Vitamin B6. Koala Life are partnering with DEW and the University of Adelaide to undertake a trial of the drug Stiripentol on captive koalas in Cleland Wildlife Park to determine the safety and efficacy of this drug in the treatment of oxalate nephrosis.

## **Koalas in the landscape**

Our first major project in this area is an investigation of free-living koala populations in the Mt Lofty Ranges, South Australia.

This project aims to better predict the distribution, density and abundance of koalas in this region, the impact that koalas have on their native habitats, and the drivers of population dynamics, including the impacts of climate change. The work will inform the management of this population to ensure its sustainability now and in the future. The modelling approaches developed in this

project will also be useful for predicting the response of other koala populations to environmental change. The project is being conducted by Professor Corey Bradshaw (Flinders University), leading a group of research students and early-career researchers.

Our second major project is an investigation into the use of automated facial recognition technology to identify individual koalas in the wild. Identifying individual animals in the wild is essential to allow researchers to understand the movement of individuals and estimate populations. Identification has traditionally relied on capturing and individually marking individuals in a population, a process that is both labour intensive and poses potential welfare issues.

This project, being conducted by Dr Collombelli-Negrel (Flinders University), is combining automated facial recognition algorithms and data recorded by drones to provide a non-invasive method of recognition.

Other research into koalas in the landscape include preliminary assessments of the impact of climate change on the Kangaroo Island koala population, using population viability analysis. This research will help us better predict the response of this population to future climates, and allow us to incorporate these climate impacts into our future management strategies. It is being conducted by Koala Life, along with DEW, the University of Adelaide and Vrije Universiteit Amsterdam.

We have also partnered with DEW and the Queensland University of Technology to undertake post-fire surveys of koalas on Kangaroo Island, using a combination of drones, thermal imagery and automated detection algorithms.

## Koalas and the community

Given the globally iconic nature of koalas, they are likely to play a significant role in how people interact with nature generally. Understanding the social, economic and environmental implications of this interaction will help us to improve community engagement and better design koala-related tourism and engagement experiences to maximise the benefits.

Koala Life are partnering with Professor Delene Weber and Dr Morgan Schebella (University of South Australia) on a research program whose aim is to better understand the complex relationship between different sectors of society and koalas.

The research questions being investigated include:

- The role of koalas in the Australian tourism industry
- Koalas as a mechanism for pro-environmental behaviour
- Koalas in the social media before, during and after the 2019–20 bushfires
- The evolving role of koalas.







## The golden opportunity: Spotlight on our disease-free Golden Children colony

In 2020 we were presented with a unique opportunity to help koalas both immediately and in the future.

In the summer of 2019-20, the largest bushfires in Kangaroo Island's recorded history engulfed the western half of the island. Before the bushfires, Kangaroo Island supported about 50,000 koalas. Bushfire affected about 85 per cent of their habitat, including most of the blue gum plantations where many koalas lived.

In January 2020, large numbers of injured animals were collected and some of the rescued koalas were sent to Cleland Wildlife Park to prevent them from dying of starvation.

These koalas were free of the infective diseases of Chlamydia and Koala Retrovirus (KoRV), which dominate the health status of many koala populations in the north of Australia. The idea of the 'Golden Children' colony - a small population of disease-free captive koalas - was born.

A disease-free, captive-managed population provides scope for research to help further our understanding of koala ecology, disease, genetics and management, thus contributing to the national conservation of koalas. It also brings koalas into a securely managed area to breed them according to best practice recommendations, thereby creating a 'managed population' in case of the extinction of koalas in the wild.

As of December 2020, the total size of the Golden Children colony is 28 animals, including pouch joeys. We are investigating ways to increase the genetic diversity of the population, for example, by introducing koalas from the South Gippsland Strzelecki Ranges. This will set the scene for our 2021 breeding program and secure a better long-term future for this important group.



On Kangaroo Island, 2019-2020 bushfires  
**burnt about 215,000 hectares**  
**(about half the island).**



**28** rescued disease-free KI koalas  
form the Golden Children colony



Our Golden Children colony at Cleland Wildlife Park is now one of the nation's most valuable koala populations.



Soldiers from the Australian Army lend a hand with koalas rescued from the bushfires during feeding time at the Cleland Wildlife Park.

# Our people

The support of many organisations and individuals was needed to establish the IKCE and refocus the organisation under its new brand, Koala Life.

We thank these supporters for their ongoing commitment to the koala cause through financial or in-kind donations.

## Our supporters

Our major donors and partners in 2020 were:

### Donors

- Longleat Safari Park, UK
- Prince Albert II of Monaco Foundation
- Lysaght Steel
- Joanna and Richard Collins
- Nature Foundation SA
- Schultz Foundation
- Wombaroo
- Drummond Family Trust
- Ian Hough.

### Partners

- Department for Environment and Water
- Australian Armed Forces
- Cleland Wildlife Park
- Hanson Bay Wildlife Sanctuary
- SAVEM
- Theatre Bugs.

## Our patrons and ambassadors

Koala Life is also supported by Patrons and Ambassadors. These individuals promote the organisation and its work, and provide financial and practical support reflecting the skills, connections and talents of each of these special supporters.

### International patrons



Ceawlin Thynn, Marquis of Bath  
Chairman, Longleat Enterprises



Emma Thynn,  
Marchioness of Bath

## Ambassadors



Parry Agius, Indigenous Community and Business Leader



Jeremy Boot, Wildlife Artist



Melanie Cooper, Director of Finance and Corporate Affairs, Coopers Brewery Ltd



Adam Hills, Comedian and Presenter



Trish Liggett, Wildlife and Conservation Advocate



Phil Liggett, Public Commentator (Tour Down Under) and Conservation Advocate



Teresa Palmer, Actress, Writer, Producer and Director



Tim Jarvis, Adventurer and Environmentalist.



Joanna Collins, Philanthropist



Richard Collins, Business Leader and Philanthropist

## Board members

From 1 July 2019, the Governing Board took oversight of the operations of the organisation. Board members were appointed for an initial 3-year term. One Board position remains vacant.



### **Ian Drummond (Chair)**

is an entrepreneur and environmentalist who has a background in education and current business interests in tourism in the Northern Territory and South Australia.



### **Kris Helglen (Deputy Chair)**

is Chief Scientist and Director of the Australian Museum Research Institute in Sydney NSW.



### **Sandy Carruthers**

is Executive Director, Strategy, Science and Corporate Services at the Department for Environment and Water.



### **Brian Cunningham**

has 25 years' experience as a Chief Executive in both the private and public sectors in Australia and has wide-ranging experience in leading and managing successful organisations over that time.



### **Kristina Roberts**

has extensive experience in executive leadership and management. She has worked with local and state governments in the areas of business and economic development.



### **Yvonne Sneddon**

is a professional nonexecutive company director with more than 20 years' experience on boards and audit, governance and risk committees.

# Our business

## Operations

The International Koala Centre of Excellence, operating and trading under the name Koala Life, is an independent not-for-profit corporation, established through an Act of State Parliament for the purpose of conservation and research of koalas. Koala Life is governed by the South Australia Public Corporations (International Koala Centre of Excellence) Regulations 2018 under the Public Corporations Act 1993.

The CEO, Professor Chris Daniels, was appointed on 9 March 2020.

## Finances

IKCE supports research by attracting donations, sponsorships and bequests from a wide range of organisations and individuals. Since July 2019, Koala Life has raised \$587,906.

The income to date has supported the creation and the operation of Koala Life, including public promotion of issues around koalas, building of a research facility and management of the Golden Children colony, and research efforts by local and international researchers.

### **Our business partners that provided in-kind support in 2020 were:**

- Principals
- Jones, Hartley and Toole Lawyers
- Suzie Hertzberg
- A7 Designs
- Productivity Database Solutions
- Damian Scanlon.

# How you can help

You can help to ensure the survival of koalas in Australia. Our supporters and researchers play a vital role in our work, and we welcome new supporters and researchers at any time.

If you would like to provide a donation to support the work of our scientists, visit [www.koalalife.asn.au/donate](http://www.koalalife.asn.au/donate).

To find out more about being a patron or ambassador for Koala Life, contact [info@koalalife.asn.au](mailto:info@koalalife.asn.au).

If you would like to be a research partner, download our research prospectus from [www.koalalife.asn.au](http://www.koalalife.asn.au)

You can also sign up to get all the latest news, or follow us on Facebook or Instagram, by visiting our website at [www.koalalife.asn.au](http://www.koalalife.asn.au)



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