Outstanding Terrestrial Vertebrate Faunal Diversity in the Greater Blue Mountains World Heritage Area, New South Wales

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We have compiled a comprehensive account of the native terrestrial vertebrate fauna of the Greater Blue Mountains World Heritage Area. A total of 432 species has been reliably recorded within the area since European settlement, including 68 mammal, 254 bird, 74 reptile and 36 frog species. At least five species are represented by more than one subspecies. There have been losses: one mammal species is now totally extinct and eight others appear to be extinct in the World Heritage Area. Seventy-three species are currently listed as threatened under NSW and Commonwealth legislation, including 28 mammal, 34 bird, 4 reptile and 7 frog species. It is still a rich and diverse fauna of international significance, but it is a fauna under threat, a situation made worse by the bushfires of 2019-20, which burnt a globally unprecedented proportion of Australia's temperate forests, including 75% of the World Heritage Area. There is much to be done to support the recovery of the region's biodiversity after the fires. This should include an increase in land management staff and resources and the establishment of a systematic, comprehensive, long-term biodiversity monitoring program as a basis for effective adaptive management practices in these uncertain times.

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KEYWORDS: birds, climate change, drought, fire, frogs, mammals, reptiles, threatened species.

INTRODUCTION

The Greater Blue Mountains World Heritage Area in the dramatic sandstone ranges west of Sydney covers over one million hectares or one third of the area of Belgium. It extends some 200 km south from the Hunter Valley to the Southern Tablelands and 35-100 km west from the Nepean River to the top of the Great Dividing Range (Figure 1). It is within the traditional lands of the Dakinjung, Darug, Dharawal, Gundgungurra, Wanaruah and Wiradjuri Aboriginal nations and encompasses eight conservation reserves: Blue Mountains, Gardens of Stone, Kanangra-Boyd, Nattai, Thirlmere Lakes and Yengo National Parks and Jenolan Karst Conservation Reserve (NSW National Parks and Wildlife Service 2009).

In 2000, the Greater Blue Mountains was granted World Heritage status in recognition of its outstanding natural values. Well known values

include the rich native flora with around 1500 plant species (NSW National Parks and Wildlife Service 2009), the diversity of eucalypt tree species (the term 'eucalypt' refers to the closely related genera Eucalyptus, Angophora and Corymbia of the family Myrtaceae), with 98 species currently known in the area (Smith et al. 2018), and iconic plant species such as the critically endangered Wollemi Pine Wollemia nobilis, the Pink Flannel Flower Actinotus forsythii which appears after fires, and the more common Waratah Telopea speciosissima and Mountain Devil Lambertia formosa. The diversity of the extensive eucalypt forest and woodland communities is also renowned, though the diversity of more restricted vegetation communities, including rainforests, heaths and wetlands, is perhaps less appreciated.

The World Heritage listed values also include the fauna but the contribution that the fauna makes to the area's biodiversity has generally received less

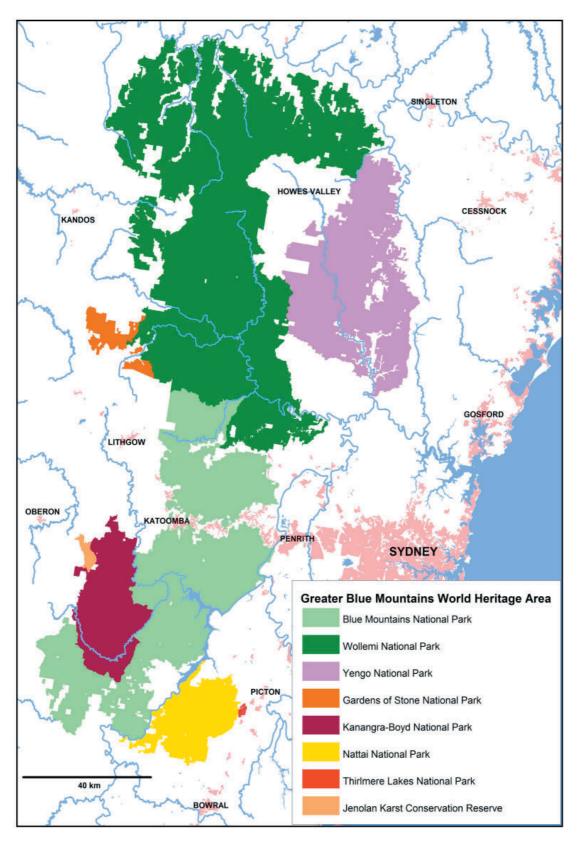


Figure 1. Map of Greater Blue Mountains World Heritage Area

attention than the flora. The fauna includes vertebrate and invertebrate species, both terrestrial and aquatic. Here, we document the native terrestrial vertebrate fauna of the Greater Blue Mountains World Heritage Area to demonstrate its diversity and to show that there is still much to be learnt. A more detailed account of the fauna is provided in Smith et al. (2019).

STUDY AREA

The World Heritage Area is a predominantly natural area. Vast areas of wilderness, declared under the NSW Wilderness Act (1987), in Blue Mountains, Kanangra-Boyd, Nattai, Wollemi and Yengo National Parks, constitute almost two-thirds of the area.

Elevation ranges from near sea level along the Nepean and Colo Rivers in the east to over 1000 m along the Great Dividing Range in the west. The climate becomes progressively wetter and colder with increasing elevation. Lower elevations experience mild temperate conditions but in the north-east, on the fringes of the Hunter Valley, conditions are warm temperate. At higher elevations, the conditions become cool temperate. The highest elevations, in Kanangra-Boyd National Park, are subject to frequent fogs and frosts and occasional snowfalls, and the climate here is alpine (Smith et al. 2019).

Most of the World Heritage Area is within the Sydney Basin Bioregion and overlies Triassic sandstone rocks. Small shale remnants, basalt-capped mountains and patches of alluvium are scattered throughout the sandstone. The south-west of the World Heritage Area, in Jenolan Caves Karst Conservation Reserve and Kanangra-Boyd and south-western Blue Mountains National Parks, lies beyond the Sydney Basin Bioregion within the South Eastern Highlands Bioregion. Here, the underlying rocks are older and are part of the Lachlan Fold Belt. Over the eons, extensive folding and faulting has produced a mixture of sedimentary rocks such as sandstone, siltstone and limestone, and metamorphic rocks such as quartzite, slate and phyllite, interspersed with intrusions of igneous rocks. Older rocks are also evident at the central western edge of the World Heritage Area in Gardens of Stone National Park. This park is at the junction of three bioregions - Sydney Basin, South Eastern Highlands and NSW South Western Slopes - and Triassic and Permian Sydney Basin rocks merge with sedimentary and metamorphic rocks of Devonian age (Smith et al. 2019, Washington and Wray 2015).

The Greater Blue Mountains region consists of uplifted plateaus, which dip gently from west to east.

A series of faults and steep monoclines, known as the Lapstone Monocline, separates the 'mountains' from the Cumberland Plain to the east. The west of the area straddles the Great Dividing Range, which divides the catchments of east and west flowing streams. Over millennia, the streams have eroded and dissected the plateaus to form a maze of ridges incised by alluvial valleys with sandy floors, gorges, canyons, sandstone cliffs and outcrops, and steep talus slopes. The area's distinctive 'gardens of stone' consist of rock turrets known as 'pagodas', together with cliffs, slot canyons and flat-topped mesas. In the south-west of the area, ancient bands of limestone derived from coral have weathered to form caves such as the spectacular Jenolan Caves. Across most of the World Heritage Area, the soils are sandstone based and are sandy, shallow, well-drained and infertile. Patches of moderate to high fertility soils are associated with occurrences of shale, volcanic rocks and alluvium. The soils on the Permian rocks of the deeper valleys and lower slopes below the cliffs are also relatively fertile (Smith et al. 2019, Washington and Wray 2015).

The World Heritage Area is within one of the most bushfire prone areas of Australia (Hammill and Tasker 2010). Its plants and animals have been subject to earlier Aboriginal burning practices, more recent European fire management and, over millions of years, recurring wildfires. Fire has been an important factor in the evolution of the local fauna. Across the area, differing combinations of fire frequency, intensity, season and extent, have contributed to the diversity of fauna habitats.

The varied elevations, climates, geologies, landforms, soils and fire histories have shaped the evolution of a mosaic of different types of eucalypt forest and woodland, interspersed with pockets of other habitats where eucalypts are absent or few, including rainforest, heath, swamp, open wetlands, watercourses, cliffs and other rock formations. These diverse habitats provide many opportunities for fauna

METHODS

In order to determine which native terrestrial vertebrate fauna species have been recorded in the Greater Blue Mountains World Heritage Area since European settlement we searched the following sources of information: writings of early explorers, travellers and guides; online wildlife databases including NSW BioNet Atlas, Atlas of Living Australia, eBird Australia, Online Zoological

Collections of Australian Museums and National Flying-fox Monitoring Program; NSW National Parks and Wildlife fauna surveys; wildlife carer records; published and unpublished reports; bird and frog club newsletters; sub-fossil records from Jenolan Caves; and naturalists' records including our own and others. A full list of sources is included in Smith et al. (2019). We viewed all records with caution. Records that could not be placed within the boundaries of the Greater Blue Mountains World Heritage Area or where identifications were in doubt were not included. All records were collated in a checklist indicating in which of the eight constituent reserves of the World Heritage Area each species has been recorded. Where known, records for subspecies are indicated. For species with no recent (2000 or later) records in a reserve, the date of the last record in that reserve was noted.

For mammals, species nomenclature follows Van Dyck et al. (2013) except for the genus *Mormopterus*, which follows Reardon et al. (2014); subspecies follow Burbidge et al. (2014). For birds, scientific names follow Birdlife Australia (2018) and common names follow Menkhorst et al. (2017). For frogs and reptiles, species nomenclature follows Cogger (2014).

RESULTS

We found a total of 432 native terrestrial vertebrate fauna species that have been reliably recorded within the Greater Blue Mountains World Heritage Area since European settlement (Appendix 1). These include 68 mammal, 254 bird, 74 reptile and 36 frog species. Five species are represented by more than one subspecies: Striated Pardalote Pardalotus striatus, Australian Magpie Gymnorhina tibicen, Eastern Yellow Robin Eopsaltria australis, Silvereye Zosterops lateralis and Eastern Banjo Frog Limnodynastes dumerilii.

The 68 mammals include representatives of 21 families and all three evolutionary lines, monotremes, marsupials and placentals. Two of only three surviving species of monotremes—the Platypus *Ornithorhynchus anatinus* and Short-beaked Echidna *Tachyglossus aculeatus*—inhabit the World Heritage Area. The marsupials are represented by 29 species, including carnivorous quolls, insectivorous antechinus and dunnarts, omnivorous bandicoots, and herbivorous gliders, possums, wombats, koalas, kangaroos and wallabies. The placentals, which evolved in the northern hemisphere and are relatively recent arrivals to the Australian continent, are represented by a surprisingly high number of native species. The 37

native placentals in the area outnumber the marsupials and monotremes, and comprise nine rodents, 27 bats and the Dingo *Canis lupus dingo*.

The 254 birds number around one third of all Australian bird species (747 breeding residents or regular migrants: Menkhorst et al. 2017). Sixty-one bird families are represented in the area, with the honeyeater family (family Meliphagidae) the most numerous with 29 species. Parrots and cockatoos (families Psittaculidae and Cacatuidae) with 18 species are also prominent.

The 74 reptiles are likewise diverse and include one freshwater turtle (family Chelidae), 51 lizards including 5 dragon lizards (family Agamidae), 5 geckos (families Carphodactylidae and Diplodactylidae), 3 snake-lizards (family Pygopodidae), 35 skinks (family Scincidae) and 3 goannas (family Varanidae), and 22 snakes including 1 python (family Boidae), 2 tree snakes (family Pygopidae), 16 front-fanged snakes (family Elapidae) and 3 blind snakes (family Typhlopidae). Wollemi National Park, with 67 reptile species, and Blue Mountains National Park, with 57 species, support particularly rich reptilian faunas.

The 36 frogs include 18 tree frogs (family Hylidae), 10 southern ground frogs (family Myobatrachidae) and 8 limnodynastid ground frogs (family Limnodynastidae). The frogs are most abundant and diverse at warmer lower elevations. Wollemi National Park boasts 30 frog species and Blue Mountains National Park 25 species, but only 12 species have been recorded in Jenolan Karst Conservation Reserve and 16 species in Kanangra-Boyd National Park. Five species – Fletcher's Frog Lechriodus fletcheri, Sudell's Frog Neobatrachus sudelli, Haswell's Frog Paracrinia haswelli, Tyler's Toadlet Litoria tyleri and Green and Golden Bellfrog Litoria aurea – have only been recorded once in the World Heritage Area.

Seventy-three terrestrial vertebrate fauna species in the World Heritage Area, including 28 mammal, 34 bird, 4 reptile and 7 frog species, are currently listed as threatened under the NSW Biodiversity Conservation Commonwealth Environment 2016 and Protection and Biodiversity Conservation Act 1999 (Appendix 1). Recently listed species include the Dusky Woodswallow Artamus cyanopterus (listed in 2016), Greater Glider Petauroides volans (2016) and White-throated Needletail Hirundapus caudacutus (2019). Twelve bird species are protected under international migratory bird agreements including the Bonn Convention, China-Australia Migratory Bird Agreement, Japan-Australia Migratory Bird Agreement and Republic of Korea-Australia Migratory Bird Agreement (Appendix 1).

DISCUSSION

The 432 native terrestrial vertebrate species recorded in the Greater Blue Mountains World Heritage Area since European settlement are a rich and diverse fauna of international significance. The native fish and thousands of invertebrate species, many only poorly known, add to this remarkable faunal diversity.

There is still work to be done to achieve a complete description of the fauna. The identities of some species in the area need to be clarified. The Feathertail Glider Acrobates pygmaeus/frontalis (formal distinction of the two species not yet published; Van Dyck et al. 2013) and Mountain Brushtail Possum Trichosurus caninus/cunninghami (Lindenmayer et al. 2002) have each recently been divided into two separate species. In both cases, the two species cannot be readily distinguished unless examined in the hand. Both Feathertail Gliders and both Mountain Brushtail Possums may inhabit the World Heritage Area, but this has not yet been confirmed. We identified five species represented by more than one subspecies. There are likely to be more such species as information regarding subspecies was often lacking. For example, the Common Ringtail Possum Pseudocheirus peregrinus, which is a familiar local species, has not been identified to subspecies level in the available records. Two different subspecies may be present in the World Heritage Area. Sadly, the identity of the species of bettongs chased by local children in the early 1800s will probably never be known. Three different species were recorded historically in the vicinity of the World Heritage Area but records within the World Heritage Area are insufficient to identify which species were present and how many. All three species are now locally extinct.

The status of a number of species within the area requires further investigation. For example, the continued presence of the Brush-tailed Phascogale *Phascogale tapoatafa* in the World Heritage Area needs to be verified. This species was widespread in the past but the only recent confirmed records (2003 and an undated record) have come from what appears to be a small, isolated population at Jenolan Caves. An unconfirmed sighting there in late 2019 (A. Musser and J. Wilkinson pers. comm.) suggests that this population still survives. Other examples are three threatened cave-breeding microbats, the Eastern Bent-winged Bat *Miniopterus oraniae*, Large-eared Pied Bat *Chalinolobus dwyeri* and Eastern Cave Bat *Vespadelus troughtoni*, which apparently breed in the

World Heritage Area but their local maternity sites are yet to be located.

The number of bird species recorded far outnumbers the numbers of mammals, reptiles and frogs. The abundance of honeyeaters (29 species) mirrors the abundance of nectar-rich flowers. Winter-flowering banksias - Heath-leaved Banksia Banksia ericifolia, Hairpin Banksias B. spinulosa and B. cunninghamii, and Silver Banksia B. marginata - attract increased numbers of Yellowfaced Honeyeaters Caligavis chrysops, Whitenaped Honeyeaters Melithreptus lunatus and other honeyeaters into the area. In contrast to nectar, insects are scarce over the cold winter months and many insect-eating birds, including the Rufous Whistler Pachycephala rufiventris, Black-faced Monarch Monarcha melanopsis, Leaden Flycatcher Myiagra rubecula, Satin Flycatcher M. cyanoleuca and Rufous Fantail Rhipidura rufifrons, migrate to Queensland and New Guinea. Their absence means that fewer species of birds are present in winter but, because of the huge influx of honeyeaters, bird numbers are greatest in winter (Smith and Smith 2017).

Some characteristic birds of the World Heritage Area are ones associated with higher elevation colder climates. The Gang-gang Cockatoo Callocephalon fimbriatum, Flame Robin Petroica phoenicea, Satin Flycatcher, Crescent Honeyeater Phylidonyris pyrrhopterus and Grey Currawong Strepera versicolor are 'mountains' birds rarely encountered in the adjacent coastal lowlands around Sydney. Worryingly, there are indications that these birds of colder climes may now be declining within the area as a consequence of climate change. Another characteristic bird is the cave-nesting Rockwarbler Origma solitaria, the only bird species endemic to mainland New South Wales. The Rockwarbler is essentially restricted to the Sydney Basin and is a moderately common breeding resident in the World Heritage Area, occurring in all eight reserves (Smith et al. 2019).

We could find no recent (this century) records for 25 species in the area (9 mammals, 8 birds, 3 reptiles and 5 frogs). Other species have been recorded recently but have suffered range contractions or population declines. The fauna includes 73 species currently listed as threatened under NSW and Commonwealth legislation. These include almost half of the mammals (28 species). One species, the White-footed Rabbit-rat *Conilurus albipes*, is now totally extinct, and eight other species – Eastern Quoll *Dasyurus viverrinus*, Southern Brown Bandicoot *Isoodon obesulus*, at least one bettong *Bettongia* species, Long-nosed Potoroo *Potorous tridactylis*, Broad-toothed Rat *Mastocomys*

fuscus, Plains Mouse Pseudomys australis, Smoky Mouse P. fumeus and Hastings River Mouse P. oralis - appear to be extinct in the World Heritage Area but still survive elsewhere in Australia. Apart from the Eastern Quoll, the only confirmed records of these nine species since European settlement are skeletal remains in owl pellets deposited in Nettle Cave in Jenolan Karst Conservation Reserve (Morris et al. 1997). Across Australia, small and mediumsized, ground-dwelling mammals have been the species most prone to extinction or severe decline since European settlement. In keeping with this general pattern, over half the native rodent species recorded in the World Heritage Area have become locally or totally extinct since European settlement. The causes are poorly understood and it is not always appreciated that even in extensive uncleared tablelands forests like the World Heritage Area, the mammal fauna has suffered many losses. The iconic Greater Glider has declined more recently, especially at lower elevations. Its decline appears to be related to increasing temperatures (Smith and Smith 2018), and the unfolding impacts of rapid climate change are a matter of concern for all fauna.

Threatened birds include the critically endangered Regent Honeyeater Anthochaera phrygia, which sits on the brink of extinction, as well as the Gang-gang Cockatoo, Flame Robin Petroica phoenica, Scarlet Robin Petroica multicolor and Dusky Woodswallow, which were all considered moderately common as recently as the 1980s (Smith and Smith 1990). There are, however, also examples (though a lesser number) of bird species that have increased. Since the 1980s, the Sulphur-crested Cockatoo Cacatua galerita, Brown Cuckoo-Dove Macropygia phasianella, Bell Miner Manorina melanophrys, and even the threatened Sooty Owl Tyto tenebricosa and Powerful Owl Ninox strenua, have increased markedly in the area.

The threatened reptiles include the endangered Blue Mountains Swamp Skink *Eulamprus leuraensis*, Heath Monitor *Varanus rosenbergi*, Broad-headed Snake *Hoplocephalus bungaroides* and Stephens's Banded Snake *Hoplocephalus stephensii*. The Blue Mountains Swamp Skink is found only in the World Heritage Area and adjacent lands.

A few frogs, such as the Common Eastern Froglet (*Crinia signifera*), Brown-striped Frog (*Limnodynastes peronii*) and Peron's Tree Frog (*Litoria peronii*), have increased in the area since European settlement. Many others have declined and seven frogs in the World Heritage Area are threatened species. A major cause of frog declines in Australia and worldwide is an infectious chytrid skin fungus

(NSW Scientific Committee 2003). This disease has spread since the 1970s and has particularly affected frogs in montane rainforests, where the cooler conditions best suit the fungus. This fungus is present in the World Heritage Area and the six species most closely associated with rainforest and wet sclerophyll forest – Tusked Frog Adelotus brevis, Fletcher's Frog, Stuttering Frog Mixophyes balbus, Great Barred Frog M. fasciolatus, Giant Barred Frog M. iteratus and Red-eyed Tree Frog Litoria chloris - are all now rare in the area. Many frog species have suffered range contractions, especially at higher elevations. Four species formerly known from Jenolan Karst Conservation Reserve, and five species known from Kanangra-Boyd National Park, have not been recorded in those reserves this century. Other species, such as the Brown Toadlet Pseudophryne bibronii, Green and Golden Bellfrog Litoria aurea and Green Tree Frog L. caerulea, have declined at lower elevations. The chytrid fungus is not the only threat to frogs.

A dearth of recent records for some species that are not yet recognised as threatened, such as the Dusky Antechinus *Antechinus swainsonii*, Rose Robin *Petroica rosea* and Pink-tongued Lizard *Cyclodomorphus gerrardii*, suggest that they too may be declining (Smith et al. 2019).

An extraordinarily high number of the fauna species are at or near the edge of their range in the Greater Blue Mountains World Heritage Area: one third (20 species) of the mammals, a tenth (29 species not including vagrant species) of the birds, half (37 species) of the reptiles and almost threequarters (25 species) of the frogs. A few species, such as the Southern Water Skink Eulamprus tympanum and Fletcher's Frog, occur as isolated populations well away from other populations outside the World Heritage Area. Populations at the edge of a species' range or isolated from other populations are likely to be genetically distinct and important for maintaining the genetic diversity of the species. Genetic diversity will be crucial as species face the increasing challenges of surviving and adapting to climate change.

The faunal diversity of the World Heritage Area is a result of a number of factors working together: the vast area of the World Heritage Area (over one million hectares); the extensive tracts of wilderness (two thirds of the area is declared wilderness); the diverse fauna habitats in close proximity which reflect varied elevations, microclimates, geologies, soils, topographies and fire histories; and the presence of remnant native vegetation in surrounding more fertile lands. Faunal diversity is also enhanced by the location of the World Heritage Area at the convergence of moist coastal areas to the east, dry western slopes, cold

southern tablelands and warm northern sub-tropics. Fauna from these different surrounding areas come together in the World Heritage Area and combined with wide-ranging species and a few local specialists, notably the Blue Mountains Swamp Skink, produce a rich fauna.

In October 2019 we published a book, Native Fauna of the Greater Blue Mountains World Heritage Area (Smith et al. 2019), in which we concluded that there was much to celebrate in 2020 on the 20th anniversary of the Greater Blue Mountains World Heritage Area listing on 29th November 2000. Since publication, bushfires over the 2019-20 spring and summer have burnt enormous swathes of forested country in south-eastern Australia. These were the largest fires recorded in temperate Australian forests since European settlement. They burnt 21% of Australia's temperate forests, which is a globally unprecedented percentage burnt for any continental forest biome in a single fire season (Boer et al. 2020). The unusual scale of the fires has been attributed to extreme drought conditions and high temperatures drying out fire fuels to an extraordinary degree and also compromising the normal role of damp gullies and wetter vegetation types in impeding the spread of fire across the landscape (Nolan et al. 2020). The fires are an indication that the more flammable future predicted under climate change (Bradstock 2010, Clarke and Evans 2019) has arrived earlier than anticipated (Boer et al. 2020).

The Greater Blue Mountains World Heritage Area was one of the areas worst affected by the fires. About 75% of the area was burnt, based on the Google Earth Engine Burnt Area Map for 3 February 2020, taking account of unburnt areas within the fire boundary (Roff and Aravena 2020). However, fire intensity was variable, with 12% of the area severely burnt (vegetation canopy fully affected), 35% moderately burnt (canopy partially affected) and 28% lightly burnt (understorey burnt but canopy unburnt).

There is still much to celebrate on this 20th anniversary of World Heritage listing, but the impacts of rapid, unabated climate change - drought, record high temperatures and consequent devastating fires - mean there is now also much to be done to support the recovery of the region's biodiversity after the fires. This should include an increase in land management staff and resources and the establishment of a systematic, comprehensive, long-term biodiversity monitoring program as a basis for effective adaptive management practices in these uncertain times. All fauna species will be diminished in the area and valuable genetic diversity has been lost as a consequence of the unprecedented wildfires. Many

species will be threatened locally, some of which may be locally extinct. Additional species may now also be threatened at state or national level. Unless there is community and political will to value and work to restore the biodiversity of the Greater Blue Mountains, the future of the area's native terrestrial fauna is bleak and we will have failed both the fauna and future generations.

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Sugar Glider (Petaurus breviceps)



Crimson Rosella (Platycercus elegans)

Appendix 1. Checklist of the Native Fauna of the Greater Blue Mountains World Heritage Area

Status in NSW and Commonwealth legislation: X = extinct/presumed extinct, C = critically endangered, E = endangered, V = vulnerable, M = migratory species protected by international agreements (b = Bonn Convention, c = China-Australia Migratory Bird Agreement, j = Japan-Australia Migratory Bird Agreement, k = Republic of Korea-Australia Migratory Bird Agreement).

GBMWHA reserves: BM = Blue Mountains National Park, GOS = Gardens of Stone National Park, J = Jenolan Karst Conservation Reserve, KB = Kanangra-Boyd National Park, N = Nattai National Park, TL = Thirlmere Lakes National Park, W = Wollemi National Park, Y = Yengo National Park.

Dates in the table are the last records for each reserve, rec = recent records (2000 or later), und = undated records, ext = probably extinct in WHA, < = before. Mammal records from owl deposits at Jenolan Caves are included if the material dates from after European settlement.

Common name	Scientific name	Sta	atus				Reco	rds			
		NSW	Com	BM	GOS	J	KB	N	TL	W	Y
MAMMALS											
Platypus	Ornithorhynchus anatinus			rec	rec	rec	rec	rec		rec	
Short-beaked Echidna	Tachyglossus aculeatus			rec	rec	rec	rec	rec		rec	rec
Agile Antechinus	Antechinus agilis			1986		rec					
Yellow-footed Antechinus	Antechinus flavipes			rec	rec	und				rec	
Brown Antechinus	Antechinus stuartii			rec	rec	rec	rec	rec	1956	rec	rec
Dusky Antechinus	Antechinus swainsonii			rec		1991	rec			rec	rec
Spotted-tailed Quoll	Dasyurus maculatus	V	Е	rec		rec	rec	rec		rec	rec
Eastern Quoll	Dasyurus viverrinus	E	C			ext					
Brush-tailed Phascogale	Phascogale tapoatafa	V				rec					und
Common Dunnart	Sminthopsis murina			rec	rec	rec	1998	rec		rec	rec
Northern Brown Bandicoot	Isoodon macrourus									rec	
Southern Brown Bandicoot	Isoodon obesulus	E	Е			ext					
Long-nosed Bandicoot	Perameles nasuta			rec	rec	und				rec	rec
Koala	Phascolarctos cinereus	V	V	rec	rec	rec	rec	rec		rec	rec
Common Wombat	Vombatus ursinus			rec	rec	rec	rec	rec	rec	rec	rec
Eastern Pygmy-possum	Cercartetus nanus	V		rec		und		rec		rec	
Yellow-bellied Glider	Petaurus australis	V		rec	rec	rec	rec	rec		rec	rec
Sugar Glider	Petaurus breviceps			rec	rec	rec	rec	rec	rec	rec	rec
Squirrel Glider	Petaurus norfolcensis	V		rec	rec	und		rec		rec	rec
Greater Glider	Petauroides volans		V	rec	rec	rec	rec	rec	rec	rec	rec
Common Ringtail Possum	Pseudocheirus peregrinus			rec	rec	rec	rec	rec	rec	rec	rec
Feathertail Glider	Acrobates pygmaeus/frontalis			rec	rec	rec	rec	rec		rec	rec
Short-eared/Mountain Brushtail Possum	Trichosurus caninus/ cunninghami			rec			rec			rec	
Common Brushtail Possum	Trichosurus vulpecula			rec	rec	rec	rec	rec	rec	rec	rec
Unidentified bettong species	Bettongia species	X	X			ext					
Long-nosed Potoroo	Potorous tridactylus	V	V			ext					
Eastern Grey Kangaroo	Macropus giganteus			rec	rec	rec	rec	rec	rec	rec	rec
Common Wallaroo	Macropus robustus			rec	rec	rec	rec	rec	rec	rec	rec
Red-necked Wallaby	Macropus rufogriseus			rec	rec	rec	rec	rec		rec	rec
Brush-tailed Rock-wallaby	Petrogale penicillata	Е	V	rec		rec	1989	rec		rec	rec
Swamp Wallaby	Wallabia bicolor			rec	rec	rec	rec	rec	rec	rec	rec
Black Flying-fox	Pteropus alecto			rec							
Grey-headed Flying-fox	Pteropus poliocephalus	V	V	rec		rec				rec	rec
Little Red Flying-fox	Pteropus scapulatus									rec	
Eastern Horseshoe Bat	Rhinolophus megaphyllus			rec	rec	rec	rec	rec		rec	rec
Yellow-bellied Sheath-tailed Bat	Saccolaimus flaviventris	V		rec	rec					rec	
White-striped Free-tailed Bat	Austronomus australis			rec	rec	rec	rec	rec		rec	rec
East-coast Free-tailed Bat	Mormopterus norfolkensis	V		rec				rec		rec	rec
Inland Free-tailed Bat	Mormopterus petersi									rec	
South-eastern Free-tailed Bat	Mormopterus planiceps sens.str.				rec					rec	rec
Ride's Free-tailed Bat	Mormopterus ridei			rec	rec	rec	rec	rec		rec	rec
Eastern Bent-winged Bat	Miniopterus orianae	V		rec	rec	rec	rec	rec		rec	rec
Large-eared Pied Bat	Chalinolobus dwyeri	V	V	rec	rec	rec	rec	rec		rec	rec
Gould's Wattled Bat	Chalinolobus gouldii			rec	rec	rec	rec	rec		rec	rec
Chocolate Wattled Bat	Chalinolobus morio			rec	rec	rec	rec	rec		rec	rec
Eastern False Pipistrelle	Falsistrellus tasmaniensis	V		rec	rec	rec	rec			rec	rec
Large-footed Myotis	Myotis macropus	V		rec				1997		rec	
South-eastern Long-eared Bat	Nyctophilus corbeni	V	V							rec	
Lesser Long-eared Bat	Nyctophilus geoffroyi			rec	rec	rec	rec	rec		rec	rec
Gould's Long-eared Bat	Nyctophilus gouldi			rec	rec	rec	rec	rec		rec	rec
Greater Broad-nosed Bat	Scoteanax rueppellii	V		rec	rec	rec	rec	rec		rec	rec
Inland Broad-nosed Bat	Scotorepens balstoni				rec					rec	
Eastern Broad-nosed Bat	Scotorepens orion			rec	rec		rec	rec		rec	rec
Large Forest Bat	Vespadelus darlingtoni			rec	rec	rec	rec	rec	İ	rec	rec
Eastern Forest Bat	Vespadelus pumilus								1	rec	

Common name	Scientific name	Sta	itus				Reco	rds			
		NSW	Com	BM	GOS	J	KB	N	TL	W	Y
Southern Forest Bat	Vespadelus regulus			rec	rec	rec	rec	rec		rec	1985
Eastern Cave Bat	Vespadelus troughtoni	V		rec	rec					rec	rec
Little Forest Bat	Vespadelus vulturnus			rec	rec	rec	rec	rec		rec	rec
White-footed Rabbit-rat	Conilurus albipes	X	X			ext					
Water Rat	Hydromys chrysogaster			rec	rec	rec		1991		rec	
Broad-toothed Rat	Mastacomys fuscus	V				ext					
Plains Mouse	Pseudomys australis	X	V			ext					
Smoky Mouse	Pseudomys fumeus	С	Е			ext					
New Holland Mouse	Pseudomys novaehollandiae		V			und				rec	1986
Hastings River Mouse	Pseudomys oralis	Е	Е			ext					
Bush Rat	Rattus fuscipes			rec	1978	rec	rec	rec	rec	rec	rec
Swamp Rat	Rattus lutreolus			rec	1770	100	100	100	100	1997	rec
Dingo	Canis lupus dingo			rec	rec	rec	rec	rec		rec	rec
BIRDS	Canis tupus aingo			100	100	100	100	100		100	100
Emu	Dromaius novaehollandiae			1	1		Ι	rec	1	1	
Australian Brush-turkey	Alectura lathami							160			
				rec						rec 1977	rec
Stubble Quail	Coturnix pectoralis			rec	rec		rec			19//	rec
King Quail	Synoicus chinensis			1992	-		-	rec	-		-
Brown Quail	Synoicus ypsilophorus			rec	rec	100-	rec	100	-	rec	rec
Chestnut Teal	Anas castanea			rec	1999	1999		1994	rec	rec	
Grey Teal	Anas gracilis			rec	rec		rec	rec	rec	rec	_
Pacific Black Duck	Anas superciliosa			rec	rec	rec	rec	rec	rec	rec	rec
Hardhead	Aythya australis					rec			rec	rec	
Musk Duck	Biziura lobata			1995				1997	rec	rec	
Australian Wood Duck	Chenonetta jubata			rec	rec	rec	rec	rec	rec	rec	rec
Black Swan	Cygnus atratus			rec	1992	1968		rec	1980s	rec	
Pink-eared Duck	Malacorhynchus membranaceus							rec			
Blue-billed Duck	Oxyura australis			rec							
Australasian Shoveler	Spatula rhynchotis							rec			
Freckled Duck	Stictonetta naevosa	V								rec	
Great Crested Grebe	Podiceps cristatus			1998				rec	rec	rec	
Hoary-headed Grebe	Poliocephalus poliocephalus			rec				rec	rec	rec	
Australasian Grebe	Tachybaptus novaehollandiae			rec	rec	rec	rec	rec	rec	rec	
Pacific Emerald-Dove	Chalcophaps longirostris					rec				rec	1991
White-headed Pigeon	Columba leucomela			rec					rec	rec	rec
Diamond Dove	Geopelia cuneata			rec				1997		rec	
Bar-shouldered Dove	Geopelia humeralis			rec				rec		rec	rec
Peaceful Dove	Geopelia placida			rec	rec			rec	rec	rec	rec
Wonga Pigeon	Leucosarcia melanoleuca			rec	rec	rec	rec	rec	rec	rec	rec
Topknot Pigeon	Lopholaimus antarcticus			rec	icc	100	100	100	icc	100	100
Brown Cuckoo-Dove				rec				rec		rec	rec
	Macropygia phasianella					1000					
Crested Pigeon	Ocyphaps lophotes			rec	rec	1999	rec	rec	rec	rec	rec
Common Bronzewing	Phaps chalcoptera			rec	rec	rec	rec	rec	rec	rec	rec
Brush Bronzewing	Phaps elegans			rec			1983	1997	1980s	rec	rec
Wompoo Fruit-Dove	Ptilinopus magnificus			1989	-		-		-	rec	-
Superb Fruit-Dove	Ptilinopus superbus			rec					-		
Tawny Frogmouth	Podargus strigoides			rec	rec	rec	rec	rec	rec	rec	rec
White-throated Nightjar	Eurostopodus mystacalis			rec	rec	rec	rec	rec	1985	rec	rec
Australian Owlet-nightjar	Aegotheles cristatus			rec	rec	rec	rec	rec		rec	rec
Fork-tailed Swift	Apus pacificus		Mejk	rec					1980s	rec	rec
White-throated Needletail	Hirundapus caudacutus	1		rec	rec	rec	rec		1980s	rec	rec
Australasian Darter	Anhinga novaehollandiae			rec	ļ	rec		rec	rec	rec	
Little Pied Cormorant	Microcarbo melanoleucos			rec		rec	1992	rec	rec	rec	rec
Great Cormorant	Phalacrocorax carbo			rec		rec	rec	rec	rec	rec	
Little Black Cormorant	Phalacrocorax sulcirostris			rec				rec	rec	rec	1982
Pied Cormorant	Phalacrocorax varius			rec		rec		rec	1994	rec	
Australian Pelican	Pelecanus conspicillatus			rec				rec		rec	
Black-necked Stork	Ephippiorhynchus asiaticus	Е					İ			rec	
Great Egret	Ardea alba		Mj	rec				rec	rec	rec	
Intermediate Egret	Ardea intermedia			T	1			1997	1	1992	
White-necked Heron	Ardea pacifica			rec		rec	rec	rec	rec	rec	rec
Australasian Bittern	Botaurus poiciloptilus	Е	Е	1.00	1	100	1.00	1.55	rec	100	1.00

Common name	Scientific name	Sta	atus				Reco	rds			
		NSW	Com	BM	GOS	J	KB	N	TL	W	Y
Eastern Cattle Egret	Bubulcus ibis		Mj					rec		rec	
White-faced Heron	Egretta novaehollandiae			rec	rec	rec	rec	rec	rec	rec	rec
Black Bittern	Ixobrychus flavicollis	V		1995							rec
Nankeen Night-Heron	Nycticorax caledonicus			rec	rec		rec	rec		rec	rec
Yellow-billed Spoonbill	Platalea flavipes							1994	1980s	1977	1982
Royal Spoonbill	Platalea regia							rec			
Australian White Ibis	Threskiornis moluccus			rec		rec		rec		rec	1982
Straw-necked Ibis	Threskiornis spinicollis			rec			rec	rec	1980s	rec	rec
Collared Sparrowhawk	Accipiter cirrocephalus			rec	rec	1999	rec		rec	rec	rec
Brown Goshawk	Accipiter fasciatus			rec	rec	rec	rec	rec	rec	rec	rec
Grey Goshawk	Accipiter novaehollandiae			rec					rec	rec	rec
Wedge-tailed Eagle	Aquila audax			rec	rec	rec	rec	rec	rec	rec	rec
Pacific Baza	Aviceda subcristata			rec	rec					rec	rec
Swamp Harrier	Circus approximans			rec				rec	rec	1984	
Spotted Harrier	Circus assimilis			100				100	100	1701	rec
Black-shouldered Kite	Elanus axillaris			rec	rec		rec			rec	rec
White-bellied Sea-Eagle	Haliaeetus leucogaster	V	Mc	rec	100		1992	rec	rec	rec	rec
	Haliastur sphenurus	v	IVIC	rec		1946	1774	rec	rec	rec	-
Whistling Kite	Hieraaetus morphnoides	V	-		rac			1997	1980s		rec
Little Eagle	*	V		rec	rec	rec		177/	17008	rec	rec
Square-tailed Kite	Lophoictinia isura	·		rec		1000	<u> </u>		1000	rec	
Brown Falcon	Falco berigora	+		rec	rec	1999	rec	rec	1980s	rec	rec
Nankeen Kestrel	Falco cenchroides	+		rec	rec	und	rec	rec	1000	rec	rec
Australian Hobby	Falco longipennis			rec	rec	1986	1997		1980s	rec	rec
Peregrine Falcon	Falco peregrinus			rec	rec	rec	rec	rec		rec	rec
Black Falcon	Falco subniger	V								rec	
Eurasian Coot	Fulica atra			rec		rec	rec	rec	rec	rec	
Dusky Moorhen	Gallinula tenebrosa			rec		1987		rec	rec	rec	
Buff-banded Rail	Gallirallus philippensis			rec							
Lewin's Rail	Lewinia pectoralis			rec							
Australasian Swamphen	Porphyrio porphyrio			rec					rec	rec	rec
Baillon's Crake	Zapornia pusilla								1980s	rec	
Spotless Crake	Zapornia tabuensis									rec	
Sooty Oystercatcher	Haematopus fuliginosus	V		rec							
White-headed Stilt	Himantopus leucocephalus							rec	1980s		
Black-fronted Dotterel	Elseyornis melanops			rec		1987		rec		1997	
Masked Lapwing	Vanellus miles			rec	rec	1988	rec	rec	rec	rec	rec
Latham's Snipe	Gallinago hardwickii		Mbjk	rec					1980s	rec	
Red-backed Button-quail	Turnix maculosus	V				rec					
Red-chested Button-quail	Turnix pyrrhothorax						1983				
Painted Button-quail	Turnix varius			rec	rec		1982	rec	1980s	rec	rec
Little Button-quail	Turnix velox			rec						rec	
Silver Gull	Chroicocephalus			rec				1997			
	novaehollandiae										
Sulphur-crested Cockatoo	Cacatua galerita	1	-	rec	rec	rec	rec	rec	rec	rec	rec
Little Corella	Cacatua sanguinea	+		rec	rec		1982		rec	rec	
Long-billed Corella	Cacatua tenuirostris	-		rec							
Gang-gang Cockatoo	Callocephalon fimbriatum	V	1	rec	rec	rec	rec	rec	rec	rec	rec
Glossy Black-Cockatoo	Calyptorhynchus lathami	V		rec	rec		rec	rec		rec	rec
Galah	Eolophus roseicapilla	1		rec	rec	rec	rec		rec	rec	rec
Yellow-tailed Black-Cockatoo	Zanda funereus	1	-	rec	rec	rec	rec	rec	rec	rec	rec
Australian King-Parrot	Alisterus scapularis	1		rec	rec	rec	rec	rec	rec	rec	rec
Musk Lorikeet	Glossopsitta concinna	1		rec	rec					rec	rec
Little Lorikeet	Glossopsitta pusilla	V		rec	rec		rec	rec	rec	rec	rec
Swift Parrot	Lathamus discolor	Е	C	rec	1995			1997			rec
Budgerigar	Melopsittacus undulatus			rec					1980s		
Turquoise Parrot	Neophema pulchella	V		rec	rec			rec		rec	rec
Crimson Rosella	Platycercus elegans			rec	rec	rec	rec	rec	rec	rec	rec
Eastern Rosella	Platycercus eximius			rec	rec	rec	rec	rec	rec	rec	rec
Red-rumped Parrot	Psephotus haematonotus			rec	rec	1987			1975	rec	rec
Scaly-breasted Lorikeet	Trichoglossus chlorolepidotus			rec							
Rainbow Lorikeet	Trichoglossus moluccanus			rec		rec	1994		rec	rec	rec
	1	1	1		1			1		1	1
Fan-tailed Cuckoo	Cacomantis flabelliformis			rec	rec	rec	rec	rec	rec	rec	rec

Common name	Scientific name	Sta	atus				Reco	rds			
		NSW	Com	BM	GOS	J	KB	N	TL	W	Y
Pheasant Coucal	Centropus phasianinus									1977	
Horsfield's Bronze-Cuckoo	Chalcites basalis			rec	rec	rec	1999		rec	rec	rec
Shining Bronze-Cuckoo	Chalcites lucidus			rec	rec	rec	rec	rec	rec	rec	rec
Black-eared Cuckoo	Chalcites osculans				rec					rec	
Oriental Cuckoo	Cuculus saturatus		Mejk	1990	100					100	
Eastern Koel	Eudynamys orientalis		Wiejk	rec		1999	rec	rec	1999	rec	rec
Pallid Cuckoo	Heteroscenes pallidus			1	F20	1986	1999				_
Channel-billed Cuckoo	Scythrops novaehollandiae			rec	rec	1997		rec	rec	rec	rec
	- · · ·	V		rec	rec		rec	rec	rec	rec	rec
Barking Owl	Ninox connivens	V		rec	rec	rec	1998	rec		rec	rec
Southern Boobook	Ninox boobook			rec	rec	rec	rec	rec	rec	rec	rec
Powerful Owl	Ninox strenua	V		rec	rec	rec	rec	rec		rec	rec
Eastern Barn Owl	Tyto alba			rec			rec	rec		rec	
Australian Masked Owl	Tyto novaehollandiae	V		rec				rec		rec	rec
Sooty Owl	Tyto tenebricosa	V		rec	rec	rec	rec	rec	1996	rec	rec
Azure Kingfisher	Ceyx azureus			rec			rec	rec	1997	rec	rec
Laughing Kookaburra	Dacelo novaeguineae			rec	rec	rec	rec	rec	rec	rec	rec
Forest Kingfisher	Todiramphus macleayii			rec				rec		1993	
Sacred Kingfisher	Todiramphus sanctus			rec	rec	rec	rec	rec	rec	rec	rec
Rainbow Bee-eater	Merops ornatus		Mj	rec	rec	1986		1994		rec	rec
Dollarbird	Eurystomus orientalis			rec				rec	rec	rec	rec
Noisy Pitta	Pitta versicolor			rec							
Superb Lyrebird	Menura novaehollandiae			rec	rec	rec	rec	rec	rec	rec	rec
Red-browed Treecreeper	Climacteris erythrops			rec	rec	rec	rec	rec	rec	rec	rec
Brown Treecreeper	Climacteris picumnus	V		rec	rec	1968	rec	rec	1994	rec	rec
White-throated Treecreeper	Cormobates leucophaea			rec	rec	rec	rec	rec	rec	rec	rec
Green Catbird	Ailuroedus crassirostris									1986	rec
Spotted Bowerbird	Ptilonorhynchus maculatus					rec					
Satin Bowerbird	Ptilonorhynchus violaceus			rec	rec	rec	rec	rec	rec	rec	rec
Superb Fairy-wren	Malurus cyaneus			rec	rec	rec	rec	rec	rec	rec	rec
Variegated Fairy-wren	Malurus lamberti			rec	rec	1991	rec	rec	rec	rec	rec
				1	Tec	1991		160	160		_
Southern Emu-wren	Stipiturus malachurus			rec			rec			rec	rec
Yellow-rumped Thornbill	Acanthiza chrysorrhoa			rec	rec	rec	rec	rec		rec	rec
Striated Thornbill	Acanthiza lineata			rec	rec	rec	rec	rec	rec	rec	rec
Yellow Thornbill	Acanthiza nana			rec	rec	1999	rec	rec	rec	rec	rec
Brown Thornbill	Acanthiza pusilla			rec	rec	rec	rec	rec	rec	rec	rec
Buff-rumped Thornbill	Acanthiza reguloides			rec	rec	rec	rec	rec	1998	rec	rec
Southern Whiteface	Aphelocephala leucopsis									rec	rec
Chestnut-rumped Heathwren	Calamanthus pyrrhopygius			rec	rec	rec	1986	rec	1980s	rec	rec
Western Gerygone	Gerygone fusca			rec	1997		rec	rec		rec	
Brown Gerygone	Gerygone mouki			rec		rec	rec	rec	rec	rec	rec
White-throated Gerygone	Gerygone olivacea			rec	rec	rec	rec	rec	rec	rec	rec
Rockwarbler	Origma solitaria			rec	rec	rec	rec	rec	rec	rec	rec
Pilotbird	Pycnoptilus floccosus			rec	rec		rec	rec	1987	rec	
Speckled Warbler	Pyrrholaemus sagittatus	V		rec	rec			rec	rec	rec	rec
Yellow-throated Scrubwren	Sericornis citreogularis			rec			rec	rec		rec	rec
White-browed Scrubwren	Sericornis frontalis			rec	rec	rec	rec	rec	rec	rec	rec
Large-billed Scrubwren	Sericornis magnirostra			rec	rec		rec			rec	rec
Weebill	Smicrornis brevirostris			rec	rec			rec	1980s	rec	rec
Spotted Pardalote	Pardalotus punctatus			rec	rec	rec	rec	rec	rec	rec	rec
Striated Pardalote	Pardalotus striatus			1.00	1.50	130	1.50	1.00	rec	1.00	100
Damied I didulote	subspecies <i>ornatus</i>			rec	rec	rec	rec	rec	100	rec	rec
	1 1				icc	160	icc	160		Tec	100
Sniny cheeked Honoveston	subspecies striatus		-	rec				-	 	****	1
Spiny-cheeked Honeyeater	Acanthagenys rufogularis			rec	mc -	mc -	nc -			rec	H
Eastern Spinebill	Acanthorhynchus tenuirostris			rec	rec	rec	rec	rec	rec	rec	rec
Red Wattlebird	Anthochaera carunculata			rec	rec	rec	rec	rec	rec	rec	rec
Little Wattlebird	Anthochaera chrysoptera		_	rec	1999		rec	rec	rec	rec	rec
Regent Honeyeater	Anthochaera phrygia	С	С	rec	rec			rec		rec	199
Yellow-faced Honeyeater	Caligavis chrysops	1		rec	rec	rec	rec	rec	rec	rec	rec
Pied Honeyeater	Certhionyx variegatus	V								rec	
Blue-faced Honeyeater	Entomyzon cyanotis			rec						rec	rec
Singing Honeyeater	Gavicalis virescens									1995	
Tawny-crowned Honeyeater	Glyciphila melanops			rec						1997	

Common name	Scientific name	Sta	atus				Reco	rds			
		NSW	Com	BM	GOS	J	KB	N	TL	W	Y
Painted Honeyeater	Grantiella picta	V		rec						rec	
Yellow-tufted Honeyeater	Lichenostomus melanops			rec	rec		rec	rec	rec	rec	rec
Brown Honeyeater	Lichmera indistincta										rec
Noisy Miner	Manorina melanocephala			rec	rec	rec	rec	rec	rec	rec	rec
Bell Miner	Manorina melanophrys			rec	rec	rec	rec	rec	rec	rec	rec
Lewin's Honeyeater	Meliphaga lewinii			rec	rec	rec	rec	rec	rec	rec	rec
Brown-headed Honeyeater	Melithreptus brevirostris			rec	rec	rec	rec	rec	rec	rec	rec
Black-chinned Honeyeater	Melithreptus gularis	V		rec	rec			1997		rec	rec
White-naped Honeyeater	Melithreptus lunatus			rec	rec	rec	rec	rec	rec	rec	rec
Scarlet Honeyeater	Myzomela sanguinolenta			rec	rec	rec		rec	rec	rec	rec
White-eared Honeyeater	Nesoptilotis leucotis			rec	rec	rec	rec	rec	rec	rec	rec
Little Friarbird	Philemon citreogularis			rec	rec	rec	rec			rec	rec
Noisy Friarbird	Philemon corniculatus			rec	rec	rec	rec	rec	rec	rec	rec
White-cheeked Honeyeater	Phylidonyris niger			rec	rec		1993		rec	rec	rec
New Holland Honeyeater	Phylidonyris novaehollandiae			rec	rec	rec	rec	rec	rec	rec	rec
Crescent Honeyeater	Phylidonyris pyrrhopterus			rec	rec	rec	1986			rec	rec
Striped Honeyeater	Plectorhyncha lanceolata				rec					rec	rec
Fuscous Honeyeater	Ptilotula fusca			rec	rec		1994	rec	1980s	rec	rec
White-plumed Honeyeater	Ptilotula penicillata			rec	rec	rec		rec		rec	rec
White-browed Babbler	Pomatostomus superciliosus				rec					rec	
Grey-crowned Babbler	Pomatostomus temporalis	V								rec	rec
Spotted Quail-thrush	Cinclosoma punctatum			rec	rec	rec	rec	rec	1980s	rec	rec
Eastern Whipbird	Psophodes olivaceus			rec	rec	rec	rec	rec	rec	rec	rec
Varied Sittella	Daphoenositta chrysoptera	V		rec	rec	rec	rec	rec	rec	rec	rec
Black-faced Cuckoo-shrike	Coracina novaehollandiae			rec	rec	rec	rec	rec	rec	rec	rec
White-bellied Cuckoo-shrike	Coracina papuensis			rec	rec			rec		rec	rec
Cicadabird	Edolisoma tenuirostris			rec	rec	rec	rec	rec	rec	rec	rec
White-winged Triller	Lalage tricolor			rec	rec	rec		rec	1980s	rec	rec
Grey Shrike-thrush	Colluricincla harmonica			rec	rec	rec	rec	rec	rec	rec	rec
Crested Shrike-tit	Falcunculus frontatus			rec	rec	rec	rec	rec	rec	rec	rec
Gilbert's Whistler	Pachycephala inornata									rec	
Olive Whistler	Pachycephala olivacea	V				rec				rec	
Golden Whistler	Pachycephala pectoralis			rec	rec	rec	rec	rec	rec	rec	rec
Rufous Whistler	Pachycephala rufiventris			rec	rec	rec	rec	rec	rec	rec	rec
Olive-backed Oriole	Oriolus sagittatus			rec	rec	rec	rec	rec	rec	rec	rec
Black-faced Woodswallow	Artamus cinereus			rec				rec			
Dusky Woodswallow	Artamus cyanopterus	V		rec	rec			rec	rec	rec	rec
Masked Woodswallow	Artamus personatus			rec	rec		rec	rec		rec	
White-browed Woodswallow	Artamus superciliosus			rec	rec	1006		rec		rec	
Pied Butcherbird	Cracticus nigrogularis			rec		1986	rec	rec		rec	rec
Grey Butcherbird	Cracticus torquatus			rec	rec	rec	rec	rec	rec	rec	rec
Australian Magpie	Gymnorhina tibicen										
	subspecies tibicen			rec	rec	rec	rec	rec	rec	rec	rec
D: -1 C	subspecies tyrannica						1971				1975
Pied Currawong	Strepera graculina	-		rec	rec	rec	rec	rec	rec	rec	rec
Grey Currawong	Strepera versicolor Dicrurus bracteatus			rec 1988	rec	rec	rec	rec	1980s	rec 1997	rec
Spangled Drongo					raa	ree	rec	roo	raa		rec
Grey Fantail	Rhipidura fuliginosa Rhipidura leucophrys			rec	rec	rec	rec	rec	rec	rec	rec
Willie Wagtail Rufous Fantail	1 1 1	+	Mb	rec	rec	rec	rec	rec	rec	rec	rec
Australian Raven	Rhipidura rufifrons Corvus coronoides		IVIU	rec	rec	rec	rec	rec	rec	rec	rec
Little Raven	Corvus coronoides Corvus mellori			rec	rec	rec	rec	rec	rec	rec	rec
Magpie-lark	Grallina cyanoleuca				rac			rec	rac	-	rec
Black-faced Monarch	Monarcha melanopsis		Mb	rec	rec	rec	rec	rec	rec	rec	rec
Satin Flycatcher	Myiagra cyanoleuca		Mb	rec		rec	rec	100	100	rec	rec
Restless Flycatcher	Myiagra inquieta		1910	rec	rec	1999	1994	rec		rec	rec
Leaden Flycatcher	Myiagra inquieta Myiagra rubecula	1		rec	rec			rec	rec		rec
Spectacled Monarch	Symposiachrus trivirgatus	+	Mb	160	160	rec	rec	160	160	rec	100
White-winged Chough		1	IVIU	FAC	rac	rac	rac	rac	1980s	rec	rac
Eastern Yellow Robin	Corcorax melanorhamphos Eopsaltria australis			rec	rec	rec	rec	rec	17008	rec	rec
Lastelli Tellow Koulli	subspecies australis			rec	rec	rec	rec	rec	rec	rec	rec
	subspecies <i>austratis</i> subspecies <i>chrysorrhoa</i>			100	100	160	100	166	160	rec	100
	subspecies cirysormou		1							100	

Common name	Scientific name	Sta	itus				Records						
		NSW	Com	BM	GOS	J	KB	N	TL	W	Y		
Hooded Robin	Melanodryas cucullata	V		1995	rec			rec		rec			
Jacky Winter	Microeca fascinans			rec	rec	1988	rec	rec	1980s	rec	rec		
Red-capped Robin	Petroica goodenovii			rec	1998		rec	rec		rec	rec		
Scarlet Robin	Petroica multicolor	V		rec	rec	rec	rec	rec	1980s	rec	rec		
Flame Robin	Petroica phoenicea	V		rec	rec	rec	rec		1975	rec	rec		
Rose Robin	Petroica rosea			rec	rec	rec	rec	rec	rec	rec	rec		
Horsfield's Bushlark	Mirafra javanica			1		1946				rec	1		
Golden-headed Cisticola	Cisticola exilis				1992	17.0		rec		rec			
Australian Reed-Warbler	Acrocephalus australis				1772			100	rec	rec	+		
Brown Songlark	Cincloramphus cruralis						1995		100	rec	+		
Rufous Songlark	Cincloramphus mathewsi			rec	rec		1993	rec	1980s	rec	rec		
Little Grassbird	Poodytes gramineus			100	100			icc	rec	100	100		
Silvereye	Zosterops lateralis								160		+		
Silvereye	subspecies cornwallis/ westernensis			rec	rec	rec	rec	rec	rec	rec	rec		
	subspecies lateralis			rec							-		
White-backed Swallow	Cheramoeca leucosterna			1999	1999		-				—		
Welcome Swallow	Hirundo neoxena			rec	rec	rec	rec	rec	rec	rec	rec		
Fairy Martin	Petrochelidon ariel			rec	rec	1986	rec	rec	1980s	rec	rec		
Tree Martin	Petrochelidon nigricans			rec	rec	1986	rec	rec	rec	rec	rec		
Bassian Thrush	Zoothera lunulata			rec		rec	rec	rec	rec	rec	rec		
Mistletoebird	Dicaeum hirundinaceum			rec	rec	rec	rec	rec	rec	rec	rec		
Plum-headed Finch	Neochmia modesta				1992					1995			
Red-browed Finch	Neochmia temporalis			rec	rec	rec	rec	rec	rec	rec	rec		
Beautiful Firetail	Stagonopleura bella			rec	rec		rec	rec	rec	rec	1997		
Diamond Firetail	Stagonopleura guttata	V		rec	rec	1987		rec		rec	rec		
Double-barred Finch	Taeniopygia bichenovii			rec	rec	1989		rec	1980s	rec	rec		
Zebra Finch	Taeniopygia guttata			rec	1999		1979			rec			
Australian Pipit	Anthus novaeseelandiae			rec	rec		rec	rec	1980s	rec	rec		
REPTILES													
Eastern Snake-necked Turtle	Chelodina longicollis			rec	rec	rec		rec	rec	rec	rec		
Jacky Lizard	Amphibolurus muricatus			rec	rec	rec	rec	rec	rec	rec	rec		
Nobbi	Diporiphora nobbi									rec	†		
Eastern Water Dragon	Intellagama lesueurii			rec	rec	rec	rec	rec		rec	rec		
Bearded Dragon	Pogona barbata			rec	rec					rec	rec		
Mountain Dragon	Rankinia diemensis			rec		rec	rec	rec		rec	rec		
Southern Leaf-tailed Gecko	Phyllurus platurus			rec	rec	rec	rec	rec	rec	rec	rec		
Thick-tailed Gecko	Underwoodisaurus milii			rec	rec			rec		rec	rec		
Lesueur's Velvet Gecko	Amalosia lesueurii			rec	rec		rec	rec	rec	rec	rec		
Wood Gecko	Diplodactylus vittatus			rec	rec		100	100	1954	rec	rec		
Robust Velvet Gecko	Nebulifera robusta			1						rec	rec		
Leaden Delma	Delma plebeia									rec	rec		
Burton's Snake-lizard	Lialis burtonis			rec	rec					rec	rec		
Common Scaly-foot	Pygopus lepidopodus			rec	rec					rec	rec		
Eastern Three-lined Skink	Acritoscincus duperreyi			rec	100		rec			100	100		
Red-throated Skink	Acritoscincus platynotus			rec	rec	rec	rec	rec	rec	rec	rec		
Two-clawed Worm-skink	Armoscincus piatynotus Anomalopus leuckartii			100	100	100	100	100	100	rec	100		
Punctate Worm-skink	+						 		 	rec	rec		
Southern Forest Cool-skink	Anomalopus swansoni Carinascincus coventryi			paa	-	ree	roc	-	-	100	100		
Southern Rainbow-skink	· · · · · · · · · · · · · · · · · · ·			rec	rac	rec	rec	-	-	rac	P00		
Tussock Rainbow-skink	Carlia tetradactyla Carlia vivax				rec		-	-	 	rec 1984	rec		
	+										rec		
Bar-sided Skink	Concinnia tenuis			rec	rec		rec	rec		rec	rec		
Fence Skink Rebust Ctanetus	Cryptoblepharus pulcher			rec	rec		rec	rec	rec	rec	rec		
Robust Ctenotus	Ctenotus robustus			rec	rec	mc -	m	rec	rec	rec	rec		
Copper-tailed Skink	Ctenotus taeniolatus			rec	rec	rec	rec	rec	rec	rec	rec		
Pink-tongued Lizard	Cyclodomorphus gerrardii			rec			1000		-	rec	rec		
Mainland She-oak Skink	Cyclodomorphus michaeli			rec	-		1998		-				
Cunningham's Skink	Egernia cunninghami			rec	rec	rec	rec	rec		rec	rec		
Black Rock Skink	Egernia saxatilis			rec	-	rec	rec		-	rec			
Tree Skink	Egernia striolata				rec		und			rec	rec		
Yellow-bellied Water Skink	Eulamprus heatwolei			rec		rec	rec			rec			
Blue Mountains Swamp Skink	Eulamprus leuraensis	Е	Е	rec									
Eastern Water Skink	Eulamprus quoyii			rec	rec	rec	rec	rec	1994	rec	rec		

Common name	Scientific name	Sta	itus				Reco	rds			
		NSW	Com	BM	GOS	J	KB	N	TL	W	Y
Southern Water Skink	Eulamprus tympanum			rec		rec	rec			rec	
Eastern Three-toed Earless Skink	Hemiergis talbingoensis			rec	1997	rec	rec	rec		rec	
Dark-flecked Garden Sunskink	Lampropholis delicata			rec	rec	rec	rec	rec	rec	rec	rec
Pale-flecked Garden Sunskink	Lampropholis guichenoti			rec	rec	rec	rec	rec	1994	rec	rec
South-eastern Slider	Lerista bougainvillii				rec					rec	rec
Eastern Ranges Rock-skink	Liopholis modesta									rec	
White's Skink	Liopholis whitii			rec	rec	1970	rec	rec		rec	rec
Tree-base Litter-skink	Lygisaurus foliorum			rec	rec		rec	rec		rec	rec
South-eastern Morethia Skink	Morethia boulengeri				rec					rec	rec
Tussock Cool-skink	Pseudemoia entrecasteauxii			rec	1992	rec	rec	1997		rec	
Tussock Skink	Pseudemoia pagenstecheri			rec		1995	rec			rec	
Trunk-climbing Cool-skink	Pseudemoia spenceri			rec		rec	rec			t	
Three-toed Skink	Saiphos equalis			rec		rec				rec	rec
Weasel Skink	Saproscincus mustelinus			rec	rec	rec	rec	1997		rec	rec
Blotched Blue-tongued Lizard	Tiliqua nigrolutea			rec	100	rec	rec	1007		rec	100
Eastern Blue-tongued Lizard	Tiliqua scincoides			rec		rec	100	rec		rec	rec
Gould's Goanna	Varanus gouldii			100		100		100		rec	rec
Heath Monitor	Varanus goutati Varanus rosenbergi	V		rec	rec		rec			rec	rec
Lace Monitor	Varanus rosenbergi Varanus varius	· v		rec	rec	rec	rec	rac		rec	rec
				<u> </u>	1		160	rec		1	
Diamond Python	Morelia spilota			rec	rec	und		rec		rec	rec
Brown Tree Snake	Boiga irregularis			rec						rec	rec
Green Tree Snake	Dendrelaphis punctulatus			rec				-		rec	rec
Southern Death Adder	Acanthophis antarcticus			rec						rec	rec
Highlands Copperhead	Austrelaps ramsayi			rec		rec	rec			rec	
Golden Crowned Snake	Cacophis squamulosus			rec		rec	rec			rec	
Eastern Small-eyed Snake	Cryptophis nigrescens			rec	rec		rec	rec		rec	
Yellow-faced Whipsnake	Demansia psammophis			rec				rec		rec	rec
White-lipped Snake	Drysdalia coronoides					1964	rec				
Mustard-bellied Snake	Drysdalia rhodogaster			rec		und	rec		rec	rec	rec
Red-naped Snake	Furina diadema			und						rec	rec
Marsh Snake	Hemiaspis signata			1998							
Broad-headed Snake	Hoplocephalus bungaroides	E	V	rec	rec			rec		rec	rec
Stephens's Banded Snake	Hoplocephalus stephensii	V								rec	
Tiger Snake	Notechis scutatus			rec	rec	rec	rec	rec		rec	rec
Dwyer's Snake	Parasuta spectabilis				rec					1997	rec
Red-bellied Black Snake	Pseudechis porphyriacus			rec	rec	rec	rec	rec	rec	rec	rec
Eastern Brown Snake	Pseudonaja textilis			rec	rec	rec	rec	rec		rec	rec
Eastern Bandy-bandy	Vermicella annulata			rec		rec	1989			rec	rec
Blackish Blind Snake	Ramphotyphlops nigrescens			rec	rec			rec	rec	rec	rec
Proximus Blind Snake	Ramphotyphlops proximus									1995	
Brown-snouted Blind Snake	Ramphotyphlops wiedii									1995	1975
FROGS	ramphotyphiops mean			1	1	I.			l		
Tusked Frog	Adelotus brevis			rec						rec	
Giant Burrowing Frog	Heleioporus australiacus	V	V	rec			1959			rec	rec
Fletcher's Frog	Lechriodus fletcheri	+ '	*	100			1737			1997	100
	Limnodynastes dumerilii	+		-			rec	_	roo	177/	
Eastern Banjo Frog	1						rec		rec		
	subspecies dumerilii			rec	rec			rec		rec	rec
Durana stain 1E	subspecies grayi			rec		rec	1007	rec		rec	rec
Brown-striped Frog	Limnodynastes peronii			rec		rec	1997	rec	rec	rec	rec
Spotted Grass Frog	Limnodynastes tasmaniensis			rec	rec	rec	rec			rec	
Sudell's Frog	Neobatrachus sudelli			-	-					rec	
Ornate Burrowing Frog	Platyplectrum ornatum	1								rec	rec
Common Eastern Froglet	Crinia signifera			rec	rec	rec	rec	rec	rec	rec	rec
Stuttering Frog	Mixophyes balbus	Е	V	rec		1974		1973		rec	
Great Barred Frog	Mixophyes fasciolatus									rec	rec
Giant Barred Frog	Mixophyes iteratus	Е	Е	1967						rec	
Haswell's Frog	Paracrinia haswelli								rec		
Red-crowned Toadlet	Pseudophryne australis	V		rec				rec	rec	rec	rec
Brown Toadlet	Pseudophryne bibronii			rec	rec	1979	rec	rec	1997	rec	rec
Dusky Toadlet	Uperoleia fusca			rec						rec	rec
	Uperoleia laevigata			rec			1997	rec		rec	rec
Smooth Toadlet	operoteta taevigata	I									

Common name	Scientific name	Sta	itus				Reco	rds	ds					
		NSW	Com	BM	GOS	J	KB	N	TL	W	Y			
Green and Golden Bell Frog	Litoria aurea	Е	V								1963			
Booroolong Frog	Litoria booroolongensis	Е	Е				1998			1980				
Green Tree Frog	Litoria caerulea				rec					rec	rec			
Red-eyed Tree Frog	Litoria chloris									rec	rec			
Blue Mountains Tree Frog	Litoria citropa			rec			rec	rec	1969	rec				
Bleating Tree Frog	Litoria dentata			rec	rec		rec	rec	rec	rec	rec			
Brown Tree Frog	Litoria ewingii			rec										
Eastern Dwarf Tree Frog	Litoria fallax			rec				rec	rec	rec	rec			
Freycinet's Frog	Litoria freycineti										1997			
Broad-palmed Frog	Litoria latopalmata			rec	rec					rec	rec			
Lesueur's Frog	Litoria lesueuri sens.str.			rec	rec					rec	rec			
Littlejohn's Tree Frog	Litoria littlejohni	V	V	rec						rec				
Leaf Green River Tree Frog	Litoria nudidigita			rec		rec	rec							
Peron's Tree Frog	Litoria peronii			rec	rec		rec	rec	rec	rec	rec			
Leaf Green Tree Frog	Litoria phyllochroa sens.str.			rec	rec	rec	rec	rec		rec	rec			
Tyler's Tree Frog	Litoria tyleri			rec	rec				rec	rec	rec			
Verreaux's Tree Frog	Litoria verreauxii			rec	rec	rec	rec	rec	rec	rec				
Wilcox's Frog	Litoria wilcoxi			rec	rec	rec	rec	rec		rec	rec			



Bearded Dragon (Pogona barbata)



Blue Mountains Tree Frog (Litoria citropa)