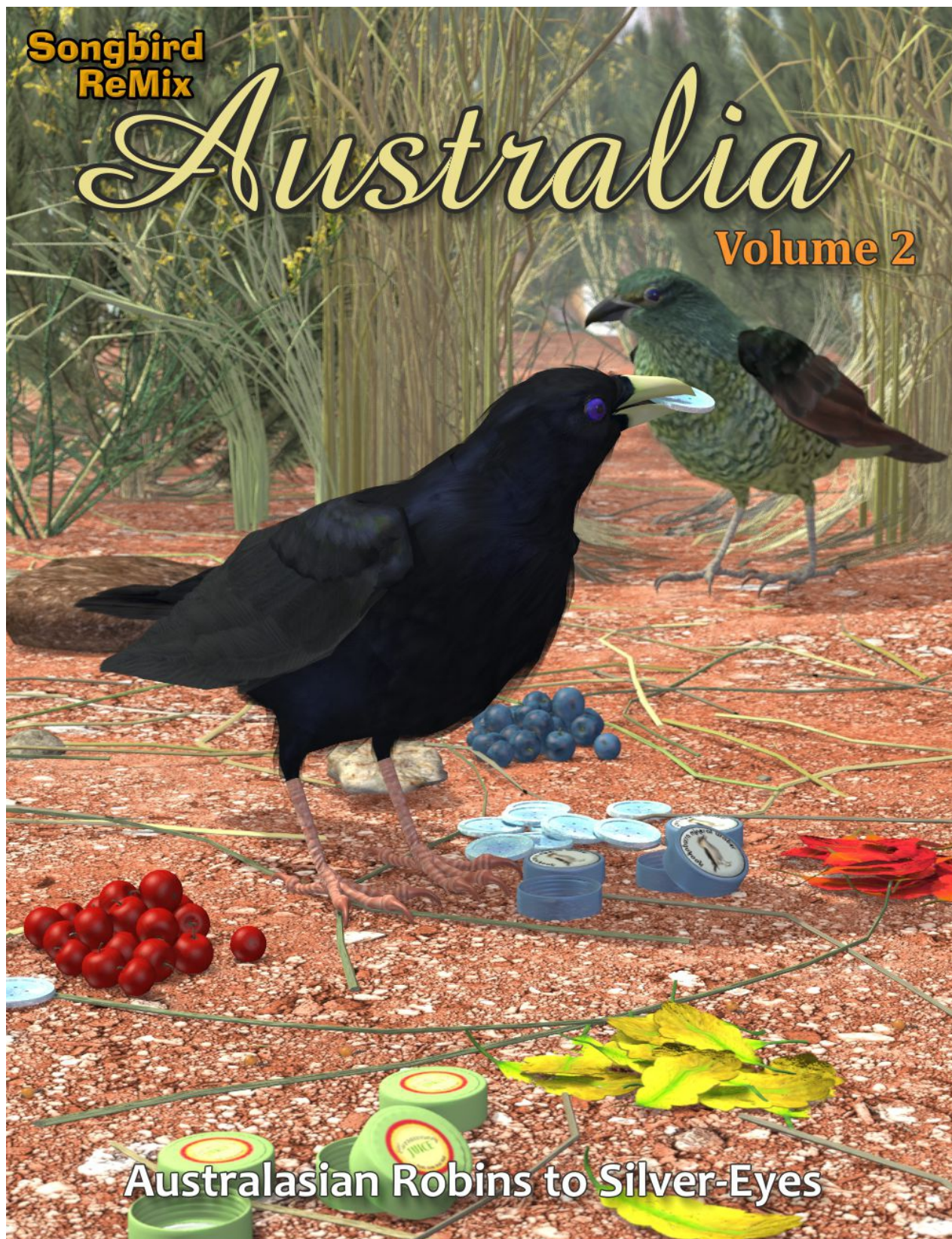


**Songbird  
ReMix**

# Australia

**Volume 2**



**Australasian Robins to Silver-Eyes**

**Avian Models for 3D Applications**

Characters and Procedural Maps by Ken Gilliland

# Songbird ReMix Australia Volume II

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# Songbird ReMix Australia Volume II

## Introduction

Songbird ReMix Australia Volume II contains the second half of Australian songbirds from “Australasian Robins” to “White-eyes”. Featured are such common Australian birds as the Australian Magpie, Jacky-winters and Willy-wagtails and iconic birds like the Apostlebird and Bowerbirds. As with all Songbird Remix volumes, more unusual and threatened birds are also included such as the stunning Star Finch and Hooded Robins.

## Overview and Use

The set is located within the **Animals : Songbird ReMix** folder. Here is where you will find a number of folders, such as **Bird Library**, **Manuals** and **Resources**. Let's look at what is contained in these folders:

- **Bird Library:** This folder holds the actual species and poses for the "premade" birds. Birds are placed into a "type" folder (such as "Birds of Prey (Order Falconiformes)" which for example would hold falcons, hawks and eagles). The birds for this set can be found in the following folder(s):
  - **Perching Birds (Order Passerines)**
- **Manuals:** Contains a link to the online manual for the set.
- **Props:** Contains any props that might be included in the set
- **Resources:** Items in this folder are for creating and customizing your birds
  - **Bird Base Models:** This folder has the blank, untextured model(s) used in this set. These models are primarily for users who wish to experiment with poses or customize their own species of bird. When using physical renderers such as Iray and Superfly, SubD should be turned to at least “3”. For DAZ Studios 3Delight renders, the SubD must be turned from the “High Resolution” setting to the “Base” setting (otherwise some areas will render incorrectly transparent).

## Poser Use

Select **Figures** in the **Runtime** Folder and go to the **Animals : Songbird ReMix** folder. Select the bird from the renderer *Firefly* or *Superfly* folder you want and simply click it to load. Some birds in the Songbird ReMix series may load with attached parts (*Conformers*) such as tail or crest extensions. Some of these parts have specific morphs. You will need to click on the attached part to access those controls. Associated poses can be found in the same folder- **Bird Library : (Type) : Poses**.

## DAZ Studio Use

Go to the **Animals : Songbird ReMix** folder. Select the bird from the renderer (*3Delight* or *Iray*) folder you want and simply click it to load. Some birds in the Songbird ReMix series may load

with attached parts (*Conformers*) such as tail or crest extensions. Some of these parts have specific morphs. You will need to click on the attached part to access those controls. Associated poses can be found in the same folder- **Bird Library : (Type) : Poses**. **Note:** Using the "Apply this Character to the currently selected Figure(s)" option **will not** properly apply the correct scaling to the bird selected. It is better to delete the existing character first and load the one you want to use.

# One Folder to Rule Them All

When I reworked the entire Songbird ReMix library starting in 2018, I decided to abandon the way the birds were sorted (by product name) and choose an Ornithological approach. All birds are found in the Bird Library folder and are arranged by type of bird. This approach is hopefully easier for most to find what bird they are looking for. Admittedly, it will take some getting use to for some longtime users, but I've always approached the Songbird ReMix series as a learning tool as well as a graphics tool, so hopefully some knowledge will rub off by seeing how birds are grouped.

Probably the most deceiving subfolder in the **Bird Library** is “**Perching Birds (Order Passeriformes)**”. This is folder you probably will end up “favoriting” because this one folder (Passeriformes) **holds more than 50% of all birds**. Perching birds range from cardinals and jays to chickadees, crow and swallows.



Finding the bird you want within the “**Perching Birds (Order Passeriformes)**” folder can be daunting, even for an experienced birder (such as myself), so I’ve included an online reference tool within this folder that helps to make your search easier. Click the “**Perching Birds Finder**” icon and when loaded, look at the first column and search for the type of bird you want. For example, I want a “manakin” (a bird common to Central and South America). Scroll down the first column alphabetically and stop on “manakin”. Looking across to the second column, you will now know that manakins can be found in the “Tyrant Flycatchers & their Allies” subfolder.

# Physical-based Rendering

**Iray** and **Superfly** requires more CPU and memory horsepower than the legacy renderers because of ray-trace bounces and higher resolution meshes needed for displacement. Poser's **Superfly** renderer will require that the "Min Transparent Bounces" be set to **at least 16** and that the "Max Transparent Bounces" be set to **at least 32** in render settings. Superfly renders may show artifacts in the head area. This is a known Poser issue and may be addressed in the future. Increasing the SubD may minimize this issue.

## Hiding Transparency Panes

In some camera angles and lighting situations, the area where a transparency pane connects to the main body may be obvious and undesirable. In the Correction Controls



area of the model, you can hide individual sections on these transparency panes to avoid this issue.

## Posing & Shaping Considerations

This volume has various species, so when using generic poses not every pose will work perfectly with every bird. You may find that some minor alteration on the stock poses may be warranted.

Here are some of the most common alterations you may need to make:

- Birds will not be flat on the zero plane due to leg size and overall scale.
- Because of the numerous beak shapes, closing the beak may range from 0.5 to 1. Usually 0.8 is about right.
- **Raise Upper Beak** (*in Action Controls*): This morph is a “one size fits all” control. Because of the variety of beak shapes. It may not work with all birds.

## IK Concerns

Some poses may go askew when IK is turned on. By default, Poser’s IK feature is turned off when loading a bird. To turn it on, select the “Figure” category from the main tool bar and “Use Inverse Kinematics” from the submenu.

By default, DAZ Studio’s IK feature is turned on when loading a bird. This will cause the thigh and shin rotations change when the character is moved. The **CTRL K** keypress will turn IK on and off in DAZ Studio. IK doesn’t work that well in Studio, so I suggest selecting the character in the **Scene tab** and simply deleting the two IK body parts to remove IK.

## Where to find your birds

Type Folder	Bird Species
<b>Perching Birds (Order Passeriformes)</b> Birds of Paradise & their Allies	Apostlebird Magpie-Lark
<b>Perching Birds (Order Passeriformes)</b> Butcherbirds & their Allies	Grey Currawong
<b>Perching Birds (Order Passeriformes)</b> Crows, Jays and their Allies	Australian Magpie Australian Raven
<b>Perching Birds (Order Passeriformes)</b> Lyrebirds, Bowerbirds & their Allies	Satin Bowerbird Regent Bowerbird
<b>Perching Birds (Order Passeriformes)</b> OW Warblers & their Allies	Grey-backed Silver-eye
<b>Perching Birds (Order Passeriformes)</b> Pipits, Wagtails & their Allies	Australasian Pipit Wille-wagtail
<b>Perching Birds (Order Passeriformes)</b> Rockfowl, Stainbirds & their Allies	Hooded Robin Jacky-winter Red-capped Robin
<b>Perching Birds (Order Passeriformes)</b> Sunbirds & their Allies	Diamonded Firetail Mistletoebird Star Finch
<b>Perching Birds (Order Passeriformes)</b> Swallows & their Allies	Australian Reed Warbler
<b>Perching Birds (Order Passeriformes)</b> Vireos, Whipbirds & their Allies	Olive-back Oriole Rufous Whistler

## Where to find your poses

Type Folder	For what species?
<b>Perching Birds (Order Passeriformes)</b> Poses can be found in "Universal Poses" & "type" folders	All Songbirds

**Songbird ReMix Australia Volume Two**

# **FIELD GUIDE**



**Australasian Robins to White-eyes  
& their eco-regions**



# Australia

**Edited from Wikipedia and other sources by Ken Gilliland**

In approaching Songbird ReMix Australia, I knew a very little about Australia other than that's the place where Kangaroos, Kookaburras and Koalas come from. As I started the project and writing the manual it came apparent that I needed a crash course in Australian geography and environmental science to accurately create images using my Australian birds. I decided to include this information in the field guides so you too can have an instant reference source when using Songbird ReMix Australia.

The field guide refers to various regions within Australia, so here's a topographical map to help pin point the regions mentioned in the Field Guide.



# Environment History

The world is also split into 14 terrestrial habitats of which eight are shared by Australia. The Australian land mass is divided into 85 bioregions and 403 subregions. Each region is a land area made up of a group of interacting ecosystems that are repeated in similar form across the landscape.

Although most of Australia is semi-arid or desert, it includes a diverse range of habitats from alpine heaths to tropical rainforests, and is recognized as a megadiverse country. Because of the continent's great age, extremely variable weather patterns, and long-term geographic isolation, much of Australia's flora and fauna is unique and diverse. About 85% of flowering plants, 84% of mammals, more than 45% of birds, and 89% of in-shore, temperate-zone fish are endemic. Australia has the greatest number of reptiles of any country, with 755 species.

Australian forests often contain a wide variety of eucalyptus trees and are mostly located in higher rainfall regions. Most Australian woody plant species are evergreen and many are adapted to fire and drought, including many eucalypts and acacias. Australia has a rich variety of endemic legume species that thrive in nutrient-poor soils because of their symbiosis with rhizobia bacteria and mycorrhizal fungi. Among well-known Australian fauna are the monotremes (the platypus and echidna); a host of marsupials, including the kangaroo, koala, and wombat; the saltwater and freshwater crocodiles; and birds such as the emu and the kookaburra. Australia is home to many dangerous animals including some of the most venomous snakes in the world. The dingo was introduced by Austronesian people who traded with Indigenous Australians around 3000 BCE. Many plant and animal species became extinct soon after first human settlement, including the Australian megafauna; others have become extinct since European settlement, among them the Tasmanian tiger (thylacine).

Many of Australia's ecoregions, and the species within those regions, are threatened by human activities and introduced plant and animal species. The federal Environment Protection and Biodiversity Conservation Act 1999 is a legal framework for the protection of threatened species. Numerous protected areas have been created under the national Biodiversity Action Plan to protect and preserve unique ecosystems; 64 wetlands are registered under the Ramsar Convention, and 15 natural World Heritage Sites have been established. Australia was ranked 46th of 149 countries in the world on the 2008 Environmental Performance Index.

Climate change has become an increasing concern in Australia in recent years, with many Australians considering protection of the environment to be the most important issue facing the country. The Australian Government initiated several emission reduction activities. This new awareness led Prime Minister Rudd to his first official act, on his first day in office, ratifying of the Kyoto Environmental Treaty in December 2007. Nevertheless, Australia's carbon dioxide emissions per capita are among the highest in the world, lower than those of only a few other industrialized nations. Rainfall in

Australia has slightly decreased over the past century, both nationwide and for two quadrants of the nation, while annual mean temperatures increased significantly over the past decades. Water restrictions are currently in place in many regions and cities of Australia in response to chronic shortages due to urban population increases and localized drought.

## **Ecoregions of Australia**

Ecoregions in Australia are geographically distinct plant and animal communities, defined by the World Wide Fund for Nature based on geology, soils, climate, and predominant vegetation. They are based heavily upon the Interim Biogeographic Regionalization for Australia (IBRA) regionalization. Like the IBRA, it was developed for use as a planning tool for conservation science, with the goal of establishing a system of nature reserves in each of the ecoregions or bioregions sufficient to preserve biodiversity.

### **Tropical and subtropical moist broadleaf forests**

- Lord Howe Island subtropical forests
- Norfolk Island subtropical forests
- Queensland tropical rain forests

### **Temperate broadleaf and mixed forests**

- Eastern Australian temperate forests
- Southeast Australia temperate forests
- Tasmanian Central Highland forests
- Tasmanian temperate forests
- Tasmanian temperate rain forests

### **Tropical and subtropical grasslands, savannas, and shrublands**

- Arnhem Land tropical savanna
- Brigalow tropical savanna
- Cape York tropical savanna
- Carpentaria tropical savanna
- Einasleigh upland savanna
- Kimberly tropical savanna
- Mitchell grass downs
- Victoria Plains tropical savanna

### **Temperate grasslands, savannas, and shrublands**

- Eastern Australia mulga shrublands
- Southeast Australia temperate savanna

### **Montane grasslands and shrublands**

- Australian Alps montane grasslands



## **Tundra**

- Antipodes Subantarctic Islands tundra (Australia, New Zealand)

## **Mediterranean forests, woodlands, and scrub**

- Coolgardie woodlands
- Esperance mallee
- Eyre and York mallee
- Jarrah-Karri forest and shrublands
- Kwongan heathlands
- Mount Lofty woodlands
- Murray-Darling woodlands and mallee
- Naracoorte woodlands
- Southwest Australia savanna
- Southwest Australia woodlands

## **Deserts and xeric shrublands**

- Carnarvon xeric shrublands
- Central Ranges xeric scrub
- Gibson Desert
- Great Sandy-Tanami Desert
- Great Victoria Desert
- Nullarbor Plain xeric shrublands
- Pilbara shrublands
- Simpson Desert
- Tirari-Sturt Stony Desert
- Western Australian mulga shrublands

# **Victoria Plains Tropical Savanna**

This is an area of large plains of dry grassland lying between the Tanami Desert to the south and the wetter, greener grassland to the north towards the coast. Sandstone outcrops rise from the grassland, the most famous of which is the Bungle Bungle Range in Purnululu National Park. The grasslands have long been used for cattle grazing. The climate is wetter in the north (average annual rainfall 1200mm) which receives some coastal monsoonal rain, and drier in the south (average 600mm). The rainy season is between November and March and the whole area is almost completely dry for the rest of the year and the climate is hot with maximum temperatures between 25°C and 35°C year round.

The plain is largely covered with Mitchell Grass scattered with bloodwood eucalyptus trees and large patches of lancewood acacia (*Acacia shirleyi*) woodland. The sandstone outcrops have thinner cover of eucalyptus over hummock grass or heathland scattered with Grevillea and Acacia trees.

There are few endemic species as these grasslands are typical of much of northern Australia at this latitude but the grasslands are nonetheless largely intact and rich in

wildlife. Mammals include the large Eastern Wallaroo, Northern Nail-tail Wallaby (*Onychogalea unguifera*), and the Long-tailed Planigale which is the smallest marsupial in the world. The lancewoods are home to the Spectacled Hare-wallaby (*Lagorchestes conspicillatus*), while the Bungle Bungle has some unique plants and an endemic Lerista skink lizard.

Birds include Australian Bustards, Singing Bushlark, and Red-backed Fairy-wren while there are important populations of Purple-crowned Fairywren (*Malurus coronatus*) along the rivers especially the Victoria. The eucalyptus trees are habitat for Lorikeets, Friarbirds, and Honeyeaters. Termites are a source of food for many of these birds and animals.

## Southeast Temperate Forests

Comprising the lowland temperate forests around the Great Dividing Range, the Southeast Australian Temperate Forests comprise a wide variety of vegetation. Unlike the rest of mainland Australia, this region is well-watered with a temperate climate. Wet forest grows along the coast and dry forest and woodland is found inland of the Dividing Range. Avian and mammalian richness is high in this ecoregion, but human impact has been severe. Logging operations and pine plantations dot the wet forests, and farming and grazing has modified the drier vegetation. The major urban centers of Canberra and Melbourne are also located in this ecoregion.

The quintessential Australian genus, Eucalyptus dominates in all better-watered regions of Australia, including the Southeast Australia Temperate Forests. There are approximately 700 species of Eucalyptus, and only seven are found outside Australia. Unlike the rest of mainland Australia, soils here are moderately fertile with a cool temperate climate. Australian temperate eucalyptus forests exhibit a long evolutionary history compared with other continents where glaciation was repeated and extensive. Plant diversity is exceptionally high in the sandstone Grampians Ranges in Victoria, where approximately 1,100 plants, or one-third of Victoria's flora are found in the 1,700 km<sup>2</sup> Grampians National Park. Temperate woodlands also contain a high number of endangered plant species, including the button winklewort (*Rutidosis leptorhynchoides*).

Warm-temperate rainforest replaces subtropical rainforest on poorer soils or with increasing altitude and latitude in NSW and Victoria. Cool-temperate rainforests are widespread in Tasmania (Tasmanian temperate rain forests ecoregion) and they can be found scattered from the World Heritage listed Border Ranges National Park and Lamington National Park on the NSW/Queensland border to Otway Ranges, Strzelecki Ranges, Dandenong Ranges and Tarra Bulga in Victoria. In the northern NSW they are usually dominated by Antarctic Beech (*Nothofagus moorei*), in the southern NSW by Pinkwood (*Eucryphia moorei*) and Coachwood (*Ceratopetalum apetalum*) and in Victoria and Tasmania by Myrtle Beech (*Nothofagus cunninghamii*), Southern Sassafras (*Atherosperma moschatum*) and Mountain Ash (*Eucalyptus regnans*). The montane rainforests of Tasmania are dominated by Tasmanian endemic conifers (mainly

*Athrotaxis spp.*). They are dominated by ferns such as *Cyathea cooperi*, *Cyathea australis*, *Dicksonia Antarctica*, *Cyathea cunninghamii* and *Cyathea leichhardtiana*

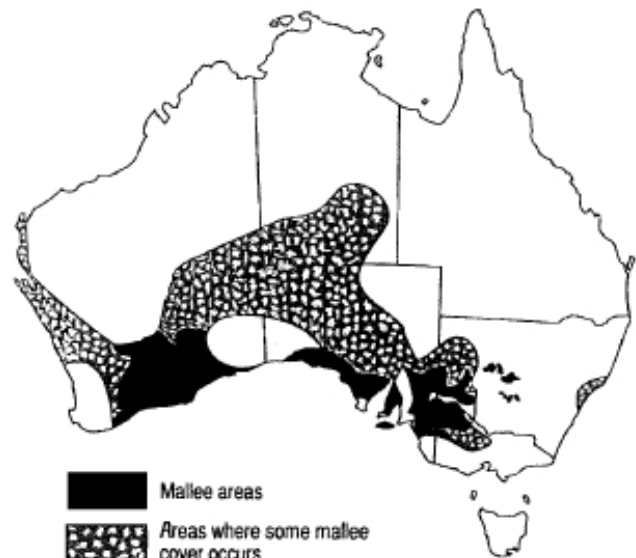
## Mallee Woodlands and Shrublands

Mallee is an Aboriginal name for a group of eucalypts which grow to a height of 2 - 9 m and have many stems arising from a swollen woody base known as a lignotuber. They have an umbrella-like leaf canopy and the trees shade 30-70% of the ground.

Several layers of vegetation grow in association with Mallee eucalypts, from large shrubs up to 3 m high to very small grasses and forbs, and ephemerals. There is a lot of bare ground and any leaf litter decomposes slowly in the dry conditions.

Mallee is also a name given to the type of vegetation community in which the Mallee eucalypts grow. Mallee areas are generally very flat, and without hills or tall trees it is very easy to become lost. Some areas of Mallee have expanses of vegetated sand dunes. This probably accounts for the fear of the Mallee felt by many early explorers and settlers.

The Mallee is a complex and sensitive environment. It contains a great diversity of organisms many of which are under threat. Since European settlement one third of all mammal species have disappeared from the Mallee of south-eastern Australia more than a dozen plant species are now considered threatened or rare as a result of clearing and grazing.



*Distribution of Mallee Shrublands*

Mallee soil is generally sandy and in some areas contains a high proportion of lime. In other areas the soil is quite salty and/or very shallow. It is often covered by a 'crust' of lichens and algae.

In 2001, the area covered by this vegetation group was estimated to be 65% of its pre-1788 coverage. The most extensive extant area of this group in Australia today is found in the Great Victoria Desert. Prior to 1788, the largest area occurred in the Murray-Darling Basin.



## Plants of the Murray-Darling woodlands and mallee

Trees	
<i>Eucalyptus gracilis</i>	Yorrel. A mallee eucalypt.
<i>Eucalyptus oleosa</i>	Giant Mallee. One of the larger mallee trees.
<i>Eucalyptus socialis</i>	Pointed Mallee. Very common species.
<i>Eucalyptus anceps</i>	Kangaroo Island Mallee. Somewhat uncommon.
<i>Myoporum platycarpum</i>	Sugarwood. Common leafy tree to about 6m with small white flowers often quite prolific and long lasting.
<i>Santalum acuminatum</i>	Quandong. Small tree with edible fruits.
Large Shrubs	
<i>Acacia nyssophylla</i>	Wait-a-while. Prickly wattle shrub with attractive globular golden-yellow flowers
<i>Exocarpus aphylla</i>	Leafless Ballart. Very shady but leafless large shrub.
<i>Melaleuca lanceolata</i>	Moonah. Dryland bottlebrush flowering plant.
Small Shrubs	
<i>Dodonaea attenuata</i>	Narrow-leaf hopbush. While not a true hop, the early settlers nevertheless did make beer from the fruits.
<i>Eremophila glabra</i>	Common Emu Bush. Very common attractive small shrub with red sigmoidal flowers.
<i>Eremophila alternifolia</i>	Poverty Bush. Uncommon attractive small shrub with mauve spotted or white sigmoidal flowers.
<i>Scaevola spinescens</i>	Spiny Fan-Flower. Unusual one-sided fan shaped flowers.
<i>Senna eremophila</i>	Cassia. Very common small shrub, very attractive when flowering. Yellow pea-like flowers very profuse in good years.
<i>Westringia rigida</i>	Very common low shrub to about 0.5m with small cylindrical leaves and small white spotted long lasting flowers.
<i>Beyeria leschenaultii</i>	Felted Wallaby-Bush.
Smaller Plants	
<i>Atriplex stipitata</i>	Kidney Saltbush. Small dome-shaped shrub with grey green leaves.
<i>Maireana erioclada</i>	Rosy Bluebush. Attractive wheel-shaped fruits green to pink when fresh.
<i>Maireana brevifolia</i>	Yanga Bush. Another bluebush with wheel-shaped fruits.
<i>Olearia magniflora</i>	Mangificent Daisy. Attractive, large purple daisy-like flowering bush
<i>Rhagodia gaudichaudiana</i>	Cottony Saltbush. Unusual spade shaped leaves.
<i>Rhagodia nutans</i>	Climbing Saltbush. Unusual lobed leaves but otherwise rather forgettable.
<i>Teucreum racemosum</i>	Grey Germander. Small plant with distinctive and prolific white flowers.
<i>Thysanotus baueri</i>	Mallee Fringe-lily. Small, short lived, mauve flowers with long fringes on the petal margins.
<i>Zygophyllum apiculatum</i>	Gall Weed. Very common low ground cover, large, brilliant green leaves with attractive yellow flowers and unusual ridged fruits. Doesn't deserve the name.
<i>Zygophyllum auranitacum</i>	Shrubby Twinleaf. Very common small woody shrub, small twinned leaves with attractive yellow flowers and four-winged fruits.



The Australian bustards and endangered black-eared miners live within the Mallee forests.

## Western Mallee

Western Mallee is roughly defined as the western half of the Mallee biogeographic region. It has an area of 47,636 square kilometres, which is only lightly populated. The main towns are Hyden, Gnowangerup and Lake Grace; lesser towns include Kulin, Ongerup, Duggan, Newdegate, Lake King and Kondinin.

The subregion contains many endemic plant species in the Eucalyptus, Acacia, Proteaceae such as Grevillea, Hakea and Banksia; and various Asteraceae.

It also supports a number of rare or endangered fauna, including some that fall within the critical weight range for predation by foxes. The Pig-footed Bandicoot (*Chaeropus ecaudatus*) and Crescent Nailtail Wallaby (*Onychogalea lunata*) previously occurred in the subregion, but both are now extinct. The Rufous Hare-wallaby (*Lagorchestes hirsutus*) is now extinct in the wild, and a further ten species of mammal are extinct in the subregion. The endangered Red-tailed Phascogale (*Phascogale calura*) still occurs in the region, as do the vulnerable Black-flanked Rock-wallaby (*Petrogale lateralis*) and Heath Rat (*Pseudomys shortridgei*), and the Western Brush Wallaby (*Macropus irma*).

More information of Mallee plants is [available](#) from the Australian government.

## **Mangroves**

Mangroves are trees and shrubs that grow in saline coastal habitats in the tropics and subtropics – mainly between latitudes 25° N and 25° S. The saline conditions tolerated by various species range from brackish water, through pure seawater (30 to 40%), to water of over twice the salinity of ocean seawater, where the salt becomes concentrated by evaporation (up to 90%).

There are many species of trees and shrubs adapted to saline conditions. Not all are closely related, and the term "mangrove" may be used for all of them, or more narrowly only for the mangrove family of plants, the Rhizophoraceae, or even more specifically just for mangrove trees of the genus *Rhizophora*.

Mangroves form a characteristic saline woodland or shrubland habitat, called mangrove swamp, mangrove forest, mangrove or mangal. Mangals are found in depositional coastal environments where fine sediments (often with high organic content) collect in areas protected from high energy wave action. They occur both in estuaries and along open coastlines. Mangroves dominate three quarters of tropical coastlines.

More than fifty species of Rhizophoraceae (Red Mangrove) grow in Australasia with particularly high biodiversity on the island of New Guinea and northern Australia.

Australia has approximately 11,500 km<sup>2</sup> of mangroves primarily on the northern and eastern coasts of the continent, with occurrences as far south as Miller's Landing in Wilson's Promontory, Victoria (38°54'S) and Barker Inlet in Adelaide, South Australia.

## **The Great Victoria Desert**

The Great Victoria is the biggest desert in Australia and consists of many small sandhills, grassland plains, areas with a closely packed surface of pebbles (called desert pavement or gibber plains) and salt lakes. It is over 700 km (430 mi) wide (from west to east) and covers an area of 424,400 square km (163,900 sq mi) from the Eastern Goldfields region of Western Australia to the Gawler Ranges in South Australia. The Western Australia Mallee shrub ecoregion lies to the west, the Little Sandy Desert to the northwest, the Gibson Desert and the Central Ranges xeric shrublands to the north, the Tirari and Sturt Stony deserts to the east, while the Nullarbor Plain to the south separates it from the Southern Ocean. Average annual rainfall is low and irregular, ranging from 200 to 250 mm (7.9 to 9.8 in) per year. Thunderstorms are relatively common in the Great Victoria Desert, with an average of 15 - 20 thunderstorms per annum. Summer daytime temperatures range from 32 to 40 °C (90 to 104 °F) while in winter, this falls to 18 to 23 °C (64 to 73 °F).

As this area has never been used for agriculture habitats remain largely undisturbed while parts of the desert are protected areas including Mamungari Conservation Park

(formerly known as Unnamed Conservation Park) in South Australia, a large area of pristine arid zone wilderness which possesses cultural significance and is one of the fourteen World Biosphere Reserves in Australia. Habitat is also preserved in the large Aboriginal local government area of Anangu Pitjantjatjara Yankunytjatjara in South Australia and in the Great Victoria Desert Nature Reserve of Western Australia.

Only the hardiest of plants can survive in much of this environment. Between the sand ridges there are areas of wooded steppe consisting of *Eucalyptus gongylocarpa*, *eucalyptus youngiana* and mulga (*Acacia aneura*) shrubs scattered over areas of resilient spinifex grasses particularly *Triodia basedownii*.

Wildlife adapted to these harsh conditions includes few large birds or mammals but the desert does sustain many types of lizard including the vulnerable great desert skink (*Egernia kintorei*) and a number of small marsupials including the Sandhill Dunnart (*Sminthopsis psammophila*) and the vulnerable Crest-tailed Mulgara (*Dasycercus cristicauda*). One way to survive here is to bury into the sands and there are a number of animals doing that including the endangered Southern Marsupial Mole (*Notoryctes typhlops*), and the Water-holding Frog. Birds include the Chestnut-breasted Whiteface (*Aphelocephala pectoralis*) found on the eastern edge of the desert and the malleefowl of Mamungari Conservation Park. Predators of the desert include the dingo (as the desert is north of the Dingo Fence) and two large monitor lizards, the perentie (*Varanus giganteus*) and the sand goanna (*Varanus gouldii*).

The nuclear weapons trials carried out by the United Kingdom at Maralinga and Emu Field in the 1950s and early 1960s has left areas contaminated with plutonium-239 and other radioactive material.

## Billabongs

While not an eco-region, billabongs are important areas and are a term familiar even to those outside Australia. Billabong is an Australian word meaning a small lake, specifically an oxbow lake. An oxbow lake or billabong, is a section of still water adjacent to a river, cut off by a change in the watercourse. Billabongs are usually formed when the path of a creek or river changes, leaving the former branch with a dead end. The word, *Billabong*, most likely from the Wiradjuri term “*bilaban*”.

Billabongs appear relatively often in Australian literature. One of the most prominent references is in the opening line of Banjo Paterson's famous folk song "Waltzing Matilda".

Plant life in billabongs varying from region to region but certain plants types are usually found there such as Eucalypts, Salix, Typhia, Grevilleas and Banksias.



# **Songbird ReMix Australia Volume Two**

## **Field Guide**

### **Australasian Robins**

Hooded Robin  
Red-capped Robin

### **Shrike-tits, Bellbird, Shrike-thrushes and Whistlers**

Jacky-winter  
Rufous Whistler

### **Monarchs, Larks, Flycatchers, Fantails and Drongo**

Wille-wagtail  
Magpie-lark

### **Orioles and Figbirds**

Olive-back Oriole

### **Birds of Paradise and Bowerbirds**

Satin Bowerbird  
Regent Bowerbird

### **Woodswallows, Butcherbirds and Currawongs**

Australian Magpie  
Grey Currawong

### **Ravens and Crows**

Australian Raven

### **Mud-nesters, Swallows and Martins**

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### **Pipits and Wagtails**

Australasian Pipit

### **Old World Larks and Warblers**

Australian Reed Warbler

### **Waxbills, Grass-Finches and Mannikins**

Star Finch  
Diamond Firetail

### **Sunbirds and Flowerpeckers**

Mistletoebird

### **White-eyes**

Grey-backed Silvereye

**Common Name:** Hooded Robin  
**Scientific Name:** *Melanodryas cucullata*

**Size:** 5.9-6 inches (15-17 cm)

**Habitat:** Australia; Endemic-found all over mainland Australia, except Cape York and eastern Gulf of Carpentaria or inland around the Simpson Desert, on the Nullarbor Plain or south of the Kimberley Ranges. They are more commonly found in south-eastern Australia from Adelaide to Brisbane.

Hooded Robins are found in Lightly timbered woodland and shrubland dominated by eucalypts and acacias, such as mallee, mulga and mixed open woodland, in semi-arid and arid zone into temperate regions. They are often found near clearings.



**Status:** Vulnerable to Threatened. **Global population:** 8,830,000 mature individuals with a decreasing population trend. Clearing of woodlands in south-eastern Australia has caused a marked decline in populations of the Hooded Robin.

The nominate race has undergone a marked reduction in numbers and range in southeastern Australia owing to habitat clearance for agriculture. The remaining habitat is often fragmented. For reasons that are unclear, this species responds poorly to fragmentation, and even large habitat remnants seem unable to support viable populations. This suggests that clearance activities on the Tiwi Islands may have similar effects on the small population there (Race *melvillensis*). The nominate race is considered “Near-threatened” in Australia. It occurs in Wyperfeld National Park, in northwestern Victoria. Race *melvillensis* is considered “Vulnerable”.

The Hooded Robin is listed as “threatened” on the Victorian Flora and Fauna Guarantee Act (1988). Under this Act, an Action Statement for the recovery and future management of this species has not yet been prepared. On the 2013 advisory list of threatened vertebrate fauna in Victoria, the hooded robin is listed as “near threatened”.

**Diet:** Insects and other small arthropods. Occasionally it will eat seeds.

It sits on exposed perches, such as dead branches and stumps and pounces on arthropods. It always forages on or near the ground. More time spent on or near ground in winter.

**Nesting:** The male has a distinctive pied coloration with a black head and neck (“hood”), white chest and under parts and black wings with white wing-bars. The eyes, bill and feet are also black. The female is an undistinguished gray-brown above with a pale gray throat and paler underneath with dark brown wings and white wing bars. Juveniles are similar to females.

Breeding season is July to November with one or two broods raised. The nest is a neat cup made of soft dry grass and bark. Spider webs, feathers and fur are used for binding/filling, generally in a tree crevice, hollow or fork. The clutch generally consists of two pale olive- or bluish-green eggs with darker spots and blotches measuring 21mm x 16 mm

**Cool Facts:** Hooded Robins may have 'helpers' at their nest; other members of the group that help feed the nestlings and fledglings.

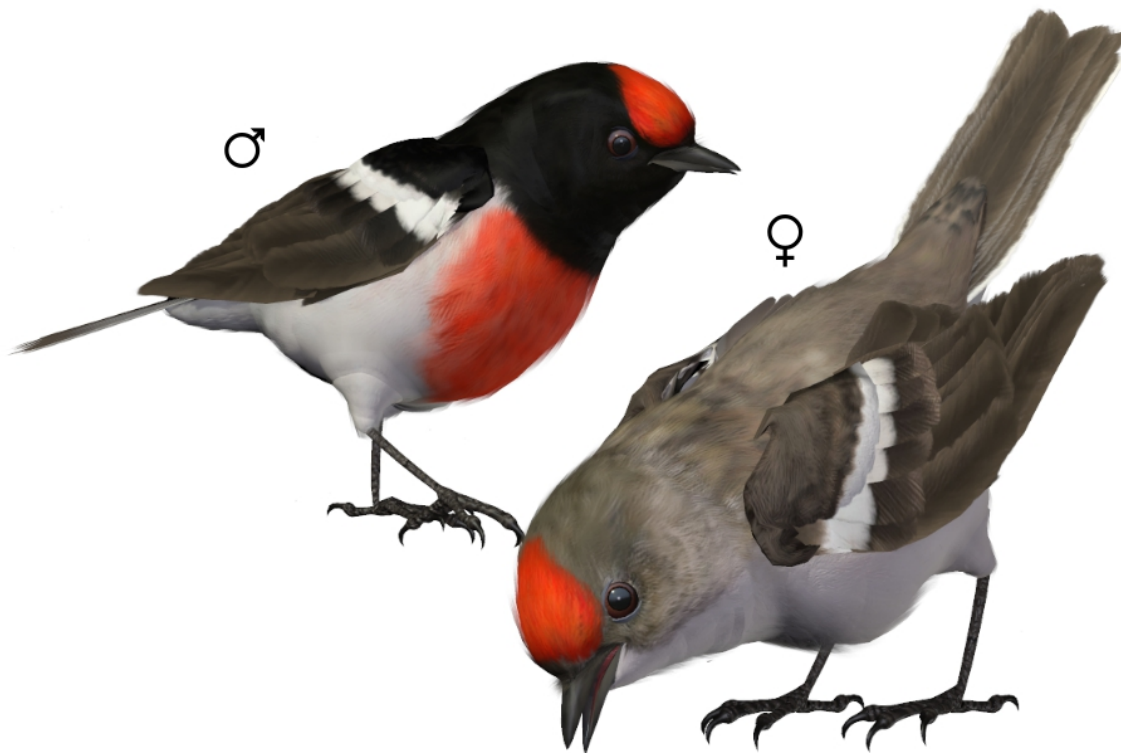
- *M. c. melvillensis*. It is endemic to the Tiwi Islands (Melville Island, Bathurst Island), off the coast of the Northern Territory, in Northern Australia. It is very small-bodied, with proportionately long bill, male belly area lightly washed with gray, female upper parts washed with brown.
- *M. c. picata*. It is found in northern and eastern Australia from northern Western Australia (Kimberley) and the northern half of the Northern Territory eastward to central and southern Queensland, and southward to central New South Wales. It is similar to *M. c. westralensis*, but is smaller-bodied, with a relatively medium-length bill, and the white tail tips larger.
- *M. c. cucullata*. First reported by John Latham in 1801. The nominate subspecies is found southeastern Australia from southeastern Queensland (along the western side of Great Dividing Range) southward to southeastern South Australia and Victoria.
- *M. c. westralensis*. This subspecies is found in the southern two-thirds of Western Australia, the southwestern quarter of Northern Territory and the western two-thirds of South Australia (including Eyre Peninsula, to the head of Spencer Gulf). It is slightly smaller than the nominate with the bill being proportionately longer. The female is with a brownish wash on the upper parts and throat, There is faint gray mottling on the breast and the white on tips of the rectrices is reduced,

**Common Name:** Red-capped Robin  
**Scientific Name:** *Petroica goodenovii*

**Size:** 4-5 inches (10.5-12.5 cm)

**Habitat:** Australia; Endemic--found from Queensland (rarely above latitude 20°S), through New South Wales, mainly west of the Great Dividing Range, to Victoria and South Australia. Also found in Western Australia in inland regions north to the Pilbara region, rarely being seen on south coast or far south-west. An isolated population occurs on Rottnest Island. Widespread in Northern Territory south of latitude 20°S. The Red-capped Robin will visit areas along the east coast during droughts.

The Red-capped Robin is found in most inland habitats that have tall trees or shrubs, such as eucalyptus, acacia and cypress pine woodlands. It is mainly found in the arid and semi-arid zones, south of the Tropics, with some extension into coastal regions. The species is seen on farms with scattered trees, as well as vineyards and orchards. It is only occasionally reported in gardens.



**Status:** Least Concern. **Global population:** 8,050,000 mature individuals with a stable population trend. The species has generally fared badly with human change to the landscape. Once common on the Cumberland Plain in Sydney's western suburbs, it has now almost disappeared from the Sydney Basin. It has also disappeared from the

vicinity of Rockhampton in Queensland, and declined on Rottneest Island, and in the Wheatbelt region of Western Australia. Field studies in small patches of remnant vegetation indicate reduced survival rates there.

The feral cat is known to prey on the Red-capped Robin, and several bird species including the Australian Raven (*Corvus coronoides*), Grey Shrike-thrush (*Colluricincla harmonica*), Grey Butcherbird (*Cracticus torquatus*) and White-browed Babbler (*Pomatostomus superciliosus*) raid nests and take young. There is one record of a Brown-headed Honeyeater (*Melithreptus brevirostris*) feeding on an egg. Predation is the commonest cause of nest failure.

**Diet:** Mostly beetles, occasionally ants, spiders, moths and other insects. The Red-capped Robin mostly pounces on prey on the ground, half spreading the wing to flush out insects. Less often, it swoops and catches prey while airborne. It also may prey while perched in low-lying vegetation, almost always less than 3 m (10 ft) above the ground.

**Nesting:** The male has its head, neck and upper-parts black with a large scarlet forehead patch. The upper-wings are black with white median and greater secondary coverts, a small white patch towards the base of the inner primaries and outer secondaries and white edges of the outermost tertial and inner secondaries (forming a broad elongate patch/stripe on folded wing extending posteriorly from near the bend of wing. There is also a narrow stripe on edges of secondaries which shows a prominent wing stripe in flight). The tail is mostly black with the outer two feather pairs with outer web white, the outermost pair with white also on edge of inner web. The throat is black, the breast and center of the upper belly scarlet with the remainder of the under-parts white. The iris is dark brown and the bill and legs are black.

The female has its head, neck and upper-parts a light gray-brown, with the forecrown variable (but usually with dull red wash). The upper-wings are dark brown with a pale patch towards the base of the inner primaries and outer secondaries (forming a patch on folded wing, and a stripe in flight). There are slight off-white edges on outer secondaries (forming an obscure line on the folded wing). The tail is as in the male except that black replaced with dark brown. The under-parts are off-white, and there is a pale gray-brown wash on the sides of breast (or over entire breast), and sometimes a variable red wash over the breast. The juvenile is pale-streaked brown above, off-white with brown mottling below. The wing and tail are as in the female. Immatures are like the female.

The breeding season takes place over five months from August to January with up to three broods raised. The male proposes suitable nest sites to the female by rubbing his body over a suitable tree fork, all the while trilling continuously. He may indicate several sites before the female ultimately makes the decision where to build, at which point she constructs the nest alone. The nest is a neat, deep cup made of soft dry grass and bark. Spider webs, feathers and fur are used for binding or filling, and the nest is generally placed in a tree fork or even a mistletoe bush. It may be decorated with lichen and



camouflaged to blend in with its surroundings. Two to three dull white eggs tinted bluish, grayish or brownish and splotched with dark gray-brown are laid on consecutive days, measuring 16 mm x 13 mm (0.6 x 0.5 in). Females alone develop brood patches and incubate, although both sexes feed the young. The male will keep lookout either on the nest or perched on a nearby branch, rather than brood while the female is foraging, and parents will feed young and dart off quickly if there are predators in the vicinity. Extra-pair mating and fertilization is fairly common, with 23% of nestlings and 37% of broods having a different father to the one rearing them, and there is some evidence that extra-pair couplings are more likely to produce male birds.

**Cool Facts:** The female has been reported as being fairly tame, while the male is more wary of human contact.

Both male and female Red-capped Robins respond strongly to playback of their species' song by flying to the source, flitting about in agitation, and sometimes replying with their own song.

Red-capped Robins rarely sit still for long. They dart to the ground flying up to a new vantage point only to duck to the ground again and back up. While perched they often give a quick flick of their tail and wings.

The Red-capped Robin is one of the most brightly colored birds in the Australian desert.

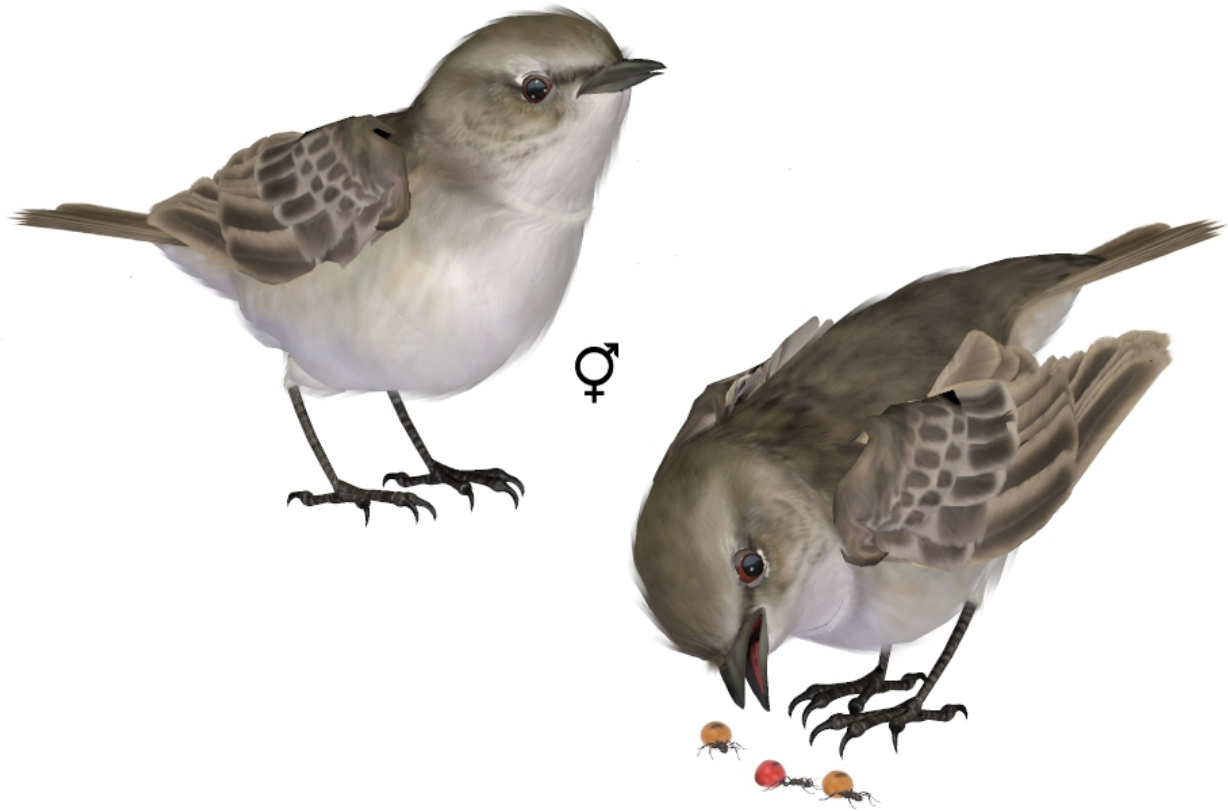
**Common Name:** Jacky-winter  
**Scientific Name:** *Microeca fascinans*

**Size:** 5.5-7.9 inches (14-20 cm)

**Habitat:** Australia; found in Australia and Papua New Guinea.

Its natural habitats are Eucalyptus woodland, mallee and other dry, lightly timbered scrublands, particularly with open shrub layer and clear spaces. It is also found in ecotones between timbered and cleared land, cleared paddocks, urban parks and gardens. In New Guinea, *Race zimmeri* inhabits eucalypt savanna in lowlands.

**Status:** Least Concern to threatened. **Global population:** unknown. Numbers have declined substantially in some areas, particularly in the south, from clearing for farming or housing. Jacky-winters can be quite tame and familiar in some areas.



**Diet:** Insects, spiders, worms and other small invertebrates.

Prey is captured mainly on ground or in air. The main technique is to pounce on the ground from a perch, with some aerial flycatching and sally-striking in the mix. It sometimes joins mixed-species flocks and often associates with the Restless Flycatcher (*Myiagra inquieta*) and Willie Wagtail (*Rhipidura leucophrys*).

**Nesting:** Sexes are similar. The nominate race has a diffuse whitish supercilium, with a narrow black stripe from the lores to behind eye. It has a white eye ring. The crown, face, neck and upper-parts are gray-brown, the upper wing dark is brown with faint paler edging on remiges, while the upper wing-coverts are gray-brown. The tail is a dark brownish-black with the central feather pair narrowly tipped white. The amount of white at tip increasing outwards on rectrices T2-T4, outer two pairs entirely white. The chin, throat and under parts are an off-white, while the breast sides and flanks are washed with a brownish-gray. The iris is dark brown. The bill and legs are a very dark brown. The juvenile is gray-brown above with feathers tipped off-white, the under parts are an off-white with brown feather tips. Immatures are as the adult but retains the pale-tipped primary coverts.

In Australia, breeding season starts from August through January, or in arid areas after the rains, with one or two broods per season. In New Guinea, fledged young are seen from mid-October to late January indicating that the breeding is late in the dry season. They breed as a monogamous pair, occasionally with helpers (up to three of which have been observed at single nest). The male performs song flight like that of a lark, flying up to 120–150 m in air. The nest built by the female and is a small shallow cup of grass, bark strips and rootlets, bound with spider webs, sometimes with bark attached to outside, lined with fur, bark, feathers and lichen. It is placed usually about 5 m above ground, generally in exposed fork of horizontal branch which is usually a dead one. The clutch is 1–3 eggs and the incubation is performed by female over a period of 16–18 days. The nestlings are brooded apparently by the female, but fed by both parents, and leave nest at 17–20 days. The adults perform injury-feigning distraction display when the nest is threatened by predators. The young continue to be fed by both parents for 10–15 days after leaving nest. Jacky-winter nests are parasitized by the Brush Cuckoo (*Cacomantis variolosus*), Pallid Cuckoo (*Heteroscenes pallidus*) and Shining Bronze-cuckoo (*Chalcites lucidus*).

**Cool Facts:** It is also colloquially known as “Post sitter” for its habit of sitting on posts in paddocks and farms. It was previously known as the Brown Flycatcher but is more closely related to crows than to true flycatchers. Little is known about the origin of the name “Jacky-winter” however the late 19th century diminutive form of the pet name was “Jack” and “Winter” is an imitative of the bird's cry.

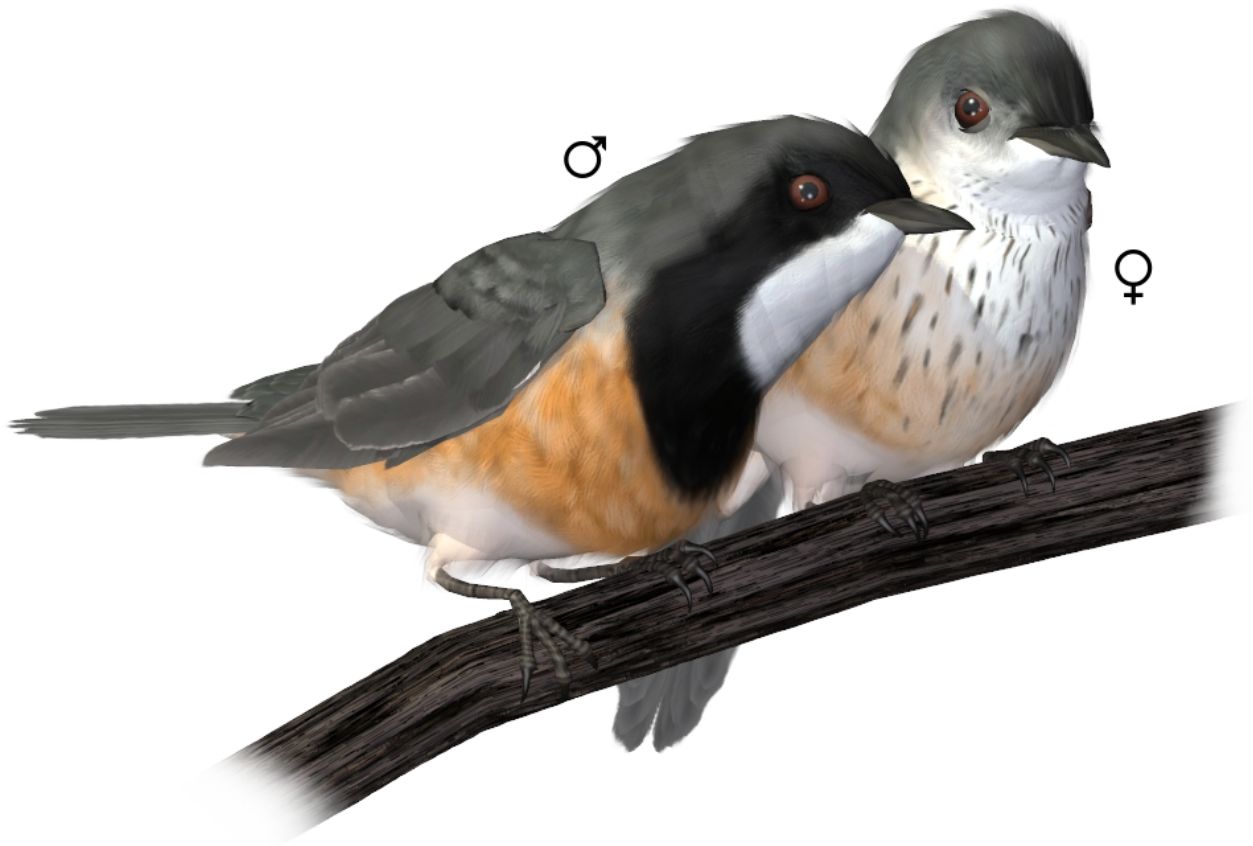
- *M. f. zimmeri*. It is found in southeastern New Guinea (from Bereina southward to Port Moresby). It has its upper parts and under parts washed yellow.
- *M. f. pallida*. It is found in northern Australia from northern Western Australia eastward to western Queensland. It is paler than others, with a more pronounced white on lores and supercilium.
- *M. f. fascinans*. The nominate race is found in eastern and southeastern Australia southward from eastern and central Queensland (south from Cairns district) and eastward from western New South Wales and Adelaide district of South Australia.
- *M. f. assimilis*. It is found in southwestern, central and southern Australia eastward to the mallee country of Victoria. It has the white in the tail restricted to the distal half of the outermost rectrix and the distal third to quarter of the adjacent one.

**Common Name:** Rufous Whistler  
**Scientific Name:** *Pachycephala rufiventris*

**Size:** 6.3 - 7 inches (16-18 cm)

**Habitat:** Australiasia; It is found in New Caledonia, Papua New Guinea, and throughout Australia (with the exception of Tasmania).

It is found in forested areas, woodland and shrubland, but also in gardens and farmland. It migrates seasonally, moving south in the spring and north in the autumn. In New Caledonia the species does not undertake migrations but is instead resident in areas of open forest and savanna.



**Status:** Least Concern. **Global population:** 11,800,000 mature individual with a decreasing population trend. It has declined in some areas of Australia as a result of extensive clearance of habitat; increases noted in other areas, where wooded habitat has been opened up.

**Diet:** Arthropods, mainly insects ; also seeds, fruit, occasionally leaves.

It is mainly arboreal, feeding among the foliage, sub-canopy and canopy; usually at a higher level than other Australian whistlers. Sexes frequently differ in foraging heights,

methods and sites. The female is found lower, often near the ground. In the open forest and woodland (Northern Territory), some shift between dry and wet seasons, foraging on ground. At many (but not all) locations, males glean less than do females, spending more time doing sally-striking. In New Caledonia, they forage in scrub and brush along stream banks, roads, and mangrove beaches. They do join mixed-species foraging flocks.

**Nesting:** The species is sexually dimorphic. The male of the nominate race has the top of its head, sides of neck and upper parts gray. There is a broad black stripe from the lores through the face to the ear-coverts, then along side of the throat to the breast, enclosing the white chin, throat and malar area. The remiges are blackish-brown, edged with pale gray on the outer webs (finely so on primaries, narrowly on secondaries, broadly on tertials). The primary coverts are dark gray and narrowly edged a lighter gray, while the secondary coverts are sooty gray, edged and tipped pale gray. The central pair of tail feathers are gray with a blackish subterminal spot. The other rectrices are black and edged gray. The under parts below breast band are rufous while the sides of the upper breast are light gray, The iris is a dark reddish-brown, the bill black and the legs gray-black to black.

The female has the top and sides of the head, and hind neck to back, a brownish-gray, grading into gray on the rump and upper tail-coverts. The wing is similar to the male but slightly browner. The tail is identical to the male. The chin, throat and malar area are off-white to buff-white with fine streaking. The breast, belly and flanks cream to buff with fine blackish-brown streaks, breast side and flanks are sometimes washed a dull rufous. The crissum and under tail-coverts are off-white to cream. The bill is black when breeding and a light brown at other times. The juvenile is dark brown with narrow buff shaft streaks above, secondaries, tertials and wing-coverts edged buff, under parts white, and heavily streaked dark brown. The iris is dark brown, the bill is yellow-brown, and the gape yellow. The first year immature is like the adult female, but the under parts are more heavily streaked and it retains the juvenile remiges, secondary and median coverts and rectrices. By the second year, it looks the same as the adult female.

Breeding occurs in monogamous pairs, both males and females incubate their eggs and care for their young. The period of incubation is about 13 days on average. The female alone constructs the nest, which usually consists of a combination of twigs, vines, grass and other matter formed in a cup-like shape and attached to a tree branch using strands from spider webs. The breeding season for Rufous Whistlers is between the months of July and February.

**Cool Facts:** It gets its name from its melodic song.

- *P. r. minor*. It is found on Bathurst Island and Melville Island, off Northern Territory (Northern Australia). The male has heavier black streaks on the crown and the breast band extends to the sides of the neck. The females upper parts are darker and more male-like than in other females, the streaking on under parts reduced.



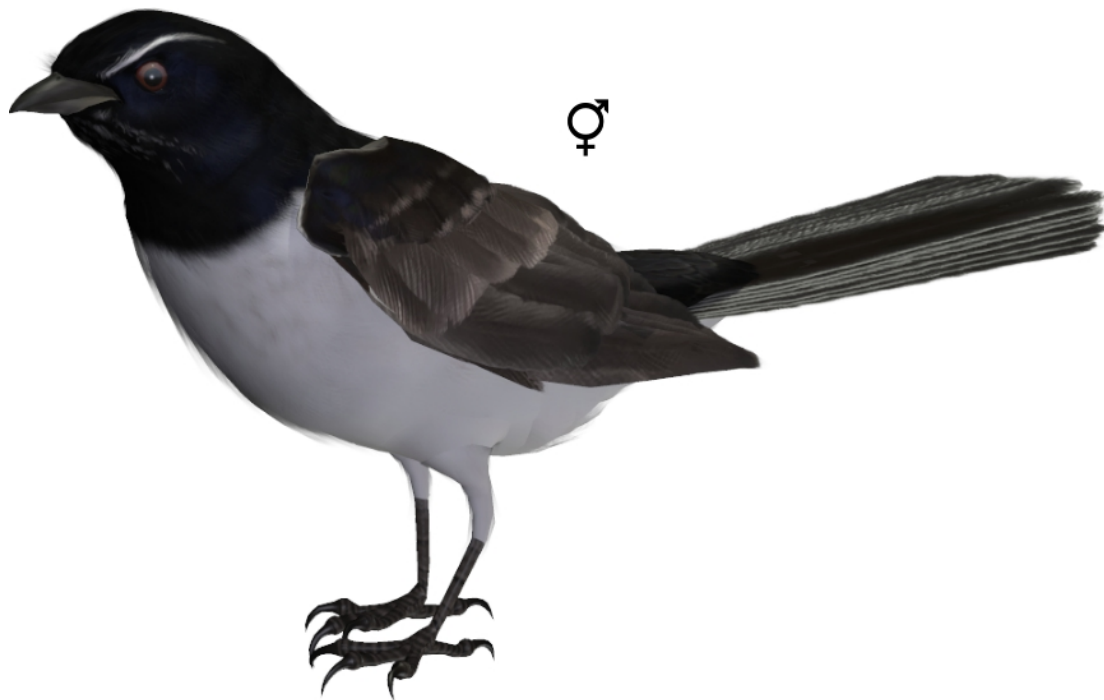
- *P. r. falcata*. It is found in northwestern Western Australia (Kimberley area) and the northern third of Northern Territory. The male lacks the black eyestripe, has lores through orbit to ear-coverts that are dark gray, and the sides of neck are dark gray, usually separating the gray of the ear-coverts from the black of the breast band.
- *P. r. pallida*. It is found in northeastern Australia (Cape York Peninsula and northwestern Queensland). It is similar to Race *falcata*, but the male is paler, particularly on the under parts, and the female lacks the streaks on the belly and flanks.
- *P. r. rufiventris*. The nominate subspecies is found in the southern four-fifths of mainland Australia.
- *P. r. xanthetreaea*. It is endemic to New Caledonia. It is like nominate, but the males eyestripe is reduced and considerably lighter (lores, ear-coverts and sides of the neck are dark gray).

**Common Name:** Willie-wagtail  
**Scientific Name:** *Rhipidura leucophrys*

**Size:** 7.5 - 8.5 inches (19-21.5 cm)

**Habitat:** Australia; found across most of Australia and New Guinea, the Solomon Islands, the Bismarck Archipelago, and eastern Indonesia. It is sedentary across most of Australia, though some areas have recorded seasonal movements; it is an autumn and winter visitor to northeastern New South Wales and southeast Queensland, as well as the Gulf Country and parts of Cape York Peninsula in the far north. It is a vagrant to Tasmania, and on occasion reaches Lord Howe Island.

The Willie Wagtail is at home in a wide variety of habitats, but avoids densely forested areas such as rainforest. It prefers semi-open woodland or grassland with scattered trees, often near wetlands or bodies of water. In New Guinea, it inhabits man-made clearings and grasslands, as well as open forest and mangroves. On Guadalcanal, it was reported from open areas and coconut groves. It has responded well to human alteration of the landscape and can often be seen hunting in open, grassed areas such as lawns, gardens, parkland, and sporting grounds. The species spread into the Western Australian wheatbelt after the original vegetation had been cleared for agriculture



**Status:** Least Concern. **Global population:** 16,600,000 mature individuals with an increasing population trend. Although it is active in defending its territory, the Willie Wagtail is very tolerant and tame around humans, often feeding and nesting in close proximity of houses and human activity.

**Diet:** Mostly Arthropods (including butterflies, moths, flies, beetles, dragonflies, bugs, spiders, centipedes, and millipedes).

It perches on low branches, fences, posts, and the like, watching for insects and other small invertebrates in the air or on the ground. It usually hunts by hawking flying insects such as gnats, flies, and small moths, but will occasionally glean from the ground. It will often hop along the ground and flit behind people and animals, such as cattle, sheep or horses, as they walk over grassed areas, to catch any creatures disturbed by their passing. It has been seen taking ticks off of sleeping lions at the zoo.

**Nesting:** Sexes are alike. It has a white supercilium with the rest of head to upper chest, and upper parts and tail all black. The malar area, chin and throat have varying amounts of white on the feather tips. The remiges and primary wing-coverts are dark brown, while the secondary coverts are black. It is white below, the under wing area is white and there is mottling in the carpal area. The iris is dark brown and the bill and legs are black. The juvenile has its supercilium tinged rufous, the black parts of the plumage are washed brownish, and the feathers of the upper parts and wing-coverts are tipped with rufous-buff. Immatures are like the adults, but the secondary wing-coverts are tipped buff (making two broken wing bars).

Willie Wagtails usually pair for life. The breeding season lasts from July to December, more often occurring after rain in drier regions. Anywhere up to four broods may be raised during this time. It builds a cup-like nest on a tree branch away from leaves or cover, less than 5 m (16 ft) above the ground. Rafters and eaves may also be used. It has been observed to build its nest in the vicinity of those of the Magpie-lark (*Grallina cyanoleuca*), possibly taking advantage of the latter bird's territoriality and aggression toward intruders. Similarly, it is not afraid to build near human habitation.

The nest consists of grass stems, strips of bark, and other fibrous material which is bound and woven together with spider webs. In urban settings, hair from pet dogs and cats is used for nest materials. The female lays two to four small cream-white eggs with brownish markings, and incubates them for 14 days. Both parents take part in feeding the young, and may continue to do so while embarking on another brood. Nestlings remain in the nest for around 14 days before fledging. Upon leaving, the fledglings will remain hidden in cover nearby for one or two days before venturing further afield, up to 20 m (60 ft) away by the third day. Parents will stop feeding their fledglings near the end of the second week, as the young birds increasingly forage for themselves, and soon afterwards drive them out of the territory.

**Cool Facts:** The Willie Wagtail was a feature in Australian aboriginal folklore. Aboriginal tribes in parts of southeastern Australia, such as the Ngarrindjeri of the Lower Murray River, and the Narrunga People of the Yorke Peninsula, regard the Willie Wagtail as the bearer of bad news. It was thought that the Willie Wagtail could steal a person's secrets while lingering around camps eavesdropping, so women would be tight-lipped in the presence of the Willie Wagtail. The people of the Kimberley held a

similar belief that it would inform the spirit of the recently departed if living relatives spoke badly of them. They also venerated the Willie Wagtail as the most intelligent of all animals. Its cleverness is also seen in a Tinputz tale of Bougainville Island, where Singing Tongereng (Willie Wagtail) wins a contest among all birds to see who can fly the highest by riding on the back of the eagle. However, the Gunwinggu in western Arnhem Land took a dimmer view and regarded it as a liar and a tattletale. He was held to have stolen fire and tried to extinguish it in the sea in a Dreaming story of the Yindjibarndi people of the central and western Pilbara, and was able to send a strong wind if frightened.

Willie Wagtail is also featured in the quintessential Australian children's book "[Blinky Bill Grows Up](#)" by Dorothy Wall published in 1933.

While you would think the Willie's tail would wag up and down, it usually wags side to side.

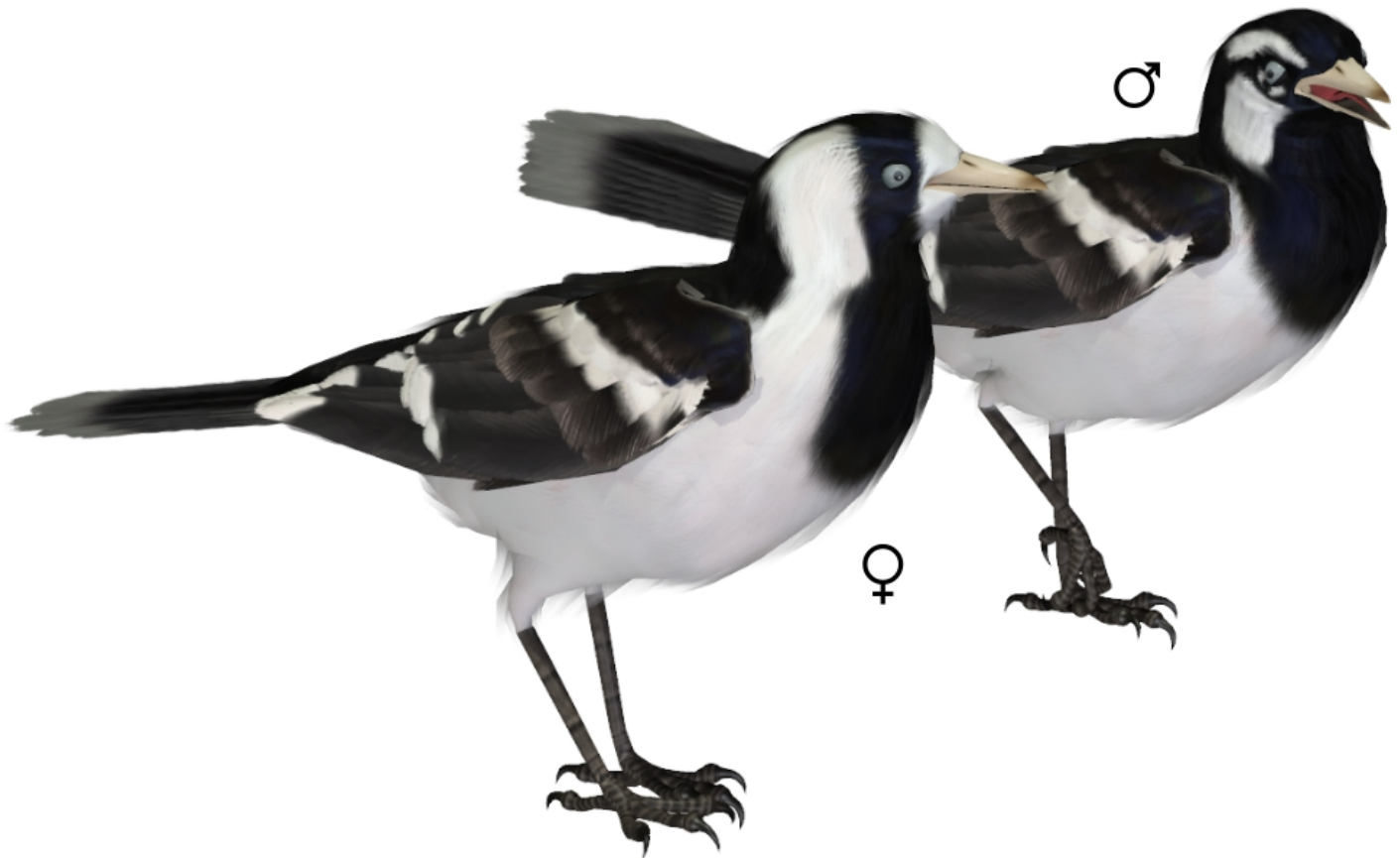
- *R. l. picata*. It is found in the northern quarter of Australia from Kimberley (in Western Australia) and the northern half of Northern Territory eastward to northern Queensland. It is smaller than the nominate.
- *R. l. leucophrys*. The nominate species is found in the southern three-quarters of mainland Australia, including Kangaroo Island.
- *R. l. melaleuca*. It is found in the Moluccas, West Papuan Islands, New Guinea and islands (including Goodenough, Fergusson and Normanby, in D'Entrecasteaux Archipelago), Aru Islands, Bismarck Archipelago (including the Admiralty Islands), Buka Island, Bougainville Island and the Solomon Islands. It is larger than the nominate with a more massive bill.

**Common Name:** Magpie-lark  
**Scientific Name:** *Grallina cyanoleuca*

**Size:** 10.5-11.8 inches (26-30 cm)

**Habitat:** Australia; common and very widespread bird both in urban and rural areas, occupying all parts of the continent except for Tasmania and some of the inland desert in the far north-west of Western Australia, and appears to have adapted well to the presence of humans.

The Magpie-lark can adapt to an enormous range of different habitats, requiring only some soft, bare ground for foraging, a supply of mud for making a nest, and a tree to make it in. They have benefited greatly from agriculture: both the clearing of dense forest in fertile zones and the provision of artesian water in arid areas—although a disaster for other species—have been a boon for bare-ground and short-grass feeders like magpies and magpie-larks.



**Status:** Least Concern. **Global population:** 11,000,000 mature individuals with an increasing population trend. It is common to abundant over much of Australia, where one of the most familiar birds in towns and on farms. It also is locally common in southern New Guinea, and thought to be locally common in Timor. It has benefited from extensive agricultural and pastoral development over much of Australia following



colonization by Europeans. When the first settlers arrived, this species was apparently restricted to habitats close to wetlands; it then dispersed into areas cleared for agriculture and where artificial sources of water were provided, enabling it to achieve a noticeable expansion of range and increase in numbers. It has bred once in Tasmania, in 1903 and introduced on Lord Howe Island in 1924, and now well established and widespread there. All attempted introductions in New Zealand (on the North Island), in Hawaii, and in Fiji, have all been unsuccessful.

**Diet:** Mainly invertebrates; including insects, spiders, worms, crustaceans, small frogs, and occasionally some seeds.

It forages mainly on open ground, including edges of wetlands, exposed tidal flats, and lawns in urban areas. It walks along on ground or wades in muddy margins, opportunistically gleaning items. It often stops and scratches a few times at the ground, then moves backwards a little and snaps up any prey that might be uncovered. It has been seen flushing and pursuing prey in grass, and to employ technique of "foot-trembling" on very wet mud in order to bring items to surface. It will seize aerial prey by sallying briefly into air, usually from ground but sometimes from low perch. It is very active, constantly calling and fluttering about. It can be seen alone or in pairs. Their young form flocks of variable size.

**Nesting:** The sexes are similar from a distance but easy to tell apart. The male has a broad white line above eye, large white patch from ear-coverts down to the sides of the neck. The rest of the head, throat and upper breast are glossy black. The hindneck to the rump are glossy black. The bases of scapulars and upper tail-coverts are white. The tail is white (but appears mostly black from above); the broad black subterminal area (broadest on the central feather pair, decreasing outwards, has a variable amount of black on outermost rectrix). The tips are white. The upper wing is black, most of the secondary wing-coverts are white, the bases of the inner secondaries are also white, and the tertials are tipped white. The under parts below the upper breast are white. The iris is white to pale straw-yellow or pale grayish. The bill is ivory to creamy in color, with blackish nasal groove and distal half of the culmen. The legs are dark blue-gray to black.

The female differs from the male in having its forehead and throat white. A broad black band extending from the black crown down side of the face to the chest, and behind this a broad white area from the eye down to the shoulder and meeting white of the under parts. Juveniles appear to have mixture of features of the male and female adults, with a black crown and white stripe above the eye (like the male) but a white throat and white area from the eye down to the shoulder (like the female). Also, the black parts of plumage appear dull, rather than glossy. The iris is a dark brown (not white) and its bill is a dark gray to black (not ivory with black tip).

They generally pair for life (though divorce is not unknown) and defend a territory together. The nest is round, about 150 mm in diameter, usually placed on a flat branch somewhere near water, made of grass and plant material thickly plastered together with mud, and generously lined with grass, feathers and fur. Breeding is opportunistic,

usually from August to February in the fertile south, anytime after rain in drier areas, and multiple broods are common when conditions allow. Both parents incubate a clutch of between three and five eggs.

**Cool Facts:** Also known as the “Mudlark” in Victoria and Western Australia, the “Murray Magpie” in South Australia, and as the “Peewee” in New South Wales and Queensland.

Magpie-larks are one of the 200-odd species of bird around the world that are known to sing in duet; each partner producing about one note a second, but a half-second apart, so that humans find it difficult to tell that there are actually two birds singing, not one.

The Magpie-lark is aggressively territorial, and will fearlessly defend its territory against larger species such as magpies, ravens, kookaburras, and even the Wedge-tailed Eagle. They are also known to attack people to defend their territory, such attacks occur usually within 60m of the nesting site.

The Magpie-lark's mud nest seems to link it closely with the mud-nest builders of the Family Corcoracidae, the White-winged Chough, and the Apostlebird. But it actually belongs in the Family Dicruridae (Monarchs, Fantails, and Drongos).

- *G. c. neglecta*. It is found in northern Western Australia (Kimberley) eastward to northern Queensland (Cape York). It is also found in the eastern Lesser Sundas (Timor), and probably, in southern New Guinea (southern Trans-Fly region). It is smaller than the nominate, with the wing and tail of the male significantly shorter than those of the nominate. The bill is proportionately longer and it also tends to have more black in the outer tail (but this matched by some nominate).
- *G. c. cyanoleuca*. The nominate subspecies is found in western, central eastern and southern Australia.

**Common Name:** Olive-backed Oriole  
**Scientific Name:** *Oriolus sagittatus*

**Size:** 10.5-11 inches (26-28 cm)

**Habitat:** Australia; occurs across coastal regions of northern and eastern Australia from the Kimberley region in Western Australia, right around the east coast to Adelaide in South Australia. Sedentary in the north of its range, but appears to be a summer migrant to the more southern part of its range. Small groups undertake nomadic movements, following fruiting trees during the autumn and winter.

Most are found in semi-open wooded areas, eucalyptus forests and paperbark woodlands. They also frequent native tree plantations, rainforest edges, and large trees alongside rivers and in savannas, parks and gardens and can sometimes be found in mangroves.



**Status:** Least Concern. **Global population:** 6,880,000 mature individuals with a decreasing population trend. They are sometimes considered a pest in gardens and commercial orchards, where it takes soft fruits.

**Diet:** Fruits, berries and small arthropods. They will feed on seeds and nectar. The most common berries, fruits and seeds include those of alien mulberries (*Morus*), inkweed, Japanese peppers, native olives, berries of white cedar, of camphor laurel and of the

mistletoe, and particularly figs. They may sometimes raid grape vines, cherry, peach, banana and paw-paw orchards. Arthropods taken include spiders and insects such as leaf beetles, ants, mantids, and lepidopteran caterpillars. It, in rare circumstances, may go after nestlings.

They tend to forage alone or in pairs, and during non-breeding season may join in small flocks. They feed mainly in the canopy, occasionally descending to ground. Arthropods are taken by gleaning from twigs and foliage. It sometimes will capture insects by aerial flycatching.

**Nesting:** The male of the nominate race has its head and upper parts a rich olive-green. Its mantle and scapulars are finely streaked black while its upper tail-coverts are olive-gray and spotted white (when plumage fresh). The upper-wing feathers are blue-gray with dark centers and edged and tipped with white. The tail is gray and paler on the outer webs of feathers, with a greenish wash above; paler below, with conspicuous large white terminal patches on the inner webs. The chin and throat are olive-washed gray with narrow blackish streaks. The under parts are creamy white, heavily streaked with black, while the sides of breast are washed olive. The vent and under tail-coverts are white or nearly so. The iris is red to orange and the bill is orange-red to deep pink. The legs are gray to blue-gray.

The female is grayer and more heavily streaked above than the male, including on crown. The wings has cinnamon edging and the tail has a cinnamon wash on white feather tips. The chin is gray, and the sides of the throat are more heavily streaked. The immature has an olive-gray crown and upper parts. It has a narrow buff eyebrow and eye ring. The wing and tail are a dull brown, the wing feathers are all edged cinnamon and with a light cinnamon-buff wash on the underwing. The tail with whitish tips is smaller than adults. The breast and belly are white and strongly streaked black. The iris is dark brown, and the bill is dark brown to dark gray.

They breed year round, but mainly August through January. Sometimes, there are two broods. It is very territorial and sings regularly throughout year. The female Olive-backed Oriole builds a cup-shaped nest which is attached by its rim to a horizontal fork on the outer-edge of the foliage of a tree or tall shrub. Nests are usually around 10 m above the ground, and built of strips of bark and grass, bound with spider web. The male does not build the nest, or incubate the eggs, but he feeds the young after the eggs hatch.

**Cool Facts:** The most wide-ranging of the Australasian orioles, it is noisy and conspicuous. Olive-backed Orioles are excellent mimics of other birds, and are also 'ventriloquists', meaning they can 'throw' their voices to sound like they are calling from somewhere else.

- *O. s. magnirostris*. It is found in south-central New Guinea (Trans-Fly region).
- *O. s. affinis*. It is found in northwestern and north-central Australia (east to the southern portion of the Gulf of Carpentaria). It is slightly smaller than the nominate,

with a longer and more slender bill. The male is generally a brighter green and with faint streaking above and less heavily streaked below. The tail spots are small.

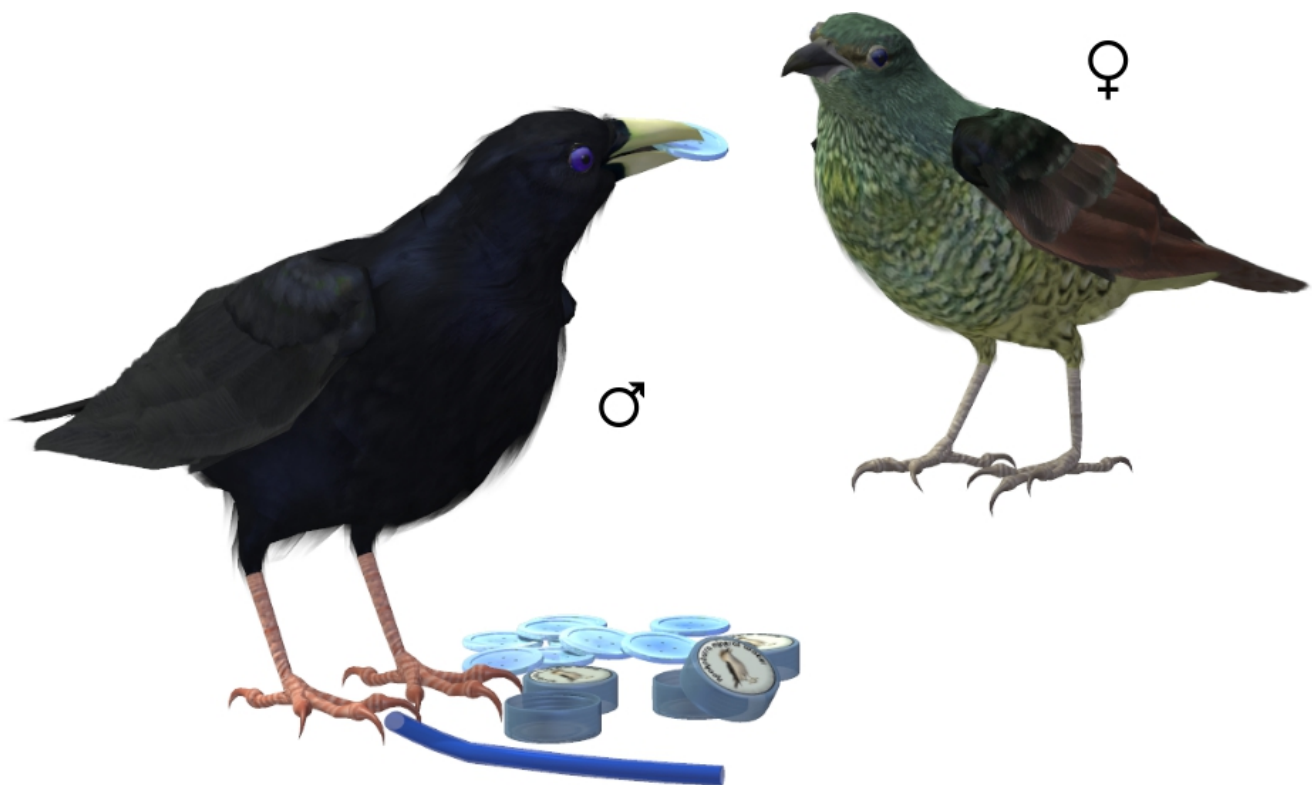
- *O. s. griseus*. It is found in northeastern Australia (Cape York, in northern Queensland). It is smaller than *affinis* but with the long and slender bill. The male is much grayer above and distinctly streaked. The tail spots are medium-sized.
- *O. s. sagittatus*. The nominate subspecies is found in northeastern Australia (except Cape York) south to Victoria and southeastern South Australia; many migrate north in winter. It is the smallest of the races and is paler, with uniform heavy wedge-shaped streaks above. The tail spots are small.

**Common Name:** Satin Bowerbird  
**Scientific Name:** *Ptilonorhynchus violaceus*

**Size:** 10.5-13 inches (27-33 cm)

**Habitat:** Australia; endemic--common in rainforest and tall wet sclerophyll forest in eastern Australia from southern Queensland to Victoria. There is also an isolated population in the Wet Tropics of north Queensland. It is mainly a resident. Some individuals, particularly those in woodlands, move into more open habitats during winter months to form flocks. During the non-breeding period adult males travel more than 1 km from bower site, when males have extensively overlapping foraging ranges. Some localized seasonal movements to lower altitudes during winter.

It is found in rainforests, with a strong preference for its edges. It can also be seen in woodlands and adjacent tall sclerophyll woodlands with sapling under-story. Winter flocks can also frequent open habitats (parks, fruit orchards, and gardens). Traditional bower sites are evenly dispersed through suitable rainforest and woodlands.



**Status:** Least Concern. **Global population:** 1,790,000 mature individuals with a decreasing population trend. It is considered common to reasonably abundant in remaining habitat. Much habitat already lost to human exploitation, and some populations in decline. Otway Range population now cut off from main one west of Melbourne; break in distribution of nominate race at Hunter Valley probably due to clearance of rainforest, and Iluka population isolated.



**Diet:** Fruit throughout the year. During summer (breeding) the diet is supplemented with a large number of insects, while leaves are often eaten during the winter months.

Fruits are mostly plucked in canopy 18 m or more above ground. It takes insects by gleaning and sallying, but rarely hawking. It forages alone or with other members of family and other frugivorous bird species. Adult males dominate younger birds at food sources. During breeding season, males forage closer to their bowers (within 50 m), and feeds more on insects. Females forage mostly within 100 m of their nests. During winter months, they can group in to flocks of up to 200 individuals, which fly to pastures to graze on grassy shoots, succulent white clover leaves and herbaceous plants. They may also visit gardens and orchards to eat green vegetables, soft fruits, and nectar.

Individuals of race *minor* have been seen foraging in figs, eucalypts and paperbark trees.

**Nesting:** Sexes are dimorphic. The male nominate race is entirely glossy indigo-blue, showing violet highlights to black in some lights. It has glossy tips and edges of the tertials and upper wing-coverts which contrast against exposed duller blackish bases (in some lights). The primaries are blackish, the upper tail blackish, tips and outer edges of each feather have a strong indigo-blue gloss. The lower belly and thighs are less glossy, a little more blackish, than the rest of the underparts. The under tail-coverts are blackish with strong glossy edges. The iris is a vivid purple, deep blue at outer edge while the bill whitish, or pale yellowish-green with a blue wash at its base. The legs are variably pale-colored.

The female is on average, lighter in weight than male, and has a longer tail. The plumage is radically different; it has a variable ashy gray-green upper body contrasted by cinnamon-brown wings and upper tail. It is green below with whitish striations to streaks on the chin, throat and upper breast becoming paler downwards and fading to off-whitish, scalloped and barred with green. The iris is deep blue, the bill blackish, legs usually pale in a dusky pink to gray.

The juvenile has its crown softly textured brownish-olive and washed green. The upper parts are brown, off-white below, the feathers of the chest are edged dark gray-brown and those of the remainder have broad chevrons and fine edges of same color, giving a scalloped appearance. The immature male is like the female for the first three years, but with markedly more pointed rectrices. In the fourth to fifth years, it generally becomes discernibly like adult male through acquisition of increasingly green breast and throat (intermediate-plumaged immature). With increasing age, the ear-coverts become darker and browner and the broad band on upper chest (from directly beneath the throat) becomes more yellowish and with chevrons finer, darker (to almost blackish) and denser (latter diminish with subsequent molts, to leave this area more solidly green with almost whitish central feather shafts). The dark bill starts to show paler areas. The subadult male in sixth year is with irregular and variable amounts of blue-black

feathering often mottled by patches of green contour feathers, and some dark flight-feathers. The female gains adult plumage with first post-juvenile molt.

Breeding season starts in late August and goes through January. Most eggs are laid in November and December. Bowerbirds are polygynous.

Like all bowerbirds, the Satin Bowerbird shows highly complex courtship behavior. Mate choice in Satin Bowerbirds has been studied in detail by a group of researchers at the University of Maryland, College Park. Males build specialized stick structures, called bowers, which they decorate with blue, yellow, and shiny objects if these are available, including berries, flowers, feathers, and even ballpoint pens, drinking straws and other discarded plastic items. As the males mature they use more blue objects than other colors; notably the blue flight-feathers of Crimson Rosellas (*Platycercus elegans*) are used. Females visit these and choose which male they will allow to mate with them. In addition to building their bowers, males carry out intense behavioral displays called dances to woo their mates, but these can be treated as threat displays by the females. Nest building and incubation are carried out by the females alone. Recent research has shown that female mate choice takes place in three stages:

1. Visits to the bowers, before nests have been built, while the males are absent
2. Visits to the bowers, before nests have been built, while the males are present and displaying
3. Visits to a selection of the bowers, after nests have been built, leading to copulation with (typically) a single male.

Experimental manipulations of the ornaments around the bowers have shown that the choices of young females (those in their first or second year of breeding) are mainly influenced by the appearance of the bowers, and hence by the first stage of this process. Older females, which are less affected by the threatening aspect of the males' displays, make their choices more on the basis of the males' dancing displays. It has been hypothesized that as males mature their color discrimination develops and they are able to select more blue objects for the bower. Males may reuse the same structure for their entire lives (approximately 30 years).

The nest takes 1–2 weeks to build and is a shallow saucer of sticks and twigs with egg-cup lining of green and dry leaves, built mostly 2–40 m (average 15 m) above ground in tree or bush. It is constructed 120-300+ m away from nearest active bower. The nesting site may be repeatedly reused by same female. She lays a clutch 1–3 eggs and incubates them 21–22 days. Brooding by female declines after day 13 of nestling life, but continues at low intensity until nestlings fledge (irrespective of brood size). The nestling period is 17–21 days

**Cool Facts:** A rare natural intergeneric hybrid between the Satin Bowerbird and the Regent Bowerbird is known as Rawnsley's Bowerbird.

- *P. v. minor*. It is found in the wet tropics of northeastern Queensland (from Mt Amos, just south of Cooktown, southward to Seaview–Paluma Range), in eastern Australia. Race *minor* is smaller than the nominate, and in female-type plumage, it has dull bluish-gray cast above.
- *P. v. violaceus*. The nominate race is found in southeastern Queensland (Dawes Range, just south of the Fitzroy river at Rockhampton) southward in coastal zone (less than 250 km broad at widest point) to southern Victoria (Otway Range, immediately west of Melbourne).

**Common Name:** Regent Bowerbird  
**Scientific Name:** *Sericulus chrysocephalus*

**Size:** 9.8-11.7 inches (25-30 cm)

**Habitat:** Australia; it is endemic to the coastal zone of central-eastern Australia from east Queensland (Connors and Clarke Ranges, on Eungella Plateau) south, with distributional gap about Fitzroy River Valley inland of Rockhampton, to eastern New South Wales (to area immediately North of Sydney).

It is found in subtropical rainforest, associated sclerophyll woodland, and more open habitats, including cultivated country and urban gardens. It frequents area from sea-level to 900 m, altitudinal limits varying across range. The traditional bower sites are dispersed through appropriate ridge top habitats and tend to be within rainforests on flat or less sloping ground, with immediate liana thicket cover providing concealment and protection.



**Status:** Least Concern. **Global population:** 315,000 mature individuals with a decreasing population trend. This population is suspected to be in decline owing to ongoing habitat loss and degradation, and unquantified levels of hunting. Adult males were once hunted for mounting as household novelties, and common in cabinets of mixed birds. Most populations appear fairly stable today.

**Diet:** Mostly fruits, but also flowers (buds, petals, nectar), seeds, leaves, and arthropods (mostly insects). Most of the leaf-eating occurs during July through October during non-breeding season. The insects eaten include cicadas, caterpillars, katydids and beetles, cicadas representing significant dietary component.

They forage mostly in the upper levels of trees and catch arthropods primarily by gleaning and hawking. They are often seen foraging alongside other bowerbirds and other fruit-eating bird species. They will actively displace other species from fruiting trees (the females dominate males at feeding trees). They sometimes forms mixed-species foraging flocks with the Satin Bowerbird (*Ptilonorhynchus violaceus*) and Pied Currawongs (*Strepera graculina*).

**Nesting:** The males forehead, crown, nape and upper mantle are a brilliant deep yellow, often washed darker flame-scarlet on fore-crown. The forehead and crown feathers are short, dense and plush-like. The remaining upper parts and entire underside are jet-black, including narrow arching line over eye. The two outermost primaries and all upper wing-coverts matte black, with the remainder of the primaries largely a golden-yellow with broad to narrow black tips and leading edges. The secondaries (lack the black leading edges) are black tipped becoming smaller towards innermost feathers, latter and most of the tertials are entirely yellow. The rectrices are black (on some individuals have fine central yellow terminal tips, while others have yellow on outer edges of the inner webs of some of the rectrices). The iris is a bright yellow and the bill is an orange-yellow. The legs are blackish-brown.

The female is on average larger than male in weight and body, but not in bill length. The plumage differs radically, variable dull dirty off-white to drab grey on head, which finely streaked, mottled and smudged and with contrasting dull sooty-black crown patch, upper parts variably olive-brown, mantle spotted off-white, dirty off-white to creamish below, broad central line of dull sooty-black feathers down throat, underparts broadly barred blackish-brown; old females may have darker forehead, and may show some plumage characters of adult male; iris dark brown, bill blackish. Newly fledged juvenile has well-developed wing feathers and down persisting on crown, nape and mantle, this then replaced by soft and loosely textured plumage resembling immature of both sexes, one-month-old juvenile has striking crown and nape pattern, dark brown iris, blackish bill, light grey legs; immature male like female, acquires adult plumage, iris and bill coloration gradually (mostly during fourth and fifth years); subadult male (by sixth year) variable, like immature male with few feathers of adult plumage intruding to like adult male with few feathers of immature plumage remaining, and with almost completely yellow eye and orange bill, full adult plumage gained in seventh year; female in first post-juvenile plumage more densely/heavily scalloped and barred ventrally than adult, black crown bordered around nape with narrow line of dark grey, retains typical brown plumage and dark bare parts and iris to third year, but by end of fourth year iris may be yellow with brown mottling.

Season Sept–Feb, peak in egg-laying Nov–Dec, fledging late Feb to early Mar, nesting cycle c. 3–4 months; display season Sept–Jan on Sarabah Range, earlier at some other localities. Polygynous, promiscuous male builds an avenue-type bower consisting of two walls of twigs and is 15 cm - 20 cm long and 30 cm high. The bower is decorated with shells, seeds, leaves and berries. Grayish blue and Pea Green are its favorite colors.

The male does not participate in nest building nor feeding the young. The nest, constructed by the female, is a shallow saucer of twigs and leaves, lined with leaves. It is often placed in a clump of mistletoe or a thin fork. The nest may be well away from the male's bower. Only the female incubates and cares for the young.

**Cool Facts:** While all male bowerbirds build bowers to attract female mates, the Regent bowerbird is unique in its ability to paint the objects in its bower. They mix a muddy grayish blue or pea green "saliva paint" in their mouths and use wads of greenish leaves as "paintbrushes" to help spread the substance. This is one of the few known instances of tools used by birds.

The male Regent Bowerbird's plumage can take from two to five years to develop to full maturity. The name commemorates the Prince Regent of the United Kingdom.



**Common Name:** Australian Magpie  
**Scientific Name:** *Gymnorhina tibicen*

**Size:** 14-17.3 inches (36-44 cm)

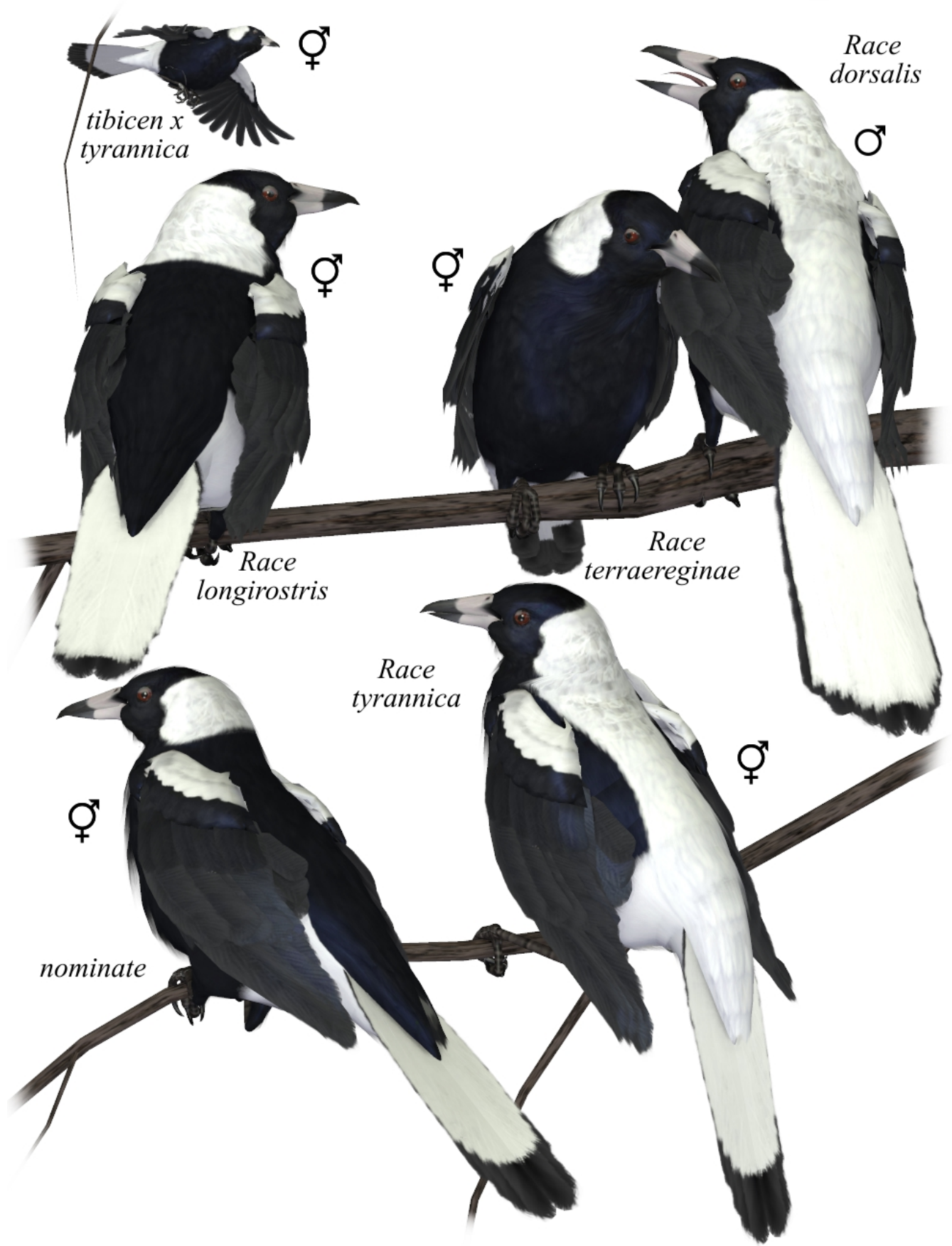
**Habitat:** Australia; The Australian Magpie is found in the Trans-Fly region of southern New Guinea, between the Oriomo River and the Princess Mariane Strait, and across most of Australia, bar the tip of Cape York, the Gibson and Great Sandy Deserts, and southwest of Tasmania. Birds taken mainly from Tasmania and Victoria were introduced into New Zealand by local Acclimatization Societies of Otago and Canterbury in the 1860s, with the Wellington Acclimatization Society releasing 260 birds in 1874. White-backed forms are spread on both the North and eastern South Island, while Black-backed forms are found in the Hawke's Bay region. Magpies were introduced into New Zealand to control agricultural pests, and were therefore a protected species until 1951. They are thought to affect native New Zealand bird populations such as the tui and kererū, sometimes raiding nests for eggs and nestlings, although studies by Waikato University have cast doubt on this, and much blame on the Magpie as a predator in the past has been anecdotal only. Introductions also occurred in the Solomon Islands and Sri Lanka, although the species has failed to become established. It has become established in western Taveuni in Fiji, however.

The Australian Magpie prefers open areas such as grassland, fields and residential areas such as parks, gardens, golf courses, and streets, with scattered trees or forest nearby.

**Status:** Least Concern. **Global population:** 10,400,000 mature individuals with an increasing population trend. In general, evidence suggests the range and population of the Australian Magpie has increased with land-clearing, although local declines in Queensland due to a 1902 drought, and in Tasmania in the 1930s have been noted; the cause for the latter is unclear but rabbit baiting, pine tree removal, and spread of the Masked Lapwing (*Vanellus miles*) have been implicated.

**Diet:** Invertebrates; especially terrestrial insects, small vertebrates (including frogs, lizards, small birds and small mammals). It will eat carrion if available, or take insects present on a carcass.

It forages in groups, with its members spreading out over a quite large area, rather than feeding close together. It mainly feeds on ground, by gleaning the surface or probing with its long bill. It turns over litter, leaves and stones, also stands at base of trees and probes into loose bark on trunks. It walks slowly across foraging area, looking for prey on the surface. It can hear subsurface prey, and probes for beetles in soil following auditory cues. Smaller prey are consumed immediately while larger items are held, shaken and bashed against the ground, or may be held with its feet and torn apart. Magpies have been seen caching food. Birds will also take handouts from humans and will often venture into open houses to beg for food.



season some individuals become aggressive towards any intruders, including humans, which venture too close to their nest sites. The nest is a platform of sticks and twigs (occasionally wire), with a small interior bowl lined with grass and hair. The nest is constructed in the outer branches of a tree, up to 15 m above the ground. Some Australian Magpies can be very aggressive during breeding season and attacks on humans and pets can occur.

**Cool Facts:** The Australian Magpie has one of the world's most complex bird songs.

Australian Magpies are common and conspicuous birds. Groups of up to 24 birds live year round in territories that are actively defended by all group members. The group depends on this territory for its feeding, roosting and nesting requirements.

There are currently thought to be nine subspecies of the Australian Magpie, however there are large zones of overlap with intermediate forms between the taxa. There is a tendency for birds to become larger with increasing latitude, the southern subspecies being larger than those further north the exception being the Tasmanian form which is small. The original form known as the Black-backed Magpie and classified as *Gymnorhina tibicen* has been split into four black-backed races:

Papuan Group:

- *G. t. papuan*. The Papuan Australian Magpie is found southern New Guinea (south of the Trans-Fly region from Princess Marianne Strait eastward to the Oriomo River). The adult male has a mostly white back with a narrow black stripe, and the female a blackish back; the black feathers here are tipped with white similar to subspecies *dorsalis*. It has a long deep bill resembling that of subspecies *longirostris*.

Black-backed Group:

- *G. t. tibicen*. First reported by John Gould in 1837. The Black-backed Australian Magpie (the nominate form) is a large subspecies found in southeastern Queensland, from the vicinity of Moreton Bay through eastern New South Wales to Moruya, New South Wales almost to the Victorian border. It is coastal or near-coastal and is restricted to east of the Great Dividing Range.
- *G. t. terraereginae*. First reported by Gregory Mathews in 1912. It is found from Cape York and the Gulf Country southwards across Queensland to the coast between Halifax Bay in the north and south to the Mary River, and central and western New South Wales and into northern South Australia, is a small to medium-sized subspecies. The plumage is the same as that of subspecies *tibicen*, although the female has a shorter black tip to the tail. The wings and tarsus are shorter and the bill proportionally longer. Its subspecies name a Latin translation, terra "land" reginae "queen's" of "Queensland". Hybridization with the large white-backed subspecies *tyrannica* occurs in northern Victoria and southeastern New South Wales; intermediate forms have black bands of varying sizes in white-backed area. Three-way hybridization occurs between Bega and Batemans Bay on the New South Wales south coast.

- *G. t. eylandtensis*. First reported by H. L. White in 1922. The Top End Magpie is found from the Kimberley in northern Western Australia, across the Northern Territory through Arnhem Land and Groote Eylandt and into the Gulf Country. It is a small subspecies with a long and thinner bill, with birds of Groote Eylandt possibly even smaller than mainland birds. It has a narrow black terminal tailband, and a narrow black band; the male has a large white nape, the female pale gray. It intergrades with subspecies *terraereginae* southeast of the Gulf of Carpentaria.
- *G. t. longirostris*. First reported by Alex Milligan in 1903. The Long-billed Magpie is found across northern Western Australia, from Shark Bay into the Pilbara. It is a medium-sized subspecies with a long thin bill. Milligan speculated the bill may have been adapted for the local conditions, slim fare meaning the birds had to pick at dangerous scorpions and spiders. There is a broad area of hybridization with the western *dorsalis* in southern central Western Australia from Shark Bay south to the Murchison River and east to the Great Victoria Desert.

White-backed Group. The White-backed Magpie, originally described as *Gymnorhina hypoleuca* by John Gould in 1837, has also been split into races:

- *G. t. tyrannica*. First reported by Schodde and Mason in 1999. A very large white-backed form found from Twofold Bay on the New South Wales far south coast, across southern Victoria south of the Great Dividing Range through to the Coorong in southeastern South Australia. It has a broad black tail band.
- *G. t. telonocua*. First reported by Schodde and Mason in 1999. It is found from Cowell south into the Eyre and Yorke Peninsulas in southern South Australia, as well as the southwestern Gawler Ranges. Its subspecific name is an anagram of *leuconota* "white-backed". It is very similar to Race *tyrannica*, differing in having a shorter wing and being lighter and smaller overall. The bill is relatively short compared with other magpie subspecies. Intermediate forms are found in the Mount Lofty Ranges and on Kangaroo Island.
- *G. t. hypoleuca*. The Tasmanian Australian Magpie is a small white-backed subspecies with a short compact bill and short wings, found on King and Flinders Islands, as well as Tasmania.

Western Group:

- *G. t. dorsalis*. First reported by A. J. Campbell in 1895. The Western Magpie is found in the fertile south-west corner of Western Australia. The adult male has a white back and most closely resembles Race *telonocua*, though it is a little larger with a longer bill and the black tip of its tail plumage is narrower. The female is unusual in that it has a scalloped black or brownish-black mantle and back; the dark feathers there are edged with white. This area appears a more uniform black as the plumage ages and the edges are worn away. Both sexes have black thighs.

**Common Name:** Grey Currawong  
**Scientific Name:** *Strepera versicolor*

**Size:** 17-23 inches (44-57 cm)

**Habitat:** Australia; found across the southern part of Australia from the Central Coast region of New South Wales, occurring south of latitude 32°S southwards and westwards, from the vicinity of Mudgee in the north and southwest to Temora and Albury onto the Riverina and across most of Victoria and southern South Australia to the fertile southwest corner of Western Australia and the semi-arid country surrounding it. Outlying populations are found on the east coast of Tasmania and in the arid area where the Northern Territory meets South Australia and Western Australia. It is absent from King and Flinders Islands in Bass Strait. In general, the Grey Currawong is sedentary throughout its range, although it appears to be resident in the cooler months only in south Gippsland in eastern Victoria and the far south coast of New South Wales.

They are found in temperate forests to arid shrubland habitats. They favor Eucalyptus forests and woodlands, mallee woodlands and shrublands with spinifex as understory. They may occur in farmlands near forests, and in exotic pine plantations.



**Status:** Least Concern to Critically Endangered. **Global population:** 4,910,000 mature individuals with a stable (declining in arid areas) population trend. Unlike its more

common relative, it has adapted poorly to human impact and has declined in much of its range. The Grey Currawong appears to have declined across its distribution; formerly common, it became scarce in northern Victoria in the 1930s, and in northeastern Victoria in the 1960s. Habitat destruction has seen it decline in southeastern South Australia around Naracoorte and from many areas in the Western Australian wheat belt. It also became rare in the Margaret River and Cape Naturaliste regions after 1920, and vanished from much of the Swan Coastal Plain by the 1940s. One place which has seen an increase in numbers is the Mount Lofty Ranges in the 1960s. The species has never been common in the Sydney Basin and sightings have been uncommon and scattered since the time of John Gould in the early 19th century. The status of the species is uncertain in the Northern Territory, where it may be extinct. It has been classified as Critically Endangered there pending further information.

**Diet:** An omnivorous and opportunistic feeder, preying on many invertebrates, such as snails, spiders and woodlice, and a wide variety of insects including beetles, earwigs, cockroaches, wasps, ants and grasshoppers, and smaller vertebrates, including frogs, lizards such as the Bearded Dragon as well as skinks, rats, mice, and nestlings or young of Tasmanian Native-hen, Red Wattlebird, Eastern Spinebill, House Sparrow and Splendid Fairywren.

It also eats a wide variety of plant material is also consumed, including the fruit or berries of *Ficus* species, *Leucopogon* species, *Exocarpos* species, a cycad, a mistletoe, and *Cotoneaster* species. *A. pinifolium* is especially popular, and one observer noted that the normally noisy birds became quiet and sluggish when eating it, prompting him to wonder whether the plant had a narcotic effect on the birds.

Foraging takes place on the ground, or less commonly in trees or shrubs. Most commonly birds probe the ground for prey, but sometimes they chase more mobile animals. It has been recorded wedging its bill under a rock to overturn and lift it, as well as removing insects from parked cars. The Grey Currawong usually swallows prey whole, although one bird was observed impaling a rodent on a stick and eating parts of it, in the manner of a butcherbird.

**Nesting:** Sexes are similar with the male being larger and darker than the female. The nominate race is mostly mid-gray, with a blackish face, forecrown and throat. It has white under tail-coverts and tail tip. The upper wing appears mostly gray, with white tips on the flight-feathers. In flight, the wings appear blacker and there is a conspicuous patch formed by white area across bases of flight-feathers (visible from above and below). The iris is yellow, the bill black and the legs dark gray or black. The juvenile is much browner than the adult, with the body plumage appearing softer and looser. The face and throat are not so dark, and there are buff streaks and mottling on the head, neck and upper chest. The white markings of the wing are similar to adult, with pale fringes on the upper wing-coverts (forming a distinct buff wing bar). The bill is black with a pale yellow tip and paler base of lower mandible. The gape is yellow and the iris is a light brown. The immature is like the adult, but its head, neck, body and tail appear



browner, and it may retain some streaking on the throat, upper breast, and wing as with the juvenile. The gape remains yellow during first year, and the iris turns yellow.

Egg laying occurs from July to December, varying with locality. Fledglings have been seen until mid-February. Currawongs appear to be monogamous and the pair maintains their territory year round. The nest built mostly by the female, with some assistance from male. It is a shallow untidy bowl made with sticks. The inner cup is lined with grass, plant fibre, fine twigs and rootlets, and usually placed high in a tall eucalyptus tree, often in fork at end of long branch in outer canopy. The clutch is usually 2–3 eggs. Incubation by performed by the female alone, who is fed on the nest by the male for about 23 days. Once hatched, the chicks are fed by both sexes, and leave nest at about 32 days. They remain with their parents until the next breeding season.

**Cool Facts:** One of three currawong species in the genus *Strepera*; it is closely related to the butcherbirds and Australian Magpie of the family *Artamidae*.

Races differ mainly in size, bill shape, color tone of body plumage, the width of pale tail tip, and the amount of white in the wing.

#### Gray Group:

- *S. v. versicolor*. The nominate subspecies is found in southeastern New South Wales (from the Hunter River) South, inland to the western slopes of the Great Dividing Range, to west Victoria (Grampians and, on coast, to Port Phillip Bay).
- *S. v. plumbea*. It is found from southwestern Western Australia (South from Geraldton) eastward, discontinuously, to extreme southwestern Northern Territory (Petermann Ranges) and western South Australia (Musgrave and Everard Ranges, and in Great Victoria Desert). It is very much like the nominate, but the plumage is slightly darker, and the bill tends to be slightly deeper with a more decurved upper mandible.

#### Clinking Group:

- *S. v. arguta*. It is found in northern and eastern Tasmania (east of line joining Devonport and Hobart). It is larger, longer-billed and much darker than the nominate. A dark sooty-gray, with faint dull gray tips to the remiges and little gray at the base of the tail. It has a large white wing patch, and more white on the tail tip.

#### Black-winged Group:

- *S. v. melanoptera*. It is found in southeastern South Australia (the southern Flinders Ranges southward to Fleurieu Peninsula and the Mt. Lofty Ranges) eastward to mallee areas of northwestern Victoria. It is similar in size and bill shape to the nominate, but the plumage is darker (very much like *intermedia*), and there is slightly less white in the tail. The upper wing is mostly blackish, lacking white tips of flight-feathers and white primary patch (sometimes there is indistinct greyish at bases of the inner webs). The wing-coverts are darker than the nominate subspecies.

Brown Group:

- *S. v. intermedia*. It is found in South Australia from Ooldea eastward along the coast (south of Nullarbor Plain) to Yorke Peninsula. It is the smallest race; the bill shape is like that of the nominate, but the plumage is darker.

Kangaroo Island Group:

- *S. v. halmaturina*. It is found on Kangaroo Island, off South Australia. It is very similar to *melanoptera*, but slightly darker, sooty-black, with the bill longer and less broad; the white on the tail tip is narrow.

**Common Name:** Australian Raven  
**Scientific Name:** *Corvus coronoides*

**Size:** 18-21 inches (48-54 cm)

**Habitat:** Australia; Endemic--not common throughout eastern, southern Australia and southern Western Australia (the populations being connected by a narrow strip across the Nullarbor Plain) but is found in the far north. It has adapted very well to human habitation in some cities and is a common bird in urban Sydney, and Rottnest Island.

It is omnivorous and has adapted well to urban environments and is a common city bird in Sydney and Canberra.



**Status:** Least Concern. **Global population:** 7,870,000 mature individuals. It has increased in range and numbers with spread of agriculture, artificial water sources in range lands, and urbanization. It has benefited from artificial food sources, and is common in developed habitats. It is considered a pest species in sheep-rearing lands, orchards, around poultry and in cities, and consequently is legally unprotected and is

persecuted by shooting, trapping and poisoning in farmland (with little apparent effect on numbers).

**Diet:** Omnivorous predator and scavenger; strongly carnivorous. Feeds mainly on invertebrates, small birds, eggs, nestlings, small mammals and carrion; occasionally frogs and lizards, rarely fish. Also seeds, some fruit, other plant material, occasionally nectar. Sometimes attacks weak or dying lambs.

It is opportunistic in nature, feeding mainly on the ground in open habitats, occasionally in trees. It forages mainly by walking and gleaning from the ground or low vegetation, occasionally snatching prey from foliage or in the air. It commonly patrols roads, sheep paddocks, rubbish dumps and parks for carrion and refuse. It often dunks carrion and household food scraps in water before eating. It may cache or bury leftover food, later retrieving those stored items. It forages singly, in pairs and in family parties. Sometimes it is seen in small flocks in non-breeding season.

**Nesting:** A large crow with a stout bill and long, lanceolate throat hackles. It has tapered wings and a rather long, slender tail in flight. Sexes are alike. The plumage is entirely glossy black, with a sometimes gray feather base on the head and neck. Its iris is white and the bill is black. Legs are black. Juveniles are duller than adults, with shorter hackles, pink gape and gular skin. The eyes are blue-gray (fledgling) to brown. Older immatures (in 2nd-3rd year) have brown eyes, becoming hazel.

Breeding season is from July to September. Ravens always nest in tall trees, never near to the ground as some species do. Nests are generally large and untidy, consisting of a bowl or platform of sticks lined with grasses, barks, and feathers. A clutch can comprise 3–6 eggs, though usually 4 or 5 are laid. Measuring 45x30 mm (1¾ x 1¼ in), eggs are pale green or bluish-green splotched with darker olive, brown and blackish markings. Incubation of the eggs is done solely by the female over roughly 20 days. Only one brood is raised per year. Fledged by 45 days and staying with parents for about four months after that.

**Cool Facts:** One of three Australian species commonly known as “ravens”. It is a more slender bird than the Common Raven of the Northern Hemisphere but is otherwise similar. It can live up to 22 years.

- *C. c. coronoides*. The nominate subspecies is found in eastern and southeastern Australia, including some major offshore islands (e.g. Kangaroo Island, in South Australia).
- *C. c. perplexus*. It is found in southwestern Australia. Race *perplexus* is slightly smaller than nominate, and has slightly shorter hackles.

**Common Name:** Apostlebird  
**Scientific Name:** *Struthidea cinerea*

**Size:** 13 inches (29-33 cm)

**Habitat:** Australia; Endemic--range is across inland eastern Australia, from the mallee regions of northern Victoria and eastern South Australia, north through New South Wales and central-western Queensland to the Gulf Country. There is an isolated population in the Northern Territory.

It prefers dry, open woodland is the preferred habitat, especially Callitris in New South Wales and Casuarina in Queensland, and Lancewood-Bulwaddi communities in the Northern Territory. It is bold and tame around modified habitat such as farms, camping and picnic grounds and country cemeteries.



**Status:** Least Concern. **Global population:** 3,950,000 mature individuals with a stable population trend. Widespread, and locally fairly common. Its range has expanded to the north, but with significant declines in east and southeast, where clearance for agriculture has destroyed woodland habitat. The main threats, in addition to habitat loss,

are fire and the disruption of breeding by drought and increasing aridity, which prevent the building of mud nests. Wildfires, as well as man-made "fuel-reduction burns" remove understory vegetation and the ground litter on which this species depends on. It has been able to co-exist with humans in well-wooded farmlands and on the fringes of country towns. It occurs in many national parks and other protected areas.

**Diet:** Primarily seeds and insects. It has been known to take eggs from nests of other birds, and small mammals.

It forages on the ground, and occasionally in low vegetation. It feeds on insects flushed from the ground or from vegetation. It rakes through leaf litter, and scratches with its bill around grasses or shrubs; extracts seeds from cones of native cypress-pine, and takes insects from beneath bark. It uses its bill to hammer at hard-shelled insects or seeds. Once, during a plague of house mice, both this species and White-winged chough (*Corcorax melanorhamphos*) seen to chase mice from under grass tussocks, grab them by the neck, and beat the victims against ground before consuming them. Forages as a group; in non-breeding season, aggregations of up to 100 individuals may form at water or where food is abundant.

**Nesting:** A distinctive bird with rather pointed feathers on head and neck giving it shaggy appearance. It has a long dark tail and a short, deep bill similar to that of a finch. Sexes are alike. The nominate race has its head and body gray; its feathers with dark shaft streaks and paler edges, the lores and ear-coverts are blackish while the breast is a paler gray. The wings are brown and the tail is black with a greenish gloss. The iris is grayish with a thin pearly outer ring. The iris becomes reddish-brown when excited. The bill and legs are black. The juvenile is similar to the adult, but the feathers on the head and body are softer, with a looser texture, and the streaking less marked. The iris is brown.

Apostlebirds are a communal species with each family group generally containing only one breeding pair, the rest being their helper offspring. All family members help construct a mud nest, and share in incubation of the eggs. Once the eggs are hatched, all members of the family group also help feed the chicks and keep the nest clean.

Breeding season is from August to December. The nest is a deep cup-shaped structure made of grasses held together with mud or sometimes manure in a tree fork up to seven or eight meters above the ground. Three to five pale blue-white eggs sparsely blotched with brown and lavender shades are laid and area tapered oval in shape

**Cool Facts:** Apostlebirds often travel in groups of about 12; for this reason they were named after the Biblical apostles, the twelve chief followers of Jesus Christ. They also tend to perch closely to each other creating an avian version of DaVinci's "Last Supper". The species travel in family groups of between 6 and 20, which may coalesce with other family groups into large feeding flocks of over 40.



Due to their gregarious nature, and harsh scolding and grating calls, they have developed a plethora of other colloquial names. They are also known locally as “Lousy Jacks” (due to heavy louse infestations), “Happy Jacks”, “Happy Families”, “Grey Jumpers” and the “CWA Birds”. The latter name is derogatory, referring to the supposed resemblance of the bird’s constant chatter to a “Country Women’s Association” meeting.

- *S. c. dalyi*. It is found in northern Northern Territory (mainly south of the Roper River) and northern and north-central Queensland, in northern Australia. Race *dalyi* is slightly larger than the nominate, has a larger bill, is darker and more streaked above and paler gray ventrally.
- *S. c. cinerea*. The nominate subspecies is found in central and southern Queensland, inland New South Wales, northern Victoria (along Murray River) and eastern South Australia (mainly north of Murray River).

**Common Name:** Australasian Pipit  
**Scientific Name:** *Anthus novaeseelandiae*

**Size:** 6¼ -7½ inches (16-19 cm)

**Habitat:** Australasia; Australia, New Zealand and New Guinea.

It is a bird of open habitats such as grassland, farmland, roadsides, dry river beds, sand dunes and open woodland.

**Status:** Least Concern. **Global population:** 21,700,000 mature individuals with a stable population trend. The birds' numbers have declined in parts of New Zealand due to the improvement of pastures, use of pesticides and predation by introduced species.

**Diet:** It forages on the ground for small invertebrates such as beetles, spiders and insect larvae. It will also eat seeds such as those of grasses.



**Nesting:** A large, slender-billed pipit with streaked under parts. Sexes are alike. Nominate race has narrow white supercilium, dark eyestripe faint in front of eye, broad and prominent behind eye, narrow dark moustachial and malar stripes, whitish submoustachial stripe; ear-coverts pale brown or fawn; fulvous-brown above, feathers with blackish centers and buff-cinnamon margins, giving streaked and mottled

appearance, rump almost plain; remiges dark brown, edged fulvous, greater wing-coverts and inner secondaries broadly margined fulvous-white; tail brown, T5 with white outer web and distal half of inner web, T6 mostly white; white throat and foreneck; neck side and breast fulvous-white, mottled dark brown, abdomen, flanks and undertail-coverts white, flanks lightly streaked dark; iris dark brown; bill pale to dark brown, or horn, lower mandible with pinkish or horn base; legs pale pinkish-brown to yellowish-brown. Juvenile resembles adult.

The breeding season begins in August. The cup-shaped nest is placed at the base of vegetation or in the shelter of a stone. It is made of grass and built by the female. Two to five eggs are laid, three or four being most common. They are buff-white with brown blotching and are incubated for 14 to 15 days. The young birds are fed by both parents and are able to fly after 14 to 16 days.

**Cool Facts:** It was formerly lumped together with the Richard's, African, Mountain and Paddyfield Pipits in a single species: Richard's Pipit, *Anthus novaeseelandiae*. Some authors split the Australasian Pipit further into two species: Australian Pipit (*Anthus australis*) in Australia and New Guinea and New Zealand Pipit (*Anthus novaeseelandiae*) in New Zealand.

#### Australian Group:

- *A. n. exiguus*. It is endemic to east-central New Guinea. It is similar to *rogersi*, but with deeper and duller black markings.
- *A. n. rogersi*. It is found in coastal northwestern Australia east to Cape York Peninsula. It is smaller, with proportionately long tarsus, cold medium dun-brown above, the remiges are edged brownish-cream, the breast heavily spotted blackish. The spots may extend to the upper belly.
- *A. n. australis*. It is found in west-central, central and southeastern Australia. It is medium to large, with a proportionately short tarsus. It is dull tawny to sandy brown above, the remiges are edged brownish-cream, it has moderate to sparse streaking on the breast which rarely extends to the flanks and upper belly.
- *A. n. bilbali*. It is found in southwestern Western Australia and south-central South Australia. It is large, with a proportionately short tarsus. It is dull tawny-brown above, the remiges are edged brownish-cream with russet cast. The inner rectrices are edged tawny above, the breast and belly are a deep cream. There is heavy breast streaking sometimes extending to the upper belly and flanks.
- *A. n. bistratus*. It is found in Tasmania, and the islands in the Bass Strait (King Island and Flinders Island). It is large, with a proportionately long tarsus and deep tawny-brown above, the remiges are edged brownish-cream with russet cast. The inner rectrices are dusky with tawny edges, the breast and belly are cream colored, and the breast streaking rarely extends to the belly and flanks.

#### New Zealand Group:

- *A. n. novaeseelandiae*. The nominate subspecies is endemic to New Zealand.
- *A. n. chathamensis*. It is endemic to the Chatham Islands. It differs from the nominate in having buffier feather edging and underparts.

- *A. n. aucklandicus*. It is endemic to Auckland Island and the Campbell Islands. It is more fulvous above and below, with almost no white on the underparts. It has a more stout bill and the supercilium is obscure.
- *A. n. steindachneri*. It is endemic to the Antipodes Islands. It is more tawny than *aucklandicus*, dark brown with light brown feather edging above, the outer half of T5 and T6 are cream. The throat and breast are cream colored with a few brown streaks, and the abdomen is light pinkish-brown.

**Common Name:** Australian Reed-warbler  
**Scientific Name:** *Acrocephalus australis*

**Size:** 5.9-6.3 inches (15-16 cm)

**Habitat:** Australia; throughout Australia where there is suitable habitat and is also found from New Guinea to south-eastern Africa.

Predominantly swamps and lake edges, springs, streams, dams, bore drains, sewage ponds and clay-pans; also irrigated crops and Pandanus. Breeds chiefly in stands of reed and reedmace. It has been seen nesting in pampas grass, and in such trees as willow, mulberry, paperbark, also in bushes, bamboo and stands of weeds, sometimes away from any water.

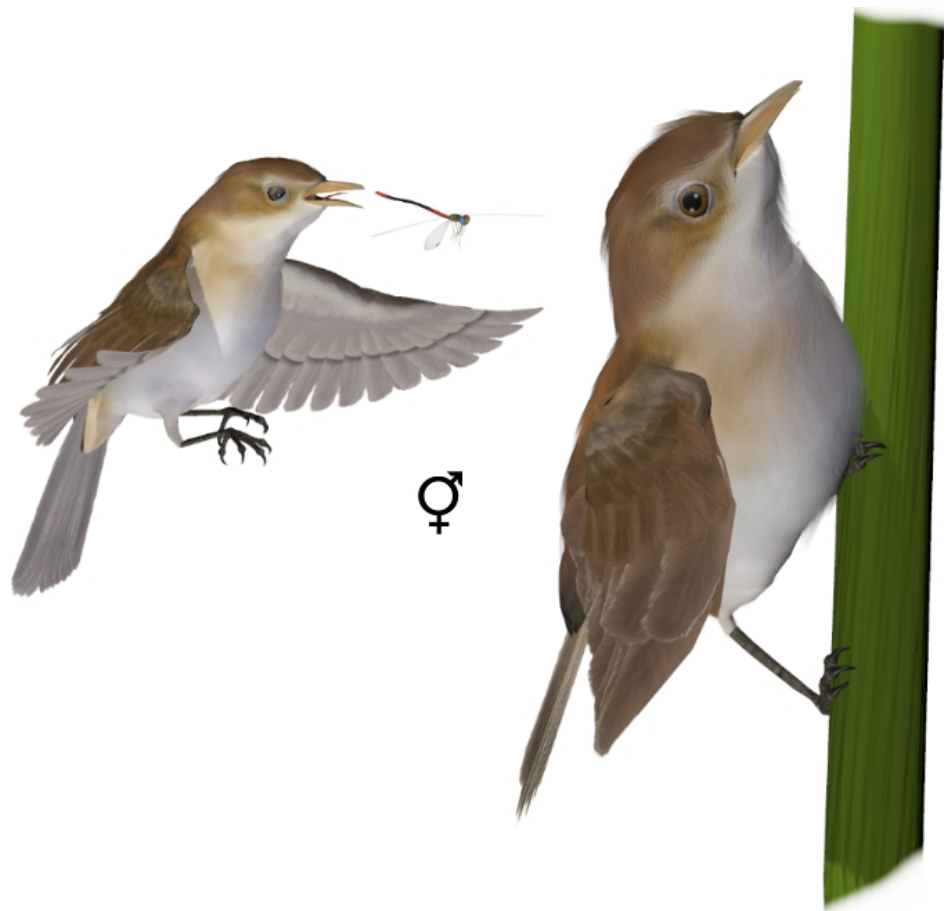
**Status:** Least Concern.

**Global population:**  
24,600,000 mature individuals with a stable population trend. Locally abundant, with very high breeding density. Vulnerable to habitat destruction by burning, clearance and drainage. On the other hand, benefits from the creation of small irrigation and stock dams, which are widespread in the agricultural landscape of Australia.

**Diet:** Insects, including dragonflies and damselflies, Diptera, orthopterans (grasshoppers, locusts), coleopterans (water beetles, scarab beetles, weevils), bugs and spiders.

It forages in dense vegetation such as reedbeds, reedmace, and adjacent shrubs, trees, crops and paddocks.

**Nesting:** Overall brown, unstreaked and nondescript. Sexes are alike. The nominate race has pale buff supercilium extending from nostril region backwards over eye to the



sides of the nape. The lores are dusky brown, the ear-coverts are mostly buff or whitish-buff, grading darker towards the back, and sometimes with whitish shaft lines. It is otherwise plain olive-brown above, darker on the head, and the wings and tail a darker brown. It is buff white below, whiter on the throat and center of the belly, and more cinnamon-buff on the breast sides and flanks. The iris is dark, the bill brown (paler below) and the legs a black-brown. The juvenile is a darker brown than the adult.

It is monogamous and partially polygynous. The nest is built by both sexes, but the female does the majority of the work. She builds a deep cup nest with a narrow top opening in among dense reeds. It is made from dry reeds and other water plants woven together and lined with fine dry grass and feathers. The female incubates the eggs.

**Cool Facts:** The Australian Reed-Warbler's nest, which is made from and attached to reeds, is designed to keep the eggs from rolling out even when the reeds are bent down by high winds.

- *A. a. sumbae*. First reported by Alfred H. Everett in 1896. It is a resident in the South Moluccas (Buru), the central and eastern Lesser Sundas (Sumba, Timor) extending eastwards into Australasia. It breeds across West Papua (including records from the Vogelkop Mountains, Wissel Lakes, Baliem Valley, Mamberamo and Noord Rivers), and throughout but local in Papua New Guinea (very few records in the northern lowlands), the Bismarck Archipelago (breeding records from New Britain, New Ireland, Umboi and Long), and the Solomon Islands, where known to breed on Buka, Bougainville, Isabel, and Guadalcanal. It is a dark and warm-toned compared to the nominate, with very short wings.
- *A. a. australis*. First reported by Gould in 1838. The nominate subspecies breeds throughout eastern Australia, from central Queensland south to southernmost Victoria and Tasmania, and west to South Australia and the Eyre Peninsula. The extent to which birds breed inland varies annually, and is dependent on the availability of artificial wetlands and irrigation schemes. In the non-breeding season, occupies a similar range, although at least birds move north (mostly abandoning southern sites entirely) to include the Top End in Northern Territory, the Gulf of Carpentaria, and the Cape York Peninsula, perhaps even to New Guinea, given occasional records on islands in the Torres Strait.
- *A. a. gouldi*. First reported by J. C. Dubois in 1901. It breeds in southwest Western Australia, occasionally as far east as Eyre Bird Observatory. It is commonest west of a line running between Bremer Bay in the southwest, and the Pilbara region in the northwest, generally moving north in the non-breeding season (although resident in some areas). Compared to the nominate, it is slightly darker, and more richly toned when fresh (but perhaps indistinguishable when worn), especially the mantle, scapulars, and fringes to the wing-coverts tertials and alula. Underparts slightly darker with an extensive cinnamon-buff wash, particularly on the breast-sides and flanks. There are also slight morphometric differences between the two Australian subspecies, with *gouldi* having a slightly longer wing and tail, and a longer, broader-based bill.

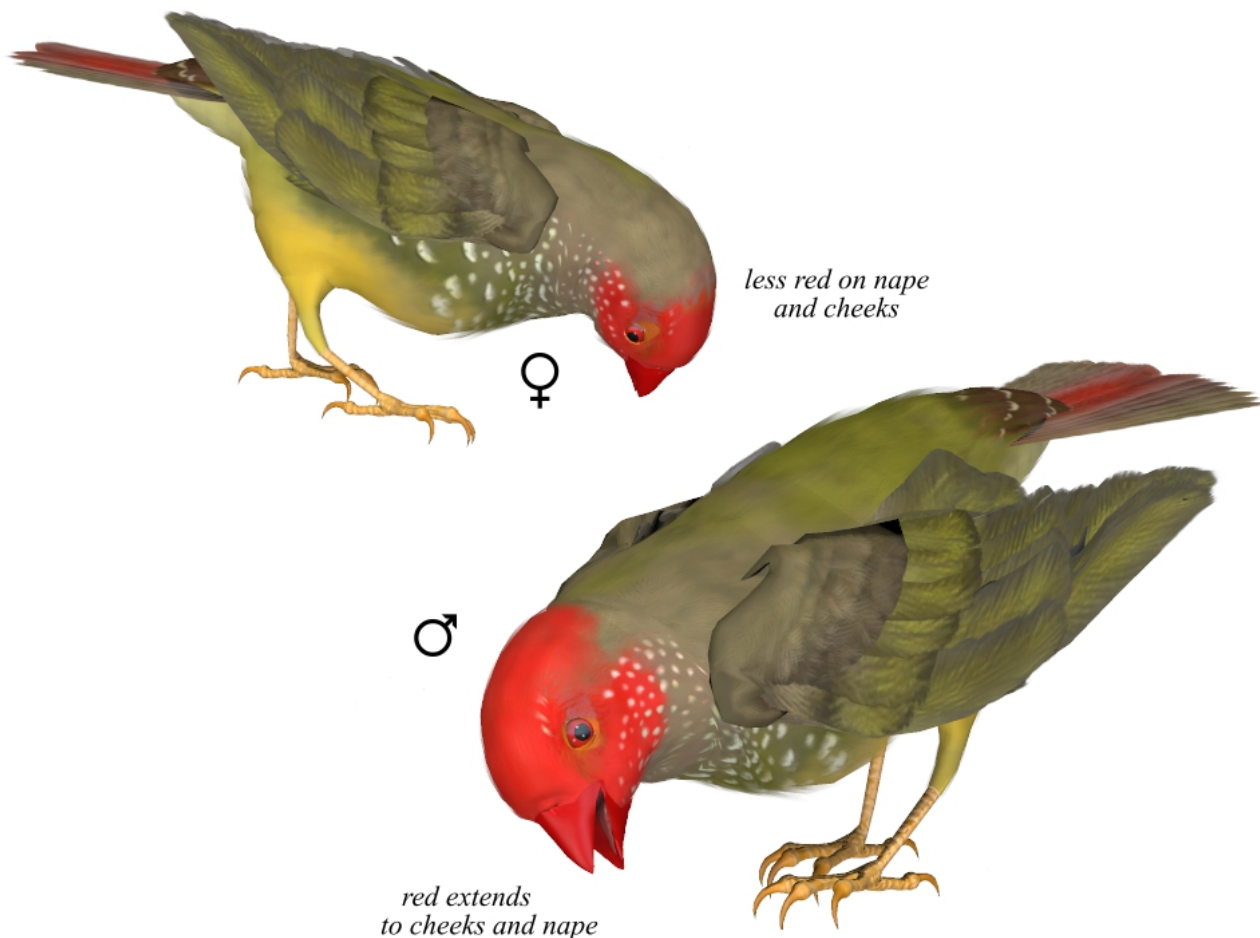
**Common Name:** Star Finch

**Scientific Name:** *Neochmia ruficauda*

**Size:** 4 ½ inches (12 cm)

**Habitat:** Australia; Endemic to Northern Australia. They occur from Shark Bay to Northern New South Wales. They now have spread to the Gulf of Carpentaria, mostly on the western side.

They inhabit damp grassland and sedge areas with scattered shrubs or trees, tall grass and rushes in swamps and watercourses, sandflats, rice and sugar-cane fields, also unburnt islands of grass and saltbrush on tidal salt pans; occurs also in grassy, open savanna-type sclerophyll woodland.



**Status:** Least concern to endangered in the wild. **Global population:** 3,380,000 mature adults with a decreasing trend. The habitats of Star Finch are threatened by overgrazing



of grasslands, removing essential cover, as well as sources of food. Selective grazing of perennials during the dry season may also remove grasses that are needed for survival during the wet season. Burning of grassland during the dry season may reduce the fallen seed during the wet season and thus reduce the food supply needed by Star Finch. This species is also threatened by cage-bird trades. Conservation measures underway: Surveys were conducted to estimate the population and trends of the eastern subspecies *clarescens*. An understanding of the natural fire regime is being built up. All three subspecies are listed separately in the Action Plan for Australian Birds; race *ruficauda* is presumed extinct, race *clarescens* is listed as endangered and race *subclarescens* as near threatened.

**Diet:** Seeds, rich varieties of insects, and greens. When feeding, they tend to avoid landing on the ground preferring to grasp onto the seed heads of grasses. Their diet includes white ants, half-ripe and ripe grass seeds, fruit culture flies, and during the breeding season they prefer to eat seeds, rich varieties of insects, and greens. In captivity finches will feed on hard cooked chopped eggs, spray millet, soaked seed, mature legumes, grated cheese, cooked rice, a variety of fresh fruits, chopped dark greens or fresh fortified canary seed.

**Nesting:** The male of the nominate race has its forecrown, lores and face to the upper throat red with white dots above the eye and on the cheek. Its rear crown and nape are gray-olive from its back to its rump. The wing is gray-olive or dull brownish-olive, and the longer upper tail-coverts have contrasting pale pink to whitish subterminal spots with the rest of each feather being a purplish maroon or pinkish maroon. The same color extends on the central rectrices and part of the outer edges of the lateral rectrices with the outer pairs drabber on the tail. The breast and flanks are olive-gray with white spots (3–3.5 mm broad), the central belly is pale yellowish to greenish-white and the under tail-coverts are yellowish-white. The iris is orange to pale red with an orbital ring of orange-olive to red. The bill is red and the legs are orange-yellow. The female is similar but with less red on the head, and usually not extending beyond the forehead or upper chin. The juvenile is olive-green above, buff to whitish below, and has no red on the face, and no spots on the under parts. The iris is yellowish-brown and the bill is black.

During the breeding season males become territorial around the immediate nesting area. Compared to the Green Singing Finch, the Star Finch has a very cheerful song. Males perform a song and dance during courtship and while they are performing they are holding a grass stem in their bill. The males tend to ruff up the feathers on their head, flanks, and breast and have their tails twisted toward the female. A whole lot of bobbing is done during courtship and the males tend to sit close to the females to peer into her face.

Star Finches reach sexual maturity 12 months after hatching and can reproduce for up to five years. When in captivity they can produce three broods per year. The females lay three to six pure white eggs. The male and female incubate the eggs for about fourteen days. The fledglings color is a pale green on the underside, a dull green on the topside and dull gray on the tail. When the fledglings are 10-12 days old they begin to have their

first set of feathers. When they reach 21 days old they leave the nest for the first time but are still dependent on their parents. Thirty-five to forty-two days after hatching they will become fully independent.

**Cool Facts:** Despite the fact that the Star Finch has been listed as endangered in the wild, it is a common pet bird. This species has mutations such as the Yellow & Cinnamon varieties.

Star finches show tough-love parenting by throwing their young out of the nest when the fledglings refuse to eat the food given to them.

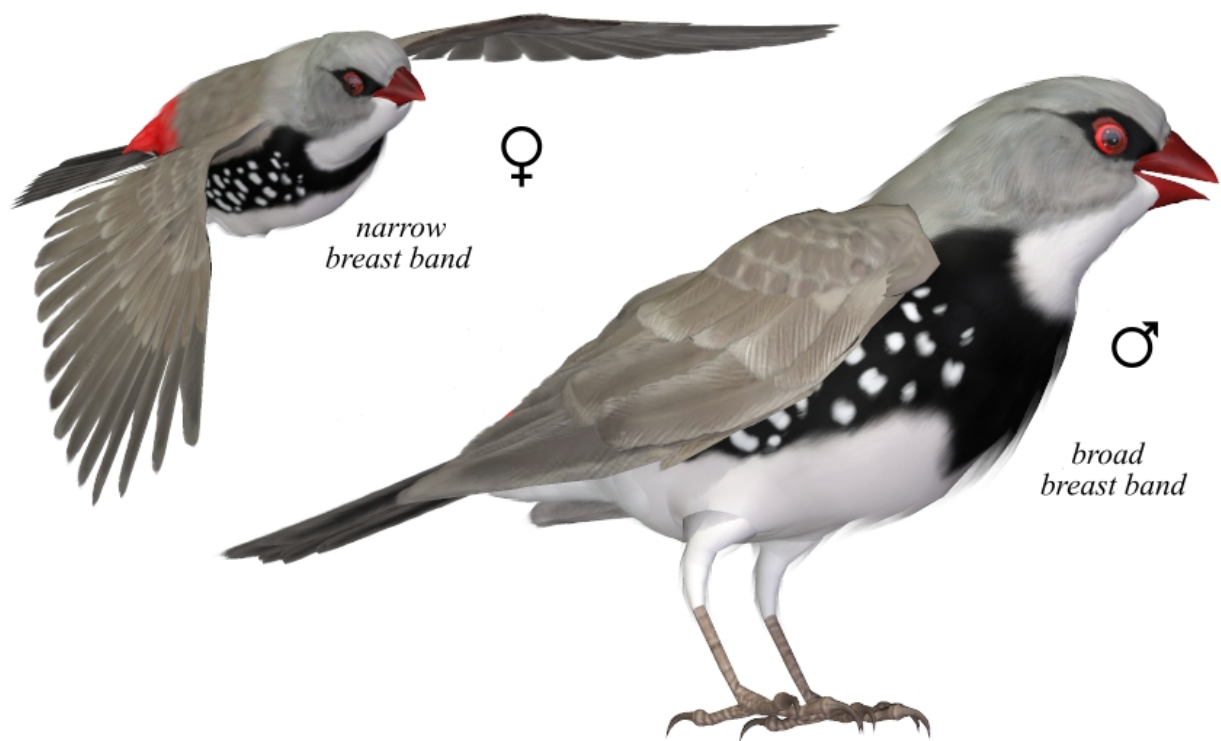
- *N. r. subclarescens*. It is found in western and northern Australia (disjunct Shark Bay to Gulf of Carpentaria). It is similar to race *clarescens*.
- *N. r. clarescens*. It is found in northern Western Australia (south to the Gascoyne river and lower Fitzroy drainage) east to the northern portion of Northern Territory (south to middle the Victoria river and middle McArthur river) and northern Queensland (Gulf of Carpentaria and Cape York Peninsula). It differs from the nominate in having more red on head (extending to its crown and upper throat), and being brighter, paler and more yellowish-olive on the upper parts, lower throat and breast. The flanks are mid-olive with smaller white spots (1–2 mm broad), and the rest of under parts are pale yellow, becoming whitish on vent. The female has the red of its head paler and more restricted to the anterior forehead, lores and anterior ear-coverts (and often the chin). The upper breast and flanks pale are olive-gray, and the lower breast to its belly and under tail-coverts are a pale yellowish-cream.
- *N. r. ruficauda*. The nominate race is found in west-central and coastal eastern Queensland.

**Common Name:** Diamond Firetail  
**Scientific Name:** *Stagonopleura guttata*

**Size:** 4-5 inches (10-13 cm)

**Habitat:** Australia; found in eastern Australia, from Eyre Peninsula, South Australia, to south-eastern Queensland, commonly found on the slopes of the Great Dividing Range. It is found in eucalypt forest and woodland and mallee country. It also can be found in farmlands, grasslands, parks and gardens. It occurs in more open habitat than that favored by the other firetails.

**Status:** Near threatened. **Global population:** 200,000 mature individuals with a decreasing population trend. Much habitat has been cleared, with remaining fragments gradually becoming unsuitable as a result of competition with invasive species, predation of adults or young, alteration of vegetation structure through over-grazing, weed invasion, salinisation and other flow-on processes. Despite legislation to stop the



large-scale clearing of habitat in New South Wales, 640,000 ha were approved for clearing in that state between 1998 and 2005 and, although not all of this will have been cleared, an unknown amount was cleared illegally. The severity of most degradation is correlated with the area of the fragment. Factors that have been postulated to be adversely affecting this species in particular include the loss of key food plants and habitat as a result of invasion by exotic grasses more suitable for flock-foraging Red-browed Finch (*Neochmia temporalis*), whose expansion in some areas may have

disadvantaged the Diamond Firetail. In the north of its range, a change in fire and grazing regimes may have played an important part in the decline. Isolated sub-populations may be susceptible to illegal trapping.

**Diet:** Ripe or partially ripe seeds. It will occasionally eat insects and their larvae.

It feeds mostly on the ground, where it hops around quickly. It takes seeds from flowering grassheads by jumping to nip at seed heads or physically perch on their stems. It forages mainly in flocks, often of up to 40 individuals. The flocks are larger in the autumn to early spring than in late spring and summer. It can be seen in large flocks of 150–300 or more individuals at plentiful food sources, predominantly in the non-breeding period. It is seen occasionally alone or in pairs, but more often mixed flocks with other finches.

**Nesting:** The male has a pale gray head with black lores and its mantle, back and upper wings being a brownish-gray. The rump and upper tail-coverts are red and the tail is black. The throat and upper breast are white. There is a broad black breast band, the sides of breast and flanks are black with large white spots. The belly and under tail-coverts are white. The iris is red to dark brown with a thick eye ring that is bright red. The bill is red and the legs are gray. The female is very much like the male, but the breast band is narrower, the eye ring is narrow and rose-red in color. The juvenile is similar to the adult, but with the breast band is gray, the flanks are barred gray and white. The bill is black, the eye ring is narrow and gray.

The Diamond Firetail builds a nest with green grass blades and stems and lines it with fine grasses and feathers. The nest can be found in trees and shrubs with dense foliage and has sometimes been known to build in the base of a hawk's nest. The nest is built by both partners but only the female does the weaving. Both partners incubate the eggs and care for the young. Usually only one clutch is laid per season

**Cool Facts:** During courtship, the male Diamond Firetail holds a long piece of green grass in his bill, then flies to a branch where he sits near the female and begins to bob up and down. When she approaches, he twists his neck around and opens his bill just like young begging for food.

**Common Name:** Mistletoebird

**Scientific Name:** *Dicaeum hirundinaceum*

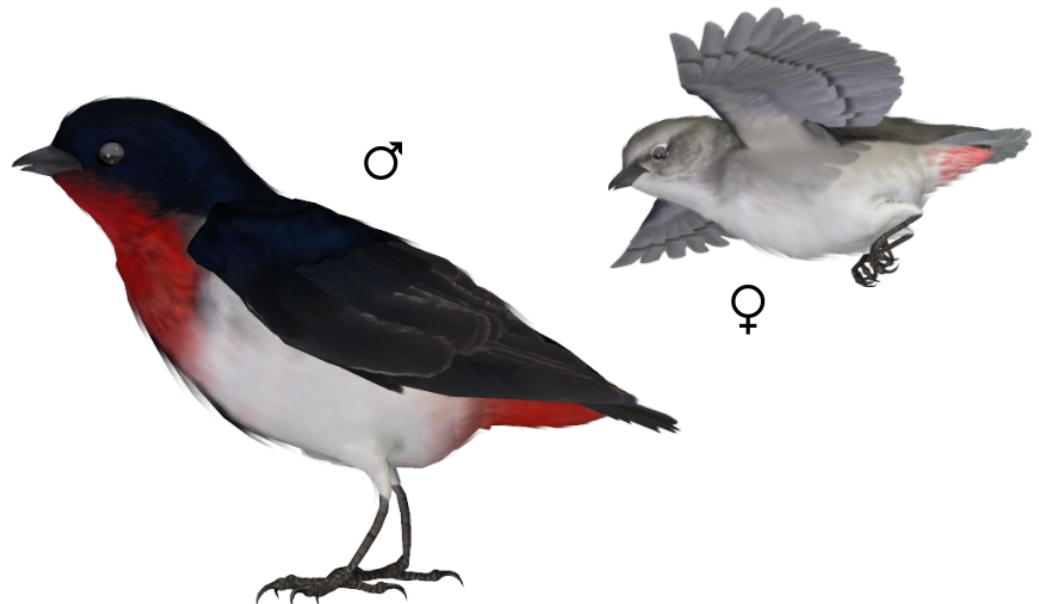
**Size:** 3.5 inches (9 cm)

**Habitat:** Australasia; found throughout mainland Australia. It is also found in Papua New Guinea and eastern Indonesia.

The Mistletoebird is found wherever mistletoe grows and is important in the dispersal of this plant species. It prefers forests, forest edges, sclerophyll and open savanna woodlands, and eucalypt woodland, including low mallee. It is also seen in mulga and other acacias, mangroves, scattered trees, riparian zones in arid areas, and secondary growth. It is generally found in lowland and middle elevations, and is rare above 1000 m in Snowy Mountains of Australia.

**Status:** Least Concern. **Global population:** 9,510,000 mature individuals with a stable population trend.

**Diet:** Mistletoe berries. The Mistletoebird is highly adapted to its diet of mistletoe berries. It lacks the muscular gizzard (food-grinding organ) of other birds, instead having a simple digestive system through which the berries pass quickly, digesting the fleshy outer parts and excreting the sticky seeds onto branches. The seed can then germinate quickly into a new plant. In this way, the Mistletoebird ensures a constant supply of its main food. It will also catch insects, mainly to provide food for its young.



**Nesting:** The adult nominate male has its head and upper parts violet-glossed blue-black. The throat and breast are scarlet with a broad blackish streak on the center of lower breast and belly. The flanks are gray, while the rest of abdomen is a gray-white. The under tail-coverts are scarlet. The iris is a gray, light brown, red or deep brown. The maxilla is blackish or dark gray, the mandible dark gray to brown and the mouth a salmon-pink (duller gray-pink in center). The legs are dark gray, dark brown or black.

The female is grayish brown above, grayish white below, with some darker mottling on the throat and breast. There are pale scarlet under tail-coverts with whitish tips (producing a scaled effect). Some individuals have a dark gray-brown central stripe on abdomen. The juvenile differs from the female in having a pink (not blackish) bill, and some slightly rufous, indistinct scaling on throat.

The Mistletoebird builds a silky, pear-shaped nest with a slit-like entrance, made from matted plant down and spider web, which is suspended from a twig in the outer foliage of a tree. The female alone builds the nest and incubates the eggs, while both sexes feed the young.

**Cool Facts:** In cold weather, the Mistletoebird can undergo torpor, which is the slowing down of bodily functions to conserve energy.

There are four subspecies:

#### Pink-breasted Group

- *D. h. keiense*. It is found on the Watubela Islands, the Tayandu Group and the Kai Islands, in eastern Indonesia. The adult nominate male is glossy purple-blue on its head and upper parts. It has a narrow red band on its breast, and pale pink-orange below with narrow black central belly-stripe. It has pale gray-green or olive-gray flanks, and whitish lower abdomen. The adult female has olive-brown head and upper parts with reddish-pink rump, and all-whitish underparts. The juvenile has an olive-gray head and orange base to its bill.
- *D. h. fulgidum*. It is endemic to the Tanimbar Islands. The male has a glossy blue-black head and upper parts, a scarlet breast and paler pink throat and belly, with broader black central belly-stripe. The female has a mid-gray head, upper parts and flanks, with indistinctly streaked white under parts, a deep crimson rump and pink vent.

#### Aru Group

- *D. h. ignicolle*. It is endemic to the Aru Islands. The adult male has its head and upper parts violet-glossed blue-black. The throat and breast are scarlet. There is a broad blackish streak on center of lower breast and belly. The flanks are olive-green, while the rest of abdomen is a dull yellowish. The under tail-coverts are scarlet. The female is grayish brown above, grayish white below, with some darker mottling on throat and breast. It has pale scarlet under tail-coverts with whitish tips (producing scaled effect). The juvenile resembles female but lacks any red on under tail-coverts and has an orange-red base to its bill.

#### Mistletoebird Group

- *D. h. hirundinaceum*. The nominate race is found in Australia (including islands in Torres Strait and Great Barrier Reef), except Tasmania.

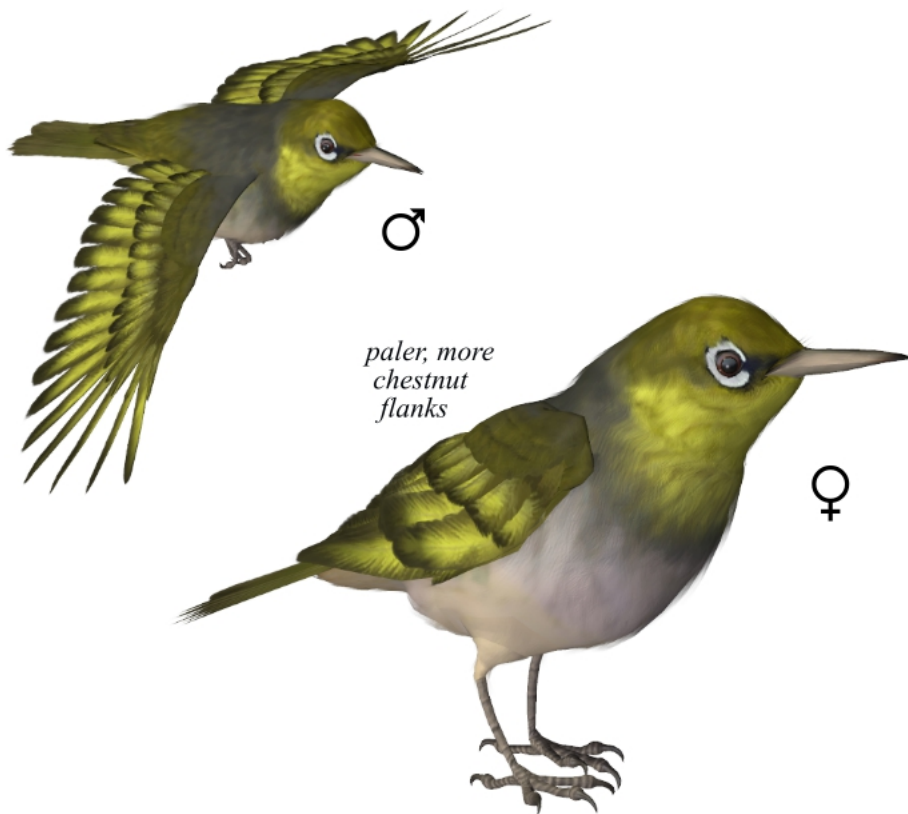
**Common Name:** Grey-backed Silvereye  
**Scientific Name:** *Zosterops lateralis*

**Size:** 4 - 4¾ inches (10-12cm)

**Habitat:** Australia; Endemic to Western Australia.

Silvereyes frequent a diverse range of habitat types, including wet and dry sclerophyll forest and woodland, rainforest, mallee shrubland, coastal heath, mangroves, farmlands, parks, gardens, orchards and vineyards. Some regional preferences are evident, with favored habitats including marri and coastal heath in Western Australia; manna gum and peppermint associations and red ironbark in the eastern States; *Banksia* and *Grevillea* shrublands; and fruiting trees and shrubs from suburbia and horticultural areas. Open savanna and arid areas are avoided.

**Status:** Least Concern to Threatened. **Global population:** 21,100,000 mature individuals with a stable population trend. Nationally protected, but locally unprotected in some States and regions due to the horticulture industry.



**Diet:** Insect prey and large amounts of fruit and nectar.

They puncture fruit with their sharp bills, creating small diamond-shaped holes and they lap at the flesh with their brush-tipped tongues. This makes them occasional pests of commercial orchards. Birds are seen alone, in pairs or small flocks during the breeding season, but form large flocks in the winter months

**Nesting:** Male nominate race has broad white eye ring broken at front by black loreal line, this continuing below eye ring. The top and side of head is bright yellowish-green. Its upper back and scapulars are gray, tinged with yellowish-green. The upper wing-



coverts, lower back, rump and upper tail-coverts are a yellowish-green. The remiges and rectrices are brown, with yellowish-green on outer webs. It is pale grayish-white below, and the throat and under tail-coverts are often with tinged yellow. The entire underside is sometimes darkened (to distinct gray), while the sides and flanks are a chestnut-brown. The under wing-coverts are white and the iris is brown. The bill is a yellow-horn color with a blackish tip and the legs are pale gray-brown. The female is like the male, but with the color of the sides and flanks less intense and more pale cinnamon-brown. Immatures resembles adults, but lack the white eye rings.

Silvereye pairs actively defend a small territory. The nest is a small, neatly woven cup of grasses, hair, and other fine vegetation, bound with spider web. It is placed in a horizontal tree fork up to 5m above the ground. The nest is constructed by both sexes, who both also incubate the bluish-green eggs. If conditions are suitable two to three clutches will be raised in a season.

**Cool Facts:** Although one of Australia's smallest birds, the Silvereye is capable of travelling great distances during migration, with Silvereyes from the most southerly regions of Tasmania travelling all the way up to Southern Queensland.

Silvereyes probably cause the greatest damage to Australian horticulture of any native bird. They frequently damage wine and table grapes, cherries, peaches, nectarines, plums, blueberries, apricots, apples, pears, tropical fruit, olives, tomatoes and capsicum. Losses are particularly severe when native nectar sources are unavailable and during migration when high-energy food sources are sought. Nectar and native fruit are preferred over horticultural crops but are often in short supply due to clearing of native vegetation, during dry seasons through lack of flowers, or in excessive wet periods when nectar may become diluted. Although variable, higher nectar yields often occur following warm autumns and springs. Cooler temperatures during nectar production also increase nectar yields.

Races differ mainly in color of back, throat and flanks, in wing formula (with migratory races having longest primary P2) and in size (larger on smaller islands):

- *Z. l. chloronotus*. It is found in southwestern and southern Western Australia (south from Point Cloates and Shark Bay, and from Wongan Hills) eastward (south of Nullarbor Plain) to southern South Australia. It is the smallest and most distinctive. It has its upper parts uniformly olive-green, the throat olive-yellow, the breast gray, and the flanks washed buff.
- *Z. l. vegetus*. It is found in northeastern Queensland (east Cape York Peninsula) in northeastern Australia. It is smaller than the nominate, with the throat and under tail-coverts a citrine-yellow and the tail relatively shorter than in other races.
- *Z. l. cornwalli*. It is found in east-central and southeastern Queensland and northeastern New South Wales. It has the general appearance close to nominate, but with the throat yellow, the under tail-coverts lemon, and the flanks gray or buffish.

- *Z. I. chlorocephalus*. It is found in the Capricorn Group (notably Heron Island) and the Bunker Group, in southern Great Barrier Reef, off southeastern Queensland. It is similar to *cornwalli* but very much larger, with the throat duller, and the flanks grayer.
- *Z. I. westernensis*. It is found in southeastern New South Wales (from the upper Lachlan River) south to eastern Victoria. It is intermediate between *cornwalli* and *pinarochrous*.
- *Z. I. pinarochrous*. It is found in southeastern South Australia, southwestern New South Wales and western Victoria. It differs from *westernensis* in somewhat duller head, paler and browner upper parts, a grayish throat and under tail-coverts, a gray breast, and pale rufous flanks.
- *Z. I. ochrochrous*. It is endemic to King Island (Western Bass Strait). It is shorter-billed than the nominate, also on average paler below.
- *Z. I. lateralis*. The nominate race is found on Flinders Island (Furneaux Group, in the eastern Bass Strait), Tasmania, Norfolk Island, New Zealand (both main islands, all smaller adjacent islands) and the Chatham Islands. Non-breeding birds are also seen in southeastern Australia.
- *Z. I. vatensis*. It is found north Vanuatu, the Banks Group and Torres Islands. It is large, with much gray on the back, more black below the eye, and a tendency towards blackening of forehead and crown in southern population.
- *Z. I. valuensis*. It is found on Mota Lava, in Eastern Banks Islands (in extreme northeastern Vanuatu). It is similar to *tropicus*, but has whole upper back green (sometimes some admixed gray).
- *Z. I. tropicus*. It is found on the Torres Islands, Banks Islands (except Mota Lava) and northwestern Vanuatu (Malo, Espiritu Santo). It is extremely similar to *tephropleurus*, but there is paler yellow on the under tail-coverts and a more slender bill.
- *Z. I. macmillani*. It is endemic to Vanuatu (Tanna and Aniwa islands).
- *Z. I. nigrescens*. It is endemic to Beaufort, Beupré, Ouvéa and Maré, in Loyalty Islands. It is intermediate between *griseonota* and *melanops*.
- *Z. I. melanops*. It is endemic to Lifou, in the central Loyalty Islands. It has rather gray back, most of the breast is distinctly gray, with dark olive colors, it differs from all others in having blackish on the forehead and the whole of forecrown.
- *Z. I. griseonota*. It is found in New Caledonia. It has a rather grayish breast, and an inconspicuous brownish wash on the flanks.
- *Z. I. flaviceps*. It is endemic to the Fiji Islands (main islands and all adjacent smaller islands from Vanua Levu and Taveuni south to Viti Levu and Kadavu; also Koro, Gau and Moala). Race *flaviceps* is very similar to *griseonota* and *tropicus*.
- *Z. I. tephropleurus*. It is endemic to Lord Howe Island off of eastern Australia. It closely resembles *cornwalli*, but differs in having a more robust build, slightly heavier and longer bill, larger feet and claws, slightly paler yellow on the chin and throat, slightly richer yellow on the under tail-coverts.

# Special Thanks to...

....my beta teams

**2010 release:** FlintHawk, Kat, Linda, Jan, and Sandra

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## Species Accuracy and Reference Materials

Many birds of the same species do vary considerably in color. This package tries to emulate the colors and markings in the most commonly found variants.

The author-artist has tried to make these species as accurate to their real life counterparts as possible. With the use of one generic model to create dozens of unique bird species, some give and take is bound to occur. The texture maps were created in Painter with as much accuracy as possible. Photographic references from photographs from various Internet searches and several field guides were used.

## Field Guide Sources:

Wikipedia <http://www.wikipedia.org>

Birds in the Backyard <http://birdsinboxyards.net>

Birds of the World Handbook <https://birdsoftheworld.org/bow/home>

OZ Animals <http://www.ozanimals.com>

Jigger Juice: Plants of the Murray Mallee <http://www.jiggerjuice.net/plants/index.html>

FloraBase: Western Australian Flora <http://florabase.calm.wa.gov.au/>

WWF <http://www.worldwildlife.org>

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