# NATIONAL TRUST CURRUMBIN WILDLIFE SANCTUARY CONSERVATION PLAN 2019 – 2025

*Brush-tailed Rock-wallaby*

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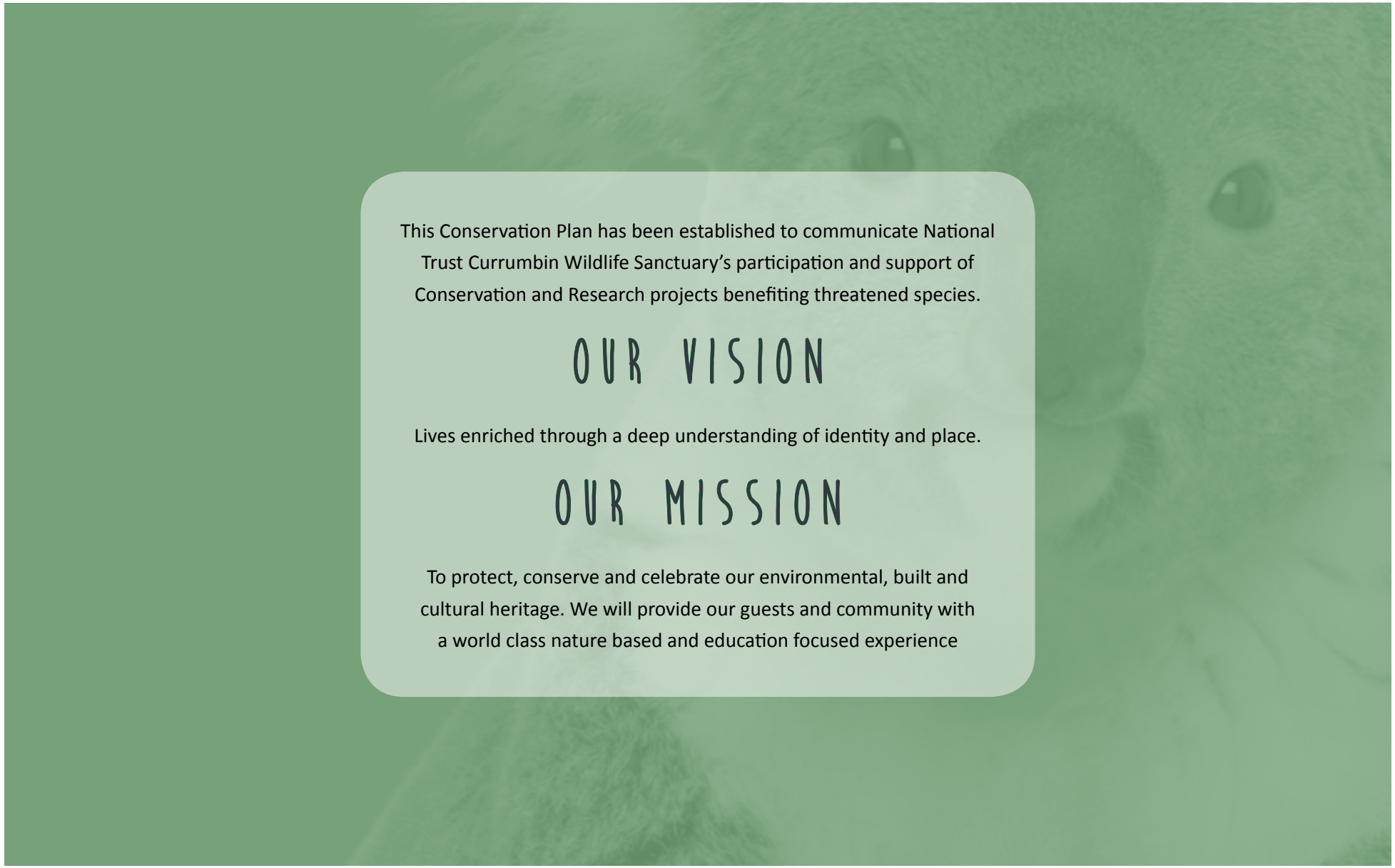


This Conservation Plan has been established to communicate National Trust Currumbin Wildlife Sanctuary's participation and support of Conservation and Research projects benefiting threatened species.

## OUR VISION

Lives enriched through a deep understanding of identity and place.

## OUR MISSION

To protect, conserve and celebrate our environmental, built and cultural heritage. We will provide our guests and community with a world class nature based and education focused experience

# MESSAGE FROM GENERAL MANAGER

National Trust Currumbin Wildlife Sanctuary has been conserving native wildlife and educating the community and our guests about our native wildlife species and their habitats for over 70 years.

I'm pleased to present the National Trust Currumbin Wildlife Sanctuary Conservation Plan for 2019-2025. This plan provides an overview of our history of contributions to vital Conservation projects, our future vision and goals.

Our contributions will help to save wildlife species from further decline through insurance populations, breeding programs, research projects and vital veterinary treatment and care.

Our team are a highly committed group of individuals that are extremely passionate about protecting our wildlife into the future. I acknowledge the work of our Conservation Project Officer and the species coordinators for each of the conservation projects we are involved in.

I am proud to ensure that the legacy of our founder, Alex Griffiths, is honoured by our efforts in protecting our precious wildlife and habitat for future generations to enjoy.

Michael Kelly
General Manager

# ALEX GRIFFITHS WHERE IT ALL BEGAN

Alex Griffiths was an Australian beekeeper, flower grower and conservationist. Alex founded the 27 hectare Currumbin Wildlife Sanctuary on his family property at Currumbin, Queensland in 1947 after he started feeding the local wild lorikeets to distract them from damaging his prize winning flowers.

Each day crowds of people would visit the Sanctuary to hold the plates of bread and honey for the birds to gather around. The lorikeet feeding then featured in the October 1956 edition of The National Geographic Magazine article titled “The Honey Eaters of Currumbin” and this attracted international awareness of the Sanctuary which saw an increase in visitor numbers.

Alex Griffiths donated the property to the people of Queensland, to be managed by the National Trust of Australia (Queensland) in 1976. Originally called the Currumbin Bird Sanctuary, we were renamed Currumbin Wildlife Sanctuary in 1995. In 2009 the Sanctuary was added to the Queensland State Heritage Register.

In 1989, the original Currumbin Wildlife Hospital was founded, and specialist veterinarians have been caring for sick, injured and orphaned wildlife ever since.

In addition to his work with native animals, Alex was active in trying to protect the natural habitat and local environment. He lobbied to stop sand mining on land adjoining the Sanctuary, raised concerns regarding the impact of gravel mining on waterways and was involved in efforts to place restrictions on the trapping of native wildlife and birds.

Today Alex’s legacy continues with Currumbin Wildlife Sanctuary home to over 900 animals and Currumbin Wildlife Hospital providing veterinary treatment to over 10,500 sick injured and orphaned wildlife patients each year.

Our Conservation Plan describes National Trust Currumbin Wildlife Sanctuary’s history, goals and vision for vital Conservation Projects as well as Currumbin Wildlife Hospital and its contribution to crucial research for the Koala and Echidna.

*Alex Griffiths – Founder Currmubin Wildlife Sanctuary*

THE NATIONAL GEOGRAPHIC MAGAZINE ARTICLE TITLED 'THE HONEY EATERS CURRUMBIN' ATTRACTED INTERNATIONAL AWARENESS OF THE SANCTUARY

# MESSAGE FROM SENIOR VETERINARIAN

I've had the good fortune of working at Currumbin Wildlife Sanctuary and Hospital since the year 2000. In that time I have seen both the Sanctuary and Hospital grow into world class facilities contributing vital conservation and research outcomes making a real difference to the fate of our native wildlife.

The passion and commitment of the staff drive the many projects, ensuring we produce significant results from the resources we have available.

In my time working as a wildlife veterinarian it has been pleasing to observe the general community becoming more and more passionate and concerned about the plight of Australia's native wildlife. While Currumbin Wildlife Sanctuary and Hospital may be doing amazing work, we will only truly make a difference if the community gets behind supporting wildlife - only together can we ensure wildlife has a secure future.

Dr Michael Pyne
Senior Veterinarian

# CURRUMBIN WILDLIFE HOSPITAL

Currumbin Wildlife Hospital provides free veterinary treatment to over 11,000 sick, injured or orphaned native animals every year. Our dedicated veterinary team and volunteers work tirelessly to treat and rehabilitate these animals and return them to the wild.

Currumbin Wildlife Hospital first opened in 1989, operating out of a small cottage, the ever growing patient admissions led to a new purpose built hospital being constructed in 2009. The hospital is well equipped and each patient receives a very high level of veterinary care.

The hospital operates a rescue ambulance and also includes extensive outdoor rehabilitation facilities to prepare patients for release back into the wild.

Sadly, almost all of the patients admitted to Currumbin Wildlife Hospital come to us as a result of human impact causing injury, illness or displacement. Habitat destruction, vehicle strikes, domestic animal attacks, introduction of pest species, poisoning and carelessly disposing of fishing tackle are just some of the many ways humans are harming our precious wildlife. Currumbin Wildlife Hospital is proud to be saving our native wildlife and helping restore the balance.

Currumbin Wildlife Hospital is funded primarily through Currumbin Wildlife Hospital Foundation with all funds raised going directly to the treatment of native wildlife for release.

## GOALS

1. Currumbin Wildlife Hospital is always looking to expand its services, we would ideally like to extend our opening hours from 8:00am-5:00pm to 8:00am-9:00pm daily to ensure wildlife injured in the early evening have an immediate treatment option. Approximate cost $70,000.
2. Many of the patients admitted through the Wildlife Hospital require hourly care throughout the night. It would be ideal to have a vet nurse stationed in the Wildlife Hospital overnight with appropriate sleeping facilities to allow for overnight care. This would include an extension to the physical hospital with appropriate facilities. Approximate cost $200,000. Ongoing operational costs: $100,000pa.
3. The Wildlife Hospital needs specialised equipment to retrieve fishing hooks from the stomach of seabirds and turtles. Approximate cost $30,000.
4. The Wildlife Hospital rehabilitation facilities need urgent upgrade to increase capacity for the ever growing admissions. Approximate cost $5,000.

To learn more or to donate please visit
https://currumbinsanctuary.com.au/hospital

# RESEARCH

Only through understanding and knowledge can we truly hope to save Australia's many vulnerable species. Currumbin Wildlife Sanctuary has a proud history of collaborating with Universities throughout Australia to unlock the secrets of our unique wildlife through vital ethically approved research projects.

The Sanctuary has contributed to many projects ranging from behavioural and dietary investigations to reproductive understanding and disease research.

Currumbin Wildlife Hospital is at the forefront of much of our research, admitting over 10,500 patients annually it is a vital source of information identifying and understanding the major threats to our native wildlife.

Sadly Australia has a very poor record when it comes to conservation of our native wildlife, Currumbin Wildlife Sanctuary will continue to invest in the future of wildlife through projects to conserve, breed and understand many species and research to find cures and preventions for the devastating diseases threatening our native animals.

# KOALA RESEARCH

*Phascolarctos cinereus*

## KOALA RESEARCH

*Koalas in Queensland, New South Wales and the Australian Capital Territory are now listed as vulnerable. National Trust Currumbin Wildlife Sanctuary has participated in countless projects to help save Australia's Koalas over the past 20 years.*

## HOW WE ARE HELPING

*Currumbin Wildlife Hospital admits almost 500 sick injured and orphaned wild Koalas every year. Just 10 years ago in 2008 we admitted only 28 Koalas; this is a 16 fold increase in Koala admissions. Sadly much of this increase is due to the devastating diseases affecting our Koalas.*

*Koala chlamydia and Koala retrovirus are both endemic diseases that are now major threats to Australia's wild Koala population. Of the almost 500 wild Koalas admitted into Currumbin Wildlife Hospital annually, well over half are positive for chlamydia.*

*Much of the research at Currumbin Wildlife Hospital is targeted at understanding, preventing and treating Koala chlamydia and Koala retrovirus. Through close collaboration with The City of Gold Coast and many universities we have contributed to research improving the treatment outcomes and assisted with the development of a Koala chlamydial vaccine that is showing promise to greatly help in the fight against this devastating disease.*

## GOAL

1. Vaccinating all Koalas released from Currumbin Wildlife Hospital. Approximate costs range from $1,000 to $50,000.
2. Research into the capture, vaccination and release of Koalas to manage chlamydia within a population of Koalas. Approximate costs range from $10,000 to $1,000,000.
3. Research into improved treatment options for Koalas suffering from chlamydia. Approximate costs range from $10,000 to $100,000.

# ECHIDNA RESEARCH

*Tachyglossidae*

## ECHIDNA RESEARCH

The Australian Short-beaked Echidna is one of only three mammals worldwide that lay eggs, making them incredibly unique and until recently very difficult to breed in captivity. Currumbin Wildlife Sanctuary has been working with The University of Queensland for the past 15 years to unlock the secrets of echidna reproduction.

## HOW WE ARE HELPING

The many years of investigation have led us to now be able to reliably breed the Short-beaked Echidna through assessment of the individual echidna fertility, careful attention to diet and husbandry along with close observation of behaviour in the lead up to mating. We have now bred a world record 19 puggles and a total collection of 25 Short-beaked Echidnas.

Currumbin Wildlife Sanctuary and The University of Queensland have recently teamed with Melbourne University to collaboratively investigate the unique reproduction and development of the Short-beaked Echidna. A significant Australian Research Council Grant is funding this research team over the next three years. The long term goal of this research is to use our knowledge to help save the endangered Long-beaked Echidna of Papua New Guinea.

## GOAL

1. To assist with a Papua New Guinea based Long-beaked Echidna conservation project. Approximate costs for the elements required to make this goal a success range from $100,000 to $1,000,000.
2. Continue with our breeding success and formalise our knowledge and skill-sets into a written piece of work that can be shared with other zoological institutions to improve captive breeding success. Cost: $10,000
3. Upgrade our Echidna Research Facility to world-class standard. This includes the built facility, cameras, video/audio recording equipment and data storage. Cost: $500,000

# MESSAGE FROM THE CONSERVATION OFFICER

National Trust Currumbin Wildlife Sanctuary has a proud heritage of conserving native wildlife through the lifelong efforts of our founder, Alex Griffiths. We all work to continue the legacy of Alex through our many conservation and research projects complemented by the vital work of Currumbin Wildlife Hospital.

It may be difficult to believe but Australia has the worst mammal extinction rate in the world and almost 30% of our surviving mammal species are threatened with extinction. The associated loss of biodiversity and crash of ecosystems have far reaching impacts that affect every one of us.

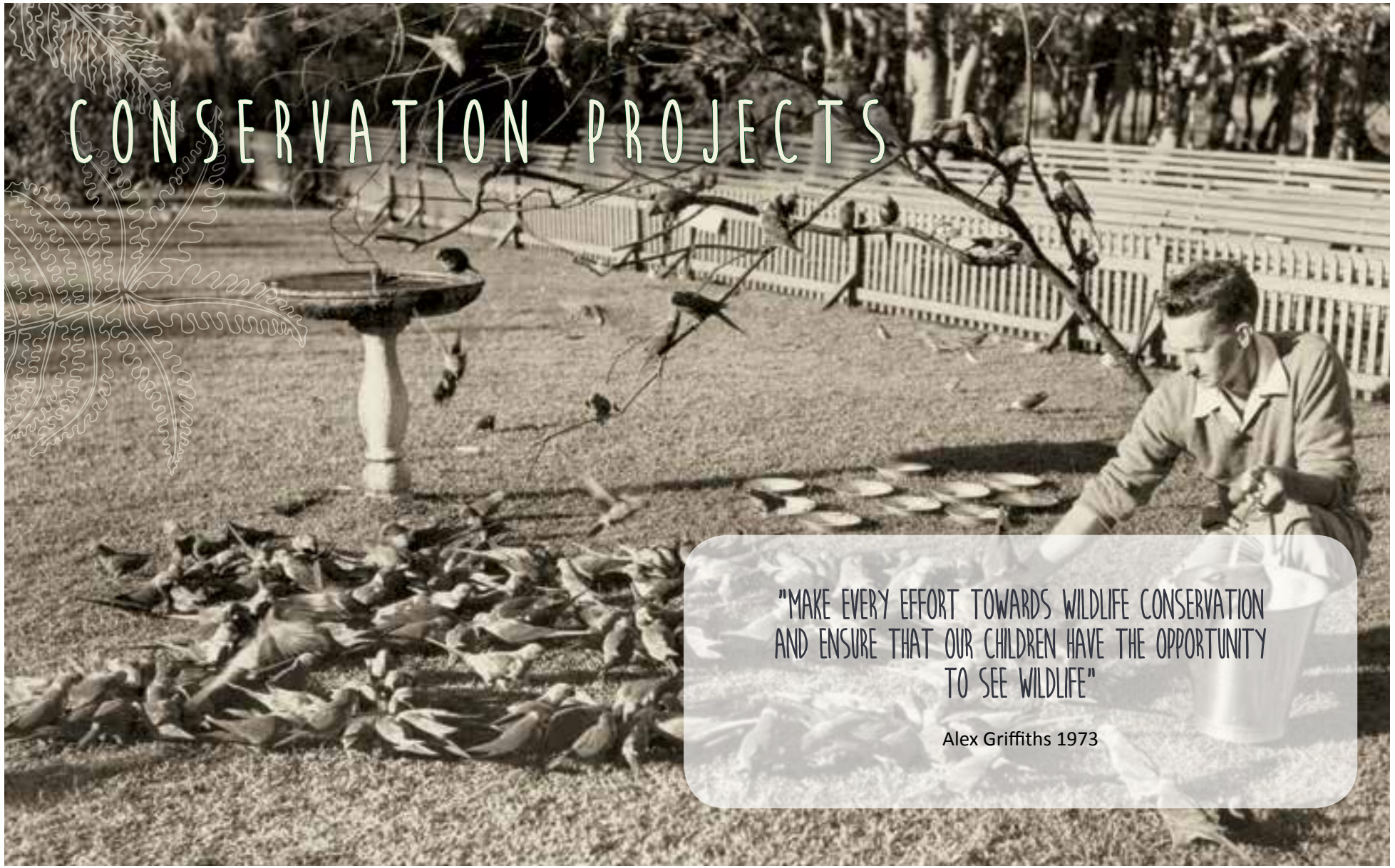
The time to act is now; many of our native wildlife species need urgent help. National Trust Currumbin Wildlife Sanctuary has taken the lead in the recovery programs of a number of critically endangered species and works collaboratively on many other crucial conservation projects.

We all have the ability to make a change, to take responsibility for the choices we make and reduce our impact on wildlife and their habitat.

If each of us made one small positive change we could make a big difference together.

Tammy Hogan
Conservation Projects Officer

# CONSERVATION PROJECTS



"MAKE EVERY EFFORT TOWARDS WILDLIFE CONSERVATION AND ENSURE THAT OUR CHILDREN HAVE THE OPPORTUNITY TO SEE WILDLIFE"

Alex Griffiths 1973

# CONSERVATION PROJECT TIERS

Currumbin Wildlife Sanctuary is actively involved in 17 Conservation Projects and our contribution type varies amongst each of them. For the purposes of this plan we have placed each of the projects into one of three categories described as tiers of involvement. Below is an explanation of each tier.

## TIER ONE

Is a key Conservation Project of which we lead the way with a very high level of contribution in multiple areas of the project. Our contribution priorities include but are not limited to:

- Assessing habitat
- Monitoring wild populations
- Establishing husbandry protocols and procedures to ensure successful captive breeding and care
- Captive breeding program
- Caring for insurance populations
- Education
- Fundraising and awareness

## TIER TWO

Is a Conservation project which we participate in a captive breeding program for a species. In addition our contributions priorities include but are not limited to:

- Caring for insurance populations
- Education
- Fundraising and awareness

## TIER THREE

Is a Conservation project of which our contribution priorities include but are not limited to:

- Caring for insurance populations
- Education
- Fundraising and awareness

# AVIAN CONSERVATION PROJECTS

22 AUSTRALIAN NATIVE BIRDS HAVE BEEN DECLARED EXTINCT SINCE EUROPEAN SETTLEMENT

## EASTERN BRISTLEBIRD

*Dasyornis brachypterus*

## CONSERVATION STATUS:

Critically Endangered

## PROJECT TIER:

One

## SPECIES INFORMATION:

The Eastern Bristlebird is a small, brown, well-camouflaged, ground-dwelling bird. It is generally shy and cryptic, spending most of its time in low, dense vegetation and rarely appearing in the open or flying. The species has contracted to four genetically isolated populations in three disjunct areas of south-eastern Australia: south-eastern Queensland/north-eastern NSW (northern population), the Illawarra and Jervis Bay regions of eastern NSW (central populations) and the NSW/Victorian border coastal region (southern population). Each of the geographically separate regional populations is comprised of one or more disjunct local populations or colonies.

## THREATENING PROCESSES:

The northern Eastern Bristlebird *Dasyornis brachypterus monoides*, is one of the most critically endangered populations with less than 40 individuals estimated to remain in the wild. This population is found only in south-eastern Queensland and north-eastern New South Wales and faces extinction in the wild from threatening processes such as habitat loss, grazing and predation.

## BACKGROUND OF PROJECT:

National Trust Currumbin Wildlife Sanctuary in conjunction with the New South Wales Office of Environment and Heritage (NSW OEH) manages the captive breeding program for the northern Eastern Bristlebird population. This captive program serves as an insurance population to increase Bristlebird numbers through captive breeding and collection of eggs and/or chicks from the wild to form additional founders for breeding.

## GOALS

The long-term objective of this Eastern Bristlebird recovery program is the stabilisation of all populations. This will involve enhancing the northern population to a viable size, maintaining the stability of the central populations, and establishing an additional southern population in Victoria, bringing the size of the southern population to a viable level. Attaining this long-term objective will involve the protection and management of habitat, the management of threats and enhancement of wild populations through captive breeding, augmentation and reintroduction.

1. Construction of additional breeding facilities to increase the number of birds for release. Cost $80,000
2. Construction of pre-release holding and conditioning aviaries. Cost $25,000
3. Support annual releases to the wild. Cost $20,000pa
4. Please see Item 1 for upgrades to Threatened Avian Species Facilities.

# REGENT HONEYEATER

*Anthochaera phrygia*

## CONSERVATION STATUS:

Endangered

## PROJECT TIER:

Two

## SPECIES INFORMATION:

A woodland Honeyeater found on the western slopes of the Great Dividing Range in south eastern Australia. It is a distinctive member of the box-ironbark woodland community and is often cited as a flagship species for the conservation of this habitat.

The current distribution of the Regent Honeyeater is extremely patchy, with a small number of known breeding sites. Formerly distributed in south-eastern Australia from the Adelaide region (South Australia) to 100km north of Brisbane (Queensland), there has been a clear contraction in the Regent Honeyeater's range.

Regent Honeyeaters may use different areas in different years depending on food resources. They may move large distances to do this although more research is required to confirm the regularity and extent of this behaviour

## THREATENING PROCESSES:

The Regent Honeyeater has recently been upgraded to Critically Endangered on the list of threatened species under the Environment Protection and Biodiversity Conservation Act 1999. The species is believed to have undergone a population decline of > 80% within three generations (Garnett et al, 2011). The probable major cause of long-term decline is the clearing and fragmentation of woodland and forest habitat containing the bird's preferred eucalypt species. The major continuing threat is habitat degradation, particularly on-going reductions in habitat quality, lack of regeneration of key habitat types, and potentially altered flowering patterns of preferred habitat. The species also faces increased competition from larger, more aggressive nectivores, such as the noisy friarbird *(Philemon corniculatus)*, Red Wattlebird *(Anthochaera carunculata)* and the Noisy Miner *(Manorina melanocephala)*. Recent research also suggests nest predation is impacting the species' ability to recruit sufficiently in favourable years. Improvement in the extent and quality of preferred Regent Honeyeater habitat is the key conservation objective of the recovery plan.

## BACKGROUND OF PROJECT:

A National Recovery Program for the species was commenced in 1996. The instigation of the Recovery Program precipitated a range of field studies to build a better understanding of the Regent Honeyeater's biology. Concurrently Taronga Zoo focused on documenting the husbandry requirements for maintaining the species in captivity. Updated Recovery Plans in 1999, (Menkhorst, Schedvin, and Geering) and 2009 (Geering and Ingwersen) expanded the captive role to include breeding for release opportunities.

The aim of zoo-based management is to provide Regent Honeyeaters suitable for release to the wild to assist persistence of the wild population, i.e. birds that are reproductively and behaviourally robust, and healthy.

## GOALS:

1. Continue to contribute to maintaining the zoo-based population at a size which will provide adequate birds to:

- provide insurance against demise in the wild population;
- continuously improve zoo-based breeding and husbandry techniques;
- provide adequate stock for trials of release strategies ;
- retain 90% of the wild-sourced heterozygosity upon which the zoo population is founded.

2. Continue to educate and gain awareness for this endangered species through education programs, interpretation and social media.
3. Please see Item 1 for upgrades to Threatened Avian Species Facilities

# GLOSSY BLACK-COCKATOO

*Calyptorhynchus lathami*

## CONSERVATION STATUS:

Vulnerable

## PROJECT TIER:

Two

## SPECIES INFORMATION:

Glossy Black-Cockatoos are one of the more threatened species of cockatoo in Australia. They have a very restricted diet, feeding only on the seeds in cones of she-oaks (*Casuarina and Allocasuarina*) and only on selected individual trees. They can fly more than 10km to feeding areas and will return to the same food tree time and time again, often ignoring nearby trees that are full of cones, but these patterns of feeding are poorly understood.

Breeding occurs every two years with a single egg being laid in late January to early June with a longer nestling period than any other cockatoos (up to 90 days). The young are dependent on the parents for at least 12 months.

Large hollow bearing trees are needed for breeding, emphasising the need to retain remnant vegetation in these areas just as much as food trees. Glossy Black-Cockatoo are known to have a life span that can exceed 30 years.

## THREATENING PROCESSES:

Clearing of these food trees and general habitat destruction is the most significant threat this species faces. The Glossy Black-Cockatoo is a specialist species, it relies on a combination of resources across the wider landscape. The loss of feed trees, nesting sites, roosting areas and water holes can compromise the ability of the species to survive in the wild. Past coastal development and clearance of suitable feeding habitat for agriculture have reduced its range and substancially reduced its overall abundance.

## BACKGROUND OF PROJECT:

The Glossy Black Conservancy was officially formed in 2005, as a partnership between government, community groups and businesses to facilitate the management and conservation of the species in the region.

The principal guidelines are to:

- coordinate the assessment of Glossy Black-Cockatoo resources across local government areas in south-east Queensland;
- engage with the community to assist in record collection;
- manage a central database of Glossy Black-Cockatoo records which can be accessed by government agencies;
- continue research aimed at increasing current knowledge of the species' use of pioneer vegetation, fidelity to individual feed trees, requirement for nesting hollows and diurnal and seasonal range, with a priority to map vital resources for Glossy Black-Cockatoo in south-east Queensland;
- develop a Regional Management Plan for the Glossy Black-Cockatoo.

## GOALS:

1. National Trust Currumbin Wildlife Sanctuary has actively supported the Glossy Black-Cockatoo Conservancy by participating in field surveys and information sessions to educate public on identification techniques for identifying Glossy Black-Cockatoo in the wild. We will continue to engage in these activities.
2. Maintain a breeding pair of Glossy Black-Cockatoo to continue husbandry techniques, breeding success and education.
3. Education and awareness through education programs, interpretation and social media. New interactive interpretation cost: $10,000
4. Document husbandry and breeding achievements for this species to ensure quality breeding programs are established and maintained.
5. Please see Item 1 for upgrades to Threatened Avian Species Facilities.

# COXEN'S FIG-PARROT

*Cyclopsitta diophthalma coxeni*

## CONSERVATION STATUS:

Endangered

## PROJECT TIER:

Two

## SPECIES INFORMATION:

Coxen's Fig-parrot, long considered to be a subspecies of the Double-eyed Fig-parrot *Cyclopsitta diophthalma*, and was recently split off by del Hoyo et al. (2014) as a species in its own right, i.e. *Cyclopsitta coxeni*. It is restricted to south-east Queensland and far north-east New South Wales, and is listed as endangered in both range states (Qld: *Nature Conservation Act 1992*; NSW: T*hreatened Species Conservation Act 1995*) and nationally (E*nvironment Protection and Biodiversity Conservation Act 1999*), although Birdlife International (2016) assesses it as Critically Endangered.

## THREATENING PROCESSES:

Clearing of rainforest habitat and fig trees for farms for agricultural purposes and residential development is one of the biggest threats faced by this species. The species survival is in jeopardy from the dissection of habitat corridors by roads and inappropiate burning of rainforest. Other threats include illegal bird trapping and egg collection, low numbers reducing available breeding partners and invasion of weeds, particularly exotic vines.

## BACKGROUND OF PROJECT:

An important component of the national recovery plan for the species (Coxen's Fig-parrot Recovery Team 2001) is to establish where extant populations occur and to gather information about temporal usage of occupied habitat. Surveys by ornithologists to locate individuals by visual means have had some success but are hampered by the critically small population size of Coxen's Fig-parrot (estimated at only 100 mature individuals [Garnett et al. 2011]), compounded by the bird's small size, cryptic colouration and highly mobile lifestyle.

National Trust Currumbin Wildlife Sanctuary first became involved in the conservation of Fig-parrots in 1985 when it helped sponsor a search for Coxen's Fig-parrot carried out by the Royal Australian Ornithologists Union (RAOU) now known as Birdlife Australia. The Sanctuary has been a member of the Coxen's Fig-parrot Recovery Team since it was formed in 1993.

The Sanctuary commenced a breeding program for the Macleay's (Red-browed) Fig-parrot as an analogue for the Coxen's Fig-parrot. Due to the non-existence of *C. coxeni* in captivity preliminary work is undertaken on the Macleay's Fig-parrot to develop appropriate husbandry methodology and reliable breeding techniques. The scarcity of information on natural history, breeding behaviours and requirements for *C. coxeni* means that the results collected so far on the analogue Macleay's Fig-parrot will ultimately form the guidelines for the captive husbandry of Coxen's Fig-parrot once it is brought into captivity. In addition to the general biological data gathered on C.d. macleayana various nesting manipulations and trials have been run to determine whether this northern subspecies will serve as successful and reliable fosters for Coxen's Fig-parrot eggs and chicks. This information is vitally important to the initiation of a captive recovery program for Coxen's Fig-parrot because founder stock will

consist of eggs or chicks collected from wild nests. Macleay's Fig-parrots will be used initially as fosters to incubate and rear Coxen's Fig-parrots until such time that there are sufficient numbers to establish breeding pairs.

To date, most sightings of the Coxen's Fig-parrot have been opportunistic. Even when such sightings seem credible, the cost and practicality of establishing a subsequent comprehensive visual monitoring program to confirm the records at these locations are preclusive.

Investigating novel survey methodologies is another component of the national recovery plan. Acoustic remote sensing offers a cost effective method to monitor sites with a history of Coxen's Fig-parrot observations. Critical to any acoustic remote sensing project is automated methodology to detect target signals from within the extensive acoustic datasets resulting from months to years at multiple sites. In 2008, the recovery team began trialling acoustic remote sensing as a potential detection tool for locating Coxen's Fig-parrot. This area of technology has vastly improved in recent years and the recovery team has been working to develop this tool further.

National Trust Currumbin Wildlife Sanctuary has played an integral role with helping to establish and decipher signals of Fig-parrots to develop acoustic recognisers both insitu and exsitu which will be used as tools to help locate Coxen's Fig-parrots. This work is ongoing.

## GOALS:

The long-term objective of the Coxen's Fig-parrot Recovery Program is the stabilisation of the species. This will involve locating birds in the wild and establishing a captive insurance population (initially from eggs and chicks). Attaining this long-term objective will involve the protection and management of habitat and the management of threats and enhancement of wild populations through captive breeding, augmentation and reintroduction.

1. Education and awareness through education programs, interpretation and social media. New interactive interpretation cost: $10,000
2. Please see Item 1 for upgrades to Threatened Avian Species Facilities

# ORANGE-BELLIED PARROT

*Neophema chrysogaster*

## CONSERVATION STATUS:

Critically Endangered

## PROJECT TIER:

Two

## SPECIES INFORMATION:

The Orange-Bellied Parrot is a small grass parrot and as it's name suggests, has an orange patch on it's belly. They migrate between the Australian mainland and Tasmania, spending Summer breeding in Tasmania and Winter in coast Victoria and South Australia. The nest in hollows of Eucalypt trees near Button-grass plains in South-west Tasmania. Sadly the are one of Australia's most threatened species, with less than 50 parrots thought to exist in the wild today.

## THREATENING PROCESSES:

The species is at risk of extinction in the wild in the near-term. Current knowledge suggests that habitat loss and degradation, particularly in the non-breeding range has caused the decline. Low breeding participation by females has been implicated in recent declines (2000-2010), and may be a consequence of low food availability due to loss or inappropriate management of habitat, or the impacts of drought on habitat condition. The species is also at risk from climate change, and the small population size places the species at increased risk from factors such as loss of genetic diversity and inbreeding, unpredictable environmental events, predators and competitors, disease, and barriers to migration and movement.

## BACKGROUND OF PROJECT:

The Orange-bellied Parrot has been the subject of National Recovery Plans since 1984. The recovery program has included the following broad strategies since that time:

- increase knowledge about the species ecology and threats;
- survey and monitor the wild population;
- manage habitat to support recovery;
- establish a captive insurance population, and
- develop captive-breeding and release techniques to support recovery of the wild population.

## GOALS:

Due to the critically endangered status of this species in the wild, the captive population serves as both an insurance population and a source of birds for release into the wild population. The captive population also provides birds for display to promote conservation and awareness.

Future goals include:

1. Contonue to contribute to maintaining the zoo based population of captive birds;
2. Support field work and surveys; protect and enhance habitat to maintain, and support growth of, the wild population.
3. Education and awareness through education programs, interpretation and

social media. New interactive interpretation cost: $10,000

4. Please see Item 1 for upgrades to Threatened Avian Species Facilities.

# SOUTHERN CASSOWARY

*Casuarius casuarius johnsonii*

## CONSERVATION STATUS:

Endangered

## PROJECT TIER:

Three

## SPECIES INFORMATION:

A striking flightless bird with glossy black plumage, the adult Southern Cassowary has a tall, brown casque (helmet) on top of its head, a vivid blue and purple neck, long drooping red wattles and amber eyes.

The Southern Cassowary has coarse hair-like feathers with no barbules, and also lacks tail feathers. It's wing stubs carry a small number of long, modified quills which curve around the body. Each heavy, well-muscled leg has three toes, with the inside toe bearing a large dagger-shaped claw (up to 120 mm long) used for scratching and fighting other birds.

Adult cassowaries can grow to an imposing 2 metres tall. In general, the sexes are fairly similar in appearance, though females are slightly larger and can weigh up to 76kg. Males can weigh up to 55kg.

At the time of the European sttlement of Australia, the Southern Cassowary lived in tropical rainforests of north-east Queensland, from Paluma Range to the top of Cape York.

## THREATENING PROCESSES:

A number of factors affect Southern Cassowary survival. The major threats include the loss, fragmentation and modification of habitat, vehicle strikes, dog attacks, human interactions, damage caused by feral pigs, disease and natural catastrophic events.

Southern Cassowary habitat, particularly on the coastal lowlands, has been seriously reduced by land clearing for farming, urban settlement and other development. Urban development continues to threaten the populations that occur outside protected areas.

## BACKGROUND OF PROJECT:

The Recovery Plan actions for the Southern Cassowary strive to secure the long-term protection of the species through improved habitat protection and enhancement, threat abatement and community engagement programs.

Local residents in Southern Cassowary areas are establishing nurseries of Southern Cassowary food plants to revegetate their habitat on cleared land, and create corridors between existing patches of habitat.

The Queensland Department of Environment and Science has mapped the habitat of the Southern Cassowary. This information can then be considered when assessing future developments by state and local governments to protect Southern Cassowary habitat.

A method for estimating Southern Cassowary abundance from genetic material in Southern Cassowary scats is being developed by the CSIRO. Recent work has shown that cells from the stomach lining of cassowaries are passed out

in their scats, and with collection and analysis of these scats it may be possible to identify the sex and genetic code of each bird. These results may help to estimate the size of populations, as well as how far birds move and their breeding patterns.

## GOALS:

Southern Cassowary at National Trust Currumbin Wildlife Sanctuary are currently maintained for education purposes, to ensure the public are aware of the current demise and threats associated with this species in the wild.

Our cassowary pair is aging with our female in the post reproductive age bracket.

1. Acquire a younger breeding pair to become actively involved in the breeding of this species and to contribute to the on-going documentation and understanding of husbandry and breeding requirements (currently cassowary are not reliably bred in captivity).
2. Education and awareness through education programs, interpretation and social media. New interactive interpretation cost: $10,000
3. Establish a native food plantation to supplement Cassowary diet requirements cost: $5000
4. Construct a 3rd enclosure to house a trio of cassowaries $30,000

# ITEM 1 AVIAN CONSERVATION PROJECT FACILITIES

National Trust Currumbin Wildlife Sanctuary contributes to six avian conservation programs including the critically endangered Eastern Bristlebird. In order to support these programs and give our full potential to these species we require additional purpose built enclosures to accommodate breeding pairs and offspring. Our goal is to construct a purpose built multi-avian species facility incorporating an incubation and hand rearing room capable of powering multiple incubators and brooders. This facility would allow for us to increase species numbers through artificial incubation and hand rearing along with standard breeding techniques.

This facility would allow visitors to National Trust Currumbin Wildlife Sanctuary to view inside the incubation room and appreciate the work done by our dedicated zookeepers. The rest of the facility would be state of the art with visitor walk throughs, appropriate interpretation and creative habitat design.

It is proposed that this facility would replace both the current 'Conservation and Rainforest Aviaries' within the site and would be built in a new location combining all species.

Approximate cost $750,000

# AMPHIBIAN CONSERVATION PROJECT

4 AUSTRALIAN NATIVE FROGS HAVE BEEN DECLARED EXTINCT SINCE EUROPEAN SETTLEMENT

# KROOMBIT TINKERFROG

*Taudactylus pleione*

## CONSERVATION STATUS:

Critically Endangered

## PROJECT TIER

One

## SPECIES INFORMATION:

Queensland hosts the highest number of extinct (or presumed extinct) and critically endangered frog species in Australia. Amongst these species are five of the six species of Tinkerfrogs, genus *Taudactylus*. The Tinkerfrog's are a group of small myobactrachid frogs that live in mountain stream environments and are endemic to eastern Queensland. These tiny frogs are cryptic and rarely seen, though they have a prominent and enchanting vocalisation reminiscent of the 'tinking' sound made by tapping on a crystal glass.

## THREATENING PROCESSES:

Kroombit Tinkerfrogs are known from only 12 small rainforest patches along the eastern escarpment of Kroombit Tops in central Queensland. The area of known habitat is less than 600ha in size. The threats and issues of greatest concern for the Kroombit Tinkerfrog are Amphibian chytrid fungus.

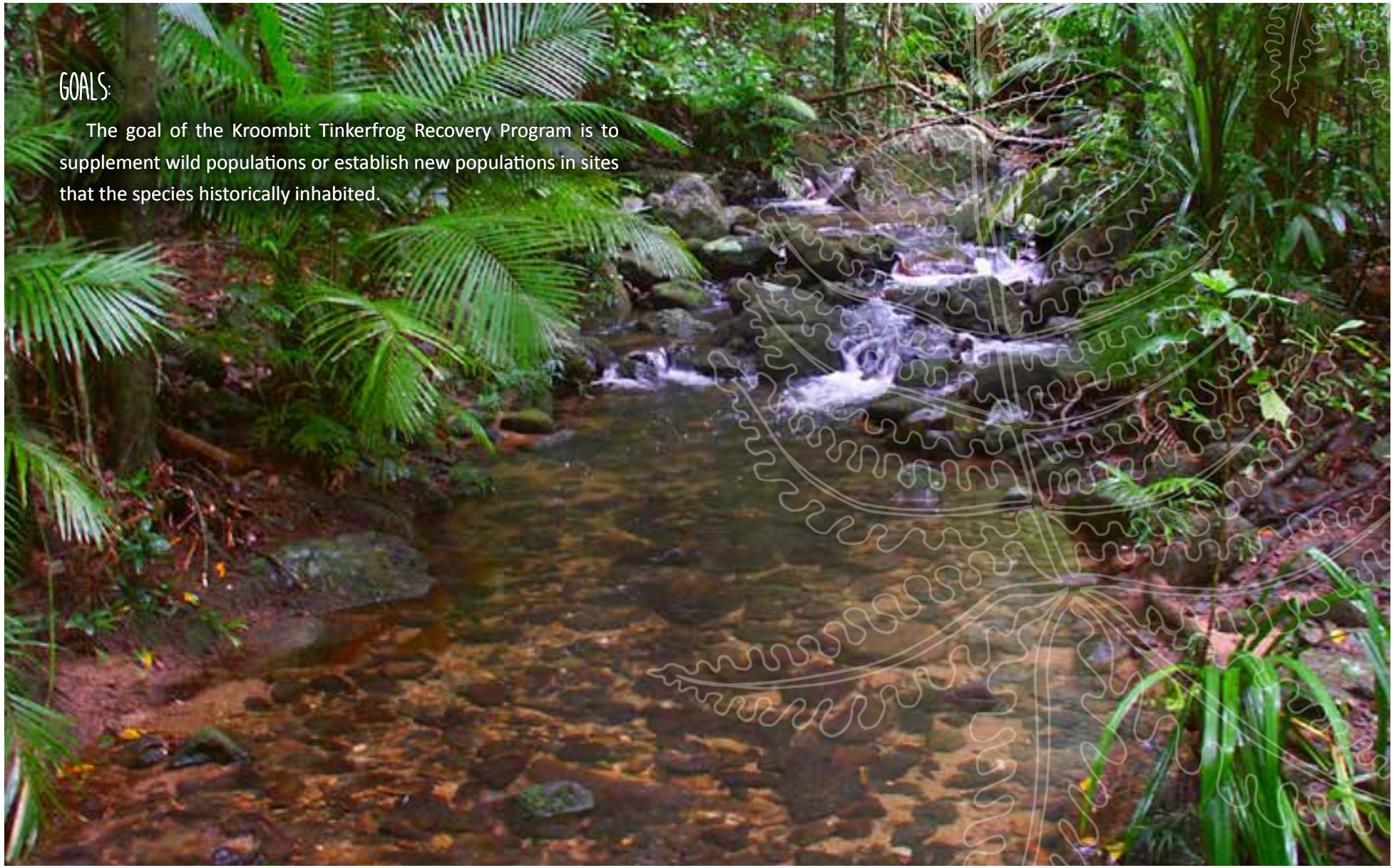
## BACKGROUND OF PROJECT

**Phase 1: Liem's Tinkerfrog**

As part of the recovery process for the Kroombit Tinkerfrog, Griffith University and National Trust Currumbin Wildlife Sanctuary joined forces in 2009 and initiated a captive breeding program for the Liem's or Eungella Tinkerfrog (*T. liemi*) as an analogue species for the Critically endangered Tinkerfrog species. The success of the program with *T. liemi* provided valuable knowledge on husbandry and breeding techniques that we are now transferring to a husbandry program for the Kroombit Tinkerfrog, to bring them back from the brink of extinction. The success of keeping and breeding *T.liemi* in captivity enabled the second phase of the Tinkerfrog recovery program to commence.

**Phase 2: Saving the Kroombit Tinkerfrog**

The second phase of the Tinkerfrog recovery program is a collaborative project by the Queensland Department of National Parks, Sport and Racing and National Trust Currumbin Wildlife Sanctuary. This phase involves the collection of Kroombit Tinkerfrogs from the wild followed by maintaining and breeding them in captivity. The founder frogs are held at the Frog Conservation and Research Facility located at the Sanctuary. They are under the experienced care of our reptile and amphibian keepers, with input from a range of amphibian conservation biologists.



## GOALS:

The goal of the Kroombit Tinkerfrog Recovery Program is to supplement wild populations or establish new populations in sites that the species historically inhabited.

The success of this program may be the difference between the extinct or extant for this species that is balancing on the brink.

Looking beyond the Kroombit Tinkerfrog Recovery Program, there are other species of frog (including other Tinkerfrog species) that need our help. Given further collaboration with key stakeholders as well as financial support, we hope to expand our frog conservation program to not only save the Kroombit Tinkerfrog but hopefully other at risk species too.

1. Monitoring equipment

So little is known about the cryptic lives of Tinkerfrogs; neither the eggs nor tadpoles in this species have ever been observed. Camera and recording equipment will give us the insight we need into the behaviours of this little known species. Approximate cost: $5000

2. Education

*Audio visual equipment and documentary development*

We will produce a documentary covering the threats that Tinkerfrogs as well as other frog species in Queensland face. This documentary will cover actions that viewers can take to support frog conservation. This documentary will be displayed at National Trust Currumbin Wildlife Sanctuary's Tinkerfrog Conservation and Research Facility and be used externally to raise awareness. Approximate cost: $10,000

*Frog Pond*

We will design and construct a frog pond which will be used as an education tool for students. The interpretation will focus on requirements of our local frogs, the importance of caring for ecosystems and the connectivity of all life. The pond will include interactive activities and audio buttons to showcase the Tinkerfrog call as well as the calls of multiple frog species. Approximate cost: $20,000

3. Breed for Research and Release

Currently our experienced reptile and amphibian keepers care for a small number of frogs. Once breeding commences we will have potentially hundreds of offspring that will require specialist care. This program would benefit immensely from additional staff and researchers to care for and monitor these frogs prior to release. Approximate ongoing cost: $25,000pa

4. Field research

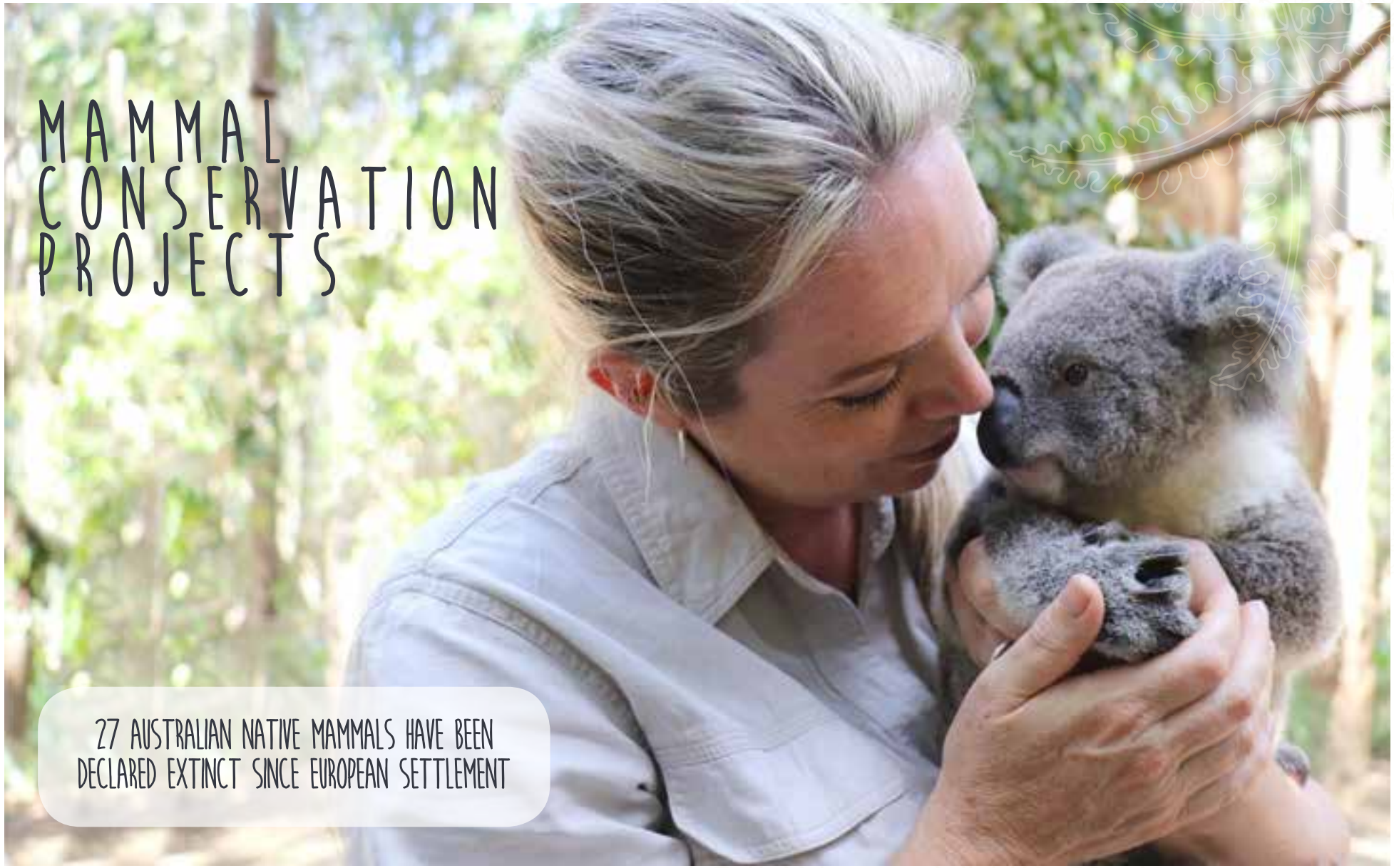
Our reptile and amphibian keepers will assist in QNPWS fauna surveys at Kroombit Tops National Park to gain an in-depth understanding of the habitats where Kroombit Tinkerfrog's live. Working closely with personnel involved in the project will facilitate the exchange of knowledge between staff working with this species in the field and those managing captive populations. Approximate cost: $5,000 p.a.

5. Working with additional Critically Endangered amphibian species

We aim to expand our conservation work to additional critically endangered Queensland amphibian species. We hope to expand our Frog Conservation and Research Facility to accommodate an additional species. It is proposed that as part of a future Reptile and Nocturnal exhibit upgrade, that a research facility be included in the new design. This would allow visitors to see inside the research facilities and appreciate the work being done.

The facility would feature state of the art equipment, including scientific equipment, ponds, tanks, filtration, climate control, noise protection and interpretation. This would however require significant financial support. Approximate cost: $500,000

# MAMMAL CONSERVATION PROJECTS



27 AUSTRALIAN NATIVE MAMMALS HAVE BEEN DECLARED EXTINCT SINCE EUROPEAN SETTLEMENT

# GREATER BILBY

Macrotis lagotis

## CONSERVATION STATUS:

Endangered

## PROJECT TIER:

Two

## SPECIES INFORMATION:

Bilbies are shy, nocturnal creatures native to Australia's desert regions. The Greater Bilby has a distinctive white-tipped tail, long and highly sensitive ears and a pointed snout. They are nocturnal animals and spend their nights digging burrows or searching for plant bulbs, seeds or insects to eat.

## THREATENING PROCESSES:

It is estimated that there are between 400 and 600 Greater Bilbies remaining in the wild in Queensland. This population is scattered over 100,000sq.km in far western Queensland and is the most threatened population of bilbies in Australia. They face ongoing threats from feral cats, foxes, rabbits and habitat change.

## HISTORY

The conservation of the Greater Bilby in Queensland requires the provision of controlled and suitable habitat free from feral cats and foxes in order to manage the existing population.

There has been some success with a Bilby fence at Currawinya National Park which completed construction in 2002. This fence was designed to protect Bilbies from feral animals and predators to enable them to live and breed in safety.

There is ongoing research to better understand how Greater Bilby populations are changing over time.

## GOALS

As one of Queensland's fifteen endangered mammals, the Greater Bilby is the subject of intense conservation efforts.

Our plan is to continue breeding this species into the future contributing to the Australia wide efforts of protecting this species from extinction.

1. Support the Save The Bilby Fund through on-going fundraising and awareness.
2. Participate in the 2019 Bilby Tracks Expedition. Approximate cost $3,500 per person
3. Design and construct a purpose built Bilby breeding facility with optimal nocturnal display facilities and suitable off display enclosures for nurturing the young. Approximate cost $200,000


Greater Bilby

# TASMANIAN DEVIL

*Sarcophilus harrisii*

## CONSERVATION STATUS

Endangered

## PROJECT TIER

Three

## SPECIES INFORMATION

Tasmanian Devils are shy creatures which often scavenge dead animals rather than kill their own prey. The Tasmanian Devil can consume an entire animal including bones, fur and scales. They can consume more than 10% of their body weight in one meal. Tasmanian Devils once roamed the mainland, however can now only be found in the wilds of Tasmania. It is estimated that over 90% of the Tasmanian Devil population has been wiped out by Devil Facial Tumour Disease (DFTD). National Trust Currumbin Wildlife Sanctuary is currently home to a small number of Tasmanian Devils.

## THREATENING PROCESSESS

Devil facial tumour disease is the biggest threat faced by this species however they also fall victim to vehicle hits. Low genetic diversity is also a concern and it is believed to be a contributing factor in the spread of DFTD.

## BACKGROUND OF PROJECT

National Trust Currumbin Wildlife Sanctuary has been a part of the Save the Tasmanian Devil Program (STDP) from its conception. The STDP is an initiative of the Australian and Tasmanian governments. It was established in 2003 following a national workshop of specialists on the decline of the Tasmanian Devil due to Devil Facial Tumour Disease (DFTD). Working with Trowanna Wildlife Sanctuary our staff became some of the first trained on the mainland as part of the project.

National Trust Currumbin Wildlife sanctuary has bred nine Tasmanian Devils on site as part of the project and over 500 Tasmanian Devils have been bred collaboratively throughout Australian Zoos and Sanctuaries. This project has now gone to an international level with animals now held in several international facilities.

## GOALS

1. Tasmanian Devils are a studbook managed species acting as an insurance population- we will continue to follow breeding recommendations from species managers and studbook keepers.
2. Interactive educational interpretation which will be used as a tool to educate guests and school children on this species and the threats it faces. Approximate cost: $15,000
3. Design and construct a new purpose built Tasmanian Devil facility allowing us to accommodate additional Tasmanian Devils onsite. This facility would enable us to make a greater contribution to the breeding component of this project. This facility would feature an enclosed air conditioned walkthrough for visitors to see inside the Tasmanian Devils lairs along with creative interpretation. Approximate cost $300,000

*Tasmanian Devil*

# KOALA

*Phascolarctos cinereus*

## CONSERVATION STATUS

Vulnerable

## PROJECT TIER

Two

## SPECIES INFORMATION

National Trust Currumbin Wildlife Sanctuary is home to over 50 Koalas and currently manages over 100 Koalas including overseas populations. These arboreal marsupials eat up to one kilogram of Eucalyptus leaves per day. Australia has nearly 900 native Eucalyptus species; the Koala uses its sensitive nose to detect the 30-40 species they enjoy. The Koala's closest living relative is the wombat.

## THREATENING PROCESSES

This iconic Australian species is under threat from habitat destruction, disease, and human impact injuries such as dog attacks and vehicle strikes. Many Koala populations are thought to have disappeared or are in serious decline.

## BACKGROUND OF PROJECT

In 2004, National Trust Currumbin Wildlife Sanctuary teamed with the University of Queensland to produce the very first Koala joey ever born from artificial insemination. This was the start of an important future resource for wild koalas and ensuring their genetic diversity.

## GOALS

1. Secure additional land for future plantations providing precious habitat to native local wildlife as well as food for both our captive collection of koalas and sick, injured and orphaned koalas in care at Currumbin Wildlife Hospital. Approximate cost $80,000.
2. Interactive educational interpretation which will be used as a tool to educate guests and school children on this species and the threats it faces. Approximate cost: $15,000.
3. National Trust Currumbin Wildlife Sanctuary will assist the City of Gold Coast with Koala monitoring and workshops in our local areas and koala habitat by attending information sessions, seminars and field work.

*Koala*

# MAHOGANY GLIDER

*Petaurus gracilis*

## CONSERVATION STATUS

Endangered

## PROJECT TIER

Two

## SPECIES INFORMATION

The Mahogany Glider is a small gliding marsupial occurring in Queensland. It is nocturnal, elusive and silent for much of the time. The Mahogany Glider, in common with other gliders, has a fold of skin which stretches between the front and rear legs. This acts as a parachute enabling individuals to glide for distances averaging 30 metres and sometimes longer. The long tail is used for stabilisation especially when coming in to land on tree trunks.

Mahogany Gliders are much larger than their closest relative, the Squirrel Glider, with which they may be confused in the wild.

## THREATENING PROCESSES

Clearing has had a dramatic impact on Mahogany Glider habitat and has resulted in severely fragmented habitat for this species. Altered fire regimes, weed invasion and intensive grazing threaten the structure and ecological integrity of these remaining fragments.

## BACKGROUND OF PROJECT

The Australian captive breeding program is in place to maintain genetic diversity for this species. National Trust Currumbin Wildlife Sanctuary has bred multiple Mahogany Glider joeys as part of this program.

## GOALS

The Mahogany Glider is a studbook managed species. National Trust Currumbin Wildlife Sanctuary will continue to follow breeding recommendations for the management of this species.

There is a Mahogany Glider Recovery Plan in place prepared for the Queensland Government by The Mahogany Glider Recovery Team. National Trust Currumbin Wildlife Sanctuary will review and support this plan through our captive breeding program supporting a healthy captive population of Mahogany Gliders.

*Mahogany Glider*

# BRUSH-TAILED ROCK-WALLABY

*Petrogale penicillata*

## CONSERVATION STATUS

Near Threatened

## PROJECT TIER

Three

## SPECIES INFORMATION

The Brush-tailed Rock-wallaby has a distinctively brushy tail as their name suggests. They are a medium sized wallaby with the adults ranging from six to eight kilograms. Brush-tailed Rock-wallabies are very agile, moving confidently and swiftly around their rocky habitat using their long, thickly furred tail for balance and padded feet for grip. They have very distinctive facial markings with a white cheek stripe and a black stripe from the eye to the back of the head. Their brown bodies, grey shoulders and dark feet allow them to camouflage well in their habitat so they are often hard to spot.

## THREATENING PROCESSES

The Brush-tailed Rock-wallaby is listed as vulnerable nationally. Threats include hunting, predation, habitat loss and competition with other species, all of which is contributing to loss of genetic diversity. Suitable habitat is becoming less and less due to the clearing of native vegetation, exotic plant invasion and altered fire regimes.

Add to this is the pressure from introduced predators such as the fox as well as competition with feral goats, sheep and rabbits. In the past Brush-tailed Rock-wallabies were considered pests and were in fact hunted for their skins. This contributed to a massive decline in numbers.

## BACKGROUND OF PROJECT

National Trust Currumbin Wildlife Sanctuary has bred Brush-tailed Rock-wallabies, one of which was subsequently released to the wild as part of a managed release program.

Key management sites for this threatened species are being identified by the New South Wales Office of Environment and Heritage and other program partners; currently 11 management sites have been identified. Project participants are trying to raise landowner's awareness about the presence of Brush-tailed Rock-wallabies and provide information to assist in their management.

## GOALS

The Brush-tailed Rock-wallaby is a studbook managed species. National Trust Currumbin Wildlife Sanctuary will continue to follow breeding recommendations for the management of this species.

There is a Brush-tailed Rock-wallaby Recovery Plan in place. National Trust Currumbin Wildlife Sanctuary will review and support this plan through our captive breeding program supporting a healthy captive population of Brush-tailed Rock-wallabies.

# EXOTICS CONSERVATION PROJECTS

IT IS NOW BELIEVED THAT LEMURS ARE THE MOST ENDANGERED OF ANY GROUP OF VERTEBRATES

# RING-TAILED LEMUR

*Lemur catta*

## CONSERVATION STATUS:

Endangered

## PROJECT TIER:

Three

## SPECIES INFORMATION:

The Ring-tailed Lemur exists in southern and south-western Madagascar. They have a lifespan of up to 18 years in the wild. Ring-tailed Lemurs are unmistakable because of their long, vividly striped, black-and-white tail.

They live in groups known as troops led by a dominant female, these groups include between six and 30 animals.

The most recent results from studies conducted by the IUCN are that of the 111 species of Lemur 38 are Critically Endangered, 44 are Endangered and 23 are Vulnerable. These numbers are very significant as Madagascar has the highest proportion of threatened species of any primate habitat region or country. It is now believed that lemurs are the most endangered of any group of vertebrates.

## THREATENING PROCESSES:

Ring-tailed Lemurs face many threats to the survival of their species; they consist of a low population density restricted to isolated fragments. Numbers have declined by 50% over three generations and continue to decline:

- on-going habitat loss in area and quality contributing to population decline. Most populations are restricted to small isolated fragments with low overall densities;
- annual burning practices to create pasture for livestock, subsequent overgrazing;
- felling of trees for charcoal production;
- hunting for the pet trade and bush meat.

Challenges facing Madagascar:

- large human population;
- rampant poverty;
- little money available for education;
- pressures on the forest.

## BACKGROUND OF PROJECT:

Ring-tailed Lemurs are new to National Trust Currumbin Wildlife Sanctuary as of 2017.

## GOALS:

1. Encourage others to learn about Ring-tailed Lemurs and the threats facing the survival of their species. We hope that when our guests participate in our animal encounters at Lost Valley, this will encourage them to help by doing simple things such as:

- use recycled products;
- get informed about being a responsible consumer;
- reduce use of plastics;

- improve mobile phone recycling awareness;
- use Palm oil free products.

2. Continue our role with the Australian Species Management Plan (ASMP).

3. Provide additional research, husbandry and conservation experience for our keepers with the development of programs taught by experienced staff at National Trust Currumbin Wildlife Sanctuary. Approximate cost: $10,000pa

4. We will support the Duke Lemur Centre and post updates on their research and conservation projects. World Lemur Day will be supported through fundraising and awareness on social media.

# RED PANDA

*Ailurus fulgens*

## CONSERVATION STATUS:

Endangered

## PROJECT TIER:

Three

## SPECIES INFORMATION:

The Red Panda is native to the mountains of Nepal, China and Bhutan. These animals spend most of their lives in trees and even sleep aloft. When foraging, they are most active at night as well as dusk and dawn. The Red Panda's main food source is bamboo however they eat many other foods such as fruits, roots and eggs.

## THREATENING PROCESSES:

The Red Panda faces multiple threats to the survival of their species. There has been a dramatic decline in population by 50% over the last 20 years (three generations). Exact numbers of Red Pandas left in the wild are unknown but have been estimated to possibly be as low as 2,500.

- Increased habitat destruction due to more roads, hydro projects, electricity wires, mining, agriculture and human made forest fires;
- Environmental degradation and deforestation mean that red pandas need to cross unsuitable habitat to find enough bamboo when certain feeding grounds naturally die off. This results in a higher risk of contact with human activity and settlements. Bamboo accounts for over 90% of a wild Red Panda's diet and where there is environmental degradation the bamboo does not easily regenerate after flowering;
- The increased probability of contact with human occupation means greater risk of red pandas contracting canine distemper, to which they are highly susceptible. This disease is fatal and they have been known to become infected even after vaccination. As more herders encroach Red Panda habitat the chance of canine distemper spreading through the wild population is high. This will have dire consequences on their already declining numbers;
- Human encroachment also results in eating and trampling of the bamboo understory by herds of hoof stock. Mature trees, stumps and fallen timber needed to create the specific habitat requirements are cut, collected and removed for firewood;
- Hunting for the pet trade has increased. Red Pandas are also poached for the expanding demand of the Chinese market for skins, meat and medicine.

## BACKGROUND OF PROJECT:

Red Pandas are new to National Trust Currumbin Wildlife Sanctuary as of 2017.

## GOALS:

1. Encourage others to learn about Red Pandas and the threats facing the survival of their species. We hope that when our guests participate on our animal encounters at Lost Valley this will encourage them to help by doing simple things such as:

- use recycled products;
- get informed about being a responsible consumer;
- reduce use of plastics;
- improve mobile phone recycling awareness;
- use Palm oil free products.

2. Incorporate Red Panda conservation within our school programs and implement educational seminars for staff, volunteers and our guests. Approximate cost: $5,000
3. We currently have one male Red Panda at National Trust Currumbin Wildlife Sanctuary however we hope to introduce a genetically paired female in 2019. We plan to modify our existing Red Panda enclosures to ensure it is best suited for successful breeding. Approximate Cost: $3000
4. Establishment of a bamboo plantation to ensure an ample supply of great quality bamboo for our resident Red Pandas. Approximate cost: $15,000
5. Provide additional research, husbandry and conservation experience for our keepers with the development of programs taught by experienced staff at National Trust Currumbin Wildlife Sanctuary. Approximate cost: $10,000
6. We will support The Red Panda Network's International Red Panda Day via fundraising and awareness on social media.

# COTTON-TOP TAMARIN

*Saguinus oedipus*

## CONSERVATION STATUS:

Critically Endangered

## PROJECT TIER:

Three

## SPECIES INFORMATION:

Cotton-top Tamarins are found in tropical forests in North-western Colombia in small fragmented reserves and parks. They are a small, agile primate and live in family groups of up to 40 animals. They are omnivores feeding on fruits, flowers, nectar small insects and lizards.

## THREATENING PROCESSES:

The Cotton-top Tamarin is one of the most endangered species of primates; their population is decreasing and severely fragmented. Current population estimates for the species are 6,000 individuals however some estimates are as low as 2000 individuals.

In the late 1960s and early 1970s 20,000 to 30,000 individuals were exported to the United States for biomedical research.

The most significant threats today are:

- deforestation for agriculture, fuel and housing, 75% of original habitat has been cleared for crops and grazing land. The remainder is in small patches;
- forest flooding for hydroelectric projects;
- poaching for the pet trade is still on-going and prolific despite international laws condemning this. Attitudes of officials are relaxed and often turn a blind eye to illegal trading.

## BACKGROUND OF PROJECT:

Cotton-top Tamarins are new to National Trust Currumbin Wildlife Sanctuary as of 2017.

## GOALS

1. Our main role with this species is to educate our guests about these animals and the issues that are threatening their existence. Our knowledgeable team will continue to give our guests the information they need to make a difference. Deforestation, waste and general habitat destruction are the main causes of mass population decline in all these species under threat. This includes exotic as well as our native animals. What we do here in Australia as consumers also has a large impact on habitats and the species that inhabit them in other areas of the globe.

We hope that our guest experiences with these animals and our team will encourage them to help by doing simple things such as:

- use recycled products;
- get informed about being a responsible consumer;
- reduce use of plastics;
- improve mobile phone recycling awareness;
- use Palm oil free products.

2. To incorporate Cotton-top Tamarin conservation within our school programs and implement Educational seminars for staff, volunteers and our guests. Approximate cost: $5,000pa

3. To continue our role with the Australian Species Management Program (ASMP). There is potential to pair a breeding female with one of our males, we will proceed with establishing shovel ready plans for a breeding facility to support this. Approximate cost: $200,000

4. To source Eco-Mochila handmade products from Colombia to sell in our retail outlets. Proceeds from these products go directly to the local communities so they do not have to depend on Cotton-top habitat for income.

5. We will support Day of the Cotton-top Tamarin via fundraising and social media awareness.

# GOODFELLOW'S TREE KANGAROO

*Dendrolagus goodfellowi*

## CONSERVATION STATUS

Critically Endangered

## PROJECT TIER

Three

## SPECIES INFORMATION

The Goodfellow's Tree Kangaroo is a marsupial. They are superb climbers and are capable of leaping long distances and are able to jump from up to 9 metres down from one tree to another.

They spend most of their time living in the trees but will occasionally forage on the ground in search of food. This largely nocturnal species is most active at night feeding on leaves of fruit from trees but also flowers and grass found along the forest edges. This unique species inhabits the rainforest of Papua New Guinea.

## THREATENING PROCESSES

Hunting for meat and habitat destruction for logging, mining, oil exploration, and agriculture are the biggest threats this species face. Much of their original rainforest habitat has been destroyed by the extensive clearing of lowland rainforest.

There are no accurate estimates of species numbers in the wild. Their survival seems to have only been assured by the reasonable numbers in National Parks and reserves and by the almost complete absence of any large tree-climbing predators or competitors.

## BACKGROUND OF PROJECT

National Trust Currumbin Wildlife Sanctuary has had good success breeding the Goodfellow's Tree Kangaroo and will continue to assist this species with further captive breeding and public education.

## GOALS

1. Goodfellow's Tree Kangaroos are a studbook managed species, an insurance population – we will continue to follow breeding recommendations from species managers and studbook keepers.
2. Interactive educational interpretation which will be used as a tool to educate guests and school children on this species and the threats it faces. Approximate cost: $15,000

# BOTANICAL CONSERVATION PROJECTS AND PLANTATIONS

36 PLANT SPECIES HAVE BEEN DECLARED EXTINCT SINCE EUROPEAN SETTLEMENT

## EUCALYPTUS PLANTATIONS

It takes 1,000 gum trees to feed just one Koala for one year. National Trust Currumbin Wildlife Sanctuary has over 50 resident Koalas and Currumbin Wildlife Hospital admits over 450 wild koalas for veterinary treatment each year. That is a lot of hungry mouths to feed!

We have four Koala fodder plantations that altogether contain approximately 38,000 gum trees in total. Due to constant harvesting each of these Koala fodder trees has a limited lifespan. It is important that we continue to plant enough trees each year to sustain this food source for our Koalas. We planted 6,500 trees in 2018; there is a financial cost to us of $10 per tree which includes the tree, planting of the tree and short term care of the tree during its early stages.

Our plantations contain approximately 22 different varieties of gum trees. The Koala's preferred varieties vary with the seasons however Blue Gums, Spotted Gums and Grey Gums are among their favourites. Wild hospitalised Koalas can be very fussy about the type of gum they eat often favouring one particular gum species and preferring the soft, tender leaves at the tip of the brows.

## GOALS

1. From 2019 to 2023 we will plant an additional 2,000 gum trees annually. Approximate cost $80,000.
2. We will endeavour to source and secure additional land in order to increase our Koala food tree population and secure an abundant food source for our Koalas.

# RICHMOND BIRDWING BUTTERFLY VINE

*Pararistolochia praevenosa*

## CONSERVATION STATUS:

Vulnerable

National Trust Currumbin Wildlife Sanctuary is currently home to a number of wild Richmond Birdwing Butterflies *Ornithoptera richmondia*. The RBB vine is the sole food source for the larvae of this butterfly which lay its eggs on the vine.

## THREATENING PROCESSES

HABITAT LOSS: The *Ornithoptera richmondia* larvae are cannibalistic and solitary, usually only one larva is found per *Pararistolochia praevenosa* vine. The butterfly once reported as abundant in 1870 is now being led to extinction due to massive habitat loss. Extensive land clearing has resulted in less than 1% of the butterfly's original habitat remaining.

FRAGMENTATION: Remnant colonies become isolated due to fragmented distribution of remaining *Pararistolochia praevenosa* vine. The results are inbreeding leading to a variety of negative effects, which may include reduced reproductive rate, the laying of sterile eggs, abnormal larval development, premature death, pupation failure, a reduction in size of adults & a loss of vigour, ultimately causing local extinction. This will be addressed by joining our existing fragmented and remnant habitat contributing to a *Pararistolochia praevenosa* corridor.

DUTCHMANS PIPE VINE *Aristolochia ssp*. An introduced species which invades our native Australian rainforest's habitat. Dutchman's pipe looks similar to the *Pararistolochia praevenosa* vine, the Richmond Birdwing Butterfly mistakenly lay their eggs on this vine but it is toxic so once the eggs hatch the larvae feed on the vine and die.

## GOALS

The project will focus on reducing loss of the vulnerable Richmond Birdwing Butterflies natural habitat by increasing the existing on site fragmented, remnant and vulnerable *Pararistolochia praevenosa* vine to help conserve & protect both species. Both species conservation status is listed as Vulnerable in Queensland (Queensland Nature Conservation Act 1992). They are both ranked as a critical priority under the Queensland Department of Environment and Science (DES).

1. Identify and map the existing critical habitat areas of the Richmond Birdwing Butterfly and conserve it to the greatest possible extent. Approximate cost: $15,000
2. Fragmented remnant vine on the property will be joined to create a *Pararistolochia praevenosa* vine corridor for the butterfly. The Queensland Department of Environment and Science in conjunction with the Richmond Birdwing Conservation Network (RBCN) are working on creating a corridor from Springbrook National Park through to Currumbin; our efforts will contribute to the creation of this corridor. Approximate cost: $10,000
3. The issue of Dutchman's Pipe Vine will be addressed through the conduction of a site weed survey to identify and eliminate weed if found. Approximate cost: $5,000
4. We will increase the population of the vulnerable Richmond Birdwing Butterfly by increasing the population of the *Pararistolochia praevenosa* vine and its surrounding ecosystem creating an improved environment for

breeding therefore helping to secure a healthy population of both vulnerable species for future generations to enjoy.

*Richmond Birdwing Butterfly*

## OUR SIGNIFICANT AND IMPORTANT NATIVE VEGETATION

National Trust Currumbin Wildlife Sanctuary is fortunate to be situated amongst some of the most important remnant vegetation on the southern Gold Coast. Vegetation on the site includes a wide variety of plant life spread across various regional ecosystems. This ranges from manicured gardens to natural areas of remnant modified Eucalyptus forest, including 'of concern' and 'endangered' regional ecosystems and many naturally occurring and planted native threatened species.

Some of these important plant species include:

| Scientific name | Common Name | Conservation status |
|---|---|---|
| *Eucalyptus pilularis forest* | Blackbutt Forest | Endangered |
| *Macadamia integrifolia* | Queensland Nut | Vulnerable |
| *Macadamia tetraphylla* | Macadamia | Vulnerable |
| *Owenia cepiodora* | Onion Cedar | Vulnerable |
| *Syzgium moorei* | Coolamon | Vulnerable |
| *Davidsonia johnsonii* | Davidson Plum | Endangered |
| *Acronychia littoralis* | Acronychia | Endangered |
| *Cryptocarya foetida* | Stinking Cryptocarya | Vulnerable |
| *Pararistolochia praevenosa* | Richmond Birdwing Butterfly Vine | Near Threatened |

# BLACKBUTT FOREST

*Eucalyptus pilularis*

Core remnant forest in western portions is dominated by Blackbutt (Eucalyptus pilularis) which is an 'endangered' regional ecosystem. To place emphasis on 'endangered' this equates to only 10-30% of the pre-clearing extent remains in Queensland. Some sections have been highly modified over previous years and contain a high dominance of weed species. However future plans include reduction/eradication of weed species, assisted revegetation of the site along with educating the greater public through educational programs and signage to why natural areas are important and the habitat they provide to native animals.

National Trust Currumbin Wildlife Sanctuary is home to an Endangered Blackbutt forest. The Blackbutt forms an important element of the canopy of several botanical communities. The trees can grow up to 50 metres in height and are distinguishable by their trunk which has a covering of rough bark to about halfway up then above this is white smooth bark.

## THREATENING PROCESSES

The key threatening processes for the Blackbutt forest and additional threatened botanical species at the Sanctuary include the loss and degradation of native plant and animal habitat by invasion of escaped garden plants.

## GOALS

1. Conduct a site survey to identify and map the existing threatened flora. Approximate cost: $15,000
2. Enhance and expand existing native vegetation through environmental weed control which will assist with natural regeneration of plant species. Approximate ongoing cost: $20,000pa
3. Flora will be sustained through the addition of supportive flora species to ensure a healthy ecosystem long term.

# FLAT ROCK CREEK

We are incredibly lucky to have Flat Rock Creek flow right through the middle of the Sanctuary property. This creek is home to a variety of wildlife including eels and waterbirds such as swans and pelicans.

## THREATENING PROCESSES

It is essential to identify and address any issues surrounding the water quality, vegetation and erosion affecting Flat Rock Creek to ensure a healthy ecosystem for our wildlife to thrive.

The true condition and concerns facing Flat Rock Creek is to be determined and this is of a high priority over the coming 12 months. During the 2018/19 financial year period we will be liaising with City of Gold Coast to understand how to improve the water quality of Flat Rock Creek. City of Gold Coast will be engaging an independent consultant to complete an analysis of the health of Flat Rock Creek. The assessor will report recommendations to maintain and improve the health of this waterway. Furthermore our horticulture team will endeavour to restore modified regional ecosystems whilst planting marginal plants to filtrate the water whilst controlling weed species.

## GOALS

1. Our Horticulture team together with the City of Gold Coast will re-vegetate Flat Rock Creek's edges to improve water quality and the long term health of the creek. Approximate cost: $20,000
2. Recommendations from the water quality assessment will be implemented in collaboration with City of Gold Coast. Cost to be determined.

*Pelican*

# OUR PARTNERS/ACKNOWLEDGEMENTS

Protecting our precious wildlife and saving individual species from the threat of extinction is not something that we can do alone and it takes the collaborative efforts of many to pull these projects together and maintain them on a path to success.

There are so many individuals and organisations that have contributed to these vital Conservation and Research Projects. We would like to thank all of the Government Departments, Wildlife Foundations, Wildlife Organisations, Universities and Independent Researchers involved. Your efforts are bringing awareness to and saving species that would otherwise disappear without human consciousness.

We extend a very special thank you to all of the amazing wildlife carer groups and individual wildlife carers who work tirelessly to save our native Australian wildlife. The love, care, sweat, tears and hours you spend rescuing and rehabilitating these animals is countless.

A warm thank you to all of National Trust Currumbin Wildlife Sanctuary and Currumbin Wildlife Hospital teams for your dedication to protecting these animals and their environment from harm.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