protected

Magazine of National Parks Association of Queensland

threatened species

wild dogs a conservation dilemma
understanding threatened species
springbrook national park
twin falls circuit walk
antarctic beech
the national park experience
- from a child's perspective

Issue 8 April - May 2016

Connect and Protect

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Images

Cover - Springbrook NP (K Leckie).

Strip p2 - Mountain White gum bark (*Eucalyptus dalrympleana* subsp. *heptantha*). (Paul Donatiu).

FROM THE PRESIDENT

Michelle Prior, NPAQ President

Welcome to the April/May edition of ***Protected.***

A controversial federal government report released in May is recommending that the federal government draconically dictate the terms of purpose for environmental Not-For-Profit organisations – that of supporting 'practical environment work in the community'.

The House of Representatives Committee inquiry into the tax deductibility of environment organisations recommends that such organisations lose their tax deductibility status for public donations, unless a quarter of donated funds is spent on remediation work, such as tree planting, weeding, controlling pests or wildlife rehabilitation (The House of Representatives Standing Committee on Environment: Inquiry into the Register of Environmental Organisations).

This arbitrary figure would be applied to all current NFP environmental organisations that have DGR (deductible gift recipients) status, regardless of the purpose for which they were established, eg. advocating for the protection of the environment, education, research, law reform or reporting wildlife crimes. Many environmental organisations do not undertake any on-ground work, concentrating on preserving nature, not attempting to replace that which has been destroyed.

Environment organisations undertake a wide variety of work to protect and conserve Australia's unique natural environment. As within any other charitable sector, advocacy plays as important a function as on-ground work (for example, advocating for children's rights and implementing actions to safeguard children), as does education or research.

Unfortunately, in many circumstances, advocacy is the only means available to redress an imbalance and provide a vehicle for community members to engage with often complex legislative, institutional and policy decision making. This improves the functioning of government and the outcome for the environment, as well as the community.

In many instances, it is due to past advocacy efforts by charitable environment organisations, that Australia's natural environment contributes to the multi-billion dollar tourism industry today.

There is little logic to the argument that only on-ground works benefit the environment and society, as the cost of planting a tree and the years it takes to grow, hardly offset the value of mature or old growth tree saved from the bulldozer by the efforts of passionate individuals or dedicated organisations.

Some also argue that on-ground works, are in fact the least efficient method of protecting the environment, and in some cases, are a way of cost shifting environmental repair to volunteers from what should be core responsibilities of corporations and government.

It is also worth considering the sociological impact. DGR status currently acts somewhat as a 'choke' on political action by environment organisations, who by and large maintain non-partisan positions and, in many instances, work constructively with governments of all political orientation. By removing DGR status, there is the likelihood that some sections of the community would become disenfranchised and potentially increasingly radicalised in their efforts to express concerns about environmental issues.

As a democratic nation, advocacy in the environmental sector is essential to encourage all sides of debate on environmental issues, and ensure freedom of speech. The High Court has recognised the implied freedom of political communication in the Constitution - what is proposed is tantamount to a restriction on political speech. Environmental issues are matters of public importance, and may not be so easy to dismiss constitutionally. Citizens also have a right to donate equally to the charity of their choice.

685 submissions were made to the inquiry, with the majority objecting to any plans to impose stricter terms on environmental organisations than other charities. The National Parks Australia Council (of which NPAQ is a member) made a submission to the inquiry.

However, the Committee choose to ignore these submissions, preferring to rely on ideology rather than evidence. The Labor members of the committee, found "…. it extraordinary that government members have recommended to, in effect, constrain the capacity of environmental organisations to engage in advocacy work. We completely reject this undemocratic proposition. Citizens should be supported to question government decision-making and corporate power, not manoeuvred into silence by legislative and administrative action."

Pause for a moment, and contemplate how many of your favourite national parks in Queensland are the result of advocacy: Lamington, Girraween, Fraser Island (Great Sandy), Cooloola (Great Sandy), Daintree, Tamborine, Bunya Mountains, Springbrook, Barron Gorge, to name just a few. All achieved through the commitment of people supported by the commitment of communities – advocating for the conservation of nature.

WILD DOGS - A CONSER

Neil Douglas, NPAQ Member

This article examines the environmental and economic effects of wild dogs and how the animals can be controlled.

Background on wild dogs

The term "wild dog" includes both feral domestic dogs, dingoes and hybrids of both. However, wild dogs and dingoes are treated differently under the *Nature Conservation Act*, with dingoes being a protected species on the conservation estate land. In common with feral dogs, dingoes are not protected in other areas.

Dingoes were introduced into mainland Australia about 4,000 years ago[1]. It is claimed in many quarters that dingoes led to the extinction of other predatory species such as the Tasmanian Tiger and Tasmanian Devil on the mainland, although this has not been definitively proven. However, it is virtually certain that by the time Europeans arrived in 1788, an equilibrium had been reached and few if any additional extinctions occurred as a result of dingoes alone.

The arrival of Europeans led to the introduction into the environment of many more predatory species such as cats, foxes and feral dogs, and a wave of extinctions of small and medium sized mammals followed. Deaths were caused not only by physical attacks, but in some cases also by competition for food or the spreading of diseases and parasites.

Starting in the second half of the nineteenth century, the particular focus of settlers was on controlling, and if possible, eliminating dingoes – as they were regarded as killers of livestock. Queensland, New South Wales and South Australia erected barrier fences to keep dingoes out of grazing areas. In Queensland, the fence now runs roughly westwards from the western Darling Downs, passes to the north of Roma, Charleville and Quilpie, then turns south to the state border west of Thargomindah. The area south of this fenceline is meant to be wild dog free – but does enclose some national parks and other protected areas where dingoes were part of the pre-European environment.

Despite part of Queensland being enclosed by the barrier fence, the Department of Employment, Economic Development and Innovation (DEEDI) estimates that predation by wild dogs still causes annual agricultural losses of $33 million.

The main areas where dingoes still occur on the mainland are Queensland north of the barrier fence, most of the Northern Territory except the south-west, a narrow coastal strip in New South Wales and eastern Victoria, and the non-arid parts of Western Australia (other than the wheat belt). They have been largely eliminated from the agricultural and pastoral lands of NSW, Victoria and South Australia.

Research[1] has demonstrated that dingoes are a top predator, whose presence suppresses the activities of second-order predators such as cats and foxes that prey on smaller mammals. Johnson ***et al***. contend that many remaining native mammals would benefit from the positive management of dingoes, and that this should be given priority. This is at odds with those who want dingoes eliminated from pastoral areas to protect grazing animals.

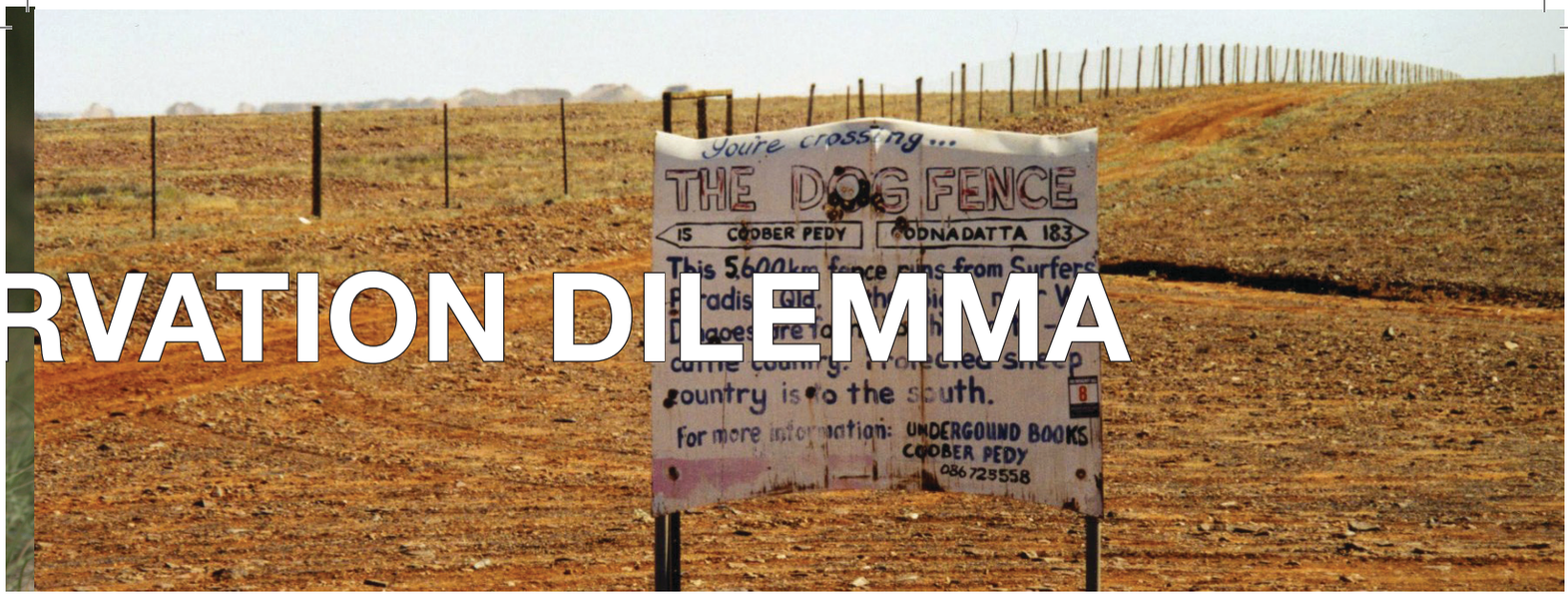
Feral domestic dogs do share some useful attributes with dingoes in that they also help control cats and other medium sized exotic predators. There is also evidence that they reduce over-populations of kangaroos. However, they tend to be more vicious and indiscriminate than dingoes and may pose a greater threat to humans in settled areas. They readily hybridise with dingoes and the offspring may be more aggressive than either. Generally, the "purest" strains of dingoes are in remoter or more isolated areas (e.g. Fraser Island). The degree of hybridisation is greater in more closely settled parts of the country.

Methods of controlling wild dogs

On a smaller scale, wild dog control as it relates to the protected area estate in Queensland is described in the DNPSR's Operational policy – *Management of Wild Dogs on QPWS Estate*. This describes the circumstances where dog control will be carried out; planning and consultation processes; and the types of control measures that are approved. Control is undertaken only where clear justification exists and there will be no significant detriment to threatened or non-target species – including the viability of core dingo populations.

The policy seeks a "tenure blind" approach where, if possible, agreement is obtained with neighbouring landowners to conduct control activities not only in the protected area concerned but also on adjacent land. The policy states that, unless there are special circumstances such as inaccessibility of terrain, control measures actually on a conservation estate itself will be limited to within 50 metres inside its boundary.

Types of control measures used are trapping, shooting, perimeter baiting and broadscale baiting. The first two



RVATION DILEMMA

are suitable only for small populations, primarily because of their labour intensive nature. Traps must be of an approved, humane type. Steeljawed traps are banned. Perimeter baiting is generally the favoured approach, with broadscale baiting allowed only for protected areas situated inside the Wild Dog Barrier Fence where there is a significant threat to endangered species but at the same time no likelihood of non-target species being harmed. Ground laying of baits is preferred, with aerial baiting permitted only if there are particular difficulties with the former. Fluoroacetate (1080) is the favoured type of bait; strychnine is not permitted.

The DNPSR policy does not refer to fencing as a means of wild dog control, but there are a few instances where fencing is currently used within protected areas – these are discussed in the next section.

The Wild Dog Management Strategy 2011-16 issued by Biosecurity Queensland (part of DEEDI) in 2011 goes into more detail on the subject at a statewide level and is broadly in agreement with the QPWS policy.

The dilemma of barrier fences

There are two notable examples in Queensland of barrier fences being erected around parts of some national parks to protect endangered species. A 20 km long fence has been built in Epping Forest National Park to prevent dingo attacks on the surviving population of northern hairy-nosed wombats. 25 square kilometres of Currawinya National Park has been enclosed in an electrified fence to protect a bilby population – mostly from cats, but also from wild dogs. There is also the fence around the perimeter of Eurong township on Fraser Island. This is a rather unusual case in that its purpose is to prevent human – dog interactions, rather than to protect endangered wildlife within it.

According to Hayward and Kerley[2], fencing is likely to be used increasingly as threats to biodiversity grow, despite high establishment and maintenance costs. Private conservation organisations such as the Australian Wildlife Conservancy are also currently fencing off some large areas of bushland to protect endangered small mammal populations.

Although fences can be critical for the survival of severely threatened species in semi-natural situations, they also have disadvantages. Studies both in Australia and elsewhere show that they impede the movement of wildlife and therefore can limit access to food, interfere with breeding processes (by limiting choice of mates) and block escape routes in bushfires or floods. Overpopulation of non-target species (or even target species themselves in favourable circumstances) can also occur.

Work has been done in South Australia on the use of one-way gates to mitigate overpopulation in fenced areas[3]. Several designs have been trialed, most based on an angled flap in a rectangular passage that can be pushed outwards by a departing animal but blocks entry in the other direction. The size of a system can be varied so as to be selective of the species allowed to depart, and some designs allow locking of gates to temporarily block egress for such reasons as the presence of high numbers of predators outside or decreased overcrowding inside.

Conclusion

The Agriculture and Environment Committee of the Queensland Parliament currently has an inquiry into barrier fences (dog and rabbit) that are maintained by the Queensland Government. It is focusing mainly on the costs, benefits and effectiveness of these fences from an agricultural point of view, and whether fences should be expanded into other areas. However, one term of reference deals with unintended impacts on native species.

The management of the wild dog problem on and near the conservation estate is complex. Dingoes need to be managed somewhat differently from feral dogs in that, overall, they pose a lesser danger to native species. However, under some circumstances, even feral dogs can serve a useful purpose by keeping smaller but vicious predators like cats and foxes in check. Each case needs to be assessed on its merits.

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Images

Fraser Island Dingo. Source: Glen Fergus

A portion of the Australian dog fence near Coober Pedy. Source: Wikipedia

UNDERSTANDING THRE

Kirsty Leckie, Conservation Principal

Conserving threatened species and ecosystems is a complex task.

Pressure from development, climate change and introduced species present challenges to scientists and protected area managers. In this edition of ***Protected***, the International Union for Conservation of Nature (IUCN) Red List and the associated assessment process are examined as one tool to inform conservation planning.

The IUCN Red List and IUCN Red List of Ecosystems

The IUCN has been assessing the global threat status for species and ecosystems for over four decades (Brito et al. 2010). Results from assessments are published publically and periodically updated. Over the past decade, a quantitative system has been developed to enhance the objectivity and comparability of red lists.

The IUCN Red List and assessment process endeavours to be both quantitative and comprehensive, making it an essential data set for informing conservation planning (Lamoreux et al. 2003). In parallel, the newly developed IUCN Red List of Ecosystems is a valuable addition to the toolbox of conservation managers providing criteria to examine ecosystems and their functionality.

Rodrigeuz et al. (2014) state the IUCN Red List of Ecosystems aims to systematically assess all freshwater, marine, terrestrial and subterranean ecosystem types of the world at a global level by 2025. Applying this approach via robust and repeatable assessments ensures a rigorous technical base. Threatened ecosystems lists can then be developed at the regional, national and sub-national levels. This is particularly relevant for Australia.

Australia has been described as a megadiverse country with a very high percentage of endemic species (Walsh et al. 2012). For example 45% of Australia's birds and 89% of Australia's reptiles only occur in Australia. Added to this is a wide array of anthropogenic pressures resulting in one of the highest extinction rates (Cork et al. 2006; Lindenmayer, 2007; and Kingsford et al. 2009).

Underscoring this is the recently released Action Plan for Australian Mammals. The Action Plan flags that point that Australia has the highest modern record of mammalian extinction along with a large proportion of extant mammals under threat. McDonald et al. (2014) goes further urging urgent and targeted actions to avoid further extinctions.

These points serve to highlight the importance of ensuring rigor in both the formation and ongoing review of the threatened species and ecosystems list and any subsequent application of this information in conservation policy and management in Australia.

Ensuring the representation of species across taxonomic groups

Legislation for threatened species is intended to encapsulate and afford protection to species which meet the assessment criteria. In practice however, there is a tendency for bias towards an uneven allocation of conservation efforts.

Walsh et al. (2012) describe this

EATENED SPECIES

bias towards 'charismatic' flora and fauna in listing and legislation, which may then have a flow on effect to conservation efforts being applied. This may be cause for concern if the resulting threatened species lists fail to fully encapsulate the status of underrepresented species.

Given conservation efforts are often based on the species flagged in these lists, populations of underrepresented species may suffer further decline in the interim. On a related note, as Walsh et al. (2012) explain, there is also lost potential for recovery, and therefore achieving the greatest conservation effort possible.

It is vital therefore, that conservation scientists and land managers bear this bias in mind when assessing threatened species and ecosystems under a common method.

Protected areas and recovery of threatened species populations

Once a species or ecosystem has been identified and listed as threatened, the next challenge is recovery. Taylor et al. (2011) noted that protected areas contribute to the stabilisation or recovery of threatened species.

Protected areas afford populations of threatened species a greater chance of recovery due to the elimination of certain anthropogenic pressures (clearing, grazing etc). Including the expansion of protected areas in recovery plans for threatened species and ecosystems is a positive step for stopping any further decline.

The future

Protecting threatened species is likely to remain a complex challenge for conservation managers for the foreseeable future. Utilising tools like the IUCN listing and assessment process helps to ensure recovery plans are well targeted. Coupling these processes with continuing to expand protected areas could help increase the number of successful recoveries and help avoid further extinctions.

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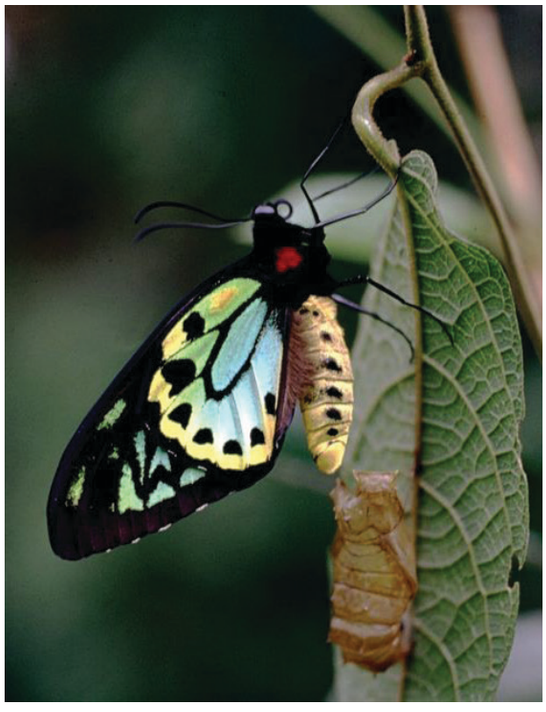
Images

Banner L: Double-eyed Fig Parrot (Coxen's). Source: Birdworld Kuranda, Qld

Banner R: Christmas Bells (Blandfordia grandiflora) at. Limeburners Creek NP, NSW. Source: John Tann

Page 6: Golden tailed Gecko. Source: Atlas of Living Australia website

Page 7: Richmond Birdwing Butterfly. Source: Dr Don Sands CSIRO



PARK IN FOCUS

Springbrook National Park

Denis McMullen, NPAQ Member

The road from Nerang climbs gently to the Springbrook Plateau through eucalypt forest and sections of lush rainforest. It is a fitting scene of welcome to an area unique to Australia.

Springbrook National Park is a constituent of the Gondwana World Heritage Rainforests of Australia. Despite being relatively small, the park provides an important link in the chain of Gondwana Rainforest that crown the highlands from north of Muswellbrook in NSW, almost to Clifton in South-east Queensland. Springbrook girdles four general, once separately managed, areas: Springbrook Plateau, Mount Cougal, the Natural Bridge and Numinbah. The Natural Bridge sits separately to the west of the three other areas of National Park.

At 22.7 km^2 Springbrook is not a large park. Compared with Lamington (206 km^2) it is rather small and with its four components, rather dispersed. One of Springbrook's more unique features is the Gondwana themed rainforest, and the dry and wet sclerophyll forest at lower elevations. Magnificent waterfalls have carved rock pools across the park alongside remarkable views of Mount Warning, and the surrounding caldera with Numinbah Valley and the Gold Coast in the not-so-far distance.

The rainforest of Springbrook holds a veritable rich floral diversity - Figs flowering throughout the year, Flame Trees dropping their foliage in winter or bursting into bloom in spring, or the autumnal carpeting of the forest floor of multi-coloured fruit of Lillipillies and Blue Quandongs. The occurrence of such rich natural resources as the Macadamia tree helps us understand the importance and inherent value of this land to traditional owners, the Yugambeh.

To see Springbrook at its best, visit after a significant period of rain. Waterways across the park produces brilliant displays in the many falls, with Purling Brook Falls (with a 109 metre drop), being the paragon of the park. The quality of the walking tracks are exemplified by the four kilometre access track that starts from the picnic and viewing areas above the waterfalls. The track passes through open eucalypt forest down an escarpment to enter the gorge at the John Stacey suspension bridge, which now crosses the Little Nerang Creek Gorge. The new suspension bridge provides a safe and wonderful range of viewing points. There is then an easy walk along the track circling back up to the viewing platform above the falls.

The Twin Falls offer an equally exhilarating visit. A four kilometre track, beginning from Tallabana picnic area or the glorious Canyon Lookout, passes behind the waterfall and takes visitors through some narrow, but tall, rock cleft structures. The track then passes through areas of tree ferns and palms. You also pass the pink Brushbox (***Lophosteman confertous)***. Individual trees have been carbon dated to 1,500 years old.

The second falls requires some dextrous stepping to avoid a shower. The view along the line of the falls to the forest track beyond is captivating. There is an easily navigable back up to the Canyon Lookout with stunning vista views.

The 'Best of All' Lookout provides views that exemplifies the Tweed caldera and the arc of precipitous cliffs of the ancient volcano which is responsible for the mountains of the scenic Rim. The walk to the lookout goes through a grove of Antarctic Beech (***Lophozonia moorei***). Coming across them on a day of mist, reveals writhing roots, moss and lichen covered trunks with twisted limbs that visually describe the age of their ancient owners, some thousands of years old.

A short drive from Springbrook plateau takes visitors to the impressive Natural Bridge in the Numinbah Valley. The power of erosion is clearly on display here, as the falling water has undercut the lip of the fall to create a cave beneath the falls. Subsequent erosion has carved a hole in the creek's bed above the falls.

The Natural Bridge cave is also the home of glow worms which provide a stunning display at night, particularly in damper weather.

What is so special about this environment that it is worthy of the highest level of protection granted by a World Heritage listing?

The landscape is dominated by the Tweed shield volcano, "***which despite its age (30.5-23.5 million years) is probably one of the best preserved for its age in the world.***" (World Heritage Listing) The volcano has been eroding over the last 23 million years, leaving behind a vast caldera.

Mount Warning, a plug formed of harder rock, is the result of lava within the cone cooling. This has resisted erosion, and now stands alone as the centre of a vast 'saucer' circled by a broad deep valley, eroded below the level of the lowest basalts left by volcanic eruption.

Precipitous cliffs form an arc around the central point of Mount Warning. The resulting formation of, the Tweed Caldera, is one of the major examples of this landform in the world.

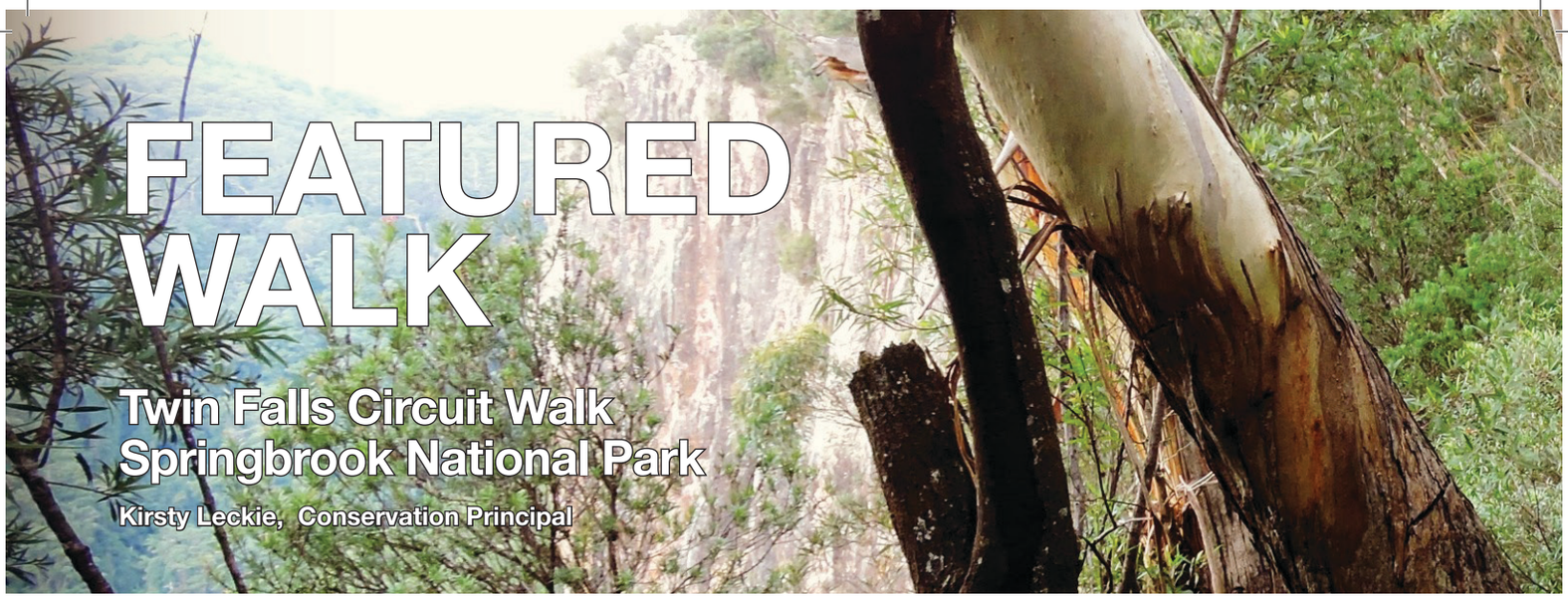
It makes one wonder, how vast this whole feature must have been!

Rainforests of Eastern Australia are a prime example of an area high in value to UNESCO, as they hold a huge number of relict species alongside unique flora and fauna that are located nowhere else in the world. In the Jurassic period (180 million years ago), until the middle of the Miocene period (~11 million years ago), the country was covered with temperate rainforest dominated by tree ferns, ***Araucarias***, such as the Hoop Pine or the Bunya Pine. Flowering plants, angiosperms, which include trees such as the eucalypts, radiated from a common ancestor more than 200 million years ago long before the splitting of Gondwana. This geological record can be observed in the Gondwana Rainforest entities such as Springbrook. The UNESCO documentation speaks of how Springbrook and the other World heritage elements "***represent outstanding examples of major stages in the Earth's evolutionary history, ongoing geological and biological processes and exceptional biological diversity. A wide range of plant and animal lineages and communities, with ancient origins in Gondwana, many of which are restricted largely or entirely to the Gondwana Rainforests, survive in these reserves."*** (Australian Government submission).

The park may be small in hectares, but its relicts have existed in the mountain areas as species for hundreds of millions of years. These species have survived the aridification of the Australian continent and date back to when Australia was once part of Gondwana, and are now preserved as natural history Springbrook National Park.

Images

Springbrook NP (K. Leckie)



FEATURED WALK

Twin Falls Circuit Walk Springbrook National Park

Kirsty Leckie, Conservation Principal

Springbrook National Park is a spectacular, though relatively small park located approximately 1.5 hours drive from Brisbane. There are a wide array of trails and circuits to explore ranging in difficulty from novice to expert. Dominated by cliffs of resistant, volcanic based rhyolite underlain by thick sequences of basalt, the park is home to many waterfalls.

With an annual rainfall of over 3000 mm, Springbrook is one of the wettest places in South-East Queensland. This is worthwhile remembering when planning a trip!

Though there are many tracks to choose from, an excellent family walk is the Twin Falls circuit. This is easily accessible and suitable for children of primary school age.

The Twin Falls lookout is a four kilometre circuit winding down to the base of Twin Falls before returning to the summit and picnic grounds. Beginning at a picnic ground and car park area, the track is well maintained though tricky in places.

Quiet and observant walkers may spot Red-necked Pademelons and the large black Land Mullets. The Land Mullet, the world's largest skink, enjoys basking in sunny warm positions beside the walking track. Looking for wildlife is a great way to get younger walkers to take notice of their surroundings, and observe the environment. It can also make the experience more enjoyable as children will feel more engaged with the natural environment.

Continuing along the track, conditions can get a little trickier for younger adventurers as the track can become slippery underfoot. Equipping children in suitable clothing and footwear is an easy way to overcome this. Sturdy comfortable walking shoes and lightweight clothing will make the whole experience safer and more enjoyable. There are several sections of the Twin Falls circuit where the track narrows and it may become necessary to walk single file. Remember to set a pace that matches the slowest member of the group (usually the youngest) so that everyone feels part of the team.

Whilst the wildlife can be a star attraction, the beautiful rainforest

along the Twin Falls Circuit is worthy of attention too. Majestic Brushbox and Blackbutt trees tower above in the canopy, whilst tree ferns and Helmholtzia lillies cluster around waterfalls and gullies. Walking through the rainforest at Springbrook is a fantastic way to see rainforest and woodland plants in all of their splendour. Fans of Jurassic Park can marvel at Queensland's very own 'prehistoric' looking attraction. Children will enjoy crossing streams, clambering through rocky overhangs and meandering along the trail down to the base of Twin Falls.

The base of the falls offers more opportunity for adventure. Intrepid walkers can venture behind the curtain of water tumbling from above. A series of stepping stones around the base of the falls form a path to follow and afford a chance to hone balancing skills!

From the base of the falls, the trail meanders uphill back to the picnic grounds. The canopy opens and the rainforest gives way to more open woodland, providing glimpses of the spectacular view across the plateau and beyond.

The Twin Falls circuit is a great walk to tackle as a family group. Given the occasionally tricky terrain, walkers should allow approximately two hours to complete the circuit. There are plenty of beautiful places to stop and rest, along with lots of interesting sights to keep all ages engaged.

Recommended resources

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Image

Banner and images below: Twin Falls track, Springbrook NP (K. Leckie)

WILDLIFE FEATURE

Antarctic Beech

Daniel Kelly, Contributor

Nothofagaceae (family), the 'Southern Beeches', are pertinently named for their similarity to the Northern Hemisphere Beech genus (fagus).

Distributions of this tree family is one of the leading clues that allowed modern science to come to the conclusion that four continents: Australia, South America, Africa and Antarctica once formed a supercontinent on the south pole that was covered in lush, temperate rainforest.

The species is scattered among temperate zones and mountain tops down the East Coast of Australia from Lamington National Park to the Barrington tops in New South Wales. A mature specimen can reach ~50 metres tall with a thick trunk sitting on a contortion of root buttressing giving an apt indication of an archaic lifespan. Flowers of ***N. moorei*** are unisexual. Both will appear on an individual tree during a season of flowering. Following the pattern of many other temperate plant species, its flowers appear close to the end of its branches in Spring. A small, spikey, four pronged fruit is produced that opens on the branch during December to February and releases a winged nut. Although the reproductive process of the Antarctic Beech isn't a show of colour like that of the Illawarra Flame Tree, in contrast it exemplifies the subtle existence of the species which makes it all the more rare and special.

It is easy to admire the Antarctic Beech when you come to understand the history of the species. The Antarctic Beech has existed through the splitting of a supercontinent, the aridification of Australia, multiple ice ages and a huge distance of continental drift. The limits of the species can be observed in Lamington National Park where it was once considered 'functionally extinct', meaning the population atop Tullawallal were only reproducing through 'suckering.' This has caused the trees at Tullawullal to show a mallee type formation where they have grown from basal shoots. Functional extinction isn't true for the rest of the species range which allows for more optimal flowering conditions. Finding an age to put on some trees is quite difficult, but it is estimated that some of the suckering individuals in Lamington National Park are 2,500-3,000 years old. That means that some of these individual trees were alive before many modern religions came into existence.

In 2013, the taxonomic name of The Antarctic Beech changed from genus ***Nothofagus*** to genus ***Lophozonia***. This etymology still hasn't gained full use yet. However, it was deemed necessary as there was too much biological variation between the different tree species in the original genus to not warrant a split. Make no mistake, these temperate mountain-top titans remain part of the family ***Nothofagaceae*** and still retain their Gondwanan relict status. Climate change represents a significant threat to this species given its current state. There is no fossil evidence of any ***Lophozonia*** surviving through suckering. With the predicted changes to temperature and rainfall due to climate change, there is a significant chance trees in the Northern most part of its range will die off in the next 100 years. Like the Great Barrier Reef, preserving this species in its natural form for posterity may no longer be possible.

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Atlas of Living Australia website, ***Nothofagus moorei (F.Muell.) Krasser Antarctic Beech***

Royal Botanic Gardens Sydney, Plantnet website, ***Nothofagus moorei (F.Muell.) Krasser***

Images

Banner: Antarctic Beech (Y. Parsons)

Below: Antarctic Beech (R. Owen)

THE NATIONAL PARK EXPERIENCE

why national parks should be valued, told through the lens of children

The Leckie Family

Town planners and psychologists had been exploring the potential benefits of making natural spaces freely available to children to play and explore for decades. The release of the book ***Last Child in the Woods*** (Louv, 2005) articulated the disadvantages of children losing access to 'wild areas' once part of the fabric of towns and cities. 'Nature-deficit disorder' was flagged as a critical issue by Louv (2005), as children began to spend less time outdoors.

In a review of literature dating back to the 1970s, Chawla (2015) examined the different ways that contact with nature can contribute to the health and well-being of children. Dixon and Naussbum (2012) explored this further, highlighting the role that nature plays in children acquiring an appreciation of the environment. This subsequently leads to developing the ability to feel and express concern for other species.

In this edition of Protected, this concept is explored further by interviewing two children, aged 9 and 6 years of age, to gain a child's perspective on the National Park Experience.

Favourite parts

Thor (9 years old) "*There were lots of pretty waterfalls and beautiful nature. All around us there was cool plants. I even saw a kingfisher! We were allowed to walk through caves, balance on rocks and walk parts of big cliffs. It was really dangerous walking right next to the cliffs, but really cool*."

"*I would tell my friends to go bushwalking there as they could see glow worms if they went at night and they could go swimming in the waterfalls. There was a giant waterfall, and we got to go right under it. I also saw a strangler-fig, it grew right around the tree. There were roots snaking right up the tree!*"

Chawla (2015) stresses the importance of these types of nature-based experiences in enabling children to develop a sense of affiliation and connection with nature. Being able to walk through and observe places like Springbrook National Park enables children to develop this connection with nature. Ward (2014) adds that one of the primary benefits is that children become better observers and feel more connected to the natural world.

Tips for visiting National Parks

Lorelei (6 years old) "*My best tips for visiting a National Park are to bring your own food and water. Don't wear thongs and bring a towel if you are going to go swimming. You shouldn't pick any of the flowers and try to be quiet. You don't want to scare away all of the birds and animals. Some animals sleep in the daytime you know.*"

Children learn about the natural environment through exploration and engagement. Being immersed in rainforest whilst walking in Springbrook National Park can provide many opportunities to children like Lorelei to observe the natural world. These experiences present opportunities to explore and understand how ecosystems work, threats to wildlife and how humans protect these environments. Cheng and Monroe (2012) suggest that learning, understanding and experiencing nature could positively influence children's attitude towards the natural environment.

Why are national parks important?

Thor (9 years old) "*National Parks are really important to make sure kids and adults have beautiful places to visit near where they live. People can see all the beauty there is in nature. You can hear all of the sounds and you can touch the waterfalls and all of the plants. It's wet and muddy, but really fun!*"

Lorelei (6 years old) "*So that people can go there, see the animals and appreciate how important it is to look after all of the different environments. The animals don't have to be afraid. You can see where all of the creatures makes their homes.*"

Ward (2014) stresses the importance of introducing children to nature, and asks 'how can children care about nature if they haven't experienced it firsthand?' Queensland is home to many beautiful national and marine parks. Regardless of where you call home, there are a wealth of parks to visit. These areas protect our natural and cultural heritage and provide an amazing opportunity to get the next generation engaged and ready to get involved in conservation.

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Louv, R. (2005). Last Child in the Woods. Chapel Hill, NC: Algonquin Books.

Ward, C. (2014). Connecting young children with nature. Teaching Young Children, 8(1), 24-27.

WHAT'S ON

NPAQ Activities

Vegetation Management Group

Saturday 21 May 2016

Location: Meet at Jolly's Lookout carpark, D'Aguilar National Park

Grading: various

Leader: Angus McElnea (0429 854 446, or gus_mcelnea@hotmail.com)

Get your hands dirty! Come and spend a couple of hours to help with lantana control and revegetation work in the Boombana and Jollys Lookout sections of D'Aguilar National Park, west of Brisbane.

Birding - Pooh Corner Bushland Reserve, Wacol

Sunday 22 May 2016

Location: Wacol Station Rd, Wacol

Grading: Easy

Leader: Geraldine Buchanan (07 3349 1109)

Fee: $5 (members) $10 (non-members).

This reserve covers 138hectares. The circuit track of 3.8km wanders through eucalyptus, casuarina and open forest woodlands.

Meet at Environment Centre, Wolston Road, Sumner. UBD 197 K15

Day Walk - Mount Cordeaux track, Main Range

Sunday 29 May 2016

Location: Mount Cordeaux, Main Range National Park

Grading: Intermediate

Leader: Geoff Lowes - (ghlowes@live.com.au or 07 3870 0783)

Mount Cordeaux is 1135 m above sea level. Branching off the Rainforest circuit, the Mt Cordeaux track zigzags through rainforest to the exposed upper slopes, ending at a lookout.

The cliff face of Mount Cordeaux is spectacular.

Track distance is 6.8km return.

Allow approx 2.5hours walking time.

There is limited group access on the track and lookout, so this will be limited to a max of 10 people.nominating.

For more information, or to register for an activity, please go to our website:

www.npaq.org.au/events

8:30am for an 8:45am depart, at Cunningham's Gap car park next to toilets.

Birding -Dan Stiller Reserve, Larapinta

Sunday 19 June 2016

Location: Dan Stiller Reserve, Axis Place, Larapinta

Grading: Easy

Leader: Geraldine Buchanan (07 3349 1109, or geraldine_buchanan@hotmail.com)

Fee: $5 (members) $10 (non-members).

This will be our first visit to this section of Dan Stiller Reserve leading off Axis Place, Larapinta. BCC has made a circuit track which includes a section close to a lagoon.

Hopefully, we will see water birds and bush birds. However, summer is continuing and with little rain we are going to have to be very observant.

Social Walk - Morelia Section, D'Aguilar NP

Wednesday 22 June 2016

Location: Morelia Section, D'Aguilar NP, Mt Nebo Rd, Mt Nebo

Grading: Easy
Leader: Len and Laurelle Lowry (07 3355 7288, 0428 335 572, onthewallaby@live.com.au)

Fee: $5 (members) $10 (non-members).

The Morelia Section has two walks - the Morelia Track which can be combined with the Atrax Circuit.

The Morelia Track leads to the Mount Nebo Lookout with outstanding views into the Samford Valley and out to Moreton Island.

At this time of year the air is crisp and the views spectacular.

As the walk is only 4 kilometres return (1.5 hours) with a steady climb of only 125 metres, it is an easy walk.

After the walk we will return to the Walkabout Creek Visitor Centre to stroll around the redeveloped grounds before having lunch in the picnic area.

Upcoming Activities

Extended Activity – Central West Qld National Parks

Saturday 27th August to Sunday 4th September 2016

Leader: Wendy Bell (ph 07 3300 2473)

A unique opportunity to explore some of Queensland's remote National Parks in the luxury of a fully airconditioned 4WD coach and staying in en-suite motel accommodation.

This tour has been especially designed for NPAQ members and supporters to emphasise the major Western National Parks with some other interesting feature which we will be passing en route.

Highlights will include Bladensburg NP, Diamantina NP, Dinosaur Stampede at Lark Quarry Conservation Park, Lochern NP, Welford NP, Idalia NP, Lara Wetlands and a Welcome to Country and Australian Age of Dinosaurs Tour and Dinner.

The tour will begin and finish in Longreach but with optional return flights to Longreach or Fly and Train return to Brisbane included in the price.

For any queries and a detailed iinerary, please contact Wendy Bell.

NPAQ Events

Annual General Meeting and Annual Awards Dinner

Wednesday 21st September 2016

Details to be provided closer to the date.

Vale

Our sincere condolences to the families and friends of Susan (Molly) Blake who recently passed away.

Bequests

NPAQ wishes to thank the estate of Susan (Molly) Blake, and the estate of Dorothy Ivar McNeill for their generous bequests.

Susan joined NPAQ in 1951 and became a life member in 2005. Dorothy, also a life member, joined NPAQ in 1948.

NPAQ is honoured that Susan and Dorothy have shown their commitment and faith in our organisation, through the generous gifts of their legacies.

The Annual Raffle was drawn on 30th April by David Thorpe, Non-Executive Director of Heritage Bank.

JOIN, DONATE, SUBSCRIBE, VOLUNTEER

www.npaq.org.au

NPAQ Annual Raffle

Congratulations to the winners:

1st Prize: Scenic Rim Trail package for two
Winner: Jennie Minifie (#1543)

2nd Prize: Yuraygir Coastal Walk for two
Winner: Sarah and Dave Harris (#1377)

3rd Prize: One night in an Acacia Room at Binna Burra Lodge for two
Winner: Deborah White (#2463)

4th Prize: Two nights in a Beach Shack at Allure Stradbroke Resort for two
Winner: Ann Tracey (#403)

5th Prize: One night in a Mountain View Room at O'Reilly's Rainforest Retreat for two
Winner: Phil Marwedel (#46)

6th Prize: Two adult passes to Australia Zoo
Winner: Graham Riddell (#291)

7th Prize: A two year subscription to Out and About with Kids magazine
Winner: Kay Nicol (#525)

8th Prize: A two year subscription to Go Camping Australia magazine
Winner: Des Whybird (#173)

9th Prize: A two year subscription to Go Camping Australia magazine
Winner: Josephine Bennett (#2542)

10th Prize: A one year subscription to Great Walks magazine
Winner: Lisa Douglas (#3181)

11th Prize: A one year subscription to Great Walks magazine
Winner: Roger McDonald (#480)

12th Prize: $50 voucher for Avid Reader Bookshop in West End, Brisbane
Winner: Sarah and Dave Harris (#1375)

13th Prize: $50 voucher for Rosco Canoes and Kayaks in Woolloongabba, Brisbane
Winner: Stephanie Allen (#1052)

14th Prize: An Easy Oven
Winner: Trudy van Dam (#1267)

15th Prize: An Easy Oven
Winner: Tony Parsons (#1981)

16th Prize: A one year subscription to Wild: Australia's wilderness adventure magazine
Winner: Hugh Luckhurst-Smith (#1747)

17th Prize: A one year subscription to Wild: Australia's wilderness adventure magazine
Winner: Mark Dwyer (#883)

18th Prize: A one year subscription to Wild: Australia's wilderness adventure magazine
Winner: Dona Ratnaweera (#1941)

Thank you to all the folk who bought and sold raffle tickets.

Thank you to our generous sponsors:

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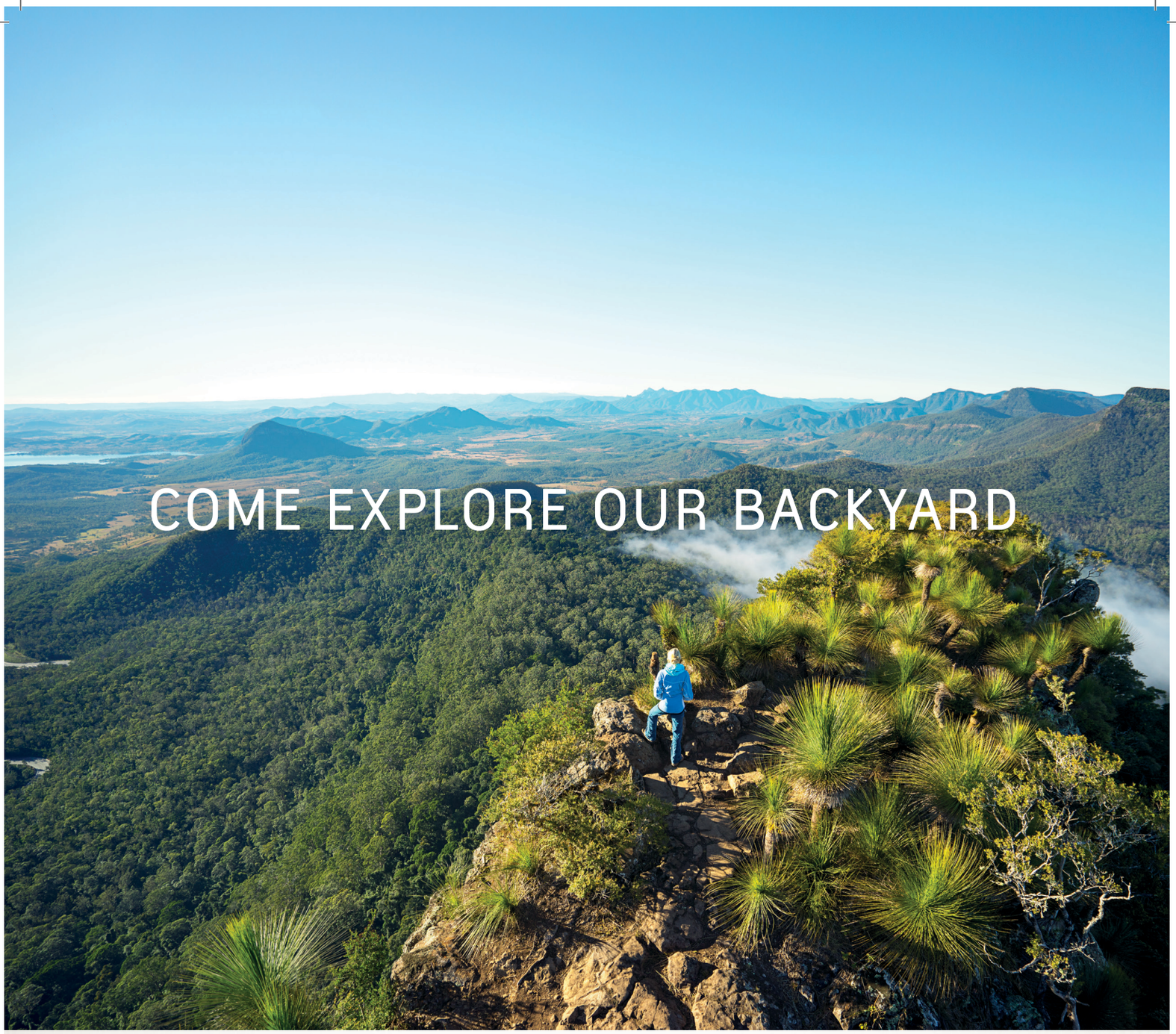

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