

Springbrook National Park and Springbrook Conservation Park Management Statement 2013

Park size:	National Park—6,354ha Conservation Park—37.5ha
Bioregion:	South Eastern Queensland
QPWS region:	South East
Local government estate/area:	Gold Coast City Council
State electorate:	Currumbin Mudgeeraba



Ravine orchid *Sarcochilus fitzgeraldii*. Photo: DSITIA

Legislative framework

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

Plans and agreements

✓	Bonn Convention
✓	China–Australia Migratory Bird Agreement
✓	Coxen's fig-parrot <i>Cyclopsitta diophthalma coxeni</i> recovery plan 2001-2005
✓	Japan–Australia Migratory Bird Agreement
✓	National recovery plan for the black-breasted button-quail <i>Turnix melanogaster</i>
✓	Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006-2016
✓	Recovery plan for stream frogs of south-east Queensland 2001-2005
✓	Recovery plan for <i>Davidsonia johnsonii</i> (smooth davidsonia)
✓	Republic of Korea–Australia Migratory Bird Agreement
✓	Southern macadamia species recovery plan

Thematic strategies

✓	Fire Management Strategy
✓	Pest Management Strategy

Vision

The beauty and significant natural values of Springbrook National Park and Springbrook Conservation Park will be maintained by minimising development and preventing further habitat fragmentation and loss of natural connectivity.

Springbrook National Park is considered to be part of one of the most outstanding and valuable places in the world. Its World Heritage values will continue to be managed in conjunction with the key principles of the World Heritage Convention and the strategic objectives for the area, as agreed by the Australian, New South Wales and Queensland governments.

Conservation purpose

Springbrook National Park and Springbrook Conservation Park contain outstanding geological features and spectacular landscapes and views that are internationally renowned. Warrie National Park in the Canyon area was declared in 1937, followed by Purling Brook Falls in 1940. Other sections of the national park were progressively declared from 1941–73. Springbrook Conservation Park was declared in 2008.

In 1994, Springbrook National Park was included in the World Heritage listed Gondwana Rainforests of Australia and World Heritage Area as it meets the following three of four natural criteria. It:

- represents a major stage of the earth's evolutionary history
- is an outstanding example of ongoing ecological and biological processes
- contains the most important natural habitats for conserving biological diversity.

The cool rainforests, eucalyptus forests and montane heath provide habitat to a large number of threatened species. Biodiversity conservation is the primary management goal.

Protecting and presenting park values

Landscape

Springbrook National Park contains four separate sections—Springbrook plateau, Mount Cougal to the east and Natural Bridge and Numinbah to the west. Escarpments, waterfalls, creeks and waterholes are the main features of the Springbrook landscape.

The Springbrook plateau is a remnant of the northern side of a once huge shield volcano that dominated the region about 23 million years ago. Around 10 million years ago, the volcano began to subside with the remaining lava plugging its numerous vents. Over the millennia, weathering and water erosion has sculpted the volcano to form a classic eroded caldera landform.

The Mount Warning caldera (the crescent of perpendicular cliffs extending from Springbrook to Lamington plateau and the Tweed Range) is regarded as the largest and best of its age in the world. Eroded subsidiary vents, plugged with rhyolite, jut out of the landscape surrounding Mount Warning, and the Pinnacle and the Tweed caldera can be viewed from several lookouts within the park.

A large proportion of the Springbrook area contains rainforest characterised by vines, palms, epiphytes and large strangler figs.

The Springbrook Plateau receives more than 3,000 millimetres (mm) of rain per annum. The high rainfall that feeds streams and powers waterfalls continues to shape the landscape in this ongoing erosion process. Natural Bridge is a prime example of this. Springbrook National Park and Springbrook Conservation Park are part of the water catchment for the Little Nerang and Hinze dams, which supply drinking water to the Gold Coast and adjacent rural areas. A significant proportion of the Springbrook area was previously logged and cleared for dairy production. Land surrounding the parks still contains several active farms.

Regional ecosystems

The Springbrook National Park and Springbrook Conservation Park contain 19 regional ecosystems, one with biodiversity status of endangered and 11 that have of concern status (Table 1). Endangered regional ecosystem 12.3.1 occurs in Springbrook National Park. These regional ecosystems have a low representation in the protected area estate.

The forests of Springbrook National Park can be grouped into five classifications—subtropical, warm temperate and cool temperate rainforests, open eucalypt forest and heath. Subtropical rainforest characterized by a closed canopy, vines, palms, epiphytes and large trees such as strangler figs, can be seen at Mount Cougal, Natural Bridge and in the sheltered gorges of Springbrook plateau. Warm and cool temperate rainforest is found on the higher parts of the plateau. Antarctic beech *Nothofagus moorei*, relics of an earlier cooler, wetter age, now occur only at high altitude. The vulnerable plant *Marsdenia longiloba* grows on the margins of subtropical rainforest in regional ecosystem 12.3.2 while the slender silkpod *Parsonsia tenuis* is found in regional ecosystem 12.8.18.

Endangered regional ecosystem 12.3.1 provides habitat for the vulnerable Richmond birdwing butterfly *Ornithoptera richmondia* and endangered Coxen's fig-parrot *Cyclopsitta diophthalma coxeni*. It also protects the vulnerable macadamia species *Macadamia integrifolia* and *M. tetraphylla*.

The vulnerable black-breasted button-quail *Turnix melanogaster* prefers the habitat found in regional ecosystem 12.3.11.

Native plants and animals

The diverse environment of Springbrook National and Springbrook Conservation Park provides habitat for numerous plants and animals, many of which are listed as species of conservation significance or are listed under international treaties (tables 2 and 3). The parks contain approximately 250 native animal species, including four that are listed as endangered under the *Nature Conservation Act 1992*. Of the 27 amphibians recorded on the parks, two are vulnerable, two endangered and three are listed as near threatened (Table 2).

The diversity of vegetation communities in the Springbrook area provide habitat for over 170 bird species. The red goshawk *Erythrorhynchus radiatus* and Coxen's fig-parrot *Cyclopsitta diophthalma coxeni* are listed as endangered. A further five bird species are listed as vulnerable and four are near threatened. Both the red goshawk and Coxen's fig-parrot are threatened by clearing of vegetation that reduces the quality and quantity of habitat available for the species.

The black-breasted button-quail is listed as vulnerable under State and Commonwealth legislation, as well as being ranked as a critical priority species under the Back on Track species prioritisation framework. Threats to the black-breasted button-quail include clearing of vegetation resulting in an increase in feral predation. Forty-four mammals have been recorded in the parks. Species which are listed as vulnerable include the spotted-tailed quoll *Dasyurus maculatus maculatus*, koala *Phascolarctos cinereus* and long-nosed potoroo *Potorous tridactylus tridactylus*. The grey-headed flying-fox *Pteropus poliocephalus* while listed as a least concern species under State legislation is a vulnerable species under Commonwealth legislation and is ranked as a critical species under the Back on Track program.

Other notable species include fresh water crayfish *Euastacus* sp. that have been found in most creeks and the buff-banded rail *Gallirallus philippensis* whose numbers appear to have been reduced by feral cats *Felis catus* predation.

In excess of 900 plant species and 42 fungi have been recorded on the parks. Twenty-five plants are listed as vulnerable, six endangered and 19 near threatened. Currently there are only two known locations in the Springbrook area for the endangered *Eucryphia jinksii*.

The endangered southern ochrosia *Ochrosia moorei* is only found in the Springbrook area. This understorey tree is threatened by small population size limiting its capacity to reproduce. The mountain wattle *Acacia orites* has been recorded in Springbrook National Park. The distribution of this acacia fluctuates with disturbance.

Aboriginal culture

The landscape is of significant cultural value to Traditional Owners including the Yugambeh people. The Yugambeh groups have been identified as the Wangerriburra, Birinburra, Gugingin, Migunberri, Mununjali, Bollongin, Minjungbal and Kombumerri. They shared language, ceremonies, celebrations and trading in the area.

Evidence of Aboriginal occupation and use is found throughout the Springbrook area. Stone tools, rock shelters, rock art, scarred trees and earthen rings have been found.

Shared-history culture

In 1906, the Springbrook area's status as a timber reserve was revoked and the land was sold for farming. The Mount Cougal section attracted the first Europeans in search of timber. Remnants of the bush sawmill established in 1943 still remain. The mill produced packing crate timber for local banana farmers during the Second World War.

At the top of Twin Falls, evidence of an old forestry camp that was in use from 1949–62 remains. Many items from

the camp are now stored at the Queensland Parks and Wildlife Service (QPWS) Information Centre for their protection. Items include crockery, wheelbarrows, cutlery, bed frames and axes.

The current Information Centre was previously the Springbrook community school up until 1971. As Springbrook's oldest building, its centenary was celebrated in 2011 and it is heritage listed.

Tourism and visitor opportunities

Springbrook National Park's spectacular waterfalls, lush rainforest, ancient trees, magnificent views, exceptional ecological importance and natural beauty make it an outstanding place to visit. The parks offer visitors a variety of nature-based activities including bush walking, bird watching and nature appreciation. Walking tracks of varying difficulty range in distance from 300 metres (m) to 54 kilometres (km), the latter being the Gold Coast Hinterland Great Walk.

The Springbrook area contains a number of day-use areas with facilities such as barbecues, toilets and shelter sheds. Camping is only available at the Settlement area. A large interpretive display at the Information Centre allows visitors to learn about the history and natural values of the Springbrook area. Other interpretation for visitors is available at Purling Brook, the Settlement, Goomoolahra, Cougals and Natural Bridge sections of Springbrook.

The Springbrook plateau is located 100km south of Brisbane and is a popular destination for independent travellers, especially during summer months when the cooler climate provides a break from the Queensland heat.

The Natural Bridge section has been developed for night tours to view the glow worms and, based on 2011 figures, there were 32 tour operators conducting guided tours in Springbrook National Park.

Education and science

QPWS's Connect with Nature program offers a range of nature-based activities and events for children, adults and families in the Springbrook area. The size and location of Springbrook makes it an attractive area for schools to visit. The national and conservation park provide opportunities for research.

Partnerships

Partnerships with neighbours, state and local government agencies and community groups help ensure that the values of the parks are well-managed and protected.

Other key issues and responses

Pest management

Pest plant infestations are a major threat to Springbrook National Park and Springbrook Conservation. Infestations of mistflower *Ageratina riparia*, molasses grass *Melinis minutiflora* and buddleia *Buddleja madagascariensis* encroach on the protected area from urban areas. Pasture species such as groundsel bush *Baccharis halimifolia* have spread from farming land surrounding the protected areas. *Aristea ecklonii* is present on road verges and is considered to be an emerging threat, particularly in relation to road mowing contractors inadvertently spreading the pest.

Lantana *Lantana camara* is spreading in the Springbrook area. It is a weed of national significance and requires control measures to inhibit spread.

Red foxes *Vulpes vulpes*, domesticated dogs *Canis lupus familiaris* and feral cats *Felis catus* have been recorded in the parks. Cane toads *Rhinella marina* have been present on the plateaux for a number of years, with recent records at the Canyon. They have possibly been the cause of the decline of the spotted-tailed quoll in the area. QPWS has implemented a control program targeting red foxes at locations where this species is known to be active. Ongoing monitoring will continue and QPWS implements cooperative control measures with neighbours and the Gold Coast City Council.

A pest management strategy was prepared in 2010.

Fire management

Fire management is conducted in accordance with the 2009 Springbrook Public Conservation Estate Fire Strategy. This strategy was developed co-operatively by QPWS and the Gold Coast City Council

QPWS utilises a comprehensive fire management system with the protection of life and property the highest

priority. Fire is an integral component of the Australian environment and many plants and animals depend on fire for their survival. The optimal timing, frequency and intensity of fire vary from ecosystem to ecosystem.

Management directions

Desired outcomes	Actions and guidelines
Regional ecosystems Rainforest and eucalypt communities are conserved and habitat diversity maintained.	A1. Establish or review key monitoring objectives for plant species and communities of conservation significance. A focus may be on monitoring programs for recruitment of <i>Macadamia</i> spp. and the endangered regional ecosystem 12.3.1.
Native plants and animals The integrity of plant and animals species of the park are recorded and conserved. World Heritage values of the park are conserved in a sustainable way. Knowledge of native animal species distribution and habitat requirements is increased and used for future management decisions.	A2. Prepare and implement actions from management programs and recovery plans for significant species. A3. Establish or review key monitoring objectives for species of conservation significance. A focus may be on monitoring programs for the distribution of the giant barred frog <i>Mixophyes iteratus</i> and Fleay's barred frog <i>Mixophyes fleayi</i> ; nesting sites of the red goshawk <i>Erythrorhynchus radiatus</i> ; and for the number and distribution of black-breasted button-quail and Coxen's fig-parrot.
Aboriginal culture Aboriginal and shared cultural values of the protected area are identified and protected.	A4. Encourage Traditional Owners to conduct a comprehensive cultural heritage survey of the park including recording stories, language names and cultural heritage places.
Fire management Fire is managed to protect natural and biodiversity values of the national park.	A5. Continue to update and implement the fire management strategy and appropriate fire regimes (including fire exclusion) to balance rainforest encroachment into eucalypt forest and to protect conservation significant species.
Pest management An effective pest control program is developed and implemented to minimise the impacts on the natural ecosystems.	A6. Continue to review and update the Springbrook Pest Management Strategy. A7. Monitor lantana and other threatening pest plant infestations and control outbreaks where feasible, particularly in areas containing threatened vegetation communities. A8. Map pest plants and include information on location, abundance and impacts. A9. Maintain fox management program in conjunction with local government and landholders.
Partnerships Neighbours and interested parties are aware of, and help achieve the desired management outcomes for the park.	A10. Liaise with park neighbours and interested parties about cooperative arrangements for park management issues, including fire, pest and visitor management.

Desired outcomes	Actions and guidelines
Tourism and visitor opportunities Opportunity will exist for people to experience and enjoy a range of nature-based recreation opportunities and settings.	A11. Develop a visitor management strategy.

Tables – Conservation values management

Table 1: Endangered and of concern regional ecosystems

Regional ecosystem	Description	Biodiversity status
12.3.1	Gallery rainforest (notophyll vine forest) on alluvial plains	Endangered
12.3.2	<i>Eucalyptus grandis</i> tall open forest on alluvial plains	Of concern
12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>Corymbia intermedia</i> open forest on alluvial plains near coast	Of concern
12.8.2	<i>Eucalyptus oreades</i> tall open forest on Cainozoic igneous rocks	Of concern
12.8.6	Simple microphyll fern forest with <i>Nothofagus moorei</i> on Cainozoic igneous rocks	Of concern
12.8.8	<i>Eucalyptus saligna</i> or <i>E. grandis</i> tall open forest on Cainozoic igneous rocks	Of concern
12.8.9	<i>Lophostemon confertus</i> open forest on Cainozoic igneous rocks	Of concern
12.8.18	Simple notophyll vine forest with <i>Ceratopetalum apetalum</i> on Cainozoic igneous rocks	Of concern
12.8.19	Heath and rock pavement with scattered shrubs or open-woodland on Cainozoic igneous hills and mountains	Of concern
12.8.20	Shrubby woodland with <i>Eucalyptus racemosa</i> or <i>E. dura</i> on Cainozoic igneous rocks	Of concern
12.11.9	<i>Eucalyptus tereticornis</i> open forest on metamorphics +/- interbedded volcanics. Usually higher altitudes	Of concern
12.12.14	Shrubby woodland of rocky near coastal areas on Mesozoic to Proterozoic igneous rocks	Of concern

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>Acacia orites</i>	mountain wattle	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>Acronychia baeuerlenii</i>	Byron Bay acronychia	Near threatened	-	Low
<i>Alloxylon pinnatum</i>	-	Near threatened	-	Low
<i>Archidendron muellerianum</i>	veiny lace flower	Near threatened	-	Low
<i>Ardisia bakeri</i>	ardisia	Near threatened	-	Low
<i>Argophyllum nullumense</i>	silver leaf	Near threatened	-	Low
<i>Baloghia marmorata</i>	jointed baloghia	Vulnerable	Vulnerable	Medium
<i>Bosistoa transversa</i>	three-leaved bosistoa	Least concern	Vulnerable	-
<i>Callitris monticola</i>	steelhead	Near threatened	-	Low
<i>Cassia marksiana</i>	-	Vulnerable	-	Low
<i>Commersonia breviseta</i>	-	Near threatened	-	-
<i>Corynocarpus rupestris</i> subsp. <i>arborescens</i>	southern corynocarpus	Vulnerable	-	Medium
<i>Cupaniopsis newmanii</i>	long-leaved tuckeroo	Near threatened	-	Medium
<i>Cyperus semifertilis</i>	-	Vulnerable	Vulnerable	Low
<i>Davidsonia johnsonii</i>	smooth davidsonia	Endangered	Endangered	High
<i>Endiandra hayesii</i>	rusty rose walnut	Vulnerable	Vulnerable	Low
<i>Eucalyptus codonocarpa</i>	mallee ash	Near threatened	-	Low
<i>Eucryphia jinksii</i>	-	Endangered	-	Low
<i>Floydia praealta</i>	ball nut	Vulnerable	Vulnerable	Medium
<i>Fontainea australis</i>	southern fontainea	Vulnerable	Vulnerable	Low
<i>Gahnia insignis</i>	-	Near threatened	-	Low
<i>Helicia ferruginea</i>	rusty oak	Vulnerable	-	Low
<i>Helmholtzia glaberrima</i>	-	Near threatened	-	Low
<i>Hibbertia hexandra</i>	-	Near threatened	-	Low
<i>Hicksbeachia pinnatifolia</i>	red bopple nut	Vulnerable	-	Medium
<i>Phlegmariurus varius</i>	long clubmoss	Vulnerable	-	High
<i>Lastreopsis silvestris</i>	-	Vulnerable	-	Low
<i>Leionema elatius</i> subsp. <i>beckleri</i>	-	Endangered	-	Low
<i>Lenwebbia prominens</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>Lepiderema pulchella</i>	fine-leaved tuckeroo	Vulnerable	-	Low
<i>Macadamia integrifolia</i>	macadamia nut	Vulnerable	Vulnerable	Medium
<i>Macadamia tetraphylla</i>	-	Vulnerable	Vulnerable	Medium
<i>Marsdenia longiloba</i>	-	Vulnerable	Vulnerable	Low
<i>Niemeyera whitei</i>	-	Vulnerable	-	Low
<i>Ochrosia moorei</i>	southern ochrosia	Endangered	Endangered	High
<i>Olearia heterocarpa</i>	nightcap daisy bush	Near threatened	-	Low
<i>Ozothamnus vagans</i>	-	Vulnerable	Vulnerable	Medium
<i>Ozothamnus whitei</i>	-	Near threatened	-	Low
<i>Parsonsia tenuis</i>	slender silkpod	Vulnerable	-	Low
<i>Plectranthus nitidus</i>	-	Endangered	Endangered	Low
<i>Pterostylis bicornis</i>	horned greenhood	Vulnerable	Vulnerable	Low
<i>Ricinocarpos speciosus</i>	-	Vulnerable	-	Medium
<i>Sarcochilus fitzgeraldii</i>	ravine orchid	Endangered	Vulnerable	Critical
<i>Sarcochilus hartmannii</i>	-	Vulnerable	Vulnerable	Critical
<i>Senna acclinis</i>	-	Near threatened	-	Low
<i>Symplocos baeuerlenii</i>	small-leaved hazelwood	Vulnerable	Vulnerable	Low
<i>Syzygium hodgkinsoniae</i>	red lilly pilly	Vulnerable	Vulnerable	Low
<i>Syzygium moorei</i>	durobbay	Vulnerable	Vulnerable	Medium
<i>Taeniophyllum muelleri</i>	-	Least concern	Vulnerable	-
<i>Wahlenbergia scopulicola</i>	-	Near threatened	-	Low
<i>Westringia blakeana</i>	-	Near threatened	-	Low
<i>Westringia rupicola</i>	-	Vulnerable	Vulnerable	Low
Animals				
<i>Acanthophis antarcticus</i>	common death adder	Near threatened	-	Medium
<i>Accipiter novaehollandiae</i>	grey goshawk	Near threatened	-	Low
<i>Adelotus brevis</i>	tusked frog	Vulnerable	-	Medium
<i>Assa darlingtoni</i>	pouched frog	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>Atrichornis rufescens</i>	rufous scrub-bird	Vulnerable	-	Critical
<i>Calyptorhynchus lathamii</i>	glossy black-cockatoo	Vulnerable	-	High
<i>Coeranoscincus reticulatus</i>	three-toed snake-tooth skink	Near threatened	Vulnerable	Medium
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's fig-parrot	Endangered	Endangered	Critical
<i>Dasyurus maculatus maculatus</i>	spotted-tailed quoll (southern subspecies)	Vulnerable	Endangered	High
<i>Erythrorhynchus radiatus</i>	red goshawk	Endangered	Vulnerable	High
<i>Kyarranus loveridgei</i>	masked mountainfrog	Near threatened	-	Low
<i>Lewinia pectoralis</i>	Lewin's rail	Near threatened	-	Low
<i>Litoria pearsoniana</i>	cascade treefrog	Vulnerable	-	Low
<i>Litoria revelata</i>	whirring treefrog	Near threatened	-	Low
<i>Menura alberti</i>	Albert's lyrebird	Near threatened	-	Low
<i>Mixophyes fleayi</i>	Fleay's barred frog	Endangered	Endangered	Low
<i>Mixophyes iteratus</i>	giant barred frog	Endangered	Endangered	Medium
<i>Ninox strenua</i>	powerful owl	Vulnerable	-	Medium
<i>Ornithoptera richmondia</i>	Richmond birdwing	Vulnerable	-	Critical
<i>Phascogalea cinerea</i> (southeast Queensland bioregion)	koala (southeast Queensland bioregion)	Vulnerable	-	-
<i>Podargus ocellatus plumiferus</i>	plumed frogmouth	Vulnerable	-	Low
<i>Potorous tridactylus tridactylus</i>	long-nosed potoroo	Vulnerable	Vulnerable	Medium
<i>Pteropus poliocephalus</i>	grey-headed flying-fox	Least concern	Vulnerable	Critical
<i>Ramphotyphlops silvia</i>	a blind snake	Near threatened	-	Low
<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>Coracina tenuirostris</i>	cicadabird	-	-	✓	-
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's fig-parrot	-	-	✓	-
<i>Gallinago hardwickii</i>	Latham's snipe	✓	✓	✓	✓
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	-	✓	-	-
<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>Symposiachrus trivirgatus</i>	spectacled monarch	✓	-	-	-

Bonn: Bonn Convention

JAMBA: Japan–Australia Migratory Bird Agreement

CAMBA: China–Australia Migratory Bird Agreement

ROKAMBA: Republic of Korea–Australia Migratory Bird Agreement