Photo: Chris Tzaros

Parrots of the Lower Lachlan Valley

EDUCATION RESOURCE FOR THE NSW RIVERINA

NSW GOVERNMENT Local Land Services

Contents

NSW GOVERNMENT Local Land Services

This unit of work, and its associated activities, has been prepared by Kelly Coleman (PeeKdesigns) in conjunction with Petaurus Education Group Inc. for Riverina Local Land Services.

Parrots are most striking for their range of brilliant colours.

They all have a short, hooked bill to help them create hollows and break open hard seeds.

Photo: Chris Tzaros

Teacher background information

INTERACTIVE PRESENTATION - bit.ly/parrots-llv

Parrots of the Lower Lachlan Valley is an interactive presentation that can be viewed on any device or computer. It profiles three parrots found in the lower Lachlan Valley, the glossy black-cockatoo, Major Mitchell's cockatoo and the turquoise parrot. The presentation includes audio of the parrots, a video about the importance of hollows for habitat and an interactive word wall to help test student knowledge on some of the terms used in the presentation. Students and teachers can use this presentation to help support the activities in this Unit.

PARROT FACT SHEETS

Three fact sheets on the parrots profiled in the presentation have been developed as part of this package (pages 19-30).

Additional references

BEAKS, FEET AND FEATHERS

This education resource was originally developed by Birds Australia. Use Beaks, Feet and Feathers to help you start monitoring birds in your own school ground. Birds can be excellent indicators of environmental health and learning more about them and their habitat needs provides an exciting introduction to understanding biodiversity.

www.birdlife.org.au/education-publications/education/

MUSEUM IN A BOX - BIRDS

This box - ordered through the Australian Museum - contains a rainbow lorikeet diorama, bird/mammal bone comparison, wings, various bird heads representing beak diversity, cast of bird feet highlighting diversity, Australian bird songs, bird books, information panels, teachers notes, birds flip book and bird species fact files.

australianmuseum.net.au/learn/teachers/museum-box/museum-in-a-box-birds/

AUSSIE BACKYARD BIRD COUNT

The Aussie Backyard Bird Count aims to engage school communities in the natural world while getting to know the birds in their local schoolyard through participation in a simple, fun, all-ages activity that can be done anywhere. The resources are intended for teachers of students in Years 5 and 6 working towards Stage 3 outcomes in the Australian Curriculum.

aussiebirdcount.org.au/teachers/

BIRDS IN SCHOOLS

Birds in Schools is an environmental education project designed to engage Years 5 and 6 students in citizen science through monitoring birds.

www.birdsinbackyards.net/Birds-Schools

PARROTS

There are 56 species found in Australia and they include cockatoos, lorikeets, rosellas, ringnecks and budgerigars.

www.environment.nsw.gov.au/topics/animals-and-plants/native-animals/native-animal-facts/parrots

Unit of work

Overview

The purpose of this unit is to broaden student's knowledge, understanding and appreciation of the bird life that exists in their local area and the importance of protecting habitat for wildlife. Students will participate in a range of learning experiences that are cross-curricular. They will have opportunities to make connections to their prior knowledge and extend it further.

Stage 1 Outcomes

SCIENCE

ST1-2DP-T Uses materials, tools and equipment to develop solutions for a need or opportunity

ST1-4LW-S Describes observable features of living things and their environments.

- Describe the external features of a variety of living things
- Identify and parrots using their external features
- Identify that living things live in different places that suit their needs
- Design and produce an environment to cater for the needs of a parrot
- Encourage the return of parrots to a local habitat
- Explore how parrots grow, change and have offspring

GEOGRAPHY

The Earth's Environment

GE1-2 Identifies ways in which people interact with and care for places

- Investigate features of places and how they can be cared for, for the benefit of parrots in the lower Lachlan Valley

Stage 2 Outcomes

SCIENCE

ST2-4LW-S compares features and characteristics of living and non-living things

- Describe how living things depend on each other and the environment to survive, e.g. birds eat and disperse seeds, trees provide habitat for birds to live in

GEOGRAPHY

The Earth's Environment

GE2-1 examines features and characteristics of places and environments

GE2-2 describes the ways people, places and environments interact

- Investigate the importance of natural vegetation and natural resources to the environment, animals and people, for example: identification of types of natural vegetation e.g. forests, grasslands, deserts; explanation of the importance of natural vegetation to animals and the functioning of the environment e.g. provision of habitats, production of oxygen.

ENGLISH [WRITING AND REPRESENTING 1]

EN2-2A plans, composes and reviews a range of texts that are more demanding in terms of topic, audience and language

- Plan, draft and publish imaginative, informative and persuasive texts containing key information and supporting details for a widening range of audiences, demonstrating increasing control over text structures and language features
- Plan, compose and review imaginative and persuasive texts
- Discuss aspects of planning prior to writing, e.g. knowledge of topic, specific vocabulary and language features
- Plan and organise ideas using headings, graphic organisers, questions and mind maps
- Create imaginative texts based on characters, settings and events from students' own and other cultures using visual features, for example perspective, distance and angle

Stage 3 Outcomes

SCIENCE

ST3-4LW-S examines how the environment affects the growth, survival and adaptation of living things

- Describe how changing physical conditions in the environment affect the growth and survival of living things, e.g. removing trees and hollows impacts parrot populations
- Describe adaptations as existing structures or behaviours that enable living things to survive in their environment
- Describe the structural and/or behavioural features of some native Australian animals and plants and why they are considered to be adaptations

GEOGRAPHY

Factors that Shape Places

GE3-3 compares and contrasts influences on the management of places and environments

- Investigate how people influence places, for example: description of who organises and manages places e.g. National Parks; identification of ways people influence places and contribute to sustainability e.g. Landcare action installing nest boxes and planting trees for habitat

ENGLISH [WRITING AND REPRESENTING]

EN3-2A composes, edits and presents well-structured and coherent texts

- Explore and analyse the effectiveness of informative and persuasive devices in texts
- Understand and use the key elements of planning, composing, reviewing and publishing in order to meet the increasing demands of topic, audience and language
- Plan, draft and publish imaginative, informative and persuasive texts, choosing and experimenting with text structures, language features, images and digital resources appropriate to purpose and audience
- Compose imaginative and informative texts that show evidence of developed ideas
- Compose texts that include sustained and effective use of persuasive devices, e.g. texts dealing with environmental issues

Teaching and learning activities

PLEASE NOTE: the following activities are provided to guide lesson planning. Examples of Stage 1, 2 and 3 activities have been included. It is anticipated that teachers will be able to develop in-depth lesson plans from these examples. Additional external activities and resources are listed on page 4.

<table>
<tr><th>ACTIVITIES</th><th>RESOURCES</th></tr>
<tr><td rowspan="2">INTRODUCTION TO PARROTS
Introduce students to birds and the many different types of birds. Show a variety of different bird photos and ask students to look at their differences - colour, shape, size, beaks, feet.
Using their Parrot flip books, students record information that they learn from the Interactive Presentation.
Word wall
Display a mixture of red and yellow card stock on the wall. Use these to record any text-specific vocabulary students query. Add the word along with a definition for future reference. This can be completed as you go through the Interactive Presentation.</td><td>Interactive Presentation http://bit.ly/parrots-llv
Parrot flip books (see pages 11-16)
Craft materials:
• Red and yellow card stock
• Empty wall
• Thumbtacks
• Permanent marker</td></tr>
<tr><td>Outcomes
ST1-4LW-S
ST2-4LW-S</td></tr>
<tr><td rowspan="2">BIRD CALLS
Listen to the parrot calls on the Interactive Presentation. Ask students to describe what they think it sounds like. Students can try to mimic the calls.
Extension (Stage 2 and/or 3)
Use the eGuide to Australian Birds App or the Field Guide to NSW Fauna App to identify and listen to bird calls. Students learn a call they can mimic. In the classroom, play a ‘Guess Who’ game to see how many students can identify each other’s bird calls.
Do birds have different calls for different situations, e.g. feeding?
Why would they have different calls?</td><td>Apps - Available on both Apple and Android platforms
eGuide to Australian Birds App – Cost involved $29.99
Field Guide to NSW Fauna App – Free but limited audio for birds</td></tr>
<tr><td>Outcomes
ST1-4LW-S
ST2-4LW-S
ST3-4LW-S</td></tr>
</table>

ACTIVITIES	RESOURCES
BIRD BEAK DESIGN ***Introduction (Stage 1, 2 and 3)*** As a class, look at how bird beaks have evolved for different functions based on their food and nesting requirements. For example, beaks can crush seeds, tear meat, poke holes, catch insects, get into tubular flowers, filter out mud, crush bugs etc. Students complete the activity sheet - Feathered features. Stage 1 class can do this together on a SMART Board. ***Beaks and food (Stage 2 and/or 3)*** In pairs, students investigate a chosen bird beak style - it's shape, function, size and how all these help the bird survive. They design a 'man-made' bird beak to replicate the beak they have investigated. Students need to determine what materials they should use and how it will be made. Students make their bird beak and present it to the rest of the class. ***Beaks and nests (Stage 2 and/or 3)*** Look at photos (on the Internet) of different types of nests made by birds – sticks, cobwebs, leaves, feathers, fur, hollows, scrapes, rocks, mud, saliva. Supply students with a set of chopsticks each - this simulates a bird beak. Using only chopsticks, students try and make a stick nest, just like a magpie would make, using leaves, twigs and shredded paper. ***Extension (Stage 2 and/or 3)*** Students design a way to create a hollow nest suitable for a parrot. Students keep a record of their experiment: • Before - assumptions on how hard or easy it might be • During - the process they used, photograph their progress • After - thoughts about how hard or easy it was, skills required by birds, what was the best material to use ***Extension (Stage 3)*** Students conduct a further investigation into adaptations of birds, for example scales on legs and feet, hollow bones, wing and tail dimensions best for flying.	Activity sheet - Feathered features Craft materials: • Chopsticks • Leaves • Twigs • Shredded paper **Outcomes** ST1-2DP-T ST1-4LW-S ST2-4LW-S ST3-4LW-S **Skills** Working scientifically Design and production

ACTIVITIES	RESOURCES
BIRD STUDY ***Go birdwatching (Stage 1, 2 and 3)*** Visit a local known area that is good for bird watching (a bird route might be nearby) - or use your school grounds. Invite local birdwatchers to guide students in how to look for and identify different birds. Activity will require binoculars and clipboards to record species spotted. ***Class bird journal (Stage 2 and/or 3)*** Keep a classroom chart (see example below) of the number of different birds students see each day over a 2-week period. Every time a student sees a bird, they put a sticker on the chart. They don't have to know the name of the bird, just the number of different birds they see. The chart could include time of day (morning, midday, late afternoon) the colour, size (small, medium, big) and if it made a call. At the end of the 2-weeks, see which days recorded the most birds, if students started noticing more birds because they were looking for them, if they knew the name then what species of bird was most popular. CLASSROOM BIRD CHART ***In-depth study (Stage 3)*** Students record, over several days, a bird(s) activity in the schoolyard or at a local bush area. Students keep a journal of their observations including: time of day, weather, surrounding noise or human activity, behaviour (feeding, drinking, collecting nest materials), bird calls, movement (hopping, jumping, flying, swooping, soaring/gliding). Once the bird is identified and observed, students make a poster or presentation about their bird using technical drawings they make themselves, photos, map or where their observations were made. **Possible assessment item.	Binoculars Bird watching books Chart & stickers **Outcomes** ST1-4LW-S ST2-4LW-S ST3-4LW-S **Skills** Working scientifically

STUDENT NAME	MON	TUES	WED	THUR	FRI	SAT/SUN	MON	TUES	WED	THUR	FRI	TOTAL	BIRD FEATURES

ACTIVITIES	RESOURCES
HOLLOWS FOR HABITAT Brainstorm the different places that animals live on the board, for example: trees, shrubs, grasses, underground, in rivers, ocean, on or under rocks. ***Nest Hollows in Southern NSW (Stage 1, 2 and 3)*** Watch the video *Nest Hollows in Southern NSW* at the end of the Interactive Presentation. • Viewing 1: Watch it all the way through and ask students to recall what they remembered and discuss how we can look after our local threatened parrots ***(Stage 1, 2 and 3)*** • Viewing 2: Hand out worksheets to students and request they answer the questions as you watch ***(Stage 2 and 3)*** ***Threats to habitat (Stage 2 and 3)*** After reviewing the Interactive Presentation, students recall the threats to the three parrots in a classroom discussion. Record as a brainstorm. Discuss the environmental requirements of the parrots, for example: old trees with hollows, food sources, water. Using the parrot fact sheets or presentation as a guide, students create a flyer about how to protect their parrot. Choose the best flyer/s to go in the school newsletter. ***Conservation in action (Stage 3)*** Visit a landholder who is protecting parrot habitat by planting trees or installing nest boxes. Make artificial hollows in the form of nest boxes. With the help of a local Men's group or parent, use design templates to create nest boxes for your threatened parrots and install them in trees where you identify would be good habitat. greatersydney.lls.nsw.gov.au/__data/assets/pdf_file/0006/656610/GS-LLS-Wildlife-Nest-Box-10-2017-Accessible.pdf	Interactive Presentation http://bit.ly/parrots-llv Parrot fact sheets (pages 19-30) **Outcomes** GE1-2
IMAGINATIVE WRITING TASK "Imagine you are a parrot for the day. Write a story about the adventures and challenges of your day." Jointly construct a word bank of topic-specific words students might use in their writing. AND/OR **PERSUASIVE WRITING TASK** "Persuade a parrot family to move into an artificial hollow installed around your school." Jointly construct a word bank of topic specific words students might use in their writing. **Possible assessment item.	Planning sheets for imaginative or persuasive text types. Word bank (e.g. use words from the introduction word wall) **Outcomes** EN2-2A EN3-2A

Parrot flip book

Create a flip book that students can use to record their own information about a chosen parrot. This flip book can be filled in while showing the interactive presentation to the class, can be used by students as a project task or to support an additional task, such as creating a poster or digital presentation.

The following four pages are cut out and stapled at the top. Basic questions are included on each page to help students record key information that will help them in learning more about their parrot. You could add more pages to this if required.

Parrot's Name: . . . . . .

Draw your parrot

How big is the parrot?

What coloured feathers do they have?

◯ **Black**	◯ **White**	◯ **Red**
◯ **Yellow**	◯ **Blue**	◯ **Green**
◯ **Pink**	◯ **Orange**	◯ **Turquoise**

What do they sound like?

How many eggs do they lay?

PROFILE

What type of trees does your parrot like to live in?

What does it eat?

Where are they found?

HABITAT

What is the Conservation status in NSW?

Why are they under threat?

What can we do to help?

CONSERVATION

List of bird words I don't know.

Habitat All the places and things an animal needs to survive – food, water, shelter, air.

WORDS I DON'T KNOW

Worksheet - Feathered features

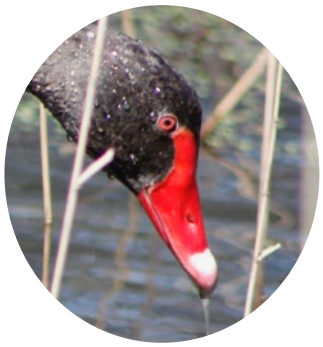
All birds have a set of physical features in common:

- feathers
- beaks
- two legs
- wings

But not all birds look the same, live in the same environment or eat the same food. Some are small and fly across countries, some are large and run really fast, some are small and are hard to spot in the trees, while others are large, colourful and call really loudly.

All of these differences are **adaptations** – meaning each species of bird has adapted to live in a particular environment(s) and eat specific food for survival.

One adaptation is beak shape. Match the following bird beak shapes to the types of food they would eat (there might be more than one type of food).



FRUIT **MEAT** **INVERTEBRATES**

Invertebrates include yabbies, snails, crabs, beetles, waterbugs

SEEDS **INSECTS** **NECTAR**

Photos: Kelly Coleman; Wikipedia (honeyeater and eagle)

Worksheet - Nest Hollows in Southern NSW

Watch the video "Nest Hollows in Southern NSW" and answer the following questions.

youtu.be/__IKsbBIvq4

1. Australian native animals rely on nest hollows for three key things:

   _____ _____ _____

2. How long can it take some trees to form hollows? _____

3. What can hollow dependant fauna use until tree hollows form?

   _____

4. Name three animals that use nest hollows.

   _____ _____ _____

5. When trees fall or drop large limbs with hollows we end up with hollow logs. Why do you think it's important to leave hollow longs on the ground?

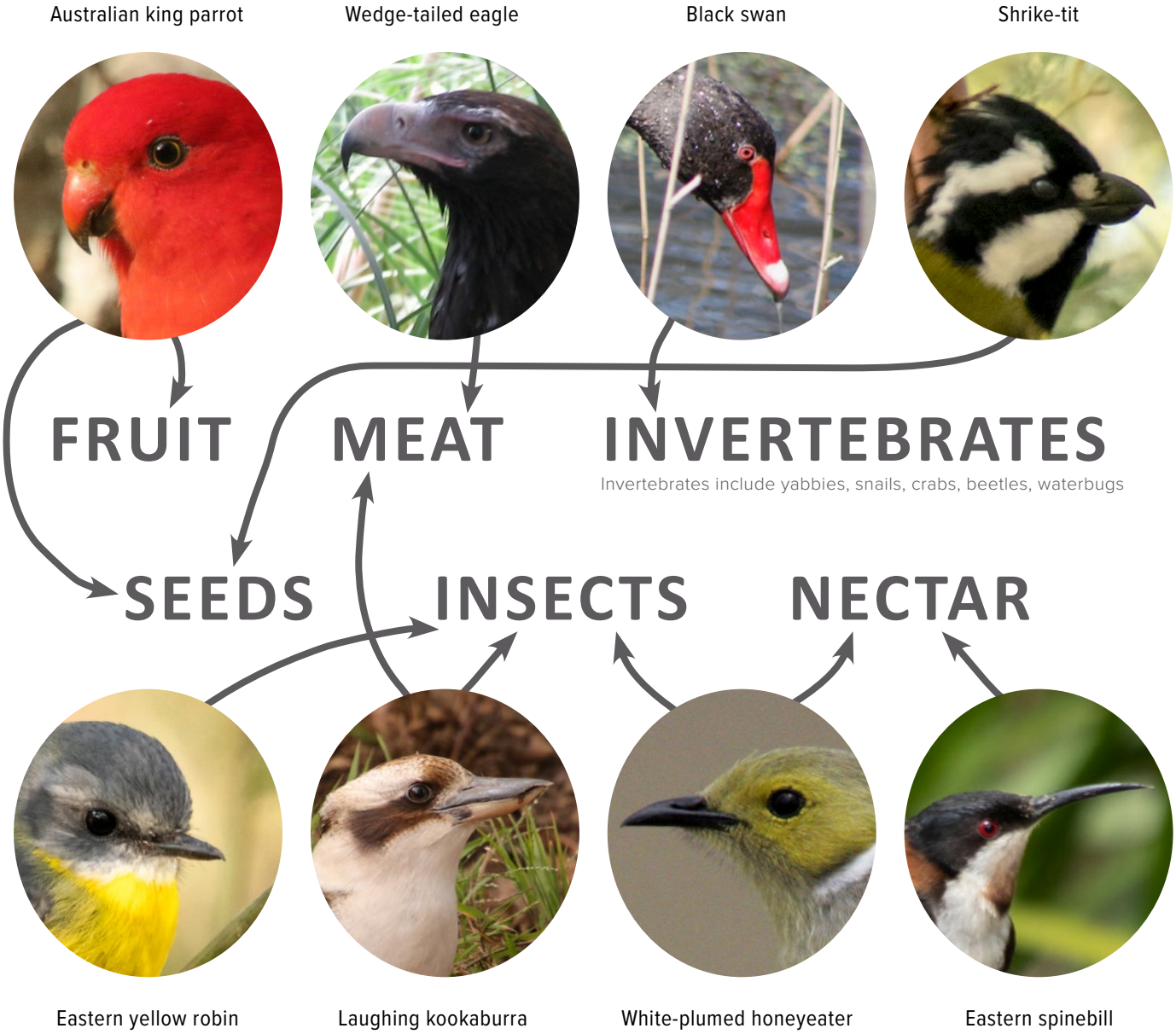
   _____

   _____

6. Different animals have different hollow needs. Choose a Lachlan parrot, find out their hollow needs and design a nest box - use the space below or a separate piece of paper. Include notes on the size of the box, the size of the hole/entrance and where you would place it in the landscape (in a tree or on a stump, facing north, south, east or west).

Worksheet Answers

Feathered Features



Nest Hollows in Southern NSW

1. Breeding, feeding and shelter
2. 100 years
3. Man-made nest boxes
4. Micro-bats, squirrel gliders and swift parrots
5. Hollow logs provide habitat for non-tree dwelling animals such as lizards and snakes, and micro-organisms that break-down the wood provide food for other animals.

Glossy black-cockatoo

Calyptorynchus lathami *Yuyang (Wiradjuri)*

*The **glossy black-cockatoo** may be confused with the **red-tailed black-cockatoo**, but it has more brownish-black plumage on the head, neck and underbody. Their body plumage is more dull black and not uniformly glossy. Also, adult females have much more yellow on the head and lack the yellow spotting on the body that red-tailed black-cockatoos have.*

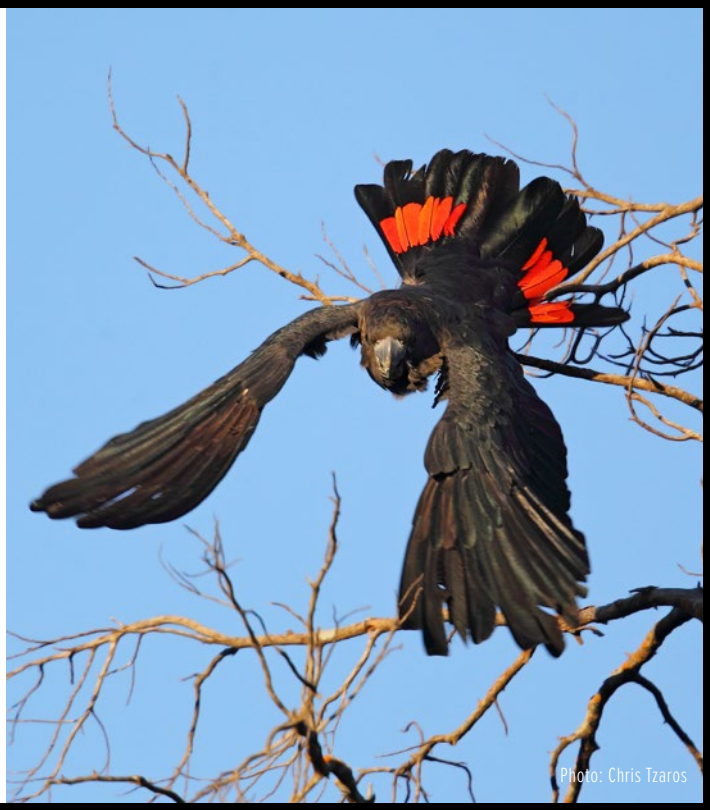
Description

Size: The glossy black-cockatoo of the Riverina is a medium-sized cockatoo.

Plumage: Glossy black-cockatoos are generally black but have a blackish-brown head, neck and underparts with red or yellowish-red panels in the tail. Adult females have patches of yellow feathering on head and neck.

Bill: They have a broad bulbous bill that is used for tearing apart the seed cones of sheoaks, their primary food source, and to create hollows in old trees for nesting.

Call: Noisy squawks or creaky calls; wheezy ‘airr-riick’, ‘kee-aiirrk’, ‘airrek’. Quieter and less raucous than other black-cockatoos.



Habitat

Glossy black-cockatoos can be found in open forest and woodlands of the coast and the Great Dividing Range where stands of sheoak occur, such as black sheoak (*Allocasuarina littoralis*) and forest sheoak (*A. torulosa*). Inland, they feed on drooping sheoak (*A. verticillata*), broombush sheoak (*A. diminuta*) and mallee sheoak (*A. gymnanthera*). Belah (*Casuarina cristata*) is also utilised and may be a critical food source for some populations.

The Riverina population is largely restricted to hills and low ridges where suitable stands of its food plant, the drooping sheoak, remain. They have also recorded in open woodlands dominated by belah.

They feed almost exclusively on the seeds of several species of sheoak (*Casuarina* and *Allocasuarina* species), shredding the cones (below-inset) with their massive bill.

Photo: Matt Wright/Faunagraphic

The Riverina population is largely restricted to hills and low ridges where suitable stands of its food plant, the drooping sheoak, occur.

Photo: Chris Tzaros, Inset - Kelly Coleman/PeeKdesigns.

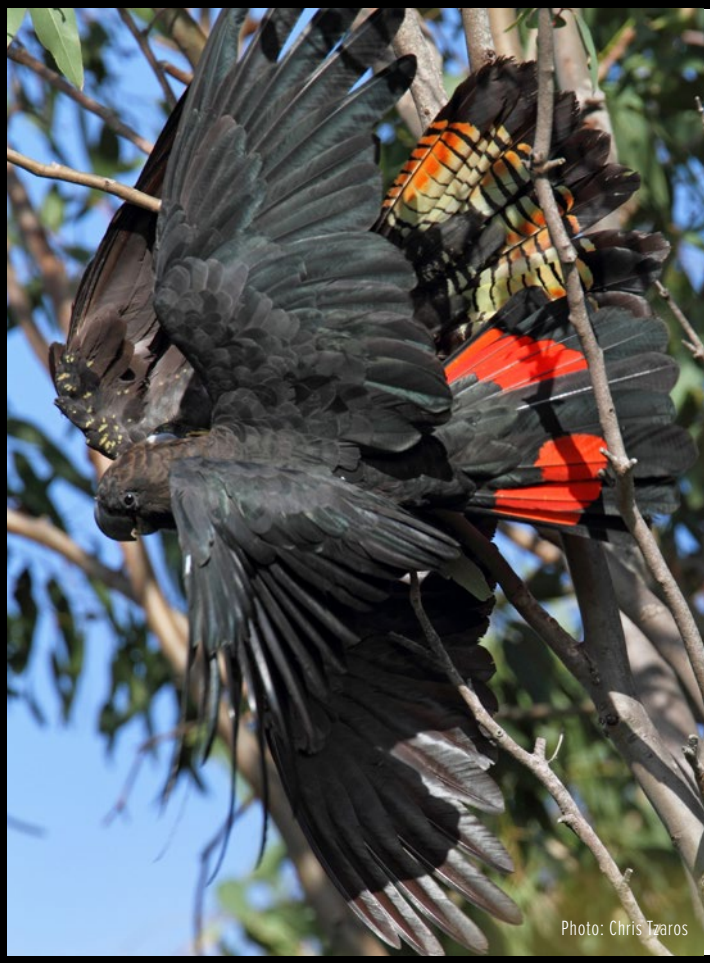


Photo: Chris Tzaros

Breeding

Glossy black-cockatoos mate for life and pairs will maintain their bond all year-round.

They will nest in large tree hollows, about 26 cm wide and up to 1.4 m deep. These trees, such as river red gums, can be found in areas adjacent to drainage lines. These area also contain reliable food and water sources.

A single egg is laid between March and May. The incubation period is about one month. The males feed the female while she sits on the nest during the incubation and brooding stage - up to a week after hatching. Once fledged, the young bird is fed by both parents for up to four months and remains with them until the next breeding season.

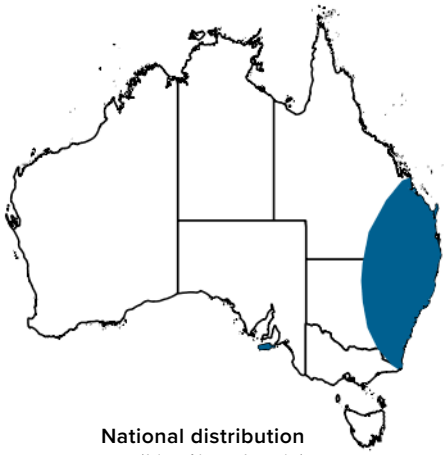
Not all chicks survive to maturity and suitable hollows are disappearing which makes population growth very slow.

Glossy black-cockatoos mate for life!
They lay only one egg per year.

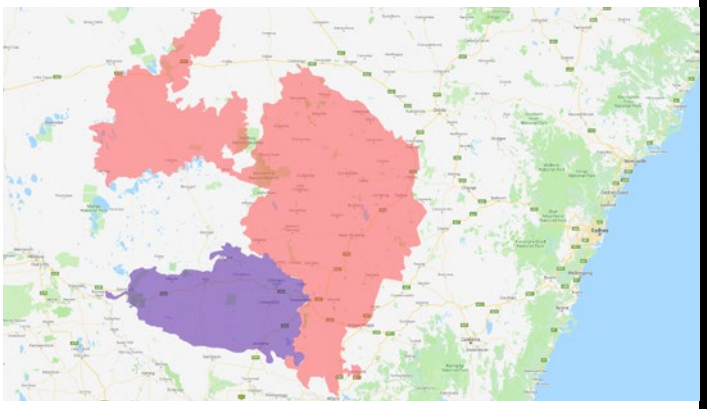
Distribution

Although uncommon, the glossy black-cockatoo's range is widespread throughout suitable forest and woodland habitats. They have been recorded from the central Queensland coast to East Gippsland in Victoria, and inland to the southern tablelands and central western plains of NSW, with a small population in the Riverina. An isolated population exists on Kangaroo Island, South Australia.

The Riverina population is largely restricted to hills and low ridges where suitable stands of its food plant, drooping sheoak (*Allocasuarina verticillata*), remain within the Narrandera Range and to the north-west in the Brobenah Hills, McPhersons Range, Cocoparra Range, Lachlan Range and Jimberoo State Forests, and the Naradhan Range. This population now occurs west of longitude 146° 40' E, within Cobar, Carrathool, Narrandera and Leeton local government areas.



National distribution
(Atlas of Living Australia)



Riverina population occurrence: Pink = Known, Purple = Predicted.
(Office of Environment and Heritage)

Conservation status

In New South Wales, the species is listed as Vulnerable, while the Riverina population is Endangered.

At the national level, this species is listed as Endangered.

Threats

Some of the key threats to the Riverina population includes:

- Decline of hollow bearing trees over time due to land management activities.
- Excessively frequent fire which eliminates sheoaks from areas, prevents the development of mature sheoak stands and destroys nest trees.
- Decline in the extent and productivity of sheoak foraging habitat due to:
  - feral herbivores, such as goats
  - moisture stress from climate change.
- Forestry activity resulting in loss of hollow bearing trees, reduced recruitment of hollow bearing trees, degradation of foraging habitat, and disturbance of breeding attempts.
- Illegal bird smuggling and egg-collecting.

Activities to assist this species

- Implement appropriate fire regimes and reduce the impact of burning to avoid the widespread burning of food resources and support the regeneration of sheoaks.
- Protect existing and future hollow-bearing trees for nest sites.
- Retain and protect areas of native forest and woodland containing sheoaks.
- Establish forested corridors linking remnant areas of habitat.
- Report suspected illegal bird trapping and egg-collecting.
- Reduce stocking intensity or exclude grazing in some areas to allow regeneration of vegetation.
- Retain hollows (including protection of existing mature trees); plant native hollow producing species; ensure that some trees are always left to grow to maturity; as a last resort place artificial hollows (e.g. nest boxes) around area.
- Avoid disturbing the species.
- Prevent clearing of sheoak stands and potential nesting habitat, including paddock trees and standing dead trees.
- Undertake annual population monitoring in the post-breeding season.

Photo: Chris Tzaros

NSW GOVERNMENT Local Land Services

Acknowledgements: Petaurus Education Group Inc., PeeKdesigns, Office of Environment and Heritage, BirdLife Australia, Birds in Backyards, eGuide to Australian Birds and Faunagraphic.

Major Mitchell's cockatoo

Lophochroa leadbeateri *Widyagala (Wiradjuri)*

Photo: Chris Tzaros

The Major Mitchell's cockatoo is named after Major Sir Thomas Mitchell, who was a surveyor and explorer of Southeast Australia during the 1800s. The species name, leadbeateri, commemorates Benjamin Leadbeater (1760-1837), a London natural history merchant who supplied specimens to the British Museum.

Description

Size: At 35-40 cm in body length, the Major Mitchell's cockatoo is smaller than the sulphur-crested cockatoo, but slightly larger than a galah.

Plumage: They are the only Australian cockatoo that is salmon-pink below and white above and because of this colouring they are also known as the pink cockatoo. They have a prominent, large, white-tipped crest that is banded in red and gold.

Eyes: Males have brown eyes and females have red eyes.

Call: Its call is a distinctive stammering or wavering screech, 'ar-ai-ar-a-ar-iagh'.

Photo: Matt Wright/Faunagraphic

Habitat

Major Mitchell's cockatoos live in a wide range of treed and treeless inland habitats, including dry woodlands in arid and semi-arid areas. They can live in the same area all year round if there is sufficient water, but they can be partly nomadic in arid areas, as they move in response to the availability of food and water.

They require old trees which support hollows that are large enough to be suitable for nesting in and spaced are at least one kilometre apart, with no more than one pair every 30 square kilometres.

Major Mitchell's cockatoos are omnivorous, eating the seeds of grasses, shrubs and trees, as well as roots and bulbs, and insect larvae. They usually forage in small groups, often in the company of galahs or little corellas, though larger flocks occasionally form where food is abundant.

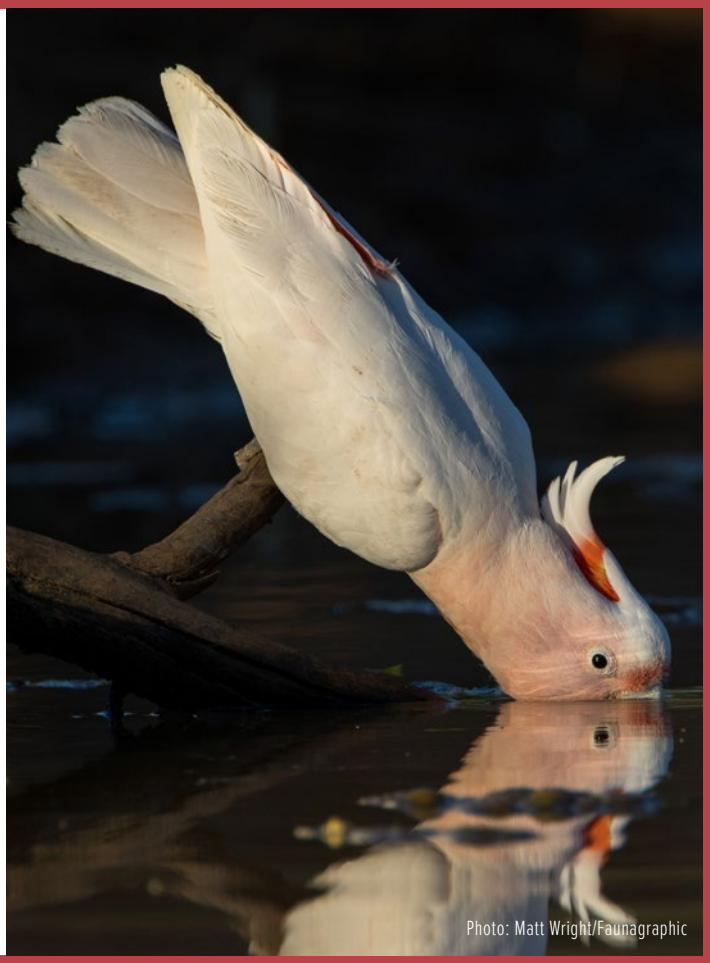


Photo: Matt Wright/Faunagraphic

Major Mitchell's cockatoos feed on the seeds of native and exotic melons and on the seeds of species of saltbush, wattles and cypress pines.

Photo: Chris Tzaros

Photo: Matt Wright/Faunagraphic

Breeding

Major Mitchell's cockatoos nest in the large hollows that can be found in river red gum (*Eucalyptus camaldulensis*), black box (*E. largiflorens*), coolibah (*E. microtheca*), or native pine (*Callitris* sp.).

A clutch of 3-4 eggs is laid in a large, vertical hollow on a bed of decayed wood, woodchips and bark. Both males and female will sit on the eggs while incubating them as well as feed and preen the chick once hatched.

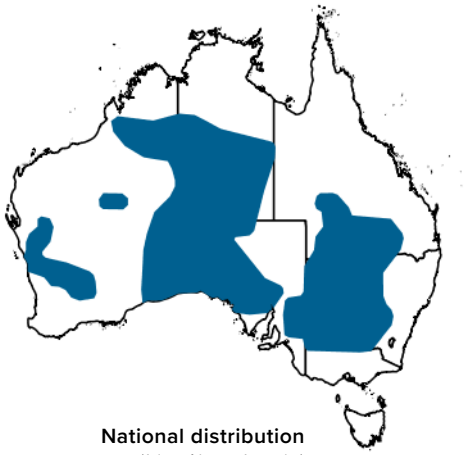
Young birds become independent from their parents when they are about 4 months old.

Native pine trees are slow to grow and sensitive to hot fires. The reduction of large native pines caused by land clearing and too-frequent fires, limits tree hollows for nesting.

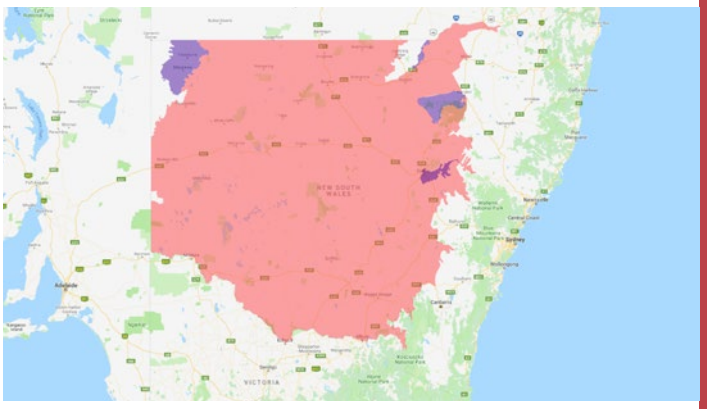
Distribution

Major Mitchell's cockatoos are found across the arid and semi-arid inland areas of Australia. Their distribution ranges from south-western Queensland south to north-west Victoria, through most of South Australia, north into the south-west Northern Territory and across to the west coast between Shark Bay and about Jurien.

In NSW, they are found regularly as far east as Bourke and Griffith, and sporadically further east beyond that.



National distribution
(Atlas of Living Australia)



NSW occurrence: Pink = Known, Purple = Predicted.
(Office of Environment and Heritage)

Conservation status

In NSW, the species is listed as Vulnerable.

Threats

Some of the key threats to the species in NSW includes:

- Clearing of woodlands.
- Heavy grazing of feeding areas resulting in the removal of seeding grasses and preventing regeneration of food plants.
- Loss of existing and future hollow-bearing trees.
- Illegal nest-robbing and trapping.

Activities to assist this species

- Manage grazing in feeding areas to prevent loss of food resources.
- Fence areas off habitat, exclude stock and control rabbits to assist regeneration of trees, shrubs and native grasses.
- Protect existing and future hollow-bearing trees for nest sites.
- Monitor known nesting sites to deter poachers.

MAJOR MITCHELL'S COCKATOOS IN TERMINAL DECLINE IN VICTORIA

A little further south, in Victoria, the Major Mitchell's cockatoo is under massive decline. Read more about the problem and what's being done in this Australian Geographic article.

www.australiangeographic.com.au/topics/wildlife/2018/03/major-mitchells-cockatoos-in-terminal-decline-in-victoria/

Major Mitchell's cockatoos are a popular bird for the captive bird trade. This has led to illegal nest-robbing and trapping.

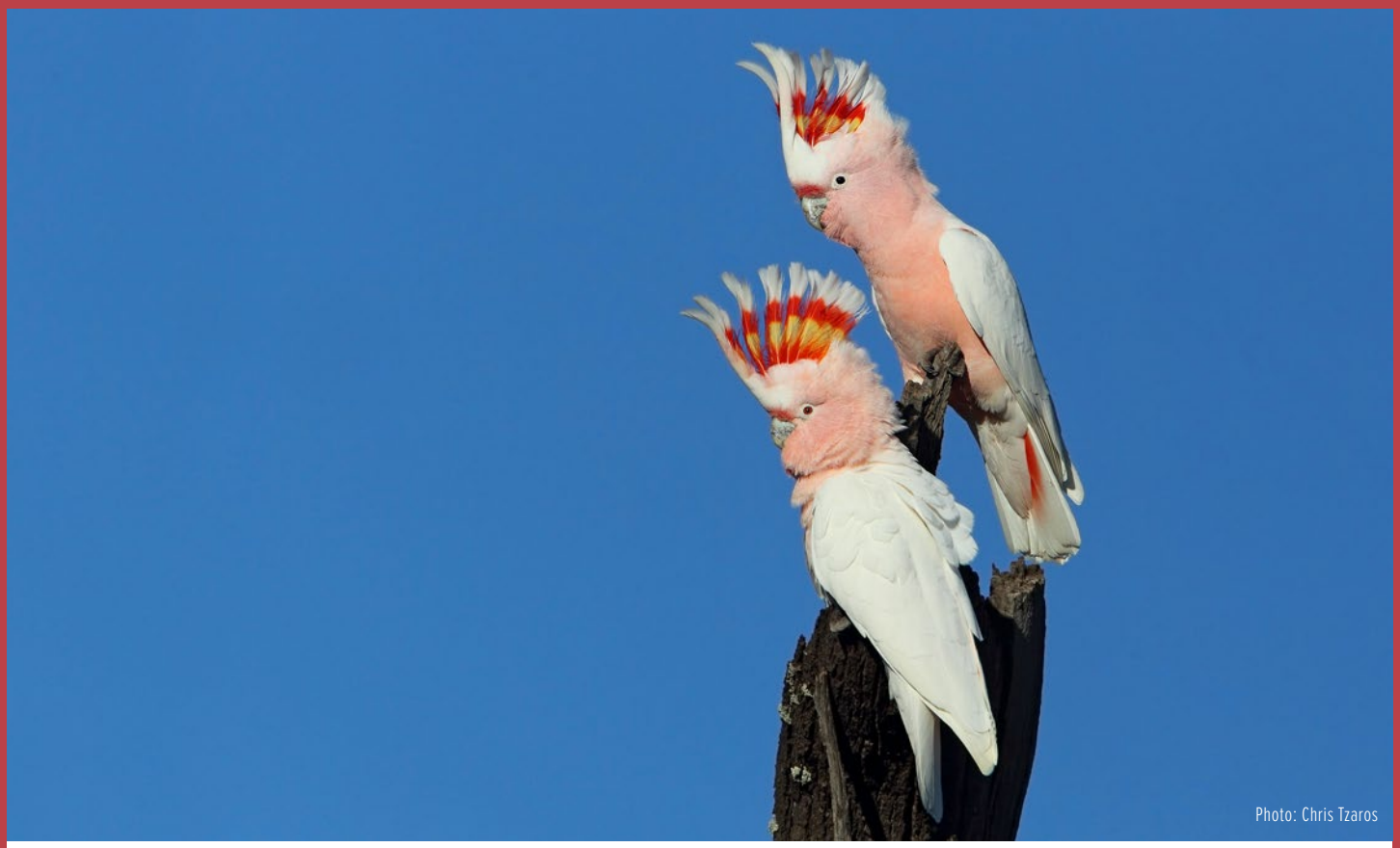


Photo: Chris Tzaros

NSW GOVERNMENT Local Land Services

Acknowledgements: Petaurus Education Group Inc., PeeKdesigns, Office of Environment and Heritage, BirdLife Australia, Birds in Backyards, eGuide to Australian Birds and Faunagraphic.

Turquoise parrot

Neophema pulchella

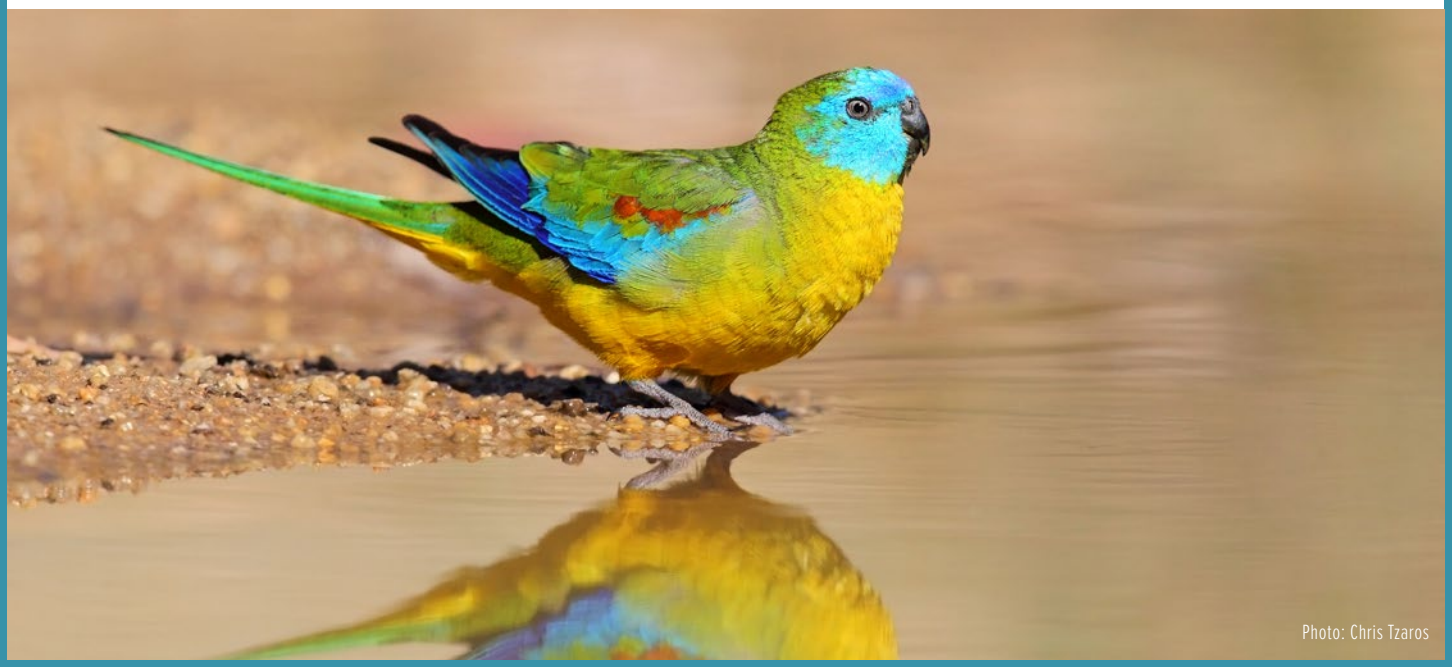


Photo: Chris Tzaros

Turquoise parrots were considered extinct in the wild by 1915 due to severe land clearing. The population began to recover by the 1920's. They had formerly been caught in large numbers for the cage bird industry and were also shot for food, as a pie-filling.

Description

Size: 19-21 cm

Plumage: The male turquoise parrot is very distinctive with bright green upper-parts and a turquoise-blue crown, face and shoulders, grading to deep blue at the flight-feathers. It has a chestnut-red patch on the upper-wing. The upper-breast of the has an orange tint, while the yellow abdomen may have an orange centre. Females and immature individuals are generally duller, have whitish lores, a green, rather than yellow throat and breast, and no red on the shoulder and upper-wing area.

Call: The call of the turquoise parrot in flight is a tinkling sound, while at other times it may emit a sharp "sit-sit" alarm call.

Photo: Chris Tzaros

Habitat

Turquoise parrots live on the edges of eucalypt woodland adjoining clearings, timbered ridges and creeks in farmland.

They are usually seen in pairs or small, possibly family, groups and have also been reported in flocks of up to thirty individuals.

Preferring to feed in the shade of a tree, these birds spend most of the day on the ground searching for the seeds or grasses and herbaceous plants, or browsing on vegetable matter. They forage quietly and may be quite tolerant of disturbance. However, if flushed they will fly to a nearby tree and then return to the ground to browse as soon as the danger has passed. Food supply can be negatively affected by livestock grazing.

Turquoise parrots prefers to feed within 100 metres of the nest, but they can travel up to 1.4 kilometres away in search of food and water.

Photo: Chris Tzaros

Photo: Chris Tzaros

Breeding

Nests in tree hollows, logs or posts, often within 1-2 metres of the ground. Hollows average about 50 cm deep, with an entrance hole of 10 x 7 cm.

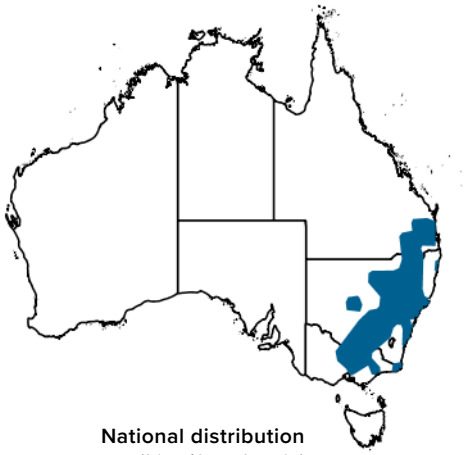
Clutches of usually four to five eggs are laid in spring and summer, with multiple attempts per season.

The incubation period is about 18 days, and the nestling period is about four weeks. Once fledged, juveniles will remain with their parents and continue to be fed by the male while the female starts a second clutch.

Breeding pairs will defend a nest site and small feeding area against other turquoise parrots. There can be four to seven breeding pairs per hectare.

Distribution

The turquoise parrot occurs mainly on the western side of the tablelands, inland slopes and adjoining plains in the eastern half of NSW, and in some dry coastal valleys (especially in the Sydney Basin),



National distribution
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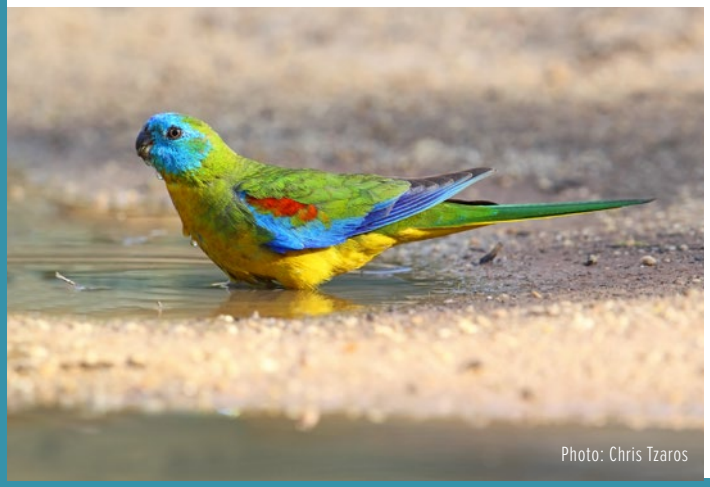
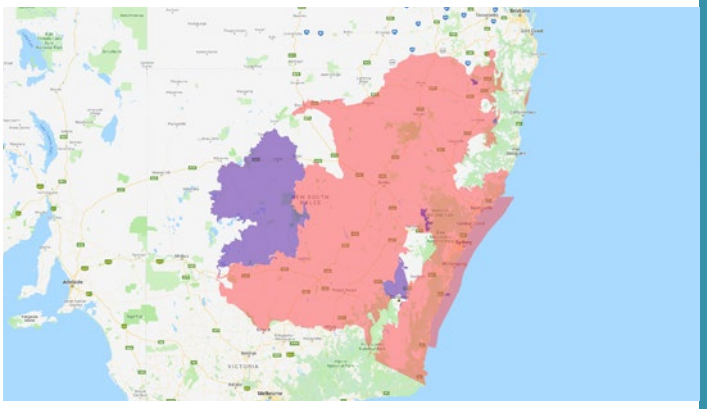


Photo: Chris Tzaros



NSW occurrence: Pink = Known, Purple = Predicted.
(Office of Environment and Heritage)

Conservation status

In NSW, the species is listed as Vulnerable.

Threats

- Clearing of grassy-woodland and open forest habitat.
- Loss of hollow-bearing trees.
- Degradation of habitat through heavy grazing, firewood collection and establishment of exotic pastures.
- Predation by foxes and cats.
- Illegal trapping of birds and collection of eggs which also often results in the destruction of hollows.
- Inappropriate fire regimes.
- Aggressive exclusion by Noisy Miners.
- Climate change impacts including reduction in resources due to drought.

Activities to assist this species

- Undertake fox and feral cat control programs in key habitat areas.
- Retain areas of open woodland with grassy understorey and adjoining grassland.
- Protect hollow-bearing trees for nest sites. Younger mature trees should also be retained to provide replacements for the older trees when they eventually die and fall over.
- Protect sites where turquoise parrots forage and nest from heavy, prolonged grazing.
- Report suspected illegal bird trapping, egg collection or sales.

In 2009, the NSW Scientific Committee estimated the population of turquoise parrots at 20,000 breeding birds, with about 18,000 birds occurring in NSW.

Photo: Chris Tzaros

NSW GOVERNMENT Local Land Services

Acknowledgements: Petaurus Education Group Inc., PeeKdesigns, Office of Environment and Heritage, BirdLife Australia, Birds in Backyards and eGuide to Australian Birds.

Photo: Chris Tzaros

For More Information

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Petaurus Education Group

peek designs