

Atlas of NSW Wildlife

Field Data Book

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Atlas of NSW Wildlife

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The **Atlas of NSW Wildlife** is a computer database containing locality records of fauna and flora species occurring in New South Wales. The sightings are not restricted to National Parks. We use records over a state-wide coverage, including National Parks Estate and State Forests.

The system is used as a tool for both land and species management, at either a localised or state-wide level. The data can be combined with records from other States to provide information across political boundaries.

The value of the Atlas of NSW Wildlife depends upon the quality and extent of the data. A widespread set of records for a species, both geographically and temporally, is needed if we are to understand the species' needs and hence conserve it.

Usually this means a high degree of accuracy is required for species identification and geographic placement.

However, for rare or poorly known species even an imprecise location can be invaluable in furthering our knowledge. Similarly, historical records are very important to determine the previous distribution of each species and hence assess whether it is declining or not. If you find interesting historical records please send the details in so they can be entered onto the database.

We encourage all interested people from within and outside the Service to use the system and to submit their observations and records for inclusion in the database.

Send the records to your local Parks and Wildlife office or to the following address:

*The Atlas of NSW Wildlife
Spatial Information and Analysis Section
Department of Environment and Conservation
PO Box 1967
Hurstville NSW 2220*

Field Data Sheet Instructions

Each sheet or card refers to a specific locality and time period. Mammals, birds, reptiles and amphibians can be entered on a fauna sheet or card. Flora is recorded on a separate card - the flora record card or sheet. The card is a convenient method for recording incidental reports. Use the sheet for lists of more than 11 sightings. The field sheet and card are completed in the same way. Contact the GIS Division about supplying the information on disk.

A sample field data card is included in this booklet.

Dates: Record the period of observation covered by the sheet. If recording on a single day use first date only (e.g. 02 Jun 1995) otherwise use a starting and finishing date. Preferably, the period of observation should fall cleanly into calendar months, but can cover months or years for records with poorly known dates (e.g. 01 Jan 1980 to 31 Dec 1989 for records from the 1980's).

Location: Describe the location as precisely as possible using place names on NATMAP or LIC (CMA) series maps. Maps of 1:25 000, 1:50 00 and 1:100 000 can now be used. Preferably give a distance and direction from a named point.

Reserve/ Forest: Enter the name of the State Forest or National Park reserve that the record is from.

Map Number & Grid references: Specify the map sheet number (e.g. 9030-2-N). Enter the zone, easting and northing of the location (eg. 56 311--- 6271---). Tick the appropriate box for **Accuracy** or write the details in the space provided. Also, indicate if a Global Positioning System (GPS) was used to determine the grid references.

AMG Golden Rule: Eastings (numbers across top & bottom of map) first and then Northings (numbers up sides of map). On page 7 there is information on how to read a grid reference.

LGA (Local Government Area): Record the name of the local government in which the site location falls, if known. This information can be obtained from 1:25 000 topographic maps, the LIC map catalogue or, for sites in the Greater Sydney area, you may refer to some street directories.

Geology: Record the geology from the immediate area of the observation if possible. A chart of geological types based on Lithological types in the Australian Soil and Land Survey Field Handbook is provided on page 8 of the Field Data Book.

Vegetation: Record the structure of the vegetation. A chart based on one in the Australian Soil and Land Survey Field Handbook is provided on pages 5-6. The growth form of the plants is listed down the edge, and their spacing, across the top. The entry in the table gives standard names for each combination, and these names should be used. The dominant plant species can be recorded in the notes section. Some areas lack native vegetation. The categories following should be used in these areas.

OS	Stream or River	OB	Billabong or Swamp
OF	Freshwater Lake	OL	Saltwater Lake
OE	Estuaries	OC	Coastal Waters
OO	Open Ocean	OM	Mudflats
OA	Beach	OR	Rock Outcrop
OV	Cave	OG	Grazing Land
OP	Crop Land	OU	Urban

Altitude: In metres, read from a topographic map.

Fauna Record Sheet Instructions

Species Entries: For general observations, list in any order the mammals, birds, reptiles and amphibians that you observed.

Species and Code: Enter species name and code from lists supplied. An abbreviated species name is acceptable. If you do not find the name of the animal on the provided lists then use the name that you know it by and the code can be assigned later.

Observation Type: (Obs. Type column on record card)

O	Observed	B	Burnt
F	Tracks/scratchings	T	Trapped or netted
H	Hair, feathers, or skin	Y	Bone or teeth
R	Road kill	P	Scat
D	Dog kill	W	Heard call
C	Cat kill	Z	In raptor/owl pellet
V	Fox kill	E	Nest/roost
K	Dead	M	Miscellaneous
S	Shot	N	Not located
X	In scat	A	Stranding/Beached
I	Subfossil/Fossil Remains	U	Anabat

Count: Record the actual number of individuals counted. The number can be followed by a symbol to describe the accuracy of the count.

X	Exactly	E	Estimate
>	Greater than	<	Less than
+	At least		

Microhabitat code: (M/Habitat column on data card). Record the microhabitat of the animal from the list below.

UC	Upper canopy	MC	Mid canopy
LC	Lower canopy	TK	On trunk
IT	In tree	DT	In dead tree (stag)
IH	In tree hollow	HS	High shrub
LS	Low shrub	UG	Undergrowth
IG	In grass	IR	In reeds
GR	On ground	OL	On log
UL	Under log	OR	On rock
UR	Under rock	UB	Under bark
UT	Under iron	IS	In soil
IB	In burrow	RD	On road
BR	In/on bridge	FC	In/on post or stump
IW	In water	EW	Edge of water
OW	Over water	DA	Farm/fire dam
CL	Crevice in log	CK	Crevice in rock
OB	On (beach) sand	WH	Waterhole
IL	In litter	BU	In building
IC	In cave		
FL	Flying within canopy		
AC	Flying above canopy		

Breeding: Record the breeding status of the animal, if known, from the codes listed below.

-	Not breeding	L	Lactating
A	Adult	M	Nestling
D	Distraction Display	N	Nesting
E	Eggs	P	Pregnant
G	Gravid	Y	Yes, but no details
I	Immature		
J	Juveniles		


Sex: Record the sex of the animal, if known, from the codes below.

M	Male	F	Female
U	Unknown	X	Mixed sexes
-	Not recorded		

Notes: Use this section for comments on vegetation, identification of difficult species, species behavioural observations and other noteworthy observations.

Specimens: Persons holding an appropriate wildlife permit are encouraged to submit remains of dead animals, or voucher specimens of species that are difficult to identify, for confirmation of the identification to the Australian Museum. For details on how to transport the specimens, contact the Australian Museum on (02) 9320 6000

Vegetation structural formation classes defined by growth form and crown separation

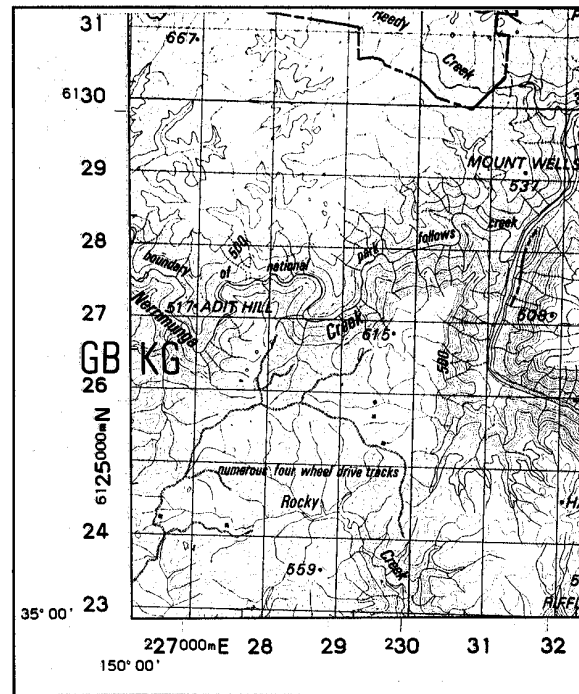
Crown separation	D	M	S	V	I	L
Field criteria	Closed or dense Touching-overlap	Mid-dense Touching-slightly separated	Sparse Clearly separated	Very Sparse Well separated	Isolated plants Isolated	Isolated clumps Isolated
Growth Form						
	Structural Formation Classes					
T Tree	Closed forest	Open forest	Woodland	Open woodland	Isolated trees	Isolated clump of trees
M Tree Mallee	Closed mallee forest	Open mallee forest	Mallee woodland	Open mallee woodland	Isolated mallee trees	Isolated clump of mallee trees
S Shrub	Closed shrubland	Shrubland	Open shrubland	Sparse shrubland	Isolated shrubs	Isolated clump of shrubs
Y Mallee shrub	Closed mallee shrubland	Mallee shrubland	Open mallee shrubland	Sparse mallee shrubland	Isolated mallee shrubs	Isolated clump of mallee shrubs
Z Heath shrub	Closed heathland	Heathland	Open heath	Sparse heath	Isolated heath shrub	Isolated clump of heath shrubs
C Chenopod shrub	Closed chenopod shrubland	Chenopod shrubland	Open chenopod shrubland	Sparse chenopod shrubland	Isolated chenopod shrubland	Isolated clump of chenopod shrubs
H Hummock grass	Closed hummock grassland	Hummock grassland	Open hummock grassland	Sparse grassland	Isolated hummock grass	Isolated clump of hummock grasses
G Tussock grass	Closed tussock grassland	Tussock grassland	Open tussock grassland	Sparse tussock grassland	Isolated tussock grasses	Isolated clump of tussock grasses

Growth Form	D	M	S	V	I	L
D Sod grass	Closed sod grassland	Sod grassland	Open sod grassland	Sparse sod grassland	Isolated sod grasses	Isolated clump of sod grasses
V Sedge	Closed sedgeland	Sedgeland	Open sedgeland	Sparse sedgeland	Isolated sedges	Isolated clump of sedges
R Rush	Closed rushland	Rushland	Open rushland	Sparse rushland	Isolated rushes	Isolated clump of rushes
F Forb	Closed forbland	Forbland	Open forbland	Sparse forbland	Isolated forbs	Isolated clump of forbs
E Fern	Closed Fernland	Fernland	Open fernland	Sparse fernland	Isolated ferns	Isolated clump of ferns
X Moss	Closed mossland	Mossland	Open mossland	Sparse mossland	Isolated mosses	Isolated clump of mosses
N Lichen	Closed lichenland	Lichenland	Open lichenland	Sparse lichenland	Isolated lichens	Isolated clump of lichens
W Liverwort	Closed liverwort land	Liverwortland	Open liverwortland	Sparse liverwortland	Isolated liverworts	Isolated clump of liverworts
L Vine	Closed vineland	Vineland	Open vineland	Sparse vineland	Isolated vines	Isolated clump of vine

Table modified from Specht *et al* 1974. Source: Australian Soil and Land Survey Field Handbook (1984)
Tree outline reproduced from Read, I. (1987) The Bush

Example: Vegetation type of **open forest** is recorded as **TM**

How to Give A Grid Reference



The Australian Continent is divided into Zones, which are 6° of longitude wide. Each Zone is covered by a grid in metres. X coordinates are called **Eastings** (a 6 digit number for how far east) and Y coordinates are called **Northings** (a 7 digit number for how far north). The new system for recording coordinates – the Geocentric Datum of Australia (GDA) and associated Map Grid of Australia (MGA), ultimately replaces the Australian Geodetic Datum (AGD) and associated Australian Map Grid (AMG).

While AMG's had been the sole coordinate system in use for some time, many of the newer topographic maps (produced since February 2000) now list MGA's as well as AMG's. This shift in datum represents a shift of approximately 200m NE, ie a single feature on a topographic map will now have both an MGA plus an AMG reading (with a difference of around 200m).

While coordinates in both systems are accepted for the Atlas, to maintain spatially accurate records, it is essential to note the datum type used when supplying coordinates in either system.

New South Wales is covered by 3 zones, **Zone 54** (138°-144°), **Zone 55** (144°-150°) and **Zone 56** (150°-156°). For any given point, the grid reference is given by the zone number, followed by the easting and lastly the northing.

For example, the grid reference for **Mount Wells** on the adjacent (pre-2000) map will be:

56 231500 6129100 (AMG)

Please also indicate how accurate the reading is in metres.

Geology-Lithographic Types

Igneous rocks

IG	Unidentified igneous rock
SR	Serpentine
GA	Gabbro
DR	Dolerite
DI	Diorite
SY	Syenite
GD	Granodiorite
AD	Adamillite
GN	Granite
AP	Aplite
QP	Quartz porphyry
BA	Basalt
AN	Andesite
TR	Trachyte
RH	Rhyolite
OB	Obsidian
SK	Scoria
AS	Ash
TU	Tuff
AG	Agglomerate

Unconsolidated substrate materials

UC	Unidentified unconsolidated substrate material
GV	Gravel
S	Sand
KS	Calcareous sand
Z	Silt
C	Clay
ML	Marl
SCA	Sand/clay/alluvium

Sedimentary Rocks

SD	Unidentified sedimentary rock
CO	Conglomerate
BR	Breccia
SA	Sandstone
GY	Graywacke
AR	Arkose
SH	Shale
MU	Mudstone
SI	Siltstone
LI	Limestone
DM	Dolomite

KA	Calcrete
EO	Eolianite
CH	Chert
JA	Jasper

Metamorphic rocks

ME	Unidentified metamorphic rocks
GE	Greenstone
AM	Amphibolite
SL	Slate
HO	Hornfels
PH	Phyllite
ST	Schist
GS	Gneiss
QU	Quartzite
MB	Marble

Other

SCA	Sand/Clay/Alluvium
LA	Laterite
SC	Silcrete
OTH	Other
UNK	Unknown

Atlas of NSW Wildlife – Fauna Record Card

Department of Environment and Conservation, PO Box 1967, Hurstville NSW 1481

Name: Molly Mawk Phone: 9585 6444

Address: 43 Bridge St, Hurstville 2220

Office Use Only Sighting Key: _____ to: _____ Location Key: _____

First date: 04/01/1998 Last date: 06/01/1998

Location: Lady Carrington Drive, Audley

Reserve / Forest: Royal NP

Map Number: 9129 LGA: Sutherland

Zone: 56 Easting: 321000 Northing: 6226000 GPS: yes / no

Please indicate which datum you are using: AGD or GDA (orWGS84)

Accuracy: 1000 (metres)

Geology: SA Vegetation: TM Altitude: 20m

Species	Code	Obs.Type	Count	M/Habitat	Breeding	Sex	
<u>Kookaburra</u>	<u>0322</u>	<u>0</u>	<u>4</u>	<u>IT</u>	<u>J</u>		
<u>Péron's Tree Frog</u>	<u>3204</u>	<u>W</u>	<u>2E</u>	<u>TK</u>			
<u>Southern Boobook</u>	<u>0292</u>	<u>W</u>	<u>1</u>	<u>IT</u>			

Flora Record Card Instructions

The plant record cards are not intended to record extensive vegetation survey data, but to note special or interesting sightings of plants, particularly scheduled species listed in the Threatened Species Conservation Act (1995).

The plant record cards are completed as per the animal record cards, with the following exceptions:

Species: Record the scientific name of the plant.

Species code: There are too many plant species to list all codes thus, the scientific name will suffice.

Count: number of plants. Follow with 'E' if count is an estimate, e.g. 5E.

Height: height in metres of plant(s)

Growth Habit code: Record the growth habit of the plant from the list below:

T	Tree	V	Sedge
M	Tree Mallee	R	Rush
S	Shrub	F	Forb
Y	Mallee shrub	E	Fern
Z	Heath shrub	X	Moss
C	Chenopod shrub	N	Lichen
H	Hummock grass	W	Liverwort
G	Tussock grass	L	Vine
D	Sod grass		

Breeding status: Record the breeding status, if applicable.

FL	Flowering	BU	Flower Buds
SE	Seedlings Present	FR	Fresh Fruit
OF	Old Fruit	N	No breeding evident
Y	Breeding Present, but not specified		

Scheduled Flora/ROTAP Species

On the reverse side of the plant record card space is provided to record additional information concerning observations of flora species covered under the Threatened Species Conservation Act (1996) and also Rare or Threatened Australian Plants (see Briggs, J.D. and Leigh, J.H. (1995) *Rare or Threatened Australian Plants, Revised Edition*, C.S.I.R.O. Publishing, Victoria).

Additional Site Location Details:

Aspect: in degrees from 0 to 359, measured with compass.

Slope: in degrees from horizontal, measured with clinometer.

Soil type: identify or provide description of soil present.

Habitat: (see reverse of card for habitat codes)

Population Details:

Area: area covered by population, in hectares. If an estimate, follow with an 'E', e.g. 5E.

Number of seedlings: number of individuals counted. Follow with 'E' if estimate.

Threats: describe existing or potential threats to viability of the population.

Herbarium: give name of herbarium if specimen is to be lodged or if specimen has been lodged, provide the accession number, if known.

Comments: Use this section for further comments on vegetation, identification of difficult species and noteworthy observations.

Habitat: Record the closest matching code from the list below:

AG	Arid-semi arid grasslands	ECLHNS	Eucalyptus forests mainly on coastal lowlands on medium to high nutrient soils, mainly tall open forests
AMH	Acacia and Myrtaceus shrublands and related communities of the highlands	EWG	Estuarine wetlands: sea grasses
ASSH	Alpine shrublands, sedgeland and herbfields, Kosciuszko National Park	EWM	Estuarine wetlands: mangroves
BW	Box woodlands	EWS	Estuarine wetlands: saltmarsh
CC	<i>Casuarina cunninghamiana</i> (River oak) forests along watercourses	HS	Swamps and bogs of tablelands excluding Kosciuszko
CFW	Coastal freshwater and sedgeland	IAC	Inland Acacia and <i>Casuarina</i> shrublands woodlands, mainly semi-arid areas
CHS	Halophytic shrublands (dominated by Chenopodiaceae)	IFR	Inland forests and shrublands dominated by rainforest genera
CLH	Heaths, Banksia and Myrtaceus shrublands and related communities of coastal lowlands: coastal sands or clays	IFW	Ironbark forests and woodlands
CNG	Coastal natural grasslands	IM	Inland Mallee (generally on sandy soils)
CTRF	Cool temperate rainforest	IWFD	Plant associations of inland watercourse floodplains and discharge areas
DRF	Dry rainforest	NGT	Natural grasslands of the tablelands
ECCH	Eucalyptus forest of the cooler climates of the highlands on various soil types generally >700m	SAW	Sub-alpine woodland usually dominated by <i>Eucalyptus pauciflora</i>
ECLCTLNS	Eucalyptus forests mainly of coastal lowlands and central tablelands on low nutrient soils: sandstones, sands; mainly open forests and woodlands	STRF	Subtropical rainforest including littoral rainforest
		WG	Aquatic or periodically flooded natural grasslands
		WTRF	Warm temperate rainforest

Atlas of NSW Wildlife – Flora Record Card

Department of Environment and Conservation, PO Box 1967, Hurstville NSW 1481

Name: Teresa Green Phone: 9585 6444

Address: 43 Bridge St, Hurstville 2220

Office Use Only Sighting Key: _____ to: _____ Location Key: _____

First date: 03/02/1998 Last date: 03/02/1998

Location: Vacant land at rear of
43 Bridge St, Hurstville

Reserve / Forest: _____

Map Number: 9130 LGA: Hurstville

Zone: 56 Easting: 323800 Northing: 6239900 GPS: yes no

Please indicate which datum you are using: AGD or GDA (or WGS84)

Accuracy: 100 (metres)

Geology: SA Vegetation: OU Altitude: 65m

Species	Code	Count	Breeding	Height	
<u>Angophora robur</u>	<u>8724</u>	<u>1</u>	<u>FL</u>	<u>8m</u>	

Scheduled Species / ROTAP Field Data Card

Site Location Details:	
Aspect: _____	Slope: _____
Soil Type: <u>sandstone based</u>	Habitat: _____

Population Details:	
Area: _____	Number of seedlings: _____
Population age structure: <input type="checkbox"/> seedling <input type="checkbox"/> immature <input checked="" type="checkbox"/> mature <input type="checkbox"/> senescent	
Threats / Disturbance Regime: <u>development proposal for site</u>	
Population status: _____ Community status: _____	
Specimen location: <u>National Herbarium</u> Specimen no.: <u>not provided</u>	

Notes: _____

Updated CAVS and CAPS codes are available digitally in separate files.

Please note that species sightings can be submitted digitally. The template for recording sightings is located on the NPWS website at:

http://www.nationalparks.nsw.gov.au/images/scientific_licence_datasheet.xls

Completed spreadsheets can be e-mail to:
gis@npws.nsw.gov.au

Sightings entered into the Atlas Database are regularly updated onto the Atlas Website at:

<http://www.wildlifeatlas.npws.nsw.gov.au>

The Department of Environment and Conservation looks forward to your continued involvement in the Atlas of NSW Wildlife. Your contributions DO make a significant difference

We welcome any feedback on the Atlas, so if you have any problems, suggestions or queries, please phone/fax or e-mail the Wildlife Data Unit.

Ph: (02) 9585 6688 or

(02) 9585 6684 or

(02) 9585 6694 or

(02) 9585 6977

Fax: (02) 9585 6466

E-mail: gis@npws.nsw.gov.au