

Borrooloola area

Location and Description

Located in the transition zone between tropical and arid zones, the Site sits immediately south-west of the township of Borrooloola, 460 km south-east of Katherine. The McArthur River lies on the eastern side of the Site and the rugged rocky sandstone hills of the north Bukalara Range dominate its centre. The Site also contains near-permanent water at Caranbirini Waterhole. Apart from riparian vegetation along the river and watercourses, the hills and surrounding areas are mostly vegetated by open eucalypt woodland with a grassy understorey.

Tenure and Land Use

Almost half of this Site is Aboriginal freehold land, held by the Narwinbi Aboriginal Land Trust. The southern portion of the Site is pastoral leasehold land and includes two pastoral leases (McArthur River and Spring Creek), and a small portion of the Site is freehold land or other tenures associated with the township of Borrooloola. The main land uses within the Site are Indigenous and pastoral operations. Approximately 1% of this Site is managed as a conservation reserve (Caranbarini Conservation Reserve) and is used for conservation and recreation.

Significance Rating

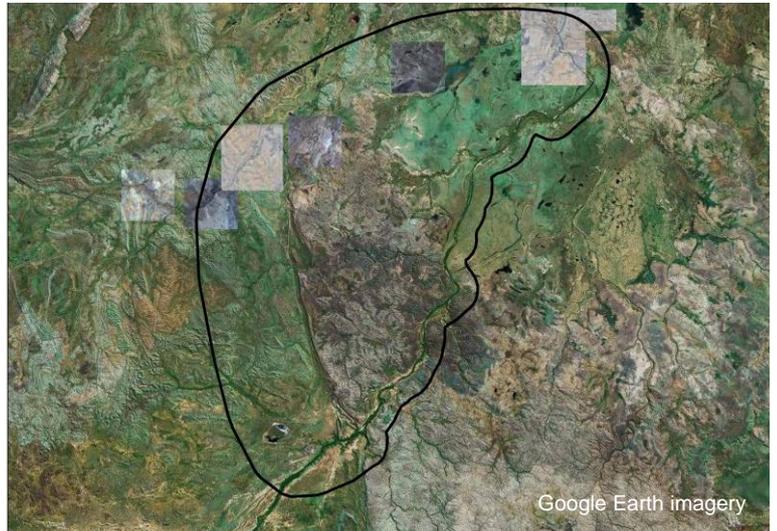
National Significance

Ecological Values

The Site includes a diverse range of habitats for fauna, including black soil plains and swamps, sandstone escarpment, and woodland. A total of ten threatened species are recorded from within this site, including eight bird species, one reptile, and one fish. The sandstone ranges have significant refugial values, and include some endemic and restricted range species and geographically-disjunct populations. The McArthur River is one of the larger rivers in the Gulf Fall and Upland Bioregion.

Management Issues

The numbers of feral animals (especially pig, water buffalo, donkey and cattle) and weeds continue to increase in the Site and are degrading the conservation values. The fire regime has probably changed substantially, and more frequent and extensive dry season fires in the sandstone ranges might be influencing the distribution and abundance of Carpentaria Grass-wrens and Gouldian Finches.



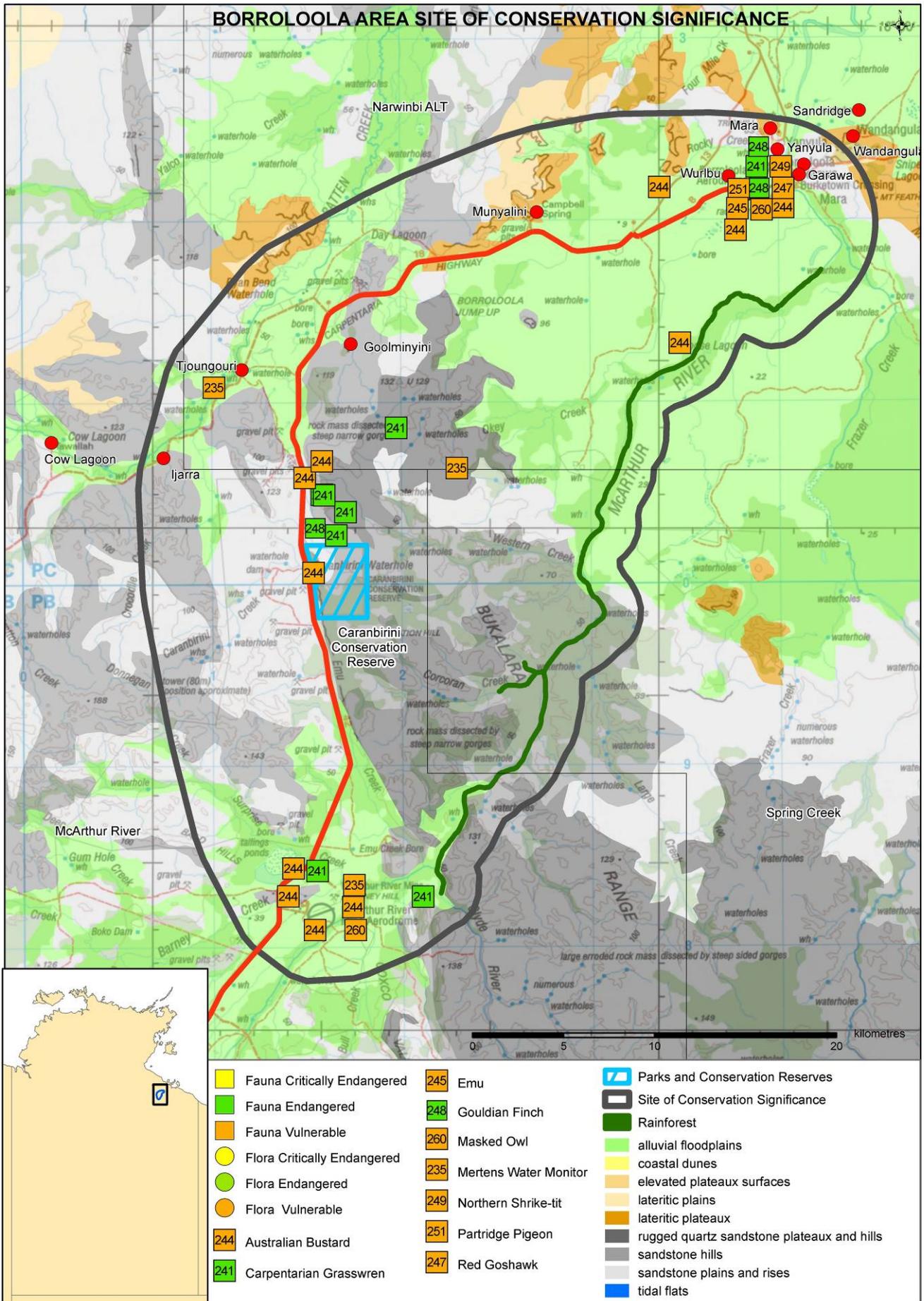
Condition

About 4% of the known flora within the Site is composed of introduced species. Grazing by feral animals has degraded some parts of the Site.

Current Conservation Initiatives

A plan of management was prepared for the Caranbirini Conservation Reserve in 2000 and a new plan is currently under preparation.

BORROLOOLA AREA - SITE OF CONSERVATION SIGNIFICANCE



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LOCATION	SOCS Number	35 (NT Parks and Conservation Masterplan Map Number 38)
	Latitude/Longitude	16° 14' South, 136° 9' East (at centre)
	Bioregion	Gulf Fall and Upland
	Description	<p>This site encompasses an area of 1105 km², is predominantly alluvial floodplains (490 km²) associated with the McArthur River, and sandstone hills and rises (447 km²), with a smaller area of rugged sandstone plateau and hills (134 km²).</p> <p>Nearby, the McArthur River coastal floodplains and the Sir Edward Pellew Island Group (offshore) are also recognised as sites of high conservation significance in the NT.</p>
THREATENED SPECIES	Significance Rating	National Significance
	Threatened plants and animals (Listings at National/NT level CR - Critically Endangered, EN - Endangered, VU - Vulnerable, NT - Near Threatened, LC - Least Concern, DD - Data Deficient)	<p>Ten threatened species are reported from this site and all are vertebrates.</p> <p>Vertebrates</p> <ul style="list-style-type: none"> ▪ Australian Bustard <i>Ardeotis australis</i> (-/VU) ▪ Carpentarian Grasswren <i>Amytornis dorotheae</i> (-/EN) ▪ Emu <i>Dromaius novaehollandiae</i> (-/VU) ▪ Gouldian Finch <i>Erythrura gouldiae</i> (EN/EN) ▪ Masked Owl <i>Tyto novaehollandiae kimberli</i> (VU/VU) ▪ Northern (crested) Shrike-tit <i>Falcunculus whitei</i> (VU/VU) ▪ Partridge Pigeon <i>Geophaps smithii</i> (VU/VU) ▪ Red Goshawk <i>Erythrotriorchis radiatus</i> (VU/VU) ▪ Merten's Water Monitor <i>Varanus mertensi</i> (-/VU) ▪ Freshwater Sawfish <i>Pristis microdon</i> (VU/VU) <p>The Carpentarian Grasswren is restricted to sandstone outcrops within the Carpentarian and Adelaidean systems of the Gulf of Carpentaria (Woinarski <i>et al.</i> 2007). In the NT, infrequent sightings of small populations are reported from around Borroloola and results from recent surveys suggest numbers of Grasswrens may have declined from previous surveys (Perry 2005).</p>
ENDEMIC SPECIES	Significance Rating	Regional Significance
	Notes	<p>Endemic to the site: One plant species is only known from this site (<i>Stylidium stenophyllum</i>).</p> <p>Endemic to the bioregion: <i>Stylidium stenophyllum</i> is endemic to the Gulf Fall and Upland bioregion.</p> <p>Endemic to the NT: Nine plant and one vertebrate species recorded in this site are NT endemics.</p> <p>Other: Three plant and one vertebrate species (Carpentaria Grasswren) are only found in the Gulf Fall and Upland bioregion within the NT, but also occur in other states.</p>
WILDLIFE AGGREGATIONS	Significance Rating	Not Significant
	Marine turtles	Not applicable
	Seabirds	No major aggregations recorded
	Waterbirds	Jaensch (1994) surveyed birds at the Borroloola Bluebush Swamps and reported a maximum count of 202 individuals of 23 species.
	Shorebirds	No major aggregations recorded
	Other aggregations	None known
WETLANDS	Significance Rating	National Significance
	Ramsar criteria met	Not assessed
	DIWA criteria met	The Borroloola Bluebush Swamps are listed as a wetland of national significance in the Directory of Important Wetlands in Australia (DIWA: NT006). The swamps meet Criteria 1 and 3 and include DIWA wetland types B13 and B14.
	Notes	The swamps are a series of small circular shaped wetlands (~1 km ²) that are located on the black soil plain 3.5 km south-south-west of the Borroloola township. The four large freshwater basins are seasonal and fed by local runoff and minor creek inflow. They are dominated by open woodland of coolibah <i>Eucalyptus microtheca</i> with scattered bluebush <i>Chenopodium auricomum</i> and this is a rare combination of vegetation types in the sub-humid tropics (Jaensch 1994). An abundance of wetland grasses in the site suggests reduced grazing pressure (Jaensch 1994).
	Rivers	The McArthur River is the second largest of the five major rivers flowing into the NT part of the Gulf of Carpentaria and has a catchment of more than 20 000 km ² (URS 2006). The River is a highly seasonal system which, unlike other southern Gulf systems such as the Roper, Towns and Gregory Rivers, ceases to flow for much of the year.
FLORA	Significance Rating	Not Significant
		Rainforest: One hundred hectares of riparian rainforest occurs as a linear stretch along the McArthur River within this site (Russell-Smith 1991).

BORROLOOLA AREA - SITE OF CONSERVATION SIGNIFICANCE

OTHER ENVIRONMENTAL VALUES		<p>17 species recorded from this site are listed under international conventions or bilateral agreements protecting migratory animals.</p> <p>Morton, Short and Barker (1995) identified the gorges and mountain ranges in Carpentaria sandstone as significant refuge areas for biodiversity.</p> <p>Two sites around Borroloola are listed on the Register of the National Estate for their natural values including: Caranbirini Waterhole Area, and the North Bukalara Range <i>Amytornis</i> Site (Australian Heritage Council).</p> <p>The Sandstone Antechinus (<i>Pseudantechinus bilarni</i>) is listed as Data Deficient in the NT and records from the site are important as they help to fill the distribution gap of the species between Arnhem Land and the Queensland border (PWCNT 2000).</p>
MANAGEMENT ISSUES		<p>Fire: In the period 1993-2004, 36% of the site was burnt in fewer than three years, and 26% was burnt in more than six years.</p> <p>Feral animals: Feral horses frequent the drying Borroloola swamps and may damage vegetation and pug substrate (DIWA).</p> <p>Weeds: One Weed of National Significance (<i>Parkinsonia aculeata</i>), one declared Category B weed (Noogoora Burr <i>Xanthium strumarium</i>) and one other undeclared but problematic environmental weed (high priority weeds: Smith 2001) (butterfly pea <i>Clitoria ternatea</i>) are recorded from this site.</p> <p>Other:</p>
MANAGEMENT INFORMATION	NRM groups	li-Anthawirriyarra Sea Rangers (Borroloola) (Northern Land Council 2006).
	Protected areas	Caranbirini Conservation Reserve (11 km ² / 1% of site).
	Current management plans	<p>Site-specific plans: Caranbirini Conservation Reserve Management Plan 2000 (PWCNT 2000).</p> <p>Recovery plans for threatened species: Gouldian Finch (O'Malley 2006); Northern Shrike-tit, Partridge Pigeon and Masked Owl (Woinarski 2004); Red Goshawk (Baker-Gabb in prep.).</p> <p>Other management plans: Australian Weeds Strategy (NRMMC 2007); FIREPLAN: Fire management for the savanna community (Russell-Smith <i>et al.</i> in press.).</p>
	Monitoring programs and research projects	<p>Fire in the tropical savannas is mapped continuously under the North Australia Fire Information Project http://www.firenorth.org.au/nafi/app/init.jsp</p> <p>There are two Tier 1 rangeland monitoring points within this site (Karfs and Bastin 2001).</p>
	Management recommendations	<p>Assess conservation values and develop appropriate management programs in conjunction with landholders and other stakeholders (NRETA 2005).</p> <p>Provide financial and extension services to landholders and the community to undertake conservation management programs (NRETA 2005).</p> <p>Conduct broad-scale control of threatening processes, especially feral animals, weeds and altered fire regimes (Woinarski 2002).</p>
KEY REFERENCES	Papers & reports	<p>DIWA (A Directory of Important Wetlands in Australia). <i>Australian Wetlands Database</i>. Department of Environment, Water, Heritage & the Arts, Canberra ACT (accessed May 2008).</p> <p>Jaensch, R., (1994). <i>An Inventory of Wetlands of the sub-humid tropics of the NT</i>. Conservation Commission of the NT, Darwin.</p> <p>PWCNT (2000). <i>Caranbirini Conservation Reserve Management Plan 2000</i>. Parks and Wildlife Commission of the Northern Territory, Northern Territory Government.</p> <p>Perry, J. (2005). <i>Habitat and status of the Carpentaria grasswren (Amytornis dorotheae) in the Northern Territory</i>. B.App.Sci. thesis. Charles Darwin University, Darwin.</p>
	Contributors	