

# Nuga Nuga National Park Management Statement 2013

Park size:	2,860ha
Bioregion:	Brigalow Belt South
QPWS region:	South West
Local government estate/area:	Central Highlands Regional
State electorate:	Gregory



Caspian tern *Hydroprogne caspia*. 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>

## Plans and agreements

✓	Bonn Convention
✓	China–Australia Migratory Bird Agreement
✓	Japan–Australia Migratory Bird Agreement
✓	Republic of Korea–Australia Migratory Bird Agreement

## Thematic strategies

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

## Vision

Nuga Nuga National Park will continue to conserve the significant values of the Brigalow Belt South bioregion, including remnants of endangered bonewood *Macropteranthes leichardtii* scrub and the vulnerable ooline *Cadellia pentasyllis*. Lake Nuga Nuga continues to conserve the valuable habitat for water birds in an otherwise arid sandstone landscape.

## Conservation purpose

Nuga Nuga National Park was originally gazetted in 1991 to protect fauna and flora of the Brigalow Belt South bioregion. Extensions to the estate in 1993 allowed for the inclusion of a former recreation reserve thereby increasing the park's size to 2,860ha.

The park is part of an island of unique and varied vegetation in a heavily cleared landscape and protects Lake Nuga Nuga which provides an important refuge for water birds.

## Protecting and presenting the park's values

### Landscape

Nuga Nuga National Park is approximately 395km by road west of Gladstone, and 695km by road north-west of Brisbane. The park is at the northern end of the Arcadia Valley to the east of Carnarvon Gorge. Mount Warinilla, at the south-western end of the park, offers an ideal view of the park and lake.

Lake Nuga Nuga is the largest natural water body within the Central Queensland Sandstone Belt and provides valuable habitat for water birds in a dry landscape. Water lilies on the lake flower at certain times of the year and the lake is dappled with colour providing visitors with photographic opportunities. The lake is ephemeral and completely dries up during dry periods.

Originally mapped by surveyor Vernon Brown in 1865, Lake Nuga Nuga was recorded as being centrally located in an extensive area of swamp, at the junction of Moolayember Creek and the Brown River. Local evidence has found that the lake only formed within the past 140 years, the result of a series of natural events which occurred over a short period. Heavy rain and flooding of the Brown River filled the existing lake and surrounding swamp, before a scouring flash flood in Moolayember Creek transported large amounts of silt into the vicinity of the lake. When these waters reached the right-angle junction with the Brown River, turbulence caused the deposition of silt to form a natural levee bank at the lakes northern end.

Remnants of bonewood scrub, a dry form of rainforest and ooline, with origins from earlier wetter geological times, are significant features in the park. The bonewood scrub represents the best known development of this plant community in Queensland and ooline is now a vulnerable species, due to extensive clearing throughout Queensland.

### Regional ecosystems

Nine regional ecosystems are represented on the park. Three are of concern, three are endangered and three are not of concern (Table 1). Endangered regional ecosystems 11.3.1 and 11.9.5, and of concern ecosystem 11.3.2 have been extensively cleared or modified by grazing.

### Native plants and animals

The park protects several significant plant and animal species, including the vulnerable ooline (Table 2). This tree was once widespread from central and southern Queensland to north-west New South Wales. It is not restricted to a few isolated areas.

Other plant species include brigalow *Acacia harpophylla*, broad-leaved bottle-tree *Brachychiton australis*, poplar box *Eucalyptus populnea*, and other eucalypt species—most notably ironbark—are present on the park. Rosewood *A. rhodoxylon* dominates the summit and sides of Mount Warinilla, with ironbark fringing the edges and scarps.

There are areas composed of a combination of open or shrubby woodland communities dominated by narrow-leaved ironbark *Eucalyptus crebra* and spotted gum *Corymbia citriodora*. Coolibah *Eucalyptus coolabah* woodland is also present.

Bonewood and semi-evergreen vine thicket exist where currant bush *Carissa ovata* is a significant coloniser of semi-evergreen vine thicket margins.

Lake Nuga Nuga provides valuable habitat for waterbirds in an otherwise arid sandstone landscape, many of which are migratory and are listed under international treaties (Table 3). Large numbers of birds such as pelicans *Pelecanus conspicillatus*, black swans *Cygnus atratus*, magpie geese *Anseranas semipalmata*, broilgas *Grus rubicunda*, grey teal *Anas gracilis*, great crested grebes *Podiceps cristatus*, little black cormorant *Phalacrocorax sulcirostris*, pink-eared ducks *Malacorhynchus membranaceus*, hardheads *Aythya australis* and plumed whistling ducks *Dendrocygna eytoni* use the lake.

### Aboriginal culture

The values and significance of Nuga Nuga National Park to Aboriginal people is unknown to Queensland Parks and Wildlife Service (QPWS).

There are currently two active native title claims over the area:

- Karingabal #2 people (claim no: QC06/005 – Federal Court no: QUD23/06)
- Bidjara people (claim no: QC08/005 – Federal Court no: QUD216/08).

## Shared-history culture

Within the Central Queensland Sandstone Belt, stockyards, fences and hand-paved roads within some of the area's national parks are a reminder of the colourful and often turbulent contemporary history of the central highlands, with many parks having been managed as sheep or cattle stations in the past.

There is no direct knowledge of shared-history use for this park.

## Tourism and visitor opportunities

Nuga Nuga National Park is an attractive and scenic destination. The park receives visitors who mostly stop in and/or drive through the site as a lay-over destination en-route.

A bush camping site with no facilities is located on the banks of Lake Nuga Nuga and canoeing, swimming and fishing is allowed. Motorised boats and jet skis are not permitted. There is pollution from bush toileting and damage from vehicles and camping off track is evident. There is a lack of formal delineation for tracks and camping areas.

There is the potential to manage the area for a higher number of visitors as the camping area is spread out over a large area and allows for privacy. Camping sites would need some informal unobtrusive delineation in order to sustain increased visitor numbers.

Other attractions in the area include:

- Glebe Weir—multiple use area for fishing, water activities, picnicking day-use area and camping
- Chain Lagoons—great for nature observation (teeming with frogs)
- Wide Water—fishing, birdwatching
- Dawson River Walk—located behind the hotel/caravan park in Taroom.

## Other key issues and responses

### Pest management

There are significant pest plant infestations on the park including buffel grass *Cenchrus ciliaris*, parthenium weed *Parthenium hysterophorus* and green panic *Panicum maximum*.

An array of pest animals are likely to occur on the park and more surveys are required to determine species and numbers to guide the pest management strategy.

A Level 2 pest management strategy is in place for Nuga Nuga National Park.

### Fire management

A Level 2 fire management strategy is in place for Nuga Nuga National Park. The objectives of this strategy includes the maintenance of ecosystem function in fire-adapted communities through protection of habitat and recruitment processes. This includes the maintenance of habitat such as hollow-bearing trees, complex ground stratum and/or mid-strata, through the development and maintenance of a mosaic of fire frequency, intensity and season consistent with the ecological limits of the vegetation community. Objectives of this strategy also include the protection of areas/places of cultural significance.

## Management directions

Desired outcomes	Actions and guidelines
<p><b>Regional ecosystems</b></p> <p>Populations of plant species and ecosystems of conservation significance are conserved, and habitat diversity is protected and maintained.</p>	<p>A1. Conserve the structure and composition of the existing vegetation communities (i.e. ooline) and associated habitat by reducing the impacts of fires, invasive pest plant species and visitor and roadside activities.</p>
<p><b>Native plants and animals</b></p> <p>Requirements for sensitive habitats and conservation significant species are reflected in management programs.</p> <p>Knowledge of native animal communities and species is increased to assist management.</p>	<p>A2. Develop and implement key management objectives for species and ecosystems of conservation significance on the park, and support programs that achieve these objectives. Particular focus will be on:</p> <ul style="list-style-type: none"> <li>• bonewood scrub</li> <li>• ooline</li> <li>• water bird populations.</li> </ul> <p>A3. Conduct fauna surveys to update resource information and assist management, including guiding fire and pest strategies.</p>
<p><b>Pest management</b></p> <p>A pest control program is developed and reduces impacts to manageable levels.</p>	<p>A4. Implement the Level 2 pest management strategy for the management area in cooperation with adjoining landholders and other interested parties.</p>
<p><b>Fire management</b></p> <p>Fire is managed to protect life, property and commercial assets and to protect the natural and biodiversity values of the park.</p>	<p>A5. Maintain and implement a fire management strategy with a primary objective of monitoring for threatened plant communities to determine any edge effects from fire.</p>

## Tables – Conservation values management

**Table 1: Endangered and of concern regional ecosystems**

Regional ecosystem number	Description	Biodiversity status
11.3.1	<i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> open-forest on alluvial plains	Endangered
11.3.2	<i>Eucalyptus populnea</i> woodland on alluvial plains	Of concern
11.3.25	<i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines	Of concern
11.3.27	Freshwater wetlands	Of concern
11.9.5	<i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> open-forest on fine-grained sedimentary rocks	Endangered
11.9.8	<i>Macropteranthes leichhardtii</i> thicket on fine-grained sedimentary 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
<b>Plants</b>				
<i>Cadellia pentastylis</i>	ooline	Vulnerable	Vulnerable	Critical
<b>Animals</b>				
<i>Denisonia maculata</i>	ornamental snake	Vulnerable	Vulnerable	Medium
<i>Ephippiorhynchus asiaticus</i>	black-necked stork	Near threatened	-	Low
<i>Nettapus coromandelianus</i>	cotton pygmy-goose	Near threatened	-	Low
<i>Stictonetta naevosa</i>	freckled duck	Near threatened	-	Low
<i>Strophurus taenicauda</i>	golden-tailed gecko	Near threatened	-	Medium

**Table 3: Species listed in international agreements**

Scientific name	Common name	Bonn	CAMBA	JAMBA	ROKAMBA
<i>Ardea modesta</i>	eastern great egret	-	✓	✓	-
<i>Coracina tenuirostris</i>	cicadabird	-	-	✓	-
<i>Cuculus optatus</i>	oriental cuckoo	-	✓	✓	✓
<i>Gallinago hardwickii</i>	Latham's snipe	✓	✓	✓	✓
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	-	✓	-	-
<i>Hydroprogne caspia</i>	Caspian tern	-	✓	✓	-
<i>Merops ornatus</i>	rainbow bee-eater	-	-	✓	-
<i>Myiagra cyanoleuca</i>	satin flycatcher	✓	-	-	-
<i>Plegadis falcinellus</i>	glossy ibis	✓	✓	-	-
<i>Tringa nebularia</i>	common greenshank	✓	✓	✓	✓
<i>Tringa stagnatilis</i>	marsh sandpiper	✓	✓	✓	✓

Bonn – Bonn Convention

CAMBA – China–Australia Migratory Bird Agreement

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ROKAMBA – Republic of Korea–Australia Migratory Bird Agreement