

Mount Abbot National Park (Scientific) Management Statement 2013

Park size:	1,378ha
Bioregion:	Brigalow Belt
QPWS region:	Central
Local government estate/area:	Whitsunday Regional Council
State electorate:	Burdekin



Mount Abbot. Photo: NPRSR

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>
✓	<i>Queensland Heritage Act 1992</i>

Plans and agreements

✓	Bonn Convention
✓	China–Australia Migratory Bird Agreement
✓	IUCN Red List for Threatened Species
✓	Japan–Australia Migratory Bird Agreement
✓	Republic of Korea–Australia Migratory Bird Agreement

Thematic strategies

✓	Level 2 Pest Management Strategy
---	----------------------------------

Vision

Mount Abbot National Park (Scientific) is valued for its high scientific values, habitat and species. The park will be managed with an increased understanding of the diverse natural environments. Significant species and communities will be protected and impacts to them from unsustainable fire regimes, and pest plants and pest animals minimised.

Management of the park will be supported by research and monitoring of natural systems. It will remain a valuable resource for this function as plant and animal diversity and behaviours will exist in a natural and largely untouched state.

Traditional Owners will be active in the park's management and cultural heritage will be protected.

Neighbours and interested parties will know and understand the natural values of the park, and will work cooperatively with park managers to conserve them.

Conservation purpose

The objectives of management for Mount Abbot National Park (Scientific) are to:

- protect the exceptional scientific values of the park, and facilitate its use for research, surveys and monitoring
- protect regional ecosystems and protect and extend the distribution of species of conservation significance
- incorporate the interests and rights of Traditional Owners and their affiliations to the area and manage and protect cultural heritage
- achieve minimal disturbance to natural processes from pests, fire and management activities
- maintain the natural processes and biodiversity of the plant and animal communities on the park
- engage and inform neighbours, local community members and other interested parties in park use and the protection of its high conservation values.

Protecting and presenting the park's values

Landscape

Mount Abbot National Park (Scientific) is approximately 50km west-south-west of Bowen in northern Queensland, 20km inland from the Bruce Highway at Guthalungra. The mountain is approximately 12km long and 6km wide (Monteith & Joyce 1999).

The mountain is of granitic origin, with the long axis lying in an east–west direction. The southern slopes are very steep and crossed by many rocky gullies. The northern slopes are less dramatic. The summit plateau of the mountain is in stark contrast to the hot, arid lower slopes. It is an extensive area of undulating valleys and gentle slopes, with rounded granite tors and flat rock pavements on many of the higher points. Striking aspects of the adjacent mountains, as well as extensive views across the surrounding lowlands to the coast, Cape Upstart to the east, Mount Aberdeen to the south and Mount Elliot to the north, offer spectacular scenery (Monteith & Joyce 1999).

There is very little free water in the park, with one permanent rock hole. The southern drainage of Mount Abbot flows into Abbot Creek and then into the Bogie River, part of the Burdekin system. Drainage to the north falls into several short watercourses (Sandy Creek, Finley Creek and Elliot River) which exit to the sea near Cape Upstart (Monteith & Joyce 1999).

Native plants and animals

There are 11 regional ecosystems listed in the regional ecosystem description database on the park (Table 1). The montane heath ecosystem, which covers an area of approximately 80ha is probably the largest and most diverse heath in the northern Brigalow Belt Bioregion (Monteith & Joyce 1999). Two of the regional ecosystems listed, 8.12.3 and 8.12.16, are not generally known within the Brigalow Belt Bioregion; however they occur in isolated pockets in the gullies of Mount Abbot. It is currently unknown if these are new Brigalow Belt Bioregion ecosystems or are outliers of the Central Queensland Coast Bioregion or South East Queensland Bioregion.

Mount Abbot has diverse flora with some species being totally restricted to the mountain and many others occurring there as remote outliers from other populations. Bean (1994) lists 493 vascular plant species, and it is estimated this figure could rise to 550–600 species with further investigation. This is a very high figure for an area traditionally thought of as being relatively arid. The flora includes a high proportion of significant taxa, most occurring only above 800m altitude. For many species, it is the northern most extent of the population, with the next most southern populations found up to 750km away.

Plectranthus cyanophyllus is endemic to Mount Abbot, with a population of approximately 1,000 plants. It grows on exposed granite outcrops at intermediate altitudes. *Hemigenia* sp. is also endemic to Mount Abbot with a population of approximately 200 plants. It is a low shrub with purple flowers and grows as an understorey species in open forests of *Eucalyptus intermedia* and *Casuarina torulosa*. *Acacia abbatiana* (referred to as *Acacia granitica* in Bean 1994 [Pedley 1999]), is also endemic to the Mount Abbot area and occurs as an erect shrub or small tree to 4m height (Bean 1994).

Croton magneticus occurs within the park and is listed as vulnerable under both the *Nature Conservation Act 1992* (NCA) and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC). *Corchorus hygrophilus* is listed as vulnerable and *Peripleura scabra* is listed as near threatened under the NCA.

Ozothamnus eriocephalus, which is listed as vulnerable under both the NCA and EPBC, has been recorded on the park. This species occurs in gorges or gullies on steep hill slopes or rocky slopes, ridges or escarpments.

Although not a protected species, one of the features that Mount Abbot National Park (Scientific) is best known for are the insect species, some found nowhere else in Australia. The insects of Mount Abbot are one of the reasons the park is listed on the Register of the National Estate. In 1996, a large ant-like, unrecognised beetle was collected. Further investigation identified this as a new species of the genus *Clidicus*. Beetles of this family are generally 2–3mm in length; however, the Mount Abbot specimens exceeded mm, almost four times the size of other family members in Australia. The genus *Clidicus* is a rare genus of 12 giant species usually known in Sri Lanka, India, Vietnam and the large islands of Java, Sumatra and Borneo in Indonesia (Monteith & Joyce 1999).

The park provides habitat for significant fauna species including nine listed under the NCA and 10 species listed under the EPBC (Table 2). Eleven species are listed under international agreements (Table 3). The red goshawk *Nettapus coromandelianus* is likely to occur in the area and is listed as endangered under the NCA, vulnerable under the EPBC and is a high priority within the Back on Track species prioritisation framework. The black-throated finch *Poephila cincta cincta* is likely to occur in the area and is listed as endangered under the NCA and EPBC. It is a high priority in the Back on Track species prioritisation framework.

Aboriginal culture

No Aboriginal cultural heritage places have been identified on the park; however, Mount Abbot is a prominent natural landmark and has significance for Indigenous people. Since no cultural heritage surveys have been conducted to locate specific sites of cultural significance on the park, it is possible that such sites could exist.

The park is in an area subject to a native title claim (application name: Birri people; Tribunal file number: QC98/12; Federal Court file number: QUD6244/98). Other Aboriginal groups have communicated a connection to the area, including Giru-dala from Bowen and Gudjuda from Townsville.

Tourism and visitor opportunities

Mount Abbot National Park (Scientific) does not allow for tourism or visitors.

Education and science

The Queensland Museum has presented a successful proposal for Mount Abbot Summit to be listed on the Register of the National Estate for its floristic diversity.

The Queensland Entomological Society currently has a statewide NCA scientific permit, which allows for the collection of insects on Mount Abbot.

The park provides plentiful opportunities for further research and monitoring programs. Research has been undertaken in the fields of ecology, entomology and botanical diversity. This valuable information helps inform park management decisions. Monitoring data from pest and fire management programs is collected, analysed and stored by Queensland Parks and Wildlife Service (QPWS).

Partnerships

QPWS is directly responsible for planning, managing and regulating activities in the park. Working with Traditional Owners, neighbours, organisations and individuals with similar interests in managing the area is highly desirable to achieve the vision. Efficiencies in resource sharing, improved communications, decision making and enhanced on-ground outcomes is to be facilitated, where possible, through working partnerships.

A working relationship with the Traditional Owners is essential so that their views and aspirations for the land can be included in planning and management. Traditional Owners have a role to protect cultural heritage in the management area and a role to educate QPWS on cultural heritage management.

QPWS has a working relationship with Queensland Rural Fire Service, local government and neighbours to assist in the management of fire and pests.

Pest management

Plant surveys undertaken in 1994 (Bean 1994), found Mount Abbot to have a very low proportion of introduced pest plant species. Eleven species were recorded, accounting for 2.2 per cent of the total flora species. Pest plant infestation levels were considered low on Mount Abbot (Monteith & Joyce 1999). A pest management strategy exists for the park.

Lantana *Lantana camara* can aggressively infest undisturbed areas, and should be controlled if significant infestations are discovered. Control of lantana will be by appropriate fire regimes, where possible. Rubber vine *Cryptostegia grandiflora* occurs in the park. *Opuntia tomentosa* is confined to a small population on the rocky summit of Mount Abbot. *Ageratum conyzoides* occurs in one clump at the head of a gully and on rocky slopes. *Tridax procumbens* is confined to the lower end of two gullies on the southern side of Mount Abbot (Bean 1994).

Low pest plant infestation is indicative of the lack of disturbance over the years. Mount Abbot summit seems to have no feral animal infestations; larger feral animals are probably inhibited by the steep lower slopes of the mountain and the lack of water. The cane toad *Bufo marinus* is found on nearby Mount Aberdeen; however, is not found on Mount Abbot (Monteith & Joyce 1999).

The absence of pest animals from Mount Abbot maintains and potentially enhances the overall natural values of the park. Pest animals can reduce the natural values by introducing pest plant species and impacting on native plant and animal species.

Fire management

A fire management system has been adopted statewide by QPWS which is the primary agency for fire management on protected areas and State forests. Fire strategies provide the overall framework and direction for fire management and are the foundation from which planned burn programs are developed. A current fire strategy does not exist for the park and should be developed.

Fire is an important ecological management tool. Fire (or its absence) is critical to maintaining the park's conservation values. There is considerable evidence of frequent and severe wildfires within the park (Monteith & Joyce 1999). High intensity burns impact on the natural values of the park. The first moisture events after fire generally promote pest plants to invade scoured and exposed areas, creating competition for native plants.

Authorities

There are some infrastructures at the boundary of the park, including a heli-pad; however areas where these occur were not included within the park. As per section 34 of the NCA, any future authorities may only be granted if they are consistent with the management of the area or if a management plan has been approved.

References

Bean AR 1994 An analysis of the vascular flora of Mt Abbot near Bowen, Queensland. *Proceedings of the Royal Society of Queensland* 104: 43–66.

Monteith GB & Joyce KA 1999 *Mt Abbot summit nomination for register of the national estate*. Australian Heritage Commission.

Pedley L 1999 Notes on Acacia (Leguminosae: Mimosoideae) chiefly from northern Australia. *Austrobaileya* 5, 313.

Management directions

Desired outcomes	Actions and guidelines
<p>Natural values</p> <p>The full range of naturally occurring biological diversity, ecological processes and landscape dynamics are maintained.</p>	<p>A1. Monitor the impacts from natural processes, pests and fire. Use the information to guide management decisions and amend current and future plans and strategies.</p> <p>A2. Minimise threats through appropriate fire regimes and pest plant and pest animal control.</p> <p>A3. Develop and implement a fire management strategy jointly with neighbouring properties.</p> <p>A4. Species endemic to Mount Abbot are reclassified under the <i>Nature Conservation Act 1992</i>.</p> <p>A5. Encourage and coordinate research programs that recognise and benefit the high scientific values of the park.</p>
<p>Partnerships</p> <p>The effectiveness of future management is strengthened through cooperative partnerships.</p>	<p>A6. Continue to build relationships with the Traditional Owners, organisations, neighbours and research institutes to improve knowledge of the management area, and to highlight its significance to the region and gain support for park management initiatives.</p>

Tables – Conservation values management

Table 1: Regional ecosystems

Regional ecosystem number	Description	Biodiversity status
8.12.16	Low microphyll vine forest to semi-evergreen vine thicket on drier subcoastal hills on Mesozoic to Proterozoic igneous rocks	of concern
11.12.14	<i>Lophostemon</i> spp. woodland on igneous rocks. Coastal hills	of concern
11.12.15	<i>Allocasuarina torulosa</i> , <i>Livistona drudei</i> woodland on igneous rocks. Coastal hills	of concern
11.12.19	<i>Eucalyptus exserta</i> , <i>E. moluccana</i> , <i>E. crebra</i> , <i>Corymbia citriodora</i> woodland on igneous rocks. Steep hills and ranges	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 species prioritisation framework
Plants				
<i>Corchorus hygrophilus</i>	-	vulnerable	-	medium
<i>Croton magneticus</i>	-	vulnerable	vulnerable	low
<i>Ozothamnus eriocephalus</i>	-	vulnerable	vulnerable	low
<i>Peripleura scabra</i>	-	near threatened	-	low
Animals				
<i>Dasyurus hallucatus</i>	northern quoll	least concern	endangered	medium
<i>Delma labialis</i>	striped-tailed delma	vulnerable	vulnerable	medium
<i>Denisonia maculate</i>	ornamental snake	vulnerable	vulnerable	medium
<i>Erythrotriorchis radiatus</i>	red goshawk	endangered	vulnerable	high
<i>Geophaps scripta scripta</i>	squatter pigeon	vulnerable	vulnerable	medium
<i>Poephila cincta cincta</i>	black-throated finch	endangered	endangered	high
<i>Pteropus conspicillatus</i>	spectacled flying-fox	least concern	vulnerable	high

Table 3: Species listed in international agreements

Scientific name	Common name	Bonn	CAMBA	JAMBA	ROKAMBA
<i>Apus pacificus</i>	fork-tailed swift	-	✓	✓	✓
<i>Ardea ibis</i>	cattle egret	-	✓	✓	-
<i>Ardea modesta</i>	great egret	-	✓	✓	-
<i>Gallinago hardwickii</i>	Latham's snipe	✓	✓	✓	✓
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	-	✓		-
<i>Hirundo rustica</i>	barn swallow	-	✓	✓	✓
<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>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