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Technical Report · July 2005

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NORTHERN TERRITORY

## bioregions

assessment of key biodiversity values and threats

# **Northern Territory Bioregions**

## **- assessment of key biodiversity values and threats -**

A resource document to accompany the  
Northern Territory Parks and Conservation Masterplan.

Biodiversity Group  
Biodiversity Conservation  
Department of Natural Resources, Environment and the Arts

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July 2005  
Darwin, Northern Territory

# Contents

Introduction .....	1
Methods and definitions .....	3
Abbreviations .....	6
Overview of NT Bioregions .....	7
ARNHEM COAST (ARC).....	16
ARNHEM PLATEAU (ARP).....	23
BURT PLAIN (BRT) .....	30
CENTRAL ARNHEM (CA).....	35
CENTRAL RANGES (CR) .....	40
CHANNEL COUNTRY (CHC).....	45
DALY BASIN (DAB).....	49
DARWIN COASTAL (DAC).....	55
DAVENPORT MURCHISON RANGES (DMR) .....	64
FINKE (FIN) .....	69
GREAT SANDY DESERT (GSD) .....	75
GULF COASTAL (GUC).....	81
GULF FALL AND UPLANDS (GUF).....	86
GULF PLAINS (GUP).....	92
MACDONNELL RANGES (MAC) .....	96
MITCHELL GRASS DOWNS (MGD) .....	105
MOUNT ISA INLIER (MII).....	111
ORD VICTORIA PLAIN (OVP) .....	114
PINE CREEK (PCK) .....	120
SIMPSON STRZELECKI DUNEFIELDS (SSD) .....	127
STONY PLAINS (STP) .....	132
STURT PLATEAU (STU).....	136
TANAMI (TAN) .....	141
TIWI COBOURG (TIW) .....	147
VICTORIA BONAPARTE (VB).....	153
Appendices.....	161
1. Land clearing in the NT .....	161
2. Fine Vegetation types and their reservation status.....	162
3. Flora species not recorded from any NT reserve .....	169
4. Terrestrial frog, reptile, bird and mammal species not recorded from any NT reserve .....	185
5. Vagrant species .....	187
References .....	188



# Introduction

This report is a collation of information about the Northern Territory's biological diversity and natural values and has been developed in conjunction with the Northern Territory Parks and Conservation Masterplan. The Masterplan seeks to provide objectives to the conservation of our biodiversity and enhancing our Parks system and their management, and this report provides a baseline of the status of our flora and fauna, and summarises the land uses and management issues which affect our biological diversity, to provide the reader with an understanding of the pressures that need to be managed by all Territorians.

This report is the culmination of summarising and collating over a million wildlife records and extensive geographic information held by the Department of Natural Resources, Environment and the Arts, as well as the extensive knowledge-base of wildlife and environmental managers and researchers throughout the Territory. It includes lists of reserves, lists of threatened flora and fauna, landcare groups, lists of exotic plants, fire histories and information on wetlands. Previous work on the status of our bioregions (Connors *et al.* 1996) was done almost 10 years ago, and this report aims to update and improve the reporting of wildlife records, and to make them more accessible to the public.

## Bioregions

The Interim Biogeographic Regionalisation for Australia (IBRA) Version 5.1 (Environment Australia 2000) provides a division of Australia into units of broadly similar landform, geology and biodiversity. These 'bioregions' provide a useful unit for natural resource management and planning. There are 12 bioregions wholly within the Territory, and another 13 shared with our neighbouring states. This report details the significant components of the Territory wildlife in each region: its diversity, its special features, and the threats they face.

## Reservation

The Territory Parks and conservation reserve system includes about 90 parks managed by the NT Parks and Wildlife Service, and covers an area of just over 50,000 km<sup>2</sup>. Here we also include two large parks managed by Parks Australia, Uluru Kata-Tjuta and Kakadu National Parks. Other important parks in the reserve system include Gregory National Park and MacDonnell Ranges National Park. There are a number of small reserves and historical reserves also managed by the Parks and Wildlife Service.

## Diversity

The Territory has many diverse and endemic species in a landscape stretching from the driest deserts to the tropical coasts. Together, these diverse elements provide many special features, which are recognised on a national and international stage.

The most recent listing for plants comprises about 4200 native species, with about 550 of these occurring nowhere else but in the Territory. The vertebrate checklist of the Territory includes more than 700 species of fish, about 50 species of frogs, more than 300 species of reptiles, more than 420 species of birds and about 150 species of mammals. Many vertebrate species (about 40 reptiles, three birds, six mammals and seven frogs) occur nowhere else but in the Territory.

There is no comparable listing of Territory invertebrates, although it is possible to tally species numbers for a few conspicuous and easily recognised groups, such as butterflies. The diversity of invertebrates in the Territory far exceeds that of vertebrates. The Territory ant fauna is perhaps the richest in the world: an inventory of a one hectare patch of eucalypt forest in the Top End would produce more than 100 species of native ants. Many invertebrates play critical roles in maintaining the health and productivity of Territory environments. Many occur nowhere else but in the Territory.

## **Management**

Protection of our unique wildlife requires more than gazetting of new parks. It is now recognised that off-reserve conservation plays a vital role in biological conservation. In the broader context, all areas of the Territory need to be managed for threatening processes, many of which are interrelated. Fire management, weed and exotic plant eradication, and feral animal control remain high on the list of important management needs in nearly all areas of the Territory. Conservation groups are working towards better management across broad landscapes and local environments, and many of these are listed in this report.

## **Presentation of this report**

The first section of this report comprises maps and tables summarising various features of bioregions, such as the area of bioregions, the proportion reserved, and the number of threatened species, etc. The second section is a summary of each bioregion, with information such as listings of names and areas of reserves and other land tenure, the composition and reservation of vegetation, lists of significant plants and animals, and management issues and special values of each bioregion. The appendices comprise further detailed information about vegetation and unreserved plants and animals.

## **Information Gaps**

We have collated a large body of information held by NRETA. However, this information has shortcomings. Large areas of the NT have not been systematically surveyed for wildlife, and our total inventory remains far from comprehensive. Additional information will help to refine the collation and conclusions drawn here. We would invite any such information to be contributed to the Biodiversity Group, Department of Natural Resources, Environment and the Arts, PO Box 496, Palmerston NT 0831.

# Methods and definitions

Each bioregional summary is divided into four sections. The first is a general description of the bioregion with a representative photo of a special feature or important habitat. The second section is a summary of land tenure, land use, and conservation effort, with bioregion size and the extent reserved in the Northern Territory, and tenure types within the bioregion. Lists of important land parcels are provided, including reserves, pastoral properties, and Aboriginal Land Trusts. In section three we summarise the important biological values: vegetation and the extent reserved, and significant flora and fauna and their status. In section four we list values and threats which are important for management consideration – the main threatening processes in the NT (fire, weeds and feral animals), and special values (wetlands, important vegetation types, and significant breeding sites for birds).

## Bioregions

The Interim Biogeographic Regionalisation of Australia (IBRA) version 5.1 (Environment Australia 2000) is used for defining bioregions. A 5 km buffer of coastal areas and islands was used to capture wildlife records with imprecise geocodes in coastal regions, but not to tally the area of bioregions. For bioregions which are shared with other states, area tallies are those within the NT unless otherwise stated. Small discrepancies between areas of bioregions, tenure and reserved areas may occur due to differing datasets used. Some bioregions have been divided further into subregions or provinces, but these were not used in the analyses or descriptions.

## Tenure

Land tenure is a good general indication of land use, but in this report we have modified tenure categories to give a more accurate indication of land use. For example, we make distinction between Freehold land held by Aboriginal Land Trusts and other Freehold land. Reserved areas (National Parks, etc.) vary in their tenure type, and these are listed separately from tenure.

Tenure is based on the NT Tenure coverage of 2004 (NRETA). Aboriginal Freehold title and area was determined from other coverages compiled by Land Administration (NRETA) in 2003, which includes Land granted as Commonwealth Aboriginal Freehold title under the Aboriginal Land Rights (NT) Act, and Aboriginal Land granted as ordinary NT Title. Legislation controlling land use varies between tenure, so that, for example, pastoral lands on different tenure do not share similar legislative requirements. Land classed as ‘pastoral’ can include Perpetual Pastoral Leases, Pastoral Leases, Crown Leases (if used for pastoral purposes), and in some cases Aboriginal Freehold title. In this report we distinguish between these tenure types.

Unimproved capital values (UCV) were calculated for each bioregion as these are a good indicator of production values and of pressures on the environment. Unimproved capital values per hectare were determined from the UCV recorded in the NT Land Tenure coverage 2003 (as determined by the Valuer-General), and averaging the values derived from the proportion of land parcels within each bioregion. In this data set Aboriginal Freehold land is not given an explicit monetary value, and accordingly where bioregions are predominantly this tenure, average values are low. A separate value for pastoral leases was calculated to provide an indication of this predominant tenure type. Where there were fewer than five pastoral properties in a bioregion the pastoral land values were omitted.

## Human Population

The number of people living in NT Bioregions was determined by the Australian Bureau of Statistics (ABS), Darwin. The ABS collects data in Collection Districts whose extents vary considerably. Populations in each bioregion were assessed using counts for towns and for areas named ‘rural balance’. Where these Collection Districts crossed more than one bioregion, the data was assigned to the bioregion with the largest population. This inevitably provides some

imprecision in bioregional tallies. The largest town or community was determined by figures provided by the ABS.

#### Reserved areas

Reserved areas include all National Parks, Conservation Reserves, Historical Reserves and other Protected Areas managed by the NT Parks and Wildlife Service. We also include two parks managed by Parks Australia, Uluru Kata-Tjuta and Kakadu National Parks. In addition to these we have also included as reserves one proposed National Park (Limmen), one proposed extension to an existing National Park (Keep River), one Indigenous Protected Area (Dhimurru), and one private reserve (Newhaven). Areas of NT reserves are calculated from GIS coverages held by NRETA. Areas of reserves in bioregions shared with other states are taken from CAPAD (Collaborative Australian Protected Areas Database; Dept. of the Environment and Heritage 2003). A measure of the representation of the reserve system within NT bioregions is provided in the vegetation section described below.

#### Land management groups

Off-reserve conservation efforts are an important component to land management. In the NT this effort is largely carried out by Landcare groups and Aboriginal Land Management organisations that operate Ranger Programs and these are listed for each bioregion, where information was available.

#### Vegetation

Descriptions of vegetation units follow the 1:1 000 000 NT vegetation map (Wilson *et al.* 1990), which describes 13 broad and 112 fine vegetation classes in the NT. Broad vegetation types are composed of one or more fine types, and these are listed for each bioregion. A summary of fine vegetation types is given in the Appendices.

Reservation bias is a measure of the dissimilarity of reserved and unreserved vegetation types in the bioregion. It was calculated as  $1 - \sum$  (smaller of  $D_{ik}$ ,  $D_{jk}$ ) where k is all vegetation types occurring in a bioregion, and  $D_{ik}$  is the proportion of the reserved area which comprises vegetation type k, and  $D_{jk}$  is the proportion of that vegetation type in the bioregion as a whole. This value can vary from zero if the reserve system has an equitable representation of all environments, to approaching one, if the system is highly unrepresented. Completely unreserved bioregions have no values. The values were calculated for both the broad and fine vegetation types.

#### Plants and Animals in the NT

Lists of significant plants and animals in each bioregion are provided. These comprise threatened species, bioregion endemic species, and range restricted species as defined below. They also show species' conservation status, NT reservation status, and the number of times recorded in the NT. Two large databases were used to examine the records and distribution of these species.

A Flora Atlas database of NT records maintained by the Biodiversity Conservation Group of NRETA was used to examine occurrence of flora in NT bioregions. The Atlas contains records from the NT Herbarium, surveys by the Biodiversity Conservation Group, and other flora surveys and records in the NT. All non-introduced terrestrial species were used, and subspecies were only used if the taxon was listed as threatened. The total number of records used was 512,428. Where proportions of exotic species as a total of all species are provided, these were determined from listings of these species in the database.

A similar Fauna Atlas database was used to examine the occurrence of vertebrate fauna in NT bioregions. It contains records from many sources, including the NT Biological Records Scheme, surveys by the Biodiversity Conservation Group of NRETA, Birds Australia 'Bird Atlas' 1 and 2, and records from the NT Museums and Art Gallery. All NT vertebrate species were included except marine mammals, marine fishes, and feral animal records. Subspecies were considered only if the taxon was listed as threatened, and numbers of these records were used separately from the species

level. Threatened freshwater fish distributions were determined from threatened species information sheets compiled by the Parks and Wildlife Service (NRETA). Records of marine reptiles were only used if the record occurred in the 5 km coastal buffer of coastal bioregions described previously. The total number of records used was 719,628.

Significant species were defined by the following criteria: (1) listed as threatened under NT (TPWCA 2000) or Commonwealth (EPBCA 2003) legislation; (2) more than 95% of the NT records occur from one bioregion (referred to as bioregion endemic); and (3) plant species with restricted ranges in two classes ( $<1000 \text{ km}^2$  or  $<10000 \text{ km}^2$ ). The reservation status of these species is noted. All unreserved species are also listed in the Appendices. Species which are NT endemic are not listed, except if they fall within the above criteria. Restricted ranges of plants were determined using GIS analysis by the Biodiversity Conservation Group of NRETA. Where the conservation status is not listed (i.e. blank) these species are not threatened under the relevant legislation. Proportions of records for some species may include records where those species have become extinct in some bioregions and are not listed in these tables.

Vagrant species with few records in the NT are listed separately in the Appendices as they could be defined as bioregion endemic using the above criteria.

Invertebrate fauna are listed only if they are threatened species under NT or Commonwealth legislation. Distribution was determined from threatened species information sheets compiled by the Parks and Wildlife Service (NRETA).

Extinct species are listed separately from significant species. Here we also list species whose presence in some bioregions has not been recorded for some time, and where such species are hence presumed to be extinct from these bioregions, but remain extant in other parts of the NT. This list was compiled by staff of the Biodiversity Conservation Group of NRETA, based on the absence of records for approximately the past 20 years or longer in a bioregion, or where there is reasonable belief that the species no longer occurs in an area. In providing this list we acknowledge there may be some uncertainty to the status of some wildlife listed in this section.

### Weeds

For each bioregion, a list of priority exotic plants was compiled from records from the NT Weeds Branch of NRETA, and from the NT Flora Atlas. Exotic plants included are weeds listed as category A (to be eradicated) and B (growth and spread to be controlled) under the NT Weeds Management Act 2001, and those species listed nationally as Weeds of National Significance (WONS). In addition, other exotic plants are listed that are widely recognised as posing significant environmental risks (Smith 2002). Some of these exotic plants also have positive values, particularly for pastoral production (examples include para grass and buffel grass) and in many regions the spread of these species on pastoral lands is being encouraged. Listing of such species here refers to the unintended or unwanted spread of such species beyond pastoral lands, into tenures or areas where their impact is detrimental to biodiversity.

### Exotic animals

For each bioregion, a listing of exotic animals occurring away from human settlement was compiled from records held by NRETA. This listing provides only a general idea of possible threats to native biodiversity and possible priorities for management. Prioritisation for management actions to control these exotic animals will require considerable further information and discussion with landholders and other affected groups. Note that this listing includes species such as horse, cattle, dog and cat. In many situations, these species may be useful and wanted. The listing does not imply otherwise, but relates only to populations of such species that are wild (feral). We recognise that listing of species that are also livestock may invite some confusion: in some bioregions (such as Tiwi-Cobourg) almost all cattle are uncontrolled and feral, whereas in others (e.g. Burt Plain) there are relatively few “scrubbers” and most cattle are relatively intensively managed.

### Fire

Fire mapping from NOAA (National Oceanic and Atmospheric Administration) AVHRR (Advanced Very High Resolution Radiometer; 1.1x1.1 km resolution) satellite data has been mapped and compiled for the whole of Australia for the years 1997-2003 by the Department of Land Administration (WA). These data were used to produce maps of the number of fires across each bioregion and to calculate a fire frequency (number of fires/year). The average proportion burnt in a bioregion was calculated from the number of pixels in each bioregion burnt each year.

### Wetlands, major rivers and catchments

Wetlands of major importance are listed from the Directory of Important Wetlands of Australia (DIWA). Listing of other wetlands in the southern region of the NT was compiled by the Biodiversity Conservation Group of NRETA. Catchments occurring in each bioregion were determined from coverages held by the Biodiversity Conservation Group of NRETA.

### Rainforests and sites of botanical significance

Rainforest areas and types were determined from GIS data (NRETA unpublished data). Rainforest sites in each bioregion affected by severe disturbance from fire, pig, buffalo and exotic weeds are calculated from data from Russell-Smith and Bowman (1992), as is the definition of severe disturbance. Sites of botanical significance have been compiled only for southern regions of the NT and are listed for each bioregion in that part of the NT (White *et al.* 2000).

### Important colonies, aggregations and breeding sites

These sites are derived from reports on waterbird breeding colonies (Chatto 2000), colonial seabirds (Chatto 2001), shorebirds (Chatto 2003), and marine turtle nesting sites (Chatto unpub. data).

### Land clearing

Land clearing data was provided by Natural Resource Management Division of NRETA, and was determined from Landsat TM satellite imagery (1:50 000) current to December 2003.

## **Abbreviations**

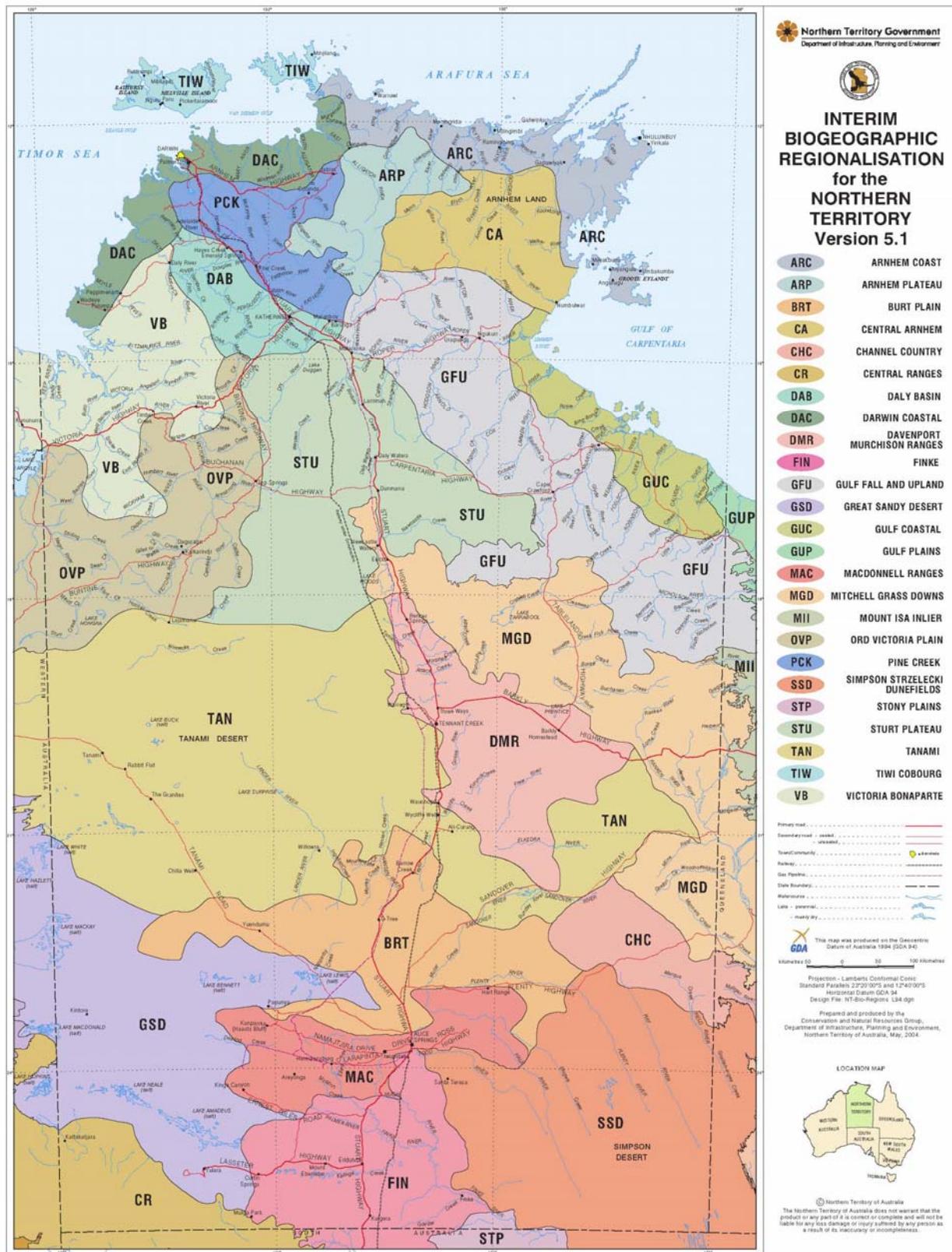
ABS	Australian Bureau of Statistics
DIWA	Directory of Important Wetlands of Australia
EPBCA	Environment Protection and Biodiversity Conservation Act 2003
GIS	Geographic Information System
IBRA	Interim Biogeographic Regionalisation of Australia
NRETA	Department of Natural Resources, Environment and the Arts
NT	Northern Territory
WONS	Weeds of National Significance
TPWCA	Territory Parks and Wildlife Conservation Act 2000

In tables referring to threatened species:

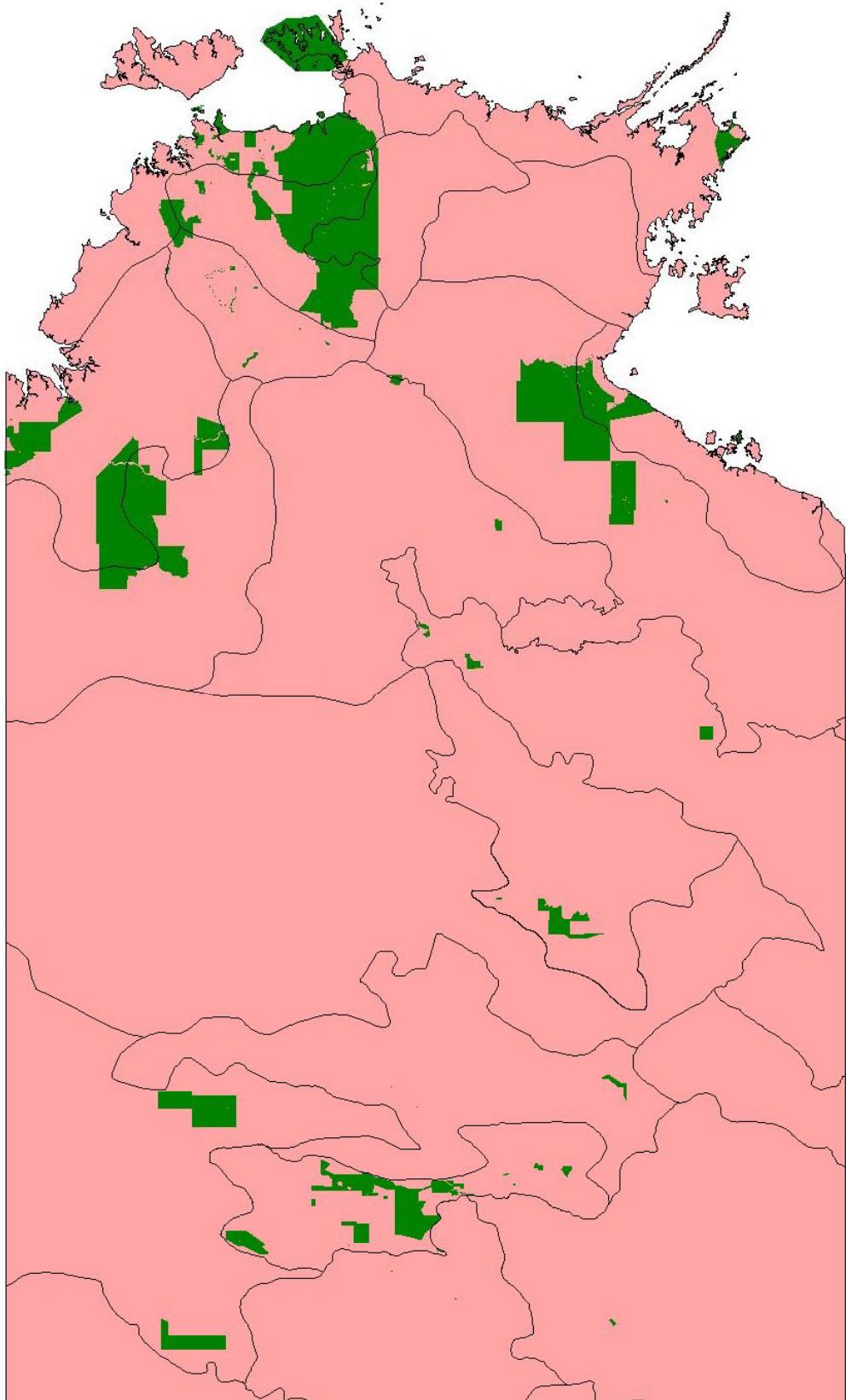
CR	Critically Endangered
DD	Data Deficient
EN	Endangered
NT	Near Threatened
VU	Vulnerable

# Overview of NT Bioregions

## 1. Biogeographic Regions of the NT.



## **2. Reserves of the Northern Territory**



### 3. Bioregion areas and reserved areas for each bioregion

Size of bioregion in NT, % NT area, % of bioregion within NT, area reserved in NT, and number of NT reserved areas. Reserves may cross bioregion boundaries and may be counted in more than one bioregion.

Bioregion	Area in NT (km <sup>2</sup> )	% NT area	% total size of Bioregion	Area reserved (km <sup>2</sup> )	% reserved in NT	No. of reserves in NT
Arnhem Coast	33022	2.46	100	806	2.44	1
Arnhem Plateau	23035	1.72	100	4838	21.0	1
Burt Plain	73605	5.48	100	192	0.26	6
Central Arnhem	34539	2.57	100	0	0	0
Central Ranges	26022	1.94	25.5	0	0	0
Channel Country	23210	1.73	8.1	0	0	0
Daly Basin	20831	1.55	100	525	2.52	12
Darwin Coastal	27991	2.09	100	8209	29.33	25
Davenport Murchison Ranges	57628	4.29	100	1151	2.0	5
Finke	54676	4.07	73.4	24	0.04	6
Great Sandy Desert	99936	7.45	24.8	3967	3.97	2
Gulf Coastal	26680	1.99	100	2913	10.92	2
Gulf Fall and Uplands	111783	8.33	95.0	9433	8.44	3
Gulf Plains	1448	0.11	0.7	0	0	0
MacDonnell Ranges	39350	2.93	100	5390	13.7	21
Mitchell Grass Downs	92359	6.88	27.6	552	0.60	3
Mount Isa Inlier	224	0.02	0.3	0	0	0
Ord Victoria Plain	69857	5.21	56.1	5580	7.99	1
Pine Creek	28456	2.12	100	12133	42.64	9
Simpson Strzelecki Dunefields	105862	7.89	35.4	31	0.03	1
Stony Plains	1715	0.13	1.2	0	0	0
Sturt Plateau	97809	7.29	100	204	0.21	3
Tanami	228261	17.01	88.4	0	0	0
Tiwi Cobourg	10005	0.75	100	2059	20.58	1
Victoria Bonaparte	53630	4.0	74.2	9762	18.2	6

#### 4. Summary table for Northern Territory Terrestrial Plant Species

Total number of recorded species, number of threatened species, number of bioregion- and NT-endemic species, and number of species recorded mainly from the bioregion (>50% of NT records) in each bioregion. Survey effort and total number of records are also shown.

Bioregion	Total number of species	Number of threatened species	Number of Bioregion endemic species	Number of NT endemic species	Number of species >50% records	Survey effort (records/km <sup>2</sup> )	Total number of records
Arnhem Coast	1721	10	61	238	170	1.71	54276
Arnhem Plateau	1649	16	72	380	192	1.26	28747
Burt Plain	971	3	7	35	22	0.10	7092
Central Arnhem	1273	1	10	174	18	0.52	17615
Central Ranges	581	0	16	18	29	0.08	2029
Channel Country	435	2	1	10	5	0.05	1068
Daly Basin	1334	5	5	164	11	0.75	14986
Darwin Coastal	1795	17	41	318	192	2.36	62528
Davenport Murchison Ranges	842	0	1	33	6	0.09	4938
Finke	856	3	26	21	71	0.13	6738
Great Sandy Desert	1000	1	15	36	50	0.07	6527
Gulf Coastal	1071	2	7	66	17	0.33	8674
Gulf Fall and Uplands	1575	3	24	130	55	0.26	28397
Gulf Plains	211	0	0	4	0	0.37	520
MacDonnell Ranges	1130	14	80	64	223	0.41	15442
Mitchell Grass Downs	858	1	13	35	75	0.10	8444
Mount Isa Inlier	55	0	0	2	0	0.27	60
Ord Victoria Plain	1300	2	27	62	119	0.57	38213
Pine Creek	1995	20	62	418	365	3.73	105036
Simpson Strzelecki Dunefields	694	4	15	17	29	0.03	3593
Stony Plains	279	0	7	3	8	0.30	499
Sturt Plateau	1074	1	4	64	19	0.20	19028
Tanami	1029	1	19	40	83	0.04	8787
Tiwi Cobourg	1193	21	38	142	97	4.17	40469
Victoria Bonaparte	1714	6	55	156	113	0.55	28722

## 5. Summary table for Northern Territory Vertebrate Species

Number of species, number of threatened and extinct species, number of bioregion- and NT-endemic species, and number of species recorded mainly from the bioregion (>50% of NT records) in each bioregion. Survey effort and total number of records are also shown.

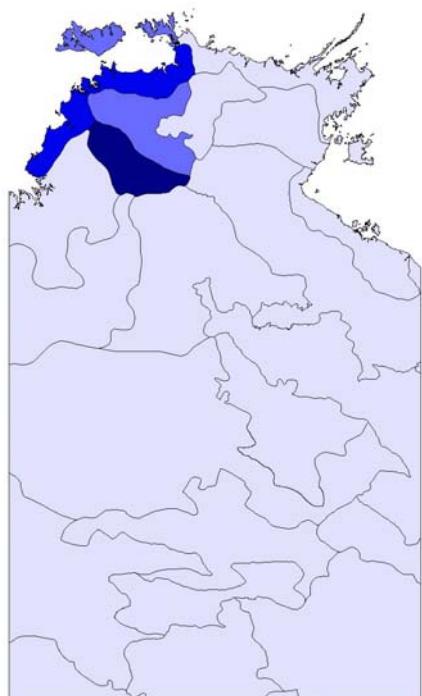
Bioregion	Total number of species	Number of threatened & extinct species	Number Bioregion endemic species	Number NT endemic species	Number of species >50% records	Survey effort (records/km <sup>2</sup> )	Total number of records
Arnhem Coast	486	21	6	24	26	1.08	34931
Arnhem Plateau	427	17	2	30	11	1.19	26996
Burt Plain	346	22	0	4	0	0.22	16118
Central Arnhem	325	7	0	9	0	0.12	3921
Central Ranges	220	19	2	0	4	0.12	1947
Channel Country	210	9	0	0	0	0.10	2266
Daly Basin	434	9	0	13	1	1.27	26302
Darwin Coastal	561	22	11	32	140	5.89	162784
Davenport Murchison Range	341	14	0	1	2	0.15	8507
Finke	373	21	4	4	7	0.66	33938
Great Sandy Desert	357	32	1	1	14	0.20	19421
Gulf Coastal	433	15	1	8	5	0.44	11583
Gulf Fall and Uplands	472	17	1	11	8	0.24	26857
Gulf Plains	156	1	0	0	0	0.33	459
MacDonnell Ranges	430	27	3	7	75	2.70	104409
Mitchell Grass Downs	378	11	2	0	16	0.20	17976
Mount Isa Inlier	35	0	0	0	0	0.20	43
Ord Victoria Plain	409	13	6	4	11	0.35	24410
Pine Creek	497	19	1	34	11	2.76	77659
Simpson Strzelecki Dunefields	317	17	2	2	4	0.11	10007
Stony Plains	165	12	0	0	2	0.54	843
Sturt Plateau	410	15	0	5	2	0.20	19919
Tanami	382	28	0	2	21	0.15	34142
Tiwi Cobourg	411	19	1	10	10	1.89	18755
Victoria Bonaparte	472	16	6	9	16	0.63	33539

## 6. Human demographics for NT bioregions

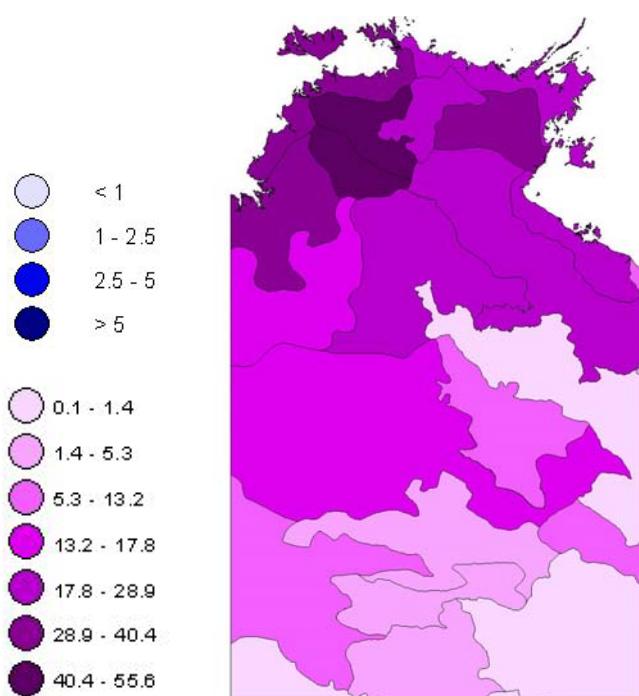
Largest town or community, and estimate of population in each bioregion. Source: ABS 2001 Census. ‘Other’ refers to people classed as offshore, shipping or migratory on census night.

Bioregion	Largest Town/Community	Population in bioregion	% NT population	% NT area	Population density (persons/ km <sup>2</sup> )
Arnhem Coast	Nhulunbuy	15204	7.22	2.46	0.46
Arnhem Plateau	No permanent communities	0	0	1.72	0.00
Burt Plain	Yuendumu	2577	1.22	5.48	0.04
Central Arnhem	Numbulwar	1063	0.50	2.57	0.03
Central Ranges	Kaltukatja	300	0.14	1.94	0.01
Channel Country	Maperte	0	0	1.73	0.00
Daly Basin	Katherine	11539	5.48	1.55	0.55
Darwin Coastal	Darwin	111427	52.89	2.09	3.98
Davenport Murchison Ranges	Tennant Creek	4188	1.99	4.29	0.07
Finke	Amoonguna	1632	0.77	4.07	0.03
Great Sandy Desert	Yulara	4206	2.00	7.45	0.04
Gulf Coastal	Robinson River	286	0.14	1.99	0.01
Gulf Fall and Upland	Ngukurr	3683	1.75	8.33	0.03
Gulf Plains	None present	0	0	0.11	0.00
MacDonnell Ranges	Alice Springs	31485	14.95	2.93	0.80
Mitchell Grass Downs	Elliott	1671	0.79	6.88	0.02
Mount Isa Inlier	None present	0	0	0.02	0.00
Ord Victoria Plain	Kalkarindji	1597	0.76	5.21	0.02
Pine Creek	Jabiru	7988	3.79	2.12	0.28
Simpson Strzelecki Dunefields	Santa Teresa	755	0.36	7.89	0.01
Stony Plains	None present	0	0	0.13	0.00
Sturt Plateau	Mataranka	979	0.46	7.29	0.01
Tanami	Lajamanu	3402	1.61	17.01	0.01
Tiwi Cobourg	Nguiu	2649	1.26	0.75	0.26
Victoria Bonaparte	Daly River	1739	0.83	4.00	0.03
Other	-	2291	1.09	-	-
Total NT		210661			

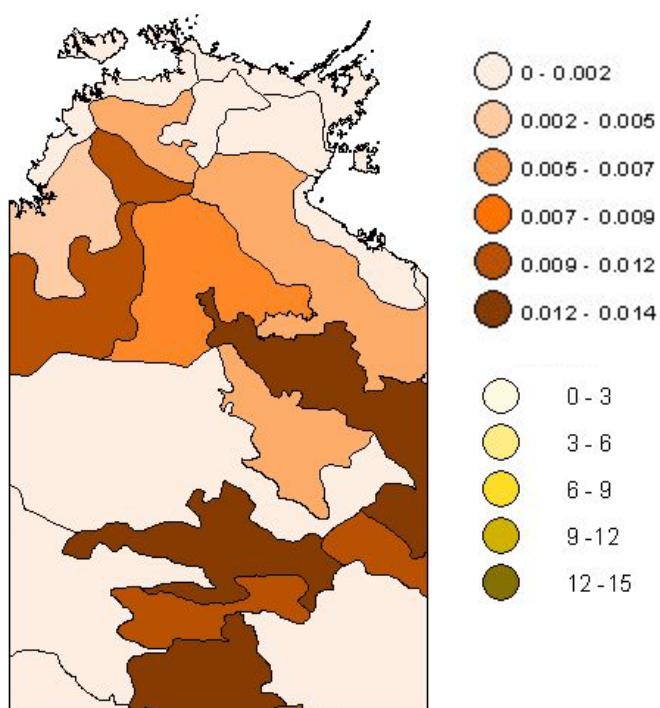
**7. Management issues for bioregions – various attributes mapped in relative terms to indicate health of bioregions** (Darker areas indicate higher numbers or proportions)



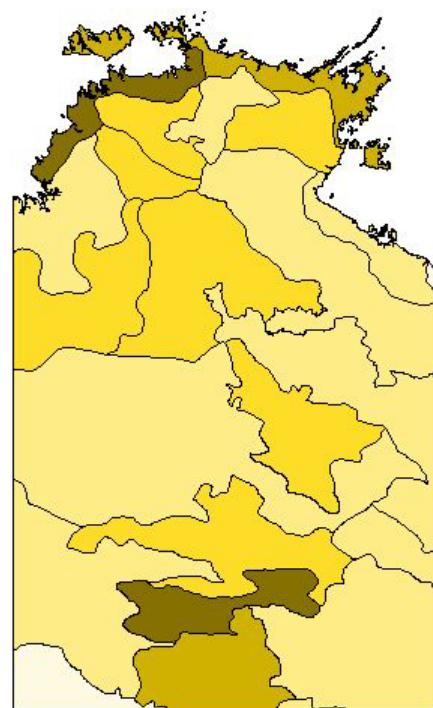
Proportion of bioregion cleared



Average proportion of bioregion burnt over 7 years



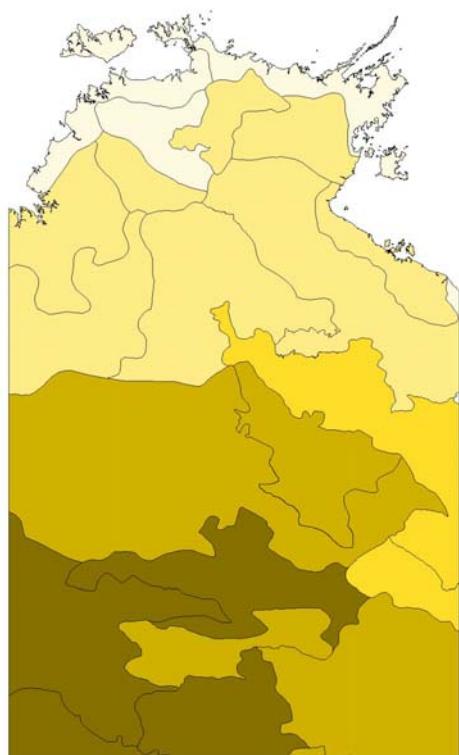
Density of bores on pastoral lands  
(bores/km<sup>2</sup>)



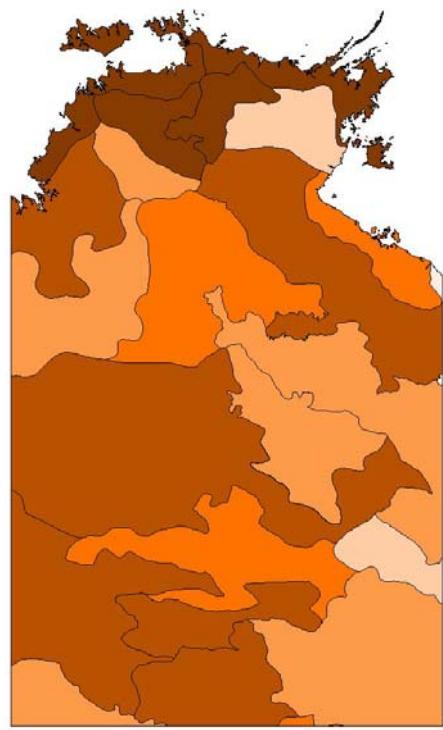
Exotic plants as percentage of total bioregion plant species

## 7. Management issues for bioregions (continued)

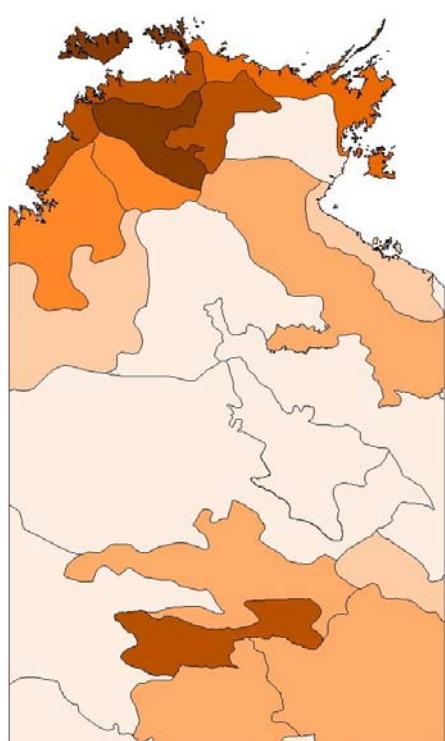
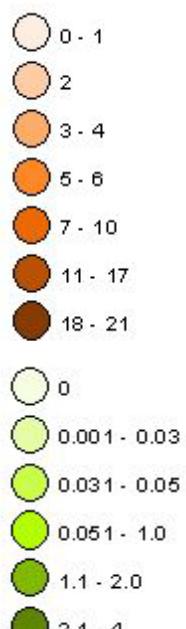
Darker areas indicate higher numbers or proportions



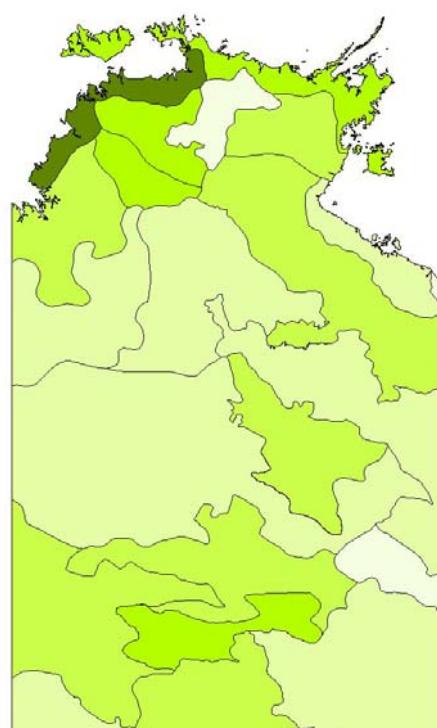
Mammals extinct from bioregions



Number of threatened fauna species



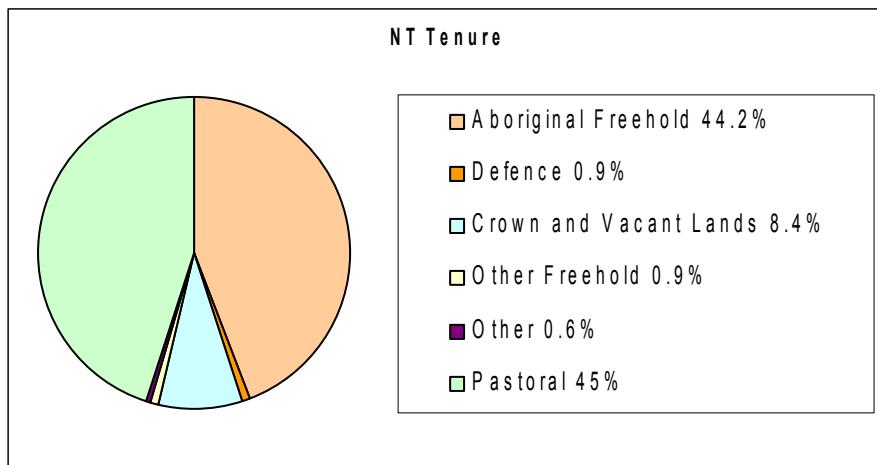
Number of threatened plant species



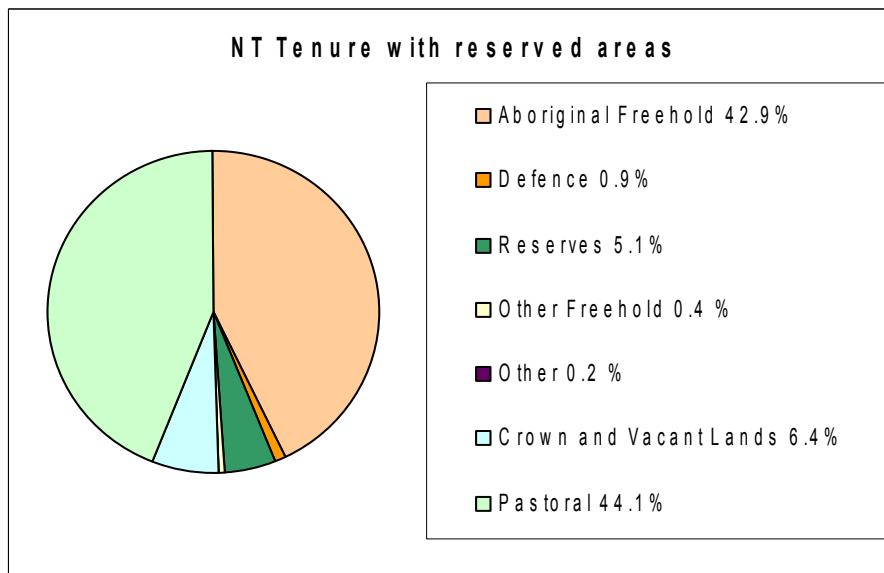
Population density

## 8. NT tenure

Proportions of NT Tenure. Reserves are not shown here as they are gazetted from, and remain as, other tenure.



Proportions of NT Tenure with reserves shown as a tenure type.



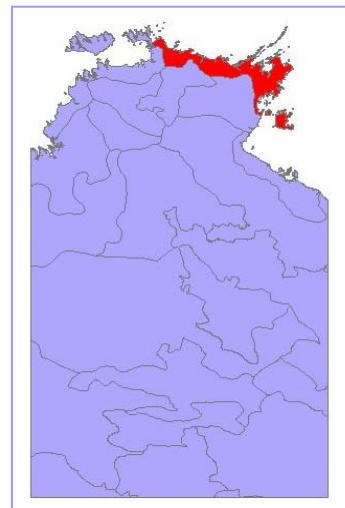
## ARNHEM COAST (ARC)

### 1. General Description

This bioregion comprises a coastal strip extending from just east of Cobourg Peninsula to just north of the mouth of the Rose River in southeastern Arnhem Land, and includes many offshore islands whose isolation provides important refuge from processes which threaten mainland areas. Coastal vegetation includes well developed heathlands, mangroves and saline flats, with some floodplain and wetland areas, most notably the extensive paperbark forest and sedgelands of the Arafura Swamp. Coastal dune systems are unusually well developed on sections of Groote Eylandt and Cape Arnhem Peninsula. Rugged Cretaceous sandstone areas occur on Groote Eylandt and islands of the Wessel group and Tertiary laterites are extensive on the Gove Peninsula. Inland from the coast, the dominant vegetation type is eucalypt tall open forest, typically dominated by Darwin woollybutt (*Eucalyptus miniata*) and Darwin stringybark (*E. tetrodonta*), with smaller areas of monsoon rainforest and eucalypt woodlands. Five subregions have been identified.



Arnhem Coast showing heathland on one of the many offshore islands in the Wessel Islands group. Photo: Alaric Fisher.



Map of NT Bioregions highlighting Arnhem Coast

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	33022 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	33022 km <sup>2</sup> (2.46%)
Extent of National Parks and other protected areas (% of bioregion area)	806 km <sup>2</sup> (2.44%)

#### (b) Tenure

Aboriginal freehold	32273 km <sup>2</sup> (98.8%)
Pastoral leases	0 km <sup>2</sup> (0%)
Crown Leases and Vacant Land	2.0 km <sup>2</sup> (0.01%)
Other Freehold	63.6 km <sup>2</sup> (0.2%)
Other tenure	311.4 km <sup>2</sup> (1.0%)
Defence	0 km <sup>2</sup> (0%)

**(c) Protected areas and extent in Arnhem Coast**

Dhimurru (Indigenous Protected Area)	806.2 km <sup>2</sup>
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**(d) Off-reserve conservation and land management groups**

<b>Group</b>	<b>Resource Centre / Aboriginal Corporation</b>	<b>Community</b>
Adjumarillar Rangers	Demed Association Incorporated Home Resource Centre	Gunbalanya / Oenpelli
Anindilyakwa Sea Rangers	Angurugu Community Government Council Inc	Angurugu
Anindilyakwa Sea Rangers	Milyakburra Community Government Council Inc	Milyakburra
Anindilyakwa Sea Rangers	Umbakumba Community Government Council Inc	Umbakumba
Bek Rangers	Demed Association Incorporated Home Resource Centre	Mamadewerre
Conservation Volunteers Australia	Darwin	Various
Dhimurru Rangers	Dhimirru Land Management Corporation	Nhulunbuy
Djelk Rangers	Bawinanga Aboriginal Corporation	Maningrida
Gamarra Nuwal Landcare	Yirrkala Dhanbul Community Association Inc	Yirrkala
Mandiddi Rangers	Demed Association Incorporated Home Resource Centre	Manmoyi
Marthakal Rangers	Galiwinku Community Incorporated / Marthakal Home Resource Centre	Galiwinku
Ritharngu Rangers/ South east Arafura Catchment	Ngadunggay Homeland Resource Centre	Donydji / Mirungerdja / Walker River
Wanga Djakmirr Rangers	Ramingining Community Incorporated / Ramingining Homelands Resource Centre	Ramingining
Warruwi Rangers	Warruwi Community Incorporated	Warruwi / South Goulburn Island
	Laynhapuy Homelands	Nhulunbuy

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Arnhem Land Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

None listed for this bioregion.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
15.85	-

### 3. Biodiversity in Arnhem Coast

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Arnhem Coast. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	26007	2.7	14.1	9	3
3	Eucalyptus low Woodland with Tussock Grass Understorey	52	0	2.4	1	0
4	Eucalyptus Woodland with Hummock Grass Understorey	1586	0	8.7	2	0
7	Melaleuca Forest and Woodlands	1370	0	8.5	1	0
8	Floodplain	1899	0	24.9	2	0
12	Littoral	1959	5.7	8.4	3	1

Reservation bias of vegetation in Arnhem Coast (broad veg/fine veg) 0.15/0.38

#### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Arnhem Coast, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia D2219-2 Gove			B		100	3	
Acacia suberosa			B		100	1	NO
Angiopteris evecta	VU		B		100	7	NO
Arenga australasica		VU			88.7	47	
Asteromyrtus lysicephala			B		100	7	NO
Bidens subalternans			B		100	1	NO
Bruguiera sexangula			B		100	9	
Calandrinia D62887 arenicola			B		100	2	NO
Centella asiatica			B		100	5	NO
Corypha utan			B		97.3	181	NO
Crinum pedunculatum			B		100	2	NO
Cycas armstrongii	VU		NT		0.39	2	
Cynometra iripa			B		100	5	NO
Cynometra ramiflora			B		100	1	NO
Cyperus scaber			B		100	8	
Dicliptera australis			B		100	3	NO
Digitaria decumbens			B		100	2	NO
Eragrostis D10558 islands			B		100	3	NO
Ficus superba			B		100	59	
Fimbristylis brownii			B		100	2	
Fimbristylis insignis			B		100	1	NO
Fimbristylis tomentosa			B		100	2	NO
Freycinetia excelsa	VU				60.0	6	
Freycinetia percostata	VU				72.7	8	NO
Glycine tabacina			B		100	1	
Grevillea versicolor	VU		NT	1	68.3	407	NO
Halophila spinulosa			B		100	2	NO

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
<i>Hernandia nymphaeifolia</i>	VU		B		100	5	NO
<i>Hibbertia species!</i> "			B		100	6	NO
<i>Ipomoea</i> D32602 Ramingining			B		100	1	NO
<i>Ipomoea mauritiana</i>			B		100	5	NO
<i>Ipomoea stolonifera</i>			B		100	6	
<i>Keraudrenia hookeriana</i>			B		100	2	NO
<i>Lagerstroemia hirsuta</i>			B		100	2	NO
<i>Lepturus geminatus</i>			B		100	2	NO
<i>Lindsaea media</i>			B		100	14	
<i>Mallotus dispersus</i>			B		100	35	
<i>Mapania macrocephala</i>	VU				28.6	2	NO
<i>Operculina</i> D40286 Cotton Island			B, NT	1	100	2	NO
<i>Oryza minuta</i>			B, NT		100	1	NO
<i>Pallavicinia yellii</i>			B		100	1	NO
<i>Persicaria strigosa</i>			B		100	2	NO
<i>Phaleria macrocarpa</i>			B		100	4	NO
<i>Phyllanthus arnheimicus</i>			B		100	2	NO
<i>Pleurostylia opposita</i>			B		96.6	28	
<i>Portulaca tuberosa</i>			B		100	1	NO
<i>Pternandra coerulescens</i>	VU		B		100	16	
<i>Pupalia lappacea</i>			B		100	2	NO
<i>Sarcolobus ritae</i>			B, NT	1	100	4	NO
<i>Scleria terrestris</i>			B		100	3	NO
<i>Solanum yirrkalense</i>			B, NT	1	100	4	NO
<i>Sophora tomentosa</i>			B		95.0	19	
<i>Spathoglottis paulinae</i>			B		100	2	NO
<i>Spermacoce juncta</i>			B, NT	1	100	1	NO
<i>Spermacoce stigmatosa</i>			B, NT	1	100	6	NO
<i>Sticherus flabellatus</i>	VU		B		100	2	NO
<i>Stylium diffusum</i>			B		100	1	NO
<i>Tarennia foliosa</i>			B		100	1	NO
<i>Tectaria siifolia</i>			B		100	2	NO
<i>Thuarea involuta</i>			B		100	5	NO
<i>Trachymene longipedunculata</i>			B		100	8	NO
<i>Trachymene psammophila</i>			B		100	7	NO
<i>Triumfetta littoralis</i>			B, NT	2	100	2	NO
<i>Vigna marina</i>			B		100	4	NO
<i>Vittadinia spechtii</i>			B		100	1	
<i>Wikstroemia indica</i>			B		100	23	
<i>Zehneria mucronata</i>			B		100	8	

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Arnhem Coast, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Freshwater Sawfish	<i>Pristis microdon</i>	VU	VU		No data	No data	
Water Frog	<i>Rana daemeli</i>	VU		B	100	11	
Beach Snake-Eyed Skink	<i>Cryptoblepharus littoralis</i>			B	100	13	NO
Flatback Turtle	<i>Natator depressus</i>	DD	VU		47.4	167	
Green Turtle	<i>Chelonia mydas</i>		VU		70.4	157	
Hawksbill Turtle	<i>Eretmochelys imbricata</i>	DD	VU		74.4	87	
Olive Ridley	<i>Lepidochelys olivacea</i>	DD	EN		51.9	42	

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Leatherback Turtle	Dermochelys coriacea	VU			33.3	1	
Robust Rainbow Skink	Carlia longipes			B	95.3	264	
Stout-Tailed Skink (skink)	Glyptosternon crassicaudus Cryptoblepharus sp. New Year and Oxley Islands (Elapid snake)		EN	B,NT	100	21	
	Simoselaps morrissi			NT	67	2	
Australian Bustard	Ardeotis australis	VU			1.4	25	
Emu	Dromaius novaehollandiae	VU			2.4	14	
Gouldian Finch	Erythrura gouldiae	EN	EN		0.20	2	
Northern Shrike-tit	Falcunculus whitei	DD	VU		3.6	1	
Partridge Pigeon	Geophaps smithii	NT	VU		4.7	74	
Red Goshawk	Erythrotriorchis radiatus	VU	VU		4.8	3	
White-throated Grasswren	Amytornis woodwardi	VU		NT	3.5	2	
Arnhem Land Rock-rat	Zyzomys maini	VU		NT	0.96	1	
Brush-tailed Rabbit-rat	Conilurus penicillatus	VU			23.9	44	
Golden Bandicoot	Isoodon auratus	EN	VU	B	100	30	
Northern Brush-tailed Phascogale	Phascogale pirata	VU			2.9	1	
Northern Hopping-mouse	Notomys aquilo	VU	VU		85.7	6	NO
Northern Quoll	Dasyurus hallucatus	VU			3.9	44	
Water mouse	Xeromys myoides	DD	VU		33.3	3	

#### (d) Threatened invertebrates

Species	Common Name	NT Conservation status	Federal Conservation status
Euploea alcathoe enastri	Gove Crow Butterfly	EN	EN

#### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

None extinct.

### 4. Management issues and special values in the bioregion

#### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

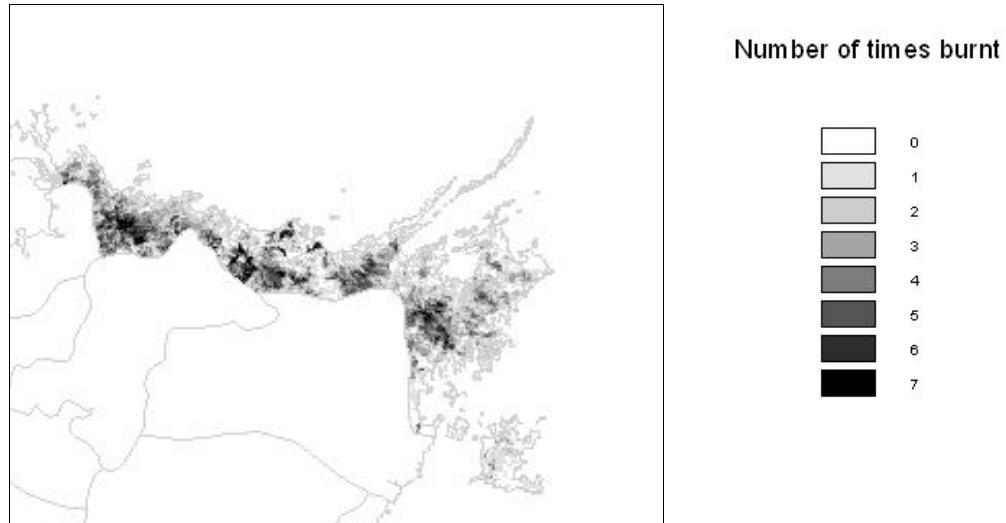
Name	NT weed class	WONS	Habitat
Aleman Grass ( <i>Echinochloa polystachya</i> )	not classed		Seasonal flooded areas, Swamps
Alligator weed ( <i>Alternanthera philoxeroides</i> )	A	WONS	Aquatic
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Calopo ( <i>Calopogonium mucunoides</i> )	not classed		Creeks, Monsoon Vine thickets
Centro ( <i>Centrosema molle</i> )	not classed		Disturbed areas, Towns
Coffee Bush ( <i>Leucaena leucocephala</i> )	not classed		Disturbed areas, Towns
Gamba grass ( <i>Andropogon gayanus</i> )	not classed		Blocks & gardens, Pastoral, Roads and Tracks
Gambia Pea ( <i>Crotalaria goreensis</i> )	not classed		Roadsides, grazed areas, Riparian

Name	NT weed class	WONS	Habitat
Guinea Grass ( <i>Urochloa maxima</i> )	not classed		Creeks, Roadsides, Towns
Neem ( <i>Azadirachta indica</i> )	not classed		Towns, Riparian
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Para Grass ( <i>Urochloa mutica</i> )	not classed		Floodplains, drainage lines
Physic nut ( <i>Jatropha curcas</i> )	A		Disturbed areas, Towns
Salvinia ( <i>Salvinia</i> )	A		Water ways and floodplains

### (b) Exotic animals in the bioregion and their status

<b>Buffalo</b>	At high densities in parts of this bioregion; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Recently established throughout mainland parts of bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Crazy ant</b>	Populations established in part of bioregion; current projects seeking to control; serious local detriment to native invertebrates, with some impact on some vertebrates and plants
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Goat</b>	Present at high densities at a few sites (islands); with severe local impacts on vegetation
<b>Honey bees</b>	Probably widespread in region: impacts uncertain but may affect native plants (through altered pollination regimes), native invertebrates (through competition), and native hollow-dwelling species (through aggressive usurpation of hollows)
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates
<b>Sambar deer</b>	Some local populations at high density (on islands), with substantial detriment to vegetation

### (c) Fire histories – number of fires in seven year history 1997-2003



#### (d) Wetlands, major rivers and catchments

Directory of important wetlands of Australia (DIWA) listings for Arnhem Coast

DIWA	Wetland Name	Area (ha)	% reserved	Tenure Types
NT021	Arafura Swamp	67259	0	Aboriginal Freehold
NT022	Blyth-Cadell Floodplain & Boucaut Bay System	16074	0	Aboriginal Freehold
NT028	Murgenella-Cooper Floodplain System	3039.5	0	Aboriginal Freehold

This bioregion includes most of the Arafura Swamp (NT021), an extensive permanent wetland. This swamp is significant as a breeding and refuge site for waterfowl and other wetland biota. Although in generally good condition, values are now degrading through the recent arrival of feral pigs and cane toads, localised planting of highly invasive exotic pasture grasses, and some incursions by livestock. Localised outbreaks of *Mimosa pigra* have been controlled to date, but the continuing arrival of propagules dispersed by waterfowl provide a continuing threat. The wetland is also highly susceptible to saltwater intrusion associated with global climate change and/or impacts of buffalo.

This bioregion also includes the Blyth-Cadell floodplain and Boucaut Bay system (NT022), a floodplain and adjacent coastal estuary, with similar condition, trends and threatening processes. A small portion of the Murgenella-Cooper floodplain system (NT028) also occurs in this bioregion, again with similar condition, trends and threats. Although not systematically assessed there are a series of dune lakes on Groote Eylandt, a permanent wetland at Jensen Bay on the Wessel Islands, and a series of swamps, seasonally inundated floodplains and river systems on the mainland of northern Arnhem Land.

**List of catchments in Arnhem Coast** - Blyth River, Buckingham River, East Alligator River, Goomadeer River, Goyder River, Koolatong River, Liverpool River, Walker River.

#### (e) Rainforests and sites of botanical significance

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Allosyncarpia	21	7.8	0.0
Dry	2141	514	3.2
Riparian	730	24.3	13.1

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
192	40.6	11.5	5.7	4.7

#### (f) Important colonies and breeding sites

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Seabird	<10000	55
Seabird	>10000	3
Shorebird	No data	80
Waterbird	<10000	10
Marine Turtle	no data	143

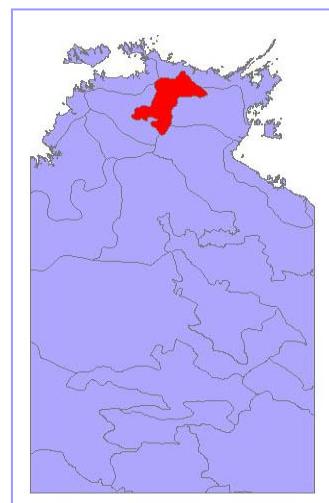
## ARNHEM PLATEAU (ARP)

### 1. General Description

This bioregion is centred on the extensive and highly dissected Proterozoic sandstone massif of western Arnhem Land, which forms the headwaters of many of the major river systems of the Top End. It supports an unusually diverse biota, including very many relictual and endemic plant and animal species. The major vegetation types include sandstone heathlands, rainforests (characteristically dominated by the endemic tree *Allosyncarpia ternata*), hummock grasslands and eucalypt open woodlands (with a range of dominants including *Eucalyptus phoenicea*, *E. kombolgiensis*, *E. miniata* and *E. dichromophloia*). Most of the bioregion is Aboriginal land, including a major part of Kakadu National Park. The bioregion includes two subregions.



Arnhem Plateau, showing “sandstone country”, home to many endemic species. Photo: Alaric Fisher.



Map of NT Bioregions highlighting Arnhem Plateau

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	23035 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	23035 km <sup>2</sup> (1.72%)
Extent of National Parks and other protected areas (% of bioregion area)	4838 km <sup>2</sup> (21%)

#### (b) Tenure

Aboriginal freehold	22098 km <sup>2</sup> (95.9%)
Pastoral leases	131.5 km <sup>2</sup> (0.6%)
Crown Leases and Vacant Land	0 km <sup>2</sup> (0%)
Other Freehold	0 km <sup>2</sup> (0%)
Other tenure	805.4 km <sup>2</sup> (3.5%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Arnhem Plateau

Kakadu National Park (part)	4837.6 km <sup>2</sup>
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**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Manwurrk Rangers	Demed Association Incorporated Home Resource Centre	Kabulwarnamyo / Mann River
Yantjarrwu Rangers	Yantjarrwu Outstation Resource Centre	Woodycupaldiya

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Arnhem Land Aboriginal Land Trust, Gunlom Aboriginal Land Trust, Jabiluka Aboriginal Land Trust, Kakadu Aboriginal Land Trust, Manyallaluk Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Mary River.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.08	-

**3. Biodiversity in Arnhem Plateau**

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Arnhem Plateau. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
1	Closed Forest	713	27.7	26.3	1	1
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	10944	24.3	14.1	7	4
3	Eucalyptus low Woodland with Tussock Grass Understorey	1205	37.9	2.4	1	1
4	Eucalyptus Woodland with Hummock Grass Understorey	10118	15.0	8.7	2	2
8	Floodplain	55	11.8	24.9	2	1

Reservation bias of vegetation in Arnhem Plateau (broad veg/fine veg) 0.16/0.30

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Arnhem Plateau, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia amanda			B, NT	1	100	13	
Acacia armitii			B		100	7	
Acacia D139586 laterite			B		100	5	NO
Acacia D19390 Jim Jim Falls			B		100	9	
Acacia D47608 Gimbat			B		100	1	
Acacia rigescens			B, NT	1	100	3	
Archidium ohioense			B		100	1	NO
Asplenium D36872 Nabarlek			B		100	2	NO
Austrodolichos D139900 Arnhem			B		100	2	NO
Bolbitis quoyana			B		100	4	
Boronia amplectens			B, NT	2	100	1	NO
Boronia decumbens			B, NT	2	99.3	152	
Boronia laxa	VU		NT	2	10.7	13	
Boronia quadrilata	VU		B, NT	2	100	78	NO
Boronia rupicola	VU		NT	1	15.2	5	
Boronia suberosa	VU		B, NT	2	100	55	
Boronia verecunda	VU		NT	1	86.7	26	
Boronia viridiflora	VU		B, NT	2	100	8	NO
Boronia xanthastrum	VU		NT		68.4	13	
Calytrix inopinata			B, NT	2	100	184	
Cephalomanes obscurum	EN				18.2	2	NO
Cuscuta campestris			B		100	2	NO
Cycas arenicola			B, NT	1	100	13	NO
Dichapetalum timoriense	VU		B		100	12	NO
Duboisia arenitensis			B, NT	2	100	1	NO
Dubouzetia austriensis	EN		B, NT	1	100	15	
Eucalyptus koolpinensis			B, NT	1	96.2	25	
Fimbristylis D10763 Deaf Adder Gorge			B		100	5	
Fissidens victorialis			B		100	1	NO
Freycinetia excelsa	VU				10.0	1	
Gleichenia dicarpa			B		100	1	
Graptophyllum spinigerum			B		100	2	NO
Grevillea aurea			B, NT	2	100	25	
Grevillea formosa			B, NT		97.0	32	
Grevillea versicolor	VU		NT	1	31.7	189	NO
Heliotropium D47556 arenitense			B		100	1	
Hibbertia D142470 Mann R			B		100	4	NO
Hibbertia D152640 fire plot 121			B		100	2	
Hibbertia D23052 Mount Howship			B, NT	2	100	12	
Hibbertia D29559 prostrate			B		96.6	28	
Hibbertia D29599 Northern Outliers			B		100	10	
Hibbertia D59671 globular			B		100	3	NO
Hibiscus aneutea			B, NT	1	100	3	
Hildegardia austriensis			B, NT	1	100	12	
Isotoma A14992 kakadu			B		100	1	NO
Jacksonia flexuosa			B, NT	2	100	2	NO
Leucobryum candidum			B		100	1	NO
Lindernia D123064 Small whitish corolla			B		100	4	
Lindernia D137732 Brennans Showy Anthers			B		100	2	NO
Lindernia D43216 Robust branched			B		100	2	

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Lithomyrtus linariifolia	VU		B, NT		98.0	48	
Micraira viscidula			B, NT	2	100	10	
Microlepia speluncae			B		100	2	
Ochrosperma sulcatum			B, NT	1	100	59	NO
Pandanus semiarmatus			B		100	2	NO
Petraeomyrtus punicea			B, NT	2	97.3	36	
Phyllanthus dallachyanus			B		100	1	NO
Pityrodia serrata			B, NT	1	100	7	NO
Podocarpus grayae			B		100	19	NO
Polycarpaea tenax			B, NT		100	14	
Psychotria loniceroides			B		95.5	21	
Sauvagesia filicina	VU		NT	2	93.8	15	
Sauvagesia gracilis			B, NT	2	100	2	NO
Schoutenia ovata	VU		NT		4.35	1	
Scleria D19144 Jabiru			B, NT	2	100	28	
Selaginella D22971			B		100	1	NO
Spermacoce brevidens			B, NT	1	100	7	
Spermacoce cardiophora			B, NT	2	100	1	
Spermacoce caudata			B, NT	1	100	6	NO
Spermacoce discreta			B, NT	1	100	10	
Spermacoce parviceps			B, NT	2	100	2	NO
Stylium simulans			B, NT	2	100	4	NO
Syzygium arenitense			B, NT	2	100	9	
Taenitis pinnata			B		100	2	NO
Taxithelium instratum			B		100	1	NO
Ternstroemia cherryi			B		100	28	
Toechima D55598 East Alligator	EN		B, NT	1	100	4	NO
Triodia aurita			B, NT	2	100	1	
Triumfetta oenpelliensis			B, NT	2	100	2	NO
Utricularia rhododactylus			B, NT	1	100	6	
Xanthostemon D18954 Obiri Rock			B		100	4	

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Arnhem Plateau, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Freshwater Tongue Sole	Cynoglossus heterolepis	EN		NT	No data	No data	
Oenpelli Python	Morelia oenpelliensis	VU		NT	57.1		
Saw-Shelled Turtle	Elseya latisternum			B	100	6	
Small-headed Blind Snake	Ramphotyphlops affinis			B	100	1	NO
Australian Bustard	Ardeotis australis	VU			0.23	4	
Emu	Dromaius novaehollandiae	VU			3.4	20	
Gouldian Finch	Erythrura gouldiae	EN	EN		0.30	3	
Masked Owl	Tyto novaehollandiae kimberli	NT	VU		8.7	2	
Partridge Pigeon	Geophaps smithii	NT	VU		8.9	139	
Red Goshawk	Erythrotriorchis radiatus	VU	VU		16.1	10	
White-throated Grasswren	Amytornis woodwardi	VU		NT	78.9	45	
Yellow Chat	Epthianura crocea	EN			6.8	2	
Arnhem Land Rock-rat	Zyzomys maini	VU		NT	49.0	51	
Arnhem Leafnosed Bat	Hipposideros inornata	VU		NT	87.5	7	

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Golden-backed Tree-rat	Mesembriomys macrurus	EN	VU		50.0	2	
Northern Brush-tailed Phascogale	Phascogale pirata	VU			11.8	4	
Northern Hopping-mouse	Notomys aquilo	VU	VU		14.3	1	NO
Northern Quoll	Dasyurus hallucatus	VU			13.8	157	

#### (d) Threatened invertebrates

None listed for this bioregion.

#### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Mammals:** Golden Bandicoot\* (*Isoodon auratus*).

### 4. Management issues and special values in the bioregion

#### (a) Significant exotic plants in the bioregion

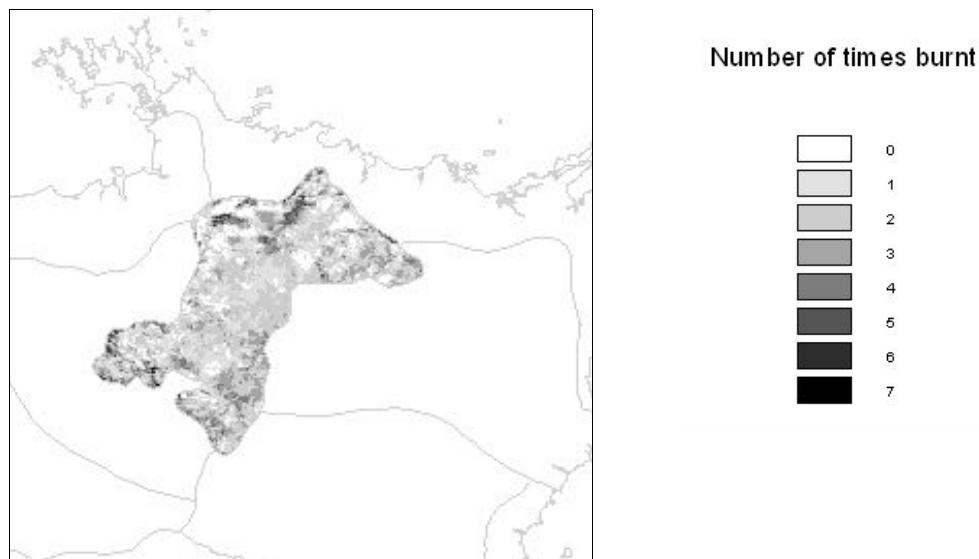
NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Gambia Pea ( <i>Crotalaria goreensis</i> )	not classed		Roadsides, grazed areas, Riparian
Guinea Grass ( <i>Urochloa maxima</i> )	not classed		Creeks, Roadsides, Towns
Para Grass ( <i>Urochloa mutica</i> )	not classed		Floodplains, drainage lines
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens

#### (b) Exotic animals in the bioregion and their status

<b>Buffalo</b>	Occurs in the bioregion, but generally localised or uncommon; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Recently established throughout bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Honey bees</b>	Probably widespread in region: impacts uncertain but may affect native plants (through altered pollination regimes), native invertebrates (through competition), and native hollow-dwelling species (through aggressive usurpation of hollows)
<b>Horse</b>	At least localised populations with high density; affecting water sources, and with some impact on biodiversity
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

**(c) Fire histories – number of fires in seven year history 1997-2003**



**(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Arnhem Plateau

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT017	Kakadu National Park	882.9	77.2	Aboriginal Freehold

Most of the reserved part of this bioregion is as a Ramsar wetland of international significance, in recognition of the extraordinary diversity of relatively pristine wetland habitats, including upland springs, gorges, waterfalls, networks of billabongs and major rivers, tidal channels and seasonally-inundated floodplains (although most of the latter are in adjacent bioregions). These support a particularly diverse and abundant wetland biota. Two other DIWA listed wetlands occur just outside the bioregion, with the headwaters for both originating here: NT018 (Katherine River Gorge), and NT028 (Murgeonella-Cooper floodplain system).

**List of catchments in Arnhem Plateau** - Blyth River, Daly River, East Alligator River, Goomadeer River, Liverpool River, Mary River, Roper River, South Alligator River.

**(e) Rainforests and sites of botanical significance**

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Allosyncarpia	1684	1100.7	30.1
Dry	9	3.6	49.1
Riparian	139	5.6	49.5
Spring	68	8.6	94.1

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
152	24.3	16.6	4.6	5.9

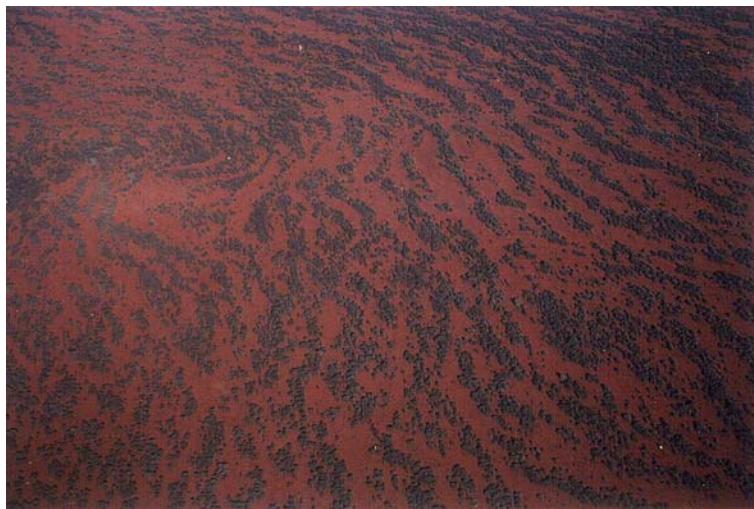
**(f) Important colonies and breeding sites**

No sites identified.

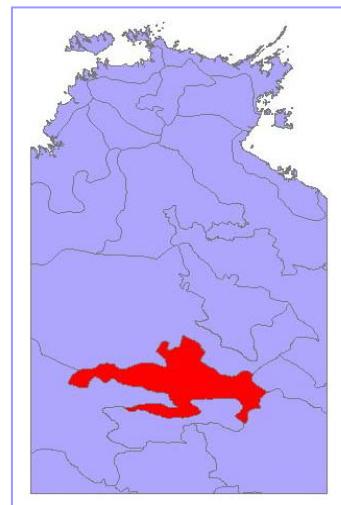
## BURT PLAIN (BRT)

### 1. General Description

The Burt Plain bioregion includes some of Australia's best developed and most extensive mulga woodlands, and some rocky ranges offering refugial values and limited endemism. It lies over the Arunta Province, Tennant Inlier, and small areas of Georgina, Wiso and Ngalia Basins, with metamorphic, plutonic, and sedimentary rocks of Precambrian age. Soils are shallow sands and massive earths. Elevation across the undulating plains varies from 350 m to 1100 m in the Reynolds Ranges. The drainage includes several ephemeral rivers flowing north into the Tanami Desert, including the Hanson, Lander Rivers and Yaloogarrie Creek. The climate is arid with annual rainfall between 300 and 400 mm. The bioregion comprises four subregions.



Burt Plain, consists of extensive areas of red earths which support acacia and spinifex covered red sands. Photo: Peter Latz.



Map of NT Bioregions highlighting Burt Plain

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	73605 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	73605 km <sup>2</sup> (5.48%)
Extent of National Parks and other protected areas (% of bioregion area)	192 km <sup>2</sup> (0.26%)

#### (b) Tenure

Aboriginal freehold	10777 km <sup>2</sup> (14.7%)
Pastoral leases	60172 km <sup>2</sup> (82.0%)
Crown Leases and Vacant Land	1260.7 km <sup>2</sup> (1.7%)
Other Freehold	130.6 km <sup>2</sup> (0.2%)
Other tenure	1066.2 km <sup>2</sup> (1.5%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Burt Plain

Anna's Reservoir Conservation Reserve	0.848 km <sup>2</sup>
Barrow Creek Telegraph Station Historical Reserve	0.008 km <sup>2</sup>
Central Mount Stuart Historical Reserve	0.003 km <sup>2</sup>
Dulcie Range National Park	190.7 km <sup>2</sup>

Native Gap Conservation Reserve	0.114 km <sup>2</sup>
Ryan Well Historical Reserve	0.024 km <sup>2</sup>

#### (d) Off-reserve conservation and land management groups

None listed for this bioregion.

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Ahakeye Aboriginal Land Trust (Ti Tree), Angarapa Aboriginal Land Trust, Ankweleyelengkwe Aboriginal Land Trust, Athenge Lhere (NTP 3806) Aboriginal Land Trust, Central Desert Aboriginal Land Trust, Haasts Bluff Aboriginal Land Trust, Ilparle Aboriginal Land Trust, Karlantijpa South Aboriginal Land Trust, Lake Mackay Aboriginal Land Trust, Mpwerenge-Arnapipe 2 Aboriginal Land Trust, Mpweringe-Arnapipe 2 (NTP 3807) Aboriginal Land Trust, Mpweringe-Arnapipe Aboriginal Land Trust, Thakeperre Aboriginal Land Trust, Thangkenhareng Aboriginal Land Trust, Willowra Pastoral Company Pty Ltd, Yalpirakinu Aboriginal Land Trust (Mt Allen), Yuendumu Aboriginal Land Trust, Yunkanjini Aboriginal Land Trust.

#### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Aileron, Alcoota, Ambalindum, Amburla, Anningie, Arapunya, Bond Springs, Bushy Park, Coniston, Delmore Downs, Delny, Derry Downs, Derwent, Dneiper, Glen Helen, Hamilton Downs, Huckitta, Indiana, Jervois, Jinka, Loves Creek, Macdonald Downs, Mount Denison, Mount Doreen, Mount Riddock, Mount Skinner, Murray Downs, Napperby, Narwietooma, Neutral Junction, Numery, Old Macdonald Downs, Ooratippa, Pine Hill, Stirling, The Garden, Woodgreen, Yambah.

#### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
1.21	1.27

### 3. Biodiversity in Burt Plain

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Burt Plain. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	2348	<0.01	2.4	1	1
4	Eucalyptus Woodland with Hummock Grass Understorey	5398	3.1	8.7	1	1
9	Acacia Woodland	48859	0.05	1.2	12	4
10	Hummock Grassland	16640	<0.01	1.5	9	1
11	Tussock Grassland	359	0	0.9	2	0

Reservation bias of vegetation in Burt Plain (broad veg/fine veg) 0.80/0.87

**(b) Significant Plant Species**

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Burt Plain, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Eleocharis papillosa	VU		NT		23.1	3	
Eremophila dalyana			B		100	10	
Ipomoea A83192 Stirling	VU	VU	B, NT	1	100	3	NO
Macrozamia macdonnellii	VU	VU	NT		2.56	1	
Marsilea A99150 Neutral Junction			B		100	1	NO
Scaevola obovata			B		100	1	NO
Sclerolaena densiflora			B		100	1	NO
Sida glauca			B		100	1	NO
Zinnia peruviana			B		100	1	NO

**(c) Significant Vertebrate Species**

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Burt Plain, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Great Desert Skink	Egernia kintorei	VU	VU		3.5	2	
Australian Bustard	Ardeotis australis	VU			3.5	62	
Australian Painted Snipe	Rostratula australis	VU	VU		5.9	1	
Emu	Dromaius novaehollandiae	VU			5.8	34	
Black-footed Rock-wallaby	Petrogale lateralis	NT	VU		7.9	45	
Mulgara	Dasyurus cristicauda	VU	VU		1.8	7	

**(d) Threatened invertebrates**

Species	Common Name	NT Conservation status	Federal Conservation status
Semotrachia huckittana	(snail)		VU
Semotrachia jinkana	(snail)		VU

**(e) Animals Extinct in this bioregion (\*still present in other NT bioregions)**

**Birds:** Malleefowl (*Leipoa ocellata*), Night Parrot\* (*Pezoporus occidentalis*); **Mammals:** Bilby\* (*Macrotis lagotis*) Brush-tailed Bettong (*Bettongia penicillata*), Burrowing Bettong (*Bettongia lesueur*), Central Hare-wallaby (*Lagorchestes asomatus*), Central Rock-rat\* (*Zyzomys pedunculatus*), Common Brushtail Possum\* (*Trichosurus vulpecula*), Crescent Nailtail Wallaby (*Onychogalea lunata*), Desert Bandicoot (*Perameles eremiana*), Dusky Hopping-mouse (*Notomys fuscus*), Ghost Bat\* (*Macroderma gigas*), Golden Bandicoot\* (*Isoodon auratus*), Lesser Stick-nest Rat (*Leporillus apicalis*), Long-tailed Hopping-mouse (*Notomys longicaudatus*), Mala (*Lagorchestes hirsutus*), Pale Field-rat\* (*Rattus tunneyi*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Red-tailed Phascogale (*Phascogale calura*), Western Quoll (*Dasyurus geoffroii*).

#### **4. Management issues and special values in the bioregion**

##### **(a) Significant exotic plants in the bioregion**

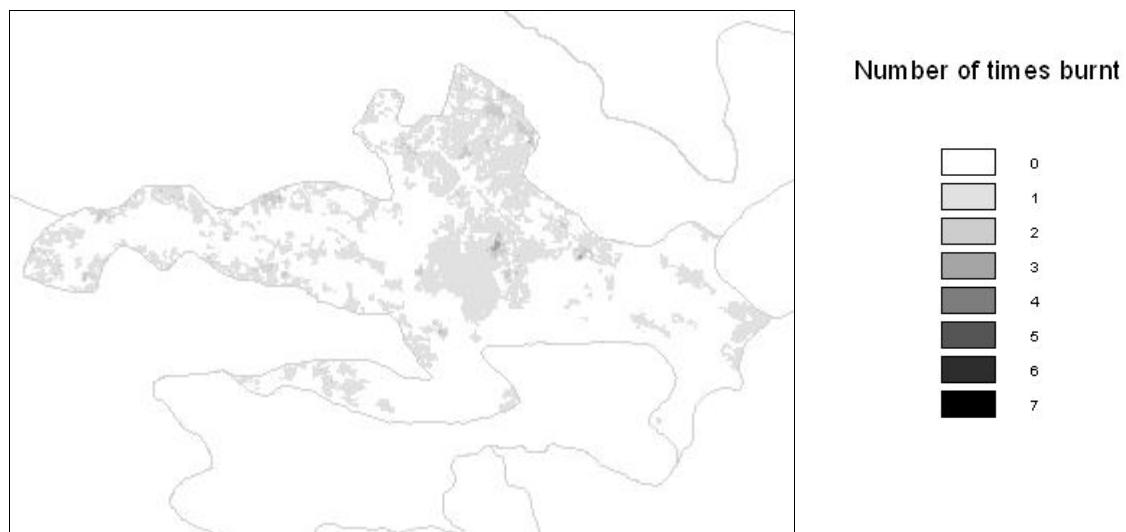
NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Castor Oil Plant ( <i>Ricinus communis</i> )	not classed		Roads, Riparian, Flood areas
Mexican poppy ( <i>Argemone ochroleuca</i> )	B		Blocks & gardens, Roads and Tracks, Waterways and floodplains
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Ruby Dock ( <i>Acetosa vesicaria</i> )	not classed		

##### **(b) Exotic animals in the bioregion and their status**

<b>Arabian camel</b>	Widespread and probably increasing; with detriment to vegetation and water sources
<b>Cat</b>	Widespread, but probably at relatively low densities: probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	In relatively low numbers
<b>Fox</b>	Serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Horse</b>	In relatively low numbers
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>Rabbit</b>	Formerly at very high densities, causing severe environmental detriment: now at least partly controlled

##### **(c) Fire histories – number of fires in seven year history 1997-2003**



#### (d) Wetlands, major rivers and catchments

No Directory of Important Wetlands of Australia wetlands listed in this bioregion.

Other important wetlands in Burt Plain (potential DIWA listings)

Wetland name	Reference number
Dulcie Ranges Springs and Waterholes	NT-potential-7
Mudhut Swamp	NT-potential-22
Narwietooma Lignum Swamp	NT-potential-36
Pine Hill and Conniston Springs	NT-potential-45
Stirling Swamp	NT-potential-13
Woodduck Swamp	NT-potential-23

A range of generally small swamps, ephemeral rivers and rock holes are present in the bioregion. Many of these are being degraded by a combination of factors including feral animals, livestock, weeds and/or unfavourable burning regimes.

**List of catchments in Burt Plain** – Burt Basin, Georgina River, Hay River, Mackay Basin, Todd River, Wiso Basin.

#### (e) Rainforests and sites of botanical significance

No rainforests occur in this bioregion.

Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
21-4-3	Barrow Creek	Bioregional
22-4-1	Bush Potato Site	National
21-3-2	Central Mount Stuart	Bioregional
22-5-2	Dulcie Ranges	National
23-4-17	Everard Scrub	Bioregional
22-5-1	Jervois Range	Bioregional
22-4-PL1	Mount Beechmore Mulga	Undetermined
23-2-1	Mount Edward	National
22-3-PL2	Mount Gardiner	Undetermined
23-3-3	Mount Hay	National
23-5-4	Mount Long/Mount Mary	Bioregional
23-3-1	Mount Zeil	National
22-4-2	Mueller Creek Catchment	Bioregional
21-3-PL2	Nanga Range	Undetermined
23-4-12	New Well	Bioregional
21-4-1	Osborne and Crawford Ranges	National
21-4-7	Stirling Swamp	National
22-4-PL2	The Twins	Undetermined
22-4-3	Upper Plenty River	Bioregional
22-3-PL3	Warimbi Hills	Undetermined
21-4-4	Watt Range Floodouts and Fringing Sandplains	Bioregional
22-2-3	Yuendumu South	Bioregional
22-3-PL1	Yunderbulu	Undetermined

#### (f) Important colonies and breeding sites

No sites identified.

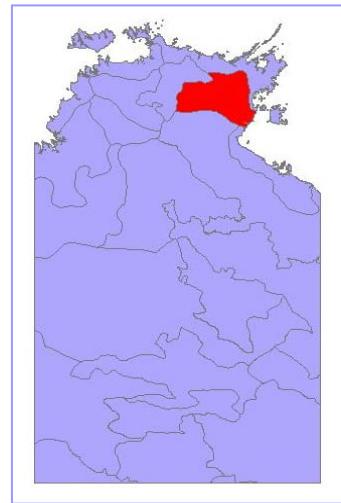
## CENTRAL ARNHEM (CA)

### 1. General Description

This bioregion stretches from the Arnhem Plateau to the Gulf of Carpentaria and covers the McArthur Basin and comprises gently sloping terrain and low hills on Cretaceous sandstones and siltstones and lateritised Tertiary material; yellow earthy sands and shallow stony sands. Elevation ranges from 400 m in the west on the Arnhem Plateau to sea level in the east, and most of the subregion is below 200 m. The bioregion contains the headwaters of many large rivers. The dominant vegetation is Darwin Woollybutt *Eucalyptus minata* and Darwin Stringybark *E. tetrodonta* open forests and woodlands with a dense grass understorey. Almost all of the bioregion is Aboriginal land. The bioregion is divided into two subregions.



Central Arnhem, woodlands dominated by *Eucalyptus minata* and *E. tetrodonta*. Photo: Kym Brennan.



Map of NT Bioregions highlighting Central Arnhem

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	34539 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	34539 km <sup>2</sup> (2.57%)
Extent of National Parks and other protected areas (% of bioregion area)	0 km <sup>2</sup> (0%)

#### (b) Tenure

Aboriginal freehold	34220 km <sup>2</sup> (99.1%)
Pastoral leases	305.4 km <sup>2</sup> (0.9%)
Crown Leases and Vacant Land	0 km <sup>2</sup> (0%)
Other Freehold	0 km <sup>2</sup> (0%)
Other tenure	0.33 km <sup>2</sup> (0%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Central Arnhem

None listed in this bioregion.

**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program	Greening Australia	Darwin
Mimal Rangers	Ngadunggay Homeland Resource Centre	Bulman/ Gulin Gulin & Weemol
Rittharngu Rangers/ South east Arafura Catchment	Ngadunggay Homeland Resource Centre	Donydji / Mirungerdja / Walker River
Wanga Djakmirr Rangers	Ramingining Community Incorporated / Ramingining Homelands Resource Centre	Ramingining

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Arnhem Land Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Mainoru.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.02	-

**3. Biodiversity in Central Arnhem**

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Central Arnhem. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	32043	0	14.1	9	0
3	Eucalyptus low Woodland with Tussock Grass Understorey	202	0	2.4	1	0
4	Eucalyptus Woodland with Hummock Grass Understorey	1232	0	8.7	1	0
7	Melaleuca Forest and Woodlands	537	0	8.5	1	0
8	Floodplain	77	0	24.9	1	0
9	Acacia Woodland	250	0	1.2	1	0
12	Littoral	190	0	8.4	1	0

Reservation bias of vegetation in Central Arnhem (broad veg/fine veg) unreserved

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Central Arnhem, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Arenga australasica		VU			3.77	2	
Barringtonia racemosa			B		100	1	NO
Cartonema D138925 Goyder R.			B		100	4	NO
Cycas arnhemica x orientis			B		100	1	NO
Dolichandrone alternifolia			B		100	1	NO
Hibiscus thegaleus			B, NT	2	100	1	NO
Hoppea dichotoma			B, NT		100	2	NO
Melaleuca D139090 Floodplain viridiflora			B		100	2	NO
Muellerargia timorensis			B		100	2	NO
Rotala rosea			B		100	2	NO
Stylium symonii			B, NT	2	100	1	NO

## (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Central Arnhem, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Flatback Turtle	Natator depressus	DD	VU		0.57	2	
Green Turtle	Chelonia mydas		VU		0.90	2	
Australian Bustard	Ardeotis australis	VU			0.23	4	
Emu	Dromaius novaehollandiae	VU			0.17	1	
Northern Shrike-tit	Falcunculus whitei	DD	VU		10.7	3	
Partridge Pigeon	Geophaps smithii	NT	VU		0.06	1	
Northern Quoll	Dasyurus hallucatus	VU			0.35	4	

## (d) Threatened invertebrates

None listed for this bioregion.

## (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Mammals:** Golden Bandicoot\* (*Isoodon auratus*).

#### **4. Management issues and special values in the bioregion**

##### **(a) Significant exotic plants in the bioregion**

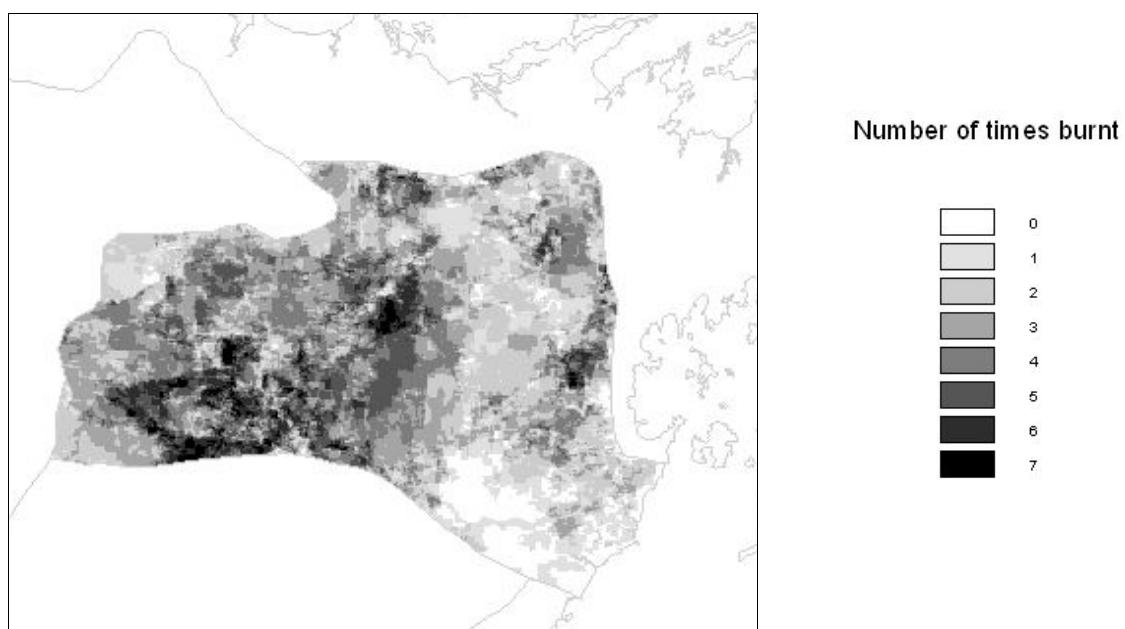
NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Gambia Pea ( <i>Crotalaria goreensis</i> )	not classed		Roadsides, grazed areas, Riparian
Neem ( <i>Azadirachta indica</i> )	not classed		Towns, Riparian
Para Grass ( <i>Urochloa mutica</i> )	not classed		Floodplains, drainage lines
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Prickly Acacia ( <i>Acacia nilotica</i> )	A		Water ways and floodplains

##### **(b) Exotic animals in the bioregion and their status**

<b>Buffalo</b>	At high densities in this bioregion; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Recently established throughout bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Crazy ant</b>	Populations established in part of bioregion; current projects seeking to control; serious local detriment to native invertebrates, with some impact on some vertebrates and plants
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Honey bees</b>	Probably widespread in region: impacts uncertain but may affect native plants (through altered pollination regimes), native invertebrates (through competition), and native hollow-dwelling species (through aggressive usurpation of hollows)
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

##### **(c) Fire histories – number of fires in seven year history 1997-2003**



#### (d) Wetlands, major rivers and catchments

Directory of important wetlands of Australia (DIWA) listings for Central Arnhem

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT007	Limmen Bight (Port Roper) Tidal Wetlands System	162.8	0	Aboriginal Freehold
NT021	Arafura Swamp	29451	0	Aboriginal Freehold

Central Arnhem includes the upstream (Goyder River) component of the nationally-listed Arafura Swamp (NT021), notable for its large size, distinctive vegetation and significance for wetland biota.

**List of catchments in Central Arnhem** - Blyth River, Buckingham River, Daly River, Goyder River, Koolatong River, Liverpool River, Roper River, Walker River.

#### (e) Rainforests and sites of botanical significance

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	161	40.8	0.0
Riparian	214	6.4	0.0
Spring	50	5.1	0.0

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
51	39.2	37.3	0	8

#### (f) Important colonies and breeding sites

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Shorebird	No data	1
Marine Turtle	No data	2

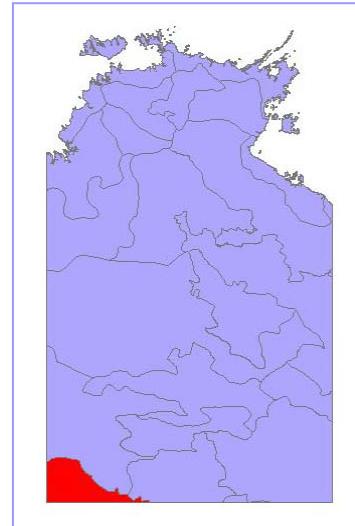
## CENTRAL RANGES (CR)

### 1. General Description

The Central Ranges bioregion lies in the south west corner of the Northern Territory. The Mann and Musgrave Ranges occur just south of the border in South Australia. Elevation is generally above 500 m, ranging up to 1000 m along the South Australian border. The area lies over the Musgrave Block and small areas of the Amadeus Basin. Soils in the subregion are mainly shallow sands and massive earths. The climate is arid with annual rainfall below 300 mm. In the NT vegetation is hummock grassland (*Triodia* spp.) and sparse Acacia shrubland. Minor drainage occurs around the Petermann Ranges. Generally the bioregion comprises sandplains supporting low open woodlands of either Desert Oak or Mulga over *Triodia basedowii* hummock grasslands, while ranges support mixed wattle scrub or *Callitris glauophylla* woodlands over hummock and tussock grasslands.



Central Ranges, showing the Bloods Range. Photo: Dave Albrecht.



Map of NT Bioregions highlighting Central Ranges

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	102147 km <sup>2</sup> (25.5%)
Area of bioregion within NT (% of NT area)	26022 km <sup>2</sup> (1.94%)
Area reserved in entire bioregion (% of bioregion area)	49853 km <sup>2</sup> (48.8%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	0 km <sup>2</sup> (0%)

#### (b) Tenure

Aboriginal freehold	24769 km <sup>2</sup> (95.2%)
Pastoral leases	1239.9 km <sup>2</sup> (4.8%)
Crown Leases and Vacant Land	0 km <sup>2</sup> (0%)
Other Freehold	4.1 km <sup>2</sup> (0.02%)
Other tenure	0 km <sup>2</sup> (0%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Central Ranges

None listed in this bioregion.

**(d) Off-reserve conservation and land management groups**

None listed in this bioregion.

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Petermann Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Mulga Park, Victory Downs.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.95	1.07

**3. Biodiversity in Central Ranges****(a) Vegetation**

Extent and level of reservation of broad vegetation types in Central Ranges. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
9	Acacia Woodland	9010	0	1.2	2	0
10	Hummock Grassland	17000	0	1.5	8	0

Reservation bias of vegetation in Central Ranges (broad veg/fine veg)    unreserved

**(b) Significant Plant Species**

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Central Ranges, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Dampiera dentata			B		100	5	NO
Dicrastylis petermannensis			B, NT		100	1	NO
Eremophila arenaria			B		100	1	NO
Eremophila clarkei			B		100	4	NO
Goodenia brunnea			B		100	4	NO
Goodenia rupestris			B, NT	2	100	1	NO
Melaleuca fulgens			B, NT		100	1	NO
Ozothamnus A25067 Petermann Ranges			B, NT		100	3	NO
Porana commixta			B		100	1	NO
Prostanthera wilkieana			B		100	2	NO

## Central Ranges

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Ptilotus royceanus			B		100	7	NO
Scaevola collina			B		100	1	NO
Sida A83883 Petermann Ranges			B, NT		100	4	NO
Tietkensia corrickiae			B		100	7	NO
Trachymene bialata			B		100	4	NO
Triodia helmsii			B		100	2	NO

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Central Ranges, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Rusty Dragon	Ctenophorus rufescens			B	100	1	NO
Small Spiny-Tailed Egernia	Egernia depressa			B	100	1	NO
Australian Bustard	Ardeotis australis	VU			0.45	8	
Emu	Dromaius novaehollandiae	VU			3.1	18	
Black-footed Rock-wallaby	Petrogale lateralis	NT	VU		0.71	4	
Common Brushtail Possum	Trichosurus vulpecula vulpecula	EN			31	66	
Mulgara	Dasyurus cristicauda	VU	VU		1.0	4	

### (d) Threatened invertebrates

None listed for this bioregion.

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Birds:** Grey Currawong (*Strepera versicolor*), Malleefowl (*Leipoa ocellata*); **Mammals:** Bilby\* (*Macrotis lagotis*), Brush-tailed Bettong (*Bettongia penicillata*), Burrowing Bettong (*Bettongia lesueur*), Central Hare-wallaby (*Lagorchestes asomatus*), Crescent Nailtail Wallaby (*Onychogalea lunata*), Desert Bandicoot (*Perameles eremiana*), Ghost Bat\* (*Macroderma gigas*), Golden Bandicoot\* (*Isoodon auratus*), Lesser Bilby (*Macrotis leucura*), Lesser Stick-nest Rat (*Leporillus apicalis*), Mala (*Lagorchestes hirsutus*), Numbat (*Myrmecobius fasciatus*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Red-tailed Phascogale (*Phascogale calura*), Short-tailed Hopping-mouse (*Notomys amplus*), Western Quoll (*Dasyurus geoffroii*).

## 4. Management issues and special values in the bioregion

### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins

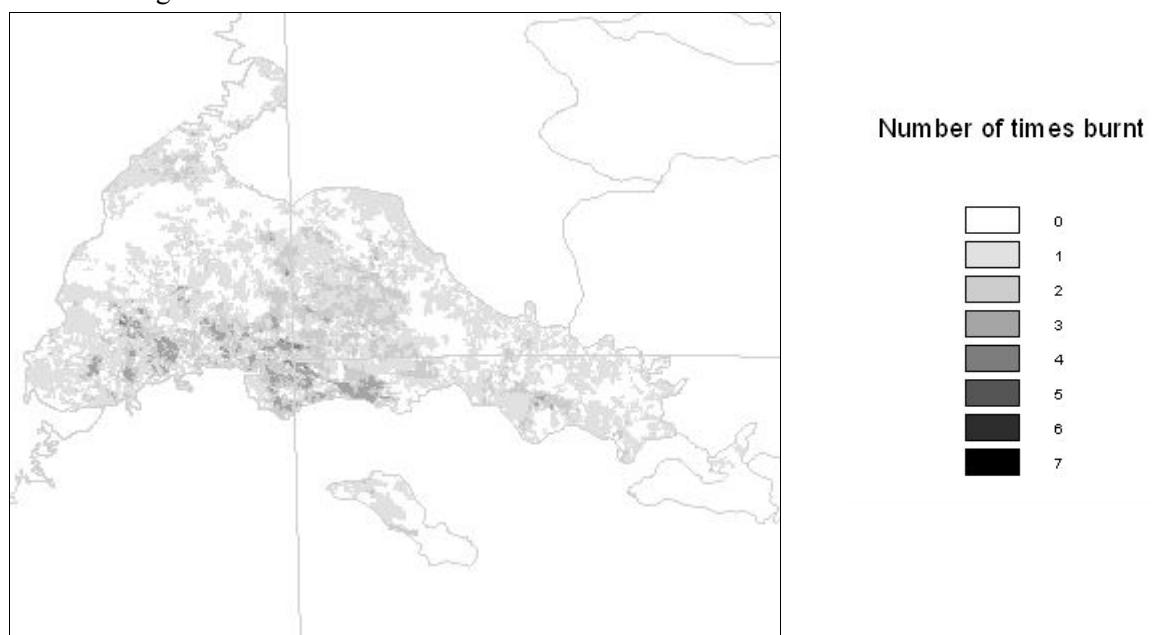
Castor Oil Plant ( <i>Ricinus communis</i> )	not classed	Roads, Riparian, Flood areas
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B	Blocks & gardens, Pastoral, Roads and Tracks
Ruby Dock ( <i>Acetosa vesicaria</i> )	not classed	

**(b) Exotic animals in the bioregion and their status**

<b>Arabian camel</b>	Widespread and probably increasing; with detriment to vegetation and water sources
<b>Cat</b>	Widespread, but probably at relatively low densities: probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Fox</b>	serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Horse</b>	At least localised populations with high density; affecting water sources, and with some impact on biodiversity
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>Rabbit</b>	Formerly at very high densities, causing severe environmental detriment: now at least partly controlled

**(c) Fire histories – number of fires in seven year history 1997-2003**

Part of bioregion in Western Australia and South Australia shown

**(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Central Ranges

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT005	Lake Amadeus	358.7	0	Aboriginal Freehold

*Central Ranges*

Other important wetlands in Central Ranges (potential DIWA listings)

<b>Wetland name</b>	<b>Reference number</b>
Lake Neale	NT-potential-41

**List of catchments in Central Ranges - Mackay Basin, Warburton Basin.**

**(e) Rainforests and sites of botanical significance**

Sites of botanical significance (White *et al.* 2000)

<b>Site No</b>	<b>Name</b>	<b>Significance</b>
24-1-1	Bloods Range	Bioregional
25-3-3	Mount Cuthbert	Bioregional
25-1-PL1	Northern Mann Ranges	Undetermined
25-2-AD1	Northern Musgrave Range	Undetermined
24-1-2	Petermann Ranges	National

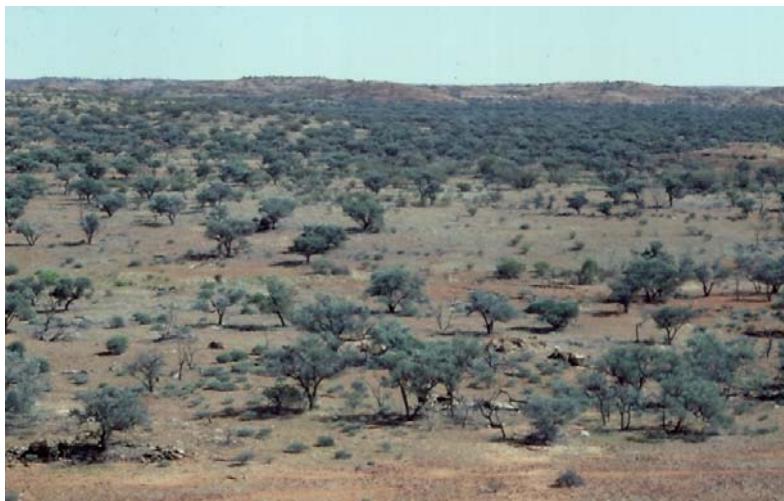
**(f) Important colonies and breeding sites**

No sites identified.

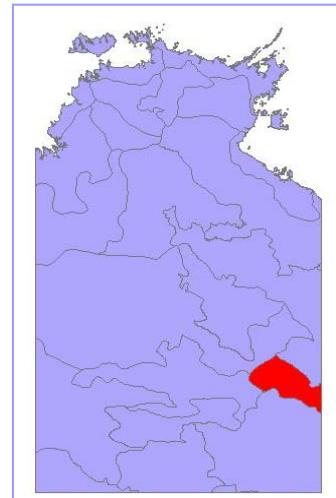
# CHANNEL COUNTRY (CHC)

## 1. General Description

This bioregion lies over the Georgina Basin on Cambrian sedimentary rocks, overlain by massive earths and shallow sandy soils. Extensive Gidgee (*Acacia georginae*) plains and rolling hills characterise the NT part of this bioregion. Elevation is between 180 m and 400 m, with minor relief provided by the Tarlton and Toko Ranges. The climate is arid with hot summers and mild winters, with most of the 300 to 400 mm of rain falling in summer months. Vegetation is predominantly Triodia grassland and Acacia tall open-shrubland, with occasional large Bluebush (*Chenopodium auricomum*) swamps.



Channel Country, with Gidgee Country around Tarlton Downs.  
Photo: Peter Latz.



Map of NT Bioregions highlighting Channel Country

## 2. Tenure, reservation and land use

### (a) Area

Total size of bioregion (% within NT)	287828 km <sup>2</sup> (8.1%)
Area of bioregion within NT (% of NT area)	23210 km <sup>2</sup> (1.73%)
Area reserved in entire bioregion (% of bioregion area)	12060 km <sup>2</sup> (4.2%)
Extent of NT National Parks and other protected areas (% of bioregion area)	0 km <sup>2</sup> (0%)

### (b) Tenure

Aboriginal freehold	317.4 km <sup>2</sup> (1.4%)
Pastoral leases	22823 km <sup>2</sup> (98.4%)
Crown Leases and Vacant Land	39.3 km <sup>2</sup> (0.2%)
Other Freehold	2.7 km <sup>2</sup> (0.01%)
Other tenure	0 km <sup>2</sup> (0%)
Defence	0 km <sup>2</sup> (0%)

### (c) Protected areas and extent in Channel Country

None listed for this bioregion.

**(d) Off-reserve conservation and land management groups**

None listed in this bioregion.

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Anatye Aboriginal Land Trust, Atnetye Aboriginal Land Trust, Irrmarne Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Annitowa, Arapunya, Argadargada, Jervois, Jinka, Lucy Creek, Manners Creek, Marqua, Ooratippa, Tarlton Downs, Tobermorey.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.04	0.68

**3. Biodiversity in Channel Country**

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Channel Country. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	597	0	2.4	1	0
4	Eucalyptus Woodland with Hummock Grass Understorey	31	0	8.7	1	0
9	Acacia Woodland	16893	0	1.2	7	0
10	Hummock Grassland	5258	0	1.5	2	0
11	Tussock Grassland	432	0	0.9	1	0

Reservation bias of vegetation in Channel Country (broad veg/fine veg)                                       unreserved

**(b) Significant Plant Species**

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Channel Country, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Bolboschoenus caldwellii	EN				14.3	1	
Eremophila polyclada			B		100	2	NO
Mukia A90788 Tobermorey Station	VU		NT		20.0	1	NO

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Channel Country, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Emu	Dromaius novaehollandiae	VU			2.7	16	
Bilby	Macrotis lagotis	VU	VU		0.41	2	NO
Mulgara	Dasyurus cristicauda	VU	VU		0.52	2	

### (d) Threatened invertebrates

None listed for this bioregion.

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Mammals:** Burrowing Bettong (*Bettongia lesueur*), Crescent Nailtail Wallaby (*Onychogalea lunata*), Common Brushtail Possum\* (*Trichosurus vulpecula*), Golden Bandicoot\* (*Isoodon auratus*), Western Quoll (*Dasyurus geoffroii*).

## 4. Management issues and special values in the bioregion

### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

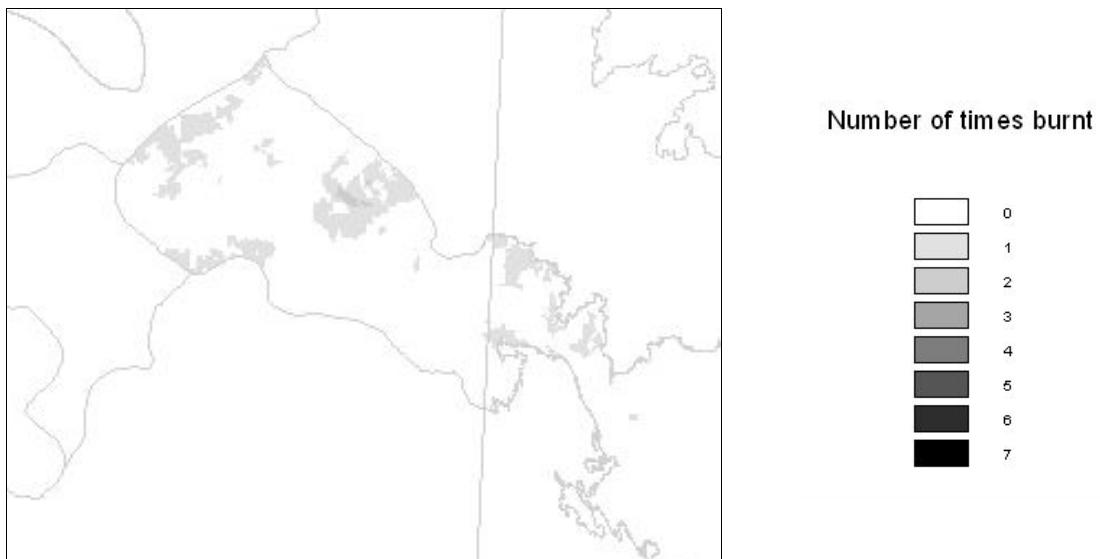
Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Marvel Grass ( <i>Dichanthium annulatum</i> )	not classed		
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens

### (b) Exotic animals in the bioregion and their status

<b>Cat</b>	Widespread, but probably at relatively low densities: probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Fox</b>	serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>Pig</b>	Probably at least localised populations, with detrimental impacts on vegetation, water sources and possibly ground-dwelling fauna.
<b>Rabbit</b>	Formerly at very high densities, causing severe environmental detriment: now at least partly controlled

**(c) Fire histories – number of fires in seven year history 1997-2003**

NT part of the bioregion shown on border with Queensland.



**(d) Wetlands, major rivers and catchments**

No Directory of Important Wetlands of Australia wetlands listed in this bioregion.

Other important wetlands in Channel Country (potential DIWA listings)

Wetland name	Reference number
Small Spring-fed Waterholes of the Toko Ranges	NT-potential-30

**List of catchments in Channel Country - Georgina River, Hay River.**

**(e) Rainforests and sites of botanical significance**

Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
22-5-1	Jervois Range	Bioregional
22-6-3	Querinya	Bioregional
21-6-PL2	Sandover River Floodout	Undetermined
22-6-1	Tarlon Ranges	Bioregional
22-6-2	Toko Range	Bioregional

**(f) Important colonies and breeding sites**

No sites identified.

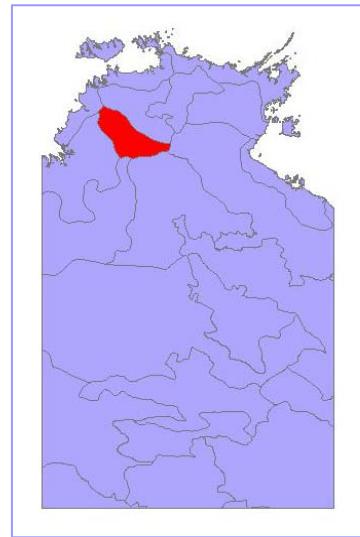
## DALY BASIN (DAB)

### 1. General Description

The Daly Basin bioregion comprises gently undulating plains and scattered low plateau remnants on Palaeozoic sandstones, siltstones and limestones; and neutral loamy and sandy red earths. The most extensive vegetation type is open forest dominated by Darwin Stringybark *Eucalyptus tetrodonta* and Darwin Woollybutt *E. miniatia* with perennial and annual grass understorey. The Daly Basin has no subregions.



Daly Basin, showing the Daly River middle reaches and Beeboom crossing. Photo: Owen Price.



Map of NT Bioregions highlighting Daly Basin

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	20831 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	20831 km <sup>2</sup> (1.55%)
Extent of National Parks and other protected areas (% of bioregion area)	525 km <sup>2</sup> (2.52%)

#### (b) Tenure

Aboriginal freehold	3730.9 km <sup>2</sup> (18.0%)
Pastoral leases	10770 km <sup>2</sup> (52.0%)
Crown Leases and Vacant Land	4902.5 km <sup>2</sup> (23.7%)
Other Freehold	1279.0 km <sup>2</sup> (6.2%)
Other tenure	30.8 km <sup>2</sup> (0.1%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Daly Basin

Butterfly Gorge Nature Park	1.04 km <sup>2</sup>
Cutta Cutta Caves Nature Park	14.9 km <sup>2</sup>
Daly River (Mt Nancar) Conservation Area (part)	16.7 km <sup>2</sup>
Douglas River / Daly River Esplanade Conservation Area	40.1 km <sup>2</sup>
Flora River Nature Park	77.7 km <sup>2</sup>
Kintore Caves Conservation Reserve	4.21 km <sup>2</sup>

## Daly Basin

Litchfield National Park (part)	278.2 km <sup>2</sup>
Nitmiluk (Katherine Gorge) National Park (part)	9.07 km <sup>2</sup>
Oolloo Crossing Conservation Area	0.025 km <sup>2</sup>
Stray Creek Conservation Area	43.1 km <sup>2</sup>
Tjuwalbyn (Douglas) Hot Springs Park	30.3 km <sup>2</sup>
Umbrawarra Gorge Nature Park	9.43 km <sup>2</sup>

## (d) Off-reserve conservation and land management groups

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program	Greening Australia	Darwin
Binjari Community		
Conservation Volunteers Australia	Darwin	Various
Jawoyn Landcare	Jawoyn Association Aboriginal Corporation	Katherine
Kalano Community Association		
Katherine Landcare Group		Katherine
Malak Malak Rangers	Nauiyu Nambiyu Community Government Council	Wooliana
Wagiman Rangers	Pine Creek Aboriginal Advancement Association / Benang Association	Kybrook Farm
Wangamaty (Lower Daly) Landcare Group		

## (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Barnjarn Aboriginal Association, Barnjarn Aboriginal Corporation, Beswick Aboriginal Land Trust, Jawoyn Aboriginal Land Trust, Lorrl Aboriginal Land Trust, Malak Malak Aboriginal Land Trust, Menngen Aboriginal Land Trust\* (Innesvale), Upper Daly Aboriginal Land Trust\*, Wagiman (No. 2) Aboriginal Land Trust, Wagiman Aboriginal Land Trust, Yubulyawun Aboriginal Land Trust.

## (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Claravale, Dorisvale, Douglas, East Mathison, Fergusson River\*, Jindare, Litchfield, Manbulloo, Mary River West, Scott Creek, Tipperary, West Mathison.

## (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
76.53	4.55

## 3. Biodiversity in Daly Basin

### (a) Vegetation

Extent and level of reservation of broad vegetation types in the Daly Basin. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	18432	1.3	14.1	7	4

Broad Veg Unit	Description	area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	1434	17.2	2.4	2	2
4	Eucalyptus Woodland with Hummock Grass Understorey	518	5.3	8.7	4	1
5	Mixed Species low open Woodland	77	0	9.9	1	0
7	Melaleuca Forest and Woodlands	370	0.80	8.5	1	1
9	Acacia Woodland	1	0	1.2	1	0

Reservation bias of vegetation in Daly Basin (broad veg/fine veg) 0.44/0.44

### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Daly Basin, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Cycas armstrongii	VU		NT		0.19	1	
Nervilia plicata	EN				87.5	7	NO
Polygala wightiana			B		100	1	
Ptychosperma macarthurii	EN				4.00	1	
Schoutenia ovata	V		NT		8.70	2	
Spermacoce inaperta			B, NT	2	100	3	
Sphaerostephanos unitus			B		100	2	NO
Tephrosia savannicola			B		100	1	NO
Utricularia singeriana	VU				20.0	1	
Vacoparis macrospermum			B, NT	1	95.2	20	

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Daly Basin, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Freshwater Sawfish	Pristis microdon	VU	VU		No data	No data	
Australian Bustard	Ardeotis australis	VU			3.0	53	
Emu	Dromaius novaehollandiae	VU			2.2	13	
Gouldian Finch	Erythrura gouldiae	EN	EN		4.4	43	
Northern Shrike-tit	Falcunculus whitei	DD	VU		17.9	5	
Partridge Pigeon	Geophaps smithii	NT	VU		5.0	79	
Northern Quoll	Dasyurus hallucatus	VU			4.2	48	

### (d) Threatened invertebrates

None listed for this bioregion.

**(e) Animals Extinct in this bioregion (\*still present in other NT bioregions)**

**Mammals:** Brush-tailed Rabbit-rat\* (*Conilurus penicillatus*).

**4. Management issues and special values in the bioregion**

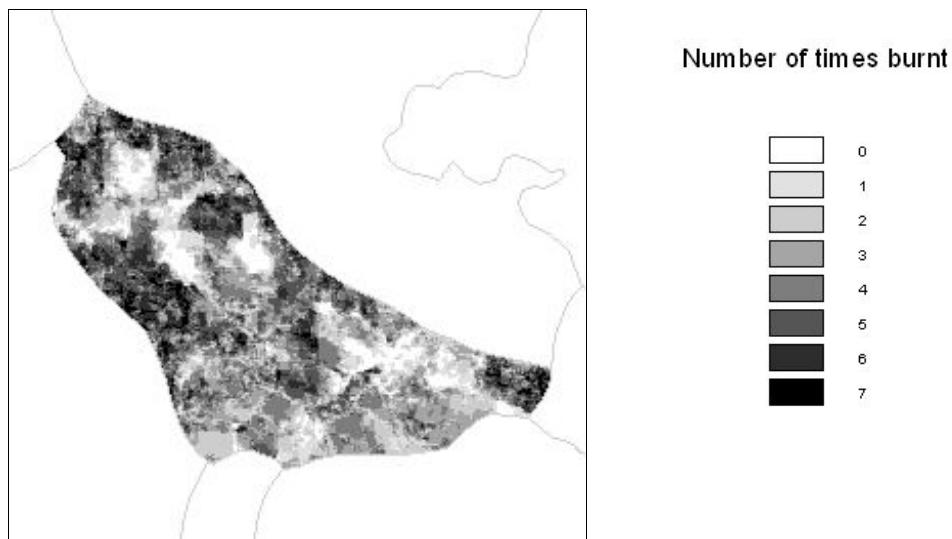
**(a) Significant exotic plants in the bioregion**

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Barleria (Barleria prionitis)	A		Towns, disturbed areas
Buffel Grass (Cenchrus ciliaris)	not classed		Disturbed areas, Towns, Roads, swamp margins
Calopo (Calopogonium mucunoides)	not classed		Creeks, Monsoon Vine thickets
Centro (Centrosema molle)	not classed		Disturbed areas, Towns
Devil's Claw (Martynia annua)	A		Pastoral, Roads and Tracks
Gamba Grass (Andropogon gayanus)	not classed		Blocks & gardens, Pastoral, Roads and Tracks
Gambia Pea (Crotalaria goreensis)	not classed		Roadsides, grazed areas, Riparian
Guinea Grass (Urochloa maxima)	not classed		Creeks, Roadsides, Towns
Mesquite (Prosopis limensis)	B	WONS	Pastoral, Water ways and floodplains
Neem (Azadirachta indica)	not classed		Towns, Riparian
Olive hymenachne (Hymenachne amplexicaulis)	not classed	WONS	Water ways and floodplains
Paddy's Lucerne (Sida rhombifolia)	B		Blocks & gardens, Pastoral, Roads and Tracks
Para Grass (Urochloa mutica)	not classed		Floodplains, drainage lines
Parkinsonia (Parkinsonia aculeata)	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens

**(b) Exotic animals in the bioregion and their status**

<b>Buffalo</b>	Occurs in the bioregion, but generally localised or uncommon; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Recently established in bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

**(c) Fire histories – number of fires in seven year history 1997-2003****(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Daly Basin

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT001	Daly River Middle Reaches	1467.9	3.1	Crown Land, Pastoral Lease
NT024	Daly-Reynolds Floodplain-Estuary System	288.0	0.2	Crown and Vacant Land, Pastoral Lease, Other Freehold

Much of the lower Daly River is recognised as a nationally significant wetland (NT001 Daly River middle reaches). It provides the largest annual discharge of any river in northern Australia, possesses important breeding sites for colonially-nesting waterfowl, supports much of the Australian population of the pig-nosed turtle *Carettochelys insculpta*, areas of distinctive limestone tufas, significant riparian vegetation, and the occurrence of two threatened fish (freshwater sawfish *Pristis microdon* and speartooth shark *Glyptis* sp A).

**List of catchments in Daly Basin** - Adelaide River, Daly River, Finniss River, Roper River.

**(e) Rainforests and sites of botanical significance**

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	236	4.2	7.0
Riparian	697	31.5	13.0
Spring	152	16.7	11.9

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
48	37.5	20.8	6.3	42.5

**(f) Important colonies and breeding sites**

No sites identified for this bioregion, although downstream on the Daly River in the Darwin Coastal bioregion are several important waterbird and seabird colonies.

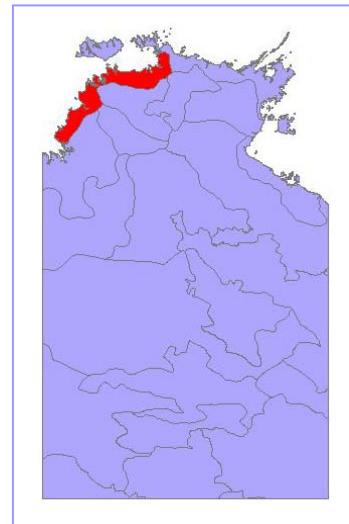
## DARWIN COASTAL (DAC)

### 1. General Description

The Darwin Coastal bioregion comprises gently undulating plains on lateritised Cretaceous sandstones and siltstones; sandy and loamy red and yellow earths and siliceous sands from near the mouth of the Victoria River to just west of Cobourg Peninsula. The most notable vegetation feature is the extensive and diverse floodplain environment associated with the lower reaches of the many large river systems. There are also substantial areas of mangroves, and rainforest and other riparian vegetation fringing the rivers. Inland from the coast, the dominant vegetation type is eucalypt tall open forest, typically dominated by Darwin woollybutt (*Eucalyptus miniata*) and Darwin stringybark (*E. tetrodonta*). The Darwin Coastal bioregion is not divided into subregions.



Darwin Coastal, has many coastal floodplains and billabongs such as this. Photo: Martin Armstrong.



Map of NT Bioregions highlighting Darwin Coastal

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	27991 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	27991 km <sup>2</sup> (2.09%)
Extent of National Parks and other protected areas (% of bioregion area)	8209 km <sup>2</sup> (29.33%)

#### (b) Tenure

Aboriginal freehold	11965 km <sup>2</sup> (43.6%)
Pastoral leases	4171.8 km <sup>2</sup> (15.2%)
Crown Leases and Vacant Land	4350.3 km <sup>2</sup> (15.9%)
Other Freehold	6681.7 km <sup>2</sup> (24.4%)
Other tenure	258.5 km <sup>2</sup> (0.9%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Darwin Coastal

Adelaide River Foreshore Conservation Area (part)	0.09 km <sup>2</sup>
Black Jungle / Lambells Lagoon Conservation Reserve	40.5 km <sup>2</sup>
Blackmore River Conservation Reserve (part)	1.95 km <sup>2</sup>

*Darwin Coastal*

Buffalo Creek Management Area	1.55 km <sup>2</sup>
Casuarina Coastal Reserve	0.364 km <sup>2</sup>
Channel Island Conservation Reserve	0.094 km <sup>2</sup>
Charles Darwin National Park	12.0 km <sup>2</sup>
Djukbinj National Park (part)	525.1 km <sup>2</sup>
Fogg Dam Conservation Reserve	18.5 km <sup>2</sup>
George Brown Darwin Botanic Gardens	0.239 km <sup>2</sup>
Harrison Dam Conservation Area	32.7 km <sup>2</sup>
Holmes Jungle Nature Park	2.51 km <sup>2</sup>
Howard Springs Hunting Reserve	16.1 km <sup>2</sup>
Howard Springs Nature Park	2.84 km <sup>2</sup>
Indian Island Conservation Area	13.2 km <sup>2</sup>
Kakadu National Park (part)	6198.2 km <sup>2</sup>
Knuckey Lagoons Conservation Reserve	1.25 km <sup>2</sup>
Leaning Tree Lagoon Nature Park	1.32 km <sup>2</sup>
Litchfield National Park (part)	606.9 km <sup>2</sup>
Mary River National Park (Proposed) (part)	558.6 km <sup>2</sup>
Melacca Swamp Conservation Area	22.6 km <sup>2</sup>
Shoal Bay Coastal Reserve	118.4 km <sup>2</sup>
Territory Wildlife Park / Berry Springs Nature Park (part)	6.58 km <sup>2</sup>
Tree Point Conservation Area	2.44 km <sup>2</sup>
Vernon Islands Conservation Reserve	24.6 km <sup>2</sup>

**(d) Off-reserve conservation and land management groups**

<b>Group</b>	<b>Resource Centre / Aboriginal Corporation</b>	<b>Community</b>
Aboriginal Landcare Education Program	Greening Australia	Darwin
Acacia Larrakia Rangers	Acacia Larrakia Incorporated	Acacia Larrakia
Adjumarllarl Rangers	Demed Association Incorporated Home Resource Centre	Gunbalanya / Oenpelli
Asyrikarrak Kirim Rangers	Peppimenarti Community Government Council	Peppimenarti
Bek Rangers	Demed Association Incorporated Home Resource Centre	Mamadewerre
Casuarina Coastal Reserve Landcare Group		
Coastcare Darwin		
Conservation Volunteers Australia	Darwin	Various
Coomalie Landcare Group		
Cox Peninsula Coastcare Group		
Duke Street Rainforest Landcare Group		
Dundee Envirocare		
Greening Australia Northern Territory	Darwin	Various
Gwalwa Daraniki Association		
Howard River Park Landcare/Waterwatch Group		
Knuckles Lagoon Recreation Reserve		
Larrakia Nation Land and Sea Management	Durdugu Tree Point Aboriginal Association	Tree Point
Leanyer Landcare Group		
Livingstone reserve Landcare Group		
Ludmilla Creek Landcare Group		

Group	Resource Centre / Aboriginal Corporation	Community
Malak Malak Rangers	Nauiyu Nambiyu Community Government Council	Wooliana
Mandiddi Rangers	Demed Association Incorporated Home Resource Centre	Manmoyi
Marine and Coastal Community Network		
Mary River Landcare Group		
McMinns Lagoon Reserve Landcare Group		
Mitchell Creek Landcare Group		
Myilly Point Landcare Group		
Ngatpuk Land Management	Wadjigan Aboriginal Corporation	Bulgul
Palumpa Land Management	Nganmarriyanga Community Incorporated	Palumpa
Rapid Creek Landcare Group		
Taminmin High School – Woodside Reserve		
Thamurrurr Rangers	Kardu Numida Council	Wadeye / Port Keats
Wangamaty (Lower Daly) Landcare Group		
White Eagle Aboriginal Corporation	White Eagle Aboriginal Corporation	Pandayal (Twin Hill)
Whitewood Park Landcare Group		

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Arnhem Land Aboriginal Land Trust, Daly River/Port Keats Aboriginal Land Trust\* (Palumpa), Delissaville/Wagait/Larrakia Aboriginal Land Trust\* (Twin Hill), Gurudju Aboriginal Land Trust, Jabiluka Aboriginal Land Trust, Kakadu Aboriginal Land Trust, Limilngan-Wulna (Land Holding) Aboriginal Corporation, Malak Malak Aboriginal Land Trust.

#### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Adelaide River (Kerlin)\*, Carmour Plains\*, Elizabeth Downs, Finniss River\*, Koolpinyah, La Belle Downs, Litchfield, Marrakai, Melaleuca\*, Old Annaburroo\*, Opium Creek\*, Swim Creek Plains Station\*, Welltree, Woolner.

#### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
1617.6	25.69

### 3. Biodiversity in Darwin Coastal

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Darwin Coastal. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
1	Closed Forest	80	21.9	26.3	2	2
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	15959	30.7	14.1	6	5
3	Eucalyptus low Woodland with Tussock Grass Understorey	213	63.8	2.4	2	1

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
4	Eucalyptus Woodland with Hummock Grass Understorey	398	54.8	8.7	1	1
6	Miscellaneous Shrubland	959	0.09	<0.1	1	1
7	Melaleuca Forest and Woodlands	739	9.3	8.5	1	1
8	Floodplain	7746	29.8	24.9	2	2
12	Littoral	1777	26.8	8.4	4	2

Reservation bias of vegetation in Darwin Coastal (broad veg/fine veg) 0.08/0.20

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Darwin Coastal, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia praetermissa	VU		NT	1	5.26	1	NO
Aeginetia saccharicola			B		100	1	NO
Amyema thalassia			B		100	8	
Asplenium D38194 Litchfield			B		100	3	
Atalaya D123943 Elizabeth River			B, NT	2	100	2	NO
Chara fibrosa			B		100	1	
Commelina difformis			B		100	9	
Crotalaria quinquefolia			B		100	12	
Cyathula prostrata			B		100	2	NO
Cycas armstrongii	VU		NT		38.0	197	
Cyperus pilosus			B		100	2	NO
Digitaria setigera			B		100	2	NO
Eleocharis GLeach 2723			B		100	1	NO
Endiandra limnophila	VU				8.82	3	
Eriocalon zollingerianum			B		100	1	NO
Finlaysonia obovata			B		100	3	
Goodenia D73968 elaiosoma			B, NT	1	100	7	
Grevillea longicuspis	VU		NT	2	88.2	284	
Habenaria rumphii	EN		B		100	1	NO
Helicteres D21039 linifolia			B, NT	1	100	510	
Helicteres D27003 Litchfield			B, NT	1	100	6	
Hibbertia D51334 Cox Peninsula			B		100	3	
Hibbertia muelleri			B, NT	2	100	5	NO
Hibiscus AD 37419			B		100	1	NO
Indigofera schultziana	VU		NT	2	4.26	2	NO
Lastreopsis rufescens			B		100	1	NO
Lindernia D123065 Litchfield			B		100	1	
Lobelia D120904 Cox Peninsula			B, NT	1	100	4	NO
Luisia teretifolia	VU				14.3	3	
Malaxis latifolia	VU		B		100	3	
Malaxis marsupichila	VU		B		100	3	NO
Margaritaria indica			B		100	6	NO
Monochoria hastata	VU		B, NT		100	88	

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
<i>Nervilia plicata</i>	EN				12.5	1	NO
<i>Oplismenus hirtellus</i>			B		100	1	NO
<i>Pentapetes phoenicea</i>			B, NT		100	25	
<i>Persicaria D17952 Bulkine Billabong</i>			B		100	1	NO
<i>Ptychosperma macarthurii</i>	EN	EN			92.0	23	
<i>Spermacoce phalloides</i>			B, NT	1	100	5	NO
<i>Stylium tepperianum</i>			B		100	1	
<i>Tephrosia d6333</i>			B		100	1	
<i>Typhonium praetermissum</i>			B, NT	1	100	5	NO
<i>Typhonium taylori</i>	EN		B, NT	2	100	2	NO
<i>Urochloa D14825 (Latz 6060)</i>			B		100	1	
<i>Utricularia D127178 rubra</i>			B, NT	1	100	3	
<i>Utricularia dunstaniae</i>	EN		B		100	8	
<i>Utricularia hamiltonii</i>			B, NT		97.7	42	
<i>Utricularia holtzei</i>			B, NT	1	100	40	
<i>Utricularia singeriana</i>	VU				20.0	1	
<i>Utricularia subulata</i>	EN				75.0	3	
<i>Zeuxine oblonga</i>	VU				12.5	1	
<i>Zornia D3024 Darwin</i>			B, NT	1	100	4	NO

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Darwin Coastal, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Dwarf Sawfish	<i>Pristis clavata</i>	VU			No data	No data	No data
Freshwater Sawfish	<i>Pristis microdon</i>	VU	VU		No data	No data	
Freshwater Tongue Sole	<i>Cynoglossus heterolepis</i>	EN		NT	No data	No data	
Green Sawfish	<i>Pristis zijsron</i>	VU			No data	No data	No data
Northern River Shark	<i>Glyphis sp. C</i>	EN	EN		No data	No data	No data
Speartooth Shark	<i>Glyphis sp. A</i>	EN	CR		No data	No data	No data
Alligator Rivers Ctenotus	<i>Ctenotus kurnbudj</i>			B, NT	100	25	
Flatback Turtle	<i>Natator depressus</i>	DD	VU		22.4	79	
Green Turtle	<i>Chelonia mydas</i>		VU		2.7	6	
Hawksbill Turtle	<i>Eretmochelys imbricata</i>	DD	VU		7.7	9	
Loggerhead Turtle	<i>Caretta caretta</i>	EN	EN		42.9	3	
Olive Ridley	<i>Lepidochelys olivacea</i>	DD	EN		14.8	12	
Point Stuart Ctenotus	<i>Ctenotus stuarti</i>			B, NT	100	5	
Yellow-bellied Sea Snake	<i>Pelamis platurus</i>			B	100	2	NO
Yellow-snouted Gecko (Blind snake)	<i>Diplodactylus occultus</i>	VU		B, NT	100	9	
	<i>Ramphotyphlops nema</i>			B, NT	100	3	NO
Australian Bustard	<i>Ardeotis australis</i>	VU			4.9	86	
Common Redshank	<i>Tringa totanus</i>			B	95.7	22	
Emu	<i>Dromaius novaehollandiae</i>	VU			5.1	30	
Gouldian Finch	<i>Erythrura gouldiae</i>	EN	EN		1.0	10	
Lewin's Rail	<i>Rallus pectoralis</i>			B	100	3	

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Little Ringed Plover	<i>Charadrius dubius</i>			B	95.5	84	
Masked Owl	<i>Tyto novaehollandiae kimberli</i>	NT	VU		47.8	11	
Partridge Pigeon	<i>Geophaps smithii</i>	NT	VU		12.4	194	
Red Goshawk	<i>Erythrociorchis radiatus</i>	VU	VU		22.6	14	
Wandering Tattler	<i>Heteroscelus incanus</i>			B	100	13	
White-throated Grasswren	<i>Amytornis woodwardi</i>	VU		NT	5.3	3	
Yellow Chat	<i>Epthianura crocea tunneyi</i>	EN			82.7	24	
Yellow Wagtail	<i>Motacilla flava</i>			B	97.5	197	
Arnhem Land Rock-rat	<i>Zyzomys maini</i>	VU		NT	13.5	14	
Brush-tailed Rabbit-rat	<i>Conilurus penicillatus</i>	VU			1.1	2	
Northern Brush-tailed Phascogale	<i>Phascogale pirata</i>	VU			14.7	5	
Northern Quoll	<i>Dasyurus hallucatus</i>	VU			44.5	506	
Water mouse	<i>Xeromys myoides</i>	DD	VU		11.1	1	
Bare-rumped Sheathtail-bat	<i>Saccopteryx saccolaimus nudicliniatus</i>	DD	CR	B	100	3	

#### (d) Threatened invertebrates

Species	Common Name	NT Conservation status	Federal Conservation status
<i>Attacus wardi</i>	Atlas Moth	EN	
<i>Ogyris iphis doddi</i>	Dodd's Azure Butterfly	EN	
<i>Taractrocera ilia ilia</i>	Northern Grass dart Butterfly	VU	

#### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

None listed for this bioregion.

### 4. Management issues and special values in the bioregion

#### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

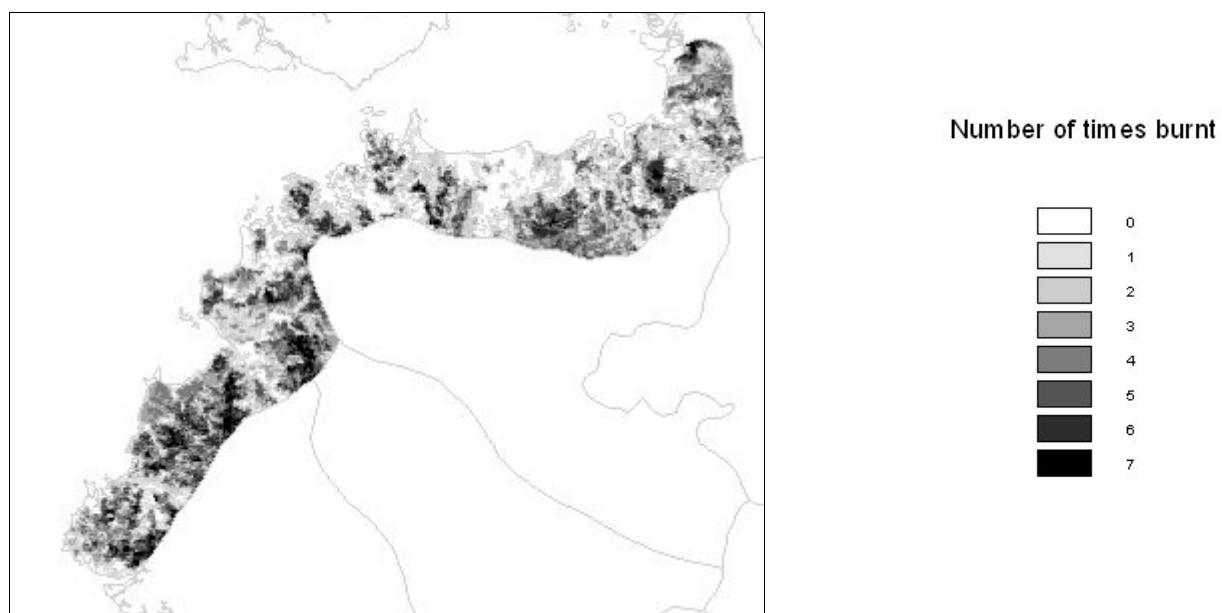
Name	NT weed class	WONS	Habitat
Aleman Grass ( <i>Echinochloa polystachya</i> )	not classed		Seasonal flooded areas, Swamps
Alligator weed ( <i>Alternanthera philoxeroides</i> )	A	WONS	Aquatic
Barleria ( <i>Barleria prionitis</i> )	A		Towns, disturbed areas
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Cabomba ( <i>Cabomba caroliniana</i> )	A	WONS	Water ways and floodplains
Calopo ( <i>Calopogonium mucunoides</i> )	not classed		Creeks, Monsoon Vine thickets
Centro ( <i>Centrosema molle</i> )	not classed		Disturbed areas, Towns
Coffee Bush ( <i>Leucaena leucocephala</i> )	not classed		Disturbed areas, Towns
Cutch tree ( <i>Acacia catechu</i> )	A		Disturbed woodland
Dalbergia ( <i>Dalbergia sissoo</i> )	A		Towns

Name	NT weed class	WONS	Habitat
Devil's Claw ( <i>Martynia annua</i> )	A		Pastoral, Roads and Tracks
Gamba grass ( <i>Andropogon gayanus</i> )	not classed		Blocks & gardens, Pastoral, Roads and Tracks
Gambia Pea ( <i>Crotalaria goreensis</i> )	not classed		Roadsides, grazed areas, Riparian
Guinea Grass ( <i>Urochloa maxima</i> )	not classed		Creeks, Roadsides, Towns
Mimosa (Giant Sensitive Plant) ( <i>Mimosa pigra</i> )	A		Pastoral, Water ways and floodplains
Mission grass ( <i>Pennisetum polystachyon</i> )	B		Blocks & gardens, Roads and Tracks, Pastoral
Neem ( <i>Azadirachta indica</i> )	not classed		Towns, Riparian
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Para Grass ( <i>Urochloa mutica</i> )	not classed		Floodplains, drainage lines
Salvinia ( <i>Salvinia</i> )	A	WONS	Water ways and floodplains
Water hyacinth ( <i>Eichornia crassipes</i> )	A		Water ways and floodplains

### (b) Exotic animals in the bioregion and their status

<b>Big-headed ant</b>	Populations established in part of bioregion; local detriment to native invertebrates, with some impact on some vertebrates and plants
<b>Black rat</b>	Localised (particularly urban) infestations; biodiversity impacts uncertain
<b>Buffalo</b>	At high densities in this bioregion; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Recently established in bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Honey bees</b>	Probably widespread in region: impacts uncertain but may affect native plants (through altered pollination regimes), native invertebrates (through competition), and native hollow-dwelling species (through aggressive usurpation of hollows)
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates
<b>Rock dove (feral pigeon)</b>	Population established in urban and near urban areas; now mostly controlled; impacts upon biodiversity uncertain.

**(c) Fire histories – number of fires in seven year history 1997-2003**



**(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Darwin Coastal

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT017	Kakadu National Park	236481	91.0	Aboriginal Freehold, Crown Land, Other Freehold
NT020	Adelaide River Floodplain System	37508	45.1	Aboriginal Freehold, Crown and Vacant Land, Pastoral Lease, Other Freehold, Other Tenure
NT024	Daly-Reynolds Floodplain-Estuary System	66550	0	Aboriginal Freehold, Vacant Land, Pastoral Lease, Other Freehold
NT025	Finniss Floodplain and Fog Bay Systems	78677	0	Aboriginal Freehold, Crown Land, Pastoral Lease, Freehold
NT026	Mary Floodplain System	114047	31.8	Crown Land, Pastoral Lease, Other Freehold, Other Tenure
NT027	Moyle Floodplain and Hyland Bay System	71097	0	Aboriginal Freehold, Vacant Land, Other Freehold
NT028	Murgenella-Cooper Floodplain System	77862	0.2	Aboriginal Freehold, Other Freehold
NT029	Port Darwin	21841	0.6	Aboriginal Freehold, Crown and Vacant Land, Other Freehold, Other Tenure
NT032	Shoal Bay - Micket Creek	0.12	0	Other Freehold

This bioregion includes all or part of several nationally important wetlands. In addition to portions of the Ramsar listed wetlands of Kakadu Stages 1 and 2 (notably the South, East and West Alligator Rivers systems: NT017) and Cobourg Peninsula (NT023), this bioregion includes 7 nationally listed wetlands.

**List of catchments in Daly Basin** - Adelaide River, Daly River, East Alligator River, Finniss River, Fitzmaurice River, Mary River, Moyle River, South Alligator, Wildman River.

**(e) Rainforests and sites of botanical significance**

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Allosyncarpia	6	1.9	28.4
Dry	1634	245.9	37.7
Riparian	681	20.0	25.0
Spring	403	60.5	35.2

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
205	32.7	46.8	37.1	55.9

**(f) Important colonies and breeding sites**

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Seabird	<10000	1
Shorebird	No data	137
Waterbird	<10000	29
Waterbird	>10000	7
Marine Turtle	No data	17

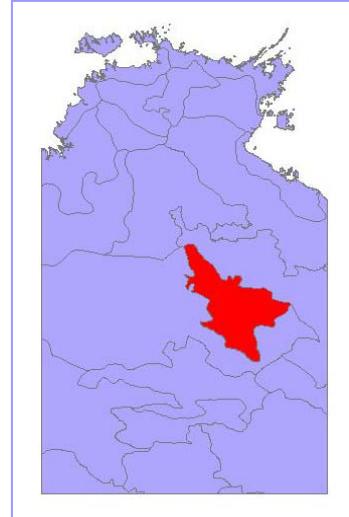
## DAVENPORT MURCHISON RANGES (DMR)

### 1. General Description

The Davenport-Murchison Ranges bioregion comprises low but rugged rocky hills, formed from folded volcanics and sandstone, siltstone and conglomerates, which contrast starkly with the generally flat sandplain surrounds of the Tanami bioregion. Soils are generally shallow lithosols, but deep fine-grained alluvial soils occur in the valleys and surrounding plains. Vegetation includes hummock grasslands and low open woodlands dominated by eucalypt and *Acacia* species. This bioregion includes three subregions.



Davenport Murchison Ranges, is dominated by low open woodland over hummock grassland. Photo: Mike Gillam.



Map of NT Bioregions highlighting Davenport Murchison Ranges

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	57628 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	57628 km <sup>2</sup> (4.29%)
Extent of National Parks and other protected areas (% of bioregion area)	1151 km <sup>2</sup> (2.0%)

#### (b) Tenure

Aboriginal freehold	15622 km <sup>2</sup> (27.2%)
Pastoral leases	30861 km <sup>2</sup> (53.7%)
Crown Leases and Vacant Land	10950 km <sup>2</sup> (19.0%)
Other Freehold	0 km <sup>2</sup> (%)
Other tenure	46.1 km <sup>2</sup> (0.08%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Davenport Murchison Ranges

Attack Creek Historical Reserve	0.002 km <sup>2</sup>
Davenport Range National Park (Proposed)	1132.8 km <sup>2</sup>
Devil's Marbles Conservation Reserve	17.9 km <sup>2</sup>
John Flynn Historical Reserve	0.005 km <sup>2</sup>
Tennant Creek Telegraph Station Historical Reserve	0.139 km <sup>2</sup>

**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Julalikari Burumana Landcare	Julalikari Burumana Aboriginal Corporation	Kalumpurlpa

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Anurrette Aboriginal Land Trust, Arruwurra Aboriginal Corporation, Kalumpitja 2 Aboriginal Land Trust, Kalumpitja Aboriginal Land Trust, Karlantijpa North Aboriginal Land Trust, Kurnturlpara Aboriginal Land Trust, Muckaty Aboriginal Land Trust (Muckaty), Mungkarta 2 Aboriginal Land Trust, Mungkarta Aboriginal Land Trust (McLaren Creek), Partta Land Aboriginal Corporation, Wakaya Aboriginal Land Trust, Warumungu Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Alroy Downs, Ammaroo, Anmitowa, Banka Banka, Brunchilly, Dalmore Downs, Derry Downs, Elkedra, Epenarra, Helen Springs, Kurundi, Murray Downs, Ooratippa, Phillip Creek, Powell Creek, Rockhampton Downs, Singleton, Tandyidgee, Tennant Creek, West Ranken.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
3.66	1.49

**3. Biodiversity in Davenport Murchison Ranges**

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Davenport Murchison Ranges. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	3190	0	2.4	4	0
4	Eucalyptus Woodland with Hummock Grass Understorey	45906	2.5	8.7	6	3
5	Mixed Species low open Woodland	1	0	9.9	1	0
9	Acacia Woodland	3101	0.41	1.2	4	2
10	Hummock Grassland	4927	0	1.5	1	0
11	Tussock Grassland	495	0	0.9	2	0
13	Chenopod Shrublands	7	0	1.4	1	0

Reservation bias of vegetation in Davenport Murchison Ranges (broad veg/fine veg) 0.20/0.81

### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Davenport Murchison Ranges, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Sporobolus latzii		B, NT	2	100	1	NO	

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Davenport Murchison Ranges, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Australian Bustard	Ardeotis australis	VU			3.2	57	
Emu	Dromaius novaehollandiae	VU			1.4	8	
Black-footed Rock-wallaby	Petrogale lateralis	NT	VU		1.4	8	
Mulgara	Dasycercus cristicauda	VU	VU		0.78	3	

### (d) Threatened invertebrates

None listed for this bioregion.

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Mammals:** Bilby\* (*Macrotis lagotis*), Burrowing Bettong (*Bettongia lesueur*), Central Rock-rat\* (*Zyzomys pedunculatus*), Common Brushtail Possum\* (*Trichosurus vulpecula*), Crescent Nailtail Wallaby (*Onychogalea lunata*), Dusky Hopping-mouse (*Notomys fuscus*), Golden Bandicoot\* (*Isoodon auratus*), Mala (*Lagorchestes hirsutus*), Pale Field-rat\* (*Rattus tunneyi*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Red-tailed Phascogale (*Phascogale calura*), Western Quoll (*Dasyurus geoffroii*).

## 4. Management issues and special values in the bioregion

### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

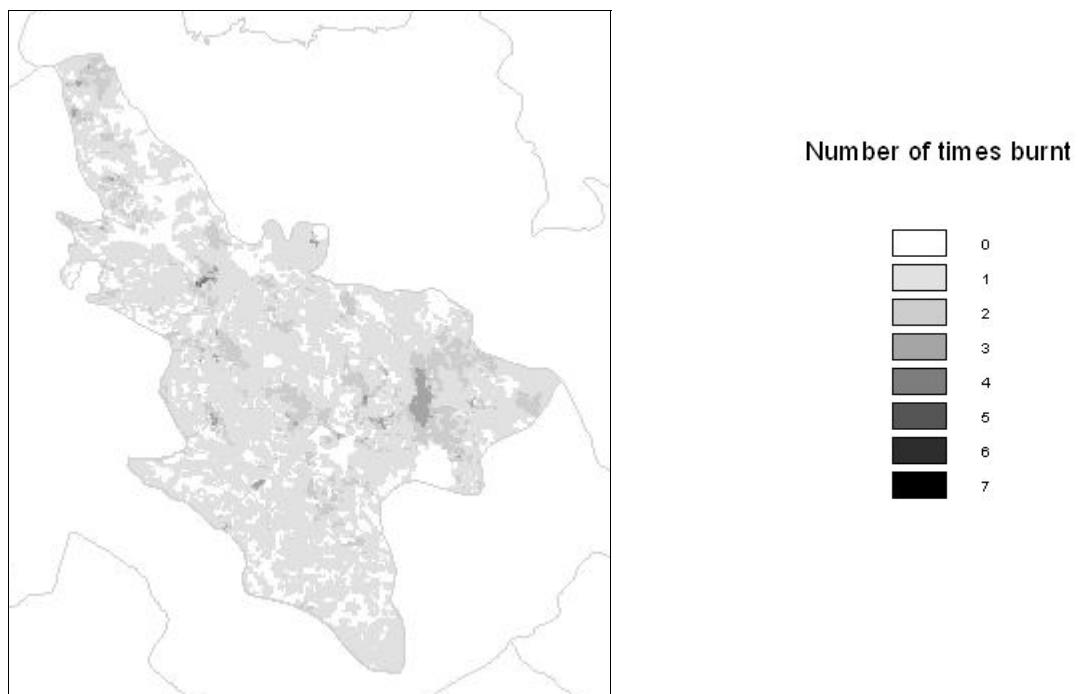
Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Coffee Bush ( <i>Leucaena leucocephala</i> )	not classed		Disturbed areas, Towns
Marvel Grass ( <i>Dichanthium annulatum</i> )	not classed		
Mesquite ( <i>Prosopis limensis</i> )	B	WONS	Pastoral, Water ways and floodplains
Neem ( <i>Azadirachta indica</i> )	not classed		Towns, Riparian

Name	NT weed class	WONS	Habitat
Noogoora Burr ( <i>Xanthium strumarium</i> )	B		Pastoral, Roads and tracks
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Ruby Dock ( <i>Acetosa vesicaria</i> )	not classed		

### (b) Exotic animals in the bioregion and their status

<b>Cat</b>	Widespread, but probably at relatively low densities: probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Fox</b>	Widespread, but probably at relatively low densities: probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>House sparrow</b>	Recently established in urban and near urban areas of the bioregion; detrimental impacts uncertain, but may out compete native granivores.
<b>Rock dove (feral pigeon)</b>	Small population established in urban and near urban areas; impacts upon biodiversity uncertain.

### (c) Fire histories – number of fires in seven year history 1997-2003



### (d) Wetlands, major rivers and catchments

No Directory of Important Wetlands of Australia wetlands listed in this bioregion.

## Davenport Murchison Ranges

### Other important wetlands in Davenport Murchison Ranges (potential DIWA listings)

Wetland name	Reference number
Frew River Floodout Swamps	NT-potential-12
Permanent Waterholes of the Davenport Ranges National Park	NT-potential-6

There are some permanent waterholes in the ranges which have allowed the persistence of a biogeographically significant fish fauna. A series of watercourses flow intermittently, and provide contrasting habitat to the dominant environmental matrix. Kurundi Creek, Gosse River, Frew River and its associated floodout swamps, and the upper Elkdra River, are the most important of these (irregular) wetland areas.

### List of catchments in Davenport Murchison Ranges - Barkly Basin, Georgina River, Wiso Basin.

### (e) Rainforests and sites of botanical significance

#### Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
20-4-2	Algoongoora Swamp	Bioregional
21-5-3	Elkedra River Floodout	Bioregional
20-4-4	Gosse River and Edinburgh Creek	National
19-4-4	Headwaters of Brunchilly Creek	Bioregional
20-4-3	Kurundi Creek	National
20-5-1	Lower Frew River and Floodout	Bioregional
19-4-2	Short Range Waterholes	Bioregional
20-4-1	Thring Swamp	Bioregional
21-5-2	Upper Elkdra River	Bioregional
20-5-2	Upper Frew River	Bioregional
18-4-1	Whittington and Short Ranges	Bioregional
20-5-4	Wonarah Beds	Bioregional

### (f) Important colonies and breeding sites

#### Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Waterbird	<10000	1

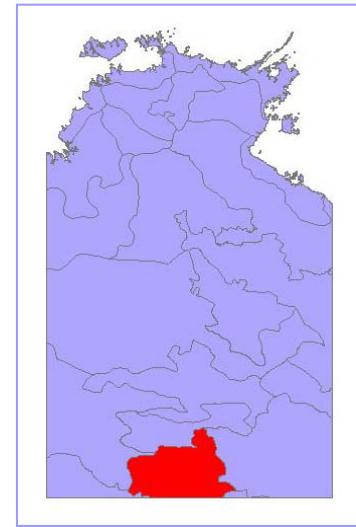
## FINKE (FIN)

### 1. General Description

The Finke bioregion is a geomorphologically complex and varied area of low sandstone ranges, weathered tablelands and rounded metamorphic hills, giving rise to undulating plains and low hills with extensive sand plains and sand dunes. It lies over the Amadeua Basin and small parts of the Pedirka and Eremonga Basins and contains sedimentary rocks of Devonian and Cambrian age. Soils are a mix of shallow and deep sands, massive earths, and red duplex saline affected soils. Dominant vegetation includes hummock grasslands, acacia shrublands and saltbush/bluebush open shrublands. The Finke bioregion includes three subregions.



Finke, has extensive sand plains and sand dunes.  
Photo: Don Langford.



Map of NT Bioregions highlighting Finke

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	74449 km <sup>2</sup> (73.4%)
Area of bioregion within NT (% of NT area)	54676 km <sup>2</sup> (4.07%)
Area reserved in entire bioregion (% of bioregion area)	24 km <sup>2</sup> (0.03%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	24 km <sup>2</sup> (0.04%)

#### (b) Tenure

Aboriginal freehold	1499.9 km <sup>2</sup> (2.8%)
Pastoral leases	52355 km <sup>2</sup> (96.1%)
Crown Leases and Vacant Land	451.7 km <sup>2</sup> (0.8%)
Other Freehold	152.0 km <sup>2</sup> (0.3%)
Other tenure	35.8 km <sup>2</sup> (0.07%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Finke

Chamber's Pillar Historical Reserve	3.42 km <sup>2</sup>
Ewaninga Rock Carvings Conservation Reserve	0.061 km <sup>2</sup>
Henbury Meteorites Conservation Reserve	4.07 km <sup>2</sup>
Kuyunba Conservation Reserve (part)	3.81 km <sup>2</sup>

Owen Springs Reserve (part)	2.44 km <sup>2</sup>
Rainbow Valley Conservation Reserve (part)	10.2 km <sup>2</sup>

#### (d) Off-reserve conservation and land management groups

None listed in this bioregion.

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Akanta (NTP 3814) Aboriginal Land Trust, Amoonguna Aboriginal Land Trust, Apatula Aboriginal Land Trust, Inarme Aboriginal Land Trust, Katiti Aboriginal Land Trust, Land Settlement Aboriginal Corporation, Mpwelarre Aboriginal Land Trust, Pantyinteme (NTP 3813) Aboriginal Land Trust, Rrurtenge (NTP 3812) Aboriginal Land Trust, Urrampinyi Iltjiltjarri Aboriginal Land Trust (Tempe Downs).

#### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Allambi, Angas Downs, Curtin Springs, Erlunda, Henbury, Horseshoe Bend, Idracowra, Lilla Creek, Lyndavale, Maryvale, Mount Cavenagh, Mount Ebenezer, Mulga Park, New Crown, Orange Creek, Owen Springs, Palmer Valley, Umbeara, Undoolya, Victory Downs.

#### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
6.28	0.82

### 3. Biodiversity in Finke

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Finke. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	653	0	2.4	1	0
4	Eucalyptus Woodland with Hummock Grass Understorey	7	0	8.7	1	0
9	Acacia Woodland	14659	0.03	1.2	13	2
10	Hummock Grassland	33132	0.05	1.5	8	2
13	Chenopod Shrublands	6194	0.07	1.4	4	1

Reservation bias of vegetation in Finke (broad veg/fine veg) 0.12/0.68

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Finke, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia A88932 Kulgera			B		100	3	NO
Acacia latzii	VU	VU	B, NT		100	20	NO
Acacia symonii			B		100	1	NO
Atriplex pseudocampanulata			B		100	1	NO
Atriplex quadrivalvata			B		100	2	NO
Atriplex quinii			B		100	3	NO
Eleocharis papillosa	VU		NT		15.4	2	
Eremophila A48866 Rainbow Valley	VU	VU	NT	1	68.4	13	
Eremophila neglecta			B		100	21	NO
Frankenia muscosa			B		100	1	NO
Goodenia calcarata			B		100	3	NO
Maireana ovata			B		100	3	NO
Maireana turbinata			B		100	3	NO
Malacocera biflora			B		100	1	NO
Malacocera tricornis			B		100	6	NO
Microcorys macrediana			B, NT		100	7	NO
Pachycornia triandra			B		100	22	NO
Panicum miliaceum			B		100	1	NO
Paraporpidia aboriginum			B		100	1	NO
Sclerochlamys brachyptera			B		100	22	NO
Senecio glossanthus			B		100	1	NO
Sida A32067 Horseshoe Bend			B, NT	2	100	2	NO
Sida petrophila			B		100	2	NO
Swainsona oliveri			B		100	3	NO
Trachymene ceratocarpa			B		100	1	NO
Tribulus minutus			B		100	1	NO
Xanthoparmelia australasica			B		100	1	NO
Xanthoparmelia prodomokosii			B		100	1	NO

## (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Finke, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Gibber Earless Dragon	Tympanocryptis intima			B	100	4	NO
Great Desert Skink	Egernia kintorei	VU	VU		1.8	1	
Slater's Egernia	Egernia slateri	EN	EN		41.2	14	
Australian Bustard	Ardeotis australis	VU			1.4	25	
Australian Painted Snipe	Rostratula australis	VU	VU		5.9	1	
Chestnut-breasted Whiteface	Aphelocephala pectoralis			B	100	2	NO
Emu	Dromaius novaehollandiae	VU			6.1	36	
Princess Parrot	Polytelis alexandrinae	VU	VU		17.6	3	
White-fronted Chat	Epthianura albifrons			B	100	1	NO
Black-footed Rock-wallaby	Petrogale lateralis	NT	VU		0.88	5	
Central Rock-rat	Zyzomys pedunculatus	EN	EN	NT	7.1	1	

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Fawn Hopping-mouse	<i>Notomys cervinus</i>	EN			20.0	1	
Kowari	<i>Dasyuroides byrnei</i>	DD	VU	B	100	1	NO
Mulgara	<i>Dasyurus cristicauda</i>	VU	VU		0.52	2	
Southern Marsupial Mole	<i>Notoryctes typhlops</i>	VU	EN		31.8	14	

#### (d) Threatened invertebrates

None listed for this bioregion.

#### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Reptiles:** Great Desert Skink\* (*Egernia kintorei*); **Birds:** Malleefowl (*Leipoa ocellata*), Night Parrot\* (*Pezoporus occidentalis*), Slender-billed Thornbill (*Acanthiza iredalei iredalei*), Thick-billed Grass-wren\* (*Amytornis textilis*); **Mammals:** Bilby\* (*Macrotis lagotis*), Burrowing Bettong (*Bettongia lesueur*), Central Rock-rat\* (*Zyzomys pedunculatus*), Common Brushtail Possum\* (*Trichosurus vulpecula*), Crescent Nailtail Wallaby (*Onychogalea lunata*), Dusky Hopping-mouse (*Notomys fuscus*), Ghost Bat\* (*Macroderma gigas*), Golden Bandicoot\* (*Isoodon auratus*), Lesser Bilby (*Macrotis leucura*), Lesser Stick-nest Rat (*Leporillus apicalis*), Long-tailed Hopping-mouse (*Notomys longicaudatus*), Mala (*Lagorchestes hirsutus*), Pale Field-rat\* (*Rattus tunneyi*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Red-tailed Phascogale (*Phascogale calura*), Shark Bay Mouse (*Pseudomys fieldi*), Short-tailed Hopping-mouse (*Notomys amplus*), Spectacled Hare-wallaby\* (*Lagorchestes conspicillatus*), Western Quoll (*Dasyurus geoffroii*), Woylie (*Bettongia penicillata*).

### 4. Management issues and special values in the bioregion

#### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

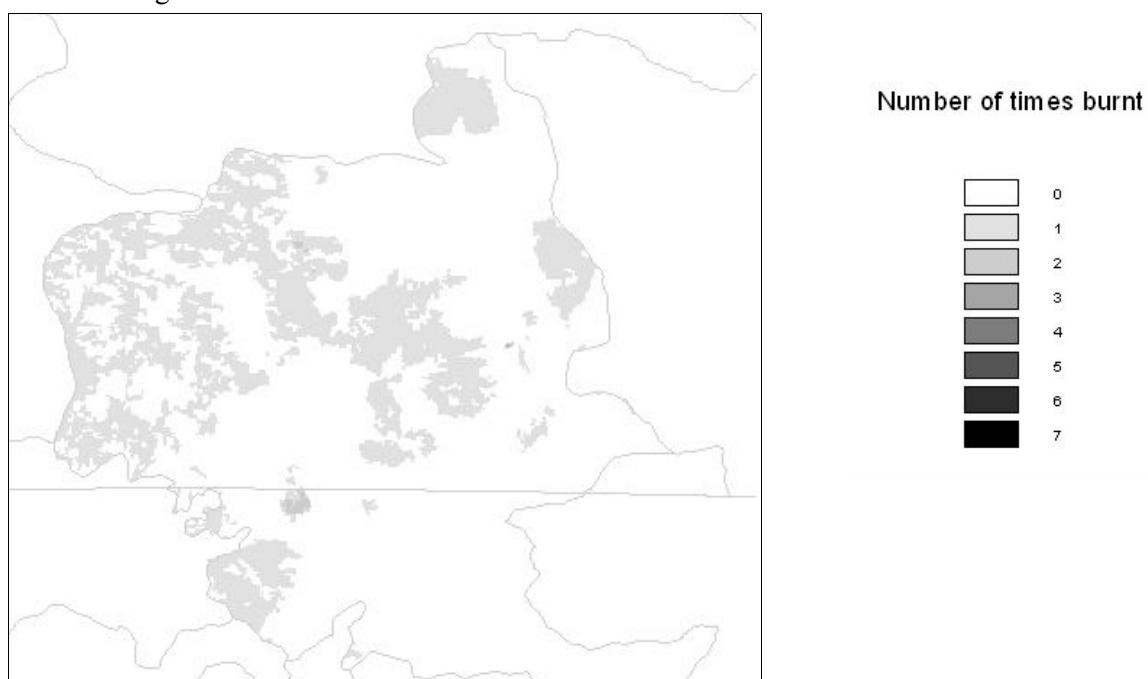
Name	NT weed class	WONS	Habitat
African boxthorn ( <i>Lycium ferocissimum</i> )	A		Roadsides
Athel pine ( <i>Tamarix aphylla</i> )	B	WONS	Pastoral, Water ways and floodplains
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Castor Oil Plant ( <i>Ricinus communis</i> )	not classed		Roads, Riparian, Flood areas
Mexican poppy ( <i>Argemone ochroleuca</i> )	B		Blocks & gardens, Roads and Tracks, Waterways and floodplains
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Paterson's Curse ( <i>Echium plantagineum</i> )	A		
Ruby Dock ( <i>Acetosa vesicaria</i> )	not classed		

### (b) Exotic animals in the bioregion and their status

<b>Arabian camel</b>	Widespread and probably increasing; with detriment to vegetation and water sources
<b>Cat</b>	Widespread and common; probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; partly controlled; some impacts on water sources and vegetation
<b>Fox</b>	serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Horse</b>	At least localised populations with high density; affecting water sources, and with some impact on biodiversity
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>Rabbit</b>	Formerly at very high densities, causing severe environmental detriment: now at least partly controlled

### (c) Fire histories – number of fires in seven year history 1997-2003

Part of bioregion shown on border with South Australia



### (d) Wetlands, major rivers and catchments

Directory of important wetlands of Australia (DIWA) listings for Finke

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT004	Karinga Creek Palaeodrainage System	5039.0	0	Pastoral Lease

Other important wetlands in Finke (potential DIWA listings)

Wetland name	Reference number
Ettenia Spring	NT-potential-51
Kangaroo Dam Swamp	NT-potential-32
Salt Creek Lake	NT-potential-15

The few permanent water sources in this bioregion are mainly found on the fringes with neighbouring bioregions, although following significant wet periods many areas will hold water for long periods, including the Finke River. The Karinga Creek palaeodrainage system occurs in the far west of this bioregion. It comprises a series of permanent springs, ephemeral seepage creeks and ephemeral lakes formed by discharge from the central Australian groundwater basin, supplemented occasionally by irregular heavy rainfall events. When full, the lakes are important for waterfowl and some shorebirds, especially as stop-over points for the latter during their dispersal across Australia. The system is also important as a research and reference site for hydrogeology and palaeoclimate.

A range of wetlands of subregional significance have been identified. Most of these are near permanent waterholes in the major intermittent/ephemeral river systems, and the broad reaches of the river systems themselves.

List of catchments in Finke - Finke River, Mackay Basin, Todd River.

#### **(e) Rainforests and sites of botanical significance**

Sites of botanical significance (White *et al.* 2000)

<b>Site No</b>	<b>Name</b>	<b>Significance</b>
25-3-2	Ayres Range	Bioregional
24-3-3	Bacon Ranges	National
25-4-1	Beddome Range	National
24-4-6	Camel Creek	Bioregional
25-4-PL2	Confluence of Finke and Hugh Rivers	Undetermined
23-4-13	Emily Gap	Bioregional
24-3-7	Fox Salt lakes	Bioregional
24-2-DN1	Golden Valley	Undetermined
24-3-4	Illawilla	Bioregional
24-4-3	James Range East	Bioregional
25-3-1	Karinga Creek	Bioregional
25-3-5	Kernot Range	Bioregional
24-2-2	Lake Amadeus	Bioregional
25-2-3	Mount Conner	National
25-3-PL1	Mount Sunday	Undetermined
24-4-4	Ooraminna	National
25-4-3	Poona	Bioregional
24-4-5	Rainbow Valley	National
24-4-1	Rodinga	National
25-4-2	Rumbalara	Bioregional
24-3-2	Wolluga Dunefields	National

#### **(f) Important colonies and breeding sites**

No sites identified.

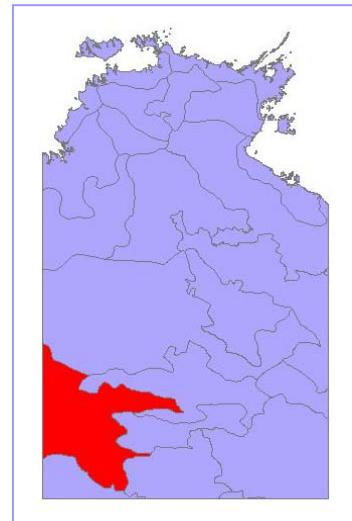
## GREAT SANDY DESERT (GSD)

### 1. General Description

This large bioregion stretches from the south western NT to almost the Indian Ocean in WA through some of the remotest areas of Australia. The NT component is subdivided into several small subregions where large saline lakes occur, the largest of these is Lake Mackay which straddles the WA border. The area is generally flat and arid (rainfall <400 mm) with few watercourses, although there are several low ranges. Vegetation is dominated by hummock grassland (*Triodia basedowii* and *T. pungens*) with areas of tall-shrubland (*Acacia* sp.) or low open woodland, Mulga (*Acacia anuera*) tall open-shrubland, and Samphire low open-shrubland fringing salt pans. Soils are predominantly shallow sands and are influenced by the presence of saline lakes, where mostly saline loams occur.



Great Sandy Desert, showing spinifex Sand Plain at Newhaven.  
Photo: Don Langford.



Map of NT Bioregions highlighting Great Sandy Desert

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	403705 km <sup>2</sup> (24.8%)
Area of bioregion within NT (% of NT area)	99936 km <sup>2</sup> (7.45%)
Area reserved in entire bioregion (% of bioregion area)	17041 km <sup>2</sup> (4.2%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	3967 km <sup>2</sup> (3.97%)

#### (b) Tenure

Aboriginal freehold	90165 km <sup>2</sup> (90.3%)
Pastoral leases	9271.9 km <sup>2</sup> (9.3%)
Crown Leases and Vacant Land	286.1 km <sup>2</sup> (0.3%)
Other Freehold	177.0 km <sup>2</sup> (0.2%)
Other tenure	<0.1 km <sup>2</sup> (0%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Great Sandy Desert

Newhaven (Reserve)	2617.2 km <sup>2</sup>
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## *Great Sandy Desert*

Uluru-Kata Tjuta National Park

1350.3 km<sup>2</sup>

### (d) Off-reserve conservation and land management groups

Group	Resource Centre / Aboriginal Corporation	Community
Conservation Volunteers Australia	Alice Springs	Various

### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Haasts Bluff Aboriginal Land Trust, Katiti Aboriginal Land Trust, Lake Mackay Aboriginal Land Trust, Land Settlement Aboriginal Corporation, Ngalurrtju Aboriginal Land Trust (Central Mount Wedge), Petermann Aboriginal Land Trust, Uluru-Katatjuta Aboriginal Land Trust, Urrampinyi Iltjiltjarri Aboriginal Land Trust (Tempe Downs), Watarrka Aboriginal Land Trust, Yalpirakinu Aboriginal Land Trust (Mt Allen), Yuendumu Aboriginal Land Trust, Yunkanjini Aboriginal Land Trust.

### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Aileron, Amburla, Angas Downs, Curtin Springs, Derwent, Mount Doreen, Mulga Park, Napperby, Narwietooma, Yambah.

### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
3.15	0.77

## 3. Biodiversity in Great Sandy Desert

### (a) Vegetation

Extent and level of reservation of broad vegetation types in Great Sandy Desert. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	169	0	2.4	1	0
4	Eucalyptus Woodland with Hummock Grass Understorey	3340	0	8.7	2	0
7	Melaleuca Forest and Woodlands	600	0	8.5	1	0
9	Acacia Woodland	6409	6.3	1.2	10	4
10	Hummock Grassland	85013	3.9	1.5	14	6
13	Chenopod Shrublands	4405	5.6	1.4	2	2

Reservation bias of vegetation in Great Sandy Desert (broad veg/fine veg) 0.06/0.38

### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Great Sandy Desert, and their NT reservation status (blank=reserved in at least

one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia D70541 Lake Mackay			B		100	4	NO
Acacia prainii			B		100	10	NO
Atriplex flabelliformis			B		100	1	NO
Eleocharis papillosa	VU		NT		7.69	1	
Eragrostis sterilis			B		100	7	
Eremophila tietkensii			B		100	2	NO
Goodenia A105527 Great Sandy Desert			B		100	1	NO
Laxmannia arida			B		100	7	NO
Lobelia gibbosa			B		100	2	
Myoporum montanum			B		100	1	
Olearia arida			B		100	1	
Sauvagesia arenosus			B		100	4	NO
Sida echinocarpa			B		100	2	
Stackhousia D70123 Lake Mackay			B, NT		100	1	NO
Swainsona laciniata			B, NT		100	6	NO
Wurmbea centralis			B, NT		100	11	

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Great Sandy Desert, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Great Desert Skink	Egernia kintorei	VU	VU		21.1	12	
Slater's Egernia	Egernia slateri	EN	EN		2.9	1	
Australian Bustard	Ardeotis australis	VU			5.5	96	
Emu	Dromaius novaehollandiae	VU			10.6	62	
Night Parrot	Pezoporus occidentalis	CR	EN		50	1	
Princess Parrot	Polytelis alexandrinae	VU	VU		23.5	4	
Bilby	Macrotis lagotis	VU	VU		16.6	81	NO
Black-footed Rock-wallaby	Petrogale lateralis	NT	VU		2.6	15	
Fawn Hopping-mouse	Notomys cervinus	EN			60.0	3	
Long-tailed Dunnart	Sminthopsis longicaudata	VU			50.0	3	
Mulgara	Dasyurus cristatus	VU	VU		24.9	96	
Sandhill Dunnart	Sminthopsis psammophila	DD	EN	B	100	6	
Southern Marsupial Mole	Notoryctes typhlops	VU	EN		40.9	18	

### (d) Threatened invertebrates

None listed for this bioregion.

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Birds:** Malleefowl (*Leipoa ocellata*), Thick-billed Grass-wren\* (*Amytornis textilis*); **Mammals:** Brush-tailed Bettong (*Bettongia penicillata*), Burrowing Bettong (*Bettongia lesueur*), Central Hare-

wallaby (*Lagorchestes asomatus*), Central Rock-rat\* (*Zyzomys pedunculatus*), Common Brushtail Possum\* (*Trichosurus vulpecula*), Crescent Nailtail Wallaby (*Onychogalea lunata*), Desert Bandicoot (*Perameles eremiana*), Ghost Bat\* (*Macroderma gigas*) Golden Bandicoot\* (*Isoodon auratus*), Lesser Bilby (*Macrotis leucura*), Lesser Stick-nest Rat (*Leporillus apicalis*), Long-tailed Hopping-mouse (*Notomys longicaudatus*), Mala (*Lagorchestes hirsutus*), Numbat (*Myrmecobius fasciatus*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Red-tailed Phascogale (*Phascogale calura*), Shark Bay Mouse (*Pseudomys fieldi*), Short-tailed Hopping-mouse (*Notomys amplus*), Spectacled Hare-wallaby\* (*Lagorchestes conspicillatus*), Western Quoll (*Dasyurus geoffroii*).

#### **4. Management issues and special values in the bioregion**

##### **(a) Significant exotic plants in the bioregion**

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

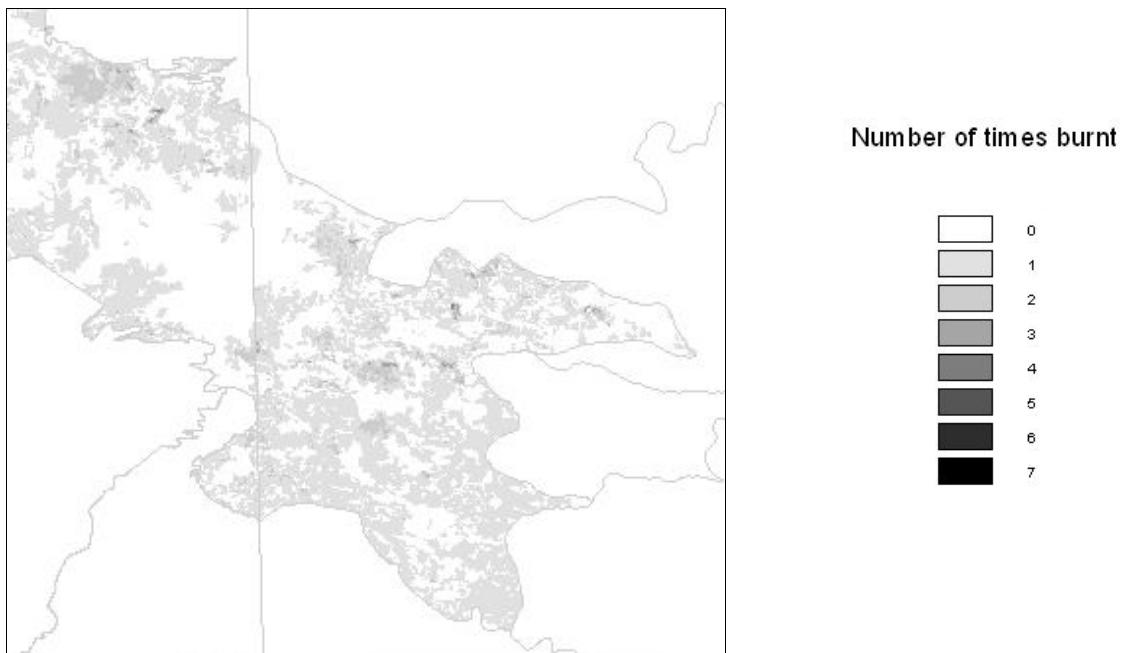
Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Mexican poppy ( <i>Argemone ochroleuca</i> )	B		Blocks & gardens, Roads and Tracks, Waterways and floodplains
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Ruby Dock ( <i>Acetosa vesicaria</i> )	not classed		

##### **(b) Exotic animals in the bioregion and their status**

<b>Arabian camel</b>	High and increasing populations, with detriment to vegetation and water sources
<b>Cat</b>	Serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Present but relatively uncommon; may be some localised impacts on water sources and vegetation
<b>Fox</b>	Serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Horse</b>	Present but relatively uncommon; may be some localised impacts on water sources and vegetation
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>Rabbit</b>	Formerly at very high densities, causing severe environmental detriment: now at least partly controlled

**(c) Fire histories – number of fires in seven year history 1997-2003**

NT part shown on border with Western Australia.

**(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Great Sandy Desert

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT005	Lake Amadeus	264.0	0	Aboriginal Freehold

Other important wetlands in Great Sandy Desert (potential DIWA listings)

Wetland name	Reference number
Lake Lewis	NT-potential-9
Lake Mackay	NT-potential-8
Newhaven Lakes	NT-potential-20

**List of catchments in Great Sandy Desert** – Burt Basin, Finke River, Mackay Basin.**(e) Rainforests and sites of botanical significance**Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
25-2-4	Acacia ammobia Shrublands	Bioregional
24-1-1	Bloods Range	Bioregional
22-2-2	Central Mount Wedge	Bioregional
23-2-5	Cleland Hills	Bioregional
22-1-2	Kalipima	Bioregional
25-2-2	Kata Tjuta	Bioregional
23-1-1	Kintore Range	Bioregional
24-2-2	Lake Amadeus	Bioregional
22-2-1	Lake Bennett	Bioregional
22-3-2	Lake Lewis	National

*Great Sandy Desert*

<b>Site No</b>	<b>Name</b>	<b>Significance</b>
23-1-PL2	Lake Macdonald	Undetermined
22-1-1	Lake MacKay	Bioregional
24-1-PL1	Lake Neale	Undetermined
24-1-PL1	Lake Neale	Undetermined
20-1-PL3	Lake White	Undetermined
23-2-6	Lay Cock's Sandplain	Bioregional
23-2-4	Mereenie	Bioregional
23-3-2	Missionary Plain	National
23-2-3	Talipata/Mount Liebig	National
25-2-1	Uluru	Bioregional
24-2-1	Watarrka	National
24-3-2	Wolluga Dunefields	National
23-1-PL1	Yingurrdu	Undetermined

**(f) Important colonies and breeding sites**

No sites identified.

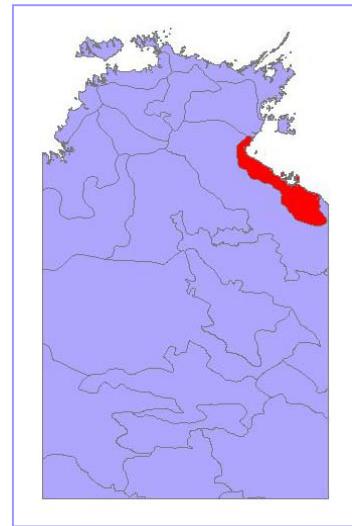
## GULF COASTAL (GUC)

### 1. General Description

The Gulf Coastal bioregion comprises gently undulating coastal plains along the southern Gulf of Carpentaria from near the Roper River to near the Queensland border, with scattered rugged areas of Proterozoic sandstones. Soils are predominantly sandy red earths and shallow gravelly sands. The climate is tropical with annual rainfall between 800 and 1200 mm, falling mostly between December and March; cyclones are a frequent phenomenon. The bioregion encompasses the lower reaches of many major rivers. Eucalyptus woodland with tussock or hummock grass understorey dominates the bioregion, with significant areas of tidal flats, mangroves and littoral grassland. The bioregion includes two subregions, with one of these comprising the Sir Edward Pellew Islands group.



Gulf Coastal, has several off shore island groups important as refugia, such as the Pellew group. Photo: John Woinarski.



Map of NT Bioregions highlighting Gulf Coastal

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	26680 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	26680 km <sup>2</sup> (1.99%)
Extent of National Parks and other protected areas (% of bioregion area)	2913 km <sup>2</sup> (10.92%)

#### (b) Tenure

Aboriginal freehold	6433.4 km <sup>2</sup> (24.2%)
Pastoral leases	17092 km <sup>2</sup> (64.4%)
Crown Leases and Vacant Land	2823.2 km <sup>2</sup> (10.6%)
Other Freehold	192.0 km <sup>2</sup> (0.7%)
Other tenure	2.1 km <sup>2</sup> (0.01%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Gulf Coastal

Barranyi (North Island) National Park	49.5 km <sup>2</sup>
Limmen National Park (part)	2864.0 km <sup>2</sup>

**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Lianthawirriyarrra Marine Rangers	Mabunji Aboriginal Resource Association	Borroloola
Mabunji Land and Sea Management	Mabunji Aboriginal Resource Association	Borroloola
Mungoorbada Land Management / Robinson River Community	Mungoorbada Aboriginal Corporation	Robinson River
Roper River Landcare Group		Katherine/ Mataranka Ngukurr
Yugal Mangi Rangers	Yugal Mangi Community Government Council	

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Arnhem Land Aboriginal Land Trust, Barranyi Aboriginal Corporation, Garawa Aboriginal Land Trust (Robinson River), Marra Aboriginal Land Trust, Marthandula Association Incorporated, Narwinbi Aboriginal Land Trust, Warungu Association Incorporated, Wurrabali Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Calvert Hills, Greenbank, Lorella, Manangoora, McArthur River, Nathan River, Pungalina, Seven Emu, Spring Creek, Wollogorang.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.41	0.54

### 3. Biodiversity in Gulf Coastal

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Gulf Coastal. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
1	Closed Forest	2	0	26.3	1	0
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	18428	13.3	14.1	4	2
3	Eucalyptus low Woodland with Tussock Grass Understorey	500	0	2.4	2	0
4	Eucalyptus Woodland with Hummock Grass Understorey	3426	7.4	8.7	4	1
7	Melaleuca Forest and Woodlands	1243	0.06	8.5	2	1
9	Acacia Woodland	2	0	1.2	1	0
12	Littoral	2898	5.7	8.4	3	1

Reservation bias of vegetation in Gulf Coastal (broad veg/fine veg) 0.18/0.24

### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Gulf Coastal, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Arenga australasica		VU			7.6	4	
Dentella browniana			B		100	3	NO
Euphorbia myrtoides			B		100	1	NO
Goodenia minutiflora			B		100	1	NO
Goodenia quadrifida	VU	NT	2		25.0	1	
Macrothelypteris torresiana			B		100	1	NO
Phacelothrix cladochaeta			B		100	1	NO
Triglochin multifructum			B		100	1	NO
Vallisneria caulescens			B		100	2	NO

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Gulf Coastal, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Freshwater Sawfish	Pristis microdon	VU	VU		No data	No data	
Flatback Turtle	Natator depressus	DD	VU		8.8	31	
Green Turtle	Chelonia mydas		VU		9.4	21	
Gulf Snapping Turtle	Elusor larvatus		EN		No data	No data	No data
Loggerhead Turtle	Caretta caretta	EN	EN		28.6	2	
Olive Ridley	Lepidochelys olivacea	DD	EN		1.2	1	
Australian Bustard	Ardeotis australis	VU			1.2	21	
Australian Painted Snipe	Rostratula australis	VU	VU		5.9	1	
Emu	Dromaius novaehollandiae		VU		0.34	2	
Masked Owl	Tyto novaehollandiae katherinae	NT	VU		8.7	2	
Brush-tailed Rabbit-rat	Conilurus penicillatus	VU			2.2	4	
Canefield Rat	Rattus sordidus			B	100	2	NO
Carpentarian Antechinus	Pseudantechinus mimulus	EN	VU		75.0	3	
Carpentarian Rock-rat	Zyzomys palatalis	CR	EN	NT	57.9	11	NO
Northern Brush-tailed Phascogale	Phascogale pirata	VU			5.9	2	
Northern Quoll	Dasyurus hallucatus	VU			0.09	1	

### (d) Threatened invertebrates

None listed for this bioregion.

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Birds:** Partridge Pigeon\* (*Geophaps smithii*); **Mammals:** Black-footed Tree-rat\* (*Mesembriomys gouldii*), Golden Bandicoot\* (*Isoodon auratus*), Kultarr (*Antechinomys laniger*).

#### **4. Management issues and special values in the bioregion**

##### **(a) Significant exotic plants in the bioregion**

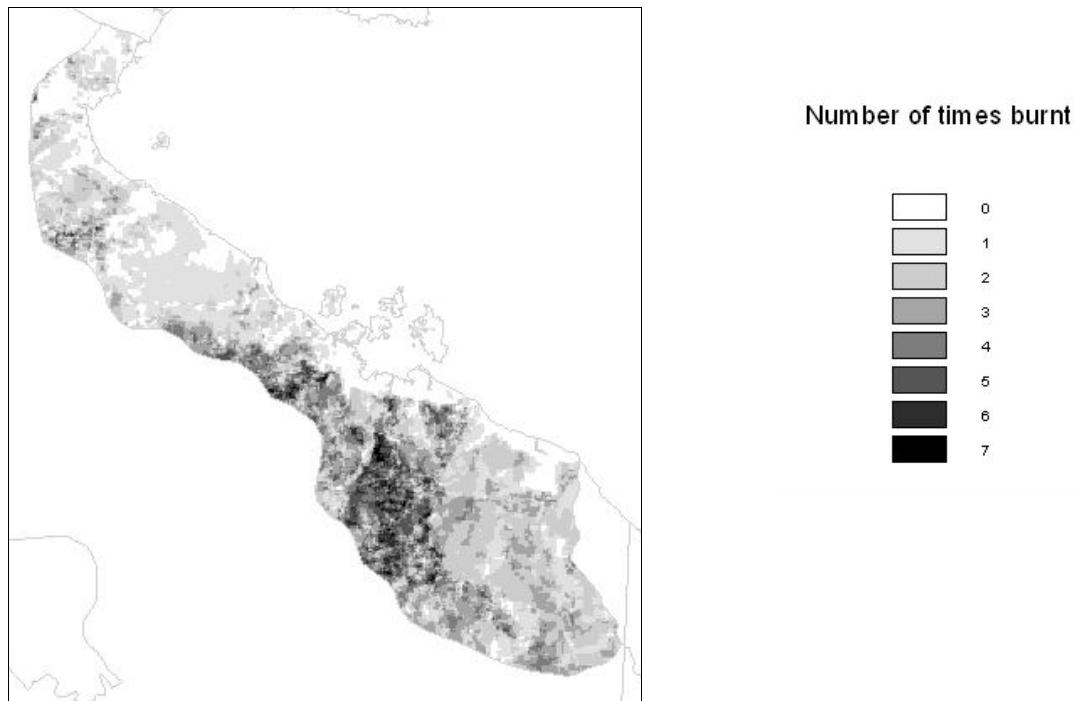
NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Lion's Tail ( <i>Leonotis nepitifolia</i> )	B		Roadsides
Mexican poppy ( <i>Argemone ochroleuca</i> )	B		Blocks & gardens, Roads and Tracks, Waterways and floodplains
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Waterways and floodplains
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens

##### **(b) Exotic animals in the bioregion and their status**

<b>Buffalo</b>	Occurs in the bioregion, but generally localised or uncommon; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Recently established throughout bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Goat</b>	present at high densities at a few sites (islands); with severe local impacts on vegetation
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

##### **(c) Fire histories – number of fires in seven year history 1997-2003**



#### (d) Wetlands, major rivers and catchments

Directory of important wetlands of Australia (DIWA) listings for Gulf Coastal

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT007	Limmen Bight (Port Roper) Tidal Wetlands System	139462	14.1	Aboriginal Freehold, Crown and Vacant Land, Other Freehold, Pastoral Lease, Other Tenure
NT008	Port McArthur Tidal Wetlands System	52579	0	Aboriginal Freehold, Crown and Vacant Land, Other Freehold, Pastoral Lease

Two nationally significant wetlands are recognised from this bioregion which are generally in good condition, but are affected by feral animals, and have occasional or potential threats from commercial fishing and/or pollution associated with mining. A range of permanent rivers and some swamps are of significance on the mainland subregion, and the large freshwater lake, Lake Eames, on Vanderlin Island, is significant in the Pellew subregion.

**List of catchments in Gulf Coastal** – Calvert River, Limmen Bight River, McArthur River, Robinson River, Roper River, Rosie River, Settlement Creek, Towns River, Walker River.

#### (e) Rainforests and sites of botanical significance

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	325	49.06	9.2
Riparian	2	0.03	0.0
Spring	33	2.05	0.0

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
42	40.48	16.7	4.8	14.6

#### (f) Important colonies and breeding sites

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Seabird	<10000	22
Shorebird	No data	33
Waterbird	<10000	7
Marine Turtle	No data	36

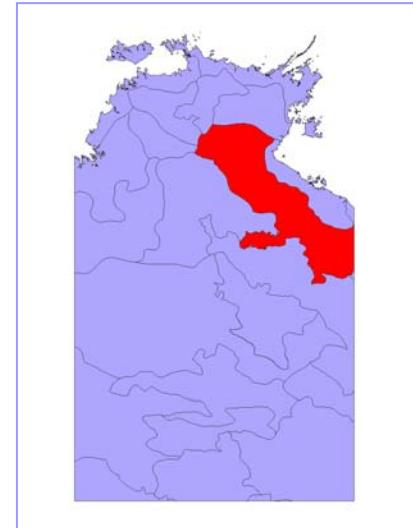
## GULF FALL AND UPLANDS (GUF)

### 1. General Description

The Gulf Fall and Uplands bioregion is the second largest in the NT and stretches from the Arnhem Plateau into western Queensland. It comprises undulating terrain with scattered low, steep hills and rugged dissected plateaux on Proterozoic and Palaeozoic sedimentary rocks, often overlain by lateritised Tertiary material. Soils are mostly skeletal or shallow sands. The most extensive vegetation is woodland dominated by Darwin Stringybark (*Eucalyptus tetrodonta*) and Variable-barked Bloodwood (*Corymbia dichromophloia*) with spinifex understorey, and woodland dominated by Northern Box (*Eucalyptus tectifica*) with tussock grass understorey. This bioregion includes two subregions.



Gulf Fall and Upland, a region with diverse topography and many large rivers dissecting plateaux. Photo: Colin Trainor.



Map of NT Bioregions highlighting Gulf Fall and Uplands

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	117,626 km <sup>2</sup> (95%)
Area of bioregion within NT (% of NT area)	111,783 km <sup>2</sup> (8.3%)
Area reserved in entire bioregion (% of bioregion area)	11398 km <sup>2</sup> (9.7%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	9433 km <sup>2</sup> (8.4%)

#### (b) Tenure

Aboriginal freehold	40514 km <sup>2</sup> (36.3%)
Pastoral leases	63559 km <sup>2</sup> (57%)
Crown Leases and Vacant Land	7451 km <sup>2</sup> (6.7%)
Other Freehold	0 km <sup>2</sup> (0%)
Other tenure	0.6 km <sup>2</sup> (<0.1%)
Defence	0 km <sup>2</sup> (0%)

**(c) Protected areas and extent in Gulf Fall and Uplands**

Caranbirini Conservation Reserve	12.1 km <sup>2</sup>
Elsey National Park (part)	48.5 km <sup>2</sup>
Limmen National Park (proposed) (part)	9372.6 km <sup>2</sup>

**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program	Greening Australia	Darwin
Minyerri	Alawa Aboriginal Corporation	Minyerri / Hodgson Downs
Mungoorbada Land Management / Robinson River Community	Mungoorbada Aboriginal Corporation	Robinson River
Yugal Mangi Rangers	Yugal Mangi Community Government Council	Ngukurr

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Alawa 1 Aboriginal Land Trust (Hodgson Downs), Alawa Aboriginal Land Trust (Cox River), Arnhem Land Aboriginal Land Trust, Beswick Aboriginal Land Trust, Garawa Aboriginal Land Trust\* (Robinson River), Gulgunnorr Aboriginal Land Trust, Jandanku Aboriginal Land Trust\* (Bauhinia Downs), Jawoyn Aboriginal Land Trust, Kewulyi Aboriginal Land Trust, Mangarrayi Aboriginal Land Trust\* (Elsey), Manyallaluk Aboriginal Land Trust, Mataranka Aboriginal Land Trust, Narwinbi Aboriginal Land Trust, Northern Land Council (Urapunga Aboriginal Land Trust) (Urapunga), The Northern Land Council (Mambaliya Rrumburriya Wuyaliya Aboriginal Land Trust)\* (Balbarini/Robinson River), Waanyi/Garawa Aboriginal Land Trust, Wampaya Association Incorporated, Yutpundji-Djindiwirritj Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Alexandria, Anthony Lagoon, Beetaloo, Benmara, Big River, Broadmere, Brunette Downs, Calvert Hills, Cave Creek\*, Cresswell Downs, Eva Downs, Flying Fox, Goondooloo, Helen Springs, Hodgson River, Kiana, Lonesome Dove, Lorella, Mainoru, Mallapunyah Springs, Manangoora, McArthur River, Mittiebah, Moroak, Mount Drummond, Mount McMinn, Mountain Valley, Mungabroom, Namul Namul, Nutwood Downs, Spring Creek, Tanumbirini, Ucharonidge, Vermelha, Walhallow, Wollogorang, Wongalara,

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
1.54	1.79

### 3. Biodiversity in Gulf Fall and Uplands

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Gulf Fall and Uplands. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	32068	17.8	14.1	12	4
3	Eucalyptus low Woodland with Tussock Grass Understorey	18404	1.7	2.4	6	1
4	Eucalyptus Woodland with Hummock Grass Understorey	51462	5.6	8.7	8	4
5	Mixed Species low open Woodland	1801	0	9.9	1	0
7	Melaleuca Forest and Woodlands	2017	17.1	8.5	2	2
9	Acacia Woodland	3841	5.0	1.2	2	1
11	Tussock Grassland	1960	0	0.9	2	0
12	Littoral	206	10.1	8.4	1	1

Reservation bias of vegetation in Gulf Fall and Uplands (broad veg/fine veg) 0.37/0.54

#### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Gulf Fall and Uplands, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia phlebocarpa			B		100	10	
Adiantum diaphanum			B		100	1	NO
Amyema herbertiana			B		100	10	
Aponogeton queenslandicus			B		100	1	
Aristida lazaridis			B		100	2	NO
Astartea intratropica			B, NT	2	100	8	
Bothriochloa decipiens			B		100	1	NO
Cyperus fucus			B		100	2	NO
Endiandra limnophila	VU				2.94	1	
Fuirena arenosa			B		100	2	NO
Goodenia argillacea			B, NT	2	100	3	NO
Goodenia chthonocephala			B, NT	2	100	2	NO
Goodenia quadrifida	VU		NT	2	25.0	1	
Lepturus A51850 Mataranka			B, NT	2	100	1	NO
Lindernia A81528 Cliff lover			B		100	15	
Phyllanthus D138821 Roper River			B		100	7	NO
Porphyrosiphon notarisit			B		100	1	NO
Pteris comans			B		100	1	NO
Solanum carduiforme	VU		B		100	2	
Spermacoce latimarginata			B		100	8	NO
Sporobolus lenticularis			B		100	2	NO
Stylium stenophyllum			B, NT	2	100	1	
Trachymene glandulosa			B		100	1	NO
Triodia longiloba			B		100	5	

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Triumfetta fissurata			B		100	1	NO
Triumfetta mellina			B		100	2	NO

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Gulf Fall and Uplands, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Alexandria Toadlet	Uperoleia orientalis			B, NT	100	3	NO
Gulf Snapping Turtle	Elusor lavarackorum		EN		No data	No data	No data
Australian Bustard	Ardeotis australis	VU			8.0	141	
Australian Painted Snipe	Rostratula australis	VU	VU		5.9	1	
Carpentarian Grasswren	Amytornis dorotheae	EN		B	100	21	
Emu	Dromaius novaehollandiae	VU			2.7	16	
Gouldian Finch	Erythrura gouldiae	EN	EN		2.6	26	
Northern Shrike-tit	Falcunculus whitei	DD	VU		3.6	1	
Purple-crowned Fairy-wren	Malurus coronatus macgillivrayi	NT	VU		45.9	84	
Red Goshawk	Erythrotriorchis radiatus	VU	VU		4.8	3	
Brush-tailed Rabbit-rat	Conilurus penicillatus	VU			0.54	1	
Carpentarian Rock-rat	Zyzomys palatalis	CR	EN	NT	42.1	8	NO
Northern Quoll	Dasyurus hallucatus	VU			0.26	3	

### (d) Threatened invertebrates

None listed for this bioregion.

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Birds:** Partridge Pigeon\* (*Geophaps smithii*); **Mammals:** Golden-backed Tree-rat\* (*Mesembriomys macrurus*), Golden Bandicoot\* (*Isodon auratus*), Kultarr (*Antechinomys laniger*).

## 4. Management issues and special values in the bioregion

### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Devil's Claw ( <i>Martynia annua</i> )	A		Pastoral, Roads and Tracks
Gambia Pea ( <i>Crotalaria goreensis</i> )	not classed		Roadsides, grazed areas, Riparian
Lion's Tail ( <i>Leonotis nepitifolia</i> )	B		Roadsides
Mexican poppy ( <i>Argemone ochroleuca</i> )	B		Blocks & gardens, Roads and Tracks, Waterways and floodplains

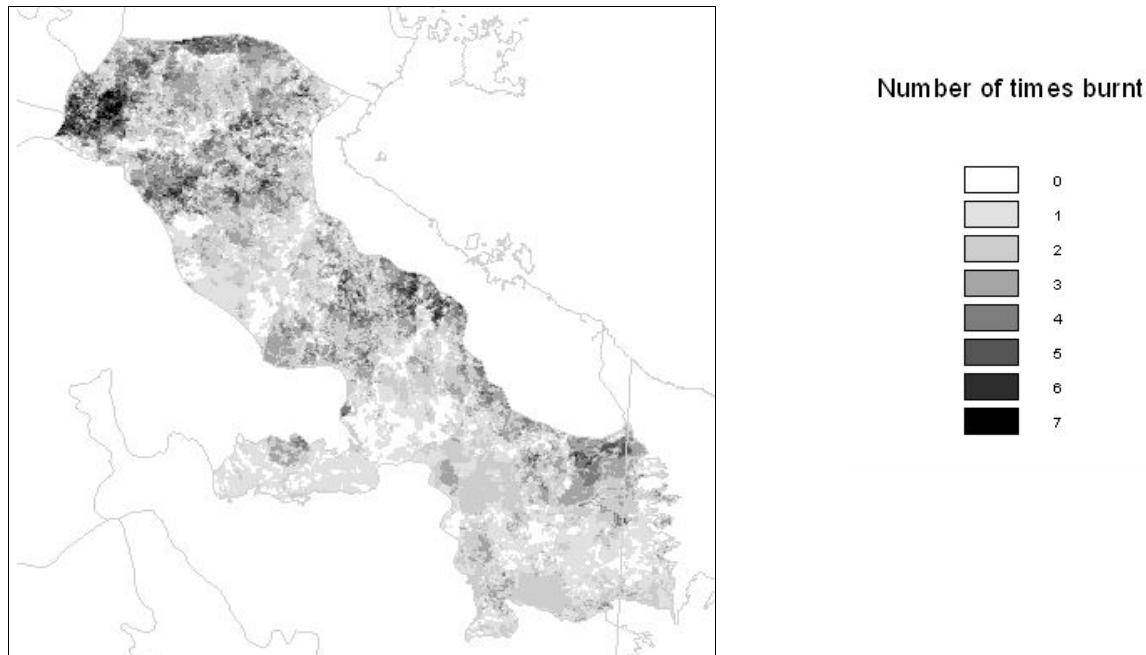
## Gulf Fall and Uplands

Name	NT weed class	WONS	Habitat
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Parthenium Weed ( <i>Parthenium hysterophorus</i> )	A		Pastoral, Blocks & gardens
Prickly Acacia ( <i>Acacia nilotica</i> )	A		Water ways and floodplains

### (b) Exotic animals in the bioregion and their status

<b>Buffalo</b>	Occurs in the bioregion, but generally localised or uncommon; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Recently established throughout bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Horse</b>	Status uncertain
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

### (c) Fire histories – number of fires in seven year history 1997-2003



### (d) Wetlands, major rivers and catchments

Directory of important wetlands of Australia (DIWA) listings for Gulf Fall and Uplands

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT003	Mataranka Thermal Pools	0.12	100	Crown Land

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT006	Borroloola Bluebush	70.2	0	Aboriginal Freehold, Other Freehold
NT007	Limmen Bight (Port Roper) Tidal Wetlands System	62120	5.0	Aboriginal Freehold, Crown and Vacant Land, Other Freehold, Pastoral Lease

Three nationally significant wetlands are recognised. Mataranka Thermal Pools (NT003) is within a conservation reserve and in good condition, although there is high tourist visitation. The bioregion includes some regionally significant perennial rivers and gorge systems.

**List of catchments in Gulf Fall and Uplands** – Barkly Basin, Calvert River, Limmen Bight River, McArthur River, Nicholson River, Robinson River, Roper River, Rosie River, Settlement Creek, Towns River, Walker River, Wiso Basin.

#### (e) Rainforests and sites of botanical significance

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	86	12.5	1.6
Riparian	147	10.8	6.8
Spring	70	5.6	5.1

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
95	45.3	21.0	8.4	8.5

#### (f) Important colonies and breeding sites

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

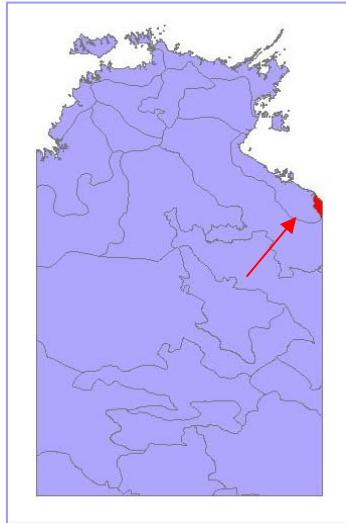
Type of site	Size of site (number of animals)	Number of sites
Waterbird	<10000	1

## GULF PLAINS (GUP)

### 1. General Description

This bioregion includes the south-eastern coast of the Gulf of Carpentaria, and has a small area within the Northern Territory. The NT portion is characterised as a coastal plain area with numerous drainage lines originating from north eastern Barkly Tableland. It lies on the McArthur Basin with soils grading from sands on the slopes to saline clays near the coast. The vegetation is mainly Eucalyptus woodland with a large area of closed forest along the coastal strip. Elevation is mostly below 50 m. The climate is tropical with annual rainfall averaging 1200 mm. The bioregion generally comprises extensive alluvial plains backed by gently sloping sandstone tablelands along the eastern margin. Coastal wetlands in this region are particularly significant.

Map of NT Bioregions showing the small portion of the Gulf Plains bioregion in the NT



### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	217638 km <sup>2</sup> (0.7%)
Area of bioregion within NT (% of NT area)	1448 km <sup>2</sup> (0.11%)
Area reserved in entire bioregion (% of bioregion area)	5522 km <sup>2</sup> (2.5%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	0 km <sup>2</sup> (0%)

#### (b) Tenure

Aboriginal freehold	0 km <sup>2</sup> (0%)
Pastoral leases	1439.0 km <sup>2</sup> (100%)
Crown Leases and Vacant Land	0 km <sup>2</sup> (0%)
Other Freehold	0 km <sup>2</sup> (0%)
Other tenure	0 km <sup>2</sup> (0%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Gulf Plains

None listed for this bioregion.

#### (d) Off-reserve conservation and land management groups

None listed for this bioregion.

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

None listed for this bioregion.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Wollogorang.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.93	-

**3. Biodiversity in Gulf Plains****(a) Vegetation**

Extent and level of reservation of broad vegetation types in Gulf Plains. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
1	Closed Forest	63	0	26.3	1	0
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	1030	0	14.1	1	0
3	Eucalyptus low Woodland with Tussock Grass Understorey	276	0	2.4	2	0
4	Eucalyptus Woodland with Hummock Grass Understorey	4	0	8.7	2	0
12	Littoral	74	0	8.4	1	0

Reservation bias of vegetation in Gulf Plains (broad veg/fine veg)   unreserved

**(b) Significant Plant Species**

None listed for this bioregion.

**(c) Significant Vertebrate Species**

None listed for this bioregion.

**(d) Threatened invertebrates**

None listed for this bioregion.

**(e) Animals Extinct in this bioregion (\*still present in other NT bioregions)**

None listed for this bioregion.

#### **4. Management issues and special values in the bioregion**

##### **(a) Significant exotic plants in the bioregion**

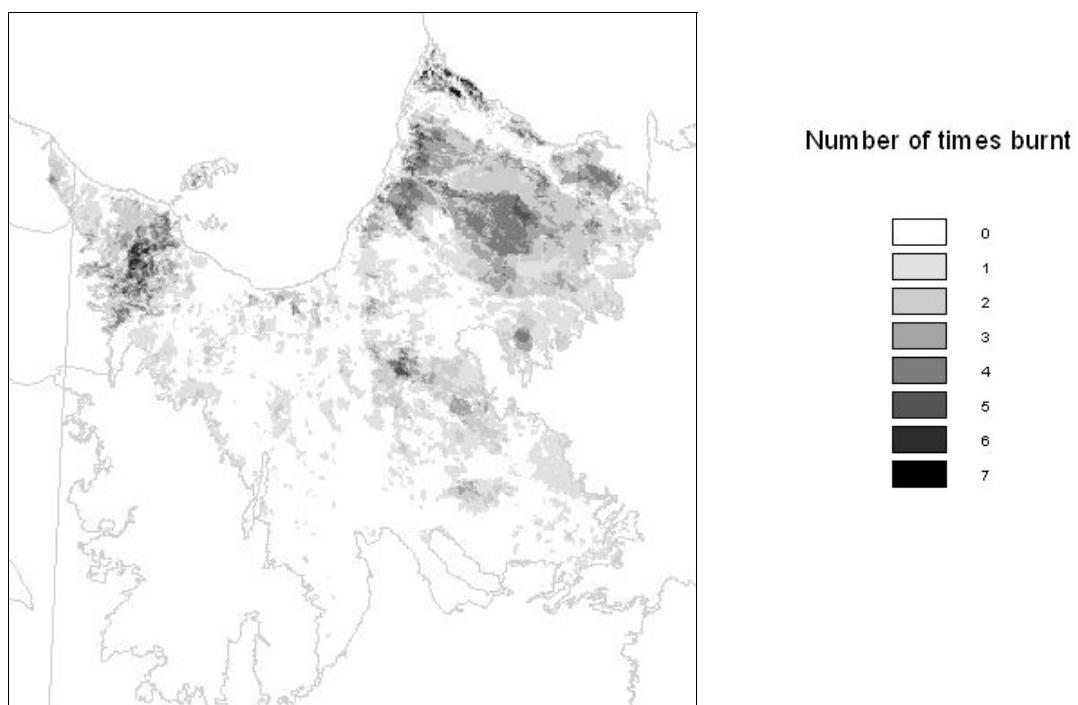
None listed for the bioregion.

##### **(b) Exotic animals in the bioregion and their status**

<b>Cane toad</b>	Recently established throughout bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

##### **(c) Fire histories – number of fires in seven year history 1997-2003**

Entire bioregion shown (predominantly in Queensland)



##### **(d) Wetlands, major rivers and catchments**

No Directory of Important Wetlands of Australia listed in this bioregion.

**List of catchments in Gulf Plains** – Calvert River, Settlement Creek.

**(e) Rainforests and sites of botanical significance**

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	22	18.6	0.0

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
5	20	0	0	25

**(f) Important colonies and breeding sites**

No sites identified.

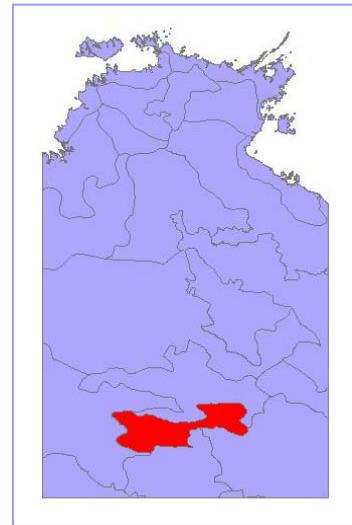
## MACDONNELL RANGES (MAC)

### 1. General Description

This bioregion is characterised by spectacular high relief ranges and foothills, of diverse geology (mostly sedimentary rocks in the Amadeus Basin and crystalline metamorphic rocks in the Arunta Block). These ranges enclose some broad plains and watercourses. Soils are generally skeletal or shallow sands on the rocky hills, with earthy sands and deep loamy alluvium on the lowlands. The climate is arid with annual rainfall varying between 200 and 300 mm. The dominant vegetation types are spinifex hummock grassland, sparse acacia shrublands and woodlands along watercourses. The bioregion includes 3 subregions



MacDonnell Ranges, showing extensive folding, faulting and erosion of the ranges which has led to the formation of the many gaps and gorges. Photo: Jeff Cole.



Map of NT Bioregions highlighting MacDonnell Ranges

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	39350 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	39350 km <sup>2</sup> (2.93%)
Extent of National Parks and other protected areas (% of bioregion area)	5390 km <sup>2</sup> (13.7%)

#### (b) Tenure

Aboriginal freehold	15211 km <sup>2</sup> (38.8%)
Pastoral leases	19746 km <sup>2</sup> (50.3%)
Crown Leases and Vacant Land	2924.6 km <sup>2</sup> (7.5%)
Other Freehold	367 km <sup>2</sup> (0.9%)
Other tenure	998.4 km <sup>2</sup> (2.5%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in MacDonnell Ranges

Alice Springs Desert Park	13.1 km <sup>2</sup>
Alice Springs Telegraph Station Historical Reserve	20.1 km <sup>2</sup>
Arltunga Historical Reserve	54.4 km <sup>2</sup>
Corroboree Rock Conservation Reserve	0.073 km <sup>2</sup>

Emily and Jessie Gaps Nature Park	6.94 km <sup>2</sup>
Emily and Jessie Gaps Nature Park Extension (proposed)	5.45 km <sup>2</sup>
Finke Gorge National Park	459.9 km <sup>2</sup>
Heavitree Gap Police Station Historical Reserve	0.004 km <sup>2</sup>
Illamurta Springs Conservation Reserve	1.30 km <sup>2</sup>
Ilparpa Swamp Wildlife Protected Area	21.3 km <sup>2</sup>
John Flynn's Grave Historical Reserve	0.003 km <sup>2</sup>
Joint Geological / Geophysical Reserve	9.32 km <sup>2</sup>
Kuyunba Conservation Reserve (part)	2.67 km <sup>2</sup>
N'Dhala Gorge Nature Park	5.02 km <sup>2</sup>
Owen Springs Reserve (part)	1832.3 km <sup>2</sup>
Rainbow Valley Conservation Reserve (part)	14.7 km <sup>2</sup>
Ruby Gap Nature Park	92.6 km <sup>2</sup>
Tnorala (Gosse Bluff) Conservation Reserve	47.7 km <sup>2</sup>
Trephina Gorge Nature Park	17.7 km <sup>2</sup>
Watarrka National Park	722.0 km <sup>2</sup>
West MacDonnell National Park	2063.2 km <sup>2</sup>

#### (d) Off-reserve conservation and land management groups

Group	Resource Centre / Aboriginal Corporation	Community
Conservation Volunteers Australia	Alice Springs	Various
Ilparpa Valley Landcare Group	Alice Springs	
Lower Todd River Landcare Group	Alice Springs	

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Akekarrwenteme Ureyenge Aboriginal Land Trust, Athenge Lhere (NTP 3806) Aboriginal Land Trust, Haasts Bluff Aboriginal Land Trust, Iwupataka Aboriginal Land Trust, Land Settlement Aboriginal Corporation, Ltalaltuma Aboriginal Land Trust, Melkngé Aboriginal Land Trust, Mpweringe-Arnapipe Aboriginal Land Trust, Ntaria Aboriginal Land Trust, Petermann Aboriginal Land Trust, Pwanye (NTP 3820) Aboriginal Land Trust, Rodna Aboriginal Land Trust, Roulpmalpma Aboriginal Land Trust, Uretyingke Aboriginal Land Trust, Urrampinyi Iltjiltjarri Aboriginal Land Trust (Tempe Downs), Uruna Aboriginal Land Trust.

#### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Alcoota, Ambalindum, Bond Springs, Bushy Park, Glen Helen, Hamilton Downs, Henbury, Indiana, Loves Creek, Mount Riddock, Narwietooma, Numery, Owen Springs, Ringwood, The Garden, Todd River, Undoolya, Yambah.

#### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
200.94	1.82

### **3. Biodiversity in MacDonnell Ranges**

#### **(a) Vegetation**

Extent and level of reservation of broad vegetation types in MacDonnell Ranges. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	226	0	2.4	1	0
4	Eucalyptus Woodland with Hummock Grass Understorey	730	0	8.7	1	0
9	Acacia Woodland	18177	7.8	1.2	11	9
10	Hummock Grassland	20178	19.7	1.5	9	7
11	Tussock Grassland	37	0	0.9	1	0

Reservation bias of vegetation in MacDonnell Ranges (broad veg/fine veg) 0.26/0.42

#### **(b) Significant Plant Species**

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in MacDonnell Ranges, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia dolichophylla			B, NT	1	100	14	
Acacia undoolyana	VU	VU	B, NT	1	100	36	
Actinotus schwarzii	VU	VU	B, NT	1	100	19	
Adiantum capillus-veneris	VU				33.3	1	
Amperea spicata			B, NT	1	100	8	
Amyema subcapitata			B, NT	2	100	1	
Aristida latzii			B, NT		100	18	
Asterella drummondii			B		100	1	
Atriplex semibaccata			B		100	2	
Atriplex sturtii			B		100	4	
Austrostipa aquarrii			B, NT		100	12	
Austrostipa centralis			B, NT		100	19	
Babingtonia behrii			B		100	3	
Baumea arthropylla	EN		B		100	1	
Bolboschoenus caldwellii	EN				85.7	6	
Brachyscome blackii			B		95.5	21	
Bryum argenteum			B		100	2	
Caesia A88425 Mt Zeil			B		100	1	
Campylopus introflexus			B		100	1	
Carex fascicularis			B		100	4	
Cassinia laevis			B		100	2	NO
Clematis microphylla			B		100	3	
Convolvulus crispifolius			B		100	1	
Desmatodon convolutus			B		100	1	
Diploschistes actinostomus			B		100	1	
Doodia caudata			B		100	7	
Eleocharis papillosa	VU		NT		15.4	2	
Eleocharis pusilla			B		100	1	
Eremophila A48866 Rainbow Valley	VU	VU	NT	1	31.6	6	

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
<i>Eucalyptus lucens</i>			B, NT	2	100	31	
<i>Eucalyptus socialis</i>			B		100	3	NO
<i>Eucalyptus thozetiana</i>			B		100	48	
<i>Euphorbia sarcostemmoides</i>			B		100	29	
<i>Fissidens humilis</i>			B		100	1	NO
<i>Fissidens perobtusus</i>			B		100	1	
<i>Funaria gracilis</i>			B		100	2	NO
<i>Glycine clandestina</i>			B		100	8	
<i>Glycine rubiginosa</i>			B		100	1	
<i>Goniomitrium acuminatum</i>			B		100	1	
<i>Goniomitrium enerve</i>			B		100	2	
<i>Goodenia faucium</i>			B, NT	1	100	9	NO
<i>Hakea grammophylla</i>			B, NT		96.3	52	
<i>Hakea standleyensis</i>			B, NT	2	95.7	22	
<i>Heterodea beaugleholei</i>			B		100	1	
<i>Hibbertia A86497 Chewings Range</i>			B, NT	2	100	13	
<i>Hydrocotyle A39600 Watarrka</i>			B, NT	1	100	15	
<i>Hydrocotyle D62620 Hart Range</i>			B, NT	2	100	2	NO
<i>Indigofera A83977 Areyonga</i>			B, NT	2	100	2	NO
<i>Juncus A87739 MacDonnell Ranges</i>					97.6	41	
<i>Juncus kraussii</i>					100	12	
<i>Livistona mariae mariae</i>	VU	VU	NT		14.6	14	
<i>Lomandra patens</i>			B, NT		100	29	
<i>Macrozamia macdonnellii</i>	VU	VU	B, NT		97.4	38	
<i>Maireana sedifolia</i>			B		100	1	
<i>Minuria tridens</i>	VU	VU	NT		92.0	23	
<i>Mirbelia ramulosa</i>			B		100	5	
<i>Murchisonia volubilis</i>			B		100	2	NO
<i>Neurachne tenuifolia</i>			B, NT		100	33	
<i>Nostoc commune</i>			B		100	1	NO
<i>Olearia macdonnellensis</i>	VU	VU	B, NT	2	100	17	
<i>Olearia xerophila</i>			B		100	3	
<i>Pentaschistes airoides</i>			B		100	1	
<i>Persicaria decipiens</i>			B		100	7	
<i>Persicaria lapathifolia</i>			B		100	22	
<i>Phalaris canariensis</i>			B		100	1	
<i>Phragmites australis</i>			B		100	15	
<i>Phyllanthus oblongolatus</i>			B, NT		100	7	
<i>Pimelea interioris</i>			B, NT	1	100	19	
<i>Pityrodia loricata</i>			B, NT		100	4	NO
<i>Plagiochasma australe</i>			B		100	1	NO
<i>Pluchea A87409 Ormiston</i>			B, NT	2	100	11	
<i>Polystichum proliferum</i>			B		100	1	
<i>Pomax umbellata</i>			B		100	1	
<i>Pottia latzii</i>			B		100	1	
<i>Pteris tremula</i>			B		100	24	
<i>Riccardia cochleata</i>			B		100	1	
<i>Ricinocarpos gloria-medii</i>	VU	VU	B, NT	1	100	45	
<i>Sauvagesia thesioides</i>			B		100	1	NO
<i>Scaevola humilis</i>			B		100	1	NO
<i>Sclerolaena limbata</i>			B		100	1	NO
<i>Sida A104174 Chewings Range</i>			B		100	5	
<i>Stenanthemum A83203 Palm Valley</i>			B, NT	2	100	15	
<i>Swainsona colutoides</i>			B		100	10	
<i>Targionia hypophylla</i>			B		100	1	
<i>Thryptomene hexandra</i>	VU		B, NT		100	11	
<i>Wrixonia schultzii</i>	VU	VU	B, NT	1	100	19	

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in MacDonnell Ranges, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Finke Goby	Chlamydogobius jalpalpa	VU			No data	No data	No data
Centralian Tree Frog	Litoria gilleni			B, NT	99.2	126	
Frost's Lerista	Lerista frosti			B, NT	97.3	108	
Slater's Egernia	Egernia slateri	EN	EN		55.9	19	
Australian Bustard	Ardeotis australis	VU			4.8	85	
Australian Painted Snipe	Rostratula australis	VU	VU		23.5	4	
Blue-billed Duck	Oxyura australis			B	100	20	
Emu	Dromaius novaehollandiae	VU			13.6	80	
Princess Parrot	Polytelis alexandri	VU	VU		47.1	8	
Black-footed Rock-wallaby	Petrogale lateralis	NT	VU		83.1	471	
Central Rock-rat	Zyzomys pedunculatus	EN	EN	NT	57.1	8	
Common Brushtail Possum	Trichosurus vulpecula vulpecula	EN			47.9	102	
Long-tailed Dunnart	Sminthopsis longicaudata	VU			50.0	3	
Mulgara	Dasyurus cristicauda	VU	VU		2.3	9	
Southern Marsupial Mole	Notoryctes typhlops	VU	EN		15.9	7	

### (d) Threatened invertebrates

Species	Common Name	NT Conservation status	Federal Conservation status
Basedowena squamulose	(snail)	VU	
Bothriembryon spenceri	(snail)	VU	
Croitana aestiva	Desert Sand Skipper	EN	
Dirutracchia sublevata	(snail)	VU	
Divellomelon hillieri	(snail)	VU	
Granulomelon arcigerens	(snail)	VU	
Granulomelon grandituberculatum	(snail)	VU	
Pillomena aemula	(snail)	VU	
Semotrachia caupona	(snail)	VU	
Semotrachia elleryi	(snail)	VU	
Semotrachia emilia	(snail)	VU	
Semotrachia esau	(snail)	VU	
Semotrachia euzyga	(snail)	CR	
Semotrachia filixiana	(snail)	VU	
Semotrachia illarana	(snail)	VU	
Semotrachia jessiana	(snail)	VU	
Semotrachia rossana	(snail)	VU	
Semotrachia runutjirbana	(snail)	VU	
Semotrachia winneckiana	(snail)	VU	
Sinumelon bednalli	(snail)	CR	
Vidumelon wattii	(snail)	VU	

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Reptiles:** Great Desert Skink\* (*Egernia kintorei*), **Birds:** Malleefowl (*Leipoa ocellata*), Night Parrot\* (*Pezoporus occidentalis*), Thick-billed Grass-wren\* (*Amytornis textilis*); **Mammals:** Bilby\*

(*Macrotis lagotis*), Burrowing Bettong (*Bettongia lesueuri*), Crescent Nailtail Wallaby (*Onychogalea lunata*), Ghost Bat\* (*Macroderma gigas*), Golden Bandicoot\* (*Isoodon auratus*), Lesser Stick-nest Rat (*Leporillus apicalis*), Long-tailed Hopping-mouse (*Notomys longicaudatus*), Mala (*Lagorchestes hirsutus*), Pale Field-rat\* (*Rattus tunneyi*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Red-tailed Phascogale (*Phascogale calura*), Shark Bay Mouse (*Pseudomys fieldi*), Short-tailed Hopping-mouse (*Notomys amplus*), Spectacled Hare-wallaby\* (*Lagorchestes conspicillatus*), Western Quoll (*Dasyurus geoffroii*).

#### **4. Management issues and special values in the bioregion**

##### **(a) Significant exotic plants in the bioregion**

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
African boxthorn ( <i>Lycium ferocissimum</i> )	A		Roadsides
Bathurst Burr ( <i>Xanthium spinosum</i> )	B		Pastoral
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Castor Oil Plant ( <i>Ricinus communis</i> )	not classed		Roads, Riparian, Flood areas
Couch Grass ( <i>Cynodon dactylon</i> )	not classed		
Marvel Grass ( <i>Dichanthium annulatum</i> )	not classed		
Mexican Poppy ( <i>Argemone achroleuca</i> )	B		Roads and tracks, water ways and flood plains
Noogoora Burr ( <i>Xanthium strumarium</i> )	B		Pastoral, Roads and tracks
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Rubber Bush ( <i>Calotropis procera</i> )	B		Roads and tracks, Pastoral
Ruby Dock ( <i>Acetosa vesicaria</i> )	not classed		

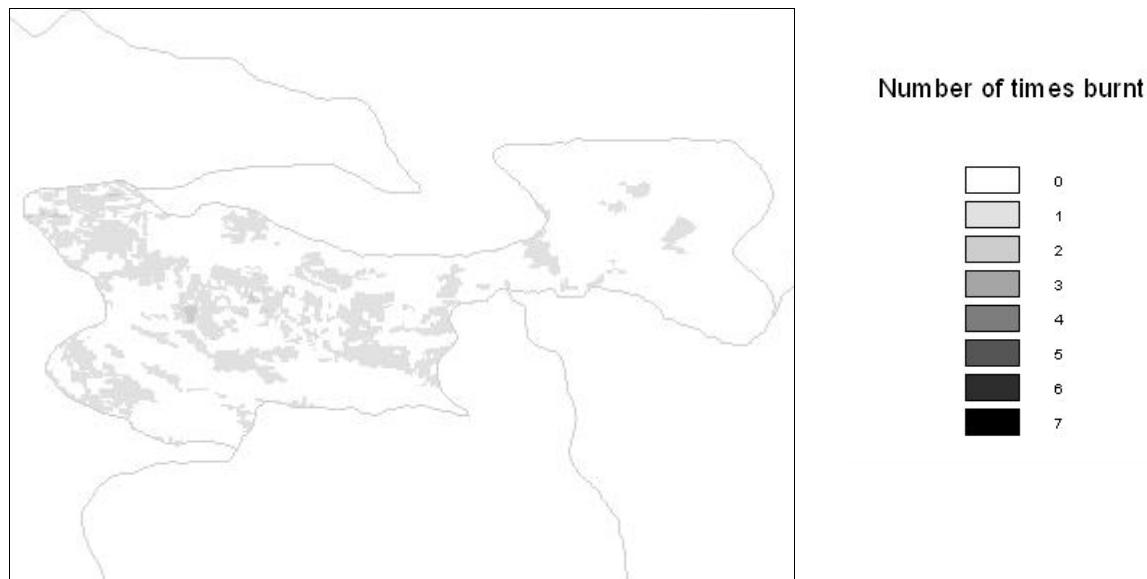
##### **(b) Exotic animals in the bioregion and their status**

<b>Arabian camel</b>	Widespread and probably increasing; with detriment to vegetation and water sources
<b>Barbary dove; Spotted turtle-dove</b>	Recently established in urban and near urban areas of the bioregion; detrimental impacts uncertain, but may out compete native granivores.
<b>Big-headed ant</b>	Populations in Alice Springs area; local detriment to native invertebrates, with some impact on some vertebrates and plants
<b>Cat</b>	Widespread, but probably at relatively low densities: probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>Cattle</b>	Local feral populations in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; partly controlled; some impacts on water sources and vegetation
<b>Fox</b>	Serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Gambusia (mosquito fish)</b>	Population in Alice Springs area; local detriment to aquatic systems generally, including native fish and aquatic invertebrates
<b>Honey bees</b>	Probably widespread in region: impacts uncertain but may affect native plants (through altered pollination regimes), native invertebrates (through competition), and native hollow-dwelling species (through aggressive usurpation of hollows)
<b>Horse</b>	At least localised populations with high density; affecting water sources, and with some impact on biodiversity

## MacDonnell Ranges

<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>Pig</b>	Localised feral population.
<b>Rabbit</b>	Formerly at very high densities, causing severe environmental detriment: now at least partly controlled
<b>Rock dove (feral pigeon)</b>	Small population established in urban and near urban areas; now locally controlled; impacts upon biodiversity uncertain.

### (c) Fire histories – number of fires in seven year history 1997-2003



### (d) Wetlands, major rivers and catchments

#### Directory of important wetlands of Australia (DIWA) listings for MacDonnell Ranges

DIWA No.	Wetland Name	Area (Ha)	% reserved	Tenure Types
NT002	Finke River Headwater Gorges System		0	Aboriginal Freehold, Other Freehold

#### Other important wetlands in MacDonnell Ranges (potential DIWA listings)

Wetland name	Reference number
Alice Springs Sewage Ponds	NT-potential-17
Chewings Range Permanent Springs	NT-potential-2
George Gill Range Springs and Rock holes	NT-potential-4
Illparpa Valley Wetlands	NT-potential-16
Ormiston – Glen Helen Mound Springs	NT-potential-19
Palm Valley Area Springs, Rock holes and Palm Groves	NT-potential-5
Permanent and Long-term Waterholes of the Finke River System	NT-potential-1
Rainbow Valley Claypans	NT-potential-18
Ringwood Bluebush Swamp	-
Talipata Spring	NT-potential-3

This bioregion includes the small (10 ha) but nationally significant wetland of the Finke River headwater gorge system (NT002), an important set of perennial waterholes within the rugged

ranges. Most of this system is within the West MacDonnell National Park, and is in good condition. Tourism may be having minor local effects. There are many other waterhole and gorge systems within the mountain systems of this bioregion which are of local and regional significance in this arid system. The ranges form the headwaters of many ephemeral or intermittent river systems. There are also floodout and swamp areas, notably including Ilparpa Swamp near Alice Springs. Well-protected moist areas are especially significant as refuge areas, with the most notable of these being Palm Valley.

**List of catchments in MacDonnell Ranges** – Burt Basin, Finke River, Georgina River, Hay River, Mackay Basin, Todd River, Wiso Basin.

#### (e) Rainforests and sites of botanical significance

Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
23-4-7	Amarata Range	National
24-3-8	Bowson	Bioregional
23-4-15	Charles and Todd Rivers	Bioregional
23-3-5	Chewings Range	National
23-4-13	Emily Gap	Bioregional
23-3-7	Glen Helen	National
23-3-6	Goyder Pass	Bioregional
23-4-10	Hale and Paddys Plains	Bioregional
23-4-10	Hale and Paddys Plains	Bioregional
23-4-9	Harts Range	National
23-2-8	Idirriki	Bioregional
24-3-4	Illawilla	Bioregional
23-4-16	Ilparpa	National
23-2-6	Lay Cock's Sandplain	Bioregional
23-2-4	Mereenie	Bioregional
23-3-2	Missionary Plain	National
23-2-1	Mount Edward	National
23-5-4	Mount Long/Mount Mary	Bioregional
23-4-11	Mount Riddock	Bioregional
23-5-2	Mount Ruby	Bioregional
23-3-1	Mount Zeil	National
22-4-2	Mueller Creek Catchment	Bioregional
23-4-6	N'Dhala	National
23-4-12	New Well	Bioregional
24-3-5	Palm Valley	National
24-4-5	Rainbow Valley	National
23-4-14	Simpsons Gap	National
23-2-3	Talipata/Mount Liebig	National
23-2-3	Talipata/Mount Liebig	National
23-4-5	Trephina	National
22-4-3	Upper Plenty River	Bioregional
24-2-1	Watarrka	National
24-3-1	Waterhouse Range	National
24-3-6	Wild Eagle Plains	Bioregional
24-3-2	Wolluga Dunefields	National

**(f) Important colonies and breeding sites**

No sites identified.

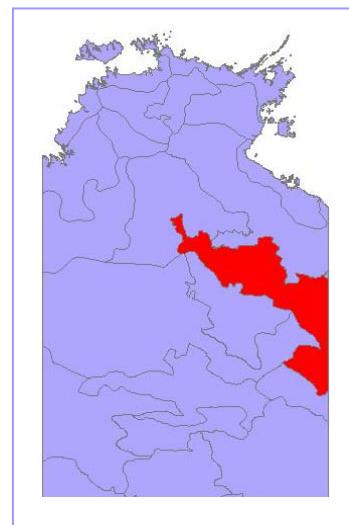
## MITCHELL GRASS DOWNS (MGD)

### 1. General Description

The Northern Territory component of this bioregion contains some nationally important wetlands and extensive, economically important grasslands, and includes the Barkly Tableland. It lies over the Georgina and Dunmurra Basins containing sedimentary rocks of Cretaceous, Tertiary and Cambrian ages and soils are predominantly cracking clays. The vegetation is predominantly *Eucalyptus microtheca* low open-woodland with Bluebush (*Chenopodium auricomum*) sparse-shrubland understorey, and Mitchell Grass (*Astrebla*) grassland on the Barkly Tableland. The southern section contains Gidyea (*Acacia georginae*) low open woodland with *Astrebla* open-grassland understorey. The climate is semi-arid with annual rainfall between 400 and 500 mm. The drainage in the tableland is complex, with a number of short creeks and rivers flowing toward several large seasonal lakes, while the Rankin and Georgina Rivers flow southeast of the bioregion.



Mitchell Grass Downs, showing a diversity of grasses and forbs between the Mitchell grass. Photo: Alaric Fisher.



Map of NT Bioregions highlighting Mitchell Grass Downs

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	334086 km <sup>2</sup> (27.6%)
Area of bioregion within NT (% of NT area)	92359 km <sup>2</sup> (6.88%)
Area reserved in entire bioregion (% of bioregion area)	4089.6 km <sup>2</sup> (1.2%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	552 km <sup>2</sup> (0.60%)

#### (b) Tenure

Aboriginal freehold	502.9 km <sup>2</sup> (0.5%)
Pastoral leases	89743 km <sup>2</sup> (97.4%)
Crown Leases and Vacant Land	1147.7 km <sup>2</sup> (1.2%)
Other Freehold	122.0 km <sup>2</sup> (0.1%)
Other tenure	658.2 km <sup>2</sup> (0.7%)
Defence	0 km <sup>2</sup> (0%)

**(c) Protected areas and extent in Mitchell Grass Downs**

Connells Lagoon Conservation Reserve	256.7 km <sup>2</sup>
Junction Reserve	201.8 km <sup>2</sup>
Longreach Waterhole Protected Area	93.0 km <sup>2</sup>

**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Barkly Landcare and Conservation Association		Tennant Creek

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Aboriginal Land Trust, Burudu Aboriginal Land Trust, Gulgunnorr Aboriginal Land Trust, Gurungu (NTP 3720, 3869)  
 Aboriginal Land Trust, Gurungu Aboriginal Land Trust, Kurnturlpara Aboriginal Land Trust, Marlinja (NTP 3624)  
 Aboriginal Land Trust, Mittiebah Aboriginal Land Trust, Murranji Aboriginal Land Trust, Warumungu Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Adder, Alexandria, Alroy Downs, Annitowa, Anthony Lagoon, Argadargada, Austral Downs, Avon Downs, Banka Banka, Beetaloo, Benmara, Brunchilly, Brunette Downs, Burramurra, Cresswell Downs, Dalmore Downs, East Ranken, Eva Downs, Georgina Downs, Hayfield, Helen Springs, Lake Nash, Manners Creek, Marqua, Mittiebah, Mount Drummond, Mungabroom, Murranji, Newcastle Waters, Powell Creek, Rockhampton Downs, Rocklands, Soudan, Tandyidgee, Tobermorey, Ucharonidge, Walhallow, West Ranken.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
4.11	4.02

**3. Biodiversity in Mitchell Grass Downs**

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Mitchell Grass Downs. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	12080	0.54	2.4	7	3
4	Eucalyptus Woodland with Hummock Grass Understorey	4759	0	8.7	6	0
5	Mixed Species low open Woodland	304	0	9.9	1	0
9	Acacia Woodland	11419	0	1.2	6	0
10	Hummock Grassland	1946	2.8	1.5	2	1
11	Tussock Grassland	58816	0.73	0.9	3	2
13	Chenopod Shrublands	3034	0	1.4	1	0

Reservation bias of vegetation in Mitchell Grass Downs (broad veg/fine veg) 0.22/0.27

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Mitchell Grass Downs, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia longipedunculata			B		100	1	NO
Atriplex muelleri			B		100	3	NO
Bergia barklyana			B, NT	2	100	7	NO
Corchorus pascuorum			B		100	16	NO
Eryngium supinum			B		100	3	NO
Eucalyptus helenae			B, NT	2	100	10	
Iseilema calvum			B		95.0	19	
Maireana dichotera			B		100	2	NO
Mukia A90788 Tobermorey Station	VU		NT		80.0	4	NO
Oldenlandia spathulata			B, NT		100	3	NO
Pycnosorus eremaeus			B		100	4	
Rhodanthe gossypina			B		100	3	NO
Rorippa eustylis			B		100	2	NO
Sida D68189 excedentifolia			B		100	1	NO

## (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Mitchell Grass Downs, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Black-Soil Ctenotus	Ctenotus joanae			B	97.3	359	
Southern Death Adder	Acanthophis antarcticus			B	100	22	NO
Australian Bustard	Ardeotis australis	VU			8.5	150	
Australian Painted Snipe	Rostratula australis	VU	VU		23.5	4	
Emu	Dromaius novaehollandiae	VU			2.0	12	
Masked Owl	Tyto novaehollandiae kimberli	NT	VU		4.3	1	
Bilby	Macrotis lagotis	VU	VU		0.21	1	NO
Common Brushtail Possum	Trichosurus vulpecula vulpecula	EN			0.5	1	

## (d) Threatened invertebrates

None listed for this bioregion.

## (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Mammals:** Lesser Stick-nest Rat (*Leporillus apicalis*), Carpentarian Antechinus\* (*Pseudantechinus mimulus*), Golden Bandicoot\* (*Isoodon auratus*), Northern Quoll\* (*Dasyurus hallucatus*), Western Quoll (*Dasyurus geoffroii*).

#### **4. Management issues and special values in the bioregion**

##### **(a) Significant exotic plants in the bioregion**

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

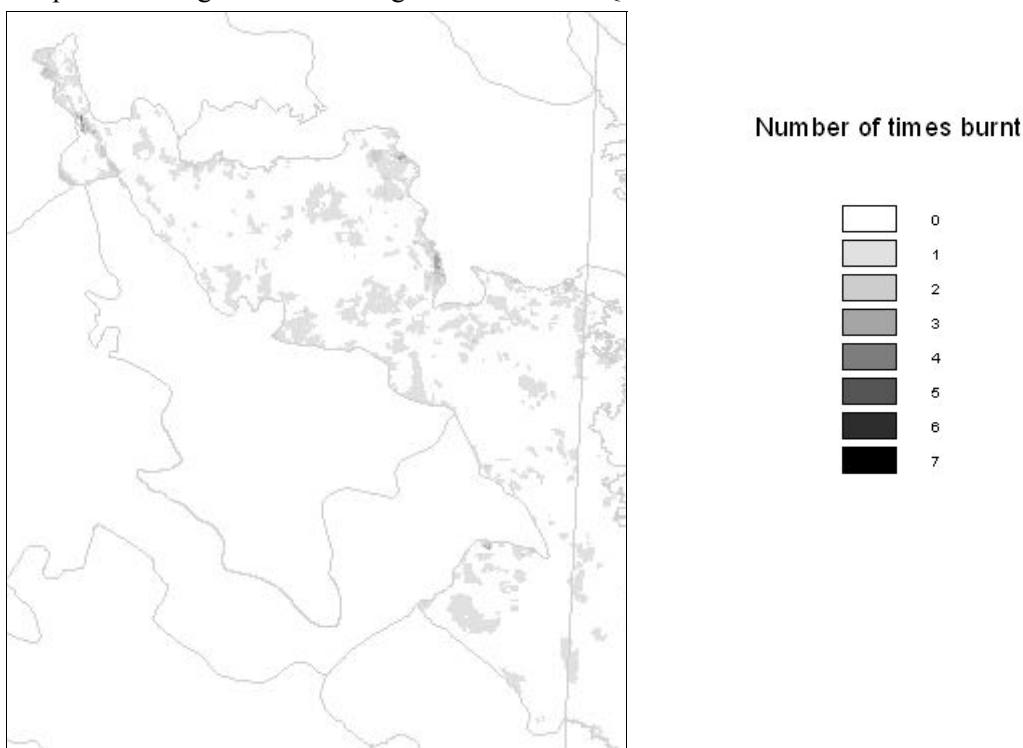
Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Mesquite ( <i>Prosopis limensis</i> )	B	WONS	Pastoral, Water ways and floodplains
Neem ( <i>Azadirachta indica</i> )	not classed		Towns, Riparian
Noogoora Burr ( <i>Xanthium strumarium</i> )	B		Pastoral, Roads and Tracks
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Para Grass ( <i>Urochloa mutica</i> )	not classed		Floodplains, drainage lines
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Prickly Acacia ( <i>Acacia nilotica</i> )	A		Water ways and floodplains

##### **(b) Exotic animals in the bioregion and their status**

<b>Cat</b>	Widespread and common; probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Fox</b>	Road kills have been reported from this bioregion
<b>Horse</b>	Wildlife operations state moderate numbers of feral horses occur in this bioregion.
<b>House sparrow</b>	Present, particularly around homesteads and some communities; detrimental impacts uncertain, but may out compete native granivores.
<b>Pig</b>	Probably at least localised populations, with detrimental impacts on vegetation, water sources and possibly ground-dwelling fauna.

**(c) Fire histories – number of fires in seven year history 1997-2003**

NT part of bioregion shown along the border with Queensland

**(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Mitchell Grass Downs

DIWA No.	Wetland Name	Area (ha)	% reserved	Tenure Types
NT009	Corella Lake	10196	0	Pastoral Lease
NT010	Eva Downs Swamp	12672	0	Pastoral Lease
NT011	Lake de Burgh	22217	0	Pastoral Lease
NT012	Lake Sylvester	76467	0	Pastoral Lease
NT013	Lake Woods	42569	8.4	Pastoral Lease
NT014	Tarrabool Lake	46942	0	Pastoral Lease

At least three of these nationally important wetlands have been assessed for international importance. Lake Woods is in generally good condition, albeit affected adversely by weeds (principally Parkinsonia), and grazing by livestock and feral animals. The fringes of Tarrabool Lake support vast stands of coolibah woodland which constitutes probably the largest wooded swamp in tropical Australia.

Other important wetlands in Mitchell Grass Downs (potential DIWA listings)

Wetland name	Reference number
Blue Bush Swamp (Burramurra)	NT-potential-53
Large Semi-permanent Waterholes of the Georgina River System	NT-potential-29
Yellow Hole Bore Swamp	NT-potential-38

**List of catchments in Mitchell Grass Downs** – Barkly Basin, Georgina River, Nicholson River, Wiso Basin.

**(e) Rainforests and sites of botanical significance**

Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
19-5-PL1	Alroy Downs Gidgee	Undetermined
18-5-1	Brunette Creek Waterholes	National
19-6-1	Buchanan Rises	Bioregional
18-6-1	Connells Lagoon	National
20-6-1	Georgina River	Bioregional
19-4-4	Headwaters of Brunchilly Creek	Bioregional
22-6-4	Illungnara	National
20-6-2	James River Waterholes	Bioregional
21-6-2	Lake Nash – No. One Dam	Bioregional
18-5-2	Lake Sylvester	Bioregional
19-6-2	Lorne Creek Waterholes	Bioregional
21-6-1	Manners Creek Gidgee	Bioregional
18-4-5	Nilly	Bioregional
22-6-3	Querinya	Bioregional
20-5-4	Wonarah Beds	Bioregional

**(f) Important colonies and breeding sites**

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Waterbird	<10000	6
Waterbird	>10000	1

## MOUNT ISA INLIER (MII)

### 1. General Description

This bioregion occupies a very small area in the Northern Territory east of the Barkly Tableland, on the border with Queensland. It falls in the semi-arid zone with annual rainfall averaging 500 mm. It lies to the east of the Carrara Range in the Georgina Basin and has hard-setting clays originating from Cambrian limestones and shales. Elevation is around 230 m. The small section of the Thorntonia subregion within the Northern Territory has Eucalyptus low open-woodland with spinifex understorey. The bioregion generally comprises stony hills and ranges, with skeletal soils supporting low open Eucalypt woodlands with a tussock grass (*Triodia*) understorey.



Representative habitat of Mount Isa Inlier. Photo: Parks and Wildlife Service.



Map of NT Bioregions showing the small portion of the Mount Isa Inlier bioregion in the NT

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	66196 km <sup>2</sup> (0.3%)
Area of bioregion within NT (% of NT area)	224 km <sup>2</sup> (0.02%)
Area reserved in entire bioregion (% of bioregion area)	1807 km <sup>2</sup> (2.7%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	0 km <sup>2</sup> (0%)

#### (b) Tenure

Aboriginal freehold	2.4 km <sup>2</sup> (1.1%)
Pastoral leases	218.1 km <sup>2</sup> (98.9%)
Crown Leases and Vacant Land	0 km <sup>2</sup> (0%)
Other Freehold	0 km <sup>2</sup> (0%)
Other tenure	0 km <sup>2</sup> (0%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Mount Isa Inlier

None listed for this bioregion.

**(d) Off-reserve conservation and land management groups**

None listed for this bioregion.

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Waanyi/Garawa Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Mount Drummond.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
2.56	-

**3. Biodiversity in Mount Isa Inlier**

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Mount Isa Inlier. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
4	Eucalyptus Woodland with Hummock Grass Understorey	223	0	8.7	2	0
11	Tussock Grassland	1	0	0.9	1	0

Reservation bias of vegetation in Mount Isa Inlier (broad veg/fine veg)    unreserved

**(b) Significant Plant Species**

None listed for this bioregion.

**(c) Significant Vertebrate Species**

None listed for this bioregion.

**(d) Threatened invertebrates**

None listed for this bioregion.

**(e) Animals Extinct in this bioregion (\*still present in other NT bioregions)**

None listed for this bioregion.

**4. Management issues and special values in the bioregion****(a) Significant exotic plants in the bioregion**

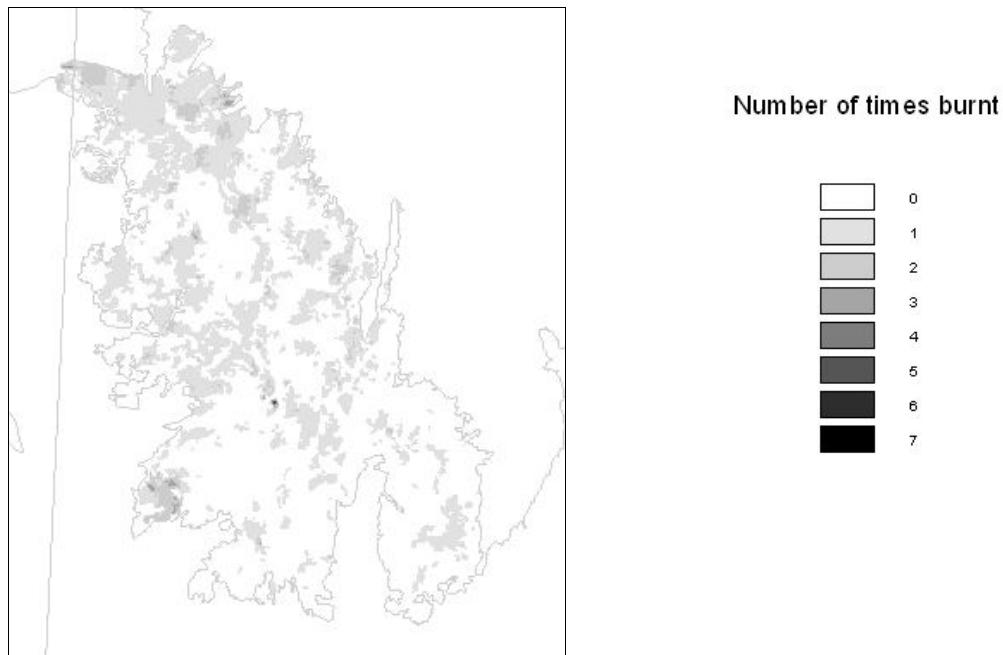
None listed for the bioregion.

**(b) Exotic animals in the bioregion and their status**

<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor

**(c) Fire histories – number of fires in seven year history 1997-2003**

Entire Bioregion shown (predominantly in Queensland)

**(d) Wetlands, major rivers and catchments**

No Directory of Important Wetlands of Australia listed in this bioregion.

List of catchments in Mount Isa Inlier – Nicholson River.

**(e) Rainforests and sites of botanical significance**

No rainforests listed for this bioregion.

**(f) Important colonies and breeding sites**

No sites identified.

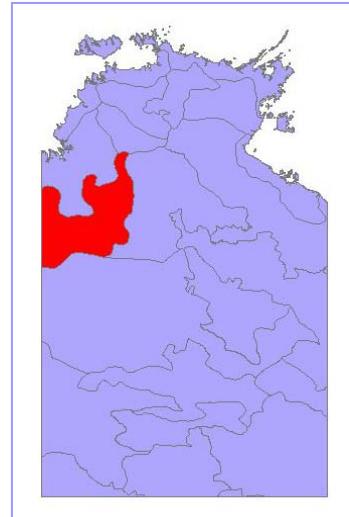
## ORD VICTORIA PLAIN (OVP)

### 1. General Description

The Ord-Victoria Plain bioregion comprises three main components: (1) abrupt Proterozoic and Phanerozoic ranges and scattered hills and mesas mantled by shallow sand and loam soils supporting *Triodia* hummock grasslands with sparse low trees; (2) extensive plains based on Cambrian volcanics and limestones, with short grass (*Enneapogon* spp.) on dry calcareous soils and medium-height grassland communities (*Astrebla* and *Dichanthium*) on cracking clays; and (3) in the south-west, Phanerozoic strata expressed as often lateritised upland sandplains with sparse trees. This component recurs in the adjacent Sturt Plateau bioregion. The climate in the bioregion is monsoonal with annual average rainfall varying (south to north) from 400 to 1000 mm. Elevation varies between 50 and 450 m. Other vegetation types include extensive eucalypt woodlands and open woodlands with tussock or hummock grass understorey.



Ord Victoria Plain, showing open woodland in the Victoria River District. Photo: Cameron Yates.



Map of NT Bioregions highlighting Ord Victoria Plain

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	124414 km <sup>2</sup> (56.1%)
Area of bioregion within NT (% of NT area)	69857 km <sup>2</sup> (5.21%)
Area reserved in entire bioregion (% of bioregion area)	8833 km <sup>2</sup> (7.1%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	5580 km <sup>2</sup> (7.99%)

#### (b) Tenure

Aboriginal freehold	10504 km <sup>2</sup> (15.1%)
Pastoral leases	52147 km <sup>2</sup> (74.8%)
Crown Leases and Vacant Land	6839.0 km <sup>2</sup> (9.8%)
Other Freehold	0.6 km <sup>2</sup> (<0.1%)
Other tenure	0 km <sup>2</sup> (0%)
Defence	190.7 km <sup>2</sup> (0.3%)

**(c) Protected areas and extent in Ord Victoria Plain**

Gregory National Park (part) 5579.7 km<sup>2</sup>

**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program	Greening Australia	Darwin
Amanbidgi Land Management	Ngaliwurru – Wuli Association	Amanbidgi
Timber Creek Land Management	Ngaliwurru – Wuli Association	Muruning / Timber Creek
Victoria River district conservation association		
Yarralin Rangers	Daguragu Community Government Council	Daguragu

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Bilinara Aboriginal Land Trust, Daguragu Aboriginal Land Trust, Hooker Creek Aboriginal Land Trust, Karlantijpa North Aboriginal Land Trust, Malngin 2 Aboriginal Land Trust\* (Mistake Creek), Malngin Aboriginal Land Trust (Brumby Plains), Mayat Aboriginal Land Trust, Menngen Aboriginal Land Trust\* (Innesvale), Nagurunguru Aboriginal Land Trust\* (Amanbidji), Ngaliwurru/Nungali Aboriginal Land Trust\* (Fitzroy), Wambardi Aboriginal Land Trust, Wampana – Karlantijpa Aboriginal Land Trust, Wanimiyn Aboriginal Land Trust, Yingawunari Mudbura Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Auvergne, Birrindudu, Bunda, Camfield, Cattle Creek, Delamere, Dungowan, Humbert River, Inverway, Killarney, Kirkimbie, Limbunya, Montejinni East, Montejinni West, Newry, Riveren, Rosewood, Scott Creek, Victoria River Downs, VRD/Yarralin\*, Wallamunga, Waterloo, Wave Hill, West Mathison, Willeroo.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
3.49	4.24

**3. Biodiversity in Ord Victoria Plain****(a) Vegetation**

Extent and level of reservation of broad vegetation types in Ord Victoria Plain. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	6144	45.4	14.1	5	2
3	Eucalyptus low Woodland with Tussock Grass Understorey	15289	0.22	2.4	5	2
4	Eucalyptus Woodland with Hummock Grass Understorey	17799	11.0	8.7	6	5
5	Mixed Species low open Woodland	3831	13.9	9.9	3	1
9	Acacia Woodland	182	0	1.2	2	0
10	Hummock Grassland	9892	0	1.5	3	0
11	Tussock Grassland	16302	1.6	0.9	4	3

## Ord Victoria Plain

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
13	Chenopod Shrublands	418	0	1.4	1	0

Reservation bias of vegetation in Ord Victoria Plain (broad veg/fine veg) 0.60/0.71

### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Ord Victoria Plain, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia amentifera			B, NT	2	100	2	NO
Acacia manipularis			B	100	1		
Acacia ptychophylla			B	100	1		NO
Acalypha pubiflora			B	100	1		NO
Adiantum capillus-veneris	VU				33.3	1	
Boronia jucunda			B	100	4		
Corchorus leptocarpus			B	100	3		NO
Corchorus macropetalus			B	100	7		NO
Corchorus vermicularis			B	100	3		NO
Desmodium hannii			B	100	1		NO
Eriachne humilis			B	100	1		NO
Eucalyptus A2171 Montejinni Station			B	100	1		NO
Eucalyptus argillacea			B	100	56		NO
Eucalyptus confluens			B	100	1		NO
Eucalyptus D76647 Kalkarindji			B	100	1		NO
Eucalyptus gymnoteles			B	100	1		NO
Eucalyptus limitaris			B	100	2		NO
Fimbristylis elegans			B	100	5		NO
Heliotropium tachyglossoides			B	100	1		
Hibiscus coatesii			B	100	3		NO
Iseilema ciliatum			B	97.0	32		
Pentalepis trichodesmoides			B	100	3		NO
Portulaca D48049 Limestone			B	100	2		
Ptilotus capitatus			B	100	4		NO
Solanum cunninghamii			B	100	1		
Spermacoce occidentalis			B	100	1		NO
Trachymene dusenii			B	100	3		NO
Triodia fitzgeraldii	VU				16.7	1	
Triodia roscida			B	100	10		NO

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Ord Victoria Plain, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Angalarri grunter	Scortum neilli	VU			No data	No data	
Small Toadlet	Uperoleia minima			B	100	1	NO

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Wailing Frog	Cyclorana vagita			B	100	4	NO
Gravel Dragon	Cryptagama aurita			B	100	1	NO
Ord Snake	Suta ordensis			B	100	1	NO
(Skink)	Lerista greeri			B	100	11	NO
(Skink)	Proablepharus sp VRD			B, NT	95.8	113	
Australian Bustard	Ardeotis australis	VU			9.1	161	
Emu	Dromaius novaehollandiae	VU			0.85	5	
Gouldian Finch	Erythrura gouldiae	EN	EN		7.4	73	
Northern Shrike-tit	Falcunculus whitei	DD	VU		10.7	3	
Purple-crowned Fairy-wren	Malurus coronatus coronatus	NT	VU		18.6	34	
Bilby	Macrotis lagotis	VU	VU		1.2	6	NO

#### (d) Threatened invertebrates

Species	Common Name	NT Conservation status	Federal Conservation status
Ordtrachia australis	(snail)	CR	
Ordtrachia septentrionalis	(snail)	CR	

#### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Mammals:** Burrowing Bettong (*Bettongia lesueur*), Common Brushtail Possum\* (*Trichosurus vulpecula*), Golden Bandicoot\* (*Isoodon auratus*).

### 4. Management issues and special values in the bioregion

#### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Barleria (Barleria prionitis)	A		Towns, disturbed areas
Buffel Grass (Cenchrus ciliaris)	not classed		Disturbed areas, Towns, Roads, swamp margins
Castor Oil Plant (Ricinus communis)	not classed		Roads, Riparian, Flood areas
Devil's Claw (Martynia annua)	A		Pastoral, roads and tracks
Gambia Pea (Crotalaria goreensis)	not classed		Roadsides, grazed areas, Riparian
Mesquite (Prosopis limensis)	B	WONS	Pastoral, Water ways and floodplains
Neem (Azadirachta indica)	not classed		Towns, Riparian
Para Grass (Urochloa mutica)	not classed		Floodplains, drainage lines
Parkinsonia (Parkinsonia aculeata)	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens

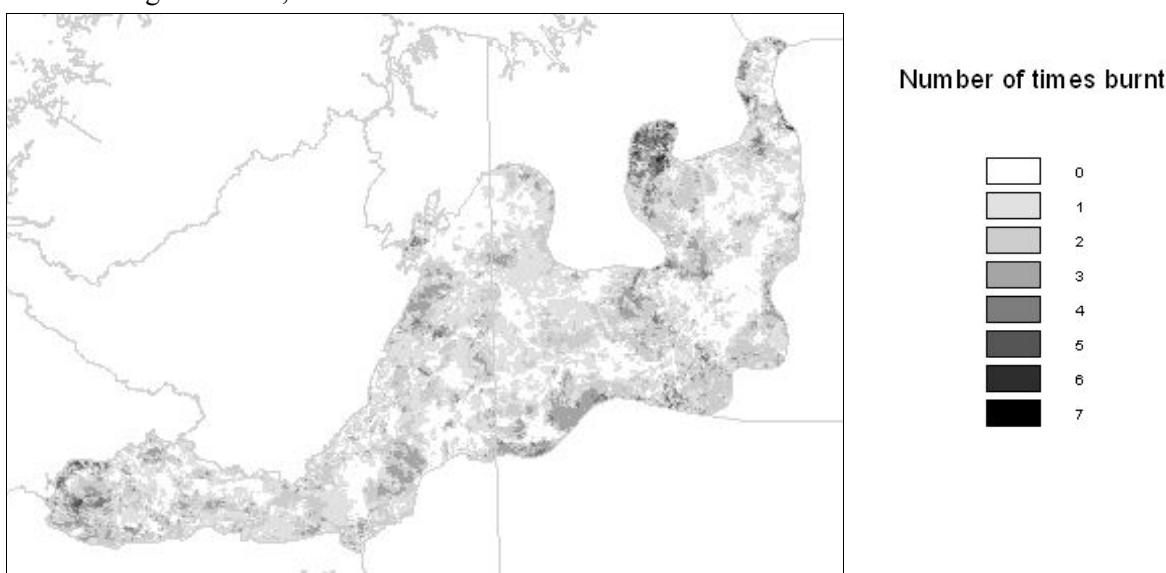
#### (b) Exotic animals in the bioregion and their status

<b>Arabian camel</b>	numbers building up in the south of this bioregion; impacts on biodiversity uncertain
<b>Buffalo</b>	Occurs in the bioregion, but generally localised or uncommon; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.

<b>Cane toad</b>	Likely to soon establish across bioregion, with detrimental impacts upon a range of animal species, such as quolls, goannas, snakes
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	At high densities in parts of this bioregion, with serious detriment to vegetation and water sources. Currently subjected to major management program.
<b>Horse</b>	At least localised populations with high density; affecting water sources, and with some impact on biodiversity
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

**(c) Fire histories – number of fires in seven year history 1997-2003**

Entire bioregion shown, shared with Western Australia



**(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Ord Victoria Plain

DIWA No.	Wetland Name	Area (ha)	% reserved	Tenure Types
NT015	Birrindudu Waterhole and Floodplain	23516	0	Pastoral Lease
NT016	Nongra Lake	6823.6	0	Pastoral Lease

The Ord-Victoria Plain bioregion includes two nationally significant wetlands, both on pastoral properties. Both may be under some pressure from cattle grazing on the fringes, but there have been some recent initiatives to fence Birrindudu wetlands. The artificial Lake Argyle (WA097) occurs across the border between this bioregion and Victoria-Bonaparte bioregion. Other important wetlands in the bioregion include the major river systems, and gorges within the Bungle Bungle and Osmand Ranges

**List of catchments in Ord Victoria Plain** – Daly River, Keep River, Mackay Basin, Ord River, Victoria River, Wiso Basin.

**(e) Rainforests and sites of botanical significance**

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	770	13.7	40.4
Spring	4	0.03	18.5

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
14	7.1	7.1	0	7.7

Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
18-1-PL2	Birrindudu Range	Undetermined

**(f) Important colonies and breeding sites**

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Waterbird	<10000	2

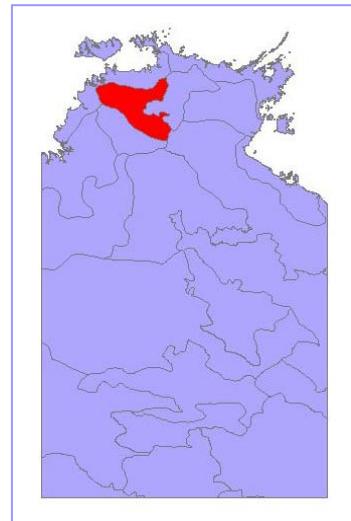
## PINE CREEK (PCK)

### 1. General Description

The Pine Creek bioregion comprises foothill environments below and to the west of the western Arnhem Land sandstone massif. It also includes parts of the Darwin rural area. Its main defining feature is the highly mineraliferous Pine Creek Geosyncline, comprising Archaean granite and gneiss overlain by Palaeoprotozoic sediments. The major vegetation types are eucalypt tall open forests, typically dominated by Darwin woollybutt (*Eucalyptus miniata*) and Darwin stringybark (*E. tetrodonta*) woodlands, with smaller areas of monsoon rainforest patches, *Melaleuca* woodlands, riparian vegetation and tussock grasslands. The climate is monsoonal with rainfall occurring between the months of November and April, varying greatly from inland areas (1000 mm) to coastal areas (1600 mm).



Pine Creek bioregion, showing eucalypt woodland on stony hills in Stage III of Kakadu National Park. Photo: Alaric Fisher.



Map of NT Bioregions highlighting Pine Creek

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	28456 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	28456 km <sup>2</sup> (2.12%)
Extent of National Parks and other protected areas (% of bioregion area)	12133 km <sup>2</sup> (42.64%)

#### (b) Tenure

Aboriginal freehold	11637 km <sup>2</sup> (41.1%)
Pastoral leases	7334 km <sup>2</sup> (25.9%)
Crown Leases and Vacant Land	2581 km <sup>2</sup> (9.1%)
Other Freehold	2407.5 km <sup>2</sup> (8.5%)
Other tenure	2798.4 km <sup>2</sup> (9.9%)
Defence	1575.4 km <sup>2</sup> (5.6%)

#### (c) Protected areas and extent in Pine Creek

Adelaide River Foreshore Conservation Area (part)	2.44 km <sup>2</sup>
Blackmore River Conservation Reserve (part)	3.52 km <sup>2</sup>

Djukbinj National Park (part)	5.73 km <sup>2</sup>
Kakadu National Park (part)	7887.4 km <sup>2</sup>
Litchfield National Park (part)	570.7 km <sup>2</sup>
Manton Dam Recreation Area	116.5 km <sup>2</sup>
Mary River National Park (Proposed) (part)	619.3 km <sup>2</sup>
Nitmiluk (Katherine Gorge) National Park (part)	2925.8 km <sup>2</sup>
Territory Wildlife Park / Berry Springs Nature Park (part)	1.49 km <sup>2</sup>

#### (d) Off-reserve conservation and land management groups

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program	Greening Australia	Darwin
Conservation Volunteers Australia	Darwin	Various
Coomalie Landcare group		
Darwin River Hills Landcare group		
Jawoyn Landcare	Jawoyn Association Aboriginal Corporation	Katherine
Wagiman Rangers	Pine Creek Aboriginal Advancement Association / Benang Association	Kybrook Farm

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Arnhem Land Aboriginal Land Trust, Bambalmok Aboriginal Corporation, Barnjarn Aboriginal Association, Barnjarn Aboriginal Corporation, Beswick Aboriginal Land Trust, Comm Aust, Delissaville/Wagait/Larrakia Aboriginal Land Trust, Finniss River Aboriginal Land Trust, Gunlom Aboriginal Land Trust, Gurudju Aboriginal Land Trust, Jabiluka Aboriginal Land Trust, Jawoyn Aboriginal Land Trust, Kakadu Aboriginal Land Trust, Limilngan-Wulna (Land Holding) Aboriginal Corporation, Manyallaluk Aboriginal Land Trust, Wagiman (No. 2) Aboriginal Land Trust.

#### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Adelaide River (Kerlin)\*, Ban Ban Springs, Bonrook, Claravale, Douglas, Jindare, Koolpinyah, Marrakai, Mary River, Mary River West, McKinlay River, Mount Keppler, Mount Ringwood, Old Annaburroo\*, Old Mount Bunday.

#### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
74.57	13.0

### 3. Biodiversity in Pine Creek

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Pine Creek. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
1	Closed Forest	63	87.4	26.3	2	1
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	22063	42.9	14.1	8	7
3	Eucalyptus low Woodland with Tussock Grass Understorey	3833	25.5	2.4	1	1

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
4	Eucalyptus Woodland with Hummock Grass Understorey	902	82.3	8.7	2	2
7	Melaleuca Forest and Woodlands	1125	57.0	8.5	1	1
8	Floodplain	416	60.4	24.9	2	2
9	Acacia Woodland	52	0	1.2	1	0

Reservation bias of vegetation in Pine Creek (broad veg/fine veg) 0.10/0.26

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Pine Creek, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia D154771 affin. oncinocarpa			B		100	5	
Acacia malloclada			B, NT	1	100	4	NO
Acacia praetermissa	VU		NT	1	94.7	18	NO
Alyxia evansii			B, NT	2	100	1	
Archidium indicum			B		100	1	
Aristida D139414 affin. Schultzii			B		100	2	
Aristida D146976 Nitmiluk			B		100	6	
Boronia laxa	VU		NT	2	89.3	108	
Boronia rupicola		VU	NT	1	84.8	28	
Boronia tolerans	VU	VU	B, NT	1	100	10	
Boronia verecunda		VU	NT	1	13.3	4	
Boronia xanthastrum		VU	NT		31.6	6	
Calandrinia D125727 Yinberrie Hills			B		100	2	NO
Calytrix faucomolia			B, NT	2	95.9	70	
Calytrix verticillata			B, NT	2	97.8	307	
Chrysopogon sylvaticus			B		100	1	
Clausospicula extensa			B, NT	1	100	11	
Corymbia oocarpa			B, NT		96.7	408	
Cycas armstrongii	VU		NT		22.5	117	
Cyperus D146628 red base			B		100	2	
Cyperus unioloides			B		100	8	
Eleocharis retroflexa		VU			33.3	1	
Endiandra limnophila	VU				2.94	1	
Eragrostis D154396 Nitmiluk			B		100	4	
Eriachne glandulosa			B		100	9	
Euphorbia D154490 Nitmiluk small			B		100	3	
Euphorbia D154491 Nitmiluk large			B		100	6	
Fimbristylis D138471 minuta			B		100	3	NO
Fimbristylis D146583 Latz sp.F			B		100	2	
Fimbristylis D151140 Nitmiluk			B		100	11	
Fimbristylis fimbriystoides			B		100	4	
Galactia A13588 Katherine			B		100	49	
Galactia D154645 short inflorescence			B		100	84	
Goodenia quadrifida	VU		NT	2	50.0	2	
Goodenia subauriculata			B		100	9	
Grevillea longicuspis	VU		NT	2	11.8	38	
Helicteres D148625 Douglas			B		100	5	
Helicteres D2164 Glenluckie Ck	EN	VU	B, NT	2	100	15	

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
<i>Helicteres semiglabra</i>			B		100	1	
<i>Hibbertia D137990 Marrawal</i>			B, NT	1	100	15	
<i>Hibbertia D29598 Nitmiluk</i>			B		100	62	
<i>Hibiscus brennanii</i>	VU		B, NT	1	100	74	
<i>Hibiscus menzeliae</i>			B, NT	2	96.2	127	
<i>Indigofera D146784 Marrawal</i>			B		97.5	39	
<i>Indigofera schultziana</i>	VU		B, NT	2	95.7	45	NO
<i>Isolepis D17576 Nourlangie</i>			B		100	3	
<i>Jacksonia bifida</i>			B, NT	1	100	3	
<i>Jacksonia effusa</i>			B		100	28	
<i>Jacksonia spicata</i>			B, NT	2	96.8	90	
<i>Jasminum simplicifolium</i>			B		100	1	
<i>Lithomyrtus linariifolia</i>	VU		NT		2.04	1	
<i>Lithomyrtus obtusa</i>			B		100	1	NO
<i>Mitrasacme phascoides</i>			B		100	3	
<i>Mitrasacme troglodytica</i>			B, NT	2	100	1	
<i>Murdannia cryptantha</i>			B		100	1	NO
<i>Polygala D44249 Edith Falls</i>			B		97.7	211	
<i>Psydrax pendulina</i>			B		97.9	321	
<i>Ptychosperma macarthurii</i>	EN				4.00	1	
<i>Sauvagesia filicinus</i>		VU	NT	2	6.25	1	
<i>Schoenus D146937 Douglas Springs</i>			B		100	11	
<i>Schoutenia ovata</i>	VU		NT		87.0	20	
<i>Selaginella uliginosa</i>			B		100	5	
<i>Senna procumbens</i>			B, NT	1	100	4	NO
<i>Solanum A55445 Mt Brockman</i>			B		100	7	
<i>Spermacoce reticulata</i>			B, NT	2	100	12	
<i>Spermacoce suprahila</i>			B, NT	2	100	2	NO
<i>Tephrosia D126386 Maud Creek</i>			B		100	5	
<i>Tephrosia D145234 metamorphics</i>			B		100	3	
<i>Tephrosia maculata</i>			B		100	1	NO
<i>Tephrosia phaeosperma x D78772</i>			B		100	1	
Pentecost River							
<i>Thaumastochloa rariflora</i>			B		98.6	141	
<i>Trachymene D21199 Jabiru</i>			B		100	2	
<i>Trachyphyllum inflexum</i>			B		100	1	
<i>Triodia radonensis</i>			B, NT	2	100	3	
<i>Utricularia foveolata</i>			B		100	6	
<i>Utricularia singeriana</i>	VU				60.0	3	
<i>Vallisneria triptera</i>			B		100	12	
<i>Zeuxine oblonga</i>	VU				25.0	2	

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Pine Creek, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Lorentz's Grunter	<i>Pingalla lorentzi</i>	VU			No data	No data	No data
Arnhemland Egernia	<i>Egernia obiri</i>			B, NT	100	2	
Oenpelli Python	<i>Morelia oenpelliensis</i>	VU		NT	42.9	3	
Australian Bustard	<i>Ardeotis australis</i>	VU			4.1	73	
Emu	<i>Dromaius novaehollandiae</i>	VU			4.9	29	
Gouldian Finch	<i>Erythrura gouldiae</i>	EN	EN		47.7	469	

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Masked Owl	Tyto novaehollandiae Kimberli	NT	VU		13.0	3	
Northern Shrike-tit	Falcunculus whitei	DD	VU		21.4	6	
Partridge Pigeon	Geophaps smithii	NT	VU		62.4	977	
Red Goshawk	Erythrociorchis radiatus	VU	VU		16.1	10	
White-throated Grasswren	Amytornis woodwardi	VU		NT	12.3	7	
Yellow Chat	Epthianura crocea tunneyi	EN			10.3	3	
Arnhem Land Rock-rat	Zyzomys maini	VU		NT	36.5	38	
Arnhem Leafnosed Bat	Hipposideros inornata	VU		NT	12.5	1	
Brush-tailed Rabbit-rat	Conilurus penicillatus	VU			7.6	14	
Golden-backed Tree-rat	Mesembriomys macrurus	EN	VU		25.0	1	
Northern Brush-tailed Phascogale	Phascogale pirata	VU			64.7	22	
Northern Quoll	Dasyurus hallucatus	VU			28.3	321	

#### (d) Threatened invertebrates

Species	Common Name	NT Conservation status	Federal Conservation status
Taractrocera ilia ilia	Northern Grassdart Butterfly	VU	

#### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Mammals:** Golden Bandicoot\* (*Isoodon auratus*).

### 4. Management issues and special values in the bioregion

#### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

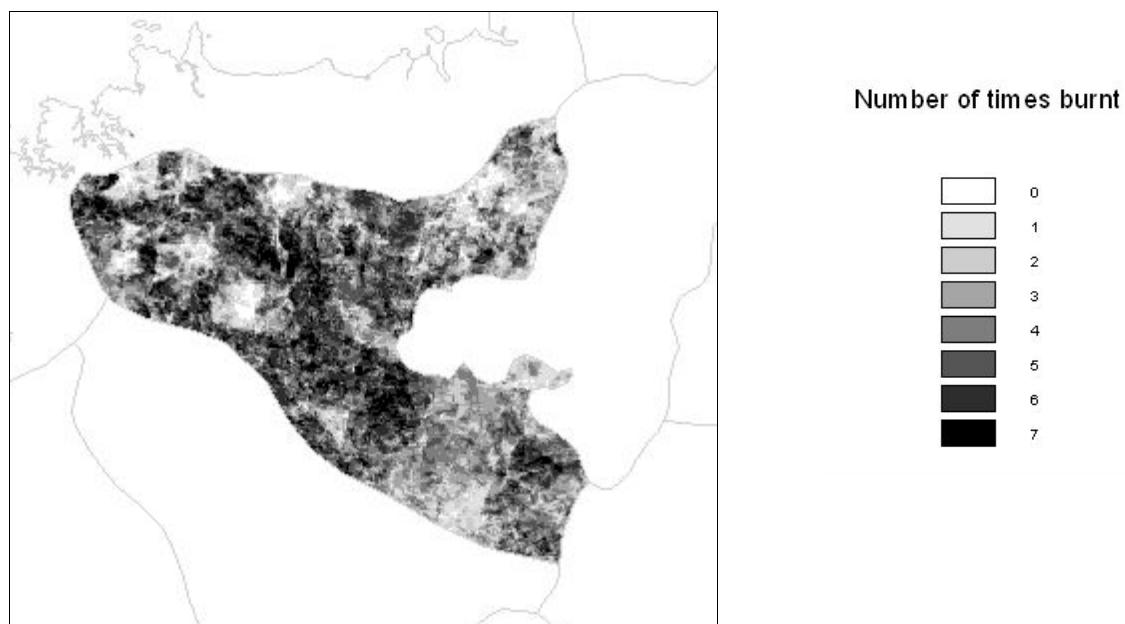
Name	NT weed class	WONS	Habitat
Aleman Grass ( <i>Echinochloa polystachya</i> )	not classed		Seasonal flooded areas, Swamps
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Calopo ( <i>Calopogonium mucunoides</i> )	not classed		Creeks, Monsoon Vine thickets
Centro ( <i>Centrosema molle</i> )	not classed		Disturbed areas, Towns
Coffee Bush ( <i>Leucaena leucocephala</i> )	not classed		Disturbed areas, Towns
Devil's Claw ( <i>Martynia annua</i> )	A		Pastoral, Roads and Tracks
Gamba Grass ( <i>Andropogon gayanus</i> )	not classed		Blocks & gardens, Pastoral, Roads and Tracks
Gambia Pea ( <i>Crotalaria goreensis</i> )	not classed		Roadsides, grazed areas, Riparian
Guinea Grass ( <i>Urochloa maxima</i> )	not classed		Creeks, Roadsides, Towns
Mimosa (Giant Sensitive Plant) ( <i>Mimosa pigra</i> )	A		Pastoral, Water ways and floodplains
Mission grass ( <i>Pennisetum polystachyon</i> )	B		Blocks & gardens, Roads and Tracks, Pastoral
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Para Grass ( <i>Urochloa mutica</i> )	not classed		Floodplains, drainage lines

Name	NT weed class	WONS	Habitat
Parkinsonia (Parkinsonia aculeata)	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Physic nut (Jatropha curcas)	A		Disturbed areas, Towns
Salvinia (Salvinia)	A		Water ways and floodplains
Water hyacinth (Eichornia crassipes)	A		Water ways and floodplains

### (b) Exotic animals in the bioregion and their status

<b>Buffalo</b>	Occurs in the bioregion, but generally localised or uncommon; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Recently established throughout bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Widespread in bioregion; some impacts on water sources and vegetation
<b>Honey bees</b>	Probably widespread in region: impacts uncertain but may affect native plants (through altered pollination regimes), native invertebrates (through competition), and native hollow-dwelling species (through aggressive usurpation of hollows)
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

### (c) Fire histories – number of fires in seven year history 1997-2003



### (d) Wetlands, major rivers and catchments

Directory of important wetlands of Australia (DIWA) listings for Pine Creek

DIWA No.	Wetland Name	Area (ha)	% reserved	Tenure Types
NT017	Kakadu National Park	46240	94.2	Aboriginal Freehold, Crown Land, Other Freehold, Other Tenure

## Pine Creek

NT018	Katherine River Gorge	354.3	97.5	Aboriginal Freehold, Other Freehold
NT020	Adelaide River Floodplain System	5618.7	1.7	Aboriginal Freehold, Crown and Vacant Land, Other Freehold, Pastoral Lease
NT025	Finniss Floodplain and Fog Bay Systems	73.2	0	Crown Land
NT026	Mary Floodplain System	11756	0	Crown Land
NT029	Port Darwin	9.6	100	Other Freehold
NT031	Mount Bundey Training Area – Mary River Floodplain	0.12	0	Other Freehold

The bioregion includes parts of two nationally significant wetland systems: Kakadu NP (NT 017) and Katherine River Gorge (NT018). It is also immediately upstream of three other nationally significant wetlands: the Adelaide River floodplain system (NT020), Mary floodplain system (NT026) and Port Darwin (NT029). In this bioregion, the wetlands are generally in moderately good condition, albeit subject to some level of degradation from feral animals (principally pigs) and weeds. The bioregion also includes a range of other perennial river systems of at least regional significance.

**List of catchments in Pine Creek** – Adelaide River, Daly River, East Alligator River, Finniss River, Mary River, Roper River, South Alligator, Wildman River.

### (e) Rainforests and sites of botanical significance

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Allosyncarpia	126	79.6	96.2
Dry	224	16.8	59.2
Riparian	972	45.2	37.9
Spring	137	11.0	33.9

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
107	49.5	28.9	18.7	27.4

### (f) Important colonies and breeding sites

No sites identified.

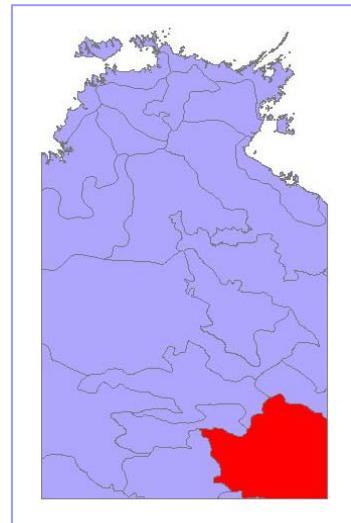
## SIMPSON STRZELECKI DUNEFIELDS (SSD)

### 1. General Description

This bioregion covers a large area in the south-east corner of the Northern Territory, stretching into QLD, SA, and NSW. The bioregion is characterised by a series of large parallel drainage lines running north-east to south-west, following the elevation which drops from 400 m to almost sea level at Lake Thomas. Despite the presence of these drainage lines the area is arid with <300 mm average annual rainfall. The vegetation is dominated by *Triodia basedowii* grassland with *Acacia* tall sparse-shrubland and *Acacia georginae* (Gidgea) low open woodland, and in areas is influenced by the topography of sand dunes which are up to 35 m high. *Triodia* hummock grassland with tall shrubland occurs between dunes and open-hummock grassland occurs on dune crests, while Samphire low open-shrubland fringes bare salt pans.



Simpson Strzelecki Dunefields, showing a swale in east Simpson Desert.  
Photo: Jeff Cole.



Map of NT Bioregions highlighting Simpson Strzelecki Dunefields

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	299162 km <sup>2</sup> (35.4%)
Area of bioregion within NT (% of NT area)	105862 km <sup>2</sup> (7.89%)
Area reserved in entire bioregion (% of bioregion area)	77320 km <sup>2</sup> (25.8%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	31 km <sup>2</sup> (0.03%)

#### (b) Tenure

Aboriginal freehold	29577 km <sup>2</sup> (28.0%)
Pastoral leases	30928 km <sup>2</sup> (29.2%)
Crown Leases and Vacant Land	45124 km <sup>2</sup> (42.7%)
Other Freehold	80 km <sup>2</sup> (0.08%)
Other tenure	30.6 km <sup>2</sup> (0.03%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Simpson Strzelecki Dunefields

Mac Clark ( <i>Acacia peuce</i> ) Conservation Reserve	30.6 km <sup>2</sup>
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#### (d) Off-reserve conservation and land management groups

None listed for this bioregion.

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Atnetye Aboriginal Land Trust, Melkngé Aboriginal Land Trust, Pmer Ulperre Ingwemirne Arletherre Aboriginal Land Trust, Pmere Nyente Aboriginal Land Trust, Santa Teresa Aboriginal Land Trust, Uretyingke Aboriginal Land Trust, Yewerre Aboriginal Land Trust.

#### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Allambi, Andado, Horseshoe Bend, Indiana, Jervois, Jinka, Lilla Creek, Loves Creek, Marqua, New Crown, Numery, Ringwood, Tarlton Downs, Tobermorey, Todd River, Undoolya.

#### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.24	0.73

### 3. Biodiversity in Simpson Strzelecki Dunefields

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Simpson Strzelecki Dunefields. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	1944	0	2.4	1	0
9	Acacia Woodland	10805	0.11	1.2	10	1
10	Hummock Grassland	90730	0	1.5	6	0
13	Chenopod Shrublands	2384	0.78	1.4	3	1

Reservation bias of vegetation in Simpson Strzelecki Dunefields (broad veg/fine veg) 0.88/0.98

#### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Simpson Strzelecki Dunefields, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia D7472 Indiana Station			B		100	3	NO
Acacia desmondii			B, NT	2	100	21	NO
Acacia peuce	EN	VU	B, NT		100	13	
Acacia pickardii	VU	VU	B, NT		100	12	NO
Arabidella procumbens			B		100	2	NO
Atriplex eardleyae			B		100	3	NO
Atriplex intermedia			B		100	1	

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Atriplex morrisii			B, NT		100	2	NO
Centipeda cunninghamii			B		100	1	NO
Cyperus laevigatus			B		100	1	NO
Eleocharis papillosa	VU		NT		15.4	2	
Endocarpus helmsianum			B		100	1	NO
Frankenia cupularis			B		100	2	NO
Maireana eriantha			B		100	1	NO
Minuria tridens	VU	VU	NT		8.00	2	
Sida carinatus			B		100	1	NO
Teucrium albicaule			B		100	4	NO

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Simpson Strzelecki Dunefields, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Australian Bustard	Ardeotis australis	VU			2.6	46	
Australian Painted Snipe	Rostratula australis	VU	VU		5.9	1	
Emu	Dromaius novaehollandiae	VU			7.2	42	
Eyrean Grasswren	Amytornis goyderi			B	98.5	65	NO
Ampurta	Dasyurus hallucinus	VU	EN	B	100	26	NO
Black-footed Rock-wallaby	Petrogale lateralis	NT	VU		0.53	3	
Mulgara	Dasyurus cristicauda	VU	VU		29.8	115	
Plains Mouse	Pseudomys australis	EN	VU		93.5	43	

### (d) Threatened invertebrates

Species	Common Name	NT Conservation status	Federal Conservation status
Pillomena aemula	(snail)	VU	

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Birds:** Night Parrot\* (*Pezoporus occidentalis*); **Mammals:** Bilby\* (*Macrotis lagotis*), Common Brushtail Possum\* (*Trichosurus vulpecula*), Desert Bandicoot (*Perameles eremiana*), Dusky Hopping-mouse (*Notomys fuscus*), Golden Bandicoot\* (*Isoodon auratus*), Lesser Bilby (*Macrotis leucura*), Lesser Stick-nest Rat (*Leporillus apicalis*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Short-tailed Hopping-mouse (*Notomys amplus*), Western Quoll (*Dasyurus geoffroii*).

## 4. Management issues and special values in the bioregion

### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat

## Simpson Strzelecki Dunefields

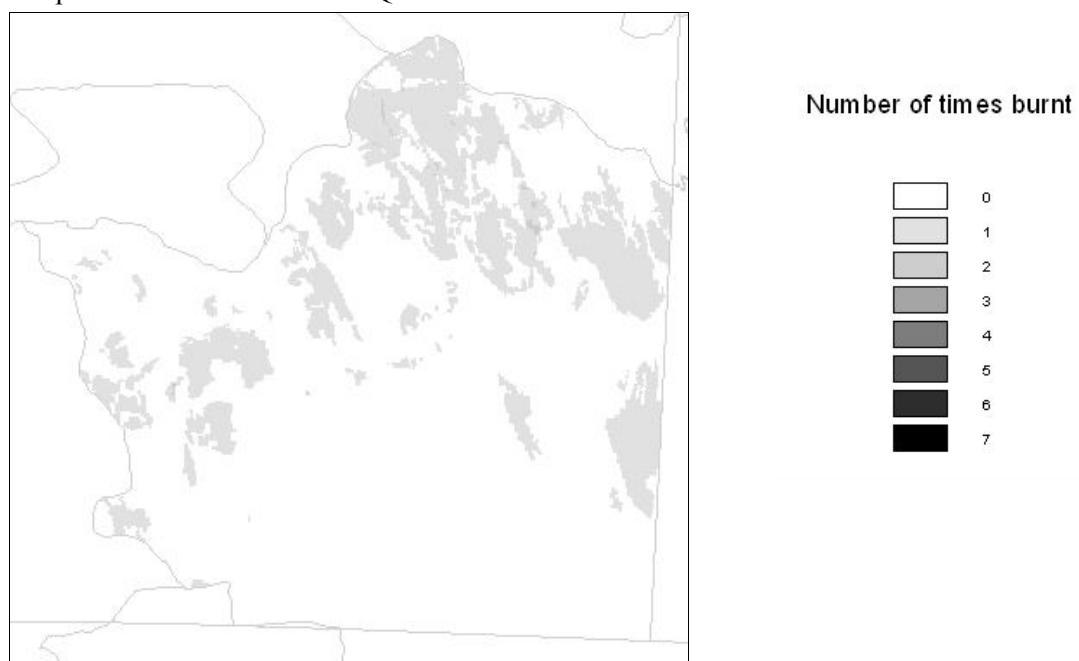
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed	Disturbed areas, Towns, Roads, swamp margins
Castor Oil Plant ( <i>Ricinus communis</i> )	not classed	Roads, Riparian, Flood areas
Mexican poppy ( <i>Argemone ochroleuca</i> )	B	Blocks & gardens, Roads and Tracks, Waterways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B	Blocks & gardens, Pastoral, Roads and Tracks
Ruby Dock ( <i>Acetosa vesicaria</i> )	not classed	

## (b) Exotic animals in the bioregion and their status

<b>Arabian camel</b>	High and increasing populations, with detriment to vegetation and water sources
<b>Cat</b>	Serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Present but relatively uncommon; may be some localised impacts on water sources and vegetation
<b>Fox</b>	Serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Horse</b>	Present but relatively uncommon; may be some localised impacts on water sources and vegetation
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>Rabbit</b>	Formerly at very high densities, causing severe environmental detriment: now at least partly controlled

## (c) Fire histories – number of fires in seven year history 1997-2003

NT part shown on border with Queensland and South Australia



## (d) Wetlands, major rivers and catchments

No Directory of Important Wetlands of Australia listed in this bioregion.

**Other important wetlands in Simpson Strzelecki Dunefields (potential DIWA listings)**

<b>Wetland name</b>	<b>Reference number</b>
Casuarina Swamp	NT-potential-14
Field River Floodout and other swamps	NT-potential-37
Indemina Swamp	NT-potential-40
Indinda Swamp	NT-potential-35
Northern Simpson Desert Area Lakes	NT-potential-52
Snake Creek Interdune Floodout Lakes	NT-potential-10

**List of catchments in Simpson Strzelecki Dunefields** – Finke River, Georgina River, Hay River, Todd River.

**(e) Rainforests and sites of botanical significance**Sites of botanical significance (White *et al.* 2000)

<b>Site No</b>	<b>Name</b>	<b>Significance</b>
24-5-1	Allitra Tablelands	National
25-5-1	Andado	National
24-5-2	Arookara Range	National
25-5-PL1	Dakota	Undetermined
23-4-13	Emily Gap	Bioregional
23-5-PL1	Gidgee Bore	Undetermined
24-6-PL1	Hay River Floodout	Undetermined
22-5-1	Jervois Range	Bioregional
23-6-PL1	Lake Caroline	Undetermined
25-6-1	Lake Poeppel	Bioregional
24-4-2	Mount Capitor	Bioregional
24-5-3	Old Todd River Floodout	Bioregional
24-6-1	Prior floodout of the Plenty River	Bioregional
24-4-1	Rodinga	National
25-4-2	Rumbalara	Bioregional
23-4-PL1	Santa Teresa	Undetermined
23-4-5	Trephina	National
25-5-2	Wilyunpa Tablelands	National
23-4-8	Wyeecha	Bioregional

**(f) Important colonies and breeding sites**

No sites identified.

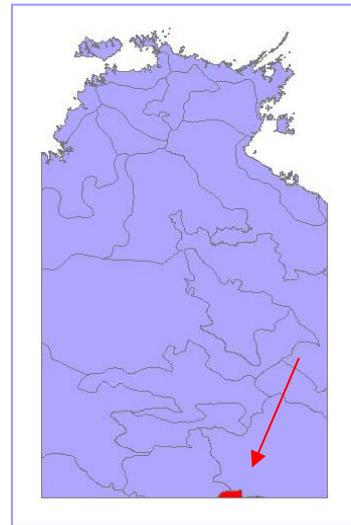
## **STONY PLAINS (STP)**

### **1. General Description**

This is an arid bioregion, occupying a small area in the Northern Territory on the south east margin of the Simpson Desert and crossing into South Australia where it stretches as far south as the Flinders Ranges. It is characterised by stony or gibber plains with deep sands and red duplex soils. Vegetation is mainly Acacia low open-woodland with areas of Atriplex shrubland and Chenopod open-herbland. Elevation in the bioregion is between 100 and 250 m. The Finke River and Coglin Creek occur in the bioregion. The small area is divided into two subregions, Breakaways and Macumba.



Stony Plains at Newcrown Station.



Map of NT Bioregions highlighting Stony Plains

### **2. Tenure, reservation and land use**

#### **(a) Area**

Total size of bioregion (% within NT)	137651 km <sup>2</sup> (1.2%)
Area of bioregion within NT (% of NT area)	1715 km <sup>2</sup> (0.13%)
Area reserved in entire bioregion (% of bioregion area)	9810 km <sup>2</sup> (7.1%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	0 km <sup>2</sup> (0%)

#### **(b) Tenure**

Aboriginal freehold	138.6 km <sup>2</sup> (8.1%)
Pastoral leases	1533.2 km <sup>2</sup> (89.9%)
Crown Leases and Vacant Land	0 km <sup>2</sup> (0%)
Other Freehold	0 km <sup>2</sup> (0%)
Other tenure	33.1 km <sup>2</sup> (1.9%)
Defence	0 km <sup>2</sup> (0%)

#### **(c) Protected areas and extent in Stony Plains**

None listed for this bioregion.

#### (d) Off-reserve conservation and land management groups

None listed for this bioregion.

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Apatula Aboriginal Land Trust, Pmer Ulperre Ingwemirne Arletherre Aboriginal Land Trust.

#### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Andado, New Crown.

#### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.62	-

### 3. Biodiversity in Stony Plains

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Stony Plains. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
9	Acacia Woodland	811	0	1.2	4	0
10	Hummock Grassland	119	0	1.5	1	0
13	Chenopod Shrublands	782	0	1.4	2	0

Reservation bias of vegetation in Stony Plains (broad veg/fine veg) unreserved

#### (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Stony Plains, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Anemocarpa podolepidium			B		100	4	NO
Atriplex incrassata			B		100	1	NO
Eremophila rotundifolia			B		100	1	NO
Gunniopsis papillata			B		100	2	NO
Maireana ciliata			B		100	1	NO
Pycnosorus pleiocephalus			B		100	2	NO
Rhodanthe uniflora			B		100	2	NO

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Stony Plains, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Australian Bustard	Ardeotis australis	VU			0.17	3	
Emu	Dromaius novaehollandiae	VU			0.34	2	
Thick-billed Grasswren	Amytornis textilis	EN	VU		14.3	1	
Mulgara	Dasyurus cristicauda	VU	VU		1.0	4	
Plains Mouse	Pseudomys australis	EN	VU		6.5	3	
Southern Marsupial Mole	Notoryctes typhlops	VU	EN		6.8	3	

### (d) Threatened invertebrates

None listed for this bioregion.

### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

Bronzeback Snake-lizard (*Ophidiocephalus taeniatus*), Bilby\* (*Macrotis lagotis*), Common Brushtail Possum\* (*Trichosurus vulpecula*), Desert Bandicoot (*Perameles eremiana*), Dusky Hopping-mouse (*Notomys fuscus*), Fawn Hopping-mouse\* (*Notomys cervinus*), Golden Bandicoot\* (*Isoodon auratus*), Lesser Bilby (*Macrotis leucura*), Lesser Stick-nest Rat (*Leporillus apicalis*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Short-tailed Hopping-mouse (*Notomys amplus*), Western Quoll (*Dasyurus geoffroii*).

## 4. Management issues and special values in the bioregion

### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

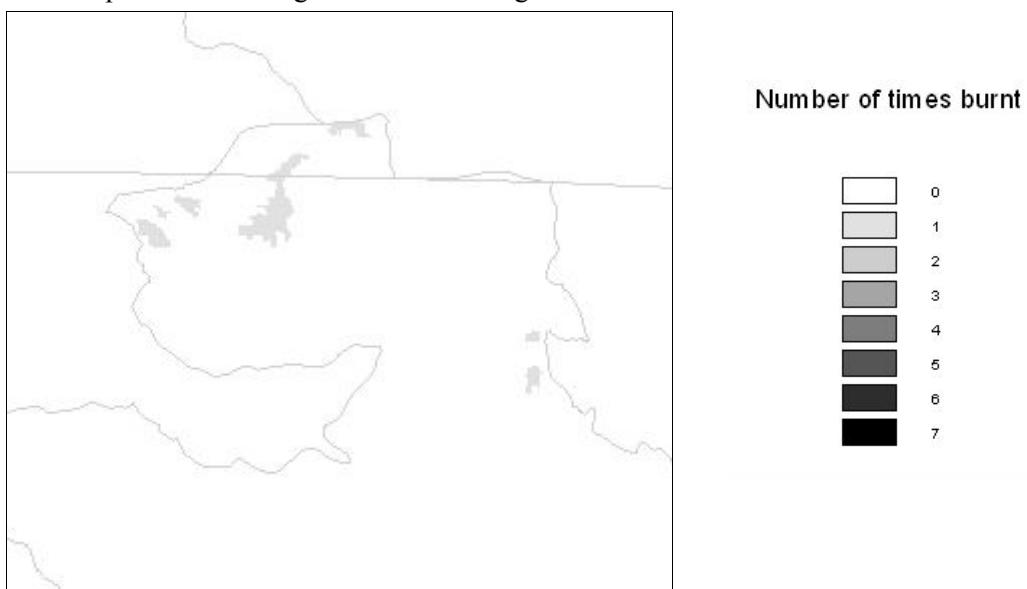
Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Castor Oil Plant ( <i>Ricinus communis</i> )	not classed		Roads, Riparian, Flood areas

### (b) Exotic animals in the bioregion and their status

<b>Arabian camel</b>	Widespread and probably increasing; with detriment to vegetation and water sources
<b>Cat</b>	Widespread, but probably at relatively low densities: probably substantial impacts on small mammals, reptiles and ground-dwelling birds
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Present but relatively uncommon; may be some localised impacts on water sources and vegetation
<b>Fox</b>	Serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Horse</b>	Present but relatively uncommon; may be some localised impacts on water sources and vegetation
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.

**(c) Fire histories – number of fires in seven year history 1997-2003**

A small part of the bioregion is shown along the southern NT border

**(d) Wetlands, major rivers and catchments**

No Directory of Important Wetlands of Australia listed in this bioregion.

Other important wetlands in Stony Plains (potential DIWA listings)

Wetland name	Reference number
Duffield Swamp	NT-potential-49
Finke Floodout Forest	NT-potential-21
Skull Creek Swamps (New Crown)	NT-potential-34

**List of catchments in Stony Plains – Finke River, Hay River.****(e) Rainforests and sites of botanical significance**Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
25-4-1	Beddome Range	National
25-5-PL1	Dakota	Undetermined
25-5-2	Wilyunpa Tablelands	National

**(f) Important colonies and breeding sites**

No sites identified.

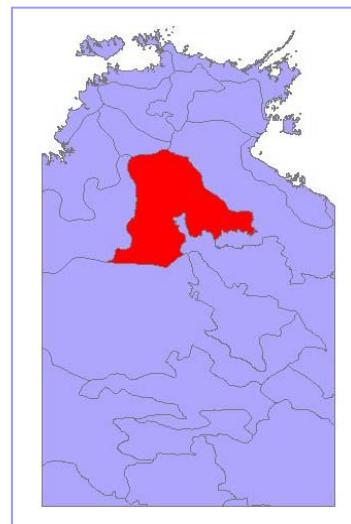
## STURT PLATEAU (STU)

### 1. General Description

The Sturt Plateau bioregion mostly comprises a gently undulating plain on lateritised Cretaceous sandstones. Soils are predominantly neutral sandy red and yellow earths. The most extensive vegetation is eucalypt woodland with tussock grass or *Triodia* understorey, but there are also large areas of lancewood (*Acacia shirleyi*) thickets, and bullwaddy (*Macropteranthes kekwickii*) woodlands. Elevation ranges from 100 to 300 m above sea level. The Sturt Plateau lies over the Dunmurra, Daly, Wiso, and McArthur Basins, where Tertiary formed laterites of the Birdum Creek Beds and Cainozoic deposited sands occur. The bioregion is divided into 3 subregions.



Sturt Plateau, showing *Eucalyptus capricornia* open-woodland with a *Triodia bitextura* understorey. Photo: Alaric Fisher.



Map of NT Bioregions highlighting Sturt Plateau

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	97809 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	97809 km <sup>2</sup> (7.29%)
Extent of National Parks and other protected areas (% of bioregion area)	204 km <sup>2</sup> (0.21%)

#### (b) Tenure

Aboriginal freehold	24496 km <sup>2</sup> (25.1%)
Pastoral leases	69050 km <sup>2</sup> (70.7%)
Crown Leases and Vacant Land	1857.8 km <sup>2</sup> (1.9%)
Other Freehold	290 km <sup>2</sup> (0.3%)
Other tenure	41.5 km <sup>2</sup> (0.04%)
Defence	1911 km <sup>2</sup> (2.0%)

#### (c) Protected areas and extent in Sturt Plateau

Bullwaddy Conservation Reserve	114.5 km <sup>2</sup>
Elsey National Park (part)	89.6 km <sup>2</sup>
Frew Ponds Historical Reserve	0.1 km <sup>2</sup>

#### (d) Off-reserve conservation and land management groups

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program	Greening Australia	Darwin
Roper River Land Care Group		Katherine
Sturt Plateau Best Practice Group		

#### (e) List of Aboriginal Land Trusts (\*managed as pastoral properties)

Central Desert Aboriginal Land Trust, Dillinya Aboriginal Land Trust, Karlantijpa North Aboriginal Land Trust, Mangarrayi Aboriginal Land Trust, Mataranka Aboriginal Land Trust, Murranji Aboriginal Land Trust, The Northern Land Council (Mambaliya Rrumburriya Wuyaliya Aboriginal Land Trust)\* (Balbarini/Robinson River), Wampana – Karlantijpa Aboriginal Land Trust, Wampaya Association Incorporated, Wubalawun Aboriginal Land Trust\*, Yingawunari Mudbura Aboriginal Land Trust.

#### (f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)

Amungee Mungee, Avago, Beetaloo, Birdum Creek, Birrimba, Bloodwood Downs, Buchanan Downs, Camfield, Cave Creek\*, Cattle Creek, Cow Creek, Delamere, Dry River, Dungowan, East Mathison, Gilnockie, Gorrie, Hayfield, Hidden Valley, Hodgson River, Kalala, Killarney, Lakefield, Larrizona, Mallapunyah Springs, Manbulloo, Margaret Downs, Maryfield, Middle Creek, Montejinni East, Mungabroom, Murranji, Nenen, Newcastle Waters, Nutwood Downs, Powell Creek, Scott Creek, Shenandoah, Stillwaters\*, Sunday Creek, Tandyidgee, Tanumbirini, Tarlee, Ucharonidge, Vermelha, Wave Hill, West Mathison, Western Creek, Willeroo, Wyworrie.

#### (g) Mean unit value of land

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
1.85	2.22

### 3. Biodiversity in Sturt Plateau

#### (a) Vegetation

Extent and level of reservation of broad vegetation types in Sturt Plateau. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	25677	0.09	14.1	5	3
3	Eucalyptus low Woodland with Tussock Grass Understorey	22944	0.02	2.4	6	2
4	Eucalyptus Woodland with Hummock Grass Understorey	5202	0	8.7	2	0
5	Mixed Species low open Woodland	501	0	9.9	2	0
7	Melaleuca Forest and Woodlands	192	33.1	8.5	2	2
9	Acacia Woodland	23343	0.48	1.2	3	1
10	Hummock Grassland	18731	0	1.5	2	0
11	Tussock Grassland	1082	0	0.9	2	0
13	Chenopod Shrublands	134	0	1.4	1	0

Reservation bias of vegetation in Sturt Plateau (broad veg/fine veg) 0.63/0.75

**(b) Significant Plant Species**

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Sturt Plateau, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Capparis lucida			B		100	1	NO
Cycas armstrongii	VU		NT		0.19	1	
Iseilema trichopus			B		100	1	NO
Isotoma D58137 tanumbirini			B		100	2	NO
Lepturus xerophilus			B		100	5	

**(c) Significant Vertebrate Species**

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Sturt Plateau, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
New Guinea Long-necked Turtle	Chelodina canni			?	100	2	NO
Australian Bustard	Ardeotis australis	VU			6.5	115	
Australian Painted Snipe	Rostratula australis	VU	VU		5.9	1	
Emu	Dromaius novaehollandiae	VU			0.85	5	
Gouldian Finch	Erythrura gouldiae	EN	EN		0.51	5	
Northern Shrike-tit	Falcunculus whitei	DD	VU		28.6	8	
Purple-crowned Fairy-wren	Malurus coronatus coronatus	NT	VU		0.5	1	
Red Goshawk	Erythrotriorchis radiatus	VU	VU		8.1	5	
Bilby	Macrotis lagotis	VU	VU		4.1	20	NO

**(d) Threatened invertebrates**

Species	Common Name	NT Conservation status	Federal Conservation status
Setobaudinia victoriana	(snail)	VU	

**(e) Animals Extinct in this bioregion (\*still present in other NT bioregions)**

**Mammals:** Carpentarian Antechinus\* (*Pseudantechinus mimulus*), Golden Bandicoot\* (*Isoodon auratus*), Northern Quoll\* (*Dasyurus hallucatus*), Western Quoll (*Dasyurus geoffroii*).

**4. Management issues and special values in the bioregion****(a) Significant exotic plants in the bioregion**

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

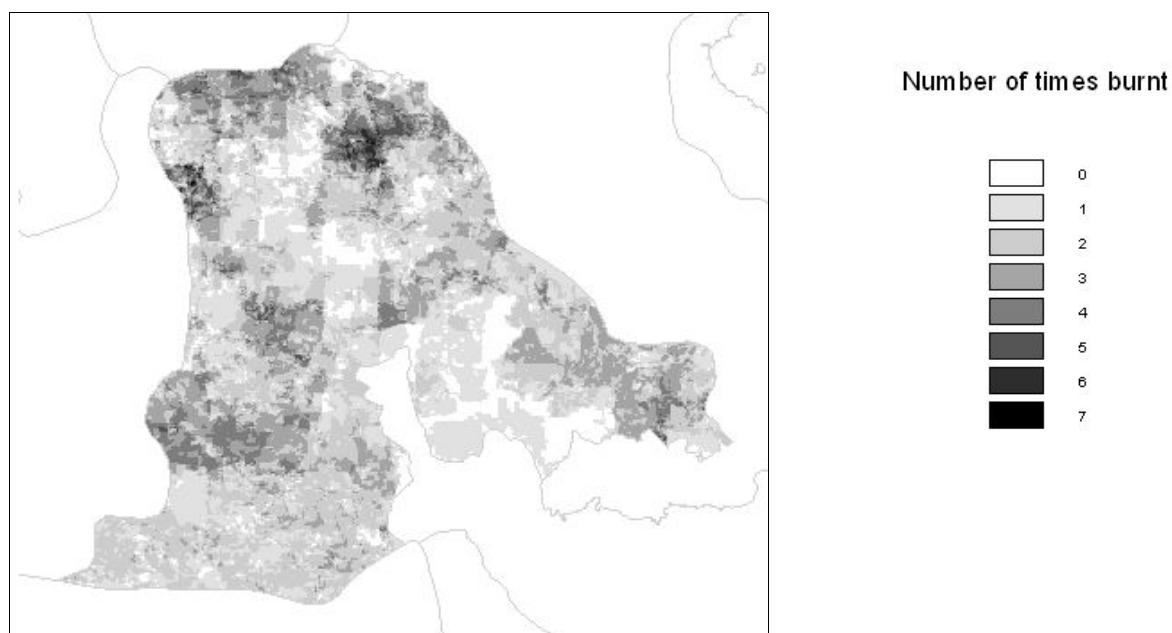
Name	NT weed class	WONS	Habitat

Barleria (Barleria prionitis)	A	Towns, disturbed areas	
Buffel Grass (Cenchrus ciliaris)	not classed	Disturbed areas, Towns, Roads, swamp margins	
Gambia Pea (Crotalaria goreensis)	not classed	Roadsides, grazed areas, Riparian	
Mesquite (Prosopis limensis)	B	WONS	Pastoral, Water ways and floodplains
Paddy's Lucerne (Sida rhombifolia)	B		Blocks & gardens, Pastoral, Roads and Tracks
Para Grass (Urochloa mutica)	not classed	Floodplains, drainage lines	
Parkinsonia (Parkinsonia aculeata)	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens

### (b) Exotic animals in the bioregion and their status

<b>Arabian camel</b>	In the far southern portion of the bioregion widespread and probably increasing; with detriment to vegetation and water sources
<b>Cane toad</b>	Recently established in bioregion: detrimental impacts upon a range of animal species, such as quolls, goannas, and snakes.
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	At high densities in parts of this bioregion, with serious detriment to vegetation and water sources
<b>Fox</b>	Gradually increasing in range into the southern end of the bioregion; potentially significant impact on biodiversity including threatened mammals.
<b>Honey bees</b>	Probably widespread in region: impacts uncertain but may affect native plants (through altered pollination regimes), native invertebrates (through competition), and native hollow-dwelling species (through aggressive usurpation of hollows)
<b>Horse</b>	Same as for donkeys

### (c) Fire histories – number of fires in seven year history 1997-2003



### (d) Wetlands, major rivers and catchments

No Directory of Important Wetlands of Australia are listed in this bioregion.

## *Sturt Plateau*

There are a number of small wetlands associated with the intermittent drainage systems throughout the bioregion, and some of these probably have regional value for flora and fauna. Apart from these, two nationally significant wetlands occur just outside this bioregion: Lake Woods wetland (NT013) occurs on the border of this bioregion and the Mitchell Grass Downs bioregion; and the Mataranka Thermal Pools (NT003) occurs on the border of this bioregion and the Gulf Fall and Uplands bioregion.

**List of catchments in Sturt Plateau** – Barkly Basin, Daly River, Limmen Bight River, McArthur River, Roper River, Victoria River, Wiso Basin.

### **(e) Rainforests and sites of botanical significance**

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	13	0.6	0.0
Riparian	10	0.2	50.5
Spring	12	0.5	0.0

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
26	73.1	23.1	0	4

### **(f) Important colonies and breeding sites**

No sites identified.

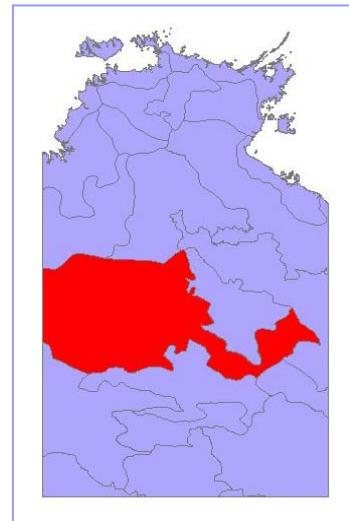
## TANAMI (TAN)

### 1. General Description

The Tanami bioregion comprises mainly red Quaternary sandplains overlying Permian and Proterozoic strata which are exposed locally as hills and ranges. The sandplains support mixed shrub steppes of *Hakea suberea*, desert bloodwoods, acacias and grevilleas over *Triodia pungens* hummock grasslands. *Acacia* shrublands over hummock grass communities occur on the ranges. Alluvial and lacustrine calcareous deposits occur throughout. In the north they are associated with Sturt Creek drainage, and support *Chrysopogon* and *Iseilema* short-grasslands often as savannas with River Gum. The climate is arid tropical with summer rain. The Tanami bioregion is divided into three subregions.



Tanami, showing spinifex with a sparse shrubland overstorey of acacias. Photo: Peter Latz.



Map of NT Bioregions highlighting Tanami

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	258224 km <sup>2</sup> (88.4%)
Area of bioregion within NT (% of NT area)	228261 km <sup>2</sup> (17%)
Area reserved in entire bioregion (% of bioregion area)	4070 km <sup>2</sup> (1.6%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	0 km <sup>2</sup> (0%)

#### (b) Tenure

Aboriginal freehold	179953 km <sup>2</sup> (78.9%)
Pastoral leases	41126 km <sup>2</sup> (18.0%)
Crown Leases and Vacant Land	7032.9 km <sup>2</sup> (3.1%)
Other Freehold	0 km <sup>2</sup> (%)
Other tenure	<0.1 km <sup>2</sup> (0%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Tanami

None listed for this bioregion.

**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program Julalikari Burumana Landcare	Greening Australia Julalikari Burumana Aboriginal Corporation	Darwin Kalumpurlpa

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Ahakeye Aboriginal Land Trust (Ti Tree), Aherrenge Aboriginal Land Trust, Alyawarra Aboriginal Land Trust, Angarapa Aboriginal Land Trust, Anurrette Aboriginal Land Trust, Arruwurra Aboriginal Corporation, Atnwengerrpe (NTP 3802) Aboriginal Land Trust, Central Desert Aboriginal Land Trust, Hooker Creek Aboriginal Land Trust, Iliyarde Aboriginal Land Trust, Irrmarne Aboriginal Land Trust, Kanttaji Aboriginal Land Trust, Karlantijpa North Aboriginal Land Trust, Karlantijpa South Aboriginal Land Trust, Lake Mackay Aboriginal Land Trust, Mala Aboriginal Land Trust (Chilla Well), Mangkurrrpa Aboriginal Land Trust (Tanami Downs), Mount Frederick Aboriginal Land Trust, Mt Frederick (No.2) Aboriginal Land Trust, Muckaty Aboriginal Land Trust (Muckaty), Mungkarta 2 Aboriginal Land Trust, Mungkarta Aboriginal Land Trust (McLaren Creek), Purta Aboriginal Land Trust, Warrabri Aboriginal Land Trust, Warumungu Aboriginal Land Trust, Wirliyajarrayi Aboriginal Land Trust (Willowra), Yingalyalya Aboriginal Land Trust, Yiningarra Aboriginal Land Trust, Yuendumu Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Ammaroo, Annингie, Annitowa, Argadargada, Birrindudu, Burramurra, Coniston, Derry Downs, Elkdra, Georgina Downs, Helen Springs, Lake Nash, Macdonald Downs, Mount Denison, Mount Doreen, Mount Skinner, Murray Downs, Neutral Junction, Ooratippa, Phillip Creek, Powell Creek, Riveren, Singleton, Soudan, Stirling, Suplejack, Tennant Creek, Wallamunga, Wave Hill, West Ranken.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.19	0.86

**3. Biodiversity in Tanami**

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Tanami. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
3	Eucalyptus low Woodland with Tussock Grass Understorey	3863	0	2.4	3	0
4	Eucalyptus Woodland with Hummock Grass Understorey	10354	0	8.7	7	0
7	Melaleuca Forest and Woodlands	922	0	8.5	1	0
9	Acacia Woodland	5859	0	1.2	8	0
10	Hummock Grassland	204069	0	1.5	6	0
11	Tussock Grassland	1519	0	0.9	3	0
13	Chenopod Shrublands	1675	0	1.4	3	0

Reservation bias of vegetation in Tanami (broad veg/fine veg)

unreserved

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Tanami, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acacia sabulosa			B		100	3	NO
Acacia stellaticeps			B		100	7	NO
Acacia synchronicia			B		100	2	NO
Acacia wiseana			B		95.7	22	NO
Byblis rorida			B		100	1	NO
Calotis xanthosioidea			B		100	1	NO
Cleome uncifera			B		100	2	NO
Coleocoma centaurea			B		100	14	NO
Comesperma A77288 Tanami			B		100	8	NO
Corynotheca asperata			B, NT		100	4	NO
Eleocharis papillosa	VU		NT		23.1	3	
Glycine pullenii			B		100	6	NO
Heliotropium parviantrum			B		100	1	NO
Indigofera ammobia			B		100	7	NO
Lawrenция A97163 The Granites			B		100	1	NO
Marsilea latzii			B, NT	1	100	4	NO
Pityrodia chorisepala			B, NT		100	1	NO
Polymeria A93357 Western Tanami			B		100	1	NO
Spermacoce resinosula			B		100	2	NO
Tephrosia benthamii			B		100	2	NO

## (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Tanami, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Great Desert Skink	Egernia kintorei	VU	VU		63.2	36	
Australian Bustard	Ardeotis australis	VU	VU		25.0	441	
Australian Painted Snipe	Rostratula australis	VU	VU		11.8	2	
Emu	Dromaius novaehollandiae	VU			21.5	126	
Masked Owl	Tyto novaehollandiae kimberli	NT	VU		4.3	1	
Night Parrot	Pezoporus occidentalis	CR	EN		50	1	
Princess Parrot	Polytelis alexandri	VU	VU		11.8	2	
Red Goshawk	Erythrotriorchis radiatus	VU	VU		1.6	1	
Bilby	Macrotis lagotis	VU	VU		68.8	335	NO
Black-footed Rock-wallaby	Petrogale lateralis	NT	VU		2.8	16	
Common Brushtail Possum	Trichosurus vulpecula vulpecula	EN			6.1	13	
Mulgara	Dasyurus cristicauda	VU	VU		36.0	139	
Southern Marsupial Mole	Notoryctes typhlops	VU	EN		4.5	2	

## (d) Threatened invertebrates

None listed for this bioregion.

**(e) Animals Extinct in this bioregion (\*still present in other NT bioregions)**

**Mammals:** Brush-tailed Bettong (*Bettongia penicillata*), Burrowing Bettong (*Bettongia lesueur*), Central Hare-wallaby (*Lagorchestes asomatus*), Central Rock-rat\* (*Zyzomys pedunculatus*), Crescent Nailtail Wallaby (*Onychogalea lunata*), Desert Bandicoot (*Perameles eremiana*), Golden Bandicoot\* (*Isoodon auratus*), Lesser Bilby (*Macrotis leucura*), Mala (*Lagorchestes hirsutus*), Pig-footed Bandicoot (*Chaeropus ecaudatus*), Red-tailed Phascogale (*Phascogale calura*), Short-tailed Hopping-mouse (*Notomys amplus*), Western Quoll (*Dasyurus geoffroii*).

**4. Management issues and special values in the bioregion**

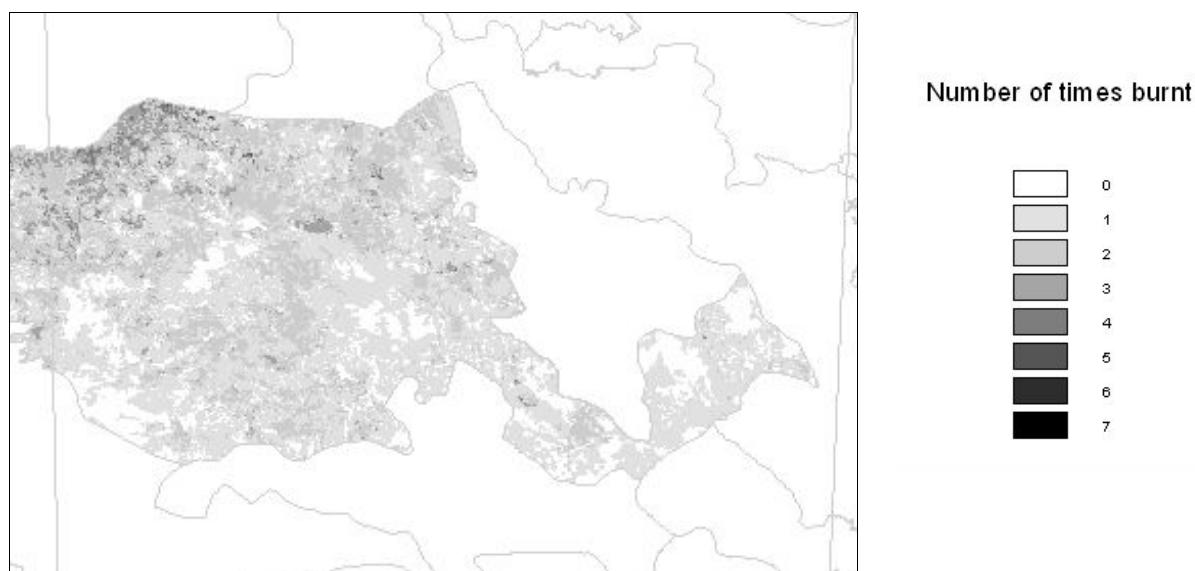
**(a) Significant exotic plants in the bioregion**

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Mesquite ( <i>Prosopis limensis</i> )	B	WONS	Pastoral, Water ways and floodplains
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens
Ruby Dock ( <i>Acetosa vesicaria</i> )	not classed		

**(b) Exotic animals in the bioregion and their status**

<b>Arabian camel</b>	High and increasing populations, with detriment to vegetation and water sources
<b>Cat</b>	serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Donkey</b>	Present but relatively uncommon; may be some localised impacts on water sources and vegetation
<b>Fox</b>	serious pest, especially affecting small and medium-sized mammals, reptiles and ground-dwelling birds
<b>Horse</b>	Present but relatively uncommon; may be some localised impacts on water sources and vegetation
<b>House mouse</b>	Widespread across much of the bioregion, occasionally in very high numbers; impacts upon biodiversity uncertain.
<b>Rabbit</b>	Formerly at very high densities, causing severe environmental detriment: now at least partly controlled

**(c) Fire histories – number of fires in seven year history 1997-2003****(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Tanami

DIWA No.	Wetland Name	Area (ha)	% reserved	Tenure Types
NT019	Lake Surprise (Yinapaka)	1820.2	0	Aboriginal Freehold

Other important wetlands in Tanami (potential DIWA listings)

Wetland name	Reference number
Ancient Swamp	NT-potential-50
Elkedra River Floodout Swamps	NT-potential-11
Lander River Floodout Swamps and Waterholes	NT-potential-25
Sanctuary Swamp	NT-potential-46
Sandover Highway Wooded Swamp	NT-potential-48
Warrabri Swamp – Skinner Creek Floodout	NT-potential-43
Wilson Creek Floodout Swamp	
Wycliffe Creek Floodouts	NT-potential-31

The bioregion includes two nationally significant wetlands: Lake Surprise (Yinapaka) (NT019) and the Lake Gregory system (WA096). The bioregion also contains many smaller ephemeral wetlands and watercourses, which are intermittently of at least regional significance.

**List of catchments in Tanami** – Barkly Basin, Georgina River, Mackay Basin, Wiso Basin.

**(e) Rainforests and sites of botanical significance**

Sites of botanical significance (White *et al.* 2000)

Site No	Name	Significance
20-4-2	Algoolgoora Swamp	Bioregional
18-1-PL2	Birrindudu Range	Undetermined
20-1-PL1	Bluebush Hills	Undetermined

<b>Site No</b>	<b>Name</b>	<b>Significance</b>
18-1-PL1	Browns Range	Undetermined
19-2-PL1	Central Tanami Paleodrainage Depression	Undetermined
21-3-PL1	Central Tanami Remnant Mulga	Undetermined
19-1-3	Coomarie	Bioregional
20-1-2	Dead Bullock Soak	Bioregional
21-5-3	Elkedra River Floodout	Bioregional
21-1-1	False Mount Russell	Bioregional
19-1-1	Gardiner Range	Bioregional
18-2-1	Hooker Creek and Floodout	Bioregional
19-1-PL1	Lake Buck	Undetermined
20-2-1	Lake Surprise and the Lander River Floodout	National
20-1-PL3	Lake White	Undetermined
19-4-3	Little Lake Surprise (Ngwrratiji)	Bioregional
20-1-4	Mongrel Downs	Bioregional
21-3-PL2	Nanga Range	Undetermined
20-4-PL1	Numagalong Dunes	Undetermined
21-4-1	Osborne and Crawford Ranges	National
20-3-1	Paleo-Lander River	Bioregional
19-1-2	Pargee	Bioregional
20-1-PL2	Tanami Paleodrainage System Extension	Undetermined
19-1-4	Tanami Range	Bioregional
20-4-1	Thring Swamp	Bioregional
20-3-2	Upper Lander River	National
21-4-4	Watt Range Floodouts and Fringing Sandplains	Bioregional
20-1-3	Western Tanami Paleodrainage Systems	National
19-2-PL2	Wilson Creek and Floodout	Undetermined
18-1-1	Winnecke Hills	Bioregional
18-2-PL1	Winnecke Floodout	Undetermined

#### **(f) Important colonies and breeding sites**

No sites identified.

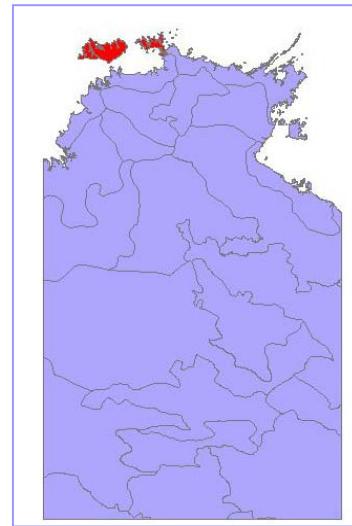
## TIWI COBOURG (TIW)

### 1. General Description

This coastal region includes Australia's second and fifth largest islands (Melville and Bathurst Island in the Tiwi island group). Coastal vegetation includes some mangroves and saline flats, although this bioregion lacks the large rivers which influence vegetation patterning in other coastal regions. Most of this bioregion is covered by tall eucalypt open forests, typically dominated by Darwin woollybutt (*Eucalyptus miniata*), Darwin stringybark (*E. tetrodonta*) and Melville Island bloodwood (*E. nesophila*), but often with northern cypress-pine *Callitris intratropica* and the tall palm *Gronophyllum ramsayi* co-dominant. This bioregion is of low relief, with laterite and Cretaceous sandstone the dominant substrates. The bioregion is almost entirely Aboriginal land, and includes two subregions.



Tiwi Cobourg, showing tall open-forest on Tiwi Islands  
Photo: Parks and Wildlife Service.



Map of NT Bioregions highlighting  
Tiwi Cobourg

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	10005 km <sup>2</sup> (100%)
Area of bioregion within NT (% of NT area)	10005 km <sup>2</sup> (0.75%)
Extent of National Parks and other protected areas (% of bioregion area)	2059 km <sup>2</sup> (20.58%)

#### (b) Tenure

Aboriginal freehold	9756.2 km <sup>2</sup> (98.8%)
Pastoral leases	0 km <sup>2</sup> (0%)
Crown Leases and Vacant Land	57.4 km <sup>2</sup> (0.6%)
Other Freehold	63.8 km <sup>2</sup> (0.6%)
Other tenure	<0.1 km <sup>2</sup> (0%)
Defence	0 km <sup>2</sup> (0%)

#### (c) Protected areas and extent in Tiwi Cobourg

Garig Gunak Barlu National Park	2058.9 km <sup>2</sup>
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**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program	Greening Australia	Darwin
Conservation Volunteers Australia	Darwin	Various
Garnji Rangers	Minjilang Community Incorporated / Jibilwanagu Aboriginal Resource Centre	Minjilang
Milikapiti community		
Nguiu community		
Pirlangimpi community		
Tiwi Rangers	Pirlangimpi Community Government Council	Pirlangimpi

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Arnhem Land Aboriginal Land Trust, Cobourg Peninsula Aboriginal Land Trust, Cobourg Peninsula Sanctuary Land Trust, Tiwi Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

None listed for this bioregion.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
0.03	-

### 3. Biodiversity in Tiwi Cobourg

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Tiwi Cobourg. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
1	Closed Forest	55	0	26.3	1	0
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	8663	22.0	14.1	3	2
6	Miscellaneous Shrubland	192	0	<0.1	1	0
8	Floodplain	81	0	24.9	2	0
12	Littoral	960	13.9	8.4	2	2

Reservation bias of vegetation in Tiwi Cobourg (broad veg/fine veg) 0.08/0.14

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Tiwi Cobourg, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Acmena hemilampra			B		100	68	NO
Acmenosperma claviflorum			B		100	83	NO
Actinostachys wagneri			B		100	1	NO
Burmannia D61177 Bathurst Island	EN	EN	B, NT	2	100	2	NO
Calochilus caeruleus	VU		B		100	2	NO
Calymperes tenerum			B		100	1	NO
Cephalomanes obscurum	EN				81.8	9	NO
Clerodendrum longiflorum			B		100	12	NO
Corymbia nesophila			B		96.2	955	
Crinum venosum			B		100	1	NO
Cryptocarya hypospodia	EN		B		100	2	NO
Cycas armstrongii	VU		NT		38.7	201	
Dendrobium trilamellatum			B		100	2	NO
Dendromyza reinwardtiana	VU		B		100	9	NO
Elaeocarpusmiegei	CR		B, NT		100	7	NO
Endandra limnophila	VU				85.3	29	
Freycinetia excelsa	VU				30.0	3	
Freycinetia percostata	VU				27.3	3	NO
Garcinia warrenii	EN		B		100	2	NO
Goodenia d58281			B		100	4	NO
Hedyotis auricularia			B		100	3	NO
Hoya australis	VU		NT		4.10	5	
Hypserpa decumbens			B		100	6	NO
Hypserpa polyandra			B		100	2	NO
Lindernia cowiei			B, NT	1	100	1	NO
Litsea breviumbellata			B		100	87	NO
Luisia teretifolia	VU				85.7	18	
Mapania macrocephala	VU				71.4	5	NO
Mitrella D24710 Melville Is.	VU		B, NT	1	100	12	NO
Parsonia D30178 Melville Island			B, NT	2	100	34	NO
Phyllanthus armstrongii			B		100	1	
Pisonia grandis			B		100	2	
Scleria carphiformis			B		100	8	NO
Spermacoce protrusa			B, NT	1	100	12	
Spermacoce retitesta			B, NT	2	100	32	NO
Strychnos minor			B		100	64	NO
Tarennoidea wallichii	EN		B, NT		100	9	NO
Tephrosia elliptica			B		100	4	NO
Tephrosia vestita			B		100	2	NO
Tephrosia villosa			B		100	10	NO
Thrixspermum congestum	VU		B		100	11	NO
Triumfetta repens			B		100	4	NO
Typhonium jonesii	EN		B, NT	1	100	4	NO
Typhonium mirabile	EN		B, NT	1	100	8	NO
Utricularia subulata	EN				25.0	1	
Xylopia D30127 Melville Island	EN		B, NT	1	100	7	NO
Zornia oligantha			B, NT	1	100	12	

**(c) Significant Vertebrate Species**

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Tiwi Cobourg, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Flatback Turtle	<i>Natator depressus</i>	DD	VU		16.5	58	
Green Turtle	<i>Chelonia mydas</i>		VU		13.0	29	
Hawksbill Turtle	<i>Eretmochelys imbricata</i>	DD	VU		5.1	6	
Leatherback Turtle	<i>Dermochelys coriacea</i>	VU	VU		66.7	2	
Loggerhead Turtle	<i>Caretta caretta</i>	EN	EN		28.6	2	
Olive Ridley	<i>Lepidochelys olivacea</i>	DD	EN		24.7	20	
(Elapid snake)	<i>Simoselaps morrissi</i>			NT	33	1	
Australian Bustard	<i>Ardeotis australis</i>	VU			0.11	2	
Emu	<i>Dromaius novaehollandiae</i>	VU			0.34	2	
Gouldian Finch	<i>Erythrura gouldiae</i>	EN	EN		0.10	1	
Hooded Robin	<i>Melanodryas cucullata</i>	EN		B	100	7	
Masked Owl	<i>Tyto novaehollandiae</i>	EN	VU	B	100	65	
Partridge Pigeon	<i>Geophaps smithii</i>	NT	VU		5.7	90	
Red Goshawk	<i>Erythrotriorchis radiatus</i>	VU	VU		24.2	15	
Brush-tailed Rabbit-rat	<i>Conilurus penicillatus</i>	VU			62.5	115	
Butler's Dunnart	<i>Sminthopsis butleri</i>	VU	VU	B	100	8	NO
Northern Brush-tailed Phascogale	<i>Phascogale pirata</i>	VU			5.9	2	
Northern Quoll	<i>Dasyurus hallucatus</i>	VU			1.3	15	
Water mouse	<i>Xeromys myoides</i>	DD	VU		55.6	5	

**(d) Threatened invertebrates**

Species	Common Name	NT Conservation status	Federal Conservation status
<i>Amphidromus cognatus</i>	(snail)	VU	
<i>Ogyris iphis doddi</i>	Dodd's Azure Butterfly	EN	
<i>Taractrocera ilia ilia</i>	Northern Grassdart Butterfly	VU	
<i>Trochomorpha melvillensis</i>	(snail)	VU	

**(e) Animals Extinct in this bioregion (\*still present in other NT bioregions)**

None listed for this bioregion.

**4. Management issues and special values in the bioregion****(a) Significant exotic plants in the bioregion**

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

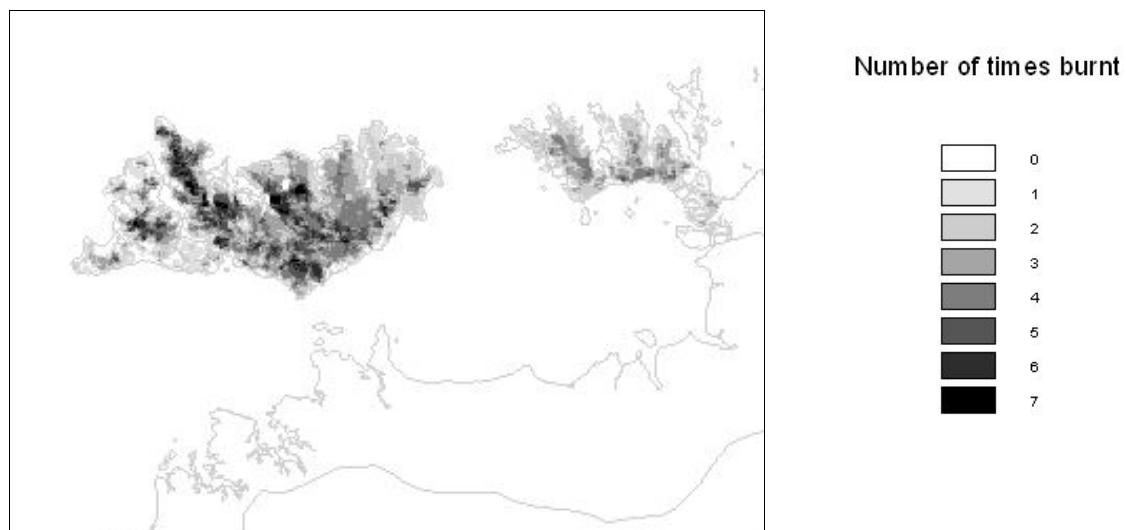
Name	NT weed class	WONS	Habitat
Aleman Grass ( <i>Echinochloa polystachya</i> )	not classed		Seasonal flooded areas, Swamps
Calopo ( <i>Calopogonium mucunoides</i> )	not classed		Creeks, Monsoon Vine thickets
Centro ( <i>Centrosema molle</i> )	not classed		Disturbed areas, Towns

Name	NT weed class	WONS	Habitat
Coffee Bush ( <i>Leucaena leucocephala</i> )	not classed		Disturbed areas, Towns
Gambia Pea ( <i>Crotalaria goreensis</i> )	not classed		Roadsides, grazed areas, Riparian
Guinea Grass ( <i>Urochloa maxima</i> )	not classed		Creeks, Roadsides, Towns
Mission grass ( <i>Pennisetum polystachyon</i> )	B		Blocks & gardens, Roads and Tracks, Pastoral
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Paddy's Lucerne ( <i>Sida rhombifolia</i> )	B		Blocks & gardens, Pastoral, Roads and Tracks

### (b) Exotic animals in the bioregion and their status

<b>Banteng</b>	At high densities in the mainland part of this bioregion; impacts upon biodiversity uncertain, but may affect vegetation dynamics.
<b>Big-headed ant</b>	Populations established in part of bioregion; local detriment to native invertebrates, with some impact on some vertebrates and plants
<b>Buffalo</b>	At high densities in this bioregion; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Likely to soon establish across (at least the mainland part of this) bioregion, with detrimental impacts upon a range of animal species, such as quolls, goannas, snakes
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Cattle</b>	Widespread and at least locally common in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor
<b>Horse</b>	At least localised populations with high density; affecting water sources, and with some impact on biodiversity
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates
<b>Sambar deer</b>	Uncommon on Cobourg Peninsula; and partly subject to commercial harvest

### (c) Fire histories – number of fires in seven year history 1997-2003



#### (d) Wetlands, major rivers and catchments

Directory of important wetlands of Australia (DIWA) listings for Tiwi Cobourg

DIWA No.	Wetland Name	Area (ha)	% reserved	Tenure Types
NT023	Cobourg Peninsula System	207030	11.6	Aboriginal Freehold, Crown and Vacant Land

All wetlands of the Cobourg Peninsula (including swamplands, mangroves and coasts) are included within a Ramsar site, and recognised as the nationally important wetland complex (NT023). The bioregion includes seasonally inundated floodplain on Croker Island and seasonal swamp at Andranagoo Creek on Melville Island.

**List of catchments in Tiwi Cobourg - East Alligator River.**

#### (e) Rainforests and sites of botanical significance

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	1416	262.4	34.1
Riparian	687	20.2	7.6
Spring	349	31.8	3.0

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
128	22.7	12.5	10.2	4.7

#### (f) Important colonies and breeding sites

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Seabird	>10000	3
Shorebird	No data	6
Marine Turtle	No data	40

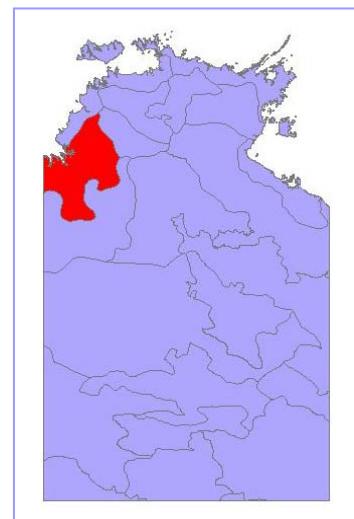
## VICTORIA BONAPARTE (VB)

### 1. General Description

Phanerozoic strata of the Bonaparte Basin in the north-western part are mantled by Quaternary marine sediments supporting samphire - *Sporobolus* grasslands and mangal, and by red earth plains and black soil plains with an open savanna of high grasses. Outcrops of Devonian limestone karst in the west support tree steppe and vine thicket. Plateaux and abrupt ranges of Proterozoic sandstone, known as the Victoria Plateau, occur in the south and east, and are partially mantled by skeletal sandy soils with low tree savannas and hummock grasslands. In the south east are limited areas of gently undulating terrain on a variety of sedimentary rocks supporting low Snappy Gum over hummock grasslands and also of gently sloping floodplains supporting *Melaleuca minutifolia* low woodland over annual sorghum. The climate is monsoonal, with rainfall varying between 600 and 1200 mm. The bioregion is divided into 3 subregions, reflecting major geomorphological differences.



Victoria Bonaparte, showing the Pinkerton Range and the Baines River, providing a range of habitats and refuges. Photo: Bryan Baker.



Map of NT Bioregions highlighting Victoria Bonaparte

### 2. Tenure, reservation and land use

#### (a) Area

Total size of bioregion (% within NT)	72242 km <sup>2</sup> (74.2%)
Area of bioregion within NT (% of NT area)	53630 km <sup>2</sup> (4.0%)
Area reserved in entire bioregion (% of bioregion area)	10868 km <sup>2</sup> (15.0%)
Extent of NT National Parks and other protected areas (% of NT bioregion)	9762 km <sup>2</sup> (18.2%)

#### (b) Tenure

Aboriginal freehold	16029 km <sup>2</sup> (28.8%)
Pastoral leases	17932 km <sup>2</sup> (32.2%)
Crown Leases and Vacant Land	12358 km <sup>2</sup> (22.2%)
Other Freehold	109 km <sup>2</sup> (0.2%)
Other tenure	259.2 km <sup>2</sup> (0.5%)
Defence	8996.6 km <sup>2</sup> (16.2%)

**(c) Protected areas and extent in Victoria Bonaparte**

Daly River (Mt Nancar) Conservation Area (part)	4.4 km <sup>2</sup>
Gregory National Park (part)	7048.8 km <sup>2</sup>
Gregory's Tree Historical Reserve	0.02 km <sup>2</sup>
Keep River National Park	566.7 km <sup>2</sup>
Keep River National Park Extension (proposed)	2141.8 km <sup>2</sup>
Victoria River Depot Historical Reserve	0.368 km <sup>2</sup>

**(d) Off-reserve conservation and land management groups**

Group	Resource Centre / Aboriginal Corporation	Community
Aboriginal Landcare Education Program	Greening Australia	Darwin
Amanbidgi Land Management	Ngaliwurru - Wuli Association	Amanbidgi
Asyrikarrak Kirim Rangers	Peppimenarti Community Government Council	Peppimenarti
Malak Malak Rangers	Naiyu Nambiyu Community Government Council	Wooliana
Palumpa Land Management	Nganmarriyanga Community Incorporated	Palumpa
Timber Creek Land Management	Ngaliwurru - Wuli Association	Muruning / Timber Creek
Victoria River District Conservation Association		Katherine
Yarralin Rangers	Daguragu Community Government Council	Daguragu

**(e) List of Aboriginal Land Trusts (\*managed as pastoral properties)**

Daly River/Port Keats Aboriginal Land Trust\* (Palumpa), Malak Malak Aboriginal Land Trust, Mayat Aboriginal Land Trust, Menngen Aboriginal Land Trust\* (Innesvale), Nagurunguru Aboriginal Land Trust\* (Amanbidji), Ngaliwurru/Nungali Aboriginal Land Trust\* (Fitzroy), Upper Daly Aboriginal Land Trust\*, Wambardi Aboriginal Land Trust, Wanimiyn Aboriginal Land Trust.

**(f) List of Pastoral Properties (Perpetual Pastoral Leases, Pastoral Leases and \*Crown Leases)**

Auvergne, Bullo River, Coolibah\*, Delamere, Elizabeth Downs, Legune, Limbunya, Litchfield, Newry, Spirit Hills, Tipperary, Victoria River Downs, Waterloo, West Mathison, Willeroo, Wombungi.

**(g) Mean unit value of land**

Value all tenure types (\$/ha)	Value of Pastoral Leases (\$/ha)
1.95	3.27

**3. Biodiversity in Victoria Bonaparte**

**(a) Vegetation**

Extent and level of reservation of broad vegetation types in Victoria Bonaparte. Broad and fine vegetation descriptions follow NT vegetation map (Wilson *et al.* 1990). See Appendices for reservation of fine vegetation types.

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
1	Closed Forest	48	0	26.3	1	0

Broad Veg Unit	Description	Area (km <sup>2</sup> ) in bioregion	% reserved in bioregion	% of total extent reserved in NT	No. of fine veg types in bioregion	No. of fine veg types reserved
2	Eucalyptus Forest and Woodlands with Tussock Grass Understorey	17821	12.7	14.1	6	4
3	Eucalyptus low Woodland with Tussock Grass Understorey	2393	0.25	2.4	4	2
4	Eucalyptus Woodland with Hummock Grass Understorey	23235	31.3	8.7	5	5
5	Mixed Species low open Woodland	387	38.7	9.9	2	2
7	Melaleuca Forest and Woodlands	4117	0.03	8.5	2	1
8	Floodplain	46	0	24.9	1	0
10	Hummock Grassland	30	0	1.5	1	0
11	Tussock Grassland	2458	2.2	0.9	3	3
12	Littoral	2884	0.41	8.4	3	1

Reservation bias of vegetation in Victoria Bonaparte (broad veg/fine veg) 0.39/0.56

## (b) Significant Plant Species

Threatened, endemic (B=bioregion, NT=Northern Territory) and area restricted (1=restricted to <1000 km<sup>2</sup>, and 2=<10000 km<sup>2</sup>) species in Victoria Bonaparte, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Abutilon cunninghamii			B		100	1	NO
Acacia kelleri			B		100	11	
Acacia lasiocarpa			B		100	1	NO
Acacia newmanii			B		100	1	
Acacia richardsii			B		100	10	
Adiantum capillus-veneris	VU				33.3	1	
Alyogyne cravenii	VU		B, NT	1	100	11	
Blumea pungens			B		100	3	
Boronia filicifolia			B		100	2	NO
Boronia minutipinna			B		100	3	NO
Boronia wilsonii			B		100	2	NO
Brachychiton fitzgeraldianus			B		100	7	
Brachychiton viscidulus			B		100	1	NO
Calandrinia D123692 Keep River			B		100	2	
Corymbia cliftoniana			B		95.5	21	
Corymbia zygophylla			B		100	1	NO
Cyperus D138659 Bradshaw			B		100	1	NO
Drosera ordensis			B		100	11	
Echinochloa macrandra			B		100	1	
Eleocharis retroflexa	VU				66.7	2	
Ficus lilliputiana			B		100	6	
Fimbristylis A61370 Mowla Bluff			B		100	2	
Gardenia D70867 Fitzmaurice			B		100	3	NO
Gleichenia D157055 Victoria River	VU		B		100	4	
Glycine arenaria			B		100	1	NO
Goodenia brachypoda			B		100	26	
Goodenia durackiana			B		100	2	NO
Grevillea miniata			B		100	13	
Isotropis D123689 Joe Creek			B, NT	1	100	11	
Lindernia cleistandra			B		100	2	
Livistona lorophylla			B		100	10	
Lobelia arnhemica			B		100	1	

Species	NT Conservation status	Federal Conservation status	Endemic to bioregion &/or NT*	Restricted area species	% NT records	Number of records in bioregion	Reserved in NT?
Melaleuca D136532 Spirit Hills			B		100	2	
Melaleuca triumphalis			B, NT	1	100	11	
Micraira dunlopii			B		100	1	NO
Mitrasacme epigaea			B		100	1	NO
Oldenlandia delicata			B, NT		100	1	
Platysace saxatilis	VU		B		100	12	
Polygala D137211 Bradshaw			B		100	7	NO
Portulaca D16855 Scalded Area			B		100	4	
Pteris vittata			B		100	2	
Ricinocarpos D120447 Moyle			B, NT	2	100	8	
Senna gonioides			B		100	1	
Spermacoce gibba			B		100	2	
Spermacoce phaeosperma			B		100	7	
Sphaerostephanos heterocarpus			B		100	1	NO
Stylium prophylloides			B		100	1	NO
Stylium rivulosum			B		100	1	NO
Tacca maculata			B		100	9	
Tephrosia D133822 valleculata			B		100	4	
Triodia fitzgeraldii	VU				83.3	5	
Triodia triticoidea			B		100	3	
Triumfetta D138660 Fleshy			B		100	2	NO
Triumfetta inermis			B, NT	2	100	2	
Triumfetta triandra			B		100	2	
Triumfetta viridis			B, NT	2	100	9	
Vigna luteola			B		100	1	
Vittadinia D123694 Keep River			B		100	1	
Zeuxine oblonga	VU				62.5	5	

### (c) Significant Vertebrate Species

Threatened and endemic (B=bioregion, NT=Northern Territory) species in Victoria Bonaparte, and their NT reservation status (blank=reserved in at least one NT reserve). \*Note bioregion endemic species may also have distribution in other states or countries unless stated otherwise.

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Angalarri grunter	Scortum neili	VU			No data	No data	
Dwarf Sawfish	Pristis clavata	VU			No data	No data	No data
Freshwater Sawfish	Pristis microdon	VU	VU		No data	No data	No data
Magnificent Tree-frog	Litoria splendida			B	100	10	
Flatback Turtle	Natator depressus	DD	VU		0.57	2	
Pygmy Rock Monitor	Varanus kingorum			B	100	1	
Spotted Snake-Eyed Skink	Cryptoblepharus megastictus			B	100	41	
Ord Blacksoil Ctenotus	Ctenotus rimacola	VU		B	100	12	
(Gecko)	Gehyra 'Keep River'			B	100	8	
(Gecko)	Strophurus robinsoni			B	100	1	NO
Australian Bustard	Ardeotis australis	VU			5.4	95	
Australian Painted Snipe	Rostratula australis	VU	VU		5.9	1	
Emu	Dromaius novaehollandiae	VU			2.4	14	
Gouldian Finch	Erythrura gouldiae	EN	EN		35.8	352	
Masked Owl	Tyto novaehollandiae	NT	VU		13.0	3	
	kimberli						
Northern Shrike-tit	Falcunculus whitei	DD	VU		3.6	1	
Partridge Pigeon	Geophaps smithii	NT	VU		0.13	2	

Common name	Species	NT Conservation status	Federal Conservation status	Endemic to Bioregion &/or NT*	% NT records	No. of records in bioregion	Reserved in NT?
Purple-crowned Fairy-wren	Malurus coronatus coronatus	NT	VU		35	64	
Red Goshawk	Erythrotriorchis radiatus	VU	VU		1.6	1	
White-quilled Rock-Pigeon	Petrophassa albipennis			B	95.9	71	
Northern Quoll	Dasyurus hallucatus	VU			3.3	37	

#### (d) Threatened invertebrates

Species	Common Name	NT Conservation status	Federal Conservation status
Mesodontrachia desmonda	Ground snail	CR	
Mesodontrachia fitzroyana	Ground snail	CR	
Prototrachia sedula	Ground snail	VU	

#### (e) Animals Extinct in this bioregion (\*still present in other NT bioregions)

**Mammals:** Brush-tailed Rabbit-rat\* (*Conilurus penicillatus*), Golden Bandicoot\* (*Isoodon auratus*), Northern Brush-tailed Phascogale\* (*Phascogale pirata*).

### 4. Management issues and special values in the bioregion

#### (a) Significant exotic plants in the bioregion

NT Weed classes A (to be eradicated), B (growth and spread to be controlled), Weeds of National Significance (WONS), and exotic plants of conservation importance.

Name	NT weed class	WONS	Habitat
Buffel Grass ( <i>Cenchrus ciliaris</i> )	not classed		Disturbed areas, Towns, Roads, swamp margins
Calopo ( <i>Calopogonium mucunoides</i> )	not classed		Creeks, Monsoon Vine thickets
Castor Oil Plant ( <i>Ricinus communis</i> )	not classed		Roads, Riparian, Flood areas
Devil's Claw ( <i>Martynia annua</i> )	A		Pastoral, Roads and Tracks
Gamba Grass ( <i>Andropogon gayanus</i> )	not classed		Blocks & gardens, Pastoral, Roads and Tracks
Gambia Pea ( <i>Crotalaria goreensis</i> )	not classed		Roadsides, grazed areas, Riparian
Olive hymenachne ( <i>Hymenachne amplexicaulis</i> )	not classed	WONS	Water ways and floodplains
Para Grass ( <i>Urochloa mutica</i> )	not classed		Floodplains, drainage lines
Parkinsonia ( <i>Parkinsonia aculeata</i> )	B	WONS	Pastoral, Water ways and floodplains, Blocks & gardens

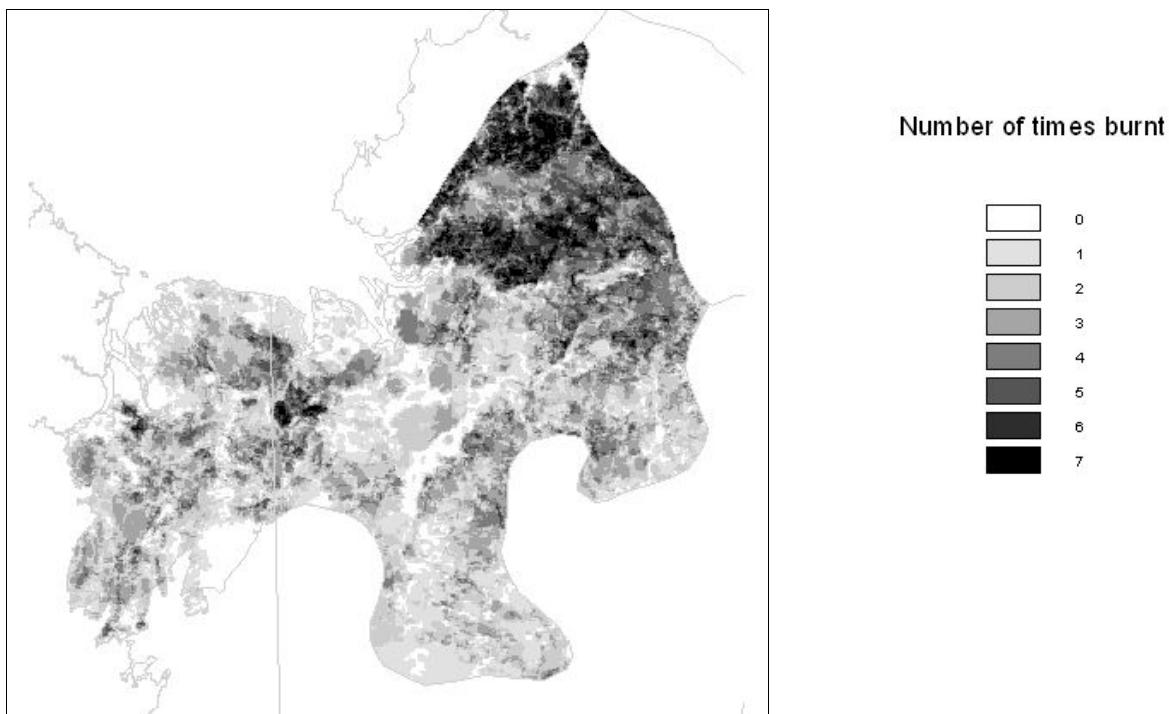
#### (b) Exotic animals in the bioregion and their status

<b>Buffalo</b>	Occurs in the bioregion, but generally localised or uncommon; impacts upon biodiversity uncertain, but may affect vegetation dynamics, particularly of wetlands.
<b>Cane toad</b>	Likely to soon establish across bioregion, with detrimental impacts upon a range of animal species, such as quolls, goannas, snakes
<b>Cat</b>	Widespread, but probably at relatively low densities: impact uncertain
<b>Cattle</b>	Widespread and at least locally common in feral state in this bioregion; probably limited detriment to biodiversity, except where they aggregate around water sources
<b>Dog</b>	Widespread, but generally not common; impacts upon biodiversity are probably generally minor

<b>Donkey</b>	At high densities in parts of this bioregion, with serious detriment to vegetation and water sources
<b>Horse</b>	At least localised feral populations with high density; affecting water sources, and with some impact on biodiversity
<b>Pig</b>	Widespread and at least locally common in this bioregion; probably substantial biodiversity detriment, to some plants (e.g. orchids, yams), ground-nesting birds, small mammals, reptiles, frogs and some invertebrates

**(c) Fire histories – number of fires in seven year history 1997-2003**

Entire bioregion shown (partly in Western Australia)



**(d) Wetlands, major rivers and catchments**

Directory of important wetlands of Australia (DIWA) listings for Victoria Bonaparte

DIWA No.	Wetland Name	Area (ha)	% reserved	Tenure Types
NT024	Daly-Reynolds Floodplain-Estuary System	40484	0	Aboriginal Freehold, Crown and Vacant Land, Pastoral Lease
NT027	Moyle Floodplain and Hyland Bay System	3635.5	0	Aboriginal Freehold
NT030	Legune Wetlands	10267	0	Pastoral Lease
NT033	Bradshaw Field Training Area	0.12	0	Pastoral Lease

There are many other wetlands of significance in the bioregion, although there has been no detailed assessment of their values. The bioregion includes some spectacular “wilderness” rivers, most notably the Fitzmaurice River. The lower reaches of the Victoria and Keep Rivers support significant waterfowl breeding colonies and feeding/roosting sites for migratory shorebirds. There are unusually extensive areas of rice-grass *Xerochloa* floodplain grasslands in patches of the Victoria, Ord and Keep systems. Four other nationally significant wetlands occur in the Western Australian portion of the bioregion.

**List of catchments in Victoria Bonaparte** - Daly River, Fitzmaurice River, Keep River, Moyle River, Ord River, Victoria River.

**(e) Rainforests and sites of botanical significance**

Rainforest Type	No. of patches	Area (km <sup>2</sup> )	% reserved
Dry	918	20.3	15.0
Riparian	501	9.4	4.9
Spring	176	32.8	1.1

Impact on rainforests (Russell-Smith and Bowman 1992)

Number of rainforest sites assessed	% sites with severe fire impact	% sites with severe buffalo impact	% sites with severe pig impact	% sites with severe infestations of exotic plant species
96	26.0	7.3	4.2	6.3

**(f) Important colonies and breeding sites**

Significant bird and marine turtle sites (Chatto 2000, 2001, 2003, unpub. data)

Type of site	Size of site (number of animals)	Number of sites
Shorebird	No data	4
Waterbird	<10000	3
Marine Turtle	no data	2



# Appendices

## 1. Land clearing in the NT

Land clearing data derived from satellite imagery (December 2003) for each bioregion.

Bioregion	Area cleared (ha)	% of bioregion
Arnhem Coast	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Arnhem Plateau	294.9	0.01
Burt Plain	11236.5	0.15
Central Arnhem	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Central Ranges	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Daly Basin	221958.3	10.7
Darwin Coastal	111230.3	4.0
Davenport Murchison Ranges	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Finke	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Great Sandy Desert	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Gulf Coastal	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Gulf Fall and Upland	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
MacDonnell Ranges	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Ord-Victoria Plain	6480.5	0.09
Pine Creek	66542.2	2.3
Simpson Strzelecki Dunefields	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Stony Plains	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Sturt Plateau	11886.84	0.12
Tanami	No recent analyses of clearing extent are currently available for this bioregion, but it is presumed that this extent is very limited (<0.01% of land area)	
Tiwi-Cobourg	14250.4	1.4
Victoria Bonaparte	20445.7	0.38

## 2. Fine Vegetation types and their reservation status

Vegetation types of the NT and their reservation status. Descriptions and unit numbers follow NT vegetation map (Wilson *et al.* 1990)

Broad vegetation description	Fine Veg Unit	Fine vegetation description	Area (km <sup>2</sup> )	% reserved in NT	Bioregion/s in which occurs (*>50%, **>95% of this extent occurs in marked bioregion)
(1) Closed Forest	1	Mixed species closed-forest (Monsoon vine-thicket).	254.1	6.27	Darwin Coastal, Gulf Coastal, Gulf Plains, Pine Creek, Tiwi Cobourg, Victoria Bonaparte
	2	Allosyncarpia ternata closed-forest.	770.9	32.95	Arnhem Plateau*, Darwin Coastal, Pine Creek
(2) Eucalyptus Forest and Woodlands with Tussock Grass Understorey	3	E. miniata (Darwin Woolly Butt), E. tetrodonta (Stringybark), E. nesophila (Melville Island Bloodwood) open-forest with Sorghum grassland understorey.	8511.5	22.10	Arnhem Coast, Darwin Coastal, Tiwi Cobourg*
	4	E. miniata (Darwin Woolly Butt), E. tetrodonta (Stringybark) open-forest with Sorghum grassland understorey.	51188.9	11.37	Arnhem Coast, Arnhem Plateau, Central Arnhem, Daly Basin, Darwin Coastal, Pine Creek, Tiwi Cobourg, Victoria Bonaparte
	5	E. miniata (Darwin Woolly Butt), E. nesophila (Melville Island Bloodwood), Callitris intratropica (Cypress Pine) open-forest with open-shrubland understorey.	585.5	0.00	Arnhem Coast**
	6	E. tetrodonta (Stringybark), Callitris intratropica (Cypress Pine) woodland with Plectrachne pungens (Curly Spinifex) open-grassland understorey.	1566.7	0.00	Gulf Coastal*, Gulf Fall and Uplands
	7	E. tetrodonta (Stringybark), Callitris intratropica (Cypress Pine) woodland with grassland understorey.	2648.9	0.75	Arnhem Coast, Central Arnhem*
	8	E. tetrodonta (Stringybark), E. miniata (Darwin Woolly Butt), E. ferruginea (Rusty Bloodwood) woodland with Sorghum grassland understorey.	15710.9	8.61	Arnhem Coast, Arnhem Plateau, Central Arnhem, Gulf Coastal, Gulf Fall and Uplands, Pine Creek
	9	E. tetrodonta (Stringybark), E. miniata (Darwin Woolly Butt), E. bleeseri (Smooth-stemmed Bloodwood) woodland with Sorghum grassland understorey.	12431.9	7.12	Arnhem Coast, Arnhem Plateau, Central Arnhem, Daly Basin, Darwin Coastal, Gulf Fall and Uplands, Pine Creek, Victoria Bonaparte
	10	E. tetrodonta (Stringybark) woodland with Plectrachne pungens (Curly Spinifex) open-grassland understorey.	21481.1	10.94	Central Arnhem, Gulf Coastal*, Gulf Fall and Uplands, Gulf Plains
	11	E. miniata (Darwin Woolly Butt) woodland with grassland understorey.	1484.7	22.18	Darwin Coastal, Pine Creek*
	12	E. miniata (Darwin Woolly Butt), E. tetrodonta (Stringybark) woodland with Plectrachne pungens (Curly Spinifex) grassland understorey.	2473.7	0.12	Arnhem Plateau, Daly Basin, Gulf Fall and Uplands, Pine Creek*
	13	E. tetrodonta (Stringybark), E. miniata (Darwin Woolly Butt), E. dichromophloia (Variable-barked Bloodwood) woodland with Plectrachne pungens (Curly Spinifex), Chrysopogon fallax (Golden Beard Grass) grassland understorey.	12365.6	10.48	Arnhem Plateau, Daly Basin, Gulf Fall and Uplands, Ord Victoria Plain, Pine Creek, Sturt Plateau, Victoria Bonaparte
	14	E. tetrodonta (Stringybark), E. tectifica, (Northern Box) woodland with Sorghum grassland understorey.	4084.5	0.00	Arnhem Coast, Central Arnhem**, Gulf Fall and Uplands
	15	E. tectifica (Northern Box), E. latifolia (Round-leaved Bloodwood) woodland with Sorghum grassland understorey.	49093.4	17.95	Arnhem Coast, Arnhem Plateau, Central Arnhem, Daly Basin, Darwin Coastal, Gulf Fall and Uplands, Ord Victoria Plain, Pine Creek, Sturt Plateau, Victoria Bonaparte

Broad vegetation description	Fine Veg Unit	Fine vegetation description	Area (km <sup>2</sup> )	% reserved in NT	Bioregion/s in which occurs (*>50%, **>95% of this extent occurs in marked bioregion)
	16	E. tectifica (Northern Box), E. terminalis (Bloodwood) woodland with Sehima nervosum (White Grass), Chrysopogon fallax (Golden Beard Grass) grassland understorey.	29450.3	30.42	Central Arnhem, Gulf Coastal, Gulf Fall and Uplands*, Ord Victoria Plain, Sturt Plateau, Victoria Bonaparte
	17	E. dichromophloia (Variable-barked Bloodwood), E. tetrodonta (Stringybark) woodland with grassland understorey.	17393.6	0.07	Daly Basin, Gulf Fall and Uplands, Ord Victoria Plain, Pine Creek, Sturt Plateau*
	18	E. papuana, (Ghost Gum), E. polycarpa (Long-fruited Bloodwood) woodland with grassland understorey.	2433.4	1.23	Arnhem Coast, Arnhem Plateau, Central Arnhem, Darwin Coastal, Gulf Fall and Uplands, Ord Victoria Plain, Tiwi Cobourg, Victoria Bonaparte
	19	E. terminalis (Bloodwood), E. patellaris (Weeping Box) woodland with grassland understorey.	2374.5	0.82	Daly Basin, Gulf Fall and Uplands, Sturt Plateau*
(3) Eucalyptus low Woodland with Tussock Grass Understorey	20	E. dichromophloia (Variable-barked Bloodwood) low woodland with Chrysopogon fallax (Golden Beard Grass), Plectrachne pungens (Curly Spinifex) grassland understorey.	15542.7	0.01	Gulf Fall and Uplands, Ord Victoria Plain, Sturt Plateau*
	21	E. tintinnans (Salmon Gum) low woodland with Sorghum grassland understorey.	7532.1	24.13	Arnhem Coast, Arnhem Plateau, Central Arnhem, Daly Basin, Darwin Coastal, Pine Creek*, Victoria Bonaparte
	22	E. terminalis (Bloodwood), E. chlorophylla (Box) low woodland with Sehima nervosum (White Grass), Chrysopogon fallax (Golden Beard Grass) grassland understorey.	18272.4	0.17	Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain*, Sturt Plateau, Victoria Bonaparte
	23	E. pruinosa (Silver Box) low woodland with Eulalia aurea (Silky Browntop), Sehima nervosum (White Grass) grassland understorey.	14436.5	2.25	Daly Basin, Davenport Murchison Range, Gulf Coastal, Gulf Fall and Uplands*, Gulf Plains, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau, Tanami, Victoria Bonaparte
	24	E. microtheca (Coolibah), Excoecaria parvifolia (Gutta-percha) low woodland with Chrysopogon fallax (Golden Beard Grass), Dichanthium (Bluegrass) grassland understorey.	4061.0	0.00	Darwin Coastal, Gulf Fall and Uplands, Mitchell Grass Downs, Sturt Plateau*, Victoria Bonaparte
	25	E. microtheca (Coolibah) low open-woodland with Eulalia aurea (Silky Browntop), Dichanthium (Bluegrass) grassland understorey.	9469.9	0.29	Gulf Coastal, Gulf Fall and Uplands, Gulf Plains, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau
	26	E. microtheca (Coolibah) low-open woodland with Eulalia aurea (Silky Browntop), Astrebla (Mitchell Grass) grassland understorey.	3965.6	0.16	Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs*, Ord Victoria Plain, Sturt Plateau, Tanami
	27	E. microtheca (Coolibah) low open-woodland with open-grassland understorey.	12666.5	0.00	Burt Plain, Channel Country, Davenport Murchison Range, Finke, Great Sandy Desert, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Tanami
	28	E. microtheca (Coolibah) low open-woodland with Chenopodium auricomum (Bluebush) sparse-shrubland understorey.	5869.2	0.53	Davenport Murchison Range, Mitchell Grass Downs**
(4) Eucalyptus Woodland with Hummock Grass Understorey	29	E. phoenicea (Scarlet Gum) low woodland with Plectrachne pungens (Curly Spinifex) hummock grassland understorey.	8971.8	13.71	Arnhem Plateau, Daly Basin, Gulf Coastal, Gulf Fall and Uplands, Ord Victoria Plain, Pine Creek, Victoria Bonaparte*
	30	E. gongylocarpa (Marble Gum) open-woodland with open-hummock grassland understorey.	3346.1	0.00	Finke, Great Sandy Desert**

Appendices

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	31	E. dichromophloia (Variable-barked Bloodwood), E. tetrodonta (Stringybark) low open-woodland with Plectrachne pungens (Curly Spinifex) open-hummock grassland understorey.	22879.2	9.09	Gulf Coastal, Gulf Fall and Uplands*, Gulf Plains
	32	E. dichromophloia (Variable-barked Bloodwood), E. miniata (Darwin Woolly Butt) low open-woodland with Plectrachne pungens (Curly Spinifex) open-hummock grassland understorey.	23135.4	21.98	Arnhem Coast, Arnhem Plateau, Central Arnhem, Daly Basin, Darwin Coastal, Gulf Fall and Uplands, Ord Victoria Plain, Pine Creek, Victoria Bonaparte
	33	E. dichromophloia (Variable-barked Bloodwood) low open-woodland with Plectrachne pungens (Curly Spinifex) open-hummock grassland understorey.	10235.4	18.83	Arnhem Coast, Daly Basin, Gulf Coastal, Gulf Fall and Uplands*, Ord Victoria Plain, Victoria Bonaparte
	34	E. dichromophloia (Variable-barked Bloodwood) low open-woodland with Triodia pungens (Soft Spinifex) hummock grassland understorey.	4602.5	0.00	Davenport Murchison Range*, Mitchell Grass Downs, Tanami
	35	E. leucophloia (Snappy Gum) low open-woodland with Plectrachne pungens (Curly Spinifex) hummock grassland understorey.	4702.8	8.72	Gulf Coastal, Gulf Fall and Uplands*, Gulf Plains
	36	E. leucophloia (Snappy Gum) low open-woodland with Triodia pungens (Soft Spinifex), Plectrachne pungens (Curly Spinifex) open-hummock grassland understorey.	16414.2	0.00	Davenport Murchison Range, Gulf Fall and Uplands*, Mitchell Grass Downs, Mount Isa Inlier, Sturt Plateau, Tanami
	37	E. brevifolia (Snappy Gum) low open-woodland with Plectrachne pungens (Curly Spinifex) hummock grassland understorey.	7405.7	41.44	Daly Basin, Ord Victoria Plain, Victoria Bonaparte*
	38	E. brevifolia (Snappy Gum) low open-woodland with Triodia pungens (Soft Spinifex) hummock grassland understorey.	21214.3	4.97	Ord Victoria Plain*, Tanami, Victoria Bonaparte
	39	E. pruinosa (Silver Box), Lysiphylgium cunninghamii (Bauhinia) low open-woodland with hummock/tussock grassland understorey.	11815.8	0.00	Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs, Mount Isa Inlier, Sturt Plateau, Tanami
	40	E. ferruginea (Rusty Bloodwood) low open-woodland or Jacksonia odontocarpa open-shrubland with Plectrachne pungens (Curly Spinifex) open-hummock grassland understorey.	2446.9	0.00	Gulf Fall and Uplands*, Mitchell Grass Downs
	41	E. opaca (Bloodwood) low open-woodland with Plectrachne pungens (Curly Spinifex) hummock grassland understorey.	3274.3	0.00	Davenport Murchison Range*, Mitchell Grass Downs, Tanami
	42	E. opaca (Bloodwood) low open-woodland with Triodia pungens (Soft Spinifex) hummock grassland understorey.	28095.3	0.00	Davenport Murchison Range*, Mitchell Grass Downs, Ord Victoria Plain, Tanami
	43	Eucalyptus low open-woodland and/or Acacia sparse-shrubland with Triodia spicata (Spike Flower Spinifex), Triodia pungens (Soft Spinifex) hummock grassland understorey.	18092.2	7.22	Burt Plain, Channel Country, Davenport Murchison Range*, Great Sandy Desert, MacDonnell Ranges, Tanami
(5) Mixed Species low open Woodland	44	Terminalia arostrata (Nutwood) low open-woodland with Chrysopogon fallax (Golden Beard Grass), Dichanthium (Bluegrass) grassland understorey.	3026.0	0.00	Ord Victoria Plain*, Sturt Plateau, Victoria Bonaparte
	45	Lysiphylgium cunninghamii (Bauhinia), E. pruinosa (Silver Box) low open-woodland with Eulalia aurea (Silky Browntop), Sehima nervosum (White Grass) grassland understorey.	2630.5	0.00	Daly Basin, Davenport Murchison Range, Gulf Fall and Uplands*, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau

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	46	Lysiphylum cunninghamii (Bauhinia), mixed species low open-woodland with <i>Sehima nervosum</i> (White Grass), <i>Chrysopogon fallax</i> (Golden Beard Grass) open-grassland understorey.	1246.4	54.87	Ord Victoria Plain*, Victoria Bonaparte
(6) Miscellaneous Shrubland	47	Acacia open-shrubland with Sorghum grassland understorey.	191.8	0.00	Tiwi Cobourg**
	48	<i>Livistona humilis</i> (Fan Palm) tall open-shrubland with Sorghum grassland understorey.	959.3	0.09	Darwin Coastal**
	49	<i>Melaleuca citrolens</i> (Paperbark) low woodland with <i>Chrysopogon fallax</i> (Golden Beard Grass) open-grassland understorey.	2775.1	14.53	Gulf Coastal, Gulf Fall and Uplands*, Sturt Plateau
(7) Melaleuca Forest and Woodlands	50	<i>Melaleuca minutifolia</i> (Paperbark) low woodland with Sorghum grassland understorey.	3662.7	0.04	Victoria Bonaparte**
	51	<i>Melaleuca viridiflora</i> (Broad Leaved Paperbark), <i>Eucalyptus</i> low open-woodland with <i>Chrysopogon fallax</i> (Golden Beard Grass) grassland understorey.	5272.3	13.66	Arnhem Coast, Central Arnhem, Daly Basin, Darwin Coastal, Gulf Coastal, Gulf Fall and Uplands, Pine Creek, Sturt Plateau, Victoria Bonaparte
	52	<i>Melaleuca glomerata</i> (Inland Teatree) open-shrubland.	1521.3	0.00	Great Sandy Desert, Tanami
	53	<i>Melaleuca</i> forest (Paperbark Swamp).	1588.8	27.19	Arnhem Coast, Arnhem Plateau, Central Arnhem, Darwin Coastal, Pine Creek, Tiwi Cobourg
(8) Floodplain	54	Mixed closed-grassland/sedgeland (Seasonal Floodplain).	8730.2	24.44	Arnhem Coast, Arnhem Plateau, Darwin Coastal*, Pine Creek, Tiwi Cobourg, Victoria Bonaparte
	55	<i>A. shirleyi</i> (Lancewood) open-forest with open-grassland understorey.	20452.4	0.55	Gulf Coastal, Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau*
(9) Acacia Woodland	56	Complex of <i>A. shirleyi</i> (Lancewood) low-woodland mixed with <i>Eucalyptus</i> low open-woodland.	3257.6	5.93	Central Arnhem, Daly Basin, Gulf Fall and Uplands*, Pine Creek, Sturt Plateau
	57	<i>Macropteranthes kekwickii</i> (Bullwaddy) tall shrubland with open-grassland understorey.	4535.8	0.00	Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau**
	58	<i>A. aneura</i> (Mulga)/mixed species low open-woodland with open-grassland understorey.	8584.8	0.13	Burt Plain*, Davenport Murchison Range, Finke, Great Sandy Desert, MacDonnell Ranges, Tanami
	59	<i>A. estrophiolata</i> (Ironwood), <i>Atalaya hemiglaucha</i> (Whitetwood) low open-woodland with open-grassland understorey.	11782.9	0.19	Burt Plain*, Channel Country, Finke, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields, Tanami
	60	<i>A. aneura</i> (Mulga), <i>Hakea</i> (Needlewood) low open-woodland with herb/grassland understorey.	1349.1	0.00	Finke**
	61	Complex of mixed species low open-woodland between dunes with <i>Zygochloa paradoxa</i> (Sandhill Cane Grass) open-hummock grassland on dune crests.	4989.1	0.00	Burt Plain, Finke, MacDonnell Ranges, Simpson Strzelecki Dunefields*, Stony Plains
	62	<i>A. georginae</i> (Gidyea) low open-woodland with <i>Astrebla pectinata</i> (Bull Mitchell Grass) open-grassland understorey.	10927.5	0.00	Channel Country, Mitchell Grass Downs*, Tanami
	63	<i>A. georginae</i> (Gidyea) low open-woodland with open-grassland understorey.	14056.9	0.00	Burt Plain, Channel Country*, Finke, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Tanami
	64	<i>A. georginae</i> (Gidyea) low open-woodland with hermland understorey.	519.1	0.00	Finke, Stony Plains*

Appendices

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	65	A. aneura (Mulga) tall open-shrubland with Eragrostis eriopoda (Woolybutt) open-grassland understorey.	40085.1	0.16	Burt Plain*, Central Ranges, Davenport Murchison Range, Finke, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields, Tanami
	66	A. aneura (Mulga) tall open-shrubland with Cassia, Eremophila (Fuchsia) open-shrubland understorey.	3635.8	6.53	Burt Plain, Finke, Great Sandy Desert, MacDonnell Ranges*, Simpson Strzelecki Dunefields
	67	A. ammobia tall open-shrubland with sparse-grassland understorey.	267.2	0.00	Finke, Great Sandy Desert*
	68	A. kempeana (Witchetty Bush) Acacia tall open-shrubland with Cassia, Eremophila (Fuchsia) open-shrubland understorey.	11758.8	5.57	Burt Plain, Channel Country, Great Sandy Desert, MacDonnell Ranges*, Tanami
	69	A. aneura (Mulga) tall sparse-shrubland with Aristida contorta (Bunched Kerosene Grass) or Triodia open-tussock/hummock grassland understorey.	2759.5	1.23	Burt Plain, Davenport Murchison Range, Great Sandy Desert, MacDonnell Ranges, Tanami*
	70	A. aneura (Mulga) tall sparse-shrubland with Cassia, Eremophila (Fuchsia) low sparse-shrubland understorey.	5378.5	6.02	Burt Plain, Channel Country, Finke, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains
	71	A. aneura (Mulga) tall sparse-shrubland with grassland understorey.	15147.5	0.93	Burt Plain, Channel Country, Davenport Murchison Range, Finke, Great Sandy Desert, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains, Tanami
	72	A. kempeana (Witchetty Bush) sparse-shrubland to tall sparse-shrubland with grassland understorey.	2730.6	24.98	Burt Plain, Finke, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields
	73	A. tetragonophylla (Dead Finish), A. kempeana (Witchetty Bush) sparse-shrubland with herb/grassland understorey.	9824.9	0.07	Central Ranges*, Finke, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields
	74	A. stowardii (Bastard Mulga), Cassia, Eremophila (Fuchsia) sparse-shrubland.	1630.8	0.73	Burt Plain, Channel Country*, Simpson Strzelecki Dunefields
(10) Hummock Grassland	75	Triodia pungens (Soft Spinifex) hummock grassland understorey with A. lysiphloia (Turpentine) tall open-shrubland overstorey.	1855.9	0.00	Tanami**
	76	Triodia pungens (Soft Spinifex), Plectrachne schinzii (Curly Spinifex) hummock grassland with Acacia tall sparse-shrubland overstorey.	210312.8	0.57	Burt Plain, Channel Country, Davenport Murchison Range, Great Sandy Desert, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau, Tanami*
	77	Triodia pungens (Soft Spinifex), Plectrachne schinzii (Curly Spinifex), hummock grassland with Acacia tall sparse-shrubland overstorey between dunes.	38857.8	0.00	Sturt Plateau, Tanami*
	78	Triodia spicata (Spike Flowered Spinifex) hummock grassland with Grevillea wickhamii (Holly Grevillea), Acacia sparse-shrubland overstorey.	1251.7	5.05	Burt Plain, Central Ranges*, Great Sandy Desert
	79	Plectrachne melvillei (Spinifex) hummock grassland with A. aneura (Mulga), A. kempeana (Witchetty Bush) tall open-shrubland overstorey.	742.9	20.43	Central Ranges, Great Sandy Desert, MacDonnell Ranges*
	80	Triodia longiceps (Grey Spinifex) hummock grassland with Acacia tall open-shrubland overstorey.	1189.2	0.48	MacDonnell Ranges*, Simpson Strzelecki Dunefields
	81	Triodia basedowii (Hard Spinifex) hummock grassland with Acacia tall sparse-shrubland overstorey.	20034.4	7.10	Burt Plain, Finke, Great Sandy Desert*, MacDonnell Ranges

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	82	Triodia basedowii hummock grassland with <i>A. aneura</i> (Mulga) tall sparse-shrubland overstorey between dunes.	13664.9	1.44	Burt Plain, Central Ranges, Finke*, Great Sandy Desert, MacDonnell Ranges, Tanami
	83	Triodia basedowii (Hard Spinifex) or <i>Triodia pungens</i> (Soft Spinifex) hummock grassland with <i>E. gamophylla</i> (Blue Mallee), <i>Acacia</i> tall sparse-shrubland overstorey.	12879.8	6.70	Finke*, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields
	84	Triodia basedowii (Hard Spinifex) hummock grassland with <i>E. gamophylla</i> (Blue Mallee) tall sparse-shrubland overstorey.	16098.8	0.00	Burt Plain, Central Ranges, Channel Country, Finke, Great Sandy Desert, Mitchell Grass Downs, Simpson Strzelecki Dunefields*, Tanami
	85	Triodia basedowii (Hard Spinifex) hummock grassland with <i>Acacia</i> tall sparse shrubland overstorey between dunes and <i>Zygochloa paradoxa</i> (Sandhill Cane Grass) open-hummock grassland on dune crests.	79338.2	0.00	Burt Plain, Finke, MacDonnell Ranges, Simpson Strzelecki Dunefields**, Stony Plains
	86	Triodia <i>pungens</i> (Soft Spinifex) or <i>Triodia basedowii</i> (Hard Spinifex) hummock grassland with <i>Acacia</i> tall sparse-shrubland overstorey between dunes	22309.0	0.00	Great Sandy Desert*, Tanami
	87	Triodia (Spinifex) open-hummock grassland with <i>A. aneura</i> tall sparse-shrubland overstorey.	7193.5	19.27	Burt Plain, Finke, Great Sandy Desert, MacDonnell Ranges*, Simpson Strzelecki Dunefields
	88	Triodia (Spinifex) hummock grassland.	4206.7	0.00	Ord Victoria Plain**, Victoria Bonaparte
	89	Triodia <i>pungens</i> (Soft Spinifex) open-hummock grassland with scattered shrubs.	218.5	0.00	Great Sandy Desert**
	90	Triodia <i>irritans</i> (Porcupine Grass) open-hummock grassland.	1323.5	6.95	Central Ranges*, Great Sandy Desert
	91	Triodia <i>wiseana</i> (Limestone Spinifex) hummock grassland with <i>Terminalia arostrata</i> (Nutwood) low open-woodland overstorey.	617.0	0.00	Ord Victoria Plain**
	92	Triodia <i>clelandii</i> (Weeping Spinifex) hummock grassland with mixed species low open-woodland overstorey.	9366.2	15.41	Burt Plain, Central Ranges, Central Ranges, Finke, Great Sandy Desert, MacDonnell Ranges*, Simpson Strzelecki Dunefields
	93	Triodia basedowii (Hard Spinifex) hummock grassland with <i>Allocasuarina decaisneana</i> (Desert Oak) open-woodland overstorey between dunes.	59670.9	2.63	Burt Plain, Central Ranges, Finke, Great Sandy Desert*, MacDonnell Ranges
	94	Triodia basedowii (Hard Spinifex) hummock grassland with <i>Allocasuarina decaisneana</i> (Desert Oak) low open-woodland or <i>Acacia</i> tall sparse-shrubland overstorey.	6533.3	0.00	Central Ranges**, Great Sandy Desert
(11) Grassland	95	Mixed species sparse-grassland or hermland.	671.7	0.00	Channel Country*, Tanami
	96	<i>Astrebla pectinata</i> (Barley Mitchell grass) grassland.	60759.4	0.61	Burt Plain, Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs*, Mount Isa Inlier, Ord Victoria Plain, Sturt Plateau, Tanami, Victoria Bonaparte
	97	<i>Astrebla</i> (Mitchell Grass), mixed species grassland with scattered trees and shrubs.	8776.1	2.69	Ord Victoria Plain*, Victoria Bonaparte
	98	<i>Chrysopogon fallax</i> (Golden Beard Grass), <i>Dichanthium fecundum</i> (Bluegrass) grassland.	10287.7	0.53	Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau, Victoria Bonaparte
	99	<i>Enneapogon purpurascens</i> (Nine Awn Grass) grassland.	906.8	0.00	Ord Victoria Plain**

*Appendices*

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	100	Eragrostis xerophila (Neverfail) open-grassland with scattered trees and shrubs.	1285.4	0.00	Burt Plain, MacDonnell Ranges, Tanami*
	101	Seasonal grassland with Muehlenbeckia cunninghamii (Lignum) low sparse-shrubland overstorey.	773.6	11.11	Davenport Murchison Range, Mitchell Grass Downs**
(12) Littoral	102	Coastal dune complex.	499.0	22.41	Arnhem Coast,** Darwin Coastal
	103	Vetiveria elongata grassland.	499.4	0.00	Gulf Coastal**
	104	Xerochloa (Rice Grass) grassland.	818.4	0.00	Darwin Coastal, Victoria Bonaparte*
	105	Mangal low closed-forest (Mangroves).	1409.8	8.10	Arnhem Coast, Darwin Coastal, Gulf Coastal, Tiwi Cobourg*, Victoria Bonaparte
	106	Saline tidal flats with scattered chenopod low shrubland (Samphire).	7721.6	8.98	Arnhem Coast, Central Arnhem, Darwin Coastal, Gulf Coastal, Gulf Fall and Uplands, Gulf Plains, Tiwi Cobourg, Victoria Bonaparte
	107	Chenopodium auricomum (Bluebush) low open-shrubland with ephemeral grassland understorey.	3598.2	0.00	Davenport Murchison Range, Mitchell Grass Downs*, Ord Victoria Plain, Tanami
(13) Chenopod Shrublands	108	Maireana astrotricha (Southern Bluebush) low open-shrubland with ephemeral open-herb/grassland.	3513.4	0.08	Finke**
	109	Chenopod open-herbland with ephemeral open-herb/grassland.	1446.6	0.00	Finke, Simpson Strzelecki Dunefields, Stony Plains
	110	Atriplex vesicaria (Bladder Saltbush) low sparse-shrubland with ephemeral open-herb/grassland.	3480.2	0.54	Finke, Simpson Strzelecki Dunefields, Stony Plains
	111	Halosarcia (Samphire) low open-shrubland fringing bare salt pans.	4199.8	3.03	Finke, Great Sandy Desert, Simpson Strzelecki Dunefields, Sturt Plateau, Tanami
	112	Bare salt pan.	2796.5	4.22	Great Sandy Desert*, Tanami

### 3. Flora species not recorded from any NT reserve

Species of flora which are unreserved in the NT (excluded species which are unreserved and threatened, endemic or range restricted, as these are listed in bioregion descriptions).

Species (*NT Endemic)	Bioregion/s in which occurs (>50% records from this bioregion)
<i>Abelmoschus manihot</i> *	Arnhem Coast, Daly Basin, Darwin Coastal*, Tiwi Cobourg
<i>Abutilon cunninghamii</i>	Victoria Bonaparte*
<i>Abutilon halophilum</i>	Simpson Strzelecki Dunefields*, Stony Plains
<i>Abutilon oxycarpum</i>	Gulf Fall and Uplands, Ord Victoria Plain*
<i>Acacia A86979 Krichauff Range</i> *	MacDonnell Ranges*, Victoria Bonaparte
<i>Acacia A88932 Kulgera</i>	Finke*
<i>Acacia D139586 laterite</i>	Arnhem Plateau*
<i>Acacia D64727 Barklys</i>	Mitchell Grass Downs*, Ord Victoria Plain*
<i>Acacia D70541 Lake Mackay</i>	Great Sandy Desert*
<i>Acacia D7472 Indiana Station</i>	Simpson Strzelecki Dunefields*
<i>Acacia abbreviata</i> *	Central Ranges, Great Sandy Desert, Tanami*
<i>Acacia adoxa</i>	Central Ranges, Davenport Murchison Range, Great Sandy Desert, MacDonnell Ranges, Mitchell Grass Downs, Ord Victoria Plain*, Sturt Plateau, Tanami
<i>Acacia amentifera</i> *	Ord Victoria Plain*
<i>Acacia cambagei</i>	Burt Plain, Channel Country, Davenport Murchison Range, Finke, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains
<i>Acacia chisholmii</i>	Mitchell Grass Downs*, Victoria Bonaparte*
<i>Acacia cyperophylla</i>	Channel Country*, Simpson Strzelecki Dunefields, Stony Plains
<i>Acacia desmondii</i> *	Simpson Strzelecki Dunefields*
<i>Acacia ditricha</i>	Ord Victoria Plain*, Victoria Bonaparte
<i>Acacia douglasica</i> *	Central Arnhem, Daly Basin, Gulf Fall and Uplands*
<i>Acacia helmsiana</i>	Central Ranges*, Great Sandy Desert
<i>Acacia hyaloneura</i>	Gulf Coastal, Gulf Fall and Uplands, Ord Victoria Plain*
<i>Acacia jensenii</i>	Burt Plain, Gulf Fall and Uplands, Sturt Plateau, Tanami*
<i>Acacia lasiocarpa</i>	Victoria Bonaparte*
<i>Acacia latzii</i> *	Finke*
<i>Acacia longipedunculata</i>	Mitchell Grass Downs*
<i>Acacia malloclada</i> *	Pine Creek*
<i>Acacia minutifolia</i>	Central Ranges, Great Sandy Desert, MacDonnell Ranges, Tanami*
<i>Acacia nyssophylla</i>	Central Ranges, Finke*, MacDonnell Ranges
<i>Acacia pachyacra</i>	Central Ranges*, Pine Creek
<i>Acacia pachycarpa</i>	Gulf Fall and Uplands, Tanami*, Victoria Bonaparte
<i>Acacia perryi</i>	Burt Plain, Davenport Murchison Range*, Gulf Fall and Uplands, Tanami
<i>Acacia pickardii</i> *	Simpson Strzelecki Dunefields*
<i>Acacia praetermissa</i> *	Darwin Coastal, Pine Creek*
<i>Acacia prainii</i>	Great Sandy Desert*
<i>Acacia ptychophylla</i>	Ord Victoria Plain*
<i>Acacia rigens</i>	Great Sandy Desert, MacDonnell Ranges*
<i>Acacia sabulosa</i>	Tanami*
<i>Acacia stellaticeps</i>	Tanami*
<i>Acacia suberosa</i>	Arnhem Coast*
<i>Acacia symonii</i>	Finke*
<i>Acacia synchonicia</i>	Tanami*
<i>Acacia tephrina</i>	Davenport Murchison Range, Gulf Fall and Uplands*
<i>Acacia thomsonii</i> *	Gulf Fall and Uplands, Ord Victoria Plain, Sturt Plateau
<i>Acacia wiseana</i>	Great Sandy Desert, Tanami*

*Appendices*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Acalypha pubiflora</i>	Ord Victoria Plain*
<i>Acmena hemilampra</i>	Tiwi Cobourg*
<i>Acmenosperma claviflorum</i>	Tiwi Cobourg*
<i>Acrachne racemosa</i>	Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs, Mount Isa Inlier, Ord Victoria Plain, Sturt Plateau*, Tanami
<i>Actinostachys wagneri</i>	Tiwi Cobourg*
<i>Adiantum aethiopicum</i>	Arnhem Coast*, Central Arnhem, Tiwi Cobourg
<i>Adiantum atroviride</i>	Arnhem Coast*, Arnhem Plateau, Central Arnhem
<i>Adiantum diaphanum</i>	Gulf Fall and Uplands*
<i>Aeginetia saccharicola</i>	Darwin Coastal*
<i>Alectryon tropicus</i>	Gulf Coastal*, Gulf Fall and Uplands
<i>Amaranthus D120438 Birrindudu</i>	Ord Victoria Plain*, Tanami*
<i>Amaranthus macrocarpus</i>	Channel Country*, MacDonnell Ranges
<i>Ammannia pubiflora</i>	Arnhem Coast*, Gulf Coastal
<i>Anemocarpa podolepidium</i>	Stony Plains*
<i>Angiopteris evecta</i>	Arnhem Coast*
<i>Arabidella nasturtium</i>	Finke, Simpson Strzelecki Dunefields, Stony Plains*
<i>Arabidella procumbens</i>	Simpson Strzelecki Dunefields*
<i>Archidium ohioense</i>	Arnhem Plateau*
<i>Arenga microcarpa</i>	Arnhem Coast*, Darwin Coastal
<i>Aristida anthoxanthoides</i>	Burt Plain, Finke, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains
<i>Aristida lazaridis</i>	Gulf Fall and Uplands*
<i>Aristida longicollis</i>	Burt Plain*, Mitchell Grass Downs
<i>Aristida polyclados</i>	Arnhem Coast*, Gulf Fall and Uplands*
<i>Asplenium D36872 Nabarlek</i>	Arnhem Plateau*
<i>Asteromyrtus lysicephala</i>	Arnhem Coast*
<i>Astrebla lappacea</i>	Burt Plain, Davenport Murchison Range, Gulf Fall and Uplands, MacDonnell Ranges, Mitchell Grass Downs, Ord Victoria Plain, Stony Plains
<i>Atalaya D123943 Elizabeth River*</i>	Darwin Coastal*
<i>Atriplex eardleyae</i>	Simpson Strzelecki Dunefields*
<i>Atriplex fissivalvis</i>	Finke*, MacDonnell Ranges, Stony Plains
<i>Atriplex flabelliformis</i>	Great Sandy Desert*
<i>Atriplex incrassata</i>	Stony Plains*
<i>Atriplex morrisii*</i>	Simpson Strzelecki Dunefields*
<i>Atriplex muelleri</i>	Mitchell Grass Downs*
<i>Atriplex pseudocampanulata</i>	Finke*
<i>Atriplex quadrivalvata</i>	Finke*
<i>Atriplex quinii</i>	Finke*
<i>Atriplex turbinata</i>	Finke, Simpson Strzelecki Dunefields, Stony Plains
<i>Austrodolichos D139900 Arnhem</i>	Arnhem Plateau*
<i>Barringtonia racemosa</i>	Central Arnhem*
<i>Bauhinia gilva</i>	Channel Country, Davenport Murchison Range, Mitchell Grass Downs*
<i>Bergia barklyana*</i>	Mitchell Grass Downs*
<i>Bergia diacheiron</i>	Channel Country*, Mitchell Grass Downs*
<i>Bidens subalternans</i>	Arnhem Coast*
<i>Blennodia pterosperma</i>	Finke, Simpson Strzelecki Dunefields*, Stony Plains
<i>Blumea benthamiana</i>	Arnhem Coast, Arnhem Plateau, Central Arnhem*, Gulf Fall and Uplands
<i>Boerhavia tetrandra</i>	Arnhem Coast, Gulf Coastal*
<i>Bonamia alatisemina*</i>	Davenport Murchison Range, Tanami*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Boronia amplectens</i> *	Arnhem Plateau*
<i>Boronia filicifolia</i>	Victoria Bonaparte*
<i>Boronia minutipinna</i>	Victoria Bonaparte*
<i>Boronia quadrilata</i> *	Arnhem Plateau*
<i>Boronia viridiflora</i> *	Arnhem Plateau*
<i>Boronia wilsonii</i>	Victoria Bonaparte*
<i>Bothriochloa decipiens</i>	Gulf Fall and Uplands*
<i>Brachyachne prostrata</i>	Davenport Murchison Range, Finke, Great Sandy Desert, MacDonnell Ranges, Tanami*
<i>Brachychiton collinus</i>	Gulf Coastal, Gulf Fall and Uplands*, Sturt Plateau
<i>Brachychiton viscidulus</i>	Victoria Bonaparte*
<i>Brachychiton x hirtellus</i>	Sturt Plateau*
<i>Brachyscome A58350 Newcastle Waters Stn.</i>	Mitchell Grass Downs*, Ord Victoria Plain, Sturt Plateau
<i>Brachyscome iberidifolia</i>	Central Ranges, Finke*, MacDonnell Ranges, Simpson Strzelecki Dunefields
<i>Burmannia D61177 Bathurst Island*</i>	Tiwi Cobourg*
<i>Byblis rorida</i>	Tanami*
<i>Calandrinia D125727 Yinberrie Hills</i>	Pine Creek*
<i>Calandrinia D62887 arenicola</i>	Arnhem Coast*
<i>Calandrinia disperma</i>	Burt Plain, Finke*, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields
<i>Calochilus caeruleus</i>	Tiwi Cobourg*
<i>Calotis squamigera</i>	Burt Plain, MacDonnell Ranges, Mitchell Grass Downs
<i>Calotis xanthosioidea</i>	Tanami*
<i>Calympères tenerum</i>	Tiwi Cobourg*
<i>Capparis lucida</i>	Sturt Plateau*
<i>Cartonema D138925 Goyder R.</i>	Central Arnhem*
<i>Cassinia laevis</i>	MacDonnell Ranges*
<i>Celtis paniculata</i>	Gulf Coastal*, Gulf Plains
<i>Centaurea melitensis</i>	Finke*, MacDonnell Ranges
<i>Centaurium clementii</i>	Burt Plain, Finke, Great Sandy Desert, Simpson Strzelecki Dunefields
<i>Centella asiatica</i>	Arnhem Coast*
<i>Centipeda cunninghamii</i>	Simpson Strzelecki Dunefields*
<i>Cephalomanes obscurum</i>	Arnhem Plateau, Tiwi Cobourg*
<i>Chloris divaricata</i>	Gulf Fall and Uplands*, Victoria Bonaparte
<i>Cladium mariscus</i> *	Arnhem Coast*, Gulf Coastal, Gulf Fall and Uplands
<i>Clausena D39161 Tipperary*</i>	Daly Basin*, Pine Creek
<i>Cleome uniflora</i>	Tanami*
<i>Clerodendrum longiflorum</i>	Tiwi Cobourg*
<i>Cochlospermum D124889 Arnhem Land*</i>	Arnhem Coast*, Central Arnhem
<i>Cocos nucifera</i>	Arnhem Coast*, Central Arnhem, Darwin Coastal, Gulf Coastal, Tiwi Cobourg
<i>Coelachne pulchella</i>	Arnhem Coast*, Darwin Coastal
<i>Coleocoma centaurea</i>	Tanami*
<i>Colubrina asiatica</i>	Arnhem Coast*, Darwin Coastal, Gulf Coastal, Gulf Plains, Tiwi Cobourg
<i>Comesperma A77288 Tanami</i>	Tanami*
<i>Commelinia tricarinata</i>	Davenport Murchison Range, Mitchell Grass Downs*
<i>Commelinia undulata</i>	Arnhem Coast*, Darwin Coastal
<i>Commicarpus australis</i>	Finke, Great Sandy Desert*, MacDonnell Ranges
<i>Corchorus elderi</i> *	Channel Country, Davenport Murchison Range, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Tanami

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Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Corchorus leptocarpus</i>	Ord Victoria Plain*
<i>Corchorus macropetalus</i>	Ord Victoria Plain*
<i>Corchorus pascuorum</i>	Mitchell Grass Downs*
<i>Corchorus vermicularis</i>	Ord Victoria Plain*
<i>Corymbia candida</i>	Great Sandy Desert, Ord Victoria Plain, Tanami*
<i>Corymbia pachycarpa*</i>	Ord Victoria Plain, Tanami*
<i>Corymbia sphaerica*</i>	Burt Plain, Davenport Murchison Range, Tanami*
<i>Corymbia zygophylla</i>	Victoria Bonaparte*
<i>Corynotheca asperata*</i>	Tanami*
<i>Corypha utan</i>	Arnhem Coast*, Arnhem Plateau, Central Arnhem
<i>Cressa cretica</i>	Simpson Strzelecki Dunefields, Victoria Bonaparte*
<i>Crinum pedunculatum</i>	Arnhem Coast*
<i>Crinum venosum</i>	Tiwi Cobourg*
<i>Crotalaria sessiliflora</i>	Arnhem Coast*, Tiwi Cobourg
<i>Croton aridus</i>	Davenport Murchison Range, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau, Tanami*
<i>Cryptocarya hypospodia</i>	Tiwi Cobourg*
<i>Cullen corallum</i>	Davenport Murchison Range, Tanami*
<i>Cullen cuneatum</i>	Ord Victoria Plain*, Victoria Bonaparte*
<i>Cullen graveolens</i>	Burt Plain, Finke, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains
<i>Cullen martinii</i>	Davenport Murchison Range, Great Sandy Desert, Ord Victoria Plain, Tanami*
<i>Cuscuta campestris</i>	Arnhem Plateau*
<i>Cyathula prostrata</i>	Darwin Coastal*
<i>Cycas angulata</i>	Arnhem Coast*, Central Arnhem, Darwin Coastal, Gulf Coastal, Gulf Fall and Uplands
<i>Cycas arenicola*</i>	Arnhem Plateau*
<i>Cycas armstrongii x maconochiei</i>	Darwin Coastal*, Tiwi Cobourg
<i>Cycas arnhemica x orientis</i>	Central Arnhem*
<i>Cycas arnhemica*</i>	Arnhem Coast, Central Arnhem*
<i>Cymaria dichotoma*</i>	Arnhem Coast*, Central Arnhem*
<i>Cynanchum brachystelmoides</i>	Arnhem Coast, Daly Basin, Darwin Coastal
<i>Cynanchum leptolepis</i>	Gulf Coastal, Gulf Fall and Uplands, Gulf Plains
<i>Cynometra iripa</i>	Arnhem Coast*
<i>Cynometra ramiflora</i>	Arnhem Coast*
<i>Cyperus D138659 Bradshaw</i>	Victoria Bonaparte*
<i>Cyperus alterniflorus</i>	Finke*, Simpson Strzelecki Dunefields*
<i>Cyperus compactus</i>	Darwin Coastal, Gulf Fall and Uplands, Ord Victoria Plain, Tiwi Cobourg
<i>Cyperus fuscus</i>	Gulf Fall and Uplands*
<i>Cyperus gilesii</i>	Burt Plain, Finke, MacDonnell Ranges, Mitchell Grass Downs*, Simpson Strzelecki Dunefields
<i>Cyperus ixiocarpus</i>	Burt Plain*, Great Sandy Desert, Simpson Strzelecki Dunefields, Tanami, Victoria Bonaparte
<i>Cyperus laevigatus</i>	Simpson Strzelecki Dunefields*
<i>Cyperus pilosus</i>	Darwin Coastal*
<i>Dampiera candicans</i>	Sturt Plateau, Tanami*
<i>Dampiera dentata</i>	Central Ranges*
<i>Dampiera royei</i>	Central Ranges*, Great Sandy Desert
<i>Decaschistia byrnesii</i>	Arnhem Plateau, Daly Basin, Pine Creek
<i>Dendrobium trilamellatum</i>	Tiwi Cobourg*
<i>Dendromyza reinwardtiana</i>	Tiwi Cobourg*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Dentella browniana</i>	Gulf Coastal*
<i>Dentella pulvinata</i>	Simpson Strzelecki Dunefields*, Stony Plains
<i>Desmodium hannii</i>	Ord Victoria Plain*
<i>Desmodium pullenii / glareosum</i>	Darwin Coastal*
<i>Desmodium tiwiense*</i>	Darwin Coastal, Tiwi Cobourg*
<i>Dicarpidium monoicum</i>	Arnhem Plateau, Davenport Murchison Range, Gulf Fall and Uplands, Ord Victoria Plain, Victoria Bonaparte
<i>Dichapetalum timoriense</i>	Arnhem Plateau*
<i>Dicliptera australis</i>	Arnhem Coast*
<i>Dicrastylis doranii</i>	Great Sandy Desert, Simpson Strzelecki Dunefields, Tanami
<i>Dicrastylis petermannensis*</i>	Central Ranges*
<i>Digitaria decumbens</i>	Arnhem Coast*
<i>Digitaria hystrichoides</i>	Burt Plain*, Davenport Murchison Range
<i>Digitaria setigera</i>	Darwin Coastal*
<i>Dioclea javanica</i>	Arnhem Coast*, Central Arnhem*
<i>Diodontium filifolium*</i>	Darwin Coastal, Gulf Fall and Uplands, Mitchell Grass Downs
<i>Dissocarpus biflorus</i>	Burt Plain*, Finke
<i>Dodonaea petiolaris</i>	Burt Plain*, Channel Country, Mitchell Grass Downs, Tanami
<i>Dolichandrone alternifolia</i>	Central Arnhem*
<i>Duboisia arenitensis*</i>	Arnhem Plateau*
<i>Eclipta D78475 Gove</i>	Arnhem Coast*, Darwin Coastal
<i>Eclipta alatocarpa</i>	Mitchell Grass Downs*, Simpson Strzelecki Dunefields
<i>Elaeocarpus angustifolius</i>	Darwin Coastal, Tiwi Cobourg*, Victoria Bonaparte
<i>Elaeocarpus culminicola</i>	Darwin Coastal, Tiwi Cobourg*, Victoria Bonaparte
<i>Elaeocarpusmiegei*</i>	Tiwi Cobourg*
<i>Eleocharis GLeach 2723</i>	Darwin Coastal*
<i>Endocarpus helmsianum</i>	Simpson Strzelecki Dunefields*
<i>Enneapogon decipiens</i>	Gulf Fall and Uplands, Ord Victoria Plain, Sturt Plateau*
<i>Enneapogon robustissimus</i>	Gulf Fall and Uplands*, Mount Isa Inlier
<i>Entada phaseoloides</i>	Arnhem Coast*, Central Arnhem
<i>Entada rheedii</i>	Arnhem Coast, Tiwi Cobourg*
<i>Eragrostis D10558 islands</i>	Arnhem Coast*
<i>Eragrostis ecarinata*</i>	Arnhem Coast, Central Arnhem, Darwin Coastal, Gulf Fall and Uplands, Pine Creek
<i>Eragrostis sororia</i>	Arnhem Coast, Central Arnhem, Pine Creek
<i>Eremophila A90760 Arookara Range*</i>	Great Sandy Desert, Simpson Strzelecki Dunefields*
<i>Eremophila alternifolia</i>	Central Ranges, Finke, Great Sandy Desert, MacDonnell Ranges
<i>Eremophila arenaria</i>	Central Ranges*
<i>Eremophila battii</i>	Finke*, Simpson Strzelecki Dunefields, Stony Plains
<i>Eremophila clarkei</i>	Central Ranges*
<i>Eremophila cordatisepala</i>	Burt Plain, Channel Country*, Mitchell Grass Downs
<i>Eremophila forrestii</i>	Central Ranges, Great Sandy Desert*
<i>Eremophila hughesii*</i>	Central Ranges*, Great Sandy Desert*
<i>Eremophila neglecta</i>	Finke*
<i>Eremophila polyclada</i>	Channel Country*
<i>Eremophila rotundifolia</i>	Stony Plains*
<i>Eremophila serrulata</i>	Central Ranges*, Finke
<i>Eremophila tietkensii</i>	Great Sandy Desert*
<i>Eremophila youngii</i>	Burt Plain*, Tanami*

*Appendices*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Eriachne basalis</i>	Arnhem Plateau, Gulf Fall and Uplands*, Mitchell Grass Downs
<i>Eriachne benthamii</i>	Burt Plain, Channel Country, Finke, Ord Victoria Plain, Simpson Strzelecki Dunefields, Stony Plains, Tanami
<i>Eriachne fastigiata</i>	Daly Basin, Ord Victoria Plain*, Victoria Bonaparte
<i>Eriachne flaccida</i>	Ord Victoria Plain*, Tanami*
<i>Eriachne humilis</i>	Ord Victoria Plain*
<i>Eriocaulon carpentariae</i>	Central Arnhem, Gulf Coastal, Gulf Fall and Uplands, Sturt Plateau
<i>Eriocaulon inapertum*</i>	Darwin Coastal, Victoria Bonaparte*
<i>Eriocaulon monoscapum</i>	Arnhem Coast, Arnhem Plateau, Victoria Bonaparte
<i>Eriocaulon odontospermum</i>	Arnhem Coast, Central Arnhem, Darwin Coastal, Victoria Bonaparte
<i>Eriocaulon zollingerianum</i>	Darwin Coastal*
<i>Eriochlamys behrii</i>	Central Ranges, Finke*, Great Sandy Desert
<i>Eriochloa decumbens</i>	Arnhem Coast, Darwin Coastal*, Ord Victoria Plain, Victoria Bonaparte
<i>Eryngium supinum</i>	Mitchell Grass Downs*
<i>Eucalyptus A2171 Montejinni Station</i>	Ord Victoria Plain*
<i>Eucalyptus D138706 Killarney</i>	Ord Victoria Plain, Sturt Plateau, Tanami
<i>Eucalyptus D76647 Kalkarindji</i>	Ord Victoria Plain*
<i>Eucalyptus argillacea</i>	Ord Victoria Plain*
<i>Eucalyptus confluens</i>	Ord Victoria Plain*
<i>Eucalyptus gymnoteles</i>	Ord Victoria Plain*
<i>Eucalyptus limitaris</i>	Ord Victoria Plain*
<i>Eucalyptus socialis</i>	MacDonnell Ranges*
<i>Eucalyptus sparsa*</i>	Central Ranges*, Finke
<i>Eulophia bicallosa</i>	Daly Basin, Darwin Coastal*
<i>Euphorbia distans</i>	Ord Victoria Plain*, Sturt Plateau
<i>Euphorbia maconochieana</i>	Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain*, Victoria Bonaparte
<i>Euphorbia myrtoides</i>	Gulf Coastal*
<i>Euphorbia parviflora</i>	Burt Plain, Channel Country, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains, Tanami
<i>Euphorbia petala*</i>	Burt Plain, Davenport Murchison Range, Gulf Plains, Mount Isa Inlier, Sturt Plateau, Tanami
<i>Ficus adenisperma</i>	Arnhem Coast, Central Arnhem, Daly Basin, Darwin Coastal, Pine Creek
<i>Fimbristylis D138471 minuta</i>	Pine Creek*
<i>Fimbristylis D71984 Montejinni</i>	Ord Victoria Plain*, Sturt Plateau*
<i>Fimbristylis ammobia</i>	Burt Plain, Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs, Sturt Plateau, Tanami
<i>Fimbristylis costiglumis</i>	Gulf Fall and Uplands, Ord Victoria Plain, Sturt Plateau, Victoria Bonaparte*
<i>Fimbristylis dipsacea*</i>	Arnhem Coast, Arnhem Plateau, Darwin Coastal*
<i>Fimbristylis elegans</i>	Ord Victoria Plain*
<i>Fimbristylis insignis</i>	Arnhem Coast*
<i>Fimbristylis neilsonii</i>	Davenport Murchison Range, Gulf Coastal, Gulf Fall and Uplands, Mitchell Grass Downs, Sturt Plateau, Tanami
<i>Fimbristylis stenostachya</i>	Arnhem Coast, Arnhem Plateau, Gulf Coastal, Victoria Bonaparte
<i>Fimbristylis tomentosa</i>	Arnhem Coast*
<i>Fissidens humilis</i>	MacDonnell Ranges*
<i>Fissidens victorialis</i>	Arnhem Plateau*
<i>Frankenia cupularis</i>	Simpson Strzelecki Dunefields*
<i>Frankenia muscosa</i>	Finke*
<i>Freycinetia percostata</i>	Arnhem Coast*, Tiwi Cobourg
<i>Fuirena arenosa</i>	Gulf Fall and Uplands*
<i>Funaria gracilis</i>	MacDonnell Ranges*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Garcinia warrenii</i>	Tiwi Cobourg*
<i>Gardenia D70867 Fitzmaurice</i>	Victoria Bonaparte*
<i>Geijera salicifolia</i>	Gulf Coastal*, Gulf Fall and Uplands*
<i>Gilesia biniflora</i>	Burt Plain, Finke, Simpson Strzelecki Dunefields, Stony Plains
<i>Glinus orygioides</i>	Burt Plain, Finke, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields, Tanami
<i>Glinus sessiliflorus*</i>	Darwin Coastal, Pine Creek*
<i>Glycine D139896 Arnhem</i>	Arnhem Plateau, Central Arnhem*
<i>Glycine arenaria</i>	Victoria Bonaparte*
<i>Glycine pullenii</i>	Tanami*
<i>Gompholobium simplicifolium</i>	Arnhem Coast, Great Sandy Desert, Tanami*
<i>Gomphrena conferta</i>	Arnhem Coast*, Victoria Bonaparte
<i>Gonocarpus eremophilus</i>	Great Sandy Desert, Tanami*
<i>Goodenia A105527 Great Sandy Desert</i>	Great Sandy Desert*
<i>Goodenia argillacea*</i>	Gulf Fall and Uplands*
<i>Goodenia azurea</i>	Davenport Murchison Range, Great Sandy Desert, Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau, Tanami
<i>Goodenia brunnea</i>	Central Ranges*
<i>Goodenia calcarata</i>	Finke*
<i>Goodenia chthonocephala*</i>	Gulf Fall and Uplands*
<i>Goodenia d58281</i>	Tiwi Cobourg*
<i>Goodenia durackiana</i>	Victoria Bonaparte*
<i>Goodenia faucium*</i>	MacDonnell Ranges*
<i>Goodenia glandulosa</i>	Central Ranges, Great Sandy Desert*, MacDonnell Ranges
<i>Goodenia gracilis</i>	Gulf Fall and Uplands, Sturt Plateau*
<i>Goodenia halophila*</i>	Burt Plain, Great Sandy Desert, Tanami*
<i>Goodenia malvina</i>	Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain*
<i>Goodenia minutiflora</i>	Gulf Coastal*
<i>Goodenia potamica*</i>	Arnhem Coast, Arnhem Plateau, Victoria Bonaparte
<i>Goodenia rupestris*</i>	Central Ranges*
<i>Goodenia strangfordii</i>	Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs*, Ord Victoria Plain, Sturt Plateau, Victoria Bonaparte
<i>Gossypium bickii</i>	Burt Plain, Channel Country, Davenport Murchison Range, Finke, MacDonnell Ranges, Mitchell Grass Downs, Ord Victoria Plain, Tanami
<i>Graptophyllum spinigerum</i>	Arnhem Plateau*
<i>Grevillea benthamiana*</i>	Central Arnhem, Daly Basin, Darwin Coastal, Pine Creek, Victoria Bonaparte
<i>Grevillea nematophylla</i>	Central Ranges*, Finke*
<i>Grevillea versicolor*</i>	Arnhem Coast*, Arnhem Plateau
<i>Gunniopsis papillata</i>	Stony Plains*
<i>Gunniopsis quadrifida</i>	Great Sandy Desert, Simpson Strzelecki Dunefields*
<i>Gunniopsis zygophylloides</i>	Finke*, MacDonnell Ranges, Simpson Strzelecki Dunefields
<i>Gymnanthera cunninghamii</i>	Burt Plain*, MacDonnell Ranges
<i>Habenaria rumphii</i>	Darwin Coastal*
<i>Hakea eyreana</i>	Burt Plain, Channel Country, Finke, Great Sandy Desert, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains
<i>Hakea rhombales</i>	Central Ranges*, Great Sandy Desert
<i>Halgania solanacea</i>	Burt Plain, Central Ranges, Davenport Murchison Range, Great Sandy Desert, Ord Victoria Plain, Tanami*
<i>Halophila decipiens</i>	Arnhem Coast, Darwin Coastal*, Gulf Coastal
<i>Halophila spinulosa</i>	Arnhem Coast*
<i>Hedyotis auricularia</i>	Tiwi Cobourg*
<i>Helicteres semiglabra</i>	Pine Creek*

*Appendices*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Heliotropium ballii</i>	Burt Plain, Davenport Murchison Range*, Gulf Fall and Uplands, Mitchell Grass Downs
<i>Heliotropium brachythrix</i>	Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau, Victoria Bonaparte
<i>Heliotropium fasciculatum</i>	Gulf Coastal*, Gulf Fall and Uplands
<i>Heliotropium geocharis</i>	Mitchell Grass Downs*, Ord Victoria Plain*
<i>Heliotropium haesum</i>	Burt Plain, Davenport Murchison Range, Gulf Fall and Uplands, MacDonnell Ranges, Ord Victoria Plain, Tanami
<i>Heliotropium parviantrum</i>	Tanami*
<i>Heliotropium prostratum</i>	Daly Basin, Gulf Coastal, Gulf Fall and Uplands
<i>Heliotropium pulvinum*</i>	Davenport Murchison Range, Mitchell Grass Downs, Tanami
<i>Heliotropium ramulipatens</i>	Daly Basin, Gulf Fall and Uplands*, Pine Creek, Sturt Plateau, Victoria Bonaparte
<i>Heliotropium sphaericum</i>	Burt Plain, Mitchell Grass Downs, Sturt Plateau, Tanami
<i>Heliotropium subreniforme*</i>	Burt Plain, Davenport Murchison Range, Mitchell Grass Downs, Tanami*
<i>Heliotropium transforme</i>	Great Sandy Desert*, Victoria Bonaparte*
<i>Hernandia nymphaeifolia</i>	Arnhem Coast*
<i>Hibbertia D142470 Mann R</i>	Arnhem Plateau*
<i>Hibbertia D59671 globular</i>	Arnhem Plateau*
<i>Hibbertia angustifolia*</i>	Arnhem Coast, Arnhem Plateau, Central Arnhem, Darwin Coastal
<i>Hibbertia muelleri*</i>	Darwin Coastal*
<i>Hibbertia species'1'</i>	Arnhem Coast*
<i>Hibiscus AD 37419</i>	Darwin Coastal*
<i>Hibiscus arenicola</i>	Great Sandy Desert*, Tanami
<i>Hibiscus coatesii</i>	Ord Victoria Plain*
<i>Hibiscus lobatus</i>	Daly Basin*, Darwin Coastal*
<i>Hibiscus thegaleus*</i>	Central Arnhem*
<i>Hoppea dichotoma*</i>	Central Arnhem*
<i>Hydrocotyle D62620 Hart Range*</i>	MacDonnell Ranges*
<i>Hypserpa decumbens</i>	Tiwi Cobourg*
<i>Hypserpa polyandra</i>	Tiwi Cobourg*
<i>Indigofera A83977 Areyonga*</i>	MacDonnell Ranges*
<i>Indigofera ammobia</i>	Tanami*
<i>Indigofera brevidens</i>	Burt Plain, Simpson Strzelecki Dunefields*
<i>Indigofera cinericolor*</i>	Darwin Coastal*, Ord Victoria Plain*
<i>Indigofera monophylla</i>	Burt Plain, Great Sandy Desert, MacDonnell Ranges, Ord Victoria Plain, Pine Creek, Tanami
<i>Indigofera schultziana*</i>	Darwin Coastal, Pine Creek*
<i>Intsia bijuga</i>	Arnhem Coast*, Central Arnhem
<i>Ipomoea A83192 Stirling*</i>	Burt Plain*
<i>Ipomoea D32602 Ramingining</i>	Arnhem Coast*
<i>Ipomoea brassii</i>	Gulf Coastal*, Gulf Fall and Uplands*
<i>Ipomoea mauritiana</i>	Arnhem Coast*
<i>Isachne globosa</i>	Arnhem Coast, Darwin Coastal*, Gulf Coastal, Gulf Fall and Uplands, Victoria Bonaparte
<i>Iseilema convexum</i>	Gulf Fall and Uplands, Mitchell Grass Downs*
<i>Iseilema eremaeum</i>	Burt Plain, Davenport Murchison Range, Finke, Ord Victoria Plain, Simpson Strzelecki Dunefields, Stony Plains, Tanami
<i>Iseilema trichopus</i>	Sturt Plateau*
<i>Isotoma A14992 kakadu</i>	Arnhem Plateau*
<i>Isotoma D58137 tanumbirini</i>	Sturt Plateau*
<i>Isotoma lenticula*</i>	Burt Plain, Channel Country, Davenport Murchison Range, Mitchell Grass Downs, Tanami*
<i>Ixiochlamys integerrima*</i>	Burt Plain*, MacDonnell Ranges, Mitchell Grass Downs

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Jacksonia arnhemica</i> *	Arnhem Coast, Arnhem Plateau, Central Arnhem
<i>Jacksonia flexuosa</i> *	Arnhem Plateau*
<i>Keraudrenia hookeriana</i>	Arnhem Coast*
<i>Kippistia suaedifolia</i>	Finke*, Great Sandy Desert, MacDonnell Ranges
<i>Lagerstroemia hirsuta</i>	Arnhem Coast*
<i>Lamarchea sulcata</i>	Central Ranges, Great Sandy Desert*
<i>Lastreopsis rufescens</i>	Darwin Coastal*
<i>Lawrenzia A97163 The Granites</i>	Tanami*
<i>Lawrenzia A98527 Glen Helen</i>	Great Sandy Desert*, MacDonnell Ranges*
<i>Laxmannia arida</i>	Great Sandy Desert*
<i>Lechenaultia lutescens</i>	Central Ranges, Great Sandy Desert, MacDonnell Ranges, Tanami
<i>Leiocarpa leptolepis</i>	Burt Plain, Finke, Great Sandy Desert, MacDonnell Ranges, Mitchell Grass Downs, Ord Victoria Plain, Simpson Strzelecki Dunefields, Stony Plains
<i>Leiocarpa websteri</i>	Burt Plain, Finke, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains
<i>Lepidium strongylophyllum</i>	Finke*, Simpson Strzelecki Dunefields
<i>Leptosema anomalum</i>	Davenport Murchison Range, Mitchell Grass Downs, Ord Victoria Plain, Sturt Plateau, Tanami*
<i>Lepturus A51850 Mataranka</i> *	Gulf Fall and Uplands*
<i>Lepturus geminatus</i>	Arnhem Coast*
<i>Leucobryum candidum</i>	Arnhem Plateau*
<i>Leucopogon A36851 Wessell Islands.</i>	Arnhem Coast*, Daly Basin
<i>Levenhookia chippendalei</i>	Burt Plain, Davenport Murchison Range, Tanami*
<i>Lindernia A4814 Willowra</i> *	Arnhem Coast*, Tanami*
<i>Lindernia D137732 Brennans Showy Anthers</i>	Arnhem Plateau*
<i>Lindernia cowiei</i> *	Tiwi Cobourg*
<i>Lindernia pubescens</i> *	Arnhem Coast, Central Arnhem*, Darwin Coastal, Tiwi Cobourg
<i>Lindernia subulata</i>	Darwin Coastal*, Gulf Fall and Uplands*
<i>Lithomyrtus obtusa</i>	Pine Creek*
<i>Litsea breviumbellata</i>	Tiwi Cobourg*
<i>Lobelia D120904 Cox Peninsula</i> *	Darwin Coastal*
<i>Lysiana maritima</i>	Arnhem Coast, Central Arnhem, Gulf Fall and Uplands
<i>Macrothelypteris torresiana</i>	Gulf Coastal*
<i>Maireana appressa</i>	Central Ranges, Finke*, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields
<i>Maireana ciliata</i>	Stony Plains*
<i>Maireana dichoptera</i>	Mitchell Grass Downs*
<i>Maireana eriantha</i>	Simpson Strzelecki Dunefields*
<i>Maireana microcarpa</i>	Simpson Strzelecki Dunefields*, Stony Plains
<i>Maireana ovata</i>	Finke*
<i>Maireana pentatropis</i>	Finke*, Great Sandy Desert
<i>Maireana pyramidata</i>	Finke*, Simpson Strzelecki Dunefields
<i>Maireana turbinata</i>	Finke*
<i>Malacocera biflora</i>	Finke*
<i>Malacocera tricornis</i>	Finke*
<i>Malaxis marsupichila</i>	Darwin Coastal*
<i>Mapania macrocephala</i>	Arnhem Coast, Tiwi Cobourg*
<i>Margaritaria indica</i>	Darwin Coastal*
<i>Marsilea A99150 Neutral Junction</i>	Burt Plain*
<i>Marsilea costulifera</i>	Burt Plain, Channel Country, Great Sandy Desert, Tanami

*Appendices*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Marsilea latzii</i> *	Tanami*
<i>Melaleuca D139090 Floodplain viridiflora</i>	Central Arnhem*
<i>Melaleuca fulgens</i> *	Central Ranges*
<i>Melia azedarach</i>	Burt Plain, Channel Country, Darwin Coastal, Davenport Murchison Range, Finke, Gulf Coastal, Gulf Plains, MacDonnell Ranges, Ord Victoria Plain
<i>Melodinus australis</i>	Arnhem Coast, Tiwi Cobourg*
<i>Menkea sphaerocarpa</i>	Finke*, Great Sandy Desert, MacDonnell Ranges
<i>Mentha australis</i>	Mitchell Grass Downs*, Stony Plains
<i>Merremia A92973 Elliott</i>	Davenport Murchison Range, Mitchell Grass Downs*
<i>Merremia davenportii</i>	Burt Plain, Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs, Sturt Plateau, Tanami
<i>Micraira dunlopii</i>	Victoria Bonaparte*
<i>Microcorys macrediana</i> *	Finke*
<i>Millotia greevesii</i>	Central Ranges*, Finke*
<i>Mimulus prostratus</i>	Burt Plain, Channel Country, Davenport Murchison Range, Great Sandy Desert, Mitchell Grass Downs, Tanami*
<i>Minuria integerrima</i>	Burt Plain, Finke, Great Sandy Desert, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains, Tanami
<i>Mitrasacme epigaea</i>	Victoria Bonaparte*
<i>Mitrasacme inornata</i>	Central Arnhem, Tiwi Cobourg*
<i>Mitrasacme lutea</i> *	Ord Victoria Plain*, Tanami
<i>Mitrella D24710 Melville Is.*</i>	Tiwi Cobourg*
<i>Molineria capitulata</i>	Arnhem Coast*, Darwin Coastal
<i>Monotaxis luteiflora</i>	Central Ranges, MacDonnell Ranges*
<i>Muelleranthus trifoliatus</i>	Burt Plain, Mitchell Grass Downs, Tanami*
<i>Muellerargia timorensis</i>	Central Arnhem*
<i>Mukia A90788 Tobermorey Station*</i>	Channel Country, Mitchell Grass Downs*
<i>Mukia micrantha</i>	Davenport Murchison Range, Gulf Fall and Uplands, Ord Victoria Plain
<i>Murchisonia volubilis</i>	MacDonnell Ranges*
<i>Murdannia cryptantha</i>	Pine Creek*
<i>Nervilia plicata</i>	Daly Basin*, Darwin Coastal
<i>Nesaea crinipes</i>	Gulf Coastal*, Gulf Fall and Uplands, Gulf Plains
<i>Nesaea repens</i>	Davenport Murchison Range, Mitchell Grass Downs, Ord Victoria Plain, Tanami
<i>Newcastelia cladotricha</i>	Great Sandy Desert, Tanami*
<i>Nitraria billardieri</i>	Finke*, Simpson Strzelecki Dunefields*
<i>Nostoc commune</i>	MacDonnell Ranges*
<i>Nymphoides exiliflora</i>	Arnhem Coast, Central Arnhem*, Gulf Coastal, Gulf Plains
<i>Ochrosperma sulcatum</i> *	Arnhem Plateau*
<i>Olax spartea</i> *	Gulf Coastal, Tanami*
<i>Oldenlandia spathulata</i> *	Mitchell Grass Downs*
<i>Operculina D40286 Cotton Island*</i>	Arnhem Coast*
<i>Operculina turpethum</i>	Arnhem Coast, Darwin Coastal*, Gulf Coastal
<i>Oplismenus hirtellus</i>	Darwin Coastal*
<i>Oryza minuta</i> *	Arnhem Coast*
<i>Osteocarpum acropterum</i>	Finke*, Simpson Strzelecki Dunefields, Stony Plains
<i>Osteocarpum pentapterum</i>	Channel Country, Simpson Strzelecki Dunefields*
<i>Ozothamnus A25067 Petermann Ranges*</i>	Central Ranges*
<i>Pachycornia triandra</i>	Finke*
<i>Pallavicinia yellii</i>	Arnhem Coast*
<i>Pandanus semiarmatus</i>	Arnhem Plateau*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Panicum miliaceum</i>	Finke*
<i>Paraceterach muelleri</i>	Gulf Fall and Uplands, Victoria Bonaparte*
<i>Paraparmelia arida</i>	Finke*, MacDonnell Ranges*
<i>Paraporpidia aboriginum</i>	Finke*
<i>Parsonsia D30178 Melville Island*</i>	Tiwi Cobourg*
<i>Pavetta tenella*</i>	Arnhem Coast, Darwin Coastal, Tiwi Cobourg*
<i>Pentalepis trichodesmoides</i>	Ord Victoria Plain*
<i>Peplidium muelleri</i>	Burt Plain, Davenport Murchison Range, Great Sandy Desert, Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain, Simpson Strzelecki Dunefields
<i>Persicaria D17952 Bulkine Billabong</i>	Darwin Coastal*
<i>Persicaria strigosa</i>	Arnhem Coast*
<i>Phacellothrix cladochaeta</i>	Gulf Coastal*
<i>Phaius terrestre</i>	Arnhem Coast*, Victoria Bonaparte
<i>Phaleria macrocarpa</i>	Arnhem Coast*
<i>Phyllanthus D138821 Roper River</i>	Gulf Fall and Uplands*
<i>Phyllanthus arnhemicus</i>	Arnhem Coast*
<i>Phyllanthus dallachyanus</i>	Arnhem Plateau*
<i>Phyllanthus lacunellus</i>	MacDonnell Ranges, Simpson Strzelecki Dunefields*, Victoria Bonaparte
<i>Physalis micrantha</i>	Arnhem Coast, Gulf Coastal*
<i>Pimelea ammocharis</i>	Davenport Murchison Range, Tanami*
<i>Pimelea penicillaris</i>	Finke*, Simpson Strzelecki Dunefields
<i>Pimelea simplex</i>	Finke*, MacDonnell Ranges, Simpson Strzelecki Dunefields, Stony Plains
<i>Pityrodia chorisepala*</i>	Tanami*
<i>Pityrodia loricata*</i>	MacDonnell Ranges*
<i>Pityrodia loxocarpa</i>	Central Ranges*, Great Sandy Desert*
<i>Pityrodia megalophylla*</i>	Arnhem Plateau, Central Arnhem*
<i>Pityrodia serrata*</i>	Arnhem Plateau*
<i>Plagiobothrys plurisepalus</i>	Simpson Strzelecki Dunefields*, Stony Plains*
<i>Plagiochasma australe</i>	MacDonnell Ranges*
<i>Plantago cunninghamii</i>	Burt Plain*, Finke, MacDonnell Ranges, Mitchell Grass Downs
<i>Plantago multiscapa*</i>	MacDonnell Ranges*, Stony Plains*
<i>Pleurocarpaea fasciculata*</i>	Arnhem Coast, Central Arnhem*, Gulf Fall and Uplands
<i>Pluchea tetrantha</i>	Burt Plain, Great Sandy Desert, Tanami*
<i>Podocarpus grayae</i>	Arnhem Plateau*
<i>Polygala A77628 Davenport Ranges</i>	Burt Plain, Davenport Murchison Range, Gulf Fall and Uplands, Pine Creek, Sturt Plateau, Tanami
<i>Polygala D132655 ciliate alae</i>	Ord Victoria Plain*, Victoria Bonaparte
<i>Polygala D137211 Bradshaw</i>	Victoria Bonaparte*
<i>Polygala tepperi</i>	Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain, Tanami
<i>Polymeria A93357 Western Tanami</i>	Tanami*
<i>Polymeria calycina</i>	Gulf Coastal, Mitchell Grass Downs, Victoria Bonaparte
<i>Porana commixta</i>	Central Ranges*
<i>Porphyrosiphon notarisit</i>	Gulf Fall and Uplands*
<i>Portulaca decipiens</i>	Gulf Coastal, Mitchell Grass Downs*, Sturt Plateau, Tanami
<i>Portulaca intraterranea</i>	Burt Plain, Finke, Gulf Fall and Uplands, MacDonnell Ranges, Ord Victoria Plain, Simpson Strzelecki Dunefields, Sturt Plateau
<i>Portulaca tuberosa</i>	Arnhem Coast*
<i>Potamogeton pectinatus</i>	Burt Plain, Mitchell Grass Downs*
<i>Pouzolzia hirta</i>	Central Arnhem*, Victoria Bonaparte
<i>Pouzolzia zeylanica</i>	Daly Basin, Darwin Coastal, Victoria Bonaparte*

*Appendices*

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<i>Prostanthera centralis</i> *	Central Ranges*, Great Sandy Desert
<i>Prostanthera wilkieana</i>	Central Ranges*
<i>Psychotria coelosperma</i>	Arnhem Coast, Tiwi Cobourg*
<i>Pteris comans</i>	Gulf Fall and Uplands*
<i>Pteroaulon sphaeranthoides</i>	Arnhem Coast, Ord Victoria Plain*
<i>Ptilotus aristatus</i> *	Burt Plain*, Finke, Simpson Strzelecki Dunefields, Stony Plains
<i>Ptilotus astrolasius</i>	Burt Plain, Great Sandy Desert, Ord Victoria Plain*, Tanami
<i>Ptilotus capitatus</i>	Ord Victoria Plain*
<i>Ptilotus dissitiflorus</i> *	Gulf Fall and Uplands, Ord Victoria Plain*, Sturt Plateau
<i>Ptilotus gardneri</i>	Ord Victoria Plain*, Tanami*
<i>Ptilotus royanus</i>	Central Ranges*
<i>Pupalia lappacea</i>	Arnhem Coast*
<i>Pycnosorus pleiocephalus</i>	Stony Plains*
<i>Rhodanthe gossypina</i>	Mitchell Grass Downs*
<i>Rhodanthe laevis</i>	Arnhem Coast, Central Ranges, MacDonnell Ranges
<i>Rhodanthe uniflora</i>	Stony Plains*
<i>Rhynchospora corymbosa</i>	Arnhem Coast*, Central Arnhem, Darwin Coastal, Victoria Bonaparte
<i>Rorippa eustylis</i>	Mitchell Grass Downs*
<i>Rotala rosea</i>	Central Arnhem*
<i>Rotala tripartita</i>	Gulf Fall and Uplands*, Mitchell Grass Downs
<i>Rulingia rotundifolia</i>	Central Ranges, Great Sandy Desert*
<i>Rumex crystallinus</i>	Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains, Tanami
<i>Ruppia maritima</i>	Burt Plain, Channel Country, Finke, Great Sandy Desert, Gulf Coastal, MacDonnell Ranges
<i>Ruppia tuberosa</i>	Finke, Great Sandy Desert, Simpson Strzelecki Dunefields, Tanami
<i>Sarcobolus ritae</i> *	Arnhem Coast*
<i>Sauvagesia D142314 Mann River</i> *	Arnhem Coast*, Central Arnhem
<i>Sauvagesia arenosus</i>	Great Sandy Desert*
<i>Sauvagesia gracilis</i> *	Arnhem Plateau*
<i>Sauvagesia huntii</i> *	Great Sandy Desert, Tanami*
<i>Sauvagesia thesioides</i>	MacDonnell Ranges*
<i>Scaevola collina</i>	Central Ranges*
<i>Scaevola depauperata</i>	Burt Plain, Finke, MacDonnell Ranges, Simpson Strzelecki Dunefields*, Tanami
<i>Scaevola graminea</i> *	Burt Plain*, MacDonnell Ranges
<i>Scaevola humilis</i>	MacDonnell Ranges*
<i>Scaevola obovata</i>	Burt Plain*
<i>Scaevola parvibarbata</i>	Burt Plain, Channel Country, Finke, MacDonnell Ranges, Simpson Strzelecki Dunefields*, Stony Plains
<i>Schoenus centralis</i> *	Great Sandy Desert*, MacDonnell Ranges*
<i>Scleria carphiformis</i>	Tiwi Cobourg*
<i>Scleria terrestris</i>	Arnhem Coast*
<i>Sclerochlamys brachyptera</i>	Finke*
<i>Sclerolaena densiflora</i>	Burt Plain*
<i>Sclerolaena limbata</i>	MacDonnell Ranges*
<i>Sclerolaena longicuspis</i>	Finke*, MacDonnell Ranges
<i>Sclerolaena minuta</i>	Burt Plain, Davenport Murchison Range, Great Sandy Desert, Tanami
<i>Sclerolaena muelleri</i>	Burt Plain, Great Sandy Desert, Tanami*
<i>Sclerolaena muricata</i>	Burt Plain, Mitchell Grass Downs*
<i>Sclerolaena symoniana</i> *	Finke, Great Sandy Desert*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Sedopsis D77223 sandstone</i>	Arnhem Coast*, Arnhem Plateau*
<i>Selaginella D22971</i>	Arnhem Plateau*
<i>Senecio A19128 Barklys</i>	Mitchell Grass Downs*, Tanami
<i>Senecio glossanthus</i>	Finke*
<i>Senna heptantha*</i>	Arnhem Coast, Arnhem Plateau*, Darwin Coastal
<i>Senna phyllodinea</i>	Channel Country, Finke, MacDonnell Ranges, Mitchell Grass Downs, Simpson Strzelecki Dunefields
<i>Senna procumbens*</i>	Pine Creek*
<i>Sesbania erubescens</i>	Darwin Coastal, Gulf Fall and Uplands, Ord Victoria Plain, Sturt Plateau, Victoria Bonaparte
<i>Sesbania javanica</i>	Gulf Fall and Uplands*, Mitchell Grass Downs, Sturt Plateau
<i>Setaria pumila</i>	Darwin Coastal*, Pine Creek*
<i>Sida A32067 Horseshoe Bend*</i>	Finke*
<i>Sida A83883 Petermann Ranges*</i>	Central Ranges*
<i>Sida A90358 Walhallow Stn.</i>	Gulf Fall and Uplands, Mitchell Grass Downs*
<i>Sida D68189 excedentifolia</i>	Mitchell Grass Downs*
<i>Sida arenicola</i>	Davenport Murchison Range, Great Sandy Desert, Ord Victoria Plain, Tanami, Victoria Bonaparte
<i>Sida carinatus</i>	Simpson Strzelecki Dunefields*
<i>Sida cleisocalyx</i>	Burt Plain, Davenport Murchison Range, Gulf Fall and Uplands, Ord Victoria Plain, Tanami
<i>Sida corrugata</i>	Burt Plain, Daly Basin, Davenport Murchison Range, Gulf Fall and Uplands
<i>Sida cryptopetala</i>	Daly Basin, Ord Victoria Plain*, Sturt Plateau
<i>Sida filicaulis</i>	Burt Plain*
<i>Sida goniocarpa</i>	Burt Plain, Finke, MacDonnell Ranges, Mitchell Grass Downs
<i>Sida intricata</i>	Channel Country, Finke*
<i>Sida petrophila</i>	Finke*
<i>Solanum gilesii</i>	Great Sandy Desert, Tanami*
<i>Solanum lasiophyllum</i>	Central Ranges*, Finke
<i>Solanum melanospermum*</i>	Gulf Coastal*, Gulf Fall and Uplands, Pine Creek
<i>Solanum pugiunculiferum</i>	Gulf Coastal, Gulf Fall and Uplands, Gulf Plains, Ord Victoria Plain, Sturt Plateau, Tanami, Victoria Bonaparte
<i>Solanum seitheae</i>	Arnhem Coast, Gulf Coastal, Gulf Fall and Uplands
<i>Solanum yirrkalense*</i>	Arnhem Coast*
<i>Spathoglottis paulinae</i>	Arnhem Coast*
<i>Spermacoce caudata*</i>	Arnhem Plateau*
<i>Spermacoce elaiosoma*</i>	Arnhem Coast*, Arnhem Plateau, Central Arnhem
<i>Spermacoce juncta*</i>	Arnhem Coast*
<i>Spermacoce lamprosperma*</i>	Arnhem Coast*, Arnhem Plateau
<i>Spermacoce latimarginata</i>	Gulf Fall and Uplands*
<i>Spermacoce occidentalis</i>	Ord Victoria Plain*
<i>Spermacoce parviceps*</i>	Arnhem Plateau*
<i>Spermacoce phalloides*</i>	Darwin Coastal*
<i>Spermacoce resinosula</i>	Tanami*
<i>Spermacoce retitesta*</i>	Tiwi Cobourg*
<i>Spermacoce stigmatosa*</i>	Arnhem Coast*
<i>Spermacoce suprahila*</i>	Pine Creek*
<i>Spermacoce tectanthera*</i>	Daly Basin*, Gulf Fall and Uplands, Pine Creek, Sturt Plateau
<i>Sphaerostephanos heterocarpus</i>	Victoria Bonaparte*
<i>Sphaerostephanos unitus</i>	Daly Basin*
<i>Sporobolus latzii*</i>	Davenport Murchison Range*

*Appendices*

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<i>Sporobolus lenticularis</i>	Gulf Fall and Uplands*
<i>Sporobolus scabridus</i>	Burt Plain, MacDonnell Ranges*
<i>Stackhousia D70123 Lake Mackay*</i>	Great Sandy Desert*
<i>Stemodia A57025 Manners Creek*</i>	Channel Country, Davenport Murchison Range, Great Sandy Desert, Mitchell Grass Downs, Tanami*
<i>Stemodia grossa</i>	Ord Victoria Plain*, Victoria Bonaparte
<i>Sticherus flabellatus</i>	Arnhem Coast*
<i>Strychnos minor</i>	Tiwi Cobourg*
<i>Stylium diffusum</i>	Arnhem Coast*
<i>Stylium floribundum</i>	Central Arnhem, Gulf Coastal, Gulf Fall and Uplands, Mitchell Grass Downs, Tanami
<i>Stylium nominatum*</i>	Arnhem Plateau*, Tiwi Cobourg*
<i>Stylium prophylloides</i>	Victoria Bonaparte*
<i>Stylium rivulosum</i>	Victoria Bonaparte*
<i>Stylium simulans*</i>	Arnhem Plateau*
<i>Stylium symonii*</i>	Central Arnhem*
<i>Stylium tenerum</i>	Arnhem Coast*, Arnhem Plateau
<i>Swainsona campylantha</i>	Burt Plain, Great Sandy Desert, MacDonnell Ranges, Mitchell Grass Downs, Ord Victoria Plain, Stony Plains
<i>Swainsona disjuncta</i>	Central Ranges*, MacDonnell Ranges*
<i>Swainsona formosa</i>	Finke*, Great Sandy Desert, Mitchell Grass Downs
<i>Swainsona laciniata*</i>	Great Sandy Desert*
<i>Swainsona laxa</i>	Finke, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields
<i>Swainsona rostrata</i>	Burt Plain, Finke, Great Sandy Desert, MacDonnell Ranges
<i>Swainsona villosa</i>	Central Ranges, Finke*
<i>Taenitis pinnata</i>	Arnhem Plateau*
<i>Tarenna foliosa</i>	Arnhem Coast*
<i>Tarennoidea wallichii*</i>	Tiwi Cobourg*
<i>Taxithelium instratum</i>	Arnhem Plateau*
<i>Tectaria siifolia</i>	Arnhem Coast*
<i>Tephrosia A27836 Dunes</i>	Great Sandy Desert, Tanami*
<i>Tephrosia A31662 arenaria</i>	Arnhem Coast*, Gulf Coastal
<i>Tephrosia A88109 granite</i>	Burt Plain*, MacDonnell Ranges*
<i>Tephrosia D50035 procera</i>	Gulf Coastal, Ord Victoria Plain, Victoria Bonaparte*
<i>Tephrosia benthamii</i>	Tanami*
<i>Tephrosia crocea</i>	Arnhem Coast*, Gulf Fall and Uplands*
<i>Tephrosia elliptica</i>	Tiwi Cobourg*
<i>Tephrosia maculata</i>	Pine Creek*
<i>Tephrosia savannicola</i>	Daly Basin*
<i>Tephrosia vestita</i>	Tiwi Cobourg*
<i>Tephrosia villosa</i>	Tiwi Cobourg*
<i>Terminalia aridicola</i>	Gulf Fall and Uplands, Mitchell Grass Downs*
<i>Tetragonia eremaea</i>	Finke*, Simpson Strzelecki Dunefields, Stony Plains
<i>Teucrium albicaule</i>	Simpson Strzelecki Dunefields*
<i>Teucrium racemosum</i>	Burt Plain, Finke, Great Sandy Desert, MacDonnell Ranges, Simpson Strzelecki Dunefields, Stony Plains
<i>Thecanthes D40250 Donydji*</i>	Arnhem Coast, Central Arnhem, Gulf Fall and Uplands
<i>Threlkeldia inchoata</i>	Finke, MacDonnell Ranges, Stony Plains*
<i>Thrixspermum congestum</i>	Tiwi Cobourg*
<i>Thuarea involuta</i>	Arnhem Coast*
<i>Tietkensia corrickiae</i>	Central Ranges*

Species (*NT Endemic)	Bioregion/s in which occurs (*>50% records from this bioregion)
<i>Toechima</i> D55598 East Alligator*	Arnhem Plateau*
<i>Trachymene</i> bialata	Central Ranges*
<i>Trachymene</i> ceratocarpa	Finke*
<i>Trachymene</i> dusenii	Ord Victoria Plain*
<i>Trachymene</i> glandulosa	Gulf Fall and Uplands*
<i>Trachymene</i> longipedunculata	Arnhem Coast*
<i>Trachymene</i> psammophila	Arnhem Coast*
<i>Trachymene</i> villosa	Ord Victoria Plain, Tanami*
<i>Trianthema</i> compacta	Arnhem Coast, Gulf Coastal, Gulf Fall and Uplands, Gulf Plains
<i>Trianthema</i> glossostigma	Burt Plain, Davenport Murchison Range, Tanami*
<i>Trianthema</i> oxycalyptra	Davenport Murchison Range, Ord Victoria Plain, Tanami, Victoria Bonaparte
<i>Tribulus</i> hystric	Simpson Strzelecki Dunefields*, Stony Plains, Tanami
<i>Tribulus</i> minutus	Finke*
<i>Trichanthodium</i> skirrophorum	Finke, Simpson Strzelecki Dunefields*
<i>Triglochin</i> multifructum	Gulf Coastal*
<i>Triodia</i> helmsii	Central Ranges*
<i>Triodia</i> latzii*	Davenport Murchison Range, Gulf Coastal, Gulf Fall and Uplands*, Tanami
<i>Triodia</i> roscida	Ord Victoria Plain*
<i>Triumfetta</i> D138660 Fleshy	Victoria Bonaparte*
<i>Triumfetta</i> aquila	Darwin Coastal, Tiwi Cobourg*
<i>Triumfetta</i> fissurata	Gulf Fall and Uplands*
<i>Triumfetta</i> litticola*	Arnhem Coast*
<i>Triumfetta</i> mellina	Gulf Fall and Uplands*
<i>Triumfetta</i> oenpelliensis*	Arnhem Plateau*
<i>Triumfetta</i> prostrata	Gulf Coastal*, Gulf Fall and Uplands*
<i>Triumfetta</i> repens	Tiwi Cobourg*
<i>Triumfetta</i> winneckeana	Great Sandy Desert*, Simpson Strzelecki Dunefields, Tanami
<i>Tropidia</i> curculigoides*	Arnhem Coast, Darwin Coastal*, Tiwi Cobourg
<i>Turraea</i> pubescens	Arnhem Coast, Tiwi Cobourg, Victoria Bonaparte*
<i>Typhonium</i> jonesii*	Tiwi Cobourg*
<i>Typhonium</i> mirabile*	Tiwi Cobourg*
<i>Typhonium</i> praetermissum*	Darwin Coastal*
<i>Typhonium</i> taylorii*	Darwin Coastal*
<i>Uranthoecium</i> truncatum	Burt Plain, Mitchell Grass Downs*, Simpson Strzelecki Dunefields, Stony Plains, Tanami
<i>Urochloa</i> atrisola	Gulf Fall and Uplands*, Mitchell Grass Downs*
<i>Utricularia</i> stellaris	Gulf Fall and Uplands*, Mitchell Grass Downs
<i>Vallisneria</i> caulescens	Gulf Coastal*
<i>Velleia</i> macrocalyx	Channel Country, Davenport Murchison Range, Mitchell Grass Downs, Tanami*
<i>Velleia</i> panduriformis	Great Sandy Desert, Ord Victoria Plain, Tanami*
<i>Vigna</i> marina	Arnhem Coast*
<i>Wahlenbergia</i> gracilis	Finke, Gulf Coastal, Ord Victoria Plain
<i>Waltheria</i> virgata	Davenport Murchison Range, Ord Victoria Plain, Tanami*
<i>Websteria</i> confervoides	Darwin Coastal*, Tiwi Cobourg
<i>Wedelia</i> D42377 Limestone	Daly Basin*, Ord Victoria Plain*
<i>Xanthoparmelia</i> amplexula	Finke*, Tanami
<i>Xanthoparmelia</i> australasica	Finke*
<i>Xanthoparmelia</i> prodomokosii	Finke*

*Appendices*

<b>Species (*NT Endemic)</b>	<b>Bioregion/s in which occurs (*&gt;50% records from this bioregion)</b>
<i>Xerochloa barbata</i>	Central Arnhem, Gulf Coastal, Gulf Fall and Uplands, Ord Victoria Plain, Victoria Bonaparte
<i>Xylopia D30127 Melville Island*</i>	Tiwi Cobourg*
<i>Zinnia peruviana</i>	Burt Plain*
<i>Zornia D3024 Darwin*</i>	Darwin Coastal*
<i>Zornia acuta</i>	Arnhem Plateau, Darwin Coastal, Victoria Bonaparte
<i>Zornia adenophora</i>	Gulf Coastal, Gulf Fall and Uplands, Gulf Plains
<i>Zornia chaetophora</i>	Arnhem Plateau, Daly Basin, Darwin Coastal, Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain, Pine Creek, Tanami
<i>Zornia disticha*</i>	Darwin Coastal, Tiwi Cobourg*
<i>Zygophyllum ovatum</i>	Central Ranges, Finke*
<i>Zygophyllum rowelliae</i>	Finke*, MacDonnell Ranges, Simpson Strzelecki Dunefields

#### 4. Terrestrial frog, reptile, bird and mammal species not recorded from any NT reserve

Species of vertebrates which are unrecorded in the NT (E=extinct from that bioregion).

Common name (*NT vagrant)	Species (*NT endemic)	Bioregion (*>50% of NT records occur in this bioregion)
Striped Burrowing Frog	<i>Cyclorana alboguttata</i>	Gulf Coastal, Gulf Fall and Uplands*
Hidden-ear Frog	<i>Cyclorana cryptotis</i>	Davenport Murchison Range, Gulf Fall and Uplands, Mitchell Grass Downs, Sturt Plateau*, Victoria Bonaparte
Wailing Frog	<i>Cyclorana vagita</i>	Ord Victoria Plain*
Northern Burrowing Frog	<i>Neobatrachus aquilonius</i>	Burt Plain, Davenport Murchison Range, Great Sandy Desert, Tanami*
Small Toadlet	<i>Uperoleia minima</i>	Ord Victoria Plain*
Alexandria Toadlet	<i>Uperoleia orientalis*</i>	Gulf Fall and Uplands*
Blacksoil Toadlet	<i>Uperoleia trachyderma</i>	Gulf Fall and Uplands, Mitchell Grass Downs, Ord Victoria Plain*, Sturt Plateau, Victoria Bonaparte
Southern Death Adder	<i>Acanthophis antarcticus</i>	Mitchell Grass Downs*
New Guinea Long-necked Turtle	<i>Chelodina canni</i>	Sturt Plateau*
Gravel Dragon	<i>Cryptagama aurita</i>	Ord Victoria Plain*
Beach Snake-Eyed Skink	<i>Cryptoblepharus litoralis</i>	Arnhem Coast*
Rusty Dragon	<i>Ctenophorus rufescens</i>	Central Ranges*
	<i>Ctenotus astictus*</i>	Arnhem Coast*, Arnhem Plateau, Central Arnhem, Gulf Coastal
Pale-Backed Ctenotus	<i>Ctenotus pallescens</i>	Davenport Murchison Range, Mitchell Grass Downs, Tanami
Tanami Ctenotus	<i>Ctenotus tanamiensis</i>	Burt Plain, Great Sandy Desert, Tanami*
Marble-faced Delma	<i>Delma australis</i>	Finke, Great Sandy Desert, MacDonnell Ranges, Stony Plains
Byrnes Gecko	<i>Diplodactylus byrnei</i>	Mitchell Grass Downs, Simpson Strzelecki Dunefields, Stony Plains*
Small Spiny-Tailed Egernia	<i>Egernia depressa</i>	Central Ranges*
Hosmer's Egernia	<i>Egernia hosmeri</i>	Gulf Coastal, Gulf Fall and Uplands*
	Gehyra 'Keep River'	Victoria Bonaparte*
Pilbara Dtella	<i>Gehyra pilbara</i>	Ord Victoria Plain, Tanami*
	<i>Lerista greeri</i>	Ord Victoria Plain**
Worm Lerista	<i>Lerista ips</i>	Great Sandy Desert, Tanami
Yellow-bellied Sea Snake	<i>Pelamis platurus</i>	Darwin Coastal*
Small-headed Blind Snake	<i>Ramphotyphlops affinis</i>	Arnhem Plateau*
Groote Dwarf Blind Snake	<i>Ramphotyphlops minimus*</i>	Arnhem Coast*, Central Arnhem
	<i>Ramphotyphlops nema*</i>	Darwin Coastal*
	<i>Simoselaps morrisi*</i>	Arnhem Coast*
	<i>Strophurus jeanae</i>	Davenport Murchison Range, Great Sandy Desert, Mitchell Grass Downs, Tanami
	<i>Strophurus robinsoni</i>	Victoria Bonaparte*
Ord Snake	<i>Suta ordensis</i>	Ord Victoria Plain*
Gibber Earless Dragon	<i>Tympanocryptis intima</i>	Finke*
Even-scaled Earless Dragon	<i>Tympanocryptis uniformis</i>	Darwin Coastal, Ord Victoria Plain*
Eyrean Grasswren	<i>Amytornis goyderi</i>	Finke, Simpson Strzelecki Dunefields*
Black Noddy*	<i>Anous minutus</i>	Arnhem Coast*
Common Noddy*	<i>Anous stolidus</i>	Arnhem Coast, Darwin Coastal
Chestnut-breasted Whiteface	<i>Aphelocephala pectoralis</i>	Finke*
House Swift*	<i>Apus affinis</i>	Darwin Coastal*
Fan-tailed Cuckoo	<i>Cacomantis flabelliformis</i>	Arnhem Coast*
Rufous Fieldwren	<i>Calamanthus campestris</i>	Finke, Stony Plains

*Appendices*

Common name (*NT vagrant)	Species (*NT endemic)	Bioregion (*>50% of NT records occur in this bioregion)
Baird's Sandpiper*	<i>Calidris bairdii</i>	Darwin Coastal*
Streaked Shearwater*	<i>Calonectris leucomelas</i>	Darwin Coastal
Caspian Plover*	<i>Charadrius asiaticus</i>	Darwin Coastal*, Pine Creek
Ringed Plover*	<i>Charadrius hiaticula</i>	Darwin Coastal*
Chestnut Quail-thrush	<i>Cinclosoma castanotus</i>	Burt Plain, Central Ranges*
Elegant Imperial Pigeon*	<i>Ducula concinna</i>	Darwin Coastal*
White-fronted Chat	<i>Epthianura albifrons</i>	Finke*
Christmas Frigatebird	<i>Fregata andrewsi</i>	Darwin Coastal*
Painted Honeyeater	<i>Grantiella picta</i>	Gulf Fall and Uplands, Mitchell Grass Downs, Sturt Plateau
Red-rumped Swallow*	<i>Hirundo daurica</i>	Arnhem Coast*
Black-tailed Gull*	<i>Larus crassirostris</i>	Darwin Coastal*
Kelp Gull*	<i>Larus dominicanus</i>	Arnhem Coast*
Sabine's Gull*	<i>Larus sabini</i>	Darwin Coastal*
Yellow-breasted Boatbill*	<i>Machaerirhynchus flaviventer</i>	Darwin Coast*
Stilt Sandpiper*	<i>Micropalama himantopus</i>	Darwin Coastal*, MacDonnell Ranges
Spectacled Monarch*	<i>Monarcha trivirgatus</i>	Arnhem Coast*
Grey Wagtail	<i>Motacilla cinerea</i>	Darwin Coastal*, Finke, Gulf Fall and Uplands
Matsudaira's Storm-petrel*	<i>Oceanodroma matsudaireae</i>	Darwin Coastal*
Little Grebe*	<i>Podiceps ruficollis</i>	Darwin Coastal*
Chirruping Wedgebill	<i>Psophodes cristatus</i>	Channel Country, Great Sandy Desert, Simpson Strzelecki Dunefields*
Hutton's Shearwater*	<i>Puffinus huttoni</i>	Arnhem Plateau, Daly Basin
Wedge-tailed Shearwater*	<i>Puffinus pacificus</i>	Darwin Coastal*
Short-tailed Shearwater*	<i>Puffinus tenuirostris</i>	Arnhem Coast*
Long-tailed Jaeger*	<i>Stercorarius longicaudatus</i>	Darwin Coastal*
Arctic Jaeger*	<i>Stercorarius parasiticus</i>	Arnhem Coast, Darwin Coastal*
Pomarine Jaeger*	<i>Stercorarius pomarinus</i>	Darwin Coastal*
Red-footed Booby*	<i>Sula sula</i>	Pine Creek*
Ampurta	<i>Dasyurus hillieri</i>	Simpson Strzelecki Dunefields*
Kowari	<i>Dasyuroides byrnei</i>	Finke*
Bilby	<i>Macrotis lagotis</i>	Burt Plain(E), Central Ranges(E), Channel Country, Davenport Murchison Range(E), Great Sandy Desert, MacDonnell Ranges(E), Mitchell Grass Downs, Ord Victoria Plains, Tanami*
Northern Hopping-mouse	<i>Notomys aquilo</i>	Arnhem Coast*, Arnhem Plateau
Dusky Hopping-mouse	<i>Notomys fuscus</i>	Burt Plain, Davenport Murchison Range, Simpson Strzelecki Dunefields, Stony Plains
Giles' Planigale	<i>Planigale gilesi</i>	Simpson Strzelecki Dunefields, Stony Plains*
Narrow-nosed Planigale	<i>Planigale tenuirostris</i>	Channel Country, Mitchell Grass Downs*
Carpentarian Antechinus	<i>Pseudantechinus mimulus</i>	Gulf Coastal*, Sturt Plateau(E)
Canefield Rat	<i>Rattus sordidus</i>	Gulf Coastal*
Butler's Dunnart	<i>Sminthopsis butleri</i>	Tiwi Cobourg*
Carpentarian Rock-rat	<i>Zyzomys palatalis*</i>	Gulf Coastal*, Gulf Fall and Uplands

## 5. Vagrant species

Species which have been recorded fewer than five times in the NT are listed separately, as they conform to our definition of significant species (as endemic to bioregions), but for which conservation effort would be difficult to manage.

Common name	Species	NT Conservation status	Federal Conservation status	End-emic	% NT records	No. of records in bioregion	Res-erved in NT?	Bioregion
Baird's Sandpiper	<i>Calidris bairdii</i>			B	100	1	NO	Darwin Coastal
Black Noddy	<i>Anous minutus</i>			B	100	1	NO	Arnhem Coast
Black-tailed Gull	<i>Larus crassirostris</i>			B	100	1	NO	Darwin Coastal
Christmas Frigatebird	<i>Fregata andrewsi</i>	VU		B	100	3	NO	Darwin Coastal
Elegant Imperial Pigeon	<i>Ducula concinna</i>			B	100	2	NO	Darwin Coastal
Fan-tailed Cuckoo	<i>Cacomantis flabelliformis</i>			B	100	4	NO	Arnhem Coast
House Swift	<i>Apus affinis</i>			B	100	1	NO	Darwin Coastal
Kelp Gull	<i>Larus dominicanus</i>			B	100	1	NO	Arnhem Coast
Kentish Plover	<i>Charadrius alexandrinus</i>			B	100	1		Darwin Coastal
Little Grebe	<i>Podiceps ruficollis</i>			B	100	1	NO	Darwin Coastal
Long-tailed Jaeger	<i>Stercorarius longicaudatus</i>			B	100	1	NO	Darwin Coastal
Matsudaira's Storm-petrel	<i>Oceanodroma matsudaireae</i>			B	100	1	NO	Darwin Coastal
Red-footed Booby	<i>Sula sula</i>			B	100	1	NO	Pine Creek
Red-rumped Swallow	<i>Hirundo daurica</i>			B	100	1	NO	Arnhem Coast
Ringed Plover	<i>Charadrius hiaticula</i>			B	100	2	NO	Darwin Coastal
Sabine's Gull	<i>Larus sabini</i>			B	100	1	NO	Darwin Coastal
Short-tailed Shearwater	<i>Puffinus tenuirostris</i>			B	100	1	NO	Arnhem Coast
Spectacled Monarch	<i>Monarcha trivirgatus</i>			B	100	1	NO	Arnhem Coast
Wedge-tailed Shearwater	<i>Puffinus pacificus</i>			B	100	3	NO	Darwin Coastal
Yellow-breasted Boatbill	<i>Machaerirhynchus flaviventer</i>			B	100	1	NO	Daly Basin

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