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For Ages 10+



# ENDANGERED SPECIES Of Australia

- Self-contained research activities based on native Australian species.
- An ideal resource for gifted students or independent learners.
- Contains relevant websites and extensive background information.



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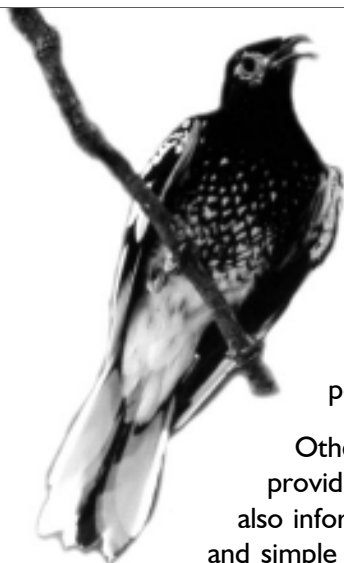
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# Teachers' Notes



Despite the efforts of a range of conservation programs, several native Australian animal species are still classified as critically endangered at a national level. While there are extensive education programs in place, many students are usually unaware of some of the lesser-known native species struggling for survival.

This book endeavours to educate students to the plight of critically endangered, endangered and threatened species. It draws attention to well-known species such as the numbat and Tasmanian devil, but also focuses on less recognised animals that are in a similar predicament such as Gilbert's potoroo, the orange-bellied parrot and the increasingly rare spotted handfish.

Other aims include clarifying the terms and status of endangered species as well as providing reasons for endangerment, which often vary among species. Students are also informed of what they can do to help certain species through a range of practical and simple strategies.

The animal species explored in this book are classified according to the regions in which they are found. For each featured animal there is a background information page (**Fact File**) that contains relevant details (e.g. species' name, habitat, description and so on) as well as conservation efforts, trivia and websites for further research. The tasks can be carried out in any order and completed independently. While Internet sites have been provided they are usually not essential to the activity. A symbol (🌐) indicates where Internet access is required.

There is a heavy emphasis placed on exploring the issues that threaten animal survival and students are given opportunities to examine conservation programs that are currently in place. The activities lend themselves to extension activities, which have been detailed on page 11 as part of ideas for National Threatened Species Day.

At the end of each activity page is a **WebQuester Challenge** that will require access to the Internet. Ideally, the students should use the websites provided on the Fact File page as a starting point for their research.

## School World Endangered Species Project (Page 45)

This is a global school project involving thousands of students from around the world. The aim of the project is to allow students to share their information on endangered species with other classes. Please visit the website at [www.schoolworld.asn.au/species/species.html](http://www.schoolworld.asn.au/species/species.html) to ensure that your students meet the required guidelines before attempting to complete this activity. Specific guidelines for reporting are available at this link:

▶ [www.schoolworld.asn.au/species/outline.html](http://www.schoolworld.asn.au/species/outline.html) - Report Outline

## WEBSITES

All websites mentioned in this book, including the page of Useful Websites on Page 5, have been linked online through the Ready-Ed Website at:

▶ [www.readyed.com.au/urls/kids/species.htm](http://www.readyed.com.au/urls/kids/species.htm)

By bookmarking this page, students can easily access the sites without having to type the addresses in. The websites are also checked regularly and replaced where necessary. Any broken links should be reported to [fixlink@readyed.com.au](mailto:fixlink@readyed.com.au)



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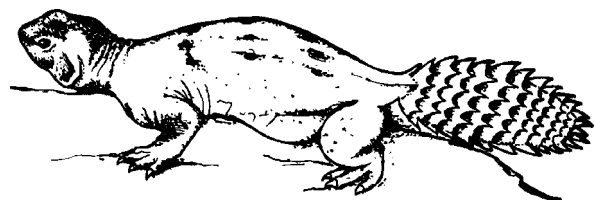
# Useful Websites

## GOVERNMENT SITES AND OFFICIAL BODIES

- ▶ [www.deh.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl](http://www.deh.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl) - National List of Threatened Fauna
- ▶ [www.deh.gov.au/biodiversity/threatened/](http://www.deh.gov.au/biodiversity/threatened/) - Threatened Australian Species and Threatened Ecological Communities
- ▶ [www.calm.wa.gov.au/](http://www.calm.wa.gov.au/) - Nature Base from Conservation and Land Management (WA)
- ▶ [www.parks.tas.gov.au/nature.html](http://www.parks.tas.gov.au/nature.html) - Parks and Wildlife Service (Tas)
- ▶ [www.denr.sa.gov.au/biodiversity/index.html](http://www.denr.sa.gov.au/biodiversity/index.html) - Department for Environment and Heritage (SA)
- ▶ [www.nationalparks.nsw.gov.au](http://www.nationalparks.nsw.gov.au) - National Parks and Wildlife Service (NSW)
- ▶ [www.denr.sa.gov.au/biodiversity/threatened.html](http://www.denr.sa.gov.au/biodiversity/threatened.html) - Parks Web Biodiversity - Threatened Species
- ▶ [www.env.qld.gov.au/nature\\_conservation/biodiversity/endangered\\_wildlife/](http://www.env.qld.gov.au/nature_conservation/biodiversity/endangered_wildlife/) - Endangered Wildlife (QLD)
- ▶ [www.nt.gov.au/ipe/pwcnt/](http://www.nt.gov.au/ipe/pwcnt/) - Parks and Wildlife Commission (NT) Click on Plants and Animals.
- ▶ [www.environment.act.gov.au/nativeplantsandanimals/thrtspecinfo.html](http://www.environment.act.gov.au/nativeplantsandanimals/thrtspecinfo.html) - Environment (ACT) Threatened Species
- ▶ [www.deh.gov.au/biodiversity/threatened/information/factsheets/index.html](http://www.deh.gov.au/biodiversity/threatened/information/factsheets/index.html) - Fact Sheets

## SITES FOR KIDS

- ▶ [www.deh.gov.au/biodiversity/threatened/information/20-tips.html](http://www.deh.gov.au/biodiversity/threatened/information/20-tips.html) - How You Can Help!
- ▶ [www.schoolworld.asn.au/species/species.html](http://www.schoolworld.asn.au/species/species.html) - School World Endangered Species Project
- ▶ [www.science.org.au/nova/010/010key.htm](http://www.science.org.au/nova/010/010key.htm) - Australia's Threatened Species from NOVA
- ▶ [www.museum.qld.gov.au/features/endangered/](http://www.museum.qld.gov.au/features/endangered/) - Queensland Museum Endangered Species Online
- ▶ [www.rainforestinfo.org.au/spp/](http://www.rainforestinfo.org.au/spp/) - The Endangered Species Project
- ▶ [www.kidcyber.com.au/topics/Austendangered.htm](http://www.kidcyber.com.au/topics/Austendangered.htm) - Endangered Australian Animals
- ▶ [www.spx.nsw.edu.au/src/Links/endanganim.html](http://www.spx.nsw.edu.au/src/Links/endanganim.html) - Endangered Animals Links
- ▶ [www.calm.wa.gov.au/plants\\_animals/watscu\\_splash.html](http://www.calm.wa.gov.au/plants_animals/watscu_splash.html) - Saving Our Threatened Wildlife
- ▶ [www.australianwildlife.org/](http://www.australianwildlife.org/) - Australian Wildlife Conservancy
- ▶ [www.deh.gov.au/biodiversity/threatened/information/factsheets/index.html](http://www.deh.gov.au/biodiversity/threatened/information/factsheets/index.html) - World Wide Fund for Nature
- ▶ [www.extinctanimal.com/extinct/extinct\\_mammals.htm](http://www.extinctanimal.com/extinct/extinct_mammals.htm) - Extinct Mammals
- ▶ [users.netconnect.com.au/Easter\\_Bilby/](http://users.netconnect.com.au/Easter_Bilby/) - Read the Easter Bilby Story
- ▶ [www.museum.vic.gov.au/bioinformatics/mammals/images/thumb1mar.htm](http://www.museum.vic.gov.au/bioinformatics/mammals/images/thumb1mar.htm) - Mammal Images
- ▶ [rainforestinfo.org.au/spp/Schouten/](http://rainforestinfo.org.au/spp/Schouten/) - Extinct Australian Species
- ▶ [www.calm.wa.gov.au/plants\\_animals/feeding\\_wild\\_animals.html](http://www.calm.wa.gov.au/plants_animals/feeding_wild_animals.html) - Feeding Wild Animals
- ▶ [www.deh.gov.au/biodiversity/threatened/information/factsheets/index.html](http://www.deh.gov.au/biodiversity/threatened/information/factsheets/index.html) - National Threatened Species Day
- ▶ [edtech.kennesaw.edu/web/endangsp.html](http://edtech.kennesaw.edu/web/endangsp.html) - Excellent Links Page





# Definitions

**Threatened animal species are classified according to the severity of their risk of extinction. The Environment Protection and Biodiversity Conservation Act (1999) classifies threatened species using the categories below. The aim of the Act is to promote the conservation and biodiversity of threatened Australian species. The classifications vary slightly among states and territories.**

## **EXTINCT:**

A species is said to be extinct when there is no reasonable doubt that the last member of this species has died. Extinctions can be hard to prove and a limit of fifty years with no official sightings of the species is now used. It is believed that in the last 200 years, at least 17 Australian animal species have become extinct.

Examples of extinct Australian species include:

- Thylacine (*Thylacinus cynocephalus*) Last seen in 1936
- Pig-footed bandicoot (*Chaeropus ecaudatus*) Last seen in 1901
- Lesser bilby (*Macrotis leucura*) Last recorded sighting in the 1950s

## **EXTINCT IN THE WILD:**

When a species exists only in cultivation, in captivity (i.e. a zoo program), or as a naturalised population outside its past range.

## **CRITICALLY ENDANGERED:**

Refers to species that are facing an extremely high risk of extinction in the wild in the “immediate” future. Examples of critically endangered Australian animals include:

- Western swamp tortoise (*Pseudemydura umbrina*)
- Gilbert’s potoroo (*Potorous gilbertii*)

## **ENDANGERED:**

Refers to species that are likely to become extinct in the “near” future unless the threats and dangers to their survival are removed. Animal species in this category are not “critically endangered” but they are still facing a very high risk of extinction in the wild. Examples of endangered Australian species include:

- Northern hairy-nosed wombat (*Lasiorhinus krefftii*)
- Spotted tree frog (*Litoria spenceri*)

## **VULNERABLE:**

Refers to species that are not classified as endangered or critically endangered, yet are facing a risk of extinction in the “medium-term” future. Species that fall into this category are likely to be classified as “endangered” within the next 25 years if no action is taken to preserve the species. Australian species that are considered “vulnerable” include:

- Great white shark (*Carcharodon carcharias*)
- Green turtle (*Chelonia mydas*)
- Chuditch, Western quoll (*Dasyurus geoffroii*)

## **CONSERVATION DEPENDENT:**

Refers to species that are the focus of specific conservation programs. Without such a program the species would be classified as vulnerable, endangered or critically endangered within a five year period. Examples include:

- Southern bent-wing bat (*Miniopterus schreibersii bassanii*)

## **Definitions used in certain states and territories:**

### **NEAR THREATENED:**

This category is used in some states and territories, where it is believed the species is “vulnerable” but there are no actual estimates of population sizes. Without these details, the species is unable to be classified as threatened or vulnerable. Examples include:

- Narbalek (*Petrogale concinna leichardti*)  
- a rock wallaby species
- Kakadu fourbar swordtail butterfly (*Protographium leosthenes geimbia*)

### **LEAST CONCERN:**

Refers to species that have abundant populations and are considered to be of least concern. There is no recorded evidence of a decline in numbers. An example includes:

- Eyrean grasswren (*Amytornis goyderi*)

### **DATA DEFICIENT:**

Species where little is known about remaining numbers and populations are listed in this category.



# Glossary

**Biodiversity:** (Biological diversity) is the term used to describe the variety that exists among organisms and their environments. It is important that biodiversity be protected so as to allow species to continue to thrive. In the past, species have become extinct as a result of natural causes. Today, however, loss of biodiversity is largely caused by humans. People have hunted certain species to extinction and polluted and destroyed their habitat. Conservation and protection efforts of recent years have slowed down the loss of biodiversity but have not stopped it.

**Community:** Term used to describe all organisms inhabiting a common environment where all living things interact with each other.

**Ecosystem:** A self-supporting biological system involving all the organisms in a community and the natural environment. This basically includes all species of plant and animal and the relationships that exist between them and the non-living aspects of their environment such as air, water, light and soil. If anything upsets the delicate balance the whole ecosystem will be affected. An example of an ecosystem is a worm farm where there are many independent factors that work together so the whole system survives.

**Endemic:** Refers to a species or population that occurs in one particular region in all months of the year and all years. For example, the chestnut-breasted whiteface (*Aphelocephala pectoralis*) is endemic to South Australia while the golden-shouldered parrot (*Psephotus chrysopterygius*) is endemic to the Cape York Peninsula.

**Environment:** The surroundings in which a plant or animal lives is called its environment. An animal's environment is very important because it can influence its development and behaviour. The environment of an animal includes its immediate habitat, climatic conditions, weather and human interference. An animal or plant adapts to its natural environment in order for it to survive. If an animal exists in a harsh environment it will try to develop special features over time that will allow it to exist more easily in the particular environment. For example, chameleons have developed a way to change their skin colour to allow them to blend in with their surroundings, escaping predators in the process.

**Habitat:** The place or places normally occupied by a particular species or population.

**Home range:** The home range is the area in which an animal will move around in order to feed.

**Least concern:** This is the status given by CITES (The Convention on International Trade in Endangered Species of Wild Fauna and Flora) when a species of plant or animal has been evaluated but does not qualify as being threatened at this time.

**Marine Protected Areas:** A marine protected area (MPA) is any marine area, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment. Some of the functions of MPAs are protecting important habitats and areas, studying the effect of developments such as marinas on marine habitats, protecting endangered marine species and regulating the fisheries to make sure size limits do not endanger the survival of certain species.

**Predators:** Predators are carnivorous animals that hunt and kill other animals for food. This term is used to describe any animal that lives by preying on another animal. For example sharks are predators of smaller fish, frogs are predators of beetles and insects, crocodiles are predators of fish, eagles are predators of lizards and humans are predators of dairy cattle.

**Special adaptations:** Animals make adaptations to their environment by changing to become better suited to their environment in order to survive and reproduce. Some of these adaptations may be behavioural while others, which happen over long periods of time, may be physical. Kangaroos, in times of drought when there is little food, will not have as many babies so there are fewer kangaroos to share the limited food sources. When there has been a really good season they will have more joeys than normal because there will be an ample food supply.

**Species:** This is the basic unit of classification for all members of the animal and plant kingdoms. Animals are grouped together according to their common characteristics. Each group is classified as a species. Members of a species all have common characteristics and differ from all other living things in one way or another. The scientific name for species is usually written in italics or is underlined. No two species in a genus have the same name and most of these names come from Greek or Latin words. All organisms are known by different common names around the world, however, their scientific name is always the same no matter what language.

**Sub species:** A group that is a subdivision of a species, which usually occurs because of isolation within a species.



# Endangered Species of New South Wales

1

## Regent Honeyeater

### Fact File

Scientific Name: *Xanthomyza phrygia*

The regent honeyeater is known for its striking black, white and yellow appearance and was once found in abundance in regions throughout Victoria and New South Wales. It is now restricted to ironbark forest habitats which have become threatened communities.

This species was once commonly found living in Queensland and South Australia, however it no longer exists in these areas due to loss of habitat. It is estimated that there are as few as 800 to 2000 birds left in existence and it is listed as nationally endangered.

### Honey Diet:

Mainly eats plant nectar from eucalypt species. This honeyeater plays an important role in the reproduction of many flowering plants, acting as a pollinator by carrying pollen from the **anther** of one plant to the **stigma** of another flowering plant.



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### Did You Know?

**Firewood collection is threatening the future of the regent honeyeater!**

**Many people think they are helping out the environment when they collect firewood from the bush. Instead, they are often doing more harm than good. The dead trees and fallen timber that many people remove from forests and bush regions actually play an important part in the survival of the forest ecosystem as many fungus species live on the dead wood. The fungi are a food source for many small woodland species and at least 20 bird species can be affected by the reduced amounts of these fungi.**



### Threats of Extinction:

The main threat for the honeyeaters is the loss of their woodland habitat. This threat affects many other woodland plant and animal species. Since European settlement the unique box-ironbark woodlands have been cleared for reasons such as gold-mining, room for industrial and residential development and for agricultural purposes such as farming. Today only 17% of Australia's original box-ironbark vegetation remains untouched.

### Habitat:

Current populations exist mainly in dry box-ironbark forests and woodland areas inland of the Great Dividing Range in New South Wales. The birds like to live near wet and fertile soils usually along river beds and valleys. They pollinate species such as mulga ironbark, white box and Blakely's red gum trees. The honeyeater relies on these plant species for food and shelter.

### Conservation Efforts:

The main focus at the moment is to preserve the habitats of the regent honeyeater. Box-ironbark woodlands are a threatened ecosystem and are also home to many other animal and plant species, several of which are becoming endangered. Conservation programs have been set up to protect and restore the natural habitats.

There are also organisations, such as the Wilderness Society, who work to promote awareness of the honeyeaters uncertain future. You can learn about what the Wilderness Society does by visiting this website:

▶ [www.wilderness.org.au/campaigns/forests/general/threatened/](http://www.wilderness.org.au/campaigns/forests/general/threatened/) - Threatened Species

Want more about the regent honeyeater?

▶ [www.birdsaustralia.com.au/birds/regent.html](http://www.birdsaustralia.com.au/birds/regent.html)



## Helping Honeyeater Habitats

### Activity

Make some notes about three threats that the regent honeyeater is facing.

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Which of these threats do you think is the most concerning? Why?

\_\_\_\_\_

\_\_\_\_\_

**Did you know that you can actually help regent honeyeaters and other endangered woodland birds?**

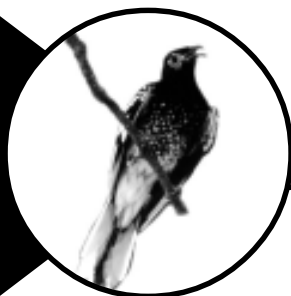
By leaving dead wood alone you stop the disruption to the natural ecosystem. This means that you are leaving food sources there for the birds who are already facing competition for food from other animals not native to Australia. You can also ask your local firewood seller where he/she collects their firewood from and find out if they are taking it from a threatened ecological community such as the box-ironbark woodlands.

#### WEBSITES:

Check out these sights for woodland information

▶ [www.vnpa.org.au/campaigns/boxironbark.htm](http://www.vnpa.org.au/campaigns/boxironbark.htm)

▶ [www.parkweb.vic.gov.au/park\\_boxironbark.cfm](http://www.parkweb.vic.gov.au/park_boxironbark.cfm)



### Woodland Worries

Be a super sleuth and hunt around the sites below to find out the names of some other endangered animals that live in box-ironbark woodlands. In the table below, list the names of four animal species that rely on these habitats for their survival. See if you can find out the status of each animal species.

Shade in the status bar.

COMMON NAME: \_\_\_\_\_

SCIENTIFIC NAME: \_\_\_\_\_

STATUS: \_\_\_\_\_

Conservation Dependent    Vulnerable    Endangered    Critically Endangered

COMMON NAME: \_\_\_\_\_

SCIENTIFIC NAME: \_\_\_\_\_

STATUS: \_\_\_\_\_

Conservation Dependent    Vulnerable    Endangered    Critically Endangered

COMMON NAME: \_\_\_\_\_

SCIENTIFIC NAME: \_\_\_\_\_

STATUS: \_\_\_\_\_

Conservation Dependent    Vulnerable    Endangered    Critically Endangered

COMMON NAME: \_\_\_\_\_

SCIENTIFIC NAME: \_\_\_\_\_

STATUS: \_\_\_\_\_

Conservation Dependent    Vulnerable    Endangered    Critically Endangered

### WebQuester Challenge:

**What's Growing On?** Find out the names of the endangered plant species that exist in box-ironbark woodlands. List them below.

\_\_\_\_\_