BushBlitz
SPECIES DISCOVERY PROGRAM

BUSH BLITZ SPECIES DISCOVERY PROGRAM

Henbury Station
Northern Territory

12–24 May 2013

Australian Government

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resourcing the future

EARTHWATCH INSTITUTE

Australian Biological Resources Study

What is Bush Blitz?

Bush Blitz is a multi-million dollar partnership between the Australian Government, BHP Billiton and Earthwatch Australia to document plants and animals in selected properties across Australia's National Reserve System.

This innovative partnership harnesses the expertise of many of Australia's top scientists from museums, herbaria, universities, and other institutions and organisations across the country.

Contents

Summary

In May 2013, a Bush Blitz survey was conducted at Henbury Station in the Northern Territory. The area had been surveyed before, however, previous studies focused on vertebrates and flowering plants. This Bush Blitz survey gave researchers an opportunity to document the invertebrates and cryptogams (liverworts, mosses, lichens and fungi) of the area. The survey also provided a snapshot of the species diversity on Henbury and the condition of its ecological communities.

Henbury Station contains an important collection of arid land ecosystems, including floodplains, sand dunes, rocky outcrops, arid grasslands and scrublands. The ancient Finke River that runs through the property has high conservation value and provides critical drought refuge areas. Management of water resources and protection of aquatic habitats on Henbury is crucial for regional conservation.

Abbreviations

ABRS
Australian Biological Resources Study

EPBC Act
Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

MAGNT
Museum and Art Gallery of the Northern Territory

NRS
National Reserve System

TPWC Act
Territory Parks and Wildlife Conservation Act 2007 (Northern Territory)

WoNS
Weeds of National Significance

MacDonnell Ranges © Copyright, P. Taylor

Many insects not targeted for collection were encountered, such as this grasshopper nymph, possibly *Buforania crassa* © Copyright, R. Whyte

During the Bush Blitz survey of Henbury Station 1,080 species were identified, 297 of which had not been recorded previously. The survey took place in autumn during and after rain, which appears to have reduced the number of species recorded for some groups (invertebrates and reptiles), but favoured others (cryptogams).

Eleven putative species new to science were identified, including 10 invertebrate species: 1 native bee, 5 true bugs, 3 spiders, and 1 pseudoscorpion. One putative new *Acacia* species was also identified.

The vertebrate collection focused on birds, reptiles, frogs and fishes. Ninety bird species were observed, four of which are listed under the *Territory Parks and Wildlife Conservation Act 2007*. Two species listed as near threatened—Emu (*Dromaius novaehollandiae)* and Red-tailed Black Cockatoo (*Calyptorhynchus banksii samueli*)—seem to have viable resident populations. The waterholes and reed beds of the Finke River are regionally significant habitat for many species.

Twenty-seven reptile species were identified, six of which were new records for the station. Two frogs were recorded as well as nine fishes, three of which are listed under the Northern Territory's *Fisheries Act 1988*.

This was the first major survey of invertebrates on Henbury Station. The collection included 28 bees, 64 true bugs, 4 thrips, 7 dragonflies, 3 damselflies, 4 millipedes, 8 centipedes, 48 spiders, 3 stygofauna species, 6 crustaceans and 18 snails.

In total, 685 vascular plant species were identified, 53 of which were new records for the station. Henbury Station now has 768 recorded vascular plant taxa, which represents a third of the total number of species recorded for central Australia. This high figure reflects the variety of habitats present on the station. Thirty-five cryptogam species were also identified, all of which are new records for the station.

The main pest species affecting the station are mammals and weeds. Introduced herbivores—Camels (*Camelus dromedarius*), Donkeys (*Equus asinus*), Horses (*Equus caballus*), European Cattle (*Bos taurus*) and Rabbits (*Oryctolagus cuniculus*)—cause major damage to local flora and also damage waterholes, riverbanks and reed beds. Forty-four weed species were identified, mostly associated with sites of station activity. Prickly Pear (*Opuntia stricta*), which is a gazetted weed requiring monitoring and reduction of spread, was seen at the station rubbish dump.

Introduction

This is a report for the Bush Blitz program, which aims to survey recent additions to the National Reserve System (NRS).[1] Bush Blitz is an initiative of the Australian Government, through the Australian Biological Resources Study (ABRS), in partnership with BHP Billiton and Earthwatch Australia. The Bush Blitz objectives are:

+ to promote, publicise and demonstrate the importance of taxonomy through species discovery;
+ to undertake a national species discovery program targeted at recently acquired properties of the National Reserve System of Australia;
+ to support the science of taxonomy in Australia through training students and early career researchers, the provision of grants for species description and resolution of taxonomically problematic, nationally important groups;
+ to promote partnerships between scientific institutions, government, industry and non-government organisations; and
+ to inform the National Reserve System, Reserve Managers and other stakeholders of the results of the Bush Blitz Program.

The Henbury Station Bush Blitz was conducted in May 2013. Rain before and during the survey made conditions difficult, with many roads and tracks within the property closed or impassable. However, a combination of vehicle and helicopter trips provided good coverage across the station. The rain and cool weather resulted in reduced activity of many species. Surveys at different times of the year are likely to add more species to the list.

1 The NRS is Australia's network of protected areas, covering 17.88% of the country—over 137 million hectares. It is made up of Commonwealth, state and territory reserves, Indigenous lands and protected areas run by non-profit conservation organisations, through to ecosystems protected by farmers on their private working properties <http://www.environment.gov.au/land/nrs>, accessed 18 May 2015.

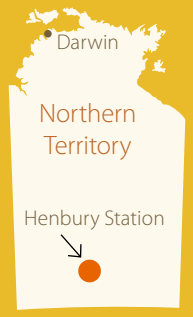
An important feature of this Bush Blitz was the involvement of school teachers participating in the TeachLive program. The Bush Blitz TeachLive program is a collaborative project between the Bush Blitz partners: the Australian Government through the ABRS, BHP Billiton, Earthwatch Australia, and the Australian Science Teachers Association. Teachers assisted in fieldwork and species identification and taught 'live' back to their classrooms via the TeachLive website, taking their students on a virtual expedition.

Two Totally Wild television episodes showing Bush Blitz participants at work in the field appeared on Network Ten.

The ABRS provided the logistical coordination and overall leadership for the survey. Experts from the following organisations conducted the field and laboratory work: Museum and Art Gallery of the Northern Territory, Northern Territory Herbarium, South Australian Museum, Western Australian Museum, National Herbarium of Victoria, University of Adelaide, University of New South Wales, Australian National Botanic Gardens, Aquagreen and EcOz Environmental Services.

Bush Blitz wishes to thank: Northern Territory Herbarium and Museum and Art Gallery of the Northern Territory for hosting this survey; RM Williams Agricultural Holdings and the property managers, especially Joel Hartwig, for facilitating access to the reserve and providing helpful advice on survey locations; Angus Duguid from the Department of Land Resource Management for information on regional habitats and previous surveys; Wendy Stuart of the Central Land Council; and Christobel Swan, Bessie Liddle and Peter Abbott, Traditional Owners, for sharing their knowledge and traditional species names.

Reserve Overview[2]



Henbury Station

RM Williams Agricultural Holdings

Date of purchase

2001

Area

516,800 ha

Description

Henbury Station is located 130 km south of Alice Springs and covers more than 500,000 ha of desert habitats within the Lake Eyre Basin of central Australia. It is bisected by the Finke River, which originates in the MacDonnell Ranges and is often described as the oldest river in the world. The overall climate is arid, with erratic and unreliable rains occurring at any time of the year. The geology of Henbury is complex and is typically representative of the geology of the MacDonnell Ranges and Finke River floodplain. Most of the rock formation is sedimentary, consisting of bands of limestone, sandstone, siltstones and dolomite. The plains consist of alluvial sands and silts, or of aeolian sands forming sand dunes.

Rain Moth (*Trictena atripalpis*), with tripectinate (triple combed) antennae © Copyright, R. Whyte

2 Information from the NRS applications and assessments. <http://www.abc.net.au/news/2014-06-09/henbury-station-sold-carbon-farming/5509950>. <http://www.abc.net.au/news/2013-08-28/henbury-station-rm-williams-sale-market/4916426>.

Rock formation near waterhole at Running Waters © Copyright, P. Taylor

National Reserve System conservation values

It is estimated that over 70% of Henbury Station is uncleared. The area includes an important collection of arid land ecosystems. Importantly, the Finke River and its associated waterholes and wetlands provide oases of permanent water within this usually dry environment. Both the arid land habitats and these oases support a highly diverse range of species.

Before the 2013 Bush Blitz survey, four formal fauna surveys had been conducted on Henbury Station, between 1997 and 2013.[3] A total of 245 vertebrate species (including seven introduced species) and 613 plant species (including 38 introduced species) had been found at Henbury, including several animals and plants classified as threatened nationally or in the Northern Territory.

Prior to 2011, Henbury Station had been run as a cattle station for around 150 years. In 2011, the property was purchased and destocked by RM Williams Agricultural Holdings with support from the Australian Government through the Caring for our Country Initiative. It was being managed as a major carbon farming and conservation project and plans were made to include it in the NRS.

In July 2013, RM Williams Agricultural Holdings went into receivership; subsequently the property was sold to pastoralists. Around 20% of the property will now be protected under a special conservation covenant. Under the covenant, environmentally significant plants and animals will be protected, with restrictions placed on cattle grazing and the use of waterholes and rivers. The covenant will include Finke Gorge National Park, Owen Springs Conservation Reserves, and Running Waters, the largest, most permanent waterhole in central Australia.

3 Parks and Wildlife Service of the Northern Territory, 1997, *A report on the Henbury Ranger Training Camp, 3rd–13th April 1997*, unpublished report, Parks and Wildlife Commission of the Northern Territory, Alice Springs; Eldridge, S.R., Shakeshaft, B.J. & Nano, T.J. 2002, *The impact of wild dog control on cattle, native and introduced herbivores and introduced predators in central Australia*, unpublished report, Bureau of Rural Sciences, Canberra; Neave, H., Nano, C., Pavey, C., Moyses, M., Clifford, B., Cole, J., Harris, M. & Albrecht, D. 2004, *A resource assessment towards a conservation strategy for the Finke Bioregion, NT*, unpublished report, Northern Territory Department of Infrastructure, Planning and the Environment, Darwin; Desert Wildlife Services, 2012, *Henbury Station Biodiversity Audit 2013*, unpublished report prepared for RM Williams Agricultural Holdings.

Methods

Collection and observation sites were selected based on land classes, supplemented by identification of suitable microhabitats during the field visit. Site selection also depended on access, suitability for trapping and time restrictions. Site locations were recorded using global positioning systems.

A number of taxonomic groups were identified as targets for study. Table 1 lists the groups surveyed and the specialists who undertook the fieldwork.

Dave Wilson, George Darby and Michael Hammer search for fishes
© Copyright, R. Whyte

Using a seine net to search a waterhole, J. Harding © Copyright, Department of the Environment

Table 1: Taxonomic groups surveyed and personnel

Group	Common name	Expert	Affiliation
Aves	Birds	Jared Archibald	MAGNT
Reptilia	Reptiles	Stephen Richards	MAGNT
		Dane Trembath	EcOz Environmental Services
Anura	Frogs	Stephen Richards	MAGNT
Pisces	Fishes	Michael Hammer	MAGNT
		David Wilson	Aquagreen
Hymenoptera	Bees	Katja Hogendoorn	Independent
		Remko Leijs	South Australian Museum
Lepidoptera	Butterflies and Moths	Jared Archibald	MAGNT
Heteroptera	True Bugs	Marina Cheng	University of New South Wales
Odonata	Damselflies and Dragonflies	Stephen Richards	MAGNT
Myriapoda	Symphylans, Millipedes and Centipedes	Mark Harvey	Western Australian Museum
Arachnida	Mites, Scorpions, Pseudoscorpions and Spiders	Mark Harvey	Western Australian Museum
Gastropoda	Snails	Vince Kessner	Independent
Stygofauna	Groundwater Fauna	Remko Leijs	South Australian Museum
		Katja Hogendoorn	Independent
Vascular Flora	Flowering Plants	Peter Jobson David Albrecht Peter Latz	Northern Territory Herbarium
Cryptogams	Liverworts, Mosses, Lichens and Fungi	Val Stajsic	National Herbarium of Victoria
Cryptogams	Liverworts	Chris Cargill (identification)	Centre for Australian National Biodiversity Research

Bush Blitz TeachLive team © Copyright, R. Whyte
Back row: Cassie Duykers, Cassandra Nichols, George Darby, Brad Wilken
Front row: Donna Azzi, Caroline Bayer, Mady Colquhoun

Some of the Bush Blitz staff © Copyright, R. Whyte
Kate Gillespie, Jo Harding, Vivek Vijayraghavan, Cassandra Nichols, Caroline Bayer

A standard suite of survey techniques was used:

+ Birds were observed directly and with binoculars. Many of the bird records were made opportunistically while surveyors were in transit to survey sites.
+ Reptiles and frogs were recorded from visual surveys, and pitfall and funnel trap collections. Frogs were also detected and identified through audio searches.
+ Fishes were collected in river refuges, springs, waterholes and wetlands using fine mesh seine nets, fyke nets, dip nets, cast nets, bait traps, and limited gill netting and angling.
+ Native bees were collected from vegetation with sweep nets and from the air with a vehicle net, and in blue vane traps. Hollow stems and twigs containing nests were collected. *Acacia* trees were scanned for the presence of thrips galls.
+ Butterflies were collected mostly with wide-mouthed nets.
+ True bugs were collected mainly by beating foliage and sweeping with nets, and some collections were also made with the vehicle net.
+ Dragonflies and damselflies were collected with large insect nets. Searches were conducted around water bodies.
+ Ground-dwelling invertebrates were collected by: sifting through leaf litter; hand searching under logs, rocks and bark; and beating vegetation. Dry pitfall traps were also used. A few specimens were collected at night using head torches or ultraviolet light.
+ Land snails were found by: sifting through leaf litter; searching samples of topsoil for shells; raking soil under rocks, logs, spinifex and fig trees; and hand searching under rocks, logs and bark and in tree and rock hollows and crevices. Freshwater snails were found by searching rocks, water plants, sand and mud in waterholes, and by dredging these with sieves or fine netting.
+ Stygofauna was collected by sampling bores and waterholes with a weighted plankton net. Hyporheic waters near springs were sampled using the Karaman–Chappuis method of digging a small hole in the creek bed, and scooping subsurface water into a plankton net or using the Bou-Rouch method of driving a perforated metal rod into the stream bed to a depth of about 1 m and hand pumping and filtering the water.
+ Vascular plants were collected from the majority of vegetation communities known to occur on the station.
+ Cryptogams were collected from a range of habitats, including the plains and ranges.

Voucher specimens were taken of reptile, frog, fish, butterfly, dragonfly and damselfly species. Bee tissue will be added to the Barcode of Life database.

Collections were identified using available literature and the holdings of museums and herbaria. Fauna specimens are lodged with the Museum and Art Gallery of the Northern Territory, apart from true bugs, which are lodged with the University of New South Wales. Plant specimens are lodged with the Northern Territory Herbarium.

Final species lists were compiled by combining the results of this Bush Blitz, the results of the 2013 biodiversity audit[4], and data provided by the Australian Natural Heritage Assessment Tool.

Accommodation at Henbury Station © Copyright, R. Whyte

4 Desert Wildlife Services, 2012, *Henbury Station Biodiversity Audit 2013*, unpublished report prepared for RM Williams Agricultural Holdings.

Results

A total of 297 species were added to those known across the reserve. Among these are 11 putative species new to science; these await assessment. Twelve animal species listed as vulnerable, near threatened or data deficient under the *Territory Parks and Wildlife Conservation Act 2007* (TPWC Act) or the Northern Territory *Fisheries Act 1988* were observed. Three plants listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) were recorded, as well as 48 plants assessed under the TPWC Act as endangered, vulnerable, near threatened or data deficient. Ten exotic or pest fauna species and 44 weed species were also recorded. The locational data of collected and observed specimens are available to reserve managers.

Spencer's Burrowing Frog (*Platyplectrum spenceri*), which spends half the year underground encased in a cocoon of its own skin

Species Lists

Appendix A provides full, updated species lists for the reserve. Names in **bold brown text** are putative new species. Species marked with an asterisk (*) had not been recorded previously at Henbury. Those without an asterisk were recorded previously and found again during this survey. Species shown in blue were not recorded on this survey, but were found at Henbury by previous studies. Table 2 provides a summary of the number of species recorded, new records and putative new taxa found on the reserve.

Some specimens collected during this Bush Blitz have been identified only to family or genus level. This is partly because identifying specimens is very time-consuming, with detailed microscopic examination needed in most cases. Also, some groups are 'orphans': there are no experts currently working on them, and their taxonomic literature is out of date. For orphan groups, species-level identification is not possible. Unidentified Bush Blitz specimens are held in institutional collections where they can be subject to further study.

Nomenclature and taxonomic concepts used in this report are consistent with the Australian Faunal Directory, Australian Plant Name Index, Australian Plant Census, Checklist of the Lichens of Australia and its Island Territories, AusMoss, and the Catalogue of Australian Liverworts and Hornworts.

Transient waterhole, home to innumerable Shield Shrimp (*Triops australiensis*) for just a few weeks, J. Archibald © Copyright, MAGNT

Table 2: Summary of flora and fauna records and putative new species

Group	Common name	Species recorded	Species new to reserve	Putative new species
Mammalia	Mammals	8	0	0
Aves	Birds	90	4	0
Reptilia	Reptiles	27	6	0
Anura	Frogs	2	0	0
Pisces	Fishes	9	0	0
Hymenoptera	Bees	28	20	1
Lepidoptera	Butterflies and Moths	16	16	0
Heteroptera	True Bugs	64	64	5
Thysanoptera	Thrips	4	4	0
Odonata	Damselflies and Dragonflies	10	4	0
Myriapoda	Symphylans, Millipedes and Centipedes	13	13	0
Arachnida	Mites, Scorpions, Pseudoscorpions and Spiders	62	61	4
Stygofauna	Groundwater Fauna	3	3	0
Crustacea	Crustaceans	6	5	0
Gastropoda	Snails	18	9	0
Vascular Flora	Flowering plants	685	53	1
Cryptogams	Liverworts, Mosses, Lichens, Fungi and Algae	35	35	0
Totals		**1080**	**297**	**11**

Threatened Species

Appendix B shows the species recorded for Henbury and assessed under the Commonwealth EPBC Act, TPWC Act, or the *Fisheries Act 1988* of the Northern Territory as endangered, vulnerable, near threatened or data deficient. A summary is provided in Table 3.

Table 3: Summary of threatened species identified

Group	Total number of species	Species new to reserve
Fauna	12	5
Flora	48	3

Exotic and Pest Species

Appendix C lists the exotic and pest species known in the reserve. A summary of exotic and pest species is provided in Table 4.

Table 4: Summary of exotic and pest species identified

Group	Total number of species	Species new to reserve
Fauna	10	3
Flora	44	5

Shield Shrimp (*Triops australiensis*) © Copyright, P. Taylor

Aerial view of the ranges showing circular Hard Spinifex (*Triodia basedowii*) growth, P. Jobson © Copyright, Northern Territory Herbarium

Discussion

Putative New Species

A putative species new to science is an unnamed species that, as far as can be ascertained, was collected for the first time during the survey; it is confirmed as a new species once it is named and its description published. Specimens collected during the Bush Blitz also include unnamed taxa that are already known from museum and herbarium collections: these are not classed as putative new species. A breakdown of the groups in which putative new species were recorded is provided in Table 5.

Table 5: Putative new species by group

Group	Common name	Number of putative new species
Hymenoptera	Bees	1
Heteroptera	True Bugs	5
Pseudoscorpiones	Pseudoscorpions	1
Araneae	Spiders	3
Vascular Flora	Flowering Plants	1

Vertebrate Fauna

No putative new vertebrate species were identified during the survey.

Invertebrate Fauna

One native bee species that may be new to science was collected: *Amegilla* (*Asaropoda*) n. sp. HSKR. This bee was found on the flowering Wireleaf Mistletoe (*Amyema preissii*). Not all recognised bee morphospecies have been compared to named specimens, therefore there may be additional new species.

Five true bug species possibly new to science were collected, all from Orthotylinae subfamily of the Miridae family.

One new species of pseudoscorpion (*Geogarypus* n. sp.) was confined to the shaded gorges and south-facing slopes of rocky outcrops and ridges. Three new mygalomorph spiders were collected; there may be several more undescribed species among the spider specimens, but further work is needed to identify these. It is also likely that a paradoxosomatid millipede specimen collected represents a new species, but adults are needed to confirm this.

Vascular Flora

One putative new flowering plant was found in the survey: *Acacia* sp. silver (P.K.Latz 27977). It is a member of the *Acacia aneura* (mulga) complex which is currently under revision. This specimen has been placed tentatively under *A. incurvaneura*, pending further investigation.

Western Bowerbird (*Ptilonorhynchus guttatus*) in Bat's Wing Coral Tree (*Erythrina vespertilio*) foliage © Copyright, R. Whyte

At least two populations were observed on the southern slopes of James Range, and a more detailed investigation of the area is likely to reveal further populations. The recorded habitat is sandstone ridge locally dominated by *Acacia* sp. silver; associated species include *Eremophila freelingii*, *E. latrobei*, *Sida* sp. Musselbrook (M.B.Thomas+ MRS437), *Digitaria brownii* and *Triodia brizoides*.

Other Northern Territory populations of *Acacia incurvaneura* have been noted as being different from typical Western Australian populations and reassessment of these may ascertain whether these populations are also strongly silver in phyllode colouration.

The only immediate threat to this and other populations is fire. Most of the mulgas in central arid Northern Territory are fire sensitive.

Threatened Species

Australia is home to an estimated 570,000 species, most of which are yet to be described formally. Approximately 92% of Australian plants, 87% of mammals, 93% of reptiles and 45% of birds are endemic.[5] Changes to the landscape and native habitat resulting from human activity have put many of these unique species at risk. Over the last 200 years, numerous species have become extinct; many others are threatened.

Vertebrate Fauna

While mammals were not a target of this survey, a previous survey recorded Black-footed Rock-wallabies (*Petrogale lateralis*) in Merricks Gully, adjacent to the Finke Gorge National Park boundary. This wallaby is listed as vulnerable under the Commonwealth EPBC Act. The Henbury record is likely to represent the south-eastern limit of its distribution in the Northern Territory.

Five bird species identified during the survey are listed under the TPWC Act. Emus (*Dromaius novaehollandiae*) have declined across the Northern Territory and are considered near threatened. It appears that there is a viable resident population at Henbury, with pairs and tracks seen throughout the survey. Similarly, Red-tailed Black Cockatoos (*Calyptorhynchus banksii samueli*, listed as near threatened) were seen in small flocks across the station, indicating a viable resident population.

5 Chapman, A. D. 2009, *Numbers of Living Species in Australia and the World*, 2nd edn. Australian Biological Resources Study, Canberra, 80 pp.

Leopard Ctenotus (*Ctenotus pantherinus*), known for its unusual night-time foraging behaviour © Copyright, D. Trembath

Of the four new bird records for the station, one species—Flock Bronzewing (*Phaps histrionica*)—is considered near threatened under the TPWC Act. This large ground pigeon was once widespread across Australia but its distribution has shrunk to semi-arid inland Australia and the Kimberley region of Western Australia. Two other species identified during the survey—Australian Reed Warbler (*Acrocephalus australis*, assessed as near threatened) and the Australian Spotted Crake (*Porzana fluminea*, assessed as data deficient)—inhabit reed beds. It is therefore important that damage to these beds by pest herbivores is minimised.

One reptile species assessed as data deficient under the TPWC Act was identified: Banded Delma (*Delma desmosa*). In a previous survey in 2009, Slater's Egernia (*Liopholis slateri slateri*) was recorded along the upper Illbilla Creek catchment. Slater's Egernia is classified as endangered under the EPBC Act and vulnerable under the TPWC Act. The main reason for its decline is believed to be changes to habitat resulting from the invasion of Buffel Grass (*Cenchrus ciliaris*).

Three endemic fish species listed under the *Fisheries Act 1988* were identified: Finke Hardyhead (*Craterocephalus centralis*, listed as near threatened); Desert Mogurnda (*Mogurnda larapintae*, listed as near threatened); and Finke Goby (*Chlamydogobius japalpa*, listed as vulnerable).

Invertebrate Fauna

Two butterfly species assessed as data deficient under the TPWC Act were identified. This status indicates that there is inadequate information to assess its conservation status. The most important of these is the Inland Sand-skipper (*Croitana arenaria*), which is a rare desert species only recorded around Alice Springs and in northern South Australia. The specimen collected during the survey is the first to be lodged with the Museum and Art Gallery of the Northern Territory. The other species is the Monarch (*Danaus plexippus*), which is not normally found in the Northern Territory.

One snail species listed as vulnerable in the Northern Territory was identified: *Basedowena squamulosa*.

Vascular Flora

Forty-eight species of conservation interest were recorded during this survey, with two assessed as endangered, three as vulnerable, 30 as near threatened and 13 as data deficient under the TPWC Act.[6] Three of these species are also listed as vulnerable under the Commonwealth EPBC Act: Palm Valley Livistona (*Livistona mariae*), Minnie Daisy (*Minuria tridens*) and Latz's Wattle (*Acacia latzii*). It is likely that some will prove to be threatened following further investigation.

A population survey was conducted on three near threatened species (Tables 6 and 7). The Desert Grass-tree (*Xanthorrhoea thorntonii*) had not previously been identified at Henbury Station, but was assumed to be present, as the type locality (Wild Eagle Plain, Tempe Downs) is less than 15 km from the survey site. The species had not been collected south of James Range, since 1936.

Unfortunately, no juveniles of Brilliant Hopbush (*Dodonaea microzyga* var. *microzyga*) were present, and there appeared to be no active recruitment. It may be necessary to monitor or conduct experiments to see if seedlings are being taken by predators, if the population is in decline through failure to set fertile seed, or if recruitment is episodic following fire, exceptional rainfall or some other event or series of events.

Table 6: Recruitment and size measurements of two near threatened species at Henbury Station

Species	Age Class	Individual Number	Mean Height ± SD	Mean Stem Diameter ± SD
Dodonaea microzyga var. *microzyga*	Adults	c. 20	–	–
	Juveniles	0	–	–
Xanthorrhoea thorntonii	Adults	25	2.3 m ± 0.43	27 cm ± 2.94
	Juveniles	30	1.25 m ± 0.35	30.5 cm ± 3.46

6 IUCN 2001, 2003; IUCN Standards and Partitions Subcommittee 2011.

The liverwort *Riccia inflexa* © Copyright, R. Whyte

In contrast, the Desert Grass-tree population exhibits obvious recruitment with over 50% of the population being juvenile plants. The measurements conducted suggest that stem diameter develops quickly in the plant's life, before stem elongation. Statistically, there is no difference between the stem diameters of the mature and juvenile plants, but there is close to a metre difference in height. Within the quadrat, two of the mature plants had flowered and released their seeds.

The Blue-bush Daisy (*Cratystylis centralis*) population extended from a drainage line to a steep slope approximately 50 m away. This population is broken up according to whether growing on a drainage line or on a slope of particular gradient, based on the recorders' perceptions, to ascertain if there were any differences in plant size and recruitment for the Blue-bush Daisy.

Table 7: Recruitment and size measurements of the *Cratystylis centralis* population

Area	Age Class	Number of Individuals	Mean Height ± SD	Mean Width ± SD	Mean Stem Diameter ± SD
Drainage	Adult	29	57cm ± 12.91	120 cm ± 38.38	4 cm ± 1.6
	Juvenile	2	35 cm ± 10.0	36 cm ± 16	0.75 cm ± 0.25
Lower Slope	Adult	5	50 cm ± 8.11	63 cm ± 15.16	2.0 cm ± 0.97
	Juvenile	1	18 cm	18 cm	0.3 cm
Mid Slope	Adult	24	47.5 cm ± 10.61	74.5 cm ± 21.57	1.65 cm ± 1.07
	Juvenile	5	30 cm ± 2.8	25 cm ± 5.88	0.5 cm ± 0.38
Steep Slope	Adult	56	45 cm ± 13.17	60 cm ± 25.38	1.3 cm ± 0.81
	Juvenile	2	25.5 cm ± 7.5	16.5 cm ± 1.5	0.325 cm ± 0.18

In general, the trend seems to be that as the slope steepens, the dimensions of the individuals diminish. However, within each delimited zone, the variability of each measurement is quite broad. This is almost certainly due to the architecture of the plant; in the field it has a bonsai appearance with gnarled branches and stems, and the base of the plant often has the appearance of the presence of a lignotuber (although this was not tested). Recruitment appears to be low along all zones and further monitoring would need to be undertaken to ascertain whether predation or intrapopulation decline was occurring.

As a consequence of Henbury Station's grazing history, potential threats and pressures to the conservation significant species are largely due to grazing by stock and introduced herbivores (particularly camels, donkeys and horses), as well as changed fire regimes.

Tarantula (*Selenocosmia* sp.) © Copyright, R. Whyte

Exotic and Pest Species

The NRS is designed to conserve and protect Australia's rare and threatened ecosystems and provide refuge for species at risk. Invasive species can have a major impact on already vulnerable species and ecosystems, as well as economic, environmental and social impacts. The inclusion of exotic and pest species records as part of this report is designed to provide land managers with baseline information to assist with pest management programs.

Vertebrate Fauna

All seven of the vertebrate pest species observed on Henbury Station were mammals. All were introduced to Australia in the 19th century and have established widespread populations.

Cats (*Felis catus*) represent the greatest threat to native taxa such as birds, reptiles and mammals. Anecdotal evidence suggests that Dingoes (*Canis dingo*) prey on cats and there is an ad hoc system of control of cats by shooting, but significant damage is still done.

Browsing animals, in particular Camels (*Camelus dromedarius*), Donkeys (*Equus asinus*), Horses (*Equus caballus*), Cattle (*Bos taurus*) and Rabbits (*Oryctolagus cuniculus*), cause major damage to local flora, which reduces habitats and food sources for native fauna. The larger herbivores also reduce water quality and damage waterholes, river banks and reed beds, which are important habitats for waterbirds, including threatened species such as the Australian Reed Warbler (*Acrocephalus australis*). Population control is recommended to prevent further damage. Some form of fencing could also be considered to protect the reed beds.

The negative impact on habitat by feral herbivores was obvious at most sites, especially Puka Waterhole and Illbilla Springs.

Only one House Mouse (*Mus musculus*) was captured, in a pitfall trap near the homestead.

A significant attribute of Henbury Station is the lack of introduced fishes. Potential invaders that proactive management could address include Eastern Gambusia (*Gambusia holbrooki*), Swordtail (*Xiphophorus hellerii*), Speckled Mosquitofish (*Phalloceros caudimaculatus*) and Goldfish (*Carassius auratus*), all of which have been reported nearby in the Alice Springs area[7] or elsewhere in the Lake Eyre Basin.[8] Further, introductions of larger predatory angling species such as Golden Perch or Yellowbelly (*Macquaria* spp.) and Murray Cod (*Maccullochella peelii*) have been rumoured but do not appear to have established self-sustaining populations; new introductions should be discouraged, and the practice is illegal.

Invertebrate Fauna

The European Honey Bee (*Apis mellifera*) is not listed as a pest species; however, it can be a pest species in certain circumstances. Feral colonies at Henbury can occupy nesting hollows that otherwise might be used by mammals or hollow-breeding birds such as parrots, lorikeets and cockatoos. Honey Bees may also compete with

7 Larson, H. K., Williams, R. S. & Hammer, M. P., 2013, 'An annotated checklist of the fishes of the Northern Territory, Australia', *Zootaxa* **3696**: 001–293.

8 Wager, R. & Unmack, P. J., 2000, *Fishes of the Lake Eyre Catchment of Central Australia*, The State of Queensland, Department of Primary Industries and Queensland Fisheries Service: Brisbane.

native bees for nectar and pollen, especially when these resources are scarce. Furthermore, they require water for thermoregulation of their colonies and can be very persistent at any water source. In order to control feral Honey Bees, access to water sources should be minimised.

The native Rutherglen Bug (*Nysius vinitor*), which can be a pest in agricultural areas across Australia, was found in various areas on the station.

A male of the introduced Tailed Daddy Longlegs spider (*Crossopriza lyoni*) was also found.

Vascular Flora

Prior to this investigation, 41 weed species were recorded on Henbury Station; an additional five weeds were collected during the survey (Table 8), mostly associated with sites of station activity. One species previously recorded for Henbury (*Opuntia* sp.), can now be confidently identified as Prickly Pear (*Opuntia stricta*). In the Northern Territory this is a Category B gazetted weed, requiring monitoring and reduction of spread. It is native to tropical and subtropical America, but it has become naturalised throughout the drier areas of mainland Australia.

Table 8: Newly recorded weeds

Species	Common name	Latitude (decimal degrees)	Longitude (decimal degrees)	Location	Indication of abundance
Caesalpinia bonduc	Grey-nicker	-24.55333	133.25222	Henbury Homestead, garden escapee	Several plants, beyond edge of garden
Cenchrus pennisetiformis	White Buffel Grass	-24.54833	133.25444	0.5 km N of Henbury Homestead	Several plants, in small drainage line in paddock, with *Cenchrus ciliaris*
Cenchrus setiger	Birdwood Grass	-24.445	133.115	18 km NW of Henbury	Several plants, scattered through grassy claypan
Malva parviflora	Mallow	-24.60861	133.23027	Dam, c. 4 km SE of Ernest Giles Rd turnoff	2–3 plants observed on the shallow entry into the dam; other weedy plants present
Opuntia stricta	Prickly Pear	-24.54944	133.25722	Rubbish dump, 1 km E of Henbury Homestead	Several plants, some 3m in diameter

Peter Jobson and Peter Latz examine Desert Grass Trees (*Xanthorrhoea thorntonii*), Wild Eagle Plain, Henbury Station © Copyright, Northern Territory Herbarium

Other Points of Interest

Vertebrate Fauna

Birds

Many of the bird species found in central Australia are uniquely adapted for life in arid zones and are found nowhere else. The bird fauna of the Northern Territory is relatively well known due to the popularity of amateur bird watching and a solid record of formal bird surveys that have been undertaken over the past 50 years.

Ninety bird species were identified during the Henbury Station Bush Blitz, four of which were new records for the property. The surprising number of waterbird species is due to the permanent waterholes that occur along the Finke River. These are important refuges for migratory and resident waterbirds, and also serve as oases for other resident species during dry times. The total bird species count for Henbury Station is now 169.

Reptiles and Frogs

Despite the diversity and abundance of herpetofauna in the Northern Territory, their taxonomy and systematic relationships are not well known. Modern molecular techniques have revealed that many well-known 'species' are composites of cryptic taxa. No known undescribed species of reptiles or frogs were found during the survey, however it is likely that some of these species comprise two or more cryptic species. The collection of vouchers and tissues will enable researchers to study the relationships of these species.

Two frog and 27 reptile species were identified during the survey. Six of the reptiles are new records for the property: Lea's Ctenotus (*Ctenotus leae*), Slender Blue-tongued Lizard (*Cyclodomorphus melanops*), Freckled Monitor (*Varanus tristis*), Woma (*Aspidites ramsayi*), Yellow-faced Whip Snake (*Demansia psammophis*) and Moon Snake (*Furina ornata*). The total reptile and frog species count for Henbury Station is now 90.

Fishes

Freshwater fishes are a key part of land management due to their diversity in number and form, intriguing life histories and adaptations, links within food-chains, value as bioindicators, role in human culture and use, and as icons for aquatic conservation and environmental awareness.[9] This is perhaps no more pronounced than in desert habitats, where water is usually very scarce, and outside of rare flood events any aquatic habitats represent biological oases. The species that occupy isolated and invariably harsh desert habitats are characterised by high levels of endemism and adaptation to extremes of salinity and temperature.

Fish from the Finke River were first surveyed in the Horn Scientific Expedition of the 1890s, and have been the subject of a number of surveys over the past 30 years. Most recently, the Lake Eyre Basin Rivers Assessment (LEBRA) undertook surveys across all the major river systems of the basin, including the Finke River.

Brad Wilken and Dane Trembath Skype with Brad's students in Canberra

In this survey, all nine fish species known from the Finke River, including three species endemic to the region, were sampled. Strong populations of all species were found, especially at the key regional refuge habitat, Running Waters. As with reptiles and frogs, further work is needed to reveal cryptic species in the region.

Initial efforts to document the Petarme language names for Ltyarnma (fishes) of the region were made during an open day with Traditional Owners and via liaison conducted by the Central Land Council. It would be valuable to establish a broader program to document Indigenous names, using live fish displays where possible.

9 Bunn, S. E. & Arthington, A. H., 2002, 'Basic principles and ecological consequences of altered flow regimes for aquatic biodiversity', *Environmental Management* **30**: 492–507; Kennard, M. J., Pusey, B. J., Arthington, A. H., Harch, B. D. & Mackay, S. J., 2006, 'Development and application of a predictive model of freshwater fish assemblage composition to evaluate river health in eastern Australia', *Hydrobiologia* **572**: 33–57; Hammer, M., Wedderburn, S. & van Weenan, J., 2009, *Action Plan for South Australian Freshwater Fishes, Native Fish Australia* (SA) Inc., Adelaide.

Northwest Glassfish, previously known as *Ambassis muelleri*, is now recognised to be an undescribed species; *Ambassis muelleri* is a synonym of Agassiz's Glassfish (*Ambassis agassizii*), which occurs in eastern Australia.[10] Further morphological and molecular work across northern Australia and the Lake Eyre Basin is required to clarify the status of fishes in the Finke River.

Invertebrate Fauna

The terrestrial invertebrate fauna of inland Australia is estimated to comprise at least 250,000 species. Research on Australian invertebrates has increased significantly over the last 20 years, but it is estimated that less than 15% of species have been formally described. In general, about a third of the species collected in any area are found to be new to science, and many of these are short-range endemic (SRE) taxa. Such taxa are defined as species that have naturally small distributions of less than 10,000 km^2 because they are poor dispersers, have relatively low reproductive rates and are conservative in their ecological requirements. These attributes make them extremely susceptible to habitat change, including fragmentation.

Surveys at Henbury Station prior to this Bush Blitz tended to focus on vertebrates, and thus little was known about the invertebrates.

Bees

Twenty-eight native bee species from four families were identified during the survey, 20 of which are new records for the property. Nine species are as yet unnamed, and it is likely that at least one of these—*Amegilla* (*Asaropoda*) n. sp. HSKR—is new to science.

Half of the bee specimens were collected by hand collecting or sweep-netting of flowering plants. In particular, flowering Wireleaf Mistletoe (*Amyema preissii*), *Grevillea* and *Eremophila* species were attractive to native bees. Wireleaf Mistletoe seemed to be the most widespread and abundant floral resource for native bees at this time of the year. It was visited by three species of the tribe Halictini, as well as three species of blue-banded bees (*Amegilla* spp.), one of which is a putative new species. Blue-banded bees were observed foraging on many other species, reinforcing the notion that they are very generalist foragers.

Nine *Exoneurella eremophila* nests were found in dead stalks of the introduced weed Prickly Poppy (*Argemone ochroleuca*), growing on sand banks in the Finke River. This small bee is known to use the pithy stems of dry flowering stalks of a range of plants as nesting substrate; however, it had not previously been found to use *A. ochroleuca*. The nests contained both adult females and males.

10 Allen, G.R., Midgley, S.H. & Allen, M. 2002, *Field Guide to the Freshwater Fishes of Australia*, Perth, Western Australian Museum. 394 pp.

Exoneurella eremophila **collected in its nest in a dry stem of Prickly Poppy (*Argemone ochroleuca*) © Copyright, R. Whyte**

Two nests were found were in dead grass stalks. One contained a white pupa, a large larva and a failed cell, while the other contained three black pupae. The brood was reared through to adulthood to identify the species. A male and a female emerged and were identified as *Hylaeus* (*Pseudhylaeus*) sp., but have not yet been compared to named specimens in existing collections. A tissue sample will be submitted for sequencing for the Barcode of Life database. One cell contained the larva of a parasitic wasp from the Ichneumonidae family. Further breeding of the parasitic wasp is ongoing. This will allow matching of a parasitic wasp species with its bee hosts, providing information that is rare and typically difficult to obtain.

Fourteen bee specimens were caught in blue vane traps, including the *Eremophila* specialist *Braunsapis dolichocephala*. Due to the inclement weather and limited accessibility of the tracks, the vehicle net could be used only on two occasions. This collecting method yielded a fascinating range of parasitic wasps and six species of bees and reinforces an earlier conclusion that the vehicle net is an efficient way of catching bees, but that it catches low numbers per species. Three of the species caught with the vehicle net were not taken using the other methods. The collection of *Homalictus blackburni* was unexpected, as it was thought to have a more coastal distribution in northern Queensland and the Northern Territory.

Butterflies and Moths

While the butterfly fauna of the Northern Territory is relatively well known, there were no previous records of butterflies or moths from Henbury Station. Fifteen butterfly species were identified during the survey, three of which are range extensions. These were the rare Inland Sand-skipper (*Croitana arenaria*), the reasonably common Lesser Wanderer (*Danaus petilia*), and the Black-spotted Grass-blue (*Famegana alsulus*). One day-flying moth was also recorded: Mistletoe Moth (*Comocrus behri*).

True Bugs

A total of 64 Heteroptera species from eight families were recorded from Henbury Station over the two week survey period, providing the first comprehensive Heteroptera species list for the Station. Five of these were new to science, three records were new for the Northern Territory (*Crompus opacus*, *Urentius sarinae*, *Taylorilygus apicalis*), and one was a range extension (*Eysarcoris fuscus*).

The survey also collected host plants to establish the insect–plant interactions. A total of 47 plants were recorded as true bug host plants at Henbury Station.

Dragonflies and Damselflies

Henbury Station had not previously been surveyed for odonates. Three damselfly and seven dragonfly species were identified during this Bush Blitz. This comparatively low diversity reflects the arid environment that supports a low natural diversity of odonates in central Australia, as well as the cold and sometimes wet conditions that prevailed during the survey. All of the species documented are common. Surveys undertaken during spring or summer, when odonate activity is higher, will undoubtedly increase the number of known species.

Burrowing Scorpion (*Urodacus* sp.) © Copyright, R. Whyte

Millipedes, Centipedes, Mites, Scorpions, Pseudoscorpions and Spiders

This Bush Blitz was the first survey undertaken at Henbury Station to focus on arachnids and myriapods. One symphylan species, four millipedes, eight centipedes, one mite, five scorpions, eight pseudoscorpions and 48 spiders were recorded.

The arachnid and myriapod fauna of Henbury Station is typical of central Australia, with a mixture of widespread and highly localised taxa. Very few specimens of the target wolf spider family Lycosidae were collected, but trapdoor (mygalomorph) spiders were well represented. Most of the species are short-range endemics.

Snails

Eighteen snail species were recorded at Henbury Station, eight of which are endemic to central Australia. Collection of four species represent range extensions: *Pleuroxia adcockiana*, *Sinumelon expositum*, *Basedowena squamulosa* and *Pupoides ischnus*. The last of these is listed as vulnerable under the TPWC Act of the Northern Territory. It is a rare species, endemic to the western section of James Range, Krichauff Range and Palm Valley.

Snail diversity on Henbury Station is highest in the northern half of the property, at James Range.

Henbury Station supports a moderate diversity of land and freshwater snails; the total number of native species currently recorded for central Australia is 72. The main reason for the lack of snails is likely to be a shortage of leaf litter, which snails require for aestivation during dry periods. During the survey period, if leaf litter was present,

1. *Plotiopsis balonnensis*, 2. *Glyptophysa* sp., 3. *Isidorella newcombi*, 4. *Austropeplea lessoni* 5. *Gyraulus hesperus* © Copyright, V. Kessner

it was too fresh. Only species that aestivate by burying deeply in soil or amongst very large piles of rocks have a chance to survive severe burning. This survey provided abundant evidence to support the view that mortality of land snails is very high due to fires.

The practice of intentional burning of spinifex grasslands poses a very serious threat to land snails and other invertebrates, and it also favours the spread of invasive grass species such as Buffel Grass (*Cenchrus ciliaris*), which do not provide a suitable habitat for native snails adapted to spinifex. Burn-offs in areas containing limestone outcrops should be avoided as far as possible in order to protect the remaining snail populations, which are in serious decline. Snail densities in Central Australia are significantly lower than they were 30 years ago. In many areas, particularly in those dominated by weeds, native snails have now completely disappeared. Overgrazing also poses a serious threat to snails by altering their habitat.

Stygofauna

There were no previous records for stygofauna from Henbury Station. The stygofauna found during this Bush Blitz consisted of three major invertebrate groups: oligochaete worms, ostracod shrimps and cyclopoid Copepoda (small planktonic animals). Crustacean groups such as Bathynellacea, Amphipoda and Isopoda were not found.

Pre-survey expectations for the existence of stygofauna in the area were high because of a number of permanent springs, waterholes and coarse sand and gravel banks in the river as well as pastoral wells drilled in aquifers with reasonable quality groundwater.

The low number of stygofauna found was due to a number of reasons. Rain before and during the survey meant that roads were closed and some of the bores and springs were not accessible. In addition, a number of wells could not be sampled because they were equipped with pumps that blocked access to the water. The majority of the gravel banks along the Finke River were impossible to sample using the Bou-Rouche pump because fine sand clogged the tubes and pump. Illamurta Springs and Illbilla Springs were damaged by feral horses that trample vegetation and add nutrients to the water, leading to increased algae growth and reduced oxygen.

The majority of the accessible wells did not have any animals, while two wells had mosquito larvae, a clear sign of surface influence that nearly always excludes stygofauna. The only bore with stygofauna was Hardrock Bore, containing a small number of stygobitic (blind) specimens of Ostracoda, cyclopoid Copepoda and Oligochaeta. Illamurta Springs had a small covered well with upwelling groundwater that contained Ostracoda and (eyed) cyclopoid Copepoda. After several unsuccessful attempts using the Bou-Rouche pump near Running Waters, fauna were collected using the Karaman-Chappuis method. The majority of the collected specimens were surface dwellers such as insect larvae, however it is likely that it also contained some stygobitic Copepoda and Ostracoda.

Vascular Flora

A total of 685 vascular flora species were identified during the survey, 53 of which were new records for the station. Henbury Station is now known to host 768 vascular plant species.

During the March 2013 survey, an unusual vegetation community was observed on the higher ridges of the James Range, but was not sampled due to poor access. However, with the help of a helicopter, it was possible to access the site. This community of interest is a Mitchell Grass (*Astrebla* spp.)-Whitewood (*Atalaya hemiglauca*) grassland, perched at or near the summit of the James Range. The soils are red-brown clays with pebbles, sandwiched between banded outcroppings of sedimentary rocks. Species associated and recorded for this community include *Sida goniocarpa*, Low Hibiscus (*Hibiscus brachysiphonius*) and *Iseilema eremaeum*. All of these species prefer heavy clay soils and have limited distributions in the region. Preliminary observations suggest that this community is threatened by fire and subsequent erosion. This is based on observations on an adjacent hill that had been burnt, and where the grass was replaced by the more fire tolerant Tall Bottlewashers (*Enneapogon intermedius*). Further targeted survey and monitoring of this community is needed to document its distribution and assess threats.

Considering the frequent botanical forays and, in particular, the intense collecting conducted in March 2013 prior to the Bush Blitz survey, it was surprising to find a significant number of new records for the station. Other sections of the James Ranges (in the northern portion of Henbury Station) not surveyed during the Bush Blitz survey may also harbour additional species. Unfortunately, due to inclement weather, it was not possible to spend more time exploring this area.

There was an observed increase in the biomass on the station as a consequence of destocking and subsequent good rains. For example, under mature Desert Oaks (*Allocasuarina decaisneana*) rings of Buffel Grass (*Cenchrus ciliaris*) were seen. In other areas, such as claypans, or recently burnt dunes, annual grasses and herbs were abundant, and flowering and setting seed. A number of these species are known to be palatable to stock, and in stocked areas are heavily grazed, resulting in reduced recruitment from seed banks. Although there are positive benefits associated with destocking, fire and weed issues become more significant and a corresponding increase in management is required.

Feral herbivores were particularly noticeable in the more isolated areas of the station such as parts of Wild Eagle Plain and the valley near Puka Rockhole. Here, grazing impact was intensive and, at Puka, all the seedlings of Whitewood (*Atalaya hemiglauca*) were cropped severely, along with a heavy reduction in diversity of grasses.

Expanding the boundaries of Finke Gorge National Park to encompass the James Ranges and internal valleys, Puka Waterhole and the eastern portion of Wild Eagle Plain to the west, would add to the conservation value of the area. This portion of Henbury Station is poor grazing land, but has good species diversity, including several species of conservation significance. The expansion of the Finke Gorge National Park would also ensure that the Mitchell Grass-Whitewood community is included within the reserve system.

Since destocking, the habitats on the alluvial plains and floodways have recovered, with species diversity increasing, including those palatable to stock. Keeping stock at a sustainable level is desirable, enabling the plant communities to survive through periodic adverse climatic conditions, whilst still allowing the pastoralist to pursue a livelihood.

Henbury Station is a botanically rich and diverse reserve supporting a third of all species known to occur in Central Australia. This is largely due to the diverse habitats present, including river and creek systems, mountain ranges and hills comprising various rock types, plains, claypans and desert sand dunes. Even with extensive collecting over the past 60 years, another 53 species were added to an already impressive species list. Another survey in spring is likely to add even more species, particularly spring-flowering annuals.

A correspondingly high number of species of conservation significance occur on Henbury. Palm Valley Livistona (*Livistona mariae*) and Quandong (*Santalum acuminatum*) are currently being monitored as part of a management plan, but the Henbury populations are not part of that plan. Neither Minnie Daisy (*Minuria tridens*) nor March Club-rush (*Bolboschoenus caldwellii*) are under management plans, but both have been flagged for future monitoring programmes. Further targeted surveys and population condition assessments of near threatened and data deficient species occurring on the reserve would be beneficial.

Cryptogams

This was the first cryptogam survey of Henbury Station: 6 species of liverwort, 2 mosses, 24 lichens and 1 fungi were collected.

***Grimmia laevigata*, a saxicolous moss, on red sandstone, 10 km NW from Illamurta Spring, V. Stajsic © Copyright, National Herbarium of Victoria**

The most important factor influencing cryptograms on Henbury is the availability of moisture and shade. Thus, the lowest species diversity for cryptogams was on the sandy rises and floodplain areas of the several streams that run through the property. For example, the only species collected from the sandy rises were minute lignicolous fungi (e.g. *Hysterographium* sp.), growing on dead branches of *Dodonaea viscosa* subsp. *mucronata*.

***Plagiochasma rupestre*, a relatively common liverwort species of shaded rocky slopes, V. Stajsic © Copyright, National Herbarium of Victoria**

By contrast, the ranges provided more moisture and shade in a diversity of habitats, such as deep gorges, overhangs, and crevices between boulders. These habitats yielded a wide variety of species. The majority of lichen species at Henbury Station are saxicolous (living on or among rocks), followed by terricolous (living on or in the ground), and only a small number were corticolous (living on bark).

One of the most important considerations in the management of the station for cryptogam biodiversity is fire. The considerations are: some sites are burnt too frequently or infrequently, or burnt on a massive scale. Fires over a large area tend to have a homogenising effect on ecosystems and biodiversity, particularly on plains and less rocky sites. A program of mosaic burning to create multi-aged post-fire communities is probably the most effective practice for maximising species diversity. Several recently burnt sites were surveyed and the cryptogam diversity found to be very low. Rocky sites that have been burnt provide more shelter for cryptogams, especially if the burn is light and patchy.

Large mammals also cause considerable damage to the soil through trampling. This is particularly a threat to *Riccia* spp. that occur on flatter terrain and near streams.

Hyperphyscia pruinosa **lichen, corticolous on a rotting** ***Ficus brachypoda*** **branch, V. Stajsic © Copyright, National Herbarium of Victoria**

Appendix A: Species Lists

Nomenclature and taxonomic concepts used in this report are consistent with the Australian Faunal Directory, Australian Plant Name Index, Australian Plant Census, Checklist of the Lichens of Australia and its Island Territories, AusMoss, and the Catalogue of Australian Liverworts and Hornworts.

Current at March 2015

Fauna

Vertebrates

Mammals		
Family	Species	Common name
Bovidae	*Bos taurus* ^	European Cattle
Camelidae	*Camelus dromedarius* ^	Camel
Canidae	*Canis dingo*	Dingo
	Vulpes vulpes ^	Fox, Red Fox
Dasyuridae	*Antechinomys laniger* ~	Kultarr
	Ningaui ridei	Wongai Ningaui
	Pseudantechinus macdonnellensis	Fat-tailed Pseudantechinus
	Sminthopsis crassicaudata	Fat-tailed Dunnart
	Sminthopsis macroura	Stripe-faced Dunnart
	Sminthopsis ooldea	Ooldea Dunnart
Emballonuridae	*Saccolaimus flaviventris*	Yellow-bellied Sheathtail-bat
	Taphozous hilli	Hill's Sheathtail-bat
Equidae	*Equus asinus* ^	Donkey
	Equus caballus ^	Horse, Brumby
Felidae	*Felis catus* ^	Cat
Leporidae	*Oryctolagus cuniculus* ^	Rabbit
Macropodidae	*Macropus robustus*	Common Wallaroo
	Macropus rufus	Red Kangaroo
	Petrogale lateralis ~ #	Black-footed Rock-wallaby
Molossidae	*Austronomus australis*	White-striped Freetail Bat
	Mormopterus (small penis)	Southern Freetail Bat (Planiceps Small Penis)
	Mormopterus sp. 3	Inland Freetail Bat
	Mormopterus sp. 6	Bristle-faced Freetail Bat
Muridae	*Mus musculus* ^	House Mouse
	Notomys alexis	Spinifex Hopping-mouse
	Notomys cervinus ~	Fawn hopping-mouse
	Pseudomys desertor	Desert Mouse
	Pseudomys hermannsburgensis	Sandy Inland Mouse

Key

* = New record for this reserve
^ = Exotic/Pest
\# = EPBC Act listed
~ = TPWC Act listed
† = *Fisheries Act 1998* listed

Colour coding for entries:

Black = Previously recorded on the reserve and found on this survey
Brown = **Putative new species**
Blue = Previously recorded on the reserve but not found on this survey

Mammals		
Family	Species	Common name
Peramelidae	*Isoodon auratus* ~	Golden Bandicoot
Tachyglossidae	*Tachyglossus aculeatus*	Short-beaked Echidna
Vespertilionidae	*Chalinolobus gouldii*	Gould's wattled bat
	Chalinolobus morio	Chocolate Wattled Bat
	Nyctophilus geoffroyi	Lesser Long-eared Bat
	Scotorepens balstoni	Inland Broad-nosed Bat
	Scotorepens greyii	Little Broad-nosed Bat
	Vespadelus baverstocki	Inland Forest Bat
	Vespadelus finlaysoni	Finlayson's Cave Bat

Dingoes (*Canis dingo*) are major predators of feral Cats (*Felis catus*) and Rabbits (*Oryctolagus cuniculus*) in the region, J. Archibald © Copyright, MAGNT

Birds		
Family	Species	Common name
Acanthizidae	*Acanthiza apicalis*	Inland Thornbill
	Acanthiza chrysorrhoa	Yellow-rumped Thornbill
	Acanthiza robustirostris	Slaty-backed Thornbill
	Acanthiza uropygialis	Chestnut-rumped Thornbill
	Aphelocephala leucopsis	Southern Whiteface
	Aphelocephala nigricincta	Banded Whiteface
	Aphelocephala pectoralis	Chestnut-breasted Whiteface
	Gerygone fusca	Western Gerygone
	Pyrrholaemus brunneus ~	Redthroat
	Smicrornis brevirostris	Weebill
Accipitridae	*Accipiter cirrocephalus* *	Collared Sparrowhawk
	Accipiter fasciatus	Brown Goshawk
	Aquila audax	Wedge-tailed Eagle
	Circus assimilis	Spotted Harrier
	Elanus axillaris	Black-shouldered Kite
	Elanus scriptus ~	Letter-winged Kite
	Haliastur sphenurus	Whistling Kite
	Hamirostra melanosternon	Black-breasted Buzzard
	Hieraaetus morphnoides	Little Eagle
	Milvus migrans	Black Kite
	Pandion cristatus	Eastern Osprey
Acrocephalidae	*Acrocephalus australis* ~	Australian Reed Warbler
Aegothelidae	*Aegotheles cristatus*	Australian Owlet-nightjar
Alcedinidae	*Todiramphus pyrrhopygius*	Red-backed Kingfisher
	Todiramphus sanctus	Sacred Kingfisher
Anatidae	*Anas gracilis*	Grey Teal
	Anas superciliosa	Pacific Black Duck
	Aythya australis	Hardhead
	Chenonetta jubata	Australian Wood Duck
	Cygnus atratus	Black Swan
	Malacorhynchus membranaceus	Pink-eared Duck
Anhingidae	*Anhinga novaehollandiae*	Australasian Darter
Ardeidae	*Ardea intermedia*	Intermediate Egret
	Ardea modesta	Eastern Great Egret
	Ardea pacifica	White-necked Heron
	Egretta garzetta	Little Egret
	Egretta novaehollandiae	White-faced Heron
	Nycticorax caledonicus	Nankeen Night-Heron

Key

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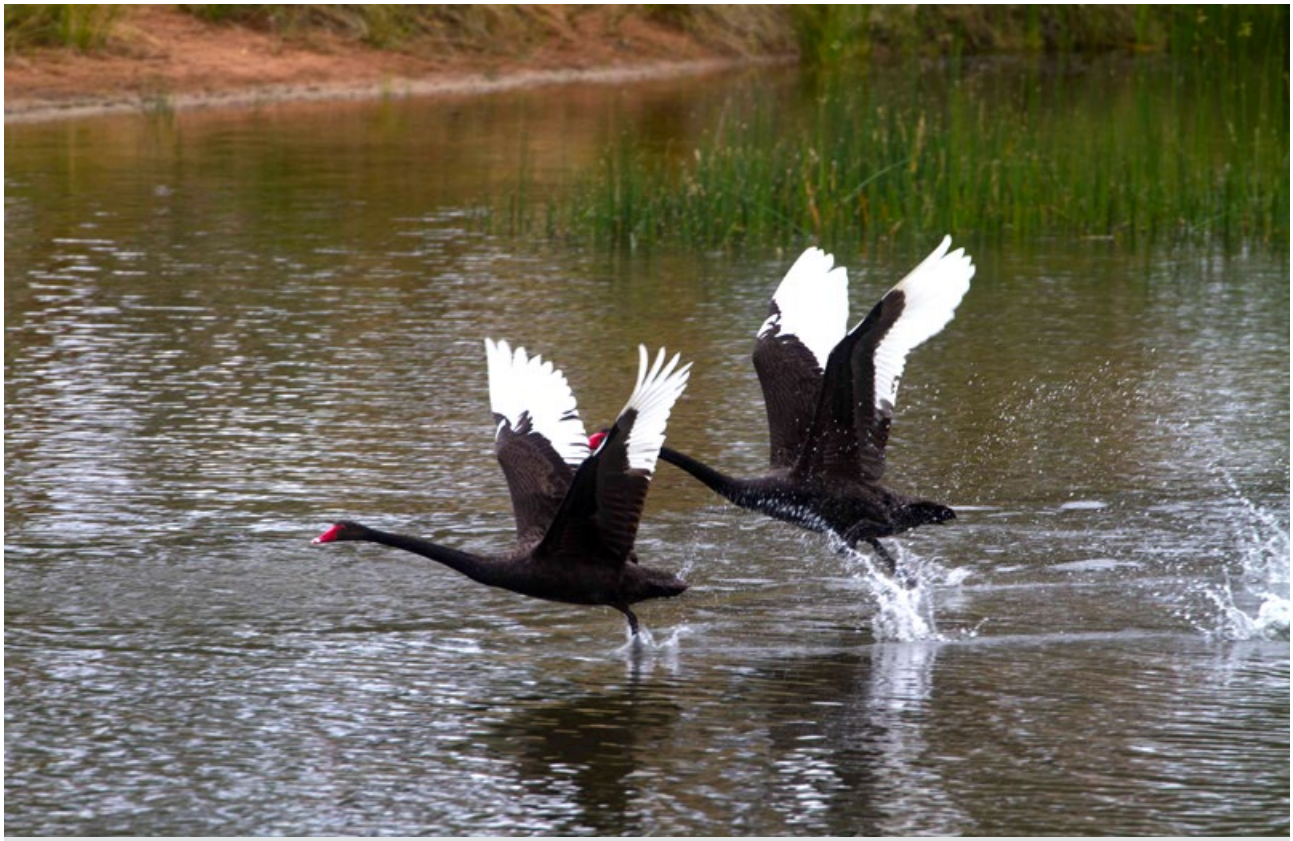

Black Swans (*Cygnus atratus*) taking off from Running Waters, Finke River © Copyright, P. Taylor

Birds		
Family	Species	Common name
Artamidae	*Artamus cinereus*	Black-faced Woodswallow
	Artamus leucorynchus *	White-breasted Woodswallow
	Artamus minor	Little Woodswallow
	Artamus personatus	Masked Woodswallow
	Artamus superciliosus	White-browed Woodswallow
	Cracticus nigrogularis	Pied Butcherbird
	Cracticus tibicen	Australian Magpie
	Cracticus torquatus	Grey Butcherbird
Burhinidae	*Burhinus grallarius* ~	Bush Stone-curlew
Cacatuidae	*Cacatua sanguinea*	Little Corella
	Calyptorhynchus banksii samueli ~	Red-tailed Black Cockatoo
	Eolophus roseicapillus	Galah
	Lophochroa leadbeateri	Major Mitchell's Cockatoo
	Nymphicus hollandicus	Cockatiel
Campephagidae	*Coracina maxima*	Ground Cuckoo-shrike
	Coracina novaehollandiae	Black-faced Cuckoo-shrike
	Lalage sueurii	White-winged Triller
Caprimulgidae	*Eurostopodus argus*	Spotted Nightjar
Casuariidae	*Dromaius novaehollandiae* ~	Emu

Birds		
Family	Species	Common name
Charadriidae	*Charadrius ruficapillus*	Red-capped Plover
	Elseyornis melanops	Black-fronted Dotterel
	Erythrogonys cinctus	Red-kneed Dotterel
	Vanellus miles	Masked Lapwing
	Vanellus tricolor	Banded Lapwing
Climacteridae	*Climacteris affinis*	White-browed Treecreeper
Columbidae	*Geopelia cuneata*	Diamond Dove
	Geophaps plumifera	Spinifex Pigeon
	Ocyphaps lophotes	Crested Pigeon
	Phaps chalcoptera	Common Bronzewing
	Phaps histrionica ~ *	Flock Bronzewing
Corvidae	*Corvus bennetti*	Little Crow
	Corvus coronoides	Australian Raven
	Corvus orru	Torresian Crow
Cuculidae	*Cacomantis pallidus*	Pallid Cuckoo
	Chrysococcyx basalis	Horsfield's Bronze-cuckoo
	Chrysococcyx osculans	Black-eared Cuckoo
Estrildidae	*Emblema pictum*	Painted Finch
	Taeniopygia guttata	Zebra Finch
Eurostopodidae	*Eurostopodus argus*	Spotted Nightjar
Falconidae	*Falco berigora*	Brown Falcon
	Falco cenchroides	Nankeen Kestrel
	Falco hypoleucos ~	Grey Falcon
	Falco longipennis	Australian Hobby
	Falco peregrinus	Peregrine Falcon
	Falco subniger	Black Falcon
Hirundinidae	*Cheramoeca leucosterna*	White-backed Swallow
	Hirundo neoxena	Welcome Swallow
	Petrochelidon ariel	Fairy Martin
	Petrochelidon nigricans	Tree Martin
Maluridae	*Amytornis purnelli*	Dusky Grasswren
	Amytornis striatus ~	Striated Grasswren
	Amytornis textilis	Thick-billed Grasswren
	Malurus lamberti	Variegated Fairy-wren
	Malurus leucopterus	White-winged Fairy-wren
	Malurus splendens	Splendid Fairy-wren
	Stipiturus ruficeps	Rufous-crowned Emu-wren

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Birds		
Family	Species	Common name
Megaluridae	*Cincloramphus cruralis*	Brown Songlark
	Cincloramphus mathewsi	Rufous Songlark
	Eremiornis carteri	Spinifexbird
	Megalurus gramineus	Little Grassbird
Meliphagidae	*Acanthagenys rufogularis*	Spiny-cheeked Honeyeater
	Certhionyx variegatus	Pied Honeyeater
	Conopophila whitei ~	Grey Honeyeater
	Epthianura aurifrons	Orange Chat
	Epthianura crocea crocea	Yellow Chat
	Epthianura tricolor	Crimson Chat
	Gavicalis virescens	Singing Honeyeater
	Lichmera indistincta	Brown Honeyeater
	Manorina flavigula	Yellow-throated Miner
	Melithreptus gularis	Black-chinned Honeyeater
	Ptilotula keartlandi	Grey-headed Honeyeater
	Ptilotula penicillata	White-plumed Honeyeater
	Ptilotula plumula	Grey-fronted Honeyeater
	Purnella albifrons	White-fronted Honeyeater
	Sugomel niger	Black Honeyeater
Meropidae	*Merops ornatus*	Rainbow Bee-eater
Monarchidae	*Grallina cyanoleuca*	Magpie-lark
Motacillidae	*Anthus novaeseelandiae*	Australasian Pipit
Nectariniidae	*Dicaeum hirundinaceum*	Mistletoebird
Neosittidae	*Daphoenositta chrysoptera*	Varied Sittella
Otididae	*Ardeotis australis* ~	Australian Bustard
Pachycephalidae	*Colluricincla harmonica*	Grey Shrike-thrush
	Oreoica gutturalis	Crested Bellbird
	Pachycephala rufiventris	Rufous Whistler
Pardalotidae	*Pardalotus rubricatus*	Red-browed Pardalote
	Pardalotus striatus	Striated Pardalote
Pelecanidae	*Pelecanus conspicillatus*	Australian Pelican
Petroicidae	*Melanodryas cucullata*	Hooded Robin
	Microeca fascinans	Jacky Winter
	Microeca flavigaster	Lemon-bellied Flycatcher
	Petroica goodenovii	Red-capped Robin
Phalacrocoracidae	*Microcarbo melanoleucos*	Little Pied Cormorant
	Phalacrocorax carbo	Great Cormorant
	Phalacrocorax sulcirostris	Little Black Cormorant
	Phalacrocorax varius	Pied Cormorant
Phasianidae	*Coturnix pectoralis*	Stubble Quail

Birds		
Family	Species	Common name
Podargidae	*Podargus strigoides*	Tawny Frogmouth
Podicipedidae	*Poliocephalus poliocephalus*	Hoary-headed Grebe
	Tachybaptus novaehollandiae	Australasian Grebe
Pomatostomidae	*Pomatostomus superciliosus*	White-browed Babbler
	Pomatostomus temporalis	Grey-crowned Babbler
Psittacidae	*Barnardius zonarius*	Australian Ringneck
	Melopsittacus undulatus	Budgerigar
	Neopsephotus bourkii	Bourke's Parrot
	Psephotus varius	Mulga Parrot
Psophodidae	*Cinclosoma castanotum* ~	Chestnut Quail-thrush
	Cinclosoma cinnamomeum	Cinnamon Quail-thrush
	Psophodes occidentalis	Chiming Wedgebill
Ptilonorhynchidae	*Ptilonorhynchus guttatus*	Western Bowerbird
Rallidae	*Fulica atra*	Eurasian Coot
	Gallinula tenebrosa	Dusky Moorhen
	Porphyrio porphyrio	Purple Swamphen
	Porzana fluminea ~ *	Australian Spotted Crake
	Tribonyx ventralis	Black-tailed Native-hen
Recurvirostridae	*Himantopus himantopus*	Black-winged Stilt
	Recurvirostra novaehollandiae	Red-necked Avocet
Rhipiduridae	*Rhipidura albiscapa*	Grey Fantail
	Rhipidura leucophrys	Willie Wagtail
Scolopacidae	*Actitis hypoleucos*	Common Sandpiper
	Calidris acuminata	Sharp-tailed Sandpiper
	Calidris ferruginea ~	Curlew Sandpiper
	Calidris melanotos ~	Pectoral Sandpiper
	Calidris tenuirostris ~	Great Knot
	Tringa glareola	Wood Sandpiper
	Tringa nebularia	Common Greenshank
Strigidae	*Ninox novaeseelandiae*	Southern Boobook
Threskiornithidae	*Platalea flavipes*	Yellow-billed Spoonbill
	Platalea regia	Royal Spoonbill
	Plegadis falcinellus	Glossy Ibis
Turnicidae	*Turnix velox*	Little Button-quail
Tytonidae	*Tyto javanica*	Eastern Barn Owl

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Reptiles		
Family	Species	Common name
Agamidae	*Ctenophorus caudicinctus*	Ring-tailed Dragon
	Ctenophorus clayi	Black-shouldered Ground-dragon
	Ctenophorus isolepis	Military Dragon
	Ctenophorus nuchalis	Central Netted Dragon
	Ctenophorus pictus	Painted Dragon
	Diporiphora lalliae	Lally's Two-line Dragon
	Lophognathus longirostris	Long-nosed Water Dragon
	Moloch horridus	Thorny Devil
	Pogona minor	Dwarf Bearded Dragon
	Pogona vitticeps	Central Bearded Dragon
	Tympanocryptis centralis	Centralian Earless Dragon
	Tympanocryptis intima	Gibber Earless Dragon
	Tympanocryptis lineata	Lined Earless Dragon
Diplodactylidae	*Crenadactylus ocellatus*	Clawless Gecko
	Diplodactylus conspicillatus	Fat-tailed Gecko
	Lucasium stenodactylum	Crowned Gecko
	Oedura marmorata	Marbled Velvet Gecko
	Rhynchoedura ornata	Western Beaked Gecko
	Strophurus ciliaris	Northern Spiny-tailed Gecko
Elapidae	*Brachyurophis incinctus*	Unbanded Shovel-nosed Snake
	Demansia psammophis *	Yellow-faced Whip snake
	Furina ornata *	Moon Snake
	Pseudechis australis ~	Mulga Snake
	Pseudonaja mengdeni	Western Brown Snake
	Pseudonaja modesta	Ringed Brown Snake
	Pseudonaja nuchalis	Northern Brown Snake
	Suta suta	Curl Snake
Gekkonidae	*Gehyra montium*	Centralian Dtella
	Gehyra purpurascens	Purplish Dtella
	Gehyra variegata	Tree Dtella
	Heteronotia binoei	Bynoe's Gecko
	Heteronotia planiceps	Bynoe's Prickly Gecko
	Nephrurus levis	Three-lined Knob-tailed Gecko
Pygopodidae	*Delma borea*	Rusty-topped Delma
	Delma butleri	Unbanded Delma
	Delma desmosa ~	Banded Delma
	Delma nasuta	Sharp-snouted Delma
	Delma tincta	Black-snecked Snake-lizard
	Lialis burtonis	Burton's Legless Lizard
	Pygopus nigriceps	Western Hooded Scaly-foot

Reptiles		
Family	Species	Common name
Pythonidae	*Antaresia stimsoni*	Stimson's Python
	Aspidites ramsayi *	Woma
	Morelia bredli	Centralian Carpet Python
Scincidae	*Carlia triacantha*	Desert Rainbow-skink
	Cryptoblepharus australis	Inland Snake-eyed Skink
	Cryptoblepharus plagiocephalus	Péron's Snake-eyed Skink
	Ctenotus alacer	Lively Ctenotus
	Ctenotus brooksi	Brook's Ctenotus
	Ctenotus calurus	Blue-tailed Ctenotus
	Ctenotus dux	Chief Ctenotus
	Ctenotus helenae	Helen's Ctenotus
	Ctenotus inornatus	Rock Ctenotus
	Ctenotus leae *	Lea's Ctenotus
	Ctenotus leonhardii	Leonhardi's Ctenotus
	Ctenotus nasutus	Long-snouted Ctenotus
	Ctenotus pantherinus	Leopard Ctenotus
	Ctenotus piankai	Pianka's Ctenotus
	Ctenotus quattuordecimlineatus	Fourteen-Lined Ctenotus
	Ctenotus regius	Pale-rumped Ctenotus
	Ctenotus schomburgkii	Schomburk's Ctenotus
	Ctenotus septenarius	Seven-lined Ctenotus
	Ctenotus strauchii	Strauch's Ctenotus
	Cyclodomorphus melanops *	Slender Blue-tongued Lizard
	Eremiascincus fasciolatus	Narrow-banded Sand Swimmer
	Eremiascincus richardsonii	Broad-banded Sand-swimmer
	Lerista bipes	Two-toed Lerista
	Lerista desertorum	Desert Lerista
	Lerista frosti	Frost's Lerista
	Lerista labialis	Sand Lerista
	Liopholis inornata	Desert Egernia
	Liopholis margaretae	Rock Egernia
	Liopholis slateri slateri # ~	Slater's Egernia
	Menetia greyii	Grey's Menetia
	Morethia boulengeri	Boulenger's Snake-eyed Skink
	Morethia ruficauda	Red-tailed Snake-eyed Skink
	Proablepharus reginae	Spinifex Snaked-eyed Skink

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Sharp-snouted Delma (*Delma nasuta*) © Copyright, D. Trembath

Reptiles		
Family	Species	Common name
Typhlopidae	*Anilios bituberculatus*	Prong-snouted Blind Snake
	Anilios centralis ~	Centralian Blind Snake
	Anilios endoterus	Interior Blind Snake
Varanidae	*Varanus eremius*	Rusty Desert Monitor
	Varanus giganteus	Perentie
	Varanus gilleni	Pygmy Mulga Monitor
	Varanus gouldii	Sand Goanna
	Varanus tristis *	Freckled Monitor

Finke River waterholes and wetlands support a wide range of species © Copyright, R. Whyte

Frogs and Toads		
Family	Species	Common name
Hylidae	*Cyclorana maini*	Main's Frog
	Litoria gilleni	Centralian Tree Frog
	Litoria rubella	Desert Tree Frog, Red Tree Frog
Myobatrachidae	*Neobatrachus sudellae*	Trilling Frog, Sudell's Frog
	Neobatrachus sutor	Shoemaker Frog
	Platyplectrum spenceri	Spencer's Burrowing Frog, Spencer's Frog

Trilling Frog (*Neobatrachus sudellae*), named for their short high-pitched trill
© Copyright, D. Trembath

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Fishes		
Family	Species	Common name
Petarme language names are included where known		
Ambassidae	*Ambassis* sp.	Northern Glassfish
Atherinidae	*Craterocephalus centralis* †	Finke Hardyhead
Clupeidae	*Nematalosa erebi*	Bony Bream, Ntepirtna
Eleotridae	*Mogurnda larapintae* †	Desert Mogurnda
Gobiidae	*Chlamydogobius japalpa* †	Finke Goby
Melanotaeniidae	*Melanotaenia splendida tatei*	Desert Rainbowfish
Plotosidae	*Neosilurus hyrtlii*	Hyrtl's Catfish
Terapontidae	*Amniataba percoides*	Barred Grunter, Intama-intama
	Leiopotherapon unicolor	Spangled Perch, Lhungalpura

Spangled Perch (*Leiopotherapon unicolor*) are an important food species for Traditional Owners, M. Hammer © Copyright, MAGNT

Invertebrates

Bees	
Family	Species
Apidae	***Amegilla (Asaropoda)* n. sp. HSKR** *
	Amegilla chlorocyanea *
	Amegilla murrayensis *
	Apis mellifera ^ *
	Braunsapis dolichocephala *
	Exoneurella eremophila *
	Thyreus waroonensis *
Colletidae	*Euhesma* sp. HSKR1 *
	Euhesma sturtiensis
	Euhesma sybilae
	Goniocolletes perfasciatus
	Hylaeus (Prosopisteron) sp. HSKR1 *
	Hylaeus (Prosopisteron) sp. HSKR2 *
	Hylaeus (Pseudhylaeus) sp. HSKR1 *
	Hylaeus (Pseudhylaeus) sp. HSKR2 *
	Hylaeus (Pseudhylaeus) sp. HSKR3 *
	Hylaeus (Pseudhylaeus) sp. HSKR4 *
	Hylaeus (Pseudhylaeus) sp. HSKR5 *
	Leioproctus cardaleae
	Leioproctus cupreus
	Leioproctus finkei
	Leioproctus lucanus *
	Leioproctus xanthozoster

Bees	
Family	Species
Halictidae	*Ceylalictus perditellus*
	Homalictus blackburni *
	Homalictus dotatus
	Homalictus urbanus
	Lasioglossum adustum
	Lasioglossum albopilosum *
	Lasioglossum brochum
	Lasioglossum chapmani
	Lasioglossum cognatum
	Lasioglossum ebeneum
	Lasioglossum eremaean
	Lasioglossum erythrurum
	Lasioglossum greavesi
	Lasioglossum immaculatum
	Lasioglossum mundulum
	Lasioglossum ochroma
	Lasioglossum platychilum *
	Lasioglossum plebeium
	Lasioglossum sororculum
	Lasioglossum vitripenne
	Lipotriches flavoviridis *
Megachilidae	*Megachile apicata*
	Megachile aurifrons
	Megachile barvonensis
	Megachile callura
	Megachile nigrovittata
	Megachile obtusa
	Megachile tosticauda

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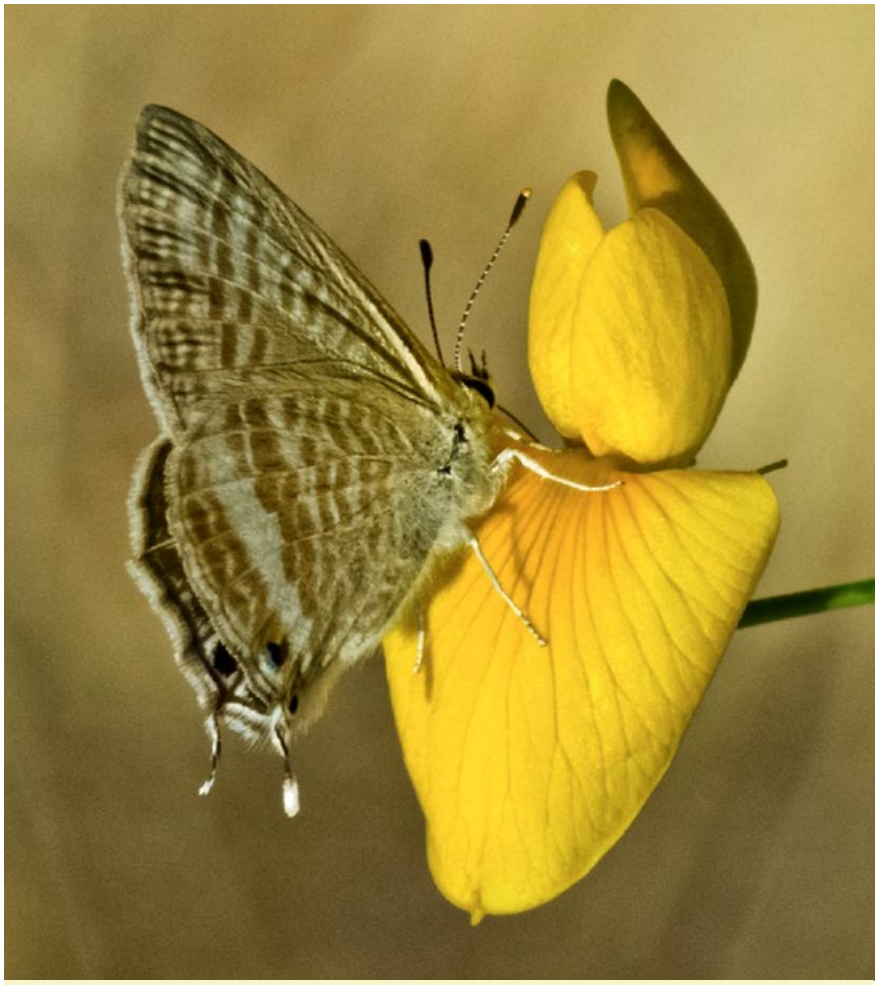

Long-tailed Pea-blue (*Lampides boeticus*) © Copyright, R. Whyte

Butterflies	
Family	Species
Hesperiidae	*Croitana arenaria* ~ *
Lycaenidae	*Famegana alsulus* *
	Lampides boeticus *
	Nacaduba biocellata *
	Ogyris amaryllis *
	Theclinesthes miskini *
	Theclinesthes serpentatus *
	Zizina otis *
Nymphalidae	*Danaus petilia* *
	Danaus plexippus ~ *
	Junonia villida *
	Vanessa itea *
	Vanessa kershawi *
Pieridae	*Belenois java* *
	Eurema smilax *

Moths	
Family	Species
Noctuidae	*Comocrus behri* *

Beetles	
Family	Species
Carabidae	*Calosoma schayeri*
	Megacephala australis
Dytiscidae	*Allodessus bistrigatus*
	Eretes australis

True Bugs	
Family	Species
Alydidae	*Melanacanthus margineguttatus*
Coreidae	*Mictis profana* ^
Geocoridae	*Germalus* sp. BBHS13/Msp020 *
Gerridae	*Limnogonus fossarum*
Hydrometridae	*Hydrometra strigosa*
Lygaeidae	*Crompus opacus* *
	Eurynysius sp. BBHS13/Msp010 *
	Melanerythrus mactans *
	Nysius vinitor ^ *
Miridae	*Ausejanus* sp. BBHS13/Msp021 *
	Austromiris n. sp. 001 BBHS13/Msp019 *
	Austromiris sp. BBHS13/Msp018 *
	***Carenotus* n. sp. BBHS13/sp013** *
	Coridromius chenopoderis *
	Creontiades dilutus ^
	Mirini sp. 01 BBHS13/Msp012 *
	Myrmecoridea n. sp. BBHS13/Msp008 *
	Orthotylini gp. 02 n. sp. BBHS13/Msp062 *
	Orthotylini gp. 04 n. sp. BBHS13/Msp064 *
	Orthotylini gp. 04 sp. 26 BBHS13/Msp057 *
	Orthotylini gp. 26 sp. 02 BBHS13/Msp061 *
	Orthotylini gp. 26 sp. 04 BBHS13/Msp063 *
	Orthotylini gp. 34 sp. ? BBHS13/Msp059 *
	Orthotylini gp. 38 sp. 05 BBHS13/Msp058 *
	Phylinae sp. 01 BBHS13/Msp029 *
	Phylinae sp. 02 BBHS13/Msp030 *
	Phylinae sp. 03 BBHS13/Msp031 *
	Phylinae sp. 04 BBHS13/Msp032 *
	Phylinae sp. 05 BBHS13/Msp033 *
	Phylinae sp. 06 BBHS13/Msp034 *

True Bugs	
Family	Species
Miridae	Phylinae sp. 07 BBHS13/Msp035 *
	Phylinae sp. 08 BBHS13/Msp036 *
	Phylinae sp. 09 BBHS13/Msp037 *
	Phylinae sp. 10 BBHS13/Msp038 *
	Phylinae sp. 11 BBHS13/Msp039 *
	Phylinae sp. 12 BBHS13/Msp040 *
	Phylinae sp. 13 BBHS13/Msp041 *
	Phylinae sp. 14 BBHS13/Msp042 *
	Phylinae sp. 15 BBHS13/Msp043 *
	Phylinae sp. 16 BBHS13/Msp044 *
	Phylinae sp. 17 BBHS13/Msp045 *
	Phylinae sp. 18 BBHS13/Msp046 *
	Phylinae sp. 19 BBHS13/Msp047 *
	Phylinae sp. 20 BBHS13/Msp048 *
	Phylinae sp. 21 BBHS13/Msp049 *
	Phylinae sp. 22 BBHS13/Msp050 *
	Phylinae sp. 23 BBHS13/Msp051 *
	Phylinae sp. 24 BBHS13/Msp052 *
	Phylinae sp. 25 BBHS13/Msp053 *
	Phylinae sp. 26 BBHS13/Msp054 *
	Phylinae sp. 27 BBHS13/Msp055 *
	Phylinae sp. 28 BBHS13/Msp056 *
	Taylorilygus apicalis *
	Witchelinamiris sp. BBHS13/Msp060 *
Pachygronthidae	*Stenophylella macreta*
Pentatomidae	*Cephaloplatus granulatus*
	Eysarcoris fuscus *
	Kapunda troughtoni ^
	Menida personata
	Minchamia hubbardae *
	Neagenor spinosus
	nr. *Tholosanus* BBHS13/Msp009 *
	Ocirrhoe sp. BBHS13/Msp003 *
	Oechalia schellenbergii *
	Oncocoris desertus
	Poecilometis fuscescens
	Poecilometis spenceri

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True Bugs	
Family	Species
Reduviidae	Reduviidae sp. BBHS13/Msp002 *
Rhopalidae	*Leptocoris mitellatus*
	Leptocoris sp. BBHS13/Msp011 *
	Leptocoris tagalicus
Rhyparochromidae	*Dieuches nudus*
	Plinthisus sp. BBHS13/Msp022 *
	Udeocoris scudderi
Scutelleridae	*Coleotichus costatus*
Tingidae	*Agramma* sp. BBHS13/Msp023 *
	Inoma sp. BBHS13/Msp025 *
	Lasiacantha aureolus *
	Lasiacantha inaquosa *
	Lasiacantha luritja *
	Nethersia tomentosa *
	Urentius sarinae *
Veliidae	*Microvelia oceanica*
	Microvelia peramoena

Thrips	
Family	Species
Phlaeothripidae	*Csirothrips watsoni* *
	Kladothrips antennatus *
	Kladothrips arotrum *
	Kladothrips tepperi *

Damselflies and Dragonflies	
Family	Species
Aeshnidae	*Anax papuensis*
Coenagrionidae	*Ischnura aurora* *
	Ischnura heterosticta
	Xanthagrion erythroneurum *
Corduliidae	*Hemicordulia tau* *
Libellulidae	*Crocothemis nigrifrons*
	Diplacodes bipunctata
	Diplacodes haematodes
	Orthetrum caledonicum
	Tramea loewii *

Symphylans	
Family	Species
[Order Symphyla]	Symphyla sp. *

Millipedes	
Family	Species
Paradoxosomatidae	Paradoxosomatidae sp. *
Polyxenidae	*Unixenus* sp. (*attemsi*?) *
	Unixenus sp. (*mjoebergi*?) *
Synxenidae	*Phryssonotus novaehollandiae* *

The Giant Centipede (*Ethmostigmus rubripes*) is the largest centipede in Australia and Asia, growing up to 16 cm © Copyright, R. Whyte

Centipedes	
Family	Species
Chilenophilidae	*Geomerinus* sp. *
Cryptopidae	*Cryptops* sp. 01 *
	Cryptops sp. 02 *
Geophilidae	*Geophilus* sp. *
Scolopendridae	*Ethmostigmus rubripes* *
	Scolopendra laeta *
	Scolopendra morsitans *
Scutigeridae	*Pilbarascutigera incola* *

Mites	
Family	Species
Trombidiidae	Trombidiidae sp. *

Scorpions	
Family	Species
Buthidae	*Lychas* sp. *
	Lychas sp. *'adonis'* *
Urodacidae	*Urodacus 'armatus'* group *
	Urodacus sp. *
	Urodacus 'yaschenkoi' group *

Pseudoscorpions	
Family	Species
Garypidae	*Synsphyronus* sp. 'Hen A' *
	Synsphyronus sp. 'Hen B' *
Geogarypidae	***Geogarypus* n. sp.** *
Olpiidae	*Austrohorus* sp. *
	Beierolpium sp. *
	Euryolpium sp. *
	Indolpium sp. *
Sternophoridae	*Afrosternophorus* sp. *

Two unidentified species of *Synsphyronus* pseudoscorpion were found at Henbury © Copyright, R. Whyte

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The Australian Golden Orb-weaving Spider (*Nephila edulis*) is found throughout Australia as well as parts of New Zealand, New Guinea and New Caledonia

Spiders	
Family	Species
Araneidae	*Argiope protensa* *
	Backobourkia sp. *
Barychelidae	***Idiommata* n. sp.** *
Clubionidae	*Clubiona* indet. sp. *
Ctenizidae	***Conothele* n. sp.** *
Desidae	*Badumna insignis* *
	Desidae gen. A sp. 01 *
	Forsterina indet. sp. *
Dipluridae	***Cethegus* n. sp.** *
Filistatidae	*Wandella centralis* *
Gnaphosidae	Gnaphosidae gen. A sp. 01 *
Hersiliidae	*Tamopsis* indet. sp. *
Idiopidae	*Aganippe* nr sp. *simpsoni* *
Lamponidae	*Asadipus kunderang* *
	Bigenditia millawa *
Lycosidae	*Dingosa simsoni* *
	Hoggicosa sp. (*bicolor*?) *
	Knoelle clara
	Lycosa laeta
	Lycosa tula
	Lycosidae gen. A indet. sp. *
	Lycosidae gen. A sp. 01 *
	Lycosidae gen. B indet. sp. *
Miturgidae	Miturgidae gen. A sp. 01 *
	Miturgidae gen. A sp. 02 *

Spiders	
Family	Species
Nemesiidae	*Aname* indet. sp. *
	Aname sp. *
Nephilidae	*Nephila edulis* *
Oonopidae	*Opopaea* sp. *
Oxyopidae	*Oxyopes* sp. *
Pholcidae	*Crossopriza lyoni* ^ *
	Pholcidae unid. genus *
	Trichocyclus arabana *
Prodidomidae	Molycriinae indet. gen. *
	Prodidomus indet. sp. *
Salticidae	*Damoetas* sp. *
	Salticidae sp. *
Segestriidae	Segestriidae gen A. sp. 01 *
Selenopidae	Selenopidae sp. (Karaops?) *
Sparassidae	*Isopedella inola*
	Neosparassus sp. *
Tetragnathidae	*Nanometa* sp. *
	Tetragnatha sp. *
Theraphosidae	*Selenocosmia* sp. *
Theridiidae	*Latrodectus hasseltii* *
Trochanteriidae	*Morebilus* sp. *
	Trochanteriidae sp. (*Morebilus*?) *
	Trochanteriidae sp. (*Pyrnus*?) *
Uloboridae	*Uloborus* sp. *
Zodariidae	*Habronestes* sp. *
	Storena indet. sp. *

Stygofauna	
Family	Species
[Class Oligochaeta]	Oligochaeta sp. *
[Class Ostracoda]	Ostracoda sp. *
[Order Cyclopoida]	Cyclopoida sp. *

Crustaceans	
Family	Species
[Class Branchiopoda]	Branchiopoda sp. *
[Order Anostraca]	Anostraca sp. *
[Order Anostraca]	Anostraca sp. *
Palaemonidae	*Macrobrachium australiense* *
Parastacidae	*Cherax destructor*
Triopsidae	*Triops australiensis* *

Snails—Aquatic	
Family	Species
Lymnaeidae	*Austropeplea lessoni* *
	Glyptophysa sp. *
	Gyraulus cf. *hesperus* *
	Isidorella newcombi *
Thiaridae	*Plotiopsis balonnensis* *

Snails—Terrestrial	
Family	Species
Camaenidae	*Basedowena squamulosa* ~ *
	Granulomelon grandituberculatum *
	Pleuroxia adcockiana
	Semotrachia esau
	Semotrachia hughana
	Sinumelon expositum
Pupillidae	*Gastrocopta margaretae*
	Gastrocopta mussoni
	Pupoides beltianus
	Pupoides eremicolus *
	Pupoides ischnus
Subulinidae	*Eremopeas interioris*
Succineidae	*Succinea interioris* *

Sinumelon expositum **is endemic to Finke River Basin and the MacDonnell, James and Krichauff Ranges. Its discovery on Henbury Station represents a range extension**

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Flora

Henbury Station contains an important collection of arid land ecosystems, including sand dunes © Copyright, P. Taylor

Flowering Plants	
Family	Species
Acanthaceae	*Dipteracanthus australasicus* subsp. *australasicus*
	Harnieria kempeana subsp. *kempeana*
	Rostellularia adscendens var. *adscendens* *
Aizoaceae	*Gunniopsis septifraga*
	Gunniopsis zygophylloides
	Tetragonia eremaea
	Trianthema triquetrum
	Zaleya galericulata subsp. galericulata

Flowering Plants	
Family	Species
Amaranthaceae	*Alternanthera angustifolia*
	Alternanthera denticulata
	Alternanthera nana *
	Alternanthera nodiflora
	Amaranthus cuspidifolius
	Amaranthus grandiflorus
	Amaranthus interruptus
	Amaranthus macrocarpus var. *macrocarpus* ~
	Amaranthus mitchellii
	Gomphrena cunninghamii
	Ptilotus clementii

Flowering Plants	
Family	Species
Amaranthaceae	*Ptilotus decipiens*
	Ptilotus gaudichaudii
	Ptilotus helipteroides
	Ptilotus latifolius
	Ptilotus macrocephalus
	Ptilotus nobilis subsp. *nobilis*
	Ptilotus obovatus var. *obovatus*
	Ptilotus polystachyus
	Ptilotus schwartzii
	Ptilotus sessilifolius
	Ptilotus whitei
Apiaceae	*Daucus glochidiatus* var. Alluvium (D.E.Albrecht 8771)
	Daucus glochidiatus var. Clay edge (P.K.Latz 16656)
Apocynaceae	*Marsdenia australis*
	Rhyncharrhena linearis
	Sarcostemma viminale subsp. *australe*
Araliaceae	*Hydrocotyle trachycarpa*
	Trachymene glaucifolia
Arecaceae	*Livistona mariae* # ~
Asparagaceae	*Corynotheca licrota*
	Lomandra patens ~
	Thysanotus exiliflorus
Asphodelaceae	*Bulbine alata*
Aspleniaceae	*Pleurosorus rutifolius* *
Asteraceae	*Anemocarpa saxatilis*
	Bidens bipinnata ^
	Brachyscome blackii
	Brachyscome ciliaris var. *ciliaris*
	Brachyscome tesquorum
	Calocephalus platycephalus
	Calotis cymbacantha
	Calotis erinacea
	Calotis hispidula
	Calotis kempei

Flowering Plants	
Family	Species
Asteraceae	*Calotis latiuscula*
	Calotis plumulifera
	Carthamus lanatus ^
	Centipeda crateriformis
	Centipeda crateriformis subsp. *crateriformis*
	Centipeda minima subsp. *macrocephala*
	Centipeda pleiocephala
	Centipeda thespidioides
	Chrysocephalum apiculatum
	Chrysocephalum eremaeum
	Chrysocephalum pterochaetum
	Conyza bonariensis ^
	Cratystylis centralis ~
	Cremnothamnus thomsonii *
	Dichromochlamys dentatifolia
	Gnephosis arachnoidea
	Gnephosis eriocarpa
	Helichrysum luteoalbum
	Ixiochlamys cuneifolia
	Ixiochlamys filicifolia
	Ixiochlamys nana
	Lactuca serriola ^
	Lawrencella davenportii
	Leiocarpa leptolepis
	Leiocarpa semicalva subsp. *semicalva*
	Leiocarpa websteri
	Leucochrysum fitzgibbonii
	Leucochrysum stipitatum
	Minuria cunninghamii
	Minuria integerrima
	Minuria leptophylla
	Minuria tridens # ~
	Myriocephalus rudallii
	Olearia ferresii

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Flowering Plants	
Family	Species
Asteraceae	*Olearia stuartii*
	Olearia subspicata
	Ozothamnus kempei
	Pluchea dentex *
	Pluchea dunlopii
	Pluchea rubelliflora
	Podolepis aristata subsp. *auriculata*
	Podolepis capillaris
	Podolepis eremaea
	Polycalymma stuartii
	Pterocaulon sphacelatum
	Rhodanthe charsleyae
	Rhodanthe floribunda
	Rhodanthe microglossa
	Rhodanthe moschata
	Rhodanthe tietkensii
	Rutidosis helichrysoides subsp. *helichrysoides*
	Schoenia ayersii
	Schoenia cassiniana
	Senecio gregorii
	Senecio magnificus
	Sonchus hydrophilus ~
	Sonchus oleraceus ^
	Sphaeromorphaea australis
	Streptoglossa adscendens
	Streptoglossa bubakii
	Streptoglossa decurrens
	Streptoglossa liatroides
	Vittadinia arida
	Vittadinia dissecta var. *hirta* *
	Vittadinia eremaea
	Vittadinia sulcata
	Waitzia acuminata var. *acuminata*
	Xerochrysum bracteatum
Bignoniaceae	*Pandorea doratoxylon*

Flowering Plants	
Family	Species
Boraginaceae	*Halgania cyanea* var. Allambi Stn (B.W.Strong 676)
	Halgania erecta
	Halgania solanacea
	Heliotropium ammophilum
	Heliotropium asperrimum
	Heliotropium cunninghamii
	Heliotropium curassavicum
	Heliotropium inexplicitum ~
	Heliotropium moorei
	Heliotropium pleiopterum
	Heliotropium supinum ^
	Heliotropium tanythrix
	Heliotropium tenuifolium
	Trichodesma zeylanicum var. *zeylanicum*
Brassicaceae	*Arabidella glaucescens*
	Arabidella trisecta
	Blennodia canescens
	Brassica tournefortii ^
	Harmsiodoxa brevipes
	Lepidium muelleri-ferdinandi
	Lepidium oxytrichum
	Lepidium phlebopetalum
	Sisymbrium erysimoides
	Stenopetalum anfractum
	Stenopetalum decipiens
	Stenopetalum nutans
	Stenopetalum velutinum
Cactaceae	*Opuntia stricta* ^ *
Campanulaceae	*Isotoma petraea*
	Isotoma petraea subsp. "small flower" *
	Wahlenbergia queenslandica
	Wahlenbergia tumidifructa
Capparaceae	*Capparis mitchellii*
	Capparis spinosa var. *nummularia*
Caryophyllaceae	*Polycarpaea arida*
	Polycarpaea breviflora *
Casuarinaceae	*Allocasuarina decaisneana*
Celastraceae	*Stackhousia clementii*

Flowering Plants	
Family	Species
Chenopodiaceae	*Atriplex elachophylla*
	Atriplex fissivalvis ~
	Atriplex holocarpa
	Atriplex humifusa
	Atriplex limbata
	Atriplex lindleyi subsp. *lindleyi*
	Atriplex nummularia subsp. *nummularia*
	Atriplex quadrivalvata var. *quadrivalvata* ~
	Atriplex spongiosa
	Atriplex velutinella
	Atriplex vesicaria
	Chenopodium auricomum
	Chenopodium desertorum subsp. *anidiophyllum*
	Chenopodium nitrariaceum
	Dissocarpus biflorus var. *biflorus* ~
	Dissocarpus paradoxus
	Dysphania cristata
	Dysphania kalpari
	Dysphania melanocarpa
	Dysphania plantaginella
	Dysphania platycarpa
	Dysphania truncata
	Einadia nutans subsp. eremaea
	Enchylaena tomentosa
	Eremophea spinosa
	Eriochiton sclerolaenoides
	Maireana aphylla
	Maireana appressa
	Maireana astrotricha
	Maireana campanulata
	Maireana carnosa ~
	Maireana coronata
	Maireana georgei

Flowering Plants	
Family	Species
Chenopodiaceae	*Maireana integra*
	Maireana lobiflora
	Maireana planifolia
	Maireana schistocarpa
	Maireana scleroptera
	Maireana spongiocarpa
	Maireana tomentosa subsp. *tomentosa*
	Maireana trichoptera
	Maireana triptera
	Maireana villosa
	Osteocarpum acropterum var. *acropterum*
	Osteocarpum dipterocarpum ~
	Rhagodia eremaea
	Rhagodia parabolica *
	Rhagodia spinescens
	Salsola australis
	Sclerochlamys brachyptera
	Sclerolaena bicornis var. *bicornis*
	Sclerolaena birchii ~
	Sclerolaena convexula
	Sclerolaena cornishiana
	Sclerolaena costata
	Sclerolaena cuneata
	Sclerolaena decurrens
	Sclerolaena deserticola
	Sclerolaena diacantha
	Sclerolaena eriacantha
	Sclerolaena glabra
	Sclerolaena holtiana
	Sclerolaena intricata
	Sclerolaena johnsonii
	Sclerolaena lanicuspis
	Sclerolaena longicuspis ~
	Sclerolaena patenticuspis

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Flowering Plants	
Family	Species
Chenopodiaceae	*Tecticornia disarticulata* ~
	Tecticornia pergranulata subsp. *elongata* *
	Tecticornia tenuis
	Tecticornia triandra ~
Cleomaceae	*Cleome viscosa*
Convolvulaceae	*Bonamia erecta*
	Convolvulus clementii
	Convolvulus remotus
	Cuscuta victoriana
	Evolvulus alsinoides
	Ipomoea muelleri
	Ipomoea polymorpha
	Ipomoea racemigera
	Polymeria longifolia
Crassulaceae	*Crassula colorata* var. *acuminata*
Cucurbitaceae	*Citrullus colocynthis* ^
	Citrullus lanatus ^
	Cucumis argenteus
	Cucumis myriocarpus ^
Cupressaceae	*Callitris glaucophylla*
Cyperaceae	*Bolboschoenus caldwellii* ~
	Bulbostylis barbata
	Bulbostylis turbinata *
	Cyperus bulbosus
	Cyperus centralis *
	Cyperus cunninghamii subsp. *cunninghamii* *
	Cyperus difformis
	Cyperus gymnocaulos
	Cyperus iria *
	Cyperus polystachyos
	Cyperus pygmaeus
	Cyperus rigidellus
	Cyperus squarrosus
	Fimbristylis dichotoma
	Fimbristylis microcarya
	Isolepis congrua ~
	Schoenoplectus dissachanthus
	Schoenoplectus subulatus

Flowering Plants	
Family	Species
Dilleniaceae	*Hibbertia glaberrima*
	Hibbertia sp. Chewings Range (P.K.Latz 10660) ~
Elatinaceae	*Bergia henshallii* *
	Bergia trimera
	Elatine gratioloides
Euphorbiaceae	*Adriana tomentosa* var. *hookeri*
	Euphorbia biconvexa
	Euphorbia boophthona
	Euphorbia centralis
	Euphorbia drummondii
	Euphorbia ferdinandi
	Euphorbia ferdinandi var. *ferdinandi*
	Euphorbia inappendiculata var. *queenslandica* *
	Euphorbia parvicaruncula
	Euphorbia sarcostemmoides ~
	Euphorbia tannensis subsp. *eremophila*
	Euphorbia wheeleri
	Ricinus communis ^
Fabaceae	*Acacia aneura*
	Acacia aneura var. *major* *
	Acacia aptaneura
	Acacia bivenosa
	Acacia brachystachya
	Acacia calcicola
	Acacia dictyophleba
	Acacia estrophiolata
	Acacia georginae
	Acacia grasbyi ~
	Acacia incurvaneura
	Acacia kempeana
	Acacia latzii # ~
	Acacia ligulata
	Acacia macdonnellensis subsp. *macdonnellensis* *
	Acacia maitlandii
	Acacia melleodora

Flowering Plants	
Family	Species
Fabaceae	*Acacia minyura* *
	Acacia mulganeura ~
	Acacia murrayana
	Acacia oswaldii
	Acacia paraneura
	Acacia ramulosa var. *ramulosa*
	Acacia salicina
	Acacia sericophylla
	Acacia sessiliceps
	Acacia sp. Mulga Holey Trunk (P.K.Latz 12458)
	***Acacia* sp. silver (P.K.Latz 27977)** *
	Acacia spondylophylla
	Acacia strongylophylla
	Acacia tetragonophylla
	Acacia victoriae
	Caesalpinia bonduc ^ *
	Crotalaria cunninghamii subsp. *sturtii*
	Crotalaria eremaea
	Crotalaria eremaea subsp. *strehlowii*
	Crotalaria novae-hollandiae subsp. *lasiophylla*
	Crotalaria smithiana
	Cullen cinereum
	Cullen discolor
	Cullen graveolens *
	Cullen pallidum
	Daviesia arthropoda
	Erythrina vespertilio subsp. *biloba*
	Gastrolobium brevipes
	Glycine canescens
	Indigofera basedowii

Flowering Plants	
Family	Species
Fabaceae	*Indigofera cornuligera* subsp. *cornuligera*
	Indigofera georgei
	Indigofera helmsii
	Indigofera leucotricha
	Indigofera linnaei
	Indigofera psammophila *
	Indigofera sp. Areyonga (D.J.Parsons 30) ~
	Isotropis wheeleri
	Leptosema chambersii
	Lotus cruentus
	Muelleranthus stipularis
	Petalostylis cassioides
	Rhynchosia minima
	Senna aff. *glutinosa* (Albrecht 14034) *
	Senna artemisioides
	Senna artemisioides subsp. *alicia*
	Senna artemisioides subsp. *artemisioides*
	Senna artemisioides subsp. *coriacea*
	Senna artemisioides subsp. *filifolia*
	Senna artemisioides subsp. *helmsii*
	Senna artemisioides subsp. Kuyunba (B.Pitts 113) ~
	Senna artemisioides subsp. *oligophylla*
	Senna artemisioides subsp. *petiolaris*
	Senna artemisioides subsp. *quadrifolia*
	Senna artemisioides subsp. *sturtii* *
	Senna glutinosa subsp. *glutinosa*
	Senna oligoclada
	Senna phyllodinea ~

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Mulga Mistletoe (*Lysiana murrayi*) © Copyright, R. Whyte

Flowering Plants	
Family	Species
Fabaceae	*Senna pleurocarpa* var. *pleurocarpa*
	Senna sericea
	Senna venusta
	Swainsona affinis
	Swainsona burkei
	Swainsona flavicarinata
	Swainsona microphylla
	Swainsona oroboides
	Swainsona phacoides
	Swainsona rostrata
	Swainsona unifoliolata

Flowering Plants	
Family	Species
Fabaceae	*Templetonia egena*
	Tephrosia sphaerospora
	Tephrosia supina
	Trifolium arvense ^
	Trigonella suavissima
	Vachellia farnesiana var. *farnesiana* ^
Frankeniaceae	*Frankenia cordata*
	Frankenia serpyllifolia
Gentianaceae	*Schenkia australis*
Geraniaceae	*Erodium cygnorum* ~

Flowering Plants	
Family	Species
Goodeniaceae	*Brunonia australis*
	Dampiera cinerea
	Goodenia berardiana
	Goodenia cycloptera
	Goodenia fascicularis
	Goodenia gibbosa
	Goodenia grandiflora
	Goodenia havilandii ~
	Goodenia heterochila
	Goodenia hirsuta subsp. Hills (P.K.Latz 13679)
	Goodenia lanata
	Goodenia larapinta
	Goodenia lunata
	Goodenia modesta
	Goodenia mueckeana
	Goodenia ramelii
	Goodenia triodiophila
	Lechenaultia divaricata
	Scaevola amblyanthera var. *centralis*
	Scaevola basedowii
	Scaevola depauperata
	Scaevola parvibarbata
	Scaevola parvifolia subsp. *parvifolia*
	Scaevola spinescens
	Velleia glabrata
Gyrostemonaceae	*Codonocarpus cotinifolius*
	Gyrostemon ramulosus
	Gyrostemon tepperi
Haloragaceae	*Haloragis aspera*
	Haloragis gossei
	Haloragis uncatipila
	Myriophyllum verrucosum

Flowering Plants	
Family	Species
Hemerocallidaceae	*Corynotheca licrota*
	Corynotheca micrantha
	Corynotheca micrantha var. *divaricata*
Hydrocharitaceae	*Najas marina* subsp. *armata*
Isoetaceae	*Isoetes muelleri*
Juncaceae	*Juncus acutus* subsp. *acutus* ^
	Juncus kraussii subsp. *australiensis*
	Juncus sp. MacDonnell Ranges (B.G.Thomson 3412)
Juncaginaceae	*Triglochin hexagona* ~
	Triglochin nana
Lamiaceae	*Dicrastylis beveridgei*
	Dicrastylis costelloi
	Dicrastylis gilesii
	Dicrastylis lewellinii
	Newcastelia spodiotricha
	Plectranthus intraterraneus
	Prostanthera althoferi subsp. *longifolia*
	Prostanthera striatiflora
	Salvia verbenaca ^
	Spartothamnella canescens ~
	Spartothamnella teucriiflora
	Teucrium racemosum
Loranthaceae	*Amyema gibberula* var. *gibberula*
	Amyema hilliana *
	Amyema maidenii subsp. *maidenii*
	Amyema miquelii
	Amyema preissii
	Amyema quandang var. *quandang*
	Lysiana exocarpi subsp. *exocarpi*
	Lysiana murrayi
	Lysiana subfalcata *

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Flowering Plants	
Family	Species
Malvaceae	*Abutilon cryptopetalum*
	Abutilon fraseri
	Abutilon hannii subsp. *prostrate*
	Abutilon lepidum
	Abutilon leucopetalum
	Abutilon macrum
	Abutilon malvifolium
	Abutilon otocarpum
	Brachychiton gregorii
	Commersonia magniflora
	Corchorus sidoides subsp. *sidoides*
	Gilesia biniflora ~ *
	Gossypium australe *
	Gossypium sturtianum var. *sturtianum*
	Hannafordia bissillii subsp. *bissillii*
	Hibiscus brachysiphonius
	Hibiscus burtonii
	Hibiscus solanifolius
	Hibiscus sturtii var. *grandiflorus*
	Hibiscus verdcourtii
	Keraudrenia nephrosperma
	Keraudrenia velutina
	Malva parviflora ^ *
	Malva preissiana
	Malvastrum americanum ^
	Melhania oblongifolia
	Sida ammophila
	Sida argillacea
	Sida cunninghamii
	Sida fibulifera
	Sida goniocarpa *
	Sida phaeotricha *
	Sida platycalyx
	Sida rohlenae subsp. *rohlenae*
	Sida sp. Ambalindum (C.R.Dunlop 2080)
	Sida sp. Golden calyces pubescent (G.J.Leach 1966)
	Sida sp. Huckitta (P.K.Latz 12592)

Flowering Plants	
Family	Species
Malvaceae	*Sida* sp. Kathleen Springs (A.C.Beauglehole 26934)
	Sida sp. limestone (D.E.Albrecht 5748)
	Sida sp. Musselbrook (M.B.Thomas+ MRS437)
	Sida sp. Pindan (B.G.Thomson 3398)
	Sida sp. Rabbit Flat (B.J.Carter 626)
	Sida sp. Rainbow Valley (D.E.Albrecht 6601)
	Sida sp. Wakaya Desert (P.K.Latz 11894)
Marsileaceae	*Marsilea drummondii*
	Marsilea exarata
	Marsilea hirsuta
Molluginaceae	*Glinus lotoides*
	Glinus oppositifolius
	Mollugo cerviana
Moraceae	*Ficus brachypoda*
Myrtaceae	*Aluta maisonneuvei* subsp. *maisonneuvei*
	Baeckea polystemonea *
	Callistemon pauciflorus ~
	Corymbia aparrerinja
	Corymbia chippendalei
	Corymbia eremaea
	Corymbia opaca
	Eucalyptus camaldulensis subsp. *arida*
	Eucalyptus camaldulensis subsp. *obtusa*
	Eucalyptus coolabah subsp. *arida*
	Eucalyptus gamophylla
	Eucalyptus gillenii
	Eucalyptus intertexta
	Eucalyptus lucens ~
	Eucalyptus mannensis
	Eucalyptus oxymitra
	Eucalyptus sessilis

Sand Sida (*Sida ammophila*) © Copyright, R. Whyte

Flowering Plants	
Family	Species
Myrtaceae	*Eucalyptus socialis* subsp. *eucentrica*
	Eucalyptus trivalva
	Melaleuca dissitiflora
	Melaleuca glomerata
	Melaleuca trichostachya
	Thryptomene hexandra
Nyctaginaceae	*Boerhavia burbidgeana*
	Boerhavia coccinea
	Boerhavia repleta
	Boerhavia schomburgkiana
	Commicarpus australis ~
Oleaceae	*Jasminum calcareum*
	Jasminum didymum subsp. *lineare*
Oxalidaceae	*Oxalis perennans*
Papaveraceae	*Argemone ochroleuca* subsp. *ochroleuca* ^
Pedaliaceae	*Josephinia eugeniae*
Phrymaceae	*Glossostigma diandrum*
	Peplidium aithocheilum

Flowering Plants	
Family	Species
Phyllanthaceae	*Phyllanthus erwinii*
	Phyllanthus exilis
	Phyllanthus fuernrohrii
	Phyllanthus maderaspatensis
	Phyllanthus minutiflorus *
	Sauropus ramosissimus
	Sauropus rigens ~
	Sauropus trachyspermus
Pittosporaceae	*Pittosporum angustifolium*
Plantaginaceae	*Stemodia florulenta*
	Stemodia viscosa
Poaceae	*Amphipogon caricinus* var. *caricinus*
	Andropogon gayanus ^
	Aristida arida
	Aristida capillifolia *
	Aristida contorta
	Aristida holathera var. *holathera*
	Aristida inaequiglumis
	Aristida latifolia
	Aristida nitidula
	Astrebla pectinata
	Austrostipa aquarii
	Austrostipa nitida
	Avena fatua ^
	Avena sativa ^
	Bothriochloa ewartiana
	Cenchrus ciliaris ^
	Cenchrus echinatus ^
	Cenchrus pennisetiformis ^ *
	Cenchrus setiger ^ *
	Chloris virgata
	Cymbopogon ambiguus
	Cymbopogon obtectus *
	Cynodon dactylon var. *dactylon* ^

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Flowering Plants	
Family	Species
Poaceae	*Dactyloctenium radulans*
	Dichanthium annulatum ^
	Dichanthium sericeum subsp. *humilius*
	Dichanthium sericeum subsp. *sericeum*
	Digitaria ammophila
	Digitaria brownii
	Digitaria ciliaris ^
	Digitaria coenicola
	Echinochloa crus-galli ^
	Enneapogon avenaceus
	Enneapogon cylindricus
	Enneapogon intermedius
	Enneapogon lindleyanus
	Enneapogon oblongus
	Enneapogon polyphyllus
	Enteropogon acicularis
	Enteropogon ramosus
	Eragrostis australasica
	Eragrostis barrelieri ^
	Eragrostis basedowii
	Eragrostis cumingii
	Eragrostis dielsii
	Eragrostis elongata *
	Eragrostis eriopoda
	Eragrostis eriopoda subsp. Hill top (P.K.Latz 11583)
	Eragrostis eriopoda subsp. Red earth (D.J.Nelson 1651)
	Eragrostis eriopoda subsp. Sandy fireweed (P.K.Latz 12908)
	Eragrostis falcata
	Eragrostis kennedyae
	Eragrostis lacunaria
	Eragrostis laniflora
	Eragrostis leptocarpa
	Eragrostis minor ^
	Eragrostis olida
	Eragrostis parviflora

Flowering Plants	
Family	Species
Poaceae	*Eragrostis setifolia*
	Eragrostis sp. Erect spikelets (P.K.Latz 2122)
	Eragrostis sp. Limestone (P.K.Latz 5921)
	Eragrostis trichophora ^
	Eragrostis xerophila
	Eriachne aristidea
	Eriachne benthamii
	Eriachne helmsii
	Eriachne mucronata
	Eriachne ovata
	Eriachne pulchella subsp. *pulchella*
	Eriachne sp. woolly culms (P.K.Latz 10065)
	Eriochloa pseudoacrotricha
	Eulalia aurea
	Iseilema dolichotrichum
	Iseilema eremaeum *
	Iseilema membranaceum *
	Iseilema vaginiflorum
	Leptochloa digitata
	Leptochloa fusca subsp. *fusca*
	Leptochloa fusca subsp. *muelleri*
	Lolium rigidum ^
	Monachather paradoxus
	Neurachne munroi
	Neurachne tenuifolia
	Oxychloris scariosa
	Panicum decompositum var. *decompositum*
	Panicum laevinode *
	Paractaenum novae-hollandiae subsp. *reversum*
	Paractaenum refractum
	Paspalidium basicladum
	Paspalidium clementii
	Paspalidium constrictum
	Paspalidium jubiflorum
	Paspalidium reflexum
	Phragmites australis

Flowering Plants	
Family	Species
Poaceae	*Polypogon monspeliensis* ^
	Setaria dielsii
	Sorghum x *almum* ^
	Sporobolus actinocladus
	Sporobolus australasicus
	Sporobolus blakei
	Sporobolus caroli
	Themeda avenacea
	Themeda triandra
	Thyridolepis mitchelliana
	Thyridolepis xerophila
	Tragus australianus
	Triodia basedowii
	Triodia brizoides
	Triodia melvillei
	Triodia pungens
	Triodia schinzii
	Tripogon loliiformis
	Triraphis mollis
	Triticum aestivum ^
	Urochloa gilesii var. *gilesii* *
	Urochloa piligera
	Urochloa praetervisa
	Yakirra australiensis *
	Zygochloa paradoxa
Polygonaceae	*Acetosa vesicaria* ^
	Comesperma viscidulum ~ *
	Duma florulenta
	Persicaria lapathifolia
	Polygonum plebeium
Portulacaceae	*Anacampseros australiana* *
	Calandrinia balonensis
	Calandrinia eremaea
	Calandrinia pumila
	Calandrinia remota
	Calandrinia reticulata
	Portulaca filifolia

Flowering Plants	
Family	Species
Portulacaceae	*Portulaca oleracea* var. Yuendumu (T.S.Henshall 2868)
Potamogetonaceae	*Potamogeton crispus* ~
Primulaceae	*Samolus eremaeus*
Proteaceae	*Grevillea albiflora*
	Grevillea juncifolia subsp. juncifolia
	Grevillea stenobotrya
	Grevillea striata
	Grevillea wickhamii subsp. *aprica* *
	Hakea divaricata
	Hakea eyreana
	Hakea grammatophylla ~
	Hakea leucoptera subsp. *leucoptera*
	Hakea lorea subsp. *lorea*
Pteridaceae	*Cheilanthes lasiophylla*
	Cheilanthes sieberi subsp. *pseudovellea* *
	Cheilanthes sieberi subsp. *sieberi*
Rhamnaceae	*Stenanthemum centrale* ~
Rubiaceae	*Oldenlandia pterospora*
	Pomax rupestris *
	Psydrax ammophila
	Psydrax latifolia
	Psydrax suaveolens
	Synaptantha tillaeacea var. *hispidula* ~
	Synaptantha tillaeacea var. *tillaeacea*
Ruppiaceae	*Ruppia tuberosa* ~
Santalaceae	*Exocarpos sparteus*
	Santalum acuminatum ~
	Santalum lanceolatum
Sapindaceae	*Alectryon oleifolius* subsp. *elongatus*
	Atalaya hemiglauca
	Dodonaea lanceolata var. *lanceolata*

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Flowering Plants	
Family	Species
Sapindaceae	*Dodonaea microzyga* var. *microzyga* ~
	Dodonaea viscosa subsp. *angustissima*
	Dodonaea viscosa subsp. *mucronata*
Scrophulariaceae	*Eremophila acrida*
	Eremophila battii
	Eremophila duttonii
	Eremophila freelingii
	Eremophila gibsonii
	Eremophila gilesii subsp. *gilesii*
	Eremophila goodwinii subsp. *goodwinii*
	Eremophila latrobei subsp. *glabra*
	Eremophila latrobei subsp. *latrobei*
	Eremophila longifolia
	Eremophila macdonnellii
	Eremophila maculata subsp. *maculata*
	Eremophila obovata
	Eremophila ovata
	Eremophila paisleyi subsp. *glandulosa*
	Eremophila platythamnos subsp. *exotrachys*
	Eremophila sturtii
	Eremophila willsii subsp. *willsii*
	Myoporum montanum
Solanaceae	*Datura ferox* ^
	Datura leichhardtii ^
	Duboisia hopwoodii
	Nicotiana glauca ^
	Nicotiana gossei
	Nicotiana megalosiphon subsp. *sessilifolia*
	Nicotiana occidentalis subsp. *obliqua*
	Nicotiana rosulata subsp. *ingulba*
	Nicotiana simulans
	Nicotiana velutina
	Solanum aridicola

Flowering Plants	
Family	Species
Solanaceae	*Solanum centrale*
	Solanum chenopodinum
	Solanum coactiliferum
	Solanum ferocissimum
	Solanum lithophilum
	Solanum lycopersicum ^
	Solanum nigrum ^
	Solanum orbiculatum subsp. *macrophyllum* *
	Solanum orbiculatum subsp. *orbiculatum*
	Solanum quadriloculatum
	Solanum sturtianum
Tamaricaceae	*Tamarix aphylla* ^
Thymelaeaceae	*Pimelea interioris* ~
	Pimelea trichostachya
Typhaceae	*Typha domingensis*
Urticaceae	*Parietaria debilis*
Verbenaceae	*Duranta erecta*
	Verbena macrostachya ~
Violaceae	*Hybanthus aurantiacus*
Xanthorrhoeaceae	*Xanthorrhoea thorntonii* ~ *
Zygophyllaceae	*Tribulopis angustifolia*
	Tribulus astrocarpus
	Tribulus eichlerianus
	Tribulus sp. long-styled eichlerianus (A.S.George 10666) ~
	Tribulus sp. saline flats (P.K. Latz 4530)
	Tribulus terrestris ^
	Zygophyllum apiculatum
	Zygophyllum crassissimum ~
	Zygophyllum emarginatum
	Zygophyllum eremaeum
	Zygophyllum howittii *
	Zygophyllum prismatothecum
	Zygophyllum simile
	Zygophyllum tesquorum

Liverworts	
Family	Species
Aytoniaceae	*Plagiochasma rupestre* *
Ricciaceae	*Riccia* cf. *sorocarpa* *
	Riccia crinita *
	Riccia inflexa *
	Riccia macrospora *
	Riccia sp. *

Mosses	
Family	Species
Bryaceae	*Bryum* sp. *
Grimmiaceae	*Grimmia laevigata* *
Pottiaceae	*Syntrichia* sp. *
	Syntrichia laevipila *

Near Rock Hole Bore, Chandler Range: Pottiaceae moss (left), *Endocarpon* sp. lichen (centre), and *Xanthoparmelia* sp. lichen (right), V. Stajsic © Copyright, National Herbarium of Victoria

Lichens	
Family	Species
Acarosporaceae	*Acarospora* sp. *
Arthoniaceae	*Arthonia* sp. *
Candelariaceae	*Candelariella xanthostigmoides* *
Cladoniaceae	*Cladia beaugleholei* *
Lecanoraceae	*Lecanora* sp. *
Lecideaceae	*Lecidea sarcogynoides* *
	Lecidea sp. VS 6572 *
	Paraporpidia sp. *
Lichinaceae	*Pyrenopsis* sp. *
	Thyrea sp. *
Parmeliaceae	*Xanthoparmelia aridella* *
	Xanthoparmelia sp. *
Peltulaceae	*Peltula* sp. *
Pertusariaceae	*Pertusaria xanthoplaca* *
Physciaceae	*Amandinea* sp. (D.E.Albrecht 14086 & P.K.Latz) *
	Buellia sp. *
	Hyperphyscia pruinosa *
	Hyperphyscia sp. *
	Hyperphyscia syncolla *
	Physcia sp. *
Psoraceae	*Psora* sp. *
Stereocaulaceae	*Lepraria* sp. *
Teloschistaceae	*Caloplaca* sp. *
Verrucariaceae	*Endocarpon* sp. *

Fungi	
Family	Species
[Subclass Pleosporomycetidae]	*Hysterographium* sp. *

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Appendix B: Threatened Species

Nomenclature and taxonomic concepts used in this report are consistent with the Australian Faunal Directory, Australian Plant Name Index, Australian Plant Census, Checklist of the Lichens of Australia and its Island Territories, AusMoss, and the Catalogue of Australian Liverworts and Hornworts.

Current at March 2015

Fauna

Vertebrates

Mammals			
Family	Species	Common name	Status
Dasyuridae	*Antechinomys laniger*	Kultarr	TPWCA—Near Threatened
Macropodidae	*Petrogale lateralis*	Black-footed Rock-wallaby	EPBC Act—Vulnerable; TPWCA—Near Threatened
Muridae	*Notomys cervinus*	Fawn hopping-mouse	TPWCA—Regionally Extinct in the Northern Territory
Peramelidae	*Isoodon auratus*	Golden Bandicoot	TPWCA—Endangered

Birds			
Family	Species	Common name	Status
Acanthizidae	*Pyrrholaemus brunneus*	Redthroat	TPWCA—Near Threatened
Accipitridae	*Elanus scriptus*	Letter-winged Kite	TPWCA—Near Threatened
Acrocephalidae	***Acrocephalus australis***	Australian Reed Warbler	TPWCA—Near Threatened
Burhinidae	*Burhinus grallarius*	Bush Stone-curlew	TPWCA—Near Threatened
Cacatuidae	***Calyptorhynchus banksii samueli***	Red-tailed Black Cockatoo	TPWCA—Near Threatened
Casuariidae	***Dromaius novaehollandiae***	Emu	TPWCA—Near Threatened
Columbidae	***Phaps histrionica*** *	Flock Bronzewing	TPWCA—Near Threatened
Falconidae	*Falco hypoleucos*	Grey Falcon	TPWCA—Vulnerable
Maluridae	*Amytornis striatus*	Striated Grasswren	TPWCA—Near Threatened
Meliphagidae	*Conopophila whitei*	Grey Honeyeater	TPWCA—Data Deficient
Otididae	*Ardeotis australis*	Australian Bustard	TPWCA—Near Threatened
Psophodidae	*Cinclosoma castanotum*	Chestnut Quail-thrush	TPWCA—Near Threatened
Rallidae	***Porzana fluminea*** *	Australian Spotted Crake	TPWCA—Data Deficient
Scolopacidae	*Calidris ferruginea*	Curlew Sandpiper	TPWCA—Vulnerable
	Calidris melanotos	Pectoral Sandpiper	TPWCA—Data Deficient
	Calidris tenuirostris	Great Knot	TPWCA—Vulnerable

Key

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FA = refers to the *Fisheries Act 1988* (Northern Territory)

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Reptiles			
Family	Species	Common name	Status
Elapidae	*Pseudechis australis*	Mulga Snake	TPWCA—Near Threatened
Pygopodidae	*Delma desmosa*	Banded Delma	TPWCA—Data Deficient
Scincidae	*Liopholis slateri*	Slater's Egernia	EPBC Act—Endangered; TPWCA—Vulnerable
Typhlopidae	*Anilios centralis*	Centralian Blind Snake	TPWCA—Data Deficient

Fishes			
Family	Species	Common name	Status
Atherinidae	*Craterocephalus centralis*	Finke Hardyhead	FA—Near Threatened
Eleotridae	*Mogurnda larapintae*	Desert Mogurnda	FA—Near Threatened
Gobiidae	*Chlamydogobius japalpa*	Finke Goby	FA—Vulnerable

Finke Goby (*Chlamydogobius japalpa*), which is listed as Vulnerable under the Northern Territory *Fisheries Act 1988*, M. Hammer © Copyright, MAGNT

Invertebrates

Butterflies			
Family	Species	Common name	Status
Hesperiidae	*Croitana arenaria* *	Inland Sand-skipper	TPWCA—Data Deficient
Nymphalidae	*Danaus plexippus* *	Monarch, Wanderer	TPWCA—Data Deficient

Snails—Terrestrial			
Family	Species	Common name	Status
Camaenidae	*Basedowena squamulosa* *	–	TPWCA—Vulnerable

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Flora

Flowering plants			
Family	Species	Common name	Status
Amaranthaceae	*Amaranthus macrocarpus* var. *macrocarpus*	Dwarf Amaranth	TPWCA—Data Deficient
Arecaceae	*Livistona mariae*	Palm Valley Livistona	EPBC Act—Vulnerable; TPWCA—Endangered
Asparagaceae	*Lomandra patens*	Irongrass	TPWCA—Near Threatened
Asteraceae	*Cratystylis centralis*	Blue-bush Daisy, Bluebush Daisy	TPWCA—Near Threatened
	Minuria tridens	Minnie Daisy	EPBC Act—Vulnerable; TPWCA—Vulnerable
	Sonchus hydrophilus	Native Sow-thistle	TPWCA—Data Deficient
Boraginaceae	*Heliotropium inexplicitum*	–	TPWCA—Data Deficient
Chenopodiaceae	*Atriplex fissivalvis*	Gibber Saltbush	TPWCA—Near Threatened
	Atriplex quadrivalvata var. *quadrivalvata*	–	TPWCA—Near Threatened
	Dissocarpus biflorus var. *biflorus*	Twin-flower Saltbush	TPWCA—Near Threatened
	Maireana carnosa	Cottony Bluebush	TPWCA—Near Threatened
	Osteocarpum dipterocarpum	–	TPWCA—Data Deficient
	Sclerolaena birchii	Galvanised Burr	TPWCA—Near Threatened
	Sclerolaena longicuspis	–	TPWCA—Near Threatened
	Tecticornia disarticulata	–	TPWCA—Near Threatened
	Tecticornia triandra	Desert Glasswort	TPWCA—Near Threatened
Cyperaceae	*Bolboschoenus caldwellii*	Marsh Club-rush	TPWCA—Endangered
	Isolepis congrua	Slender Club-sedge	TPWCA—Data Deficient
Dilleniaceae	*Hibbertia* sp. Chewings Range (P.K.Latz 10660)	–	TPWCA—Near Threatened
Euphorbiaceae	*Euphorbia sarcostemmoides*	Climbing Caustic	TPWCA—Near Threatened
Fabaceae	*Acacia grasbyi*	Minniritchie	TPWCA—Near Threatened
	Acacia latzii	Latz's Wattle	EPBC Act—Vulnerable; TPWCA—Vulnerable
	Acacia mulganeura	Hilltop Mulga, Milky Mulga	TPWCA—Data Deficient

Flowering plants			
Family	Species	Common name	Status
Fabaceae	*Indigofera* sp. Areyonga (D.J.Parsons 30)	–	TPWCA—Data Deficient
	Senna artemisioides subsp. Kuyunba (B.Pitts 113)	–	TPWCA—Data Deficient
	Senna phyllodinea	Woody Cassia, Silver Cassia	TPWCA—Near Threatened
Geraniaceae	*Erodium cygnorum*	Blue Heronsbill	TPWCA—Data Deficient
Goodeniaceae	*Goodenia havilandii*	Hill Goodenia	TPWCA—Near Threatened
Juncaginaceae	*Triglochin hexagona*	Six-point Arrowgrass	TPWCA—Near Threatened
Lamiaceae	*Spartothamnella canescens*	Red-berried Stick-plant	TPWCA—Near Threatened
Malvaceae	*Gilesia biniflora* *	Western Tarvine	TPWCA—Near Threatened
Myrtaceae	*Callistemon pauciflorus*	Desert Bottlebrush	TPWCA—Near Threatened
	Eucalyptus lucens	Shiny leaved Mallee, Glistening Mallee	TPWCA—Near Threatened
Nyctaginaceae	*Commicarpus australis*	Perennial Tar Vine	TPWCA—Near Threatened
Phyllanthaceae	*Sauropus rigens*	–	TPWCA—Near Threatened
Polygonaceae	*Comesperma viscidulum* *	–	TPWCA—Data Deficient
Potamogetonaceae	*Potamogeton crispus*	Curly Pondweed	TPWCA—Near Threatened
Proteaceae	*Hakea grammatophylla*	–	TPWCA—Near Threatened
Rhamnaceae	*Stenanthemum centrale*	–	TPWCA—Near Threatened
Rubiaceae	*Synaptantha tillaeacea* var. *hispidula*	–	TPWCA—Data Deficient
Ruppiaceae	*Ruppia tuberosa*	Tuberous Seatassel	TPWCA—Near Threatened
Santalaceae	*Santalum acuminatum*	Quandong, Sandalwood, Sweet Quandong	TPWCA—Vulnerable
Sapindaceae	*Dodonaea microzyga* var. *microzyga*	Brilliant Hopbush	TPWCA—Near Threatened
Thymelaeaceae	*Pimelea interioris*	–	TPWCA—Near Threatened
Verbenaceae	*Verbena macrostachya*	–	TPWCA—Data Deficient
Xanthorrhoeaceae	*Xanthorrhoea thorntonii* *	Desert Grass-tree	TPWCA—Near Threatened
Zygophyllaceae	*Tribulus* sp. long-styled eichlerianus (A.S.George 10666)	–	TPWCA—Data Deficient
	Zygophyllum crassissimum	Thick Twinleaf	TPWCA—Near Threatened

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Appendix C: Exotic and Pest Species

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Current at March 2015

Fauna

Vertebrates

Mammals		
Family	Species	Common name
Bovidae	*Bos taurus*	European Cattle
Camelidae	*Camelus dromedarius*	Camel
Canidae	*Vulpes vulpes*	Fox, Red Fox
Equidae	*Equus asinus*	Donkey
	Equus caballus	Horse, Brumby
Felidae	*Felis catus*	Cat
Leporidae	*Oryctolagus cuniculus*	Rabbit
Muridae	*Mus musculus*	House Mouse

Camels (*Camelus dromedarius*) are one of the main pest species in the area, J. Archibald © Copyright, MAGNT

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Invertebrates

Bees		
Family	Species	Common name
Apidae	*Apis mellifera* *	European Honey Bee

True Bugs		
Family	Species	Common name
Coreidae	*Mictis profana*	Crusader Bug
Lygaeidae	*Nysius vinitor* *	Rutherglen Bug
Miridae	*Creontiades dilutus*	Green Mirid
Pentatomidae	*Kapunda troughtoni*	Variable Shield Bug

Spiders		
Family	Species	Common name
Pholcidae	*Crossopriza lyoni* *	Tailed Daddy Longlegs

Flora

Flowering Plants		
Family	Species	Common name
Asteraceae	*Bidens bipinnata*	Spanish Needles, Beggar's Ticks, Cuckolds
	Carthamus lanatus	Saffron Thistle
	Conyza bonariensis	Cobbler's Pegs
	Lactuca serriola	Prickly Lettuce
	Sonchus oleraceus	Common Sowthistle, Annual Sowthistle
Boraginaceae	*Heliotropium supinum*	Spreading Heliotrope, Prostrate Heliotrope, Creeping Heliotrope
Brassicaceae	*Brassica tournefortii*	Wild Turnip, Mediterranean Turnip
Cactaceae	*Opuntia stricta* *	Prickly Pear
Cucurbitaceae	*Citrullus colocynthis*	Colocynth
	Citrullus lanatus	Wild Melon, Bitter Melon, Camel melon
	Cucumis myriocarpus	Paddy Melon, Prickly Paddy Melon
Euphorbiaceae	*Ricinus communis*	Castor Oil Plant

Introduced European Honey Bee (*Apis mellifera*) © Copyright, R. Whyte

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Flowering Plants		
Family	Species	Common name
Fabaceae	*Caesalpinia bonduc* *	Grey-nicker
	Trifolium arvense	Haresfoot Clover
	Vachellia farnesiana var. *farnesiana*	Spiky Wattle, Sweet Minosa, Mimosa Bush
Juncaceae	*Juncus acutus* subsp. *acutus*	Sharp Rush
Lamiaceae	*Salvia verbenaca*	Wild Sage
Malvaceae	*Malva parviflora* *	Mallow, Small-flowered Mallow
	Malvastrum americanum	Spiked Malvastrum
Papaveraceae	*Argemone ochroleuca* subsp. *ochroleuca*	Prickly Poppy, Mexican Poppy
Poaceae	*Andropogon gayanus*	Gamba Grass
	Avena fatua	Wild Oats
	Avena sativa	Cultivated Oats, Oats
	Cenchrus ciliaris	Buffel Grass
	Cenchrus echinatus	Mossman River Grass, Burr Grass
	Cenchrus pennisetiformis *	White Buffel Grass
	Cenchrus setiger *	Birdwood Grass
	Cynodon dactylon var. *dactylon*	Couch
	Dichanthium annulatum	Sheda Grass
	Digitaria ciliaris	Summer Grass
	Echinochloa crus galli	Barnyard Grass, Cockspur Grass
	Eragrostis barrelieri	Pitted Lovegrass
	Eragrostis minor	Small Stinkgrass
	Eragrostis trichophora	Hairyflower Lovegrass
	Lolium rigidum	Annual Ryegrass, Wimmera Ryegrass
	Polypogon monspeliensis	Annual Beardgrass
	Sorghum almum	Columbus Grass
	Triticum aestivum	Wheat
Polygonaceae	*Acetosa vesicaria*	Rosy Dock, Bladder Dock
Solanaceae	*Datura ferox*	Fierce Thornapple, False Castor Oil, Longspurred Thornapple, Longspine Thornapple
	Datura leichhardtii	Native Thornapple
	Nicotiana glauca	Tree Tobacco
	Solanum lycopersicum	Tomato
	Solanum nigrum	Nightshade, Black Berry Nightshade
Tamaricaceae	*Tamarix aphylla*	Athel Tree
Zygophyllaceae	*Tribulus terrestris*	Bindii, Cathead, Caltrop

Notes

Reed bed habitat at Running Waters, home of the secretive Australian Reed-Warbler (*Acrocephalus australis*) and other water birds, J. Archibald © Copyright, MAGNT

Glossary

A

Aeolian

Relating to or arising from the action of the wind.

C

Corticolous

Growing or living on the bark of trees or shrubs.

Cryptic species (cryptospecies)

Species that are physically similar but reproductively isolated from each other.

Cryptogam

A plant that reproduces by spores, without flowers or seeds. Includes bryophytes (hornworts, liverworts, mosses), lichens, fungi, slime moulds and algae. The term as used here does not pertain to ferns and fern allies as is sometimes part of the definition used by some authors.

H

Herpetofauna

The reptiles and amphibians of a particular region, habitat, or geological period.

Hyporheic zone

The region below and alongside a stream bed where groundwater and surface water mix in the gaps within the sediment.

L

Lignicolous

Growing or living on or in wood.

M

Morphospecies

A group of individuals considered to belong to the same species on the grounds of morphology (physical features) alone.

P

Putative new species

A species that has been recognised by an expert as never having been named or described in the scientific literature. Note that specimens may already be in museum or herbarium collections.

R

Range extension

Increase in the known distribution or area of occurrence of a species.

S

Saxicolous

Growing on or living among rocks.

Stygofauna

Animals that live in underground water, including crustaceans, worms, snails, insects, other invertebrate groups, and in Australia a blind fish and a newt.

T

Taxon (plural taxa)

A member of any particular taxonomic group, e.g. a species, genus, family.

Taxonomy

The categorisation and naming of species.
The science of identifying and naming species, as well as grouping them based on their relatedness.

Terricolous

Living on or in the ground.

Type locality

The location where the holotype (type specimen) was originally found.

Type specimen (Holotype)

The specimen, or each of a set of specimens, on which the description and name of a new species is based.

U

Undescribed taxon

A taxon (usually a species) that has not yet been formally described or named.

ISBN 978 0 642 56885 4

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PUBLISHER ABRS, Canberra
EDITOR ABRS
LAYOUT Looking Glass Press
DESIGN TEMPLATE ABRS
PRINTER Instant Colour Press

All publications are available online at:

www.bushblitz.org.au

Contributors

Bush Blitz is coordinated by the Australian Biological Resources Study (ABRS), which is part of the Australian Government Department of the Environment. The program is a partnership between the Australian Government, BHP Billiton and Earthwatch Australia.

Research agencies involved in this Bush Blitz were the Museum and Art Gallery of the Northern Territory, Northern Territory Herbarium, South Australian Museum, Western Australian Museum, National Herbarium of Victoria, University of Adelaide, University of New South Wales, Australian National Botanic Gardens, Aquagreen and EcOz Environmental Services.

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FRONT COVER The Tree Dtella (*Gehyra variegata*) is one of Australia's most abundant and widespread gecko species
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BIO348.0914

BushBlitz
SPECIES DISCOVERY PROGRAM

Bush Blitz survey report

Henbury Station Northern Territory + 12–24 May 2013

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