

Bunya Mountains National Park Management Statement 2012

Park size:	19,230ha
Bioregion:	South Eastern Queensland Brigalow Belt South
QPWS region:	South West
Local government estate/area:	South Burnett Regional Council and Western Downs Regional Council Toowoomba Regional Council
State electorate:	Burnett

Legislative framework

✓	<i>Aboriginal Cultural Heritage Act 2003</i>
✓	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)</i>
✓	<i>Native Title Act 1993 (Cwlth)</i>
✓	<i>Nature Conservation Act 1992</i>

Plans and agreements

✓	Bonn Convention
✓	Bunya Mountains Aboriginal Aspirations and Caring for Country Plan 2010
✓	China–Australia Migratory Bird Agreement
✓	Japan–Australia Migratory Bird Agreement
✓	National recovery plan for the black-breasted button-quail <i>Turnix melanogaster</i>
✓	National recovery plan for the northern quoll (<i>Dasyurus hallucatus</i>)
✓	Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006–2016
✓	Republic of Korea–Australia Migratory Bird Agreement
✓	Wakka Wakka #2 and Tarong Indigenous Land Use Agreement Q12008/027

Thematic strategies

✓	Level 2 fire management strategy
✓	Level 2 pest management strategy

Vision

The park's characteristic Araucarian rainforests (bunya and hoop pine) and grassy balds are preserved, along with other significant ecosystems. Targeted research assists the maintenance of these ecosystems and neighbours work cooperatively to reduce the impacts of weeds, feral animals and wildfire.

Bunya Mountains National Park will remain a vibrant meeting place for Aboriginal peoples and Traditional Owners will have meaningful input into day-to-day and long-term management. The park's rich cultural heritage values are preserved with support and involvement from local communities.

Visitors to the national park have opportunities to appreciate the cool, ancient forests and diverse forest types through a combination of well-developed facilities and remote walking tracks. World class interpretation developed in consultation with Traditional Owners presents the unique history and values of the area.

Conservation purpose

The Bunya Mountains National Park became the second national park in Queensland, gazetted in 1908 with a total of 9,303ha of land. Now with over 19,000ha, the park is the most westerly protected rainforest in southern Queensland, conserving the world's largest remaining bunya pine rainforest.

The landscape is conserved to protect the extremely high values for Aboriginal people associated with the historic bunya nut festivals and to maintain the significant spiritual value for the Aboriginal people who continue to visit the park.

Protecting and presenting the park's values

Landscape

The Bunya Mountains arise at the boundary of the Queensland region central western Brigalow and South East Queensland biogeographic regions. They are situated 160km away from the geographically similar environments of the Scenic Rim to the south-east. The mountains project 300–600m above the surrounding tablelands and plains with their highest point, Mount Kiangarow, rising to 1,135m above sea level. The elongate, dome-shape of the Bunya Mountains has been interpreted as an old shield volcano. The mountains are formed on a series of volcanic lavas, which extend from the Queensland–New South Wales border to Kingaroy and beyond.

The dense, cool rainforests and wet forests of the Bunya Mountains provide a distinct visual contrast and a scenic backdrop to the surrounding open woodlands and grassy, rural landscapes. The national park is the focal point of the Great Bunya Drive, from Gympie through to Toowoomba.

The Bunya Mountains form a watershed between the Darling Downs to the south and South Burnett district to the north. The national park protects the integrity of the headwaters of water supplied to Nanango, Benarkin, Dalby, Blackbutt and Kingaroy. It also forms part of the headwaters contributing to Brisbane's drinking water supply.

Due to the variation in altitudes across the park, there are a large range of geographically isolated ecosystems surrounded by cleared farming land. One hundred and nineteen endangered grassy balds scattered around the national park provide important habitat for many native plant and animal species.

Regional ecosystems

Twenty different regional ecosystems are recorded in Bunya Mountains National Park, seven of which are endangered and four are of concern (Table 1).

Native plants and animals

Bunya Mountains has a variety of vegetation types and sheltered and geographically isolated habitats, where a diversity of plants and animals thrive. Bunya Mountains National Park is a significant locality for several major plant communities and constitutes the major refuge in Australia for rainforest communities dominated by bunya pine *Araucaria bidwillii* and hoop pine *Araucaria cunninghamii*—the araucarian notophyll and microphyll rainforests. It is one of a few areas where both species occur together. Araucarian rainforests were once distributed more extensively across Queensland and may be considered relic communities from a past climatic regime.

Due to historic burning patterns, Bunya Mountains exhibits numerous medium–high altitude grasslands, known as grassy balds. The park conserves five of the six identified bald communities, which are rare in Australia and overseas due to the effects of grazing, inappropriate burning regimes, clearing for agriculture and development. In the park, the balds are dominated by *Poa labillardieri* grassland (endangered) and are home to some of the state's tallest grasstrees. Grassy balds are sensitive plant communities which are threatened by grazing, environmental pest plants, feral pigs and inappropriate fire regimes. Approximately one-quarter of the balds have been degraded by encroachment from surrounding woodlands or rainforest over the past 50 years. Kikuyu grass *Cenchrus clandestinus* encroachment and feral pig *Sus scrofa* activity are considered serious threats to the integrity of the remaining balds. Researchers from the Queensland Herbarium have proposed fire regimes to maintain the existing extent of the balds.

Bottle tree scrubs occupy approximately 25 per cent of the park's area and are a significant remnant of the natural plant communities once found extensively on the drier, lower slopes of the Great Dividing Range in South East Queensland. They are not well conserved elsewhere in the bioregion.

The national park is also a significant location for open forest dominated by yellow box *E. melliodora* and white box *E. albens* woodlands, which reach their northern limit here. In conjunction with heavy grazing pressures, wildfires have damaged some of these communities principally through reducing the species diversity of the herbaceous layer. The spread of weeds is also facilitated by grazing and trampling; however recent boundary fencing and neighbour negotiations has addressed some of these issues.

Brigalow Belt scrub in the vicinity of Walker's Creek is highly susceptible to grazing impacts and associated trampling and weed invasion.

Thirteen plant species of conservation significance are listed in Table 2. They include blotched sarcochilus *Sarcochilus weinthalii* (endangered), *Lepidium hyssopifolium* and *Lepidium peregrinum* (endangered under *Environment Protection and Biodiversity Conservation Act 1999*). Bunya pine is not listed but is locally and culturally significant. Dieback observed in this species requires ongoing monitoring.

Comprehensive native plant surveys have not been undertaken on the Bunya Mountains National Park, but a considerable diversity of native animals across all the major groups has been recorded. This includes 354 species, of which 212 are birds and 23 are species of conservation significance (Table 2). Many species were formerly more widely distributed in rainforest communities in South East Queensland, whilst others are considered to be endemic to the area. Some of the most notable are the endemic Bunya Mountains ringtail possum *Pseudocheirus peregrinus rubidus*, spotted-tailed quoll *Dasyurus maculatus*, the recently described endemic skink *Lamprotholis colossus* and the vulnerable rainforest dwelling black-breasted button quail *Turnix melanogaster*. Peregrine falcons *Falco peregrinus* are also recorded nesting in above average densities in the park.

Black-breasted button quails may be adversely affected by feral animal predation and the burning of eucalypt woodlands in areas adjacent to vine thickets (Mathieson and Smith 2009). Coxen's fig parrot *Cyclopsitta diophthalma* subsp. *coxeni* (endangered) has historically been recorded from the mountains. This extremely rare species has been impacted on by habitat fragmentation and widespread clearing of fig trees.

The Bunya Mountains represents the most westerly range of the red-legged pademelon *Thylogale stigmatica*. The loss of suitable habitat elsewhere has affected the distribution of this species. Cattle Creek Cave is one of a small number of breeding sites for the common bent-wing bat *Miniopterus schreibersii* and is therefore of considerable importance to the species' distribution and abundance in South East Queensland.

Frog surveys are conducted along transects on creeks including Middle Creek and Barkers Creek. Tusked frog *Adelotus brevis* is of scientific interest due to observed population declines elsewhere.

Aboriginal culture

The Bunya Mountains are of considerable importance for Aboriginal people from a wide area of southern Queensland and northern New South Wales. The Bunyas, together with areas in the Blackall Ranges, provided a location for the triennial gatherings, known in Wakka Wakka language as the 'bonye bonye' festival, characterised by bunya nut feasting and tribal ceremony. The last great bunya feast took place in 1875.

Section 1.5 of the Bunya Mountains Aboriginal Aspirations and Caring for Country Plan (2010) lists the Wakka Wakka, the Jarowair, the Djaku-nde and the Barrungam as the four Aboriginal groups with traditional custodianship responsibilities for the Bunya Mountains. The geographic area includes, but is not limited to, the traditional interests of these four groups, who are on the Bunya Mountains Council of Elders. Many Aboriginal groups were involved at the time of the gatherings and they continue to have a strong connection with the Bunya Mountains.

Although physical evidence of early Aboriginal occupation on the mountains is now limited, the area remains an important focus for traditional Aboriginal beliefs and as an integral element of the broader Aboriginal cultural landscape. Although the overall area has many cultural places and associations and is very important to Traditional Owners, the exact location of these places and relevant documentation has not been qualified.

The northern half and South Burnett catchment side of the park falls within the area of the Wakka Wakka #2 and Tarong Indigenous Land Use Agreement. There are no current native title claims over the park.

Opportunities exist to improve relationships with local Traditional Owner groups and involve them in park management.

Shared-history culture

The Bunya Mountains National Park was logged for rainforest timber from the late 1800s until 1945. Relics from this period are scattered throughout the area. Timber chutes were commonly used to slide the large logs down the mountain to the waiting timber mills below. Another interesting aspect of the timber harvesting process at the Bunya Mountains was the use of Lars Anderson's innovative tramway system to facilitate the removal of timber off the mountain. It was constructed in 1923 and remained in use until around 1930. Very little remains of the structure today and what remains is threatened by wildfire and decay.

Tourism and visitor opportunities

The park's isolation from major regional centres and its cool, mountain atmosphere provides a haven for around 200,000 visitors per year. Spectacular views, bushwalking and observation of wildlife, are the most popular activities. The park contains approximately 35km of graded track consisting of 10 individual walks which range in length from a 500m circuit at Dandabah to a 10km walk to the Big Falls Lookout. The walking tracks traverse rainforest, grassy balds and also the drier forest and shrub communities found on the western side of the mountain. There are no wheelchair accessible tracks. Bird watching is very popular and visitors enjoy seeing green catbirds, sooty owls and quails.

The park's size caters for a range of recreational settings which have their own character and focus of activity, ranging from the more developed, easily accessible and busier short walking tracks and day use areas to the quieter, more isolated longer walks. There are three campgrounds and three picnic areas, which tend to attract larger family groups who stay for longer periods of time than at other parks. At times, approximately one-third of visitors stay in privately run accommodation provided adjacent to the park.

The Queensland Parks and Wildlife Service (QPWS) information centre is open most days. The Dandabah picnic area also displays information by way of open air static displays.

Approximately 20–30 commercial operators are permitted to use the park. Weddings are a regular occurrence on or near to the park.

Education and science

The values of the park provide a popular destination for school and university groups who either visit on day trips or occasionally camp over a number of days. QPWS conducts some holiday programs for visitors including guided walks, talks and slide shows. Staff often interact with school groups and lead interpretative walks and talks.

The disjunct positioning of the Bunya Mountains from biologically similar environments has served to promote scientific interest in its biota. It is also a significant area for scientific research due to its relatively large size and the diverse range of plant communities that are represented in the area. A number of rainforest species considered to be vulnerable to the fragmentation of rainforests still occur in reasonable numbers in the Bunya Mountains and are of considerable scientific interest.

Some of the early scientific interest in the area concentrated on the origins of the grassy balds. These communities continue to be of high scientific interest today especially in the context of the global evolution of high altitude grasslands. The Queensland Herbarium has conducted research several times per year since the mid-1990s and has confirmed that the current burning regime of every 2–3 years, when there is some soil moisture present, appears the best practice to assist in maintaining the balds.

Partnerships

QPWS is a party to the Federal Government Murri Ranger Program, which trains Aboriginal employees to work in conservation and land management roles in council and QPWS areas. The program will continue until at least 2014.

Other key issues and responses

Pest management

There is a Level 2 pest management strategy implemented for this park. The common lantana *Lantana camara*, velvet tree pear *Opuntia tomentosa*, common groundsel *Senecio vulgaris*, Madeira vine *Anredera cordifolia* and white moth vine *Araujia sericifera* have spread through some habitats of the park.

Disturbance of grassy balds from grazing and fire has resulted in the invasion of balloon cotton bush *Gomphiocarpus fruticosus* and other species. The abundance of blady grass *Imperata cylindrica* in some areas is likely to have been influenced by the effects of grazing and particularly fire. This species is particularly common in frequently burnt areas. The encroachment of couch grass *Cynodon dactylon* and kikuyu grass *Cenchrus clandestinum* into the grasslands from planted lawn areas on the park and adjacent rural and residential developments is of major concern and threatens the maintenance of native grass communities.

QPWS rangers have undertaken some pest plant management in the park with assistance at times from the Condamine Alliance, Murri Ranger Program, Conservation Volunteers Australia, Greencorp and contractors.

Pigs *Sus scrofa* have become a serious pest in recent years and threaten the integrity of many plant communities including the grassy balds and rainforests. Illegal pig hunters have also become prevalent in association with the pig populations with resulting problems including escaped dogs, visitor and staff safety, disturbance of QPWS control programs and degradation of fire access trails. Pig baiting and trapping is conducted by QPWS on the park with some assistance from the Murri Rangers.

Dogs and cats are present, entering the park from adjoining rural residential developments or escapees from vehicles, and pose a threat to native animals. Dingoes *Canis lupus dingo* occur in small numbers on the park and are of some concern to adjacent land holders.

Cattle *Bos* sp. incursions occur from areas including previous state forest lease areas. Numbers are low and boundary fencing upgrading is addressing this issue.

Fire management

Most prescribed burning is for conservation purposes and is guided by a Level 2 fire management strategy. There is normally very little arson in the area. The largest wildfire in recent history occurred in 2009. Monitoring of vine thicket recovery since this event is being undertaken.

Grassy balds are currently threatened by encroachment of woodland or rainforest and fire regimes are managed to protect these sites and restore natural floral communities. Based on aesthetic, cultural heritage and biodiversity values, an optimum fire management regime is expected to ensure the survival of the grassy balds in the park. The current fire management regime also aims to minimise the establishment of woody pest plants, and woodland and rainforest encroachment.

References

Markwell Consulting 2010, *Bunya Mountains Aboriginal Aspirations and Caring for Country Plan*. Bunya Mountains Elders Council and Burnett Mary Regional Group.

Mathieson MT and Smith GC 2009, *National recovery plan for the black-breasted button-quail Turnix melanogaster*. Report to the Department of the Environment, Water, Heritage and the Arts, Canberra.

Management directions

Desired outcomes	Actions and guidelines
<p>Landscape</p> <p>Water quality is maintained and water use is sustainable in the park.</p>	<p>A1. Establish a water quality monitoring program downstream of Dandabah to quantify impacts on the environment and human health and respond to any identified impacts.</p>
<p>Native plants and animals</p> <p>Communities and species of conservation significance are protected and appropriately managed.</p>	<p>A2. Work with the Queensland Herbarium to update regional ecosystem mapping and identify unmapped ecosystems.</p> <p>A3. Encourage tertiary institutions to research the ecology and management requirements of native plant and animal species of conservation significance including programs on the effects of climate stress on Araucarian forests and develop management response strategies.</p> <p>A4. Establish key management objectives for native plant species of conservation significance on the park, and support programs that achieve these objectives.</p>
<p>Aboriginal culture</p> <p>Traditional Owners have meaningful involvement with general management planning and direction.</p> <p>Murri Rangers have a meaningful contribution to day to day conservation and land management.</p>	<p>A5. Provide further opportunities to Murri Rangers to increase their knowledge of park management, especially pest and fire management.</p> <p>A6. Continue involving Murri Rangers for tasks to assist QPWS capacity, particularly natural resource management activities.</p> <p>A7. Encourage Traditional Owners to identify and document values, artefacts and places of cultural heritage significance so that management strategies and decisions relating to fire regimes, access and track maintenance minimise potential threats to these values.</p> <p>A8. Continue to develop awareness and understanding of the cultural heritage significance with local community and user groups through education and interpretive programs (in consultation with Traditional Owners to determine appropriateness for Aboriginal values).</p> <p>A9. Manage access to tracks with significant cultural heritage values and monitor values to provide information on the impacts of activities and undertake management intervention if required.</p>
<p>Tourism and visitor opportunities</p> <p>Provide a diversity of recreational opportunities across the park.</p>	<p>A10. Create a visitor management strategy to provide specific management guidelines for visitor sites and activities.</p>
<p>Partnerships</p> <p>Adjoining landholders are aware of and assist in achieving desired management outcomes.</p>	<p>A11. Enhance cooperative relationships with park neighbours to achieve mutual conservation outcomes by:</p> <ul style="list-style-type: none"> • providing neighbours with information on managing Bunya Mountains and liaise with park neighbours about cooperative arrangements for park management issues including fire, livestock control, pest management and public access • encouraging neighbours to adopt sustainability and conservation principles to manage their land, engaging park neighbours and encourage them to participate in conservation initiatives on and adjacent to the park.

Desired outcomes	Actions and guidelines
<p>Fire management</p> <p>Fire is managed to protect life, property, commercial assets and to protect the natural and biodiversity values of the area.</p>	<p>A12. Continue to review and implement the Level 2 fire management strategy for the area with the goal of replacing this document with a Level 1 fire management strategy.</p>

Tables – Conservation values management

Table 1: Endangered and of concern regional ecosystems

Regional ecosystem number	Description	Biodiversity status
11.4.3	<i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> shrubby open forest on Cainozoic clay plains	Endangered
11.8.3	Semi-evergreen vine thicket on Cainozoic igneous rocks. Steep hillsides	Of concern
11.9.4a	11.9.4a: Semi-evergreen vine thicket, generally dominated by a low tree layer (5-10m high) which is floristically diverse and variable	Endangered
11.9.5	<i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> open forest on fine-grained sedimentary rocks	Endangered
12.3.3	<i>Eucalyptus tereticornis</i> woodland to open forest on alluvial plains	Endangered
12.8.7	Simple microphyll fern thicket with <i>Acmena smithii</i> on Cainozoic igneous rocks	Of concern
12.8.13	Araucarian complex microphyll vine forest on Cainozoic igneous rocks	Of concern
12.8.15	<i>Poa labillardieri</i> grassland on Cainozoic igneous rocks	Endangered
12.8.16	<i>Eucalyptus crebra</i> , <i>E. tereticornis</i> woodland on Cainozoic igneous rocks	Of concern
12.8.21	Semi-evergreen vine thicket with <i>Brachychiton rupestris</i> on Cainozoic igneous rocks. Usually southern half of bioregion	Endangered
12.8.23	<i>Acacia harpophylla</i> open forest on Cainozoic igneous rocks	Endangered

Table 2: Species of conservation significance

Scientific name	Common name	Nature Conservation Act 1992 status	Environment Protection and Biodiversity Conservation Act 1999 status	Back on Track status
Plants				
<i>Acomis acoma</i>	-	Near threatened	-	Low

Scientific name	Common name	Nature Conservation Act 1992 status	Environment Protection and Biodiversity Conservation Act 1999 status	Back on Track status
<i>Bothriochloa bunyensis</i>	Bunya Mountains bluegrass	Vulnerable	Vulnerable	Low
<i>Bulbophyllum globuliforme</i>	-	Near threatened	Vulnerable	Low
<i>Bulbophyllum weinthalii</i>	blotched bulbophyllum	Vulnerable	-	Not assessed
<i>Callitris baileyi</i>	Bailey's cypress	Near threatened	-	High
<i>Clematis fawcettii</i>	-	Vulnerable	Vulnerable	Low
<i>Cryptocarya floydii</i>	gorge laurel	Near threatened	-	Low
<i>Diuris parvipetala</i>	-	Vulnerable	-	High
<i>Haloragis exalata</i> subsp. <i>velutina</i>	-	Vulnerable	Vulnerable	Low
<i>Lepidium peregrinum</i>	-	Least concern	Endangered	Low
<i>Picris evae</i>	-	Vulnerable	Vulnerable	High
<i>Thesium australe</i>	toadflax	Vulnerable	Vulnerable	Medium
<i>Sarcochilus weinthalii</i>	blotched sarcochilus	Endangered	Vulnerable	Critical
Animals				
<i>Accipiter novaehollandiae</i>	grey goshawk	Near threatened	-	Low
<i>Adelotus brevis</i>	tusked frog	Vulnerable	-	Medium
<i>Anthochaera phrygia</i>	regent honeyeater	Endangered	Endangered	Medium
<i>Calyptorhynchus lathami</i>	glossy black-cockatoo	Vulnerable	-	-
<i>Chalinolobus picatus</i>	little pied bat	Near threatened	-	Medium
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's fig-parrot	Endangered	Endangered	Critical
<i>Dasyurus hallucatus</i>	northern quoll	Least concern	Endangered	Medium
<i>Dasyurus maculatus maculatus</i>	spotted-tailed quoll (southern subspecies)	Vulnerable	Endangered	High
<i>Delma torquata</i>	collared delma	Vulnerable	Vulnerable	High
<i>Egernia rugosa</i>	yakka skink	Vulnerable	Vulnerable	Medium
<i>Falco hypoleucos</i>	grey falcon	Near threatened	-	Data deficient
<i>Grantiella picta</i>	painted honeyeater	Vulnerable	-	High
<i>Kerivoula papuensis</i>	golden-tipped bat	Near threatened	-	Medium
<i>Lampropholis colossus</i>	-	Near threatened	-	Medium

Scientific name	Common name	Nature Conservation Act 1992 status	Environment Protection and Biodiversity Conservation Act 1999 status	Back on Track status
<i>Mixophyes iteratus</i>	giant barred frog	Endangered	Endangered	Medium
<i>Neophema pulchella</i>	turquoise parrot	Near threatened	-	Low
<i>Ninox strenua</i>	powerful owl	Vulnerable	-	Medium
<i>Phascolarctos cinereus</i> (South East Queensland bioregion)	koala (South East Queensland bioregion)	Special least concern animal	Vulnerable	Not assessed
<i>Podargus ocellatus plumiferus</i>	plumed frogmouth	Vulnerable	-	Low
<i>Pteropus poliocephalus</i>	grey-headed flying-fox	Least concern	Vulnerable	Critical
<i>Strophurus taenicauda</i>	golden-tailed gecko	Near threatened	-	Medium
<i>Turnix melanogaster</i>	black-breasted button-quail	Vulnerable	Vulnerable	Critical
<i>Tyto tenebricosa tenebricosa</i>	sooty owl	Near threatened	-	Low

Table 3: Species listed in international agreements

Scientific name	Common name	Bonn	CAMBA	JAMBA	ROKAMBA
<i>Acrocephalus australis</i>	Australian reed-warbler	✓	-	-	-
<i>Anthochaera phrygia</i>	regent honeyeater	-	-	✓	-
<i>Apus pacificus</i>	fork-tailed swift	-	✓	✓	✓
<i>Ardea modesta</i>	eastern great egret	-	✓	✓	-
<i>Coracina tenuirostris</i>	cicadabird	-	-	✓	-
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's fig-parrot	✓	✓	✓	✓
<i>Danaus plexippus plexippus</i>	monarch	✓	-	-	-
<i>Hirundapus caudacutus</i>	white-throated needletail	-	✓	✓	✓
<i>Merops ornatus</i>	rainbow bee-eater	-	-	✓	-
<i>Monarcha melanopsis</i>	black-faced monarch	✓	-	-	-
<i>Myiagra cyanoleuca</i>	satin flycatcher	✓	-	-	-
<i>Rhipidura rufifrons</i>	rufous fantail	✓	-	-	-
<i>Symposiarchus trivirgatus</i>	spectacled monarch	✓	-	-	-

Bonn – Bonn Convention

CAMBA – China–Australia Migratory Bird Agreement

JAMBA – Japan–Australia Migratory Bird Agreement

ROKAMBA – Republic of Korea–Australia Migratory Bird Agreement