

# Discovering Swift Parrots

## A Closer Look

YEAR 5–6 EDUCATION KIT



MURRUMBIDGEE  
**Landcare**  
INCORPORATED

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Written and designed by PeeKdesigns for Murrumbidgee Landcare Inc.

### Cultural acknowledgements

Murrumbidgee Landcare acknowledges the Wiradjuri people who are the Traditional Custodians of the Land on which we work. We pay our respects to Elders of the Wiradjuri Nation, past, present and emerging, and extend that respect to all First Nations Elders.

We celebrate the diversity and strength of Aboriginal cultures and value their contribution to caring for our Land.

### Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing (January 2024). However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information.

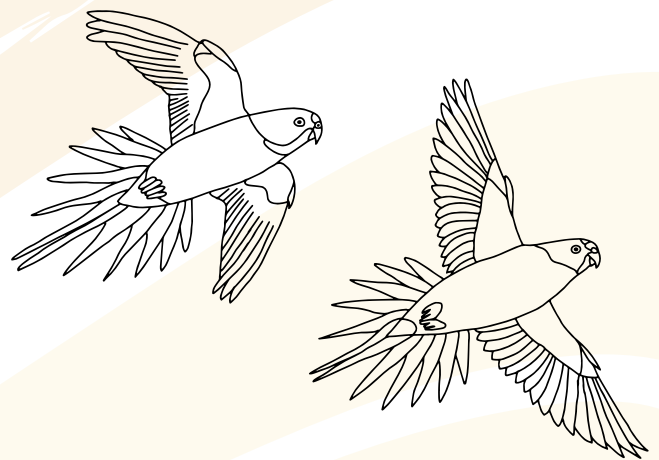
### Project partners



# About the project

**Discovering Swift Parrots** is a project developed in partnership between Murrumbidgee Landcare Inc., Wildlife Drones, NSW Government, Australian National University, Birdlife Australia, Bush Heritage Australia, Greening Australia, Central Coast Council and PeeKdesigns. The project consists of a suite of resources developed for primary schools to raise awareness of the plight of one of Australia’s beautiful and unique birds, the swift parrot.

Discovering Swift Parrots empowers educators to teach students about this precious Australian bird while fostering environmental responsibility. Aligned with both the New South Wales and Australian Curriculum, this resource supports a holistic educational approach.



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# Discovering Swift Parrots: A Closer Look

Welcome to "Discovering Swift Parrots: A Closer Look," a teaching resource tailored for Year 5 and 6 students (NSW Stage 3). This resource continues the journey exploring the world of the critically endangered swift parrot, offering a comprehensive unit that can also be used as individual activities.

This resource provides the opportunity to explore a range of topics associated with the swift parrot, including identification, taxonomy, physical characteristics, migration, habitat, adaptations, woodlands, food chains, diet, breeding, life cycles, conservation status, threats, pest species, climate change, and conservation efforts.

Subjects covered span across Science, Geography, Creative Arts, and English. The lesson scope and sequence, outlined in the following pages, detail each section's activities and corresponding New South Wales and Australian Curriculum outcomes.

## Key features

- The Discovering Swift Parrots project consists of two teaching booklets featuring comprehensive fact and activity sheets.
  - Discovering Swift Parrots: The Journey Begins (Year 3–4 education kit)
  - Discovering Swift Parrots: A Closer Look (Year 5–6 education kit)
- Interactive resources designed for engaging exploration:
  - What is a parrot?
  - Identifying swift parrots
  - The migration of Pippa, the swift parrot



Swift parrots (*Lathamus discolor*) are one of Australia's rare species of parrot and are listed as critically endangered under Australian Government legislation.

In 2023, it was estimated that less than 500 birds live in the wild. Without conservation efforts, this unique and iconic species may become extinct.



# Lesson scope and sequence

Section	Description	Curriculum
<p><b>1. Meet our swift!</b></p> <p><b>Time</b> 3–4 lessons</p>	<p>This section is an introduction to the swift parrot, or a recap of prior learning. If possible, invite a guest speaker to talk about the swift parrot. Students learn to identify the physical and behavioural features of a swift parrot.</p> <p>Introduce the role of classification of species and students use the classification description to correctly classify the swift parrot.</p> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• Fact sheet: Meet the swift parrot</li> <li>• Fact sheet: What is a parrot?</li> <li>• Fact sheet: Identifying the swift parrot</li> <li>• Fact sheet: Cracking the code of living things</li> <li>• SmartBoard to play videos and audio</li> <li>• Interactive: Identifying swift parrots</li> </ul> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• My swift parrot knowledge</li> <li>• Swift parrot poster</li> <li>• Crack the code</li> <li>• Swift facts crossword</li> </ul>	<p><b>Science</b></p> <p>ST3-4LW-S ACSSU043 ACSSU094</p> <p><b>Terms</b></p> <ul style="list-style-type: none"> <li>• nectivorous</li> <li>• migratory bird</li> <li>• critically endangered</li> <li>• parrot</li> <li>• zygodactyl feet</li> <li>• plumage</li> <li>• physical characteristics</li> <li>• behavioural characteristics</li> <li>• taxonomy</li> <li>• classification</li> </ul>
<p><b>2. Survival and habitat</b></p> <p><b>Time</b> 4 lessons</p>	<p>This section begins with a reflection on how living things depend on each other and their environment for survival and discusses the concept of habitats and their key parts.</p> <p>Students learn about about swift parrot adaptations and the impact of human activities on survival. Students Investigate the importance of woodlands to swift parrots and the role woodlands play in the swift parrot food chain.</p> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• Fact sheet: Superpowers for survival</li> <li>• Fact sheet: It's all connected</li> <li>• Fact sheet: Wonderful woodlands</li> <li>• Fact sheet: Having a sweet tooth beak</li> <li>• Fact sheet: Forest pollinators</li> <li>• Fact sheet: Woodland food chains</li> </ul> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Amazing adaptations</li> <li>• Adaptations vs human influence</li> <li>• A fractured landscape</li> <li>• Swift parrot food chain</li> </ul>	<p><b>Science</b></p> <p>ST3-4LW-S ACSSU043 ACSSU094</p> <p><b>Terms</b></p> <ul style="list-style-type: none"> <li>• adaptation</li> <li>• habitat</li> <li>• temperate</li> <li>• woodland</li> <li>• nectivorous</li> <li>• lerps</li> <li>• pollination</li> <li>• food chain</li> <li>• primary producer</li> <li>• primary consumer</li> <li>• secondary consumer</li> <li>• apex predator</li> <li>• decomposer</li> </ul>

Section	Description	Curriculum
<p><b>3. Migration patterns</b></p> <p><b>Time</b> 2–4 lessons</p>	<p>An introduction/recap to the term migration and what it means to be a migratory bird. Provide a closer look at the swift parrots time in Tasmania during summer and on the mainland during winter. Students can explore the migration story through an interactive story of their lifecycle and quiz questions.</p> <p>There are three activities related to the migration story - focussed on the following subjects: English, Creative Arts and Geography. You can do all three or pick and choose.</p> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• Fact sheet: The bird likes to move!</li> <li>• Fact sheet: Summertime in Tasmania</li> <li>• Fact sheet: Wintertime on the mainland</li> <li>• Interactive: The migration of Pippa, the swift parrot</li> </ul> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Swift parrot diary adventure</li> <li>• Swift parrot migration mural</li> <li>• Mapping the migration</li> </ul>	<p><b>Science</b></p> <p>ST2-4LW-S ACSSU043 ACSSU094</p> <p><b>English</b></p> <p>EN3-RECOM-01 EN3-CWT-01 ACELY1704 ACELY1714</p> <p><b>Creative Arts</b></p> <p>VAS3.1, VAS3.2 ACAVAM115 ACAVAM116</p> <p><b>Geography</b></p> <p>GE3-1, GE3-4 ACHASSI096 ACHASSI100 ACHASSI101 ACHASSI124 ACHASSI128 ACHASSI129</p> <p><b>Terms</b></p> <ul style="list-style-type: none"> <li>• migratory bird</li> <li>• hollows</li> <li>• eucalypt</li> <li>• life cycle</li> </ul>
<p><b>4. Under threat</b></p> <p><b>Time</b> 1–2 lessons</p>	<p>Introduce/recap the concept of what it means to be a threatened species and go through the conservation status levels of threat.</p> <p>Students learn about the threats to swift parrots and test their knowledge through gameplay. They explore a major threat to swift parrots in Tasmania—the sugar glider and how this native species has become a pest and threatens the swift parrot's survival.</p> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• Fact sheet: What does it mean to be threatened?</li> <li>• Fact sheet: Swifties need urgent help!</li> <li>• Fact sheet: Threats to swift parrots</li> <li>• Fact sheet: Living out of place</li> </ul> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• What threat am I?</li> <li>• The sugar glider problem</li> </ul>	<p><b>Science</b></p> <p>ST2-4LW-S ACSSU043 ACSSU094</p> <p><b>Geography</b></p> <p>GE3-2 ACHASSK113</p> <p><b>Terms</b></p> <ul style="list-style-type: none"> <li>• threatened</li> <li>• conservation</li> <li>• critically endangered</li> <li>• invasive native species</li> </ul>

Section	Description	Curriculum
<p><b>5. Conservation efforts</b></p> <p><b>Time</b> 2 lesson</p>	<p>Introduce students to ways we can help swift parrots and how conservation plans are used to help manage these threats across large areas/populations.</p> <p>Discuss possible actions that can be used to combat key threats before brainstorming individual actions to help reduce the impact of climate change related threats.</p> <p>Introduces students to the use of technology in tracking swift parrots and for conservation. Use the case study of Wildlife Drones as an example of Australian ingenuity leading the world in tracking wildlife. Students take part in a roleplay activity to imitate the use of drones and other technology in identifying/tracking swift parrots.</p> <p>Introduce various communication tools available to spread conservation messages. Students apply their knowledge in a creative communication project. They complete the swift parrot unit of work by signing a pledge to save the swift parrot.</p> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• Fact sheet: What can we do?</li> <li>• Fact sheet: A plan for conservation</li> <li>• Fact sheet: Helping swift parrots</li> <li>• Fact sheet: Tracking with drones</li> <li>• Fact sheet: Communication tools for change</li> </ul> <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Your actions count</li> <li>• Climate change actions</li> <li>• A game of drones</li> <li>• Tell the world</li> <li>• Swift parrot superhero pledge!</li> </ul>	<p><b>Geography</b></p> <p>GE3-2, GE3-3 ACHASSI095 ACHASSI096 ACHASSI098 ACHASSI123 ACHASSI124 ACHASSI126 ACHASSK113</p> <p><b>Science</b></p> <p>ST3-11DI-T</p> <p><b>English</b></p> <p>EN3-OLC-01, EN3-CWT-01 ACELY1704 ACELY1714</p> <p><b>Terms</b></p> <ul style="list-style-type: none"> <li>• land management</li> <li>• recovery plan</li> <li>• monitoring</li> <li>• raise awareness</li> <li>• drone</li> <li>• tracking</li> <li>• radio-telemetry</li> <li>• high-resolution observation</li> <li>• thermal imaging</li> <li>• acoustic monitoring</li> </ul>

# 1. Meet our swiftly



## Teacher's notes

### Meet the swift parrot!

- Start with a KWL chart and then introduce the swift parrot using the fact sheets and videos.

### Identifying the swift parrot

- Go through the fact sheets and videos to look at the swift parrot with more detail.
- **Activity:** Students complete the crossword using facts from the previous fact sheets.  
**Answers:** 1. Tasmania. 2. Nectivorous. 3. Fastest. 4. Critically. 5. Green. 6. Kilometres. 7. Scientific. 8. Migratory. 9. Identify. 10. Acrobatic. 11. Mainland. 12. True. 13. Forehead. 14. Small. 15. Lerp.

### Cracking the code

- Introduce the role of classification of species with the fact sheet. Try coming up with an mnemonic for remembering the order of taxonomy classification e.g. Keep Ponds Clean Or Frogs Get Sick.
- **Activity:** Using the classification descriptions, students must correctly classify the swift parrot.  
**Answers:** Animalia, Chordata, Aves, Psittaciformes, Psittaculidae, Lathamus, discolor.

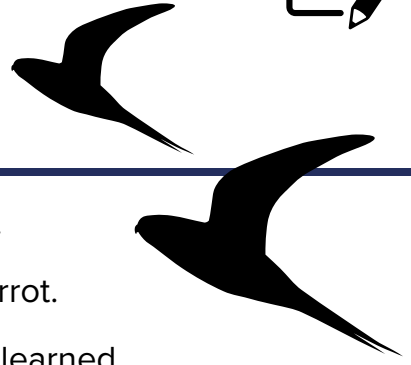
## What you need

- Copies of the activity sheets
- SmartBoard for playing videos and audio
- Parrots ID Guide
- Book: Swiftly the super-fast parrot (optional)
- Computers or tablets for completing the interactive: Identifying swift parrots





# My swift parrot knowledge



In the first box, write what you already know about the swift parrot.

In the second box, write what you want to know about the swift parrot.

After you have been introduced to the swift parrot, write what you learned.

What I **KNOW**

What I **WANT** to know

What I **LEARNED**



# Meet the swift parrot!

## Small and colourful

The swift parrot, also known by its scientific name *Lathamus discolor*, is a beautiful and unique bird that is native to Australia. It is a small parrot with bright and colourful feathers, making it a real sight to behold!

You can recognise the swift parrot by its special alarm sound, its sleek body, its pointy tail and the flashes of bright red you can see when it spreads its wings.

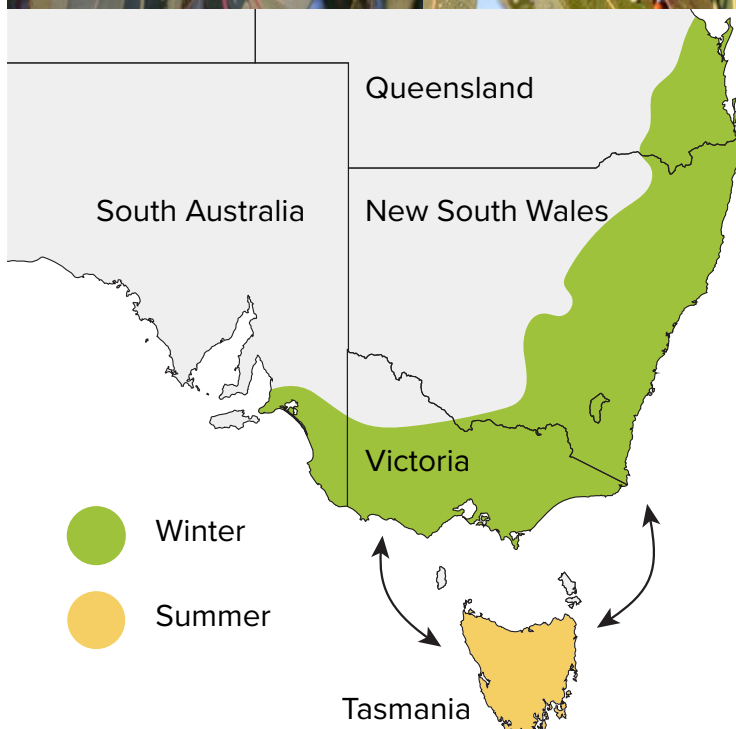
The swift parrot is a little bird that, like its name suggests, can fly really fast! In fact, it is the fastest parrot in the world, being clocked at up to 88 kilometres per hour.

## Sweet tooth beak

They love to drink nectar from eucalypt flowers and eat lerps, a type of honeydew treat left by insects. This makes it a **nectivorous** feeder.



Photos: Swift parrot (G. Dabb);  
flowers and lerps (Deb Sullivan)



## Long distance travellers

Swift parrots are a **migratory bird** that travel long distances each year. The entire population spend the summer months in Tasmania before migrating across Bass Strait to the Australian mainland for the winter.

They can travel up to 2,500 kilometres each year as they travel across a range stretching from South Australia, through Victoria and eastern NSW, up to south-eastern Queensland.



Photo: Swift parrot (Mick Roderick)

## Endangered

The swift parrot is listed as **critically endangered** due to its population numbers being so low. There is thought to be as few as 500 swift parrots left in the wild, which is incredibly low. This has been caused by habitat loss, predation and competition for resources.

For the swift parrot to survive we have to work together in our conservation efforts to protect them and help them flourish once again.



Scan or click to watch a video introducing the swift parrot



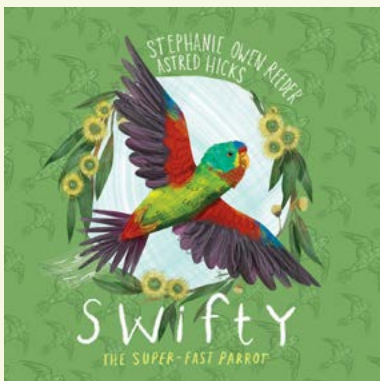
Scan or click to watch a video monitoring swift parrots



Scan or click to watch a video showcasing swift parrots



Scan or click to watch a video about protecting swift parrots



### Swiftly the super-fast parrot

Fly with Swiftly on the swift parrot's challenging migration journey following the blossom trail.

A captivating story of the remarkable, but critically endangered, swift parrot – the fastest parrot in the world!

Available at  
CSIRO Publishing

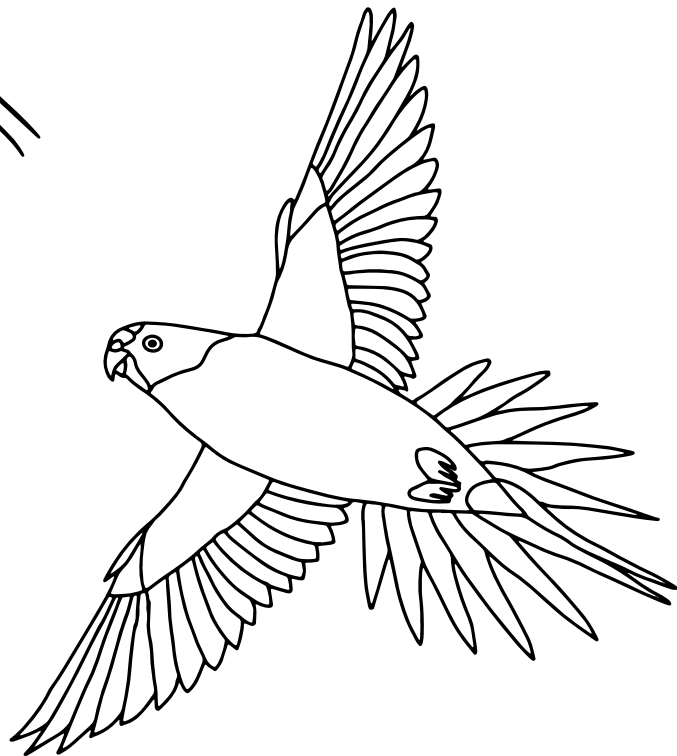
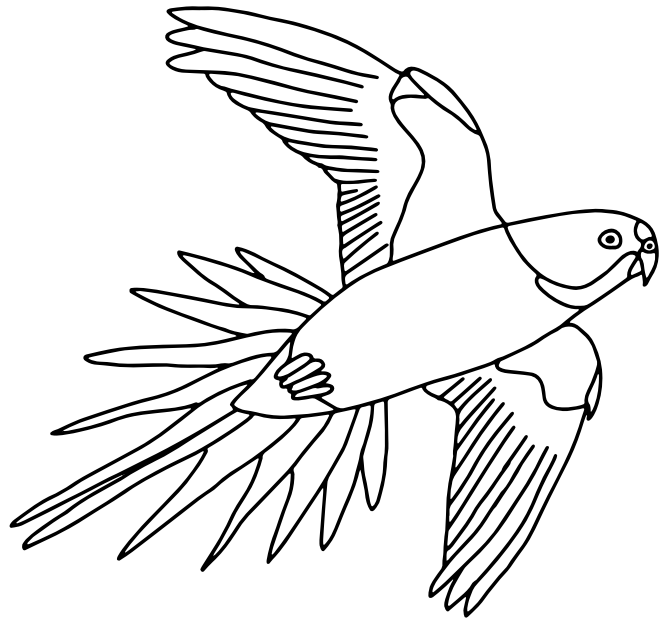
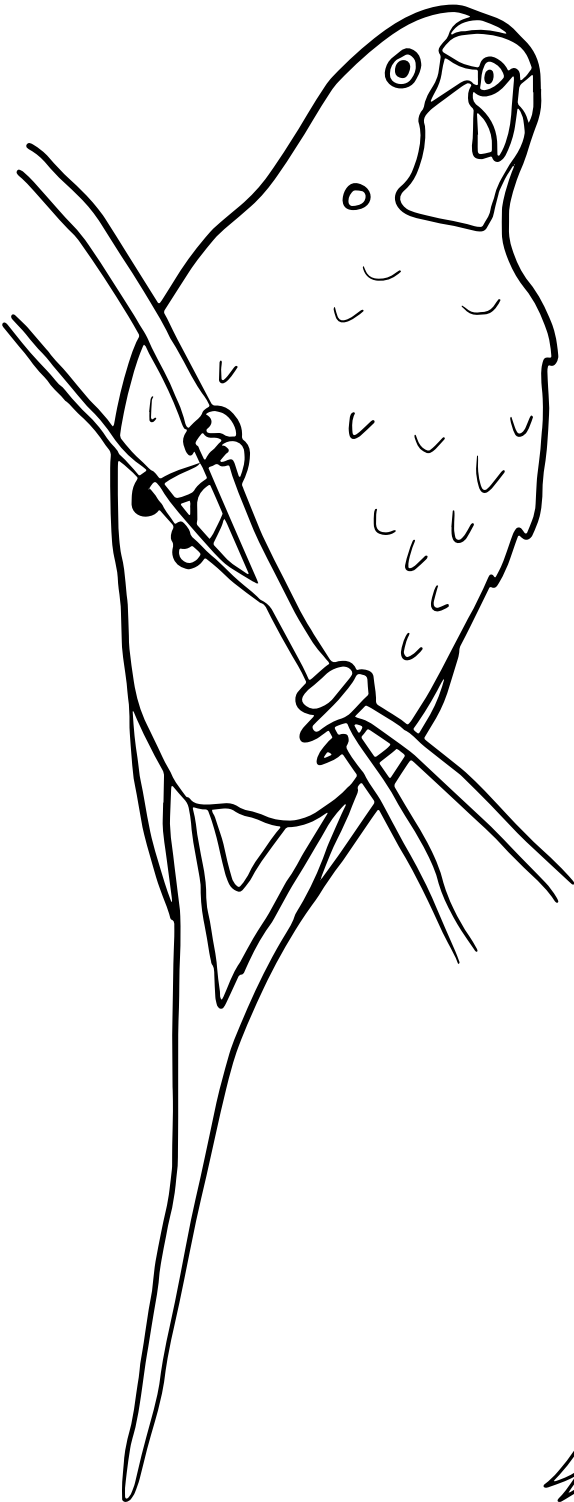
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QR code to buy





# Swift parrot poster

Create your own identification poster of the swift parrot using any of the following illustrations. You must include the common name, scientific name, conservation status, call description, colour description and any other identifying features or interesting information about this unique bird.





# What is a parrot?

You have had a brief introduction to our star species the swift parrot, but what exactly is a parrot?

Parrots are a colourful and clever type of bird that can be found in Australia, South America, Central America, Asia and Africa. There are nearly 400 different types (species) of parrots in the world.

In Australia, we have 56 species of parrots from two families: true parrots (Psittacoidea) and cockatoos (Cacatuoidea). Of these, 40 types of Australian parrots are found nowhere else in the world.

Parrots can be found in different habitats throughout Australia ranging from tropical rainforests in the north, the grasslands of the outback, to the coastal regions and temperate woodlands.



## Features of a parrot

Photo: Rainbow lorikeet

Thick, strong, hooked beaks for cracking seeds, nuts and fruits.

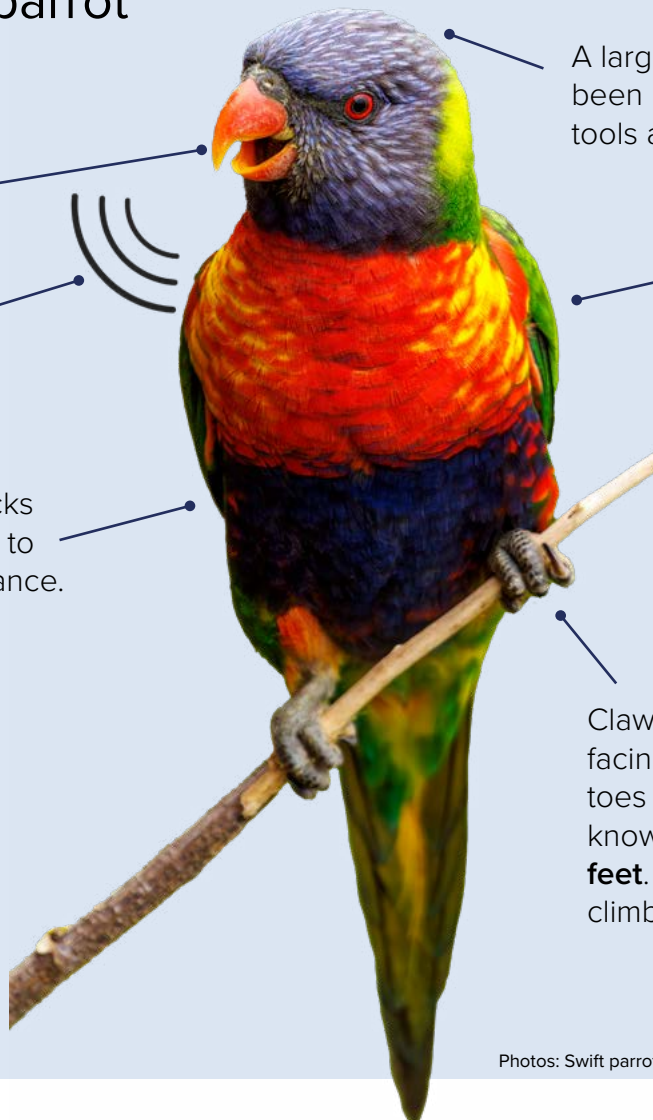
Distinguishing calls.

Sturdy bodies, short necks and strong legs (relative to their size). An upright stance.

A large brain. They have been known to use simple tools and mimic sounds.

Vibrant feathers that are often colourful.

Clawed feet with two toes facing forward and two toes facing backward, known as **zygodactyl feet**. This is very useful for climbing and grasping.



Scan or click  
QR code to watch

Parrots – Living with  
Aussie Wildlife



Photos: Swift parrot (G. Dabb); all others (Kelly Coleman)



# Identifying the swift parrot

We are lucky to have so many types of parrots in Australia. These wonderful birds have bright, colourful **plumage** (feathers), including many with shades of bright green as their primary colour.

So, the big question is how do we learn to tell the difference between our star species, the swift parrot, and other similar looking parrots? When looked at closely each parrot has **physical and behavioural characteristics** that help us tell the difference between them.

**Let's have a look at the swift parrot!**

Learn how to tell the difference between a swift parrot and other parrots with this ID Guide



Scan or click to download

## Colour

The swift parrot's main body colour is bright green, just like a lot of Australian parrots. This means we need to look at the details of their other colours and where they are on the body, so we can identify it.

Small amount of blue on the forehead.

Red above the beak.

Bright red on mask and throat surrounded by yellow fringe.

Males have a bright red forehead and throat, while females have a paler red colour.

Yellow to red patches on the shoulder.

Blue edges to the wings.

Red under the wing and tail. This is one of the important identifiable features.

Maroon pointy tail.

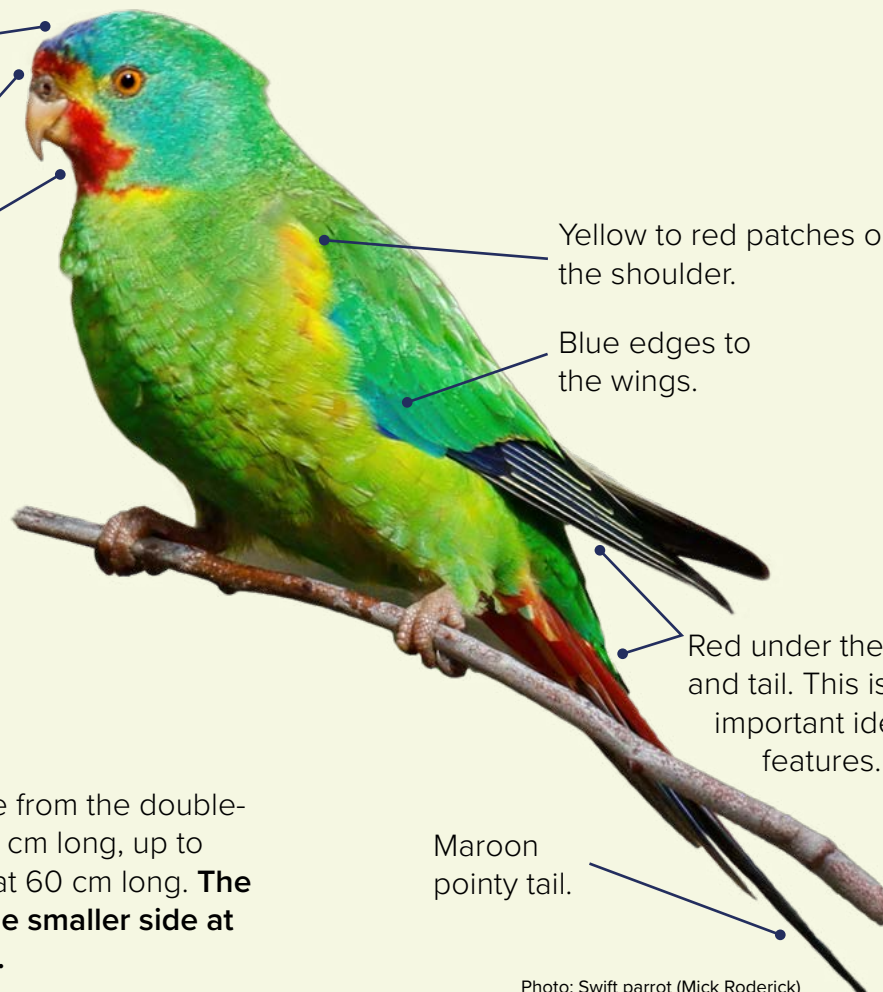


Photo: Swift parrot (Mick Roderick)

## Size

Parrots range in size from the double-eyed fig parrot at 14 cm long, up to the palm cockatoo at 60 cm long. **The swift parrot is on the smaller side at around 25 cm long.**



Photo: Flying flock (N. Lazarus)

## Movement

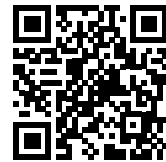
**Fast and agile flyers**, these parrots are known for their swift flight and acrobatic manoeuvres. **They are the world's fastest parrot!**

## Sound

One of the most important things used to identify birds are their wonderful calls. The swift parrot is no different.

It has unique calls that are different to other parrots. The usual contact call in flight is a **loud, metallic 'chit chit'** repeated three or four times in succession. They also make a soft chattering when feeding.

Even if you only catch a glimpse of a bird and couldn't tell for sure whether it was a swift parrot, you would be able to identify it if you heard its call.



Scan or click QR code to listen to their flight call (top) and chattering (bottom)

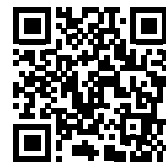


Photo: Swift parrot pair (Dave Curtis)

## Get more swifty!

Natural history photographer and **ornithologist**

Graeme Chapman has a great collection of Australian bird calls that he has recorded.

Visit his website and listen to his swift parrot call and some of the other parrots.

Do you think they all sound the same? With a bit of practice do you think it would be possible to tell the difference between parrots simply by listening to their call.



Scan or click QR code to listen to bird calls on Graeme Chapman's website



# Cracking the code of living things

## The taxonomy code

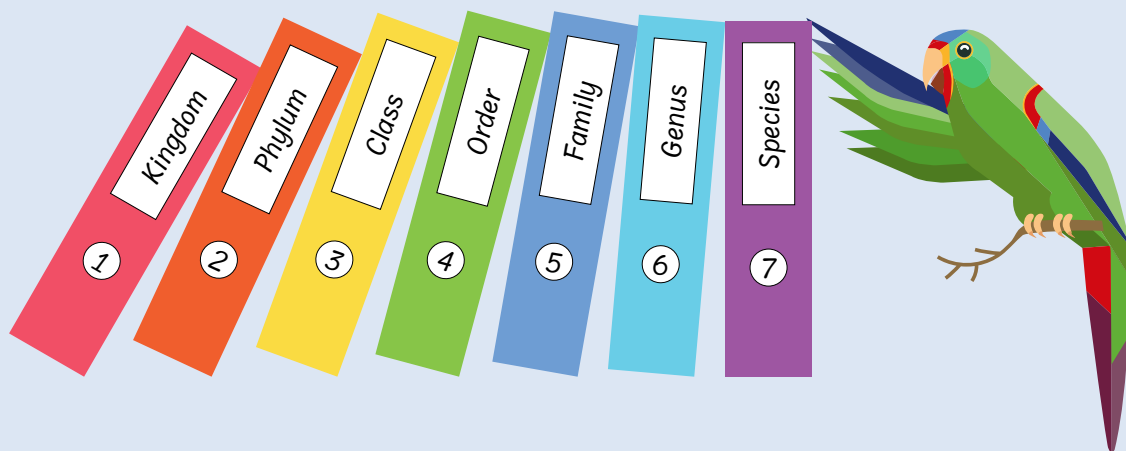
Have you ever heard someone call a kookaburra a "laughing jackass"? Funny name, right? But the problem is, these nicknames can get confusing. In different parts of Australia, people might call the same animal something different!

Imagine trying to talk about animals with friends from another country—how would you know exactly which creature you're talking about?

Back in the 1700s, a clever scientist named Carolus Linnaeus from Sweden came up with a special code to stop this confusion. It's like a super sorting system for all living things, from tiny insects to giant whales! This system is called **taxonomy**.

Think of it like a giant set of files for plants and animals. Everything has its own special place, organised into seven levels:

1. **Kingdom:** biggest group, like animals or plants.
2. **Phylum:** a smaller group within a kingdom (vertebrates and invertebrates for animals).
3. **Class:** even smaller group.
4. **Order:** getting more specific!
5. **Family:** like a big group of close relatives.
6. **Genus:** like a smaller family group.
7. **Species:** the most specific level—the exact type of animal!



## The scientific name

Scientists give each living thing a special two-part name, like a secret code! This is called a **scientific name**.

For example, the swift parrot's scientific name is ***Lathamus discolor***.

- *Lathamus* is its genus, like a last name, and birds in this group share some similar features.

- *discolor* is its species, like a first name, and tells us the exact type of swift parrot.

Wherever you are in the world, if you talk about the *Lathamus discolor*, everyone (especially scientists) will know you're talking about a swift parrot and not some other kind of similar bird.





# Crack the code

We know the scientific name for the swift parrot is *Lathamus discolor*. See if you can work out the full name using the taxonomy system. Use the keys below to decide the correct name for each classification level and record the full scientific classification of the swift parrot in the table.

KINGDOM	
PHYLUM	
CLASS	
ORDER	
FAMILY	
GENUS	
SPECIES	



Please note that the full taxonomy system has far more branches and descriptions for each level of classification. What is shown here is just a sample.

- KINGDOM

Fungi  
 Plantae (plant)  
 Animalia (animal)
- PHYLUM

Chordata (has backbone)  
 Mollusca (soft bodied)  
 Arthropoda (segmented body)
- CLASS

Mamalia (mammal)  
 Reptilia (reptile)  
 Aves (bird)
- ORDER

Anseriformes (webbed footed for swimming)  
 Psittaciformes (strong curved beak, upright stance and clawed feet)  
 Falconiformes (raptors with sharp hooked beak and strong claws)
- FAMILY

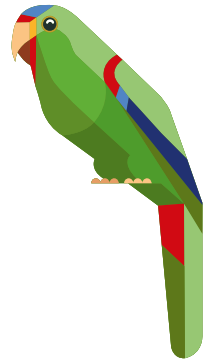
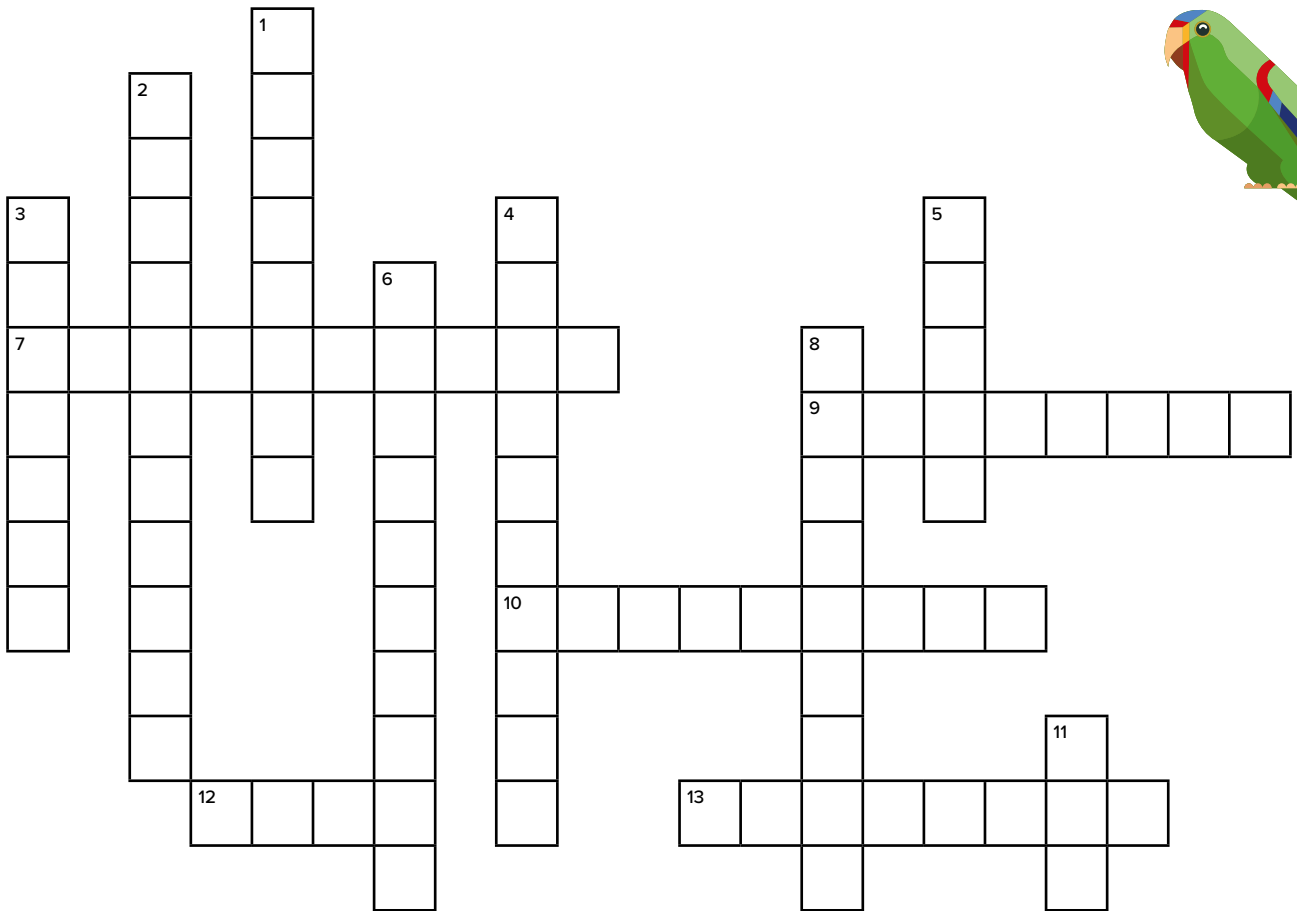
Chionidae (sheathbills and Magellanic plover)  
 Haematopodidae (oystercatchers)  
 Psittaculidae (small to medium sized broad-tailed parrots)
- GENUS

*Lathamus* Named for ornithologist John Latham in 1830. It is a monotypic genus, meaning there is currently only one species in the group — the swift parrot.
- SPECIES

*discolor* Swift parrot — even though it is the only member of the *Lathamus* genus, every animal must also have a species name.



# Swift facts crossword



## ACROSS

- 7. *Lathamus discolor* is their \_\_\_\_ name.
- 9. A maroon pointy tail is an important feature to \_\_\_\_ them.
- 10. Their flight can be described as \_\_\_\_.
- 12. The two families of parrots found in Australia are \_\_\_\_ parrots and cockatoos.
- 13. They have a patch of blue on their \_\_\_\_.
- 14. They are considered a \_\_\_\_ parrot.

## DOWN

- 1. Summers are spent in \_\_\_\_.
- 2. Drinking nectar means they are \_\_\_\_.
- 3. Clocking speeds of 88 kilometres per hour they are the worlds \_\_\_\_ parrot.
- 4. Their conservation status is listed as \_\_\_\_ endangered

- 5. Swift parrots have bright and colourful feathers that are mainly shades of \_\_\_\_.
- 6. They can travel up to 2,500 \_\_\_\_.
- 8. They travel long distances each year which means they are a \_\_\_\_ bird.
- 11. Winters are spent on the Australian \_\_\_\_.
- 15. A honeydew treat left by insects is a \_\_\_\_.

Acrobatic, Critically, Fastest, Forehead, Green, Identify, Kilometres, Lerp, Mainland, Migratory, Nectivorous, Scientific, Small, Tasmania, True

## 2. Survival and habitat



### Teacher's notes

#### Superpowers for survival

- Go through the fact sheet that introduces physical and behavioural adaptations.
- **Activity:** *Amazing adaptations* involves creating a poster or presentation on a swift parrot adaptation.
- **Activity:** *Adaptations vs human influence* involves designing a "mega-bird" to survive human impacts.

#### Habitats and woodlands

- Reflect on the interdependence of living things and discuss the key components of habitats.
- Go through the *Wonderful woodlands* fact sheet on swift parrot habitat and temperate woodlands.
- **Activity:** *A fractured landscape* helps show the amount of swift parrot habitat left on the mainland.

#### Food and food chains

- Discuss the swift parrot's food preferences and their role in pollinating our woodlands.
- Take a closer look at *Woodland food chains* and the different trophic layers (players).
- **Activity:** *Swift parrot food chain* involves recreating and describing simple food chains.

### What you need

- Copies of the activity sheets
- 2 x differently coloured paper
- rulers
- pen/pencils
- scissors
- glue sticks
- calculators

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### Answers

#### Swift parrot food chain

1. Flowering gum trees (Producer) > Swift parrot (Primary consumer) > Carpet Python (Secondary consumer) > Wedge-tailed eagle (Tertiary consumer)
2. Flowering gum trees (Producer) > Lerps (Primary consumer) > Swift parrot (Secondary consumer) > Feral cat (Tertiary consumer)



# Superpowers for survival

## All about adaptations

Have you ever wondered how animals survive in such different places, from scorching deserts to freezing oceans? It's all thanks to their amazing superpowers — **adaptations!**

Think of adaptations like costumes that animals wear to fit their environment perfectly. These costumes can be **physical** features, special ways their bodies work, or **behavioural** features, the way they do things. Adaptations develop over many generations as small gradual changes occur to allow animals to live in their surroundings, find food, avoid predators and reproduce successfully. Here are some wonderful swift parrot adaptations.



## Physical adaptations

### Specialised bill

The swift parrot's bill is adapted for feeding on nectar from various species of eucalypt trees, its primary food source. The bill is pointed for prying off lerps from leaves.

### Strong wings

The swift parrot has strong wings adapted for sustained flight, which enables it to cover long distances during migration and when searching for food and nesting sites.

### Fast flight

As the name suggests, the swift parrot has a swift and agile flight, which helps it quickly navigate through dense forests and escape from predators.

### Camouflage

The bright green coloration of the swift parrot allows it to blend in with the leaves of eucalypt trees, providing effective camouflage from predators.

### Strong vision

The swift parrot has excellent vision that allows it to spot potential food sources and predators from a distance, aiding in its survival and foraging efficiency.





### Flexibility in diet

While the swift parrot mainly feeds on nectar, it will consume pollen, insects and other food sources when nectar is scarce, displaying dietary flexibility.

### Efficient metabolism

The swift parrot has a highly efficient metabolism that allows it to obtain maximum energy from its diet of nectar, which provides the necessary fuel for its long migrations.

## Behavioural adaptations

### Seasonal migration

The swift parrot is a migratory species that travels long distances in search of suitable food and nesting sites. The exact route of their migration changes as the parrots adapt to changing environmental conditions.

### Social behaviour

The swift parrot forms large flocks during migration and while feeding, allowing them to share information about food sources and protect against predators through greater awareness — in other words, there are more eyes looking for danger.



### Breeding season timing

The breeding season of the swift parrot is timed to coincide with the flowering of eucalypt trees, ensuring that there is ample food available in their Tasmanian habitat for the nesting birds and their young.

### Unique breeding habitat

The swift parrot breeds exclusively in the hollows of old-growth eucalypt trees, which provides safe nesting sites away from ground predators.



### Nesting behaviour

The swift parrot displays specific nesting behaviour, such as excavating nesting hollows in old-growth eucalypt trees, laying eggs and incubating them, adapting its reproductive behaviour to ensure successful breeding.





# Amazing adaptations!



## The call-out

Adaptations are special tools, like body parts or behaviours, that animals develop over time to flourish in their habitat. Kinda like superpowers for survival!

You and your team-mates are being called upon to crack the code on a specific swift parrot adaptation.

## The mission

Your team will be provided with information about a swift parrot adaptation from the "Superpowers for survival" fact sheet or research some on your own!

Unleash your creativity and create a poster or presentation to show off your chosen adaptation.

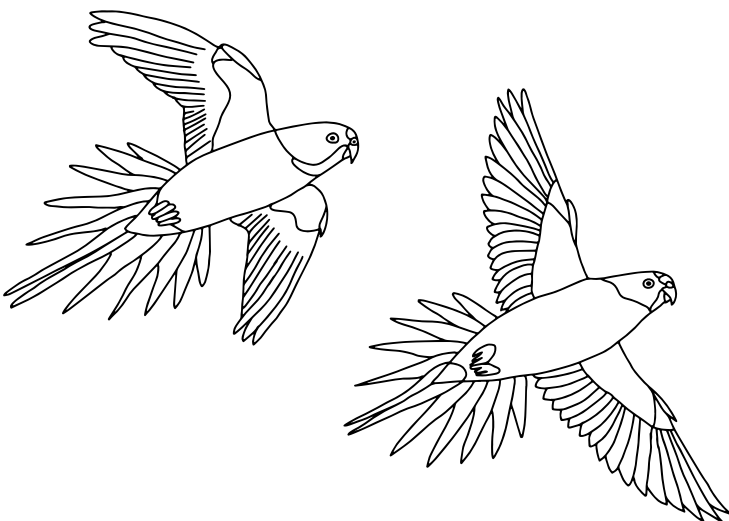
Your poster/presentation should answer these questions:

- What's the adaptation? Is it something the swift parrot does (behavioral) or something it has (physical)?
- How does it help the swift parrot survive?
- Is this adaptation common in other animals or birds?
- Why do you think swift parrots developed this one?
- Did this adaptation appear overnight or did it take many generations to develop?
- Don't forget the visuals! Add a close-up picture or draw what the adaptation looks like.

## The final showcase

Each team will become swift parrot experts and present their findings to the rest of the class.

Finally, let's combine our knowledge! We can create a one-of-a-kind swift parrot adaptation display or even create our own swift parrot adaptation book!





# Adaptations vs human influence

If the swift parrot has such wonderful adaptations, then why are they critically endangered and at risk of going extinct?

The swift parrot is an incredible bird that has developed amazing adaptations over a long period of time to survive in its environment. Despite these wonderful adaptations, the swift parrot has not been able to keep up with the rapid changes humans have made to their environment.

Land clearing for agriculture and urban development has destroyed much of their habitat, leaving them with fewer places to live and feed. They also face introduced predators like cats and sugar gliders that prey on their nests. The swift parrot is not adapted to defend itself against these types of predators.

Human influences have occurred very quickly, in just a couple of hundred years, which is too fast for the swift parrot to evolve new adaptations to survive. As a result, the swift parrot is now critically endangered and needs our help to ensure its survival.

## Design a mega-bird

Use your knowledge of swift parrot adaptations, as well as looking at other bird and animal adaptations, to design the perfect "mega-bird".

This mega-bird can have any adaptations your imagination can come up with, but you must explain why it developed that way.

For example—*My mega-bird has giant talons to capture its food and protect it from predators.*

Adaptations of your mega-bird must give it the best chance of surviving in its natural environment, as well as coping with the pressures caused by human influences.



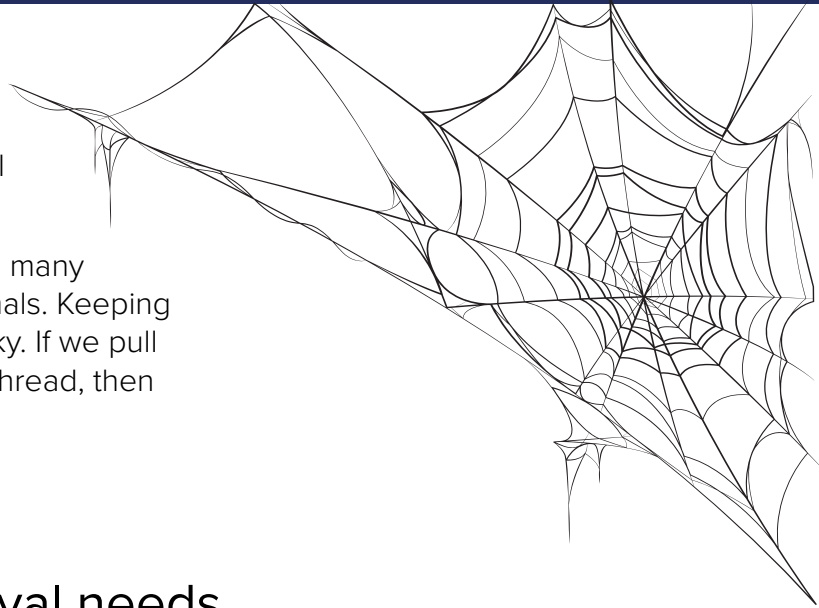


# It's all connected

## A web of connections

Understanding how living things depend on each other and their environment for survival is like solving a fascinating puzzle.

Nature is like a giant spider's web. There are many threads connecting different plants and animals. Keeping the web together and in balance can be tricky. If we pull at any of the threads in the web, or break a thread, then we will see an impact on the entire system.



## Survival needs

The swift parrot, a fascinating bird, calls two different places home — Tasmania and the Australian mainland. Each place provides essential things the parrot needs to survive:

- In Tasmania, hollow-bearing trees are crucial for nesting.
- On the mainland, the swift parrot relies on trees with plenty of nectar and lerps for food.

### What is a habitat?

A habitat is the natural home or environment where a specific animal or plant lives. It includes everything in that space, like the air, plants, food sources and other creatures living there.

Each habitat is special and perfect for the needs of the animals and plants living there. Habitats give animals what they need to stay alive: air, food, water and shelter.

Learning about their habitat is vital to understanding the swift parrot. Changes to its habitat can upset the balance and harm the species. It's crucial to keep their homes safe and healthy for them to survive and thrive.

Photos: Feeding (David Cook); On a perch (Dave Curtis)

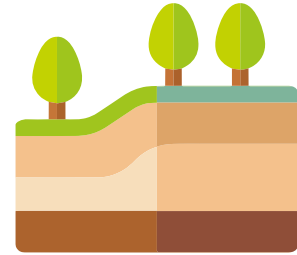




## Key parts of any habitat

### Land

Land is the ground beneath our feet. It's made up of soil, rocks and other things. It helps plants grow and gives homes to animals.



### Water

All living things, like plants and animals, need water to live. It's super important for them! Water provides a home to many plants and animals, like fish. It also helps keep the Earth at the right temperature for life to survive.



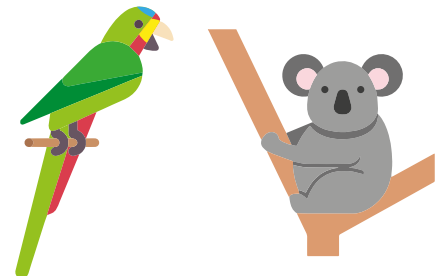
### Plants

Plants are like the superheroes of nature! They grow on land and in the water. They give food to other living things and homes for animals. Plants make their own food using sunlight, water, nutrients and carbon dioxide (what we exhale with every breath). They give back the air we breathe — oxygen!



### Animals

Animals come in all shapes and sizes! Some animals eat other animals, some help clean up nature's messes and others help plants reproduce by spreading pollen and seeds.



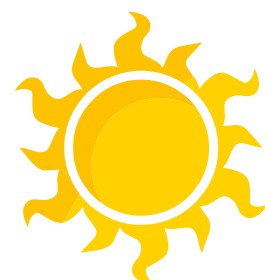
### Air

We all need air to breathe! Plants recycle the carbon dioxide in the air through a process called photosynthesis, making oxygen for us to breathe.



### Light

Light comes from the sun. It helps us see things and keeps our planet warm. Plants use sunlight to make food, which helps all living things stay alive.





# Wonderful woodlands

## Swift parrot habitat

Swift parrots rely on a specific type of woodland ecosystem for survival. Understanding their habitat requirements is vitally important for their conservation.

## Habitat importance

Vegetation plays a critical role in any animal's life, providing essential elements like food, shelter, and protection. For swift parrots, the specific type and structure of vegetation determines their presence.

## Picky eaters

Swift parrots are very picky. During the summer season in Tasmania, they feed on Tasmanian blue gum (*Eucalyptus globulus*) of temperate forests. They also nest in the hollows of other big trees like black gums (*Eucalyptus aggregata*) if they have hollows and plenty of food nearby.



When they migrate to mainland Australia, they roost/sleep in temperate eucalypt woodlands with big trees near their food source. These woodlands provide plenty of food in the form of lerps (sugary caps made by insects) and winter-flowering eucalypts.

## Murrumbidgee region

1. Mugga ironbark (*Eucalyptus sideroxylon*)
2. Yellow box (*Eucalyptus melliodora*)
3. White box (*Eucalyptus albens*)
4. Grey box (*Eucalyptus microcarpa*)

## Other regions

5. Yellow gum (*Eucalyptus leucoxylon*)
6. Red ironbark (*Eucalyptus tricarpa*)
7. Swamp mahogany (*Eucalyptus robusta*)
8. Forest red gum (*Eucalyptus teriticornis*)
9. Blackbutt (*Eucalyptus pilularis*)
10. Spotted gum (*Eucalyptus maculata*)

Credits: 1. Christopher Brown, 2. S Douglas, 3. Gunter Maywald, 4. Dean Nicolle.



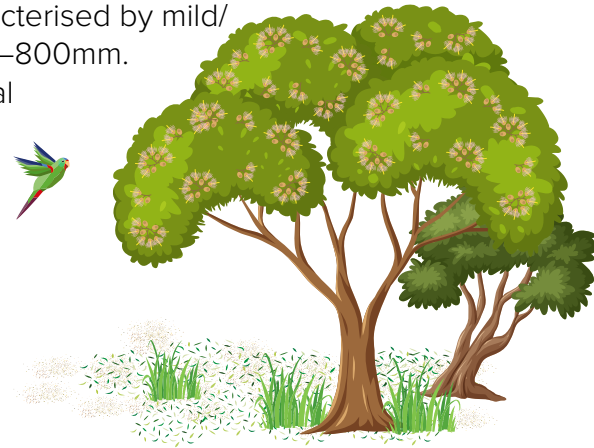


## Temperate woodlands

Woodlands are distinguished from forests by the open nature of their canopy and the wide spacing between trees. Temperate eucalypt woodlands are dominated by eucalypt trees (10–30 meters tall) with a ground layer of grasses with scattered shrubs. These unique environments bridge the gap between lush rainforests and arid inland regions.

Why are they called temperate? Temperate regions are characterised by mild/cooler temperatures and the average rainfall is between 250–800mm. Temperate eucalypt woodlands provide a number of structural resources for birds such as:

- diverse feeding grounds
- perches
- nesting hollows
- open understorey
- frequent flowering of eucalyptus trees
- sparse shrub layer with lots of ground litter.



Southeast Australia was once home to nearly continuous woodlands. Sadly, most of these woodlands have gone with as much as 85% being cleared for farming and urban development. Large, isolated trees can still be seen dotting the landscape, but without the rest of the plant and animal communities around them, they are dying out.



Left: Example of a white box woodland (Deb Saunders). Right: Yellow box isolated in a farm paddock with planted trees in the distance (Kelly Coleman).

## Habitat loss and impact

The drastic reduction of woodlands has made it among the most threatened ecosystems in Australia. This has had a devastating effect on swift parrots. With fewer areas offering food and shelter, and woodlands becoming fragmented across the landscape, swift parrots are more vulnerable during migration. This habitat loss is a major factor in their critically endangered status.



# A fractured landscape



## Background

Swift parrots live in the temperate eucalypt woodlands of southeast Australia. Unfortunately, they have lost 85% of the habitat they call home. No wonder they are critically endangered!

When we learn about things like habitat loss it is sometimes hard to visualise the full impact of the problem. To help visualise this loss, you are going to use two pieces of paper to represent the loss of 85% of their habitat.

## Instructions

- On your first sheet of paper write the heading 'Swift Parrot Habitat Loss' in the centre. This page will represent the total temperate eucalypt woodlands of southeast Australia before land clearing. Put this page aside until step 6.
- Your second sheet of paper is going to represent the remaining temperate eucalypt woodlands of southeast Australia after land clearing.

- A. If experts say 85% of this habitat has been cleared, how much of the original habitat is left?

 %

- You will then use your calculated percentage [A] to determine that area on your paper.

- B. Measure the long edge of the page.

 mm

- C. Use your calculator to work out the percentage paper measurement and then round up to the nearest whole number.

$$A \% \times B = C$$

 mm

## Materials

- 2 x sheets of paper, preferably different colours
- ruler
- pen/pencil
- scissors
- glue stick
- calculator

If you don't want to use a calculator...

Divide the page edge B by 100 to work out 1% of the length.

Multiply this 1% result by A.

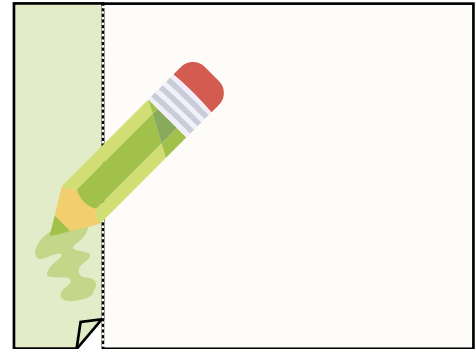
$$A \times (1\% \text{ of } B) = C$$



- On the second sheet of paper, mark the distance calculated [C]. Use a ruler to draw a straight line across the paper.

*\*If you don't have coloured paper, colour in the small section with a contrasting colour to your first sheet of paper.*

- Cut along the line. This smaller piece represents the current swift parrot habitat.
- Place the swift parrot habitat onto the first piece of paper, which represents the original temperate eucalypt woodland for southeast Australia. What does it look like?



*current swift parrot habitat*

- Rip or cut the current habitat piece of paper into about 50 different shaped pieces. Glue these pieces randomly onto the original habitat sheet. What does it look like now?

- What you have created shows the current fragmented/patchy nature of the temperate eucalypt woodlands of southeast Australia that remain. Not only does it make their food and shelter resources far more spread out, but swift parrots are extremely vulnerable when travelling between the fragmented pieces of their habitat.

How can we help the swift parrot and their patchy landscape habitat?



# Having a sweet tooth beak

## Sweet foods

Whether it be in Tassie over summer, or the Aussie mainland over winter, the swift parrot has a taste for sweet things. They are described as being nectivorous, meaning their main food is the nectar of different woodland eucalypts. As well as nectar one of their main foods are lerps from the eucalypt leaves.

## What is nectar?

Nectar is like nature's sweet treat, a special drink made by flowers. It's like a secret recipe that flowers use to attract special guests, like bees and birds, to visit them. This sweet liquid is filled with sugary goodness and gives them the energy they need to fly from flower to flower.

## What is a lerp?

Lerps are another sweet treat that swift parrots feast upon. They are protective coverings created by the nymph stage of tiny insects called psyllids. Lerps are found on the leaves of eucalyptus trees and are essentially shelters or enclosures that the psyllid nymphs construct to protect themselves.

Lerps are typically small, scale-like structures made from sugars, waxy secretions and other excreted substances that animals like the swift parrot like to eat.

## Energy boosters

These foods are high in sugar, so they are high in the energy the swift parrots need to survive and travel long distances during their migration. Swift parrots have an in-built ability to understand environmental conditions and use things like the weather patterns and other indicators to know where eucalypts will be flowering. This guides them on the best places to breed each year and the best places to find food when they travel to the mainland.



Photos: Tasmanian blue gum flowers; ant with lerps (Shutterstock)



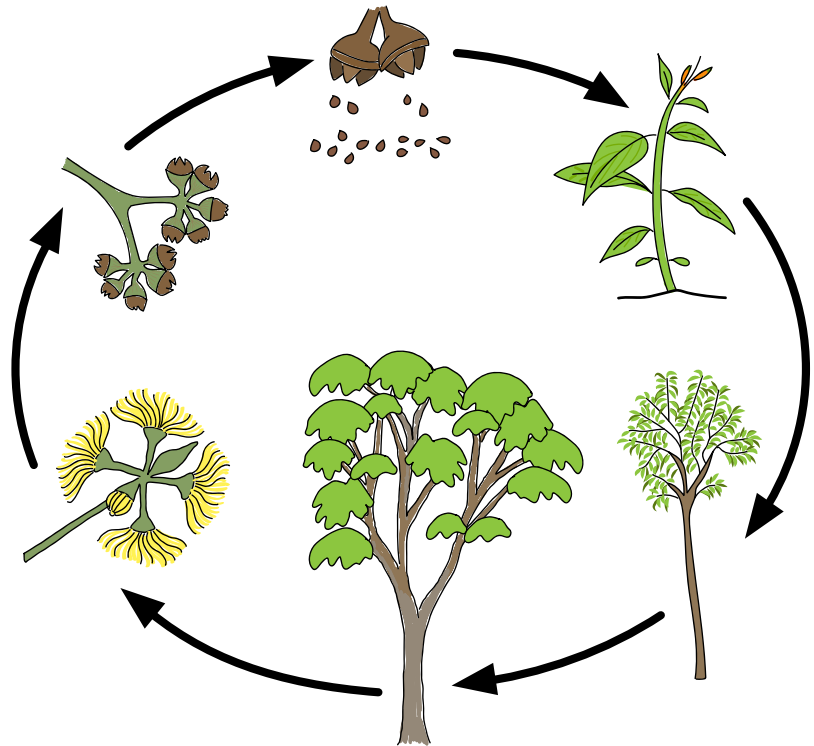
# Forest pollinators

## A role to play

Birds, bats and bees are really important to Australia's eucalypt woodlands. These creatures, including the swift parrot, are instrumental in the life cycle of eucalyptus trees.

## Powdery pollen

Pollen, a fine dust, comes from the male parts of flowers called stamens. It's a critical part of plant reproduction. When flowers bloom, they produce this powdery substance. But to make new plants, this pollen needs to reach other flowers.



## From flower to flower

Enter the swift parrot, a colourful gem among the woodlands. As it moves from flower to flower, sipping nectar, pollen sticks to its feathers and beak. When the parrot visits another eucalyptus tree, some of this pollen helps fertilise the flower, making seeds for new trees.

## Unsung heroes

Pollinators are the unsung heroes of our woodlands and forests. They help move the pollen between flowers, so eucalypt trees can reproduce and thrive. This highlights the important relationships between plants and their pollinators.



Some of our pollinators

***Just think... without pollinators like the swift parrot, we would have no native eucalypt trees!***



# Woodland food chain

## What is a food chain?

Imagine a path that shows how living things depend on each other for food. That's a food chain! It's like a connected lunch line in nature.

## The food chain players

**PRODUCERS:** These are the plant superstars! Trees like eucalyptus and wattles, as well as shrubs and flowers, use sunlight to make their own food. They are the first link in the chain.

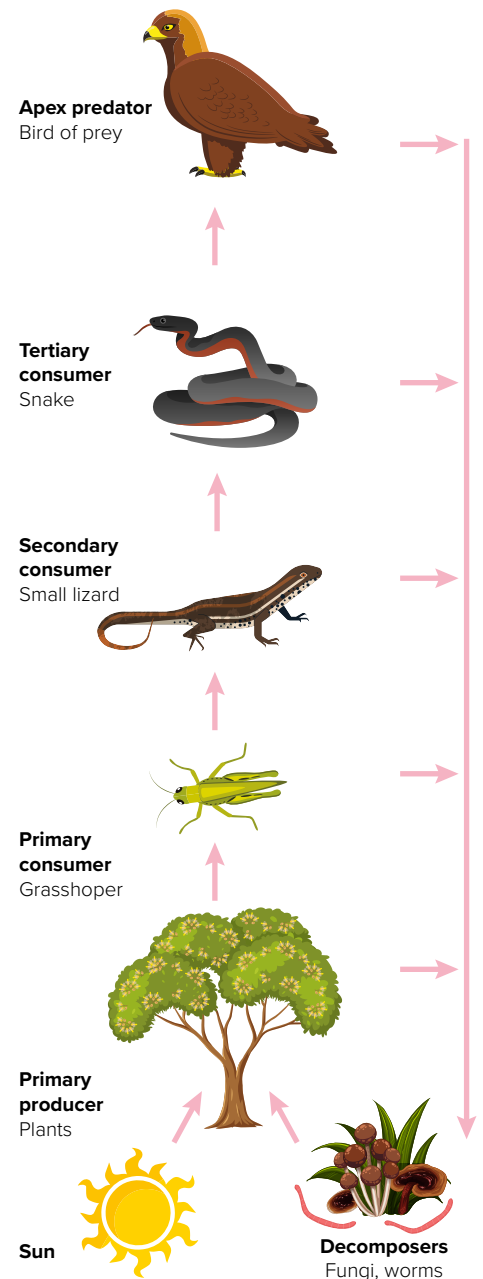
**CONSUMERS:** These guys can't make their own food, so they have to eat!

- **Primary consumers** are plant eaters (herbivores), like koalas and wallabies. They eat the producers.
- **Secondary consumers** are meat-eaters (carnivores) that eat our primary consumers. For example, an owl swooping in and grabbing a sugar glider for dinner. There can be more than one level of secondary consumers. This can include **tertiary consumers** and **apex predators** who sit at the top of the food chain.

**DECOMPOSERS:** After something dies in the woodland, these tiny but mighty creatures take over. Fungi, bacteria and some insects will break down dead plants and animals, recycling their nutrients back into the soil for the producers to use again.

## Energy flow

Energy flows through the food chain. The sun gives energy to plants and this energy flows up the food chain. It is shown by the direction of arrows in a food chain.



## Swift parrots in the mix

Swift parrots can be both primary and secondary consumers! As a primary consumer they love licking the sweet nectar from flowers. As a secondary consumer they eat the tiny lerps left behind by hungry, leaf eating insects.

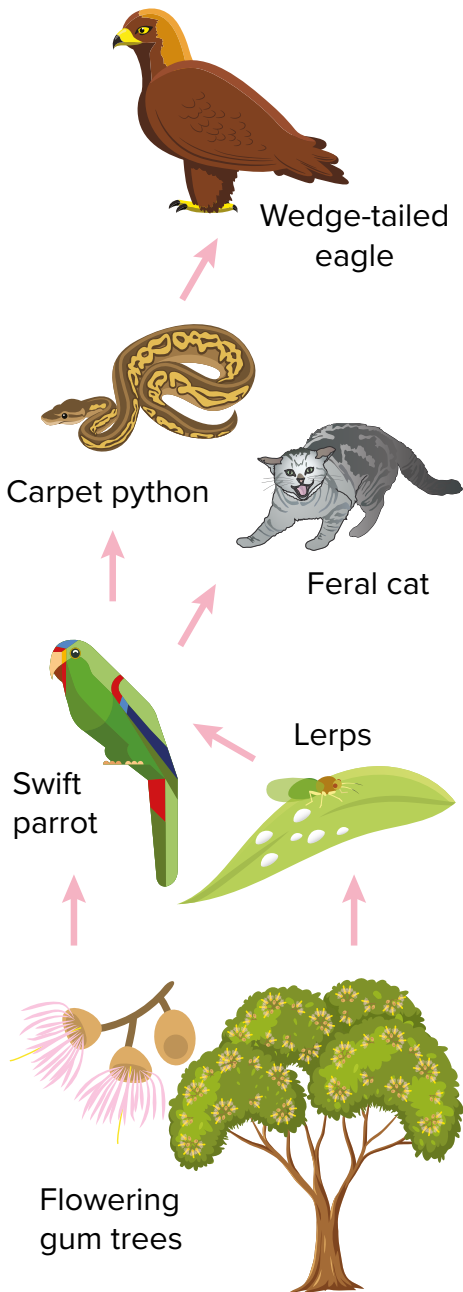
When the swift parrot visits a flower for nectar, it also brushes pollen onto its feathers. This pollen is then carried from flower to flower, helping the plants reproduce! This is called pollination, and it's a super important role that many woodland birds, including the swift parrot, play in keeping the ecosystem healthy. So, the swift parrot isn't just part of the food chain, it's also a key part of the woodland's reproductive system!





# Swift parrot food chain

- This diagram contains two food chains. Write out the food chains in the space provided. Include the 'food chain player' labels (Producer, Consumer).



FOOD CHAIN 1

FOOD CHAIN 2

- Feral cats are a big problem for many of our native animals. If you were to introduce a feral cat into the food chain, which animals would it affect? How will this impact the rest of the food chain?

# 3. Migration patterns



## Teacher's notes

### The bird likes to move!

- Introduce/recap the concept of migration in birds and show the swift parrots migration map.

### Annual migration

- Go through the *Summertime in Tasmania* and *Winter on the mainland* fact sheets. These form the base of the following activities.
- *Migration storytime quiz* is an interactive version of the migration story.
- **Activity:** *Swift parrot diary adventure* engages students in writing 12 diary entries, one for each month, from a swift parrot's point-of-view recording your incredible year.
- **Activity:** *Swift parrot migration mural* provides an opportunity to tell the migration story in an artistic way.
- **Activity:** *Mapping the migration* is a geography exercise where students have to map out and interpret the data they are provided from swift parrots' movement on the mainland.

## What you need

- Copies of the activity sheets
- SmartBoard for showing fact sheets
- Art and craft materials
- Computer access - Google Maps or Apple Maps
- Rulers
- Computers or tablets for completing the interactive: The migration of Pippa, the swift parrot



# The bird likes to move!

## What is a migratory bird?

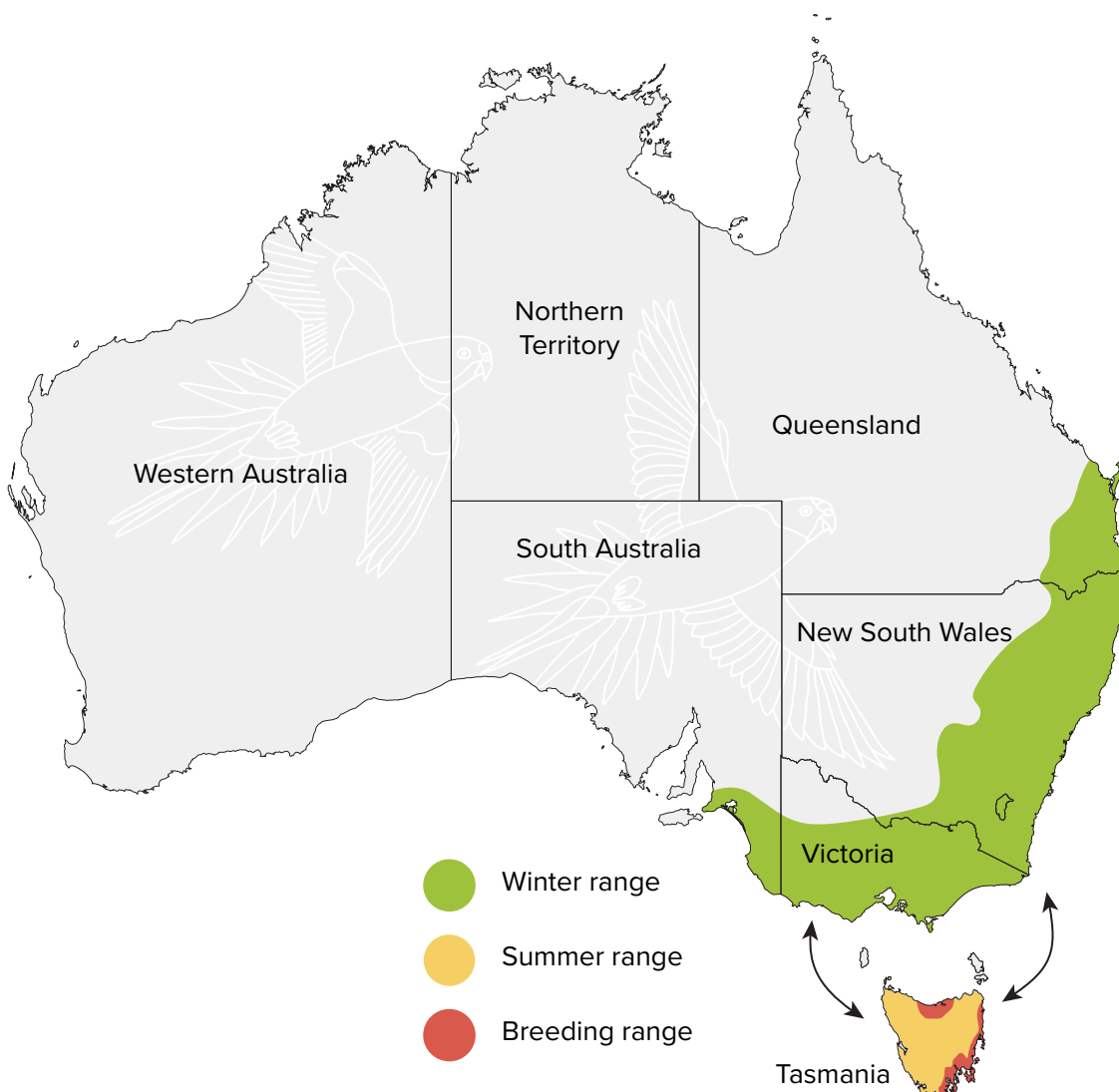
A migratory bird is a special kind of bird that travels long distances from one place to another at different times of the year. They can move a lot, covering vast distances, even across continents! They do this for many reasons, such as mating, nesting or finding better food.

The routes migratory birds take are often incredibly accurate. They are guided by instincts and environmental cues, like the changes of seasons, weather and food availability.

## Where do swifty's go?

The swift parrot is one of only three migratory parrots. Every year, they travel long distances across eastern Australia. They have two important places they stay, kind of like having two homes.

During summer, they live in Tasmania, making homes in Tasmanian blue gums and black gums. When autumn arrives, they fly over Bass Strait to the Australian mainland for winter. They can travel up to 2,500 kilometres, spreading out across woodlands from South Australia, through Victoria and eastern NSW and up to south-eastern Queensland.





# Summertime in Tasmania

## And... they're off!

Swift parrots are remarkable birds that fly all the way from mainland Australia to spend their summers in Tasmania. They start their journey from the mainland around August and most will arrive in Tasmania by October.

## Where the magic begins

The flowering season of the Tasmanian blue gum (*Eucalyptus globulus*) provides swift parrots the food they need during their summer breeding time. These nectar rich flowers provide lots of energy, perfect for raising their chicks.

## Finding the perfect home

Swift parrots need a reliable food source and big trees with hollows to make their nests. They prefer these trees in the natural woodlands of the south and east coast of Tasmania.

Tarkine (Tarkayna) forest in northwest Tasmania (Rob Blakers)



## What are tree hollows?

Tree hollows are cosy spaces inside old trees. Sometimes, animals like birds or possums make their homes in these hollows because they're safe and comfy. They're like natural apartments for animals, keeping them safe from the weather and other animals.

## Creating homes for wildlife

Tree hollows take a long time to form; and many are being lost due to people clearing land and removing old trees. So there are no longer enough hollows for the animals that need them. One solution is for people to build and install a range of artificial hollows in trees to give animals a safe place to live until new hollows can form.

## Nesting habits

Although swift parrots prefer Tasmanian blue gums, they also nest in the hollows of other big trees like black gums (*Eucalyptus aggregata*), if they have hollows and plenty of food nearby.



## Family life

Swift parrots are friendly birds and sometimes make nests close to each other or even in the same tree. The number of chicks born each year depends on how many good trees have flowers. These birds are really clever! They remember where the good trees are and come back when they flower again, which might not be every year.

## Nesting and chicks

In Tasmania, male and female parrots start looking for good places to build their nests around September–October. Females lay four to five, shiny white eggs shaped like ovals with round ends.

The female stays in the nest taking care of the eggs until they hatch, while the male brings her food every few hours. After about 25 days, tiny chicks break out of the eggs. The parents keep feeding and protecting them in the hollow until they can fly.

Right: A clutch of swift parrot nestlings in the bottom of a nest box (Dejan Stojanovic and Threatened Species Recovery Hub)

Below: Parent swift parrots with chicks in a hollow (Rob Blakers)

## Growing up

Once the chicks can fly, swift parrots spread out across the Tasmanian woodlands, collecting nectar to grow stronger. They must build up their strength and energy for the journey north to the Australian mainland for winter.





# Winter on the mainland

## Leaving Tasmania

From mid-February to the end of April, swift parrots leave Tasmania and fly to the mainland. They leave from the north coast of Tasmania and fly across Bass Strait to places like the Mornington and Bellarine Peninsulas and Port Phillip Bay in Victoria.

## Where do they explore?

On the mainland, swift parrots search for different trees with tasty food. They move around to find the best spots to roost and eat, depending on the weather and where they find enough food.

## Favourite hangouts

They love big, mature trees in eucalypt woodlands throughout Victoria and New South Wales. These areas have the food they prefer and they provide more reliable sources of food. They can spread out in a range that stretches from the far east of South Australia to south-eastern Queensland. This can be a journey of up to 2,500 km from their nesting grounds in Tasmania.

They change where they stay during the year, depending on where there's enough food. They may stay briefly in some places or sometimes longer, depending on where the best food is. Swift parrots need different places to live and eat at different times of the year to have enough food.

## Food adventure

They start by visiting trees like grey box (*Eucalyptus microcarpa*) that bloom early in autumn/winter, then move to trees like mugga ironbark (*Eucalyptus sideroxylon*) and yellow box (*Eucalyptus melliodora*) that are flowering by the end of winter.

Rain affects when these trees bloom; if there isn't enough rain, food might be scarce, especially in some inland areas. During times when there is not enough rain, swift parrots can be more concentrated in coastal regions.

## Adapting for survival

When food is hard to find, they might use planted eucalypt trees, but it's not as good for them. Being in these places a lot can make them tired and less healthy.

Grey box woodland (Elizabeth Donoghue, CC BY-NC-ND)





## Roosting habitat

Finding big trees near their food is important for where they sleep, called roost sites. Sometimes they sleep alone, sometimes in groups. We're still learning about why they sleep together, but we think it might be important for them to talk and socialise.

## Heading home

After feeding as much as possible on the Australian mainland in autumn and winter, from August on, the swift parrots begin their journey back to their breeding grounds in Tasmania's blue gum woodlands.

Right: Swift parrot feeding on lerps (David Cooke, CC BY-NC)

Below: Swift parrots flocking together (G. Dabb)





# Swift parrot diary adventure

## A year in the life of a swift parrot

Get ready to embark on an epic journey—a whole year as a migrating swift parrot! This is your chance to see the world (well, Tasmania and mainland Australia) from a bird's-eye view.

## Alright, birdies, it's diary time!

Imagine you're a swift parrot. You're going to write 12 diary entries recording your incredible journey over a year. Here's what to include in your entries:

- Where are you? Think about where swift parrots would be depending on the season. Are you spending summer in Tasmania or winter on the mainland?
- How far did you fly? These birds migrate long distances! Write about how far you travelled between locations.
- Feeding time! What foods do swift parrots eat? Research their favorite flowers and describe finding them.
- Raising a family? Maybe your diary entries will include raising chicks in Tasmania!
- Uh oh, challenges! Being a bird isn't always easy. Write about any difficulties you encounter during your migration.
- Feathered friends! Do you meet any other swift parrots on your journey?

## Share your adventure

Once you've finished your diary, why not share it with the class? Let's hear all about the amazing adventures you had as a swift parrot!

## What you'll need:

- Blank paper
- Pen or pencil
- Background reading
  - The bird likes to move
  - Summertime in Tasmania
  - Winter on the mainland
  - Migration storytime quiz: Fly through a story and answer questions along the way. Don't forget to click the buttons for extra cool info! ([Insert link to the quiz here](#))







# Swift parrot migration mural

This project is your chance to create a giant masterpiece that tells the incredible story of the swift parrot's migration.

We'll work together as a class to plan it out, then you'll get to create your own special part of the mural, either by yourself or with a partner. Finally, we'll put all the pieces together to reveal our amazing creation!

## 1. Swift parrot boot camp

Before we grab our paintbrushes, let's exercise our minds with a refresher on swift parrot migration. Read through the fact sheets:

- The bird likes to move
- Summertime in Tasmania
- Winter on the mainland

Have a discussion with a friend, or the whole class, why birds migrate in the first place and the challenges they face on their journeys.

## 2. Brainstorming

Now it's time to get creative! As a class, let's brainstorm everything we think should be included in our mural to show the story of the swift parrot's migration. Write all your ideas on the board!

From all your ideas, create a list of these key events and elements that should be included in the mural. This will be our guide to make sure our artwork tells a clear story.

## What you'll need:

- Big paper for our mural (like A3 size, butcher's paper, or a canvas)
- Art supplies (pencils, markers, paints, brushes)
- Access to the internet to research and look at images relating to the swift parrot
- Scissors, glue, and other craft materials
- Notebooks for planning all our amazing ideas





### 3. Time for a timeline

Using our chosen list, let's create a timeline, or life cycle, that shows the key events and times of year in a swift parrot's migration journey. This will help us decide which part of the story each group or pair will work on for the mural.

### 4. You're the artist!

Now for the fun part – creating your own artwork!

- **Research:** Each group or pair will research their assigned part of the migration journey using books, online resources, and class notes.
- **Sketch:** Before grabbing your paints, sketch some ideas for your section of the mural. Think about how you'll visually represent the information. Check it with your teacher.
- **Make:** Time to create your artwork! Use all your artistic skills and pay attention to detail. Remember, each piece should clearly show what part of the migration it represents (like Tasmania, mainland Australia, nesting, or threats).
- **Describe:** Write a brief description explaining their piece and how it fits into the overall story of the swift parrot's migration.

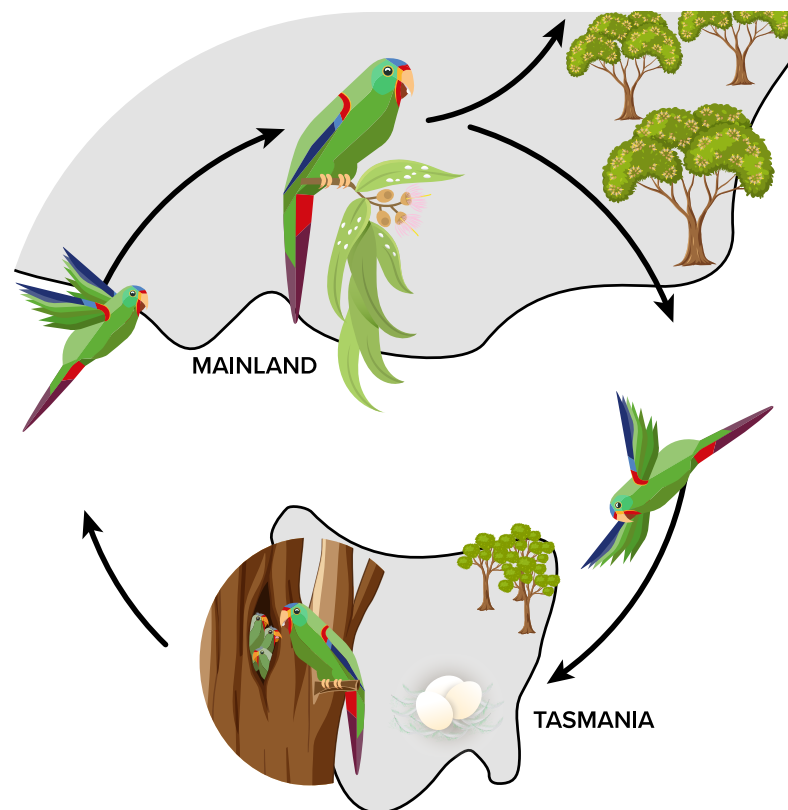
### 5. Bringing it together

Work together as a class to decide how to arrange all the pieces to create a smooth flow that follows the migration timeline. Take photos to remember how you positioned everything!

Finally, display the completed masterpiece on a prominent wall in the classroom or school!

### 6. Reflection

Let's take a moment to reflect on this awesome project! Think about the process and what you learned about swift parrots and migration.





# Mapping the migration

Data has been collected for the past few winters on some of the different locations that the swift parrot has been spotted on mainland Australia. You have been given the task of mapping these locations and interpreting them. Follow the steps.

- Use the search function in Google Maps or Apple Maps to find the following places. Mark each location in as well as you can on the map provided.

A. Port Fairy	B. Bellingen	C. Bundjalung National Park	D. Cascade National Park
E. Tallebudgera	F. Parkes	G. Sugarloaf State Conservation area	H. Dalyenong 159 Bushland Reserve
I. Mount Arapiles-Tooan State Park	J. Bangham Conservation Park	K. Grampians National Park	L. D'Aguiar National Park
M. Glen Innes	N. Bingara	O. Nowa Nowa	P. Goorooyarroo Nature Reserve
Q. Gosford	R. Kooyoora State park	S. Mendoran	T. St. Arnaud
U. Wondul Range National Park	V. Lower Ovens Wildlife Reserve	W. Mundulla West	X. Pilliga Nature Reserve

- Measure the distance, in centimetres, from your closest swift parrot sighting point on mainland Australia, to the swift parrot's summer breeding ground in Tasmania.

**Closest point (cm)**

- Measure the distance, in centimetres, of your furthest swift parrot sighting point on mainland Australia to the swift parrot's summer breeding ground in Tasmania.

**Furthest point (cm)**

- Use the scale on the map to convert these distances to kilometres travelled (km). The scale of the map is 1 cm = 77 km.

**Shortest distance in km**

To convert your centimetres measurement into kilometres, multiply your distance measured by 77 km from the scale.

For example: 5.5 cm x 77 km = 423.5 km

**Longest distance in km**



# South east Australia





5. Shade an area on your map from the furthest inland points until the coastline. This gives you a rough expected range where the swift parrot was sighted over the past few winters.

What is the winter migration range of the swift parrot?

6. The swift parrot is critically endangered with as few as 500 birds left in the wild. Do you think this is a large range for them to spread out across during their winter migration? Circle your response.

**A.** Planes can travel that far in a matter of hours so it is a small winter range for swift parrots.

**B.** The winter migration is an enormous range for swift parrots, especially considering their incredibly low population numbers.

**C.** It's a reasonable range for the swift parrots' winter migration but I am sure they could go a bit further.

**D.** The winter migration range is not that big because swift parrots always stay together and only move to one spot to find food each year.

7. Do you think that the size of the swift parrot's winter range means they face more or less possible threats as they travel between their eucalypt woodland habitats?

8. What challenges could the size of the range pose for collecting data and monitoring this critically endangered threatened species?

# 4. Under threat



## Teacher's notes

### Threats to swift parrots

- Use the following three fact sheet to help students understand what threatened species are, the threatened species classification system and the various threats facing swift parrots.
  - What does it mean to be threatened?
  - Swifties need urgent help!
  - Threats to swift parrots
- **Activity:** *What threat am I?* is a game of questions as competitors battle it out trying to guess the threat.

### Living out of place

- Explore a major threat to swift parrots in Tasmania—the sugar glider and how this native species has become a pest and threatens the swift parrot's survival.
- **Activity:** *The sugar glider problem* activity clarifies knowledge from the fact sheet and students review two videos and record the key points. This activity can be extended through an in-depth investigation into sugar gliders as a native invasive pest species.

## What you need

- Copies of the activity sheets
- SmartBoard for playing videos
- 21 x sticky notes or index cards
- Pens/markers
- A list of threats to the swift parrot
- 3 x contestants chairs



# What does it mean to be threatened?

The swift parrot is a threatened species and is listed as **CRITICALLY ENDANGERED** across Australia.

## So, what does this actually mean?

When we talk about an animal or plant as being classified as a threatened species, it tells us that **the species is at risk of disappearing**.

The Australian Government administers legislation called the *Environment Protection and Biodiversity Conservation Act 1999*. This helps guide the government to assess and address the challenges these animals face. This Act identifies the plants and animals whose survival is under threat from things such as habitat loss.

The government, businesses, experts and community groups use scientific knowledge and guidelines to work together to protect these species by preserving existing populations and helping their numbers recover to a healthy level.



## Conservation status

We use different levels to help us rate how threatened an animal or plant's natural population is in the wild. **The conservation status identifies the level of risk faced by a species in terms of its survival.**

There are a few species around the world that only exist in captivity, as all wild populations have disappeared.

Species that don't have a conservation status, and are not under threat of extinction, are often referred to as common or least concern.

## Levels of threat

1. **CONSERVATION DEPENDANT:** A species that is not yet classified as endangered but may become so in the future if its population keeps dropping.
2. **VULNERABLE:** A species that is at a high risk of becoming endangered if conservation measures are not implemented. Its population has declined significantly.
3. **ENDANGERED:** A species that is at a very high risk of becoming extinct. Its population has declined significantly and immediate conservation action is required to prevent its extinction.
4. **CRITICALLY ENDANGERED:** A species that is facing an extremely high risk of becoming extinct in the near future. Its population is critically low and urgent conservation efforts are needed.
5. **EXTINCT:** A species that no longer exists in the wild or in captivity.



# Swifties need urgent help!

## Too many in danger

In Australia, over 1,700 species and ecosystems are at risk of disappearing forever due to various dangers. In nature it's not just about single species; different plants and animals often rely on each other for survival through tasks like providing food, pollination and spreading seeds.

When one part of this delicate balance is harmed or lost, entire ecosystems can suffer. Due to our isolation, Australia has a large number of unique animals and plants that aren't found anywhere else on Earth. However, these native species face multiple threats, such as invasive pests and weeds, loss of their homes, and the impacts of climate change and large-scale disasters.

Protecting these threatened species and habitats is crucial because they play vital roles in maintaining the balance of our environment, which ultimately affects our own well-being and the health of the planet.



Owen the koala was found in the burnt forest and released the same day after he was checked by a vet and tagged.  
Credit: Murray Lane via ABC News



## Critically endangered

The tale of the swift parrot is a sad one. The number of individuals flying around in the wild has dropped so low that it is considered a threatened species. In fact, there could be **as few as 500 birds left in the wild**. This means they are listed as being a 'critically endangered' species.

This is incredibly low for any species and means that swift parrots are under imminent threat of extinction in the wild. Without action to save the species we will most likely lose them altogether. Even with our help, they face a rocky path ahead.

### Definition

A **critically endangered** species is one that is facing an extremely high risk of becoming extinct in the near future. Its population is critically low and urgent conservation efforts are needed.





# Threats to swift parrots

The swift parrot is a beautiful and unique Australian bird that is in trouble. It is thought there are as few 500 of these birds left in the wild, which has led to swift parrots being classed as Critically Endangered.

To understand why the swift parrot population has dropped so low we must learn about the things that are threatening them. Unfortunately, there are lots of things that are threats to swift parrots, with most of them being caused by people.



**Habitat loss** — native timber forestry, urban development, agricultural clearing and dieback are all factors reducing habitat for swift parrots. Old, mature trees are dying off and not being replaced.

**Drought conditions** — longer and more frequent droughts cause many habitat trees to die off or flower at different times in response to changes in weather patterns.

**Collisions with human made structures** — wire or nylon netting, mesh fences, windows and cars may cause mortality to swift parrots in urban areas.

**Loss of habitat from climate change** — as temperatures rise due to climate change the distribution and make-up of habitats are changing and can affect feeding and breeding habitat.

**Competition** — introduced bees and aggressive honeyeaters compete for food; other animals, such as sugar gliders in Tasmania, will compete for nesting hollows as well.

**Predation** — feral or domestic cats that are free to roam around are known to regularly prey on birds and other native wildlife. Sugar gliders will prey on swift parrots in the nest.

**Disease** — Psittacine Beak and Feather Disease (Pbfd) is a common and potentially deadly disease of parrots spread by food sharing through the bird's crop, or from occupying hollows used by infected birds.

**High fire frequency** — too many fires too quickly reduces the chance for mature trees to flower; hazard reduction burns around urban areas are causing habitat loss.

**Illegal capture and trade** — unregulated trade in wildlife has become a major factor in the decline of many species of animals and plants.



# What threat am I?

## Instructions for teachers

Before playing, discuss the concept of threatened species and what it means for a species to be critically endangered. Briefly go over the threats to swift parrots using the provided fact sheets.

Explain to students that you are going to play a game of 'Who am I?' or in this case 'What threat am I?' to learn about the threats that the swift parrots face.

## Before the game

Write the names of the threats in the list provided on sticky notes or index cards, one per card.

Set up three chairs at the front of the class for our "contestants".

## Materials

- 21 x sticky notes or index cards
- Pens/markers
- A list of threats to the swift parrot (provided)
- 3 x contestants chairs



## Game instructions

1. Show the class the list of threats to swift parrots (see list provided). Contestants can see this list to help them refine their questions.
2. Three contestants will be chosen to come up the front of the class and sit in the contestants' chairs, which should be facing the class.
3. **Each contestant will have a sticky note with a threat written on it (from the list provided) stuck to their forehead.** They cannot see their own threat but can see other contestants.
4. **Contestants will take turns asking the rest of the class yes-or-no questions to figure out which threat they have on their forehead.** A list of possible questions is provided to help prompt students.
5. **The first player to correctly guess their threat wins that round.**
6. After someone has won and identified their threat, three new contestants will be invited up to take part and the process is repeated.
7. After completing a satisfactory number of rounds, end the game by asking students to look closely at the list of swift parrot threats. Point out the fact that nearly all the threats to the swift parrot are a direct result of human activity or influence. This makes it even more important that we must be the ones to act to help save this critically endangered species.

Make it a team event by allocating a team colour to each contestant chair. Have a running score board on which team wins each round and is the overall champion.



## Threats to swift parrots

- Timber forestry
- Drought
- Disease – PBFD
- Bushfire
- Sugar glider
- Agriculture
- Cat
- Pollution
- Car
- City
- Truck
- Weather
- Roads
- Town
- Netting
- Power line
- Wildlife trader
- Human
- Habitat loss
- Introduced bees
- Climate change

## Possible questions

- Am I a living thing?
- Am I plant or animal?
- Am I a natural threat?
- Do I affect swift parrot habitat?
- Am I man-made?
- Am I a place where lots of people live?
- Do I directly harm the swift parrot itself?
- Am I something that could make swift parrots sick?
- Am I a human industry?
- Do I move?
- Am I used to protect crops and orchards?
- Do I have something to do with weather or climate?
- Am I something humans use for transport?
- Am I a mammal or insect?
- Do I compete with the swift parrot for homes or food?
- Am I likely to prey upon the swift parrot?
- Do I illegally sell birds like the swift parrot?
- Am I a person?
- Am I used for conducting electricity?
- Am I used for vehicles to drive upon from one place to another?



# Living out of place

## Pest animals

**Pest animals are species that have been introduced into an environment where they cause harm to native ecosystems, economy and/or communities.** They compete with native species for resources, upset the ecological balance and can threaten agriculture and human wellbeing.

When we think of pests, we usually think of foxes and rabbits that were introduced from Europe. **But not all pests are introduced from other countries.** Some plant and animal pests can be native to Australia but when introduced to another area where they don't belong they can become a pest and cause harm to the local environment.

## Native pest living out of place

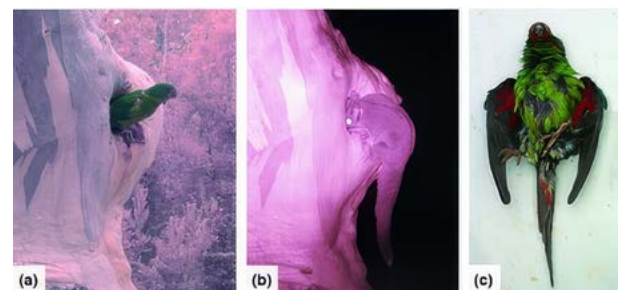
**The sugar glider is a native animal that has become a pest in Tasmania.** These cute furry marsupials, which are not causing any problems on mainland Australia, were introduced to Tasmania and now compete for food and shelter with the swift parrot and other hollow nesting birds.

**Sugar gliders were introduced to Launceston, Tasmania, as pets in 1835.** They quickly escaped their enclosures and within ten years were seen in local forests surrounding Launceston.

**A sugar glider's diet mainly consists of nectar and fruit but they also prey on insects, small animals and eggs – including nesting swift parrots.** When nests are raided by the nocturnal sugar gliders, the adult female birds are often killed as they sit on their eggs at night. As well as a loss of eggs/chicks (future generations of swifties), the loss of females results in fewer breeding pairs. **Sugar gliders kill and eat approximately half of the female swift parrots that attempt to nest on mainland Tasmania in any given year.**

## What can be done?

- Conserving swift parrot nesting habitat is vital.
- Installing artificial nest boxes where swift parrots nest.
- Trapping and monitoring sugar gliders has been carried out in areas known to be swift parrot breeding grounds.
- More research is needed into sugar glider biology and behaviour in Tasmania.



Top: Sugar glider (Kelly Coleman)

Above: A sugar glider predation event captured by a camera trap in Tasmania. The panel shows (a) an adult female swift parrot at her nest cavity at 7:00pm, then (b) at 11:00pm on the same day, a sugar glider entering the cavity, where it caused the failure of that nest. (c) Adult female swift parrots are killed and eaten by sugar gliders. (ResearchGate: [Discovery of a novel predator reveals extreme but highly variable mortality for an endangered bird.](#))



# The sugar glider problem

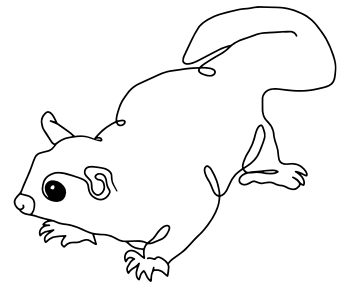
1. Read the fact sheet "Living out of place" and answer the following.

a. Describe what a pest is.

.....  
.....

b. The sugar glider is an Australian native that is now a pest in Tasmania. When and why was it introduced there?

.....  
.....



c. Why are they a problem for the swift parrot?

.....  
.....  
.....

2. Watch these two videos and write down any key points of interest.

**a. Parrots vs Possums (2015)**

[youtu.be/9dtjch6ogeg](https://youtu.be/9dtjch6ogeg)

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**b. Sugar gliders are an invasive species? (2021)**

[youtu.be/VHDRtg338Lw](https://youtu.be/VHDRtg338Lw)

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# 5. Conservation efforts



## Teacher's notes

### What can we do?

- Introduce how we can help swifties and the use of conservation plans.
- **Activity:** *Your actions count* looks at possible actions to help combat a range of key threats. Use the fact sheet *Helping swift parrots* for support.
- **Activity:** *Climate change actions* helps students identify what they can do at home or school. For ideas visit: [climateactionaustralia.net.au/what-can-i-do/](http://climateactionaustralia.net.au/what-can-i-do/)

### Tracking with drones

- Introduces students to the use of technology in tracking swift parrots and for conservation.
- **Activity:** *A game of drones* see students becoming the drone, planning a flight path, mapping their sightings and analysing the data.

### Communication tools for change

- Introduce various communication tools available to spread conservation messages.
- **Activity:** *Tell the world!* engages students in raising awareness about swift parrots.
- **Activity:** *Swift parrot superhero pledge!* Students sign a pledge to save the swift parrot.

## What you need

- Copies of the activity sheets
- SmartBoard for playing videos and audio
- Map of the school grounds (or other activity site)
- Craft or digital production materials for the communication project



# What can we do?

## Step 1: Know what they look like

Understanding what swift parrots look and sound like helps us identify them correctly.

The swift parrot is a migratory bird that spreads out over a huge range across south-eastern Australia and citizen science plays an important role in reporting sightings of them.

## Step 2: Know where they live

Knowing where swift parrots live and travel through (their habitat) is essential for us to be able to find and protect them. This includes learning about:

- breeding, roosting and feeding sites
- types of woodlands and tree species they use
- their migration patterns—where they travel.

## Step 3: Know their threats

To know how we can try and save the swift parrot, we must first know what is threatening them. Some key threats include:

- predators and competitive species
- human impact
- loss of habitat (food and roosting trees).

## Step 4: Help others understand

A lot of people in Australia may not even know about the swift parrot and its struggle. It's up to us to tell people about them. The more people who understand the danger swift parrots are in, the more support there is for people to protect them.



Photo: Swift parrot (Mick Roderick)



Scan or click to watch a video about protecting swift parrots

### Citizen Science is *Science for Everyone!*

Citizen science involves volunteers, in partnership with scientists, participating in scientific projects by running experiments, collecting data, analysing results and solving problems. This is a way of collecting valuable scientific data that can make a meaningful impact to scientific research and environmental decision making.



# A plan for conservation

Just like how we make plans to stay healthy and happy, the swift parrots have something called a **Conservation Plan** or a **Recovery Plan**. It's a special guide created by experts in government and science, as well as other members of the community, to keep our threatened parrots safe and sound.

A conservation plan help us to:

**UNDERSTAND** the reasons why swift parrots have become threatened.

**TAKE ACTION** to ensure the safety of swift parrots and their habitat.

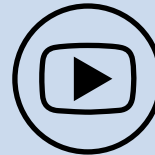
**DEVELOP STRATEGIES** to increase their population to healthy levels in the future.

**DEVELOP METHODS** to monitor their population.

**RAISE AWARENESS** about the challenges faced by the swift parrot and the importance of conservation.

## Case study

See how some landholders have turned one of their creeks into an ecological haven for the swift parrot and other wildlife.



Scan or click to watch the video

Below: Male (front) and female (rear) swift parrots (Rob Blakers)







# Helping swift parrots

Your local Landcare group, Council or Local Land Services, can help you with these activities.



## Plant and protect trees

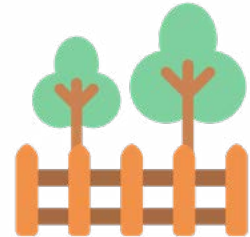
Retain old trees with hollows.

Plant food trees in key habitat areas to replace old and dying trees.

## Land management

Protect native vegetation from livestock.

Control weeds to improve bushland areas.



## Avoid obstacles

Close curtains and blinds to avoid parrots banging into windows.

Drive carefully to avoid collisions with birds.

## Responsible pet ownership

Keep cats inside to prevent them preying on native birds.



Make mesh fences more visible in migration areas.



## Control pests

Work together with your community to control feral foxes and cats.



Help control sugar gliders in Tasmania where they do not belong.

## Participate in programs

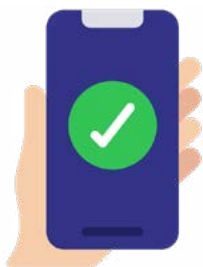
Join Birdlife Australia surveys to locate the winter foraging flocks.

Get involved in Landcare projects that are helping the swift parrot.



## Report sightings

Report sightings of swift parrots to BirdLife Australia to contribute valuable information on their current status and range.



## Go birdwatching

Join a local bird watching group.

Take friends and family bird watching and teach others about the importance of looking after wildlife.





# Your actions count

Below is a list of impacts that can cause damage or harm swift parrots and their habitat. You need to identify the actions that can be done to help reduce these impacts. Some actions can be used more than once.

IMPACT	ACTION
Predation by sugar gliders in Tasmania	
Collisions with wire netting, mesh fences, windows and cars	
Competition for food from larger, more aggressive birds	
Climate change altering flowering times and seasons	
Forestry cutting down food and nesting trees	
Trees being cut down for illegal firewood collection	
Bushfires happening too frequently	
Clearing land for residential homes and industries	
Trees dying in agricultural areas	

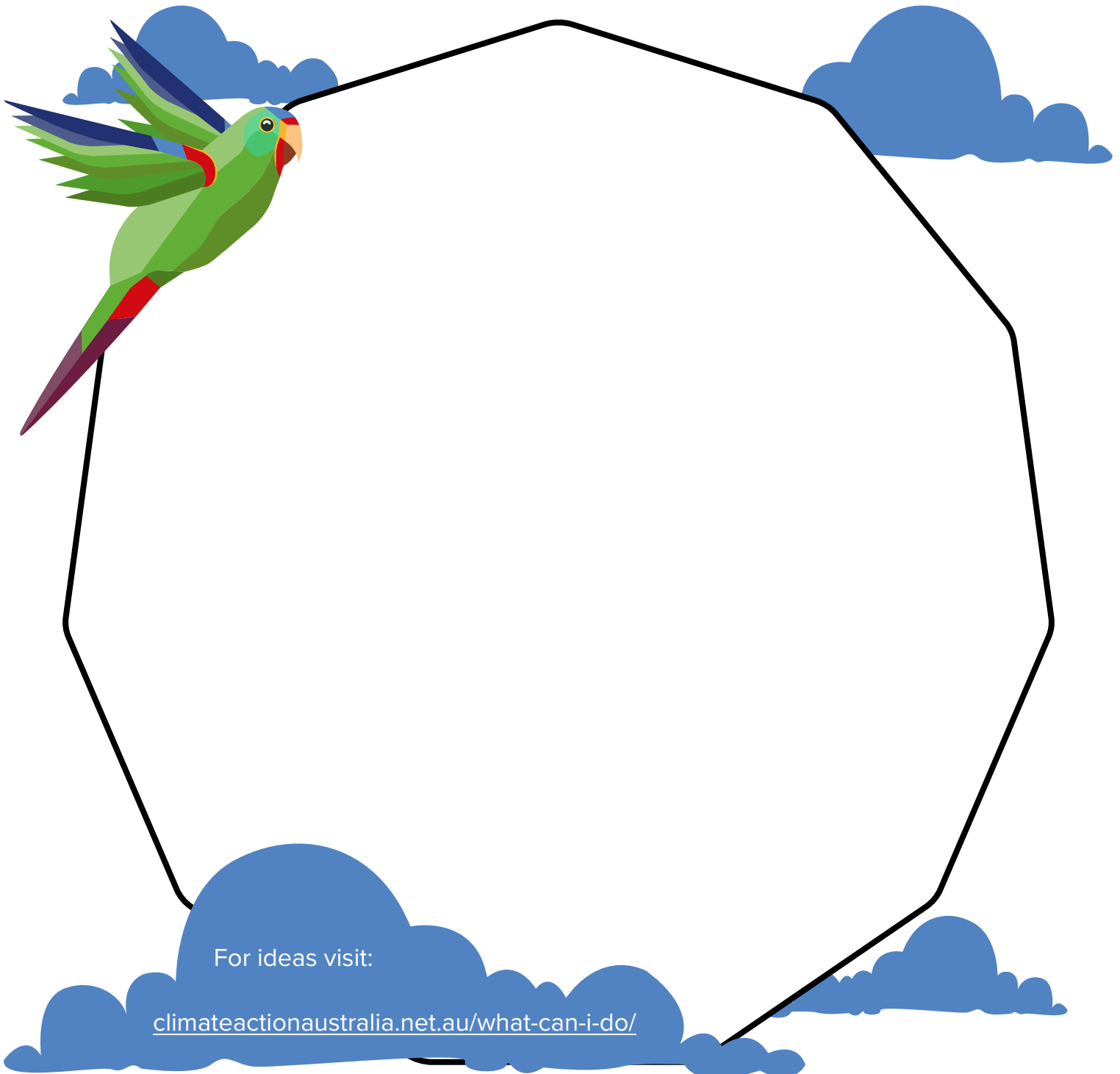
*If you get stuck, use the advice in the fact sheet: Helping swift parrots.*



# Climate change actions

Swiftly is really worried about the impacts of climate change on his fellow swift parrots. Climate change is making the trees flower at different times and they are flowering in different areas, making it hard to find food on their migration.

There are many actions we can do at home and school to tackle climate change. This is called **CLIMATE ACTION**. Help Swiftly brainstorm and record some climate actions that help the swift parrots and the planet.





# Tracking with drones

Helping our threatened species is not an easy task, especially when we are looking at a migratory species like the swift parrot. Not only do we face the challenges that their numbers have become so low they are considered critically endangered, but they rely on habitats spread out from Tasmania to Queensland. This can make them really hard to find!

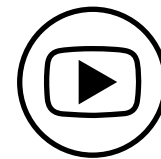
To address this challenge, Wildlife Drones, an Australian technology company, has developed specialised drones that are equipped with cameras and other sensors. These drones help scientists monitor and track swift parrots in their natural habitat.

The data collected through these drones enables researchers to analyse the movements, behaviour and habitat use of swift parrots. This information helps us understand their population dynamics and conservation needs.

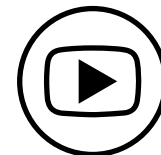
This Australian success story is now helping threatened species around the world.



Scan or click QR code to find out more about Wildlife Drones



Scan or click QR code to watch a video about tracking swift parrots



Scan or click QR code to watch a video about tracking with drones

Below: Taking a drone for a flight (Wildlife Drones)





# A game of drones

## Are you ready?

Technology has revolutionised wildlife conservation! Drones equipped with cutting-edge tools are now vital assets for researchers dedicated to protecting endangered species.

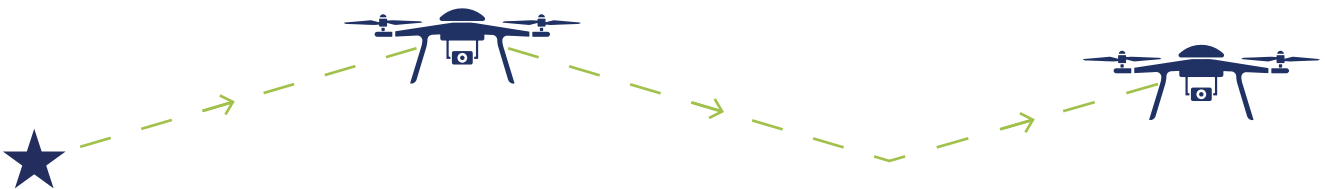


*In this game you will play the part of the wildlife detection drones!*

Imagine you are a drone and have a full range of modern technology to help you locate animals, including:

- **Radio-telemetry:** Detects signals from radio tags that have been put on animals.
- **High-resolution observation:** Uses photo and video to physically observe animals and record them.
- **Thermal imaging:** Uses heat radiated from animals to form an image of them.
- **Acoustic monitoring:** Uses acoustic equipment to detect and record sounds of animals.

*Are you ready to take flight for wildlife conservation?*



## Task

When conservationists use drones, they work in an orderly grid pattern to make sure they are covering the entire site in the most efficient way possible. As a wildlife detection drone you will search the school grounds or chosen site for swift parrots and other animals, just like a conservationist.

The swift parrot and other animals will be represented by QR codes that, when scanned, will reveal the animal that the drone has found.

Your task will be to search the site area and scan all QR codes. You will then map the results, and collate data from the animals scanned.

## Materials

- 1 x tablet or phone per pair/group
- Map of the school grounds or chosen site with a 5 x 4 grid marked on it
- Pen or marker
- 3 x coloured pencils (green, blue and red)
- 16 x QR coded cards (placed around your site)



## Instructions

Your teacher will provide you with a black and white A4 map of your school grounds or chosen site with a 5 x 4 grid marked on it (5 across and 4 down). They will have also placed 16 QR coded cards around the school/site, that you have to find.

1. **Program your flight path** by making a plan on the best way to search your school. Mark this flight path on your map to show the path through the grid you will take in your search. Mark the spot where you will start and finish with a star. Indicate the direction you are flying with arrows on the line.
2. **Now it's time to fly!** When your teacher permits, it is time for you to take off and begin your search for animals (QR codes) throughout the school.

Things to remember:

- use your map and follow your flight path plan through the grid to search the school for QR codes
- there are 20 squares in the grid and only 16 QR codes so some squares will remain blank.

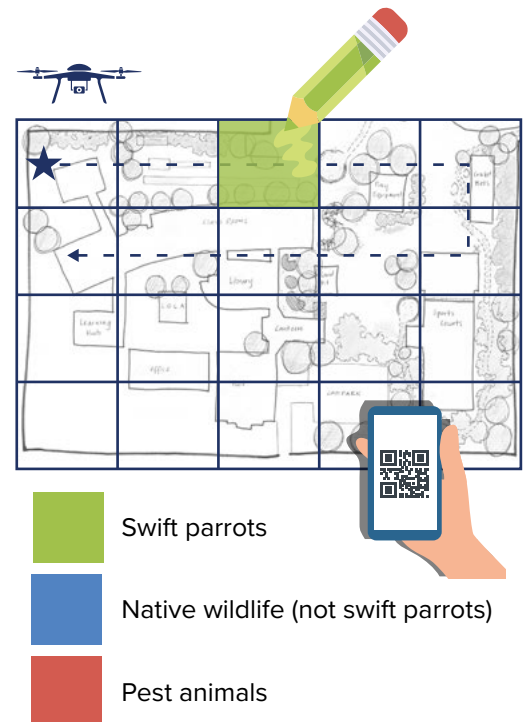
3. When you **find a QR code** it will take you to a page showing an animal. Write the name of the animal in the matching grid square on your map.

If the animal found is a:

- Swift parrot, write the method of detection that was used (Radio, Observation, Thermal, or Acoustic). Shade the grid square **GREEN**.
- If the animal is not a swift parrot but is a native species, shade the grid square **BLUE**.
- If the animal is a pest species, shade the grid square **RED**.
- Grid squares with no animal (no QR code) are left unshaded.

4. When you have found all the QR codes, or your teacher instructs you to, **return to base** by flying back to your classroom to process the data collected.

Example: Drone flight plan and wildlife map





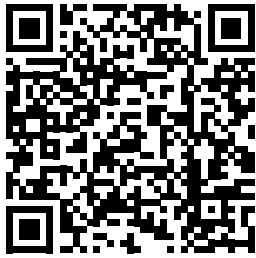
## Data analysis

1. Your flying was amazing! Let's award you some points for all of the QR codes you found, and animals identified. Complete the table by:
  - Making a tally of the different squares on your grid map.
  - Calculating the total points for each animal sighting.
  - Calculating your Total Overall Points.

Animal	Square colour	Tally	Points per animal	Total points per animal sighting
Swift parrot	Green		10	
Other natives	Blue		5	
Pest species	Red		2	
No animals	Unshaded		1	
<b>Total Overall Points</b>				

2. Part of any scientific survey is reviewing the methods we used to collect data so we can improve what we do in the future.
  - a. Did you think the path you chose to search the grid was effective? Why?
  - b. Would you change anything about the path you chose?
3. Think about how there are as few as 500 individual swift parrots left in the wild and they are spread out across such a large range in southeast Australia.
  - a. Do you think swift parrots are easy or hard to find even with modern technology? Why?
  - b. What are the benefits of knowing where swift parrots visit during their migration?

A game of drones QR Code 1



A game of drones QR Code 2



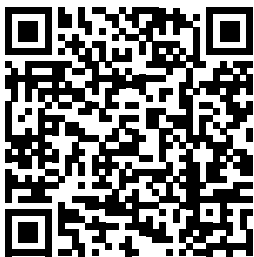
A game of drones QR Code 3



A game of drones QR Code 4



A game of drones QR Code 5



A game of drones QR Code 6



A game of drones QR Code 7



A game of drones QR Code 8

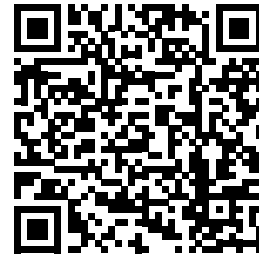




A game of drones QR Code 9



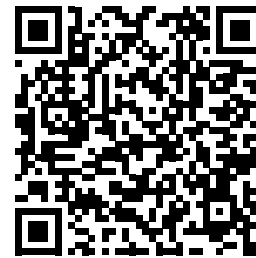
A game of drones QR Code 10



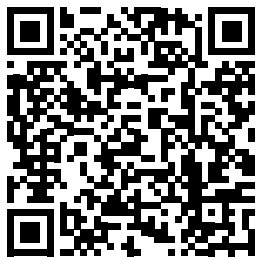
A game of drones QR Code 11



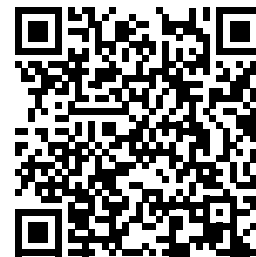
A game of drones QR Code 12



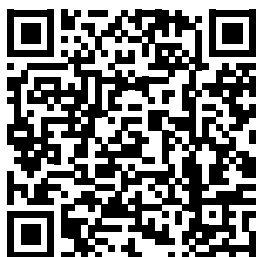
A game of drones QR Code 13



A game of drones QR Code 14



A game of drones QR Code 15



A game of drones QR Code 16





# Communication tools for change

The swift parrot needs our help! But how can we spread the word and inspire action at our school?

Today, we have a variety of communication methods at our fingertips. Let's explore some options to get the message out to our school friends and families.



## Traditional

### Posters and flyers

Eye-catching visuals and clear messages can grab attention in hallways, classrooms and the canteen. Keep it concise and colourful!

### School announcements

A short, impactful message during morning announcements can reach the entire school. Emphasise the importance of the swift parrot and how everyone can help.

### Presentations

Engage your classmates with a slideshow presentation in class or during an assembly. Use pictures, videos and interesting facts to raise awareness.

## Digital

### School website or newsletter

Submit an article or create a section about the swift parrot and conservation efforts. Include pictures, student artwork and links to helpful websites.

### Social media (with adult supervision)

Create a school environmental club page (with teacher approval) or post on existing school accounts. Share information, photos and calls to action using relevant hashtags, such as #SaveTheSwiftParrot.

### Digital bulletin boards

Your school may have digital displays in common areas, such as the Reception/ Office area. Use them to showcase student artwork, conservation tips and facts about the swift parrot.

## Interactive

### Contests and challenges

Organise a poster or slogan contest to promote swift parrot conservation. Encourage creativity and participation!

### Talent show

Organise a talent show with a swift parrot theme. Invite other classes or individuals to participate. Present your talent show in front of the entire school. Alternatively, your class could perform a play at an assembly or as part of an end-of-year concert.

### Petitions and pledges

Create a petition urging the school to adopt sustainable practices or create a pledge board for students to show their commitment to helping the swift parrot.



# Tell the world

## Your task

Use the knowledge you have learned about the swift parrot and the tools we use to communicate important messages, to help the cause of the critically endangered swift parrot by raising awareness in the school community.

Be as creative as possible and use whatever medium you think best to get your messages across!

The swift parrot travels around 5000 km a year!

Wow!  
That's amazing!

Yeah, and they are only 25 cm long!



## What you need to know

### Who is your target audience?

Tailor your message to your audience. Is it for other students in the school, or families and friends of the school? Keep it simple for younger students and more detailed for older grades or adults.

### Call to action

Every message should have a clear call to action, whether it's planting trees, reducing waste, or learning more.

### Be creative!

Use humour, visuals and interactive elements to make your message engaging and memorable.



## Topics you can include

- Where do they live?
- What do they look and sound like?
- Why are they under threat?
- Where do they migrate to and from?
- What trees do they use to feed on in our area?
- How can technology help?
- How do you report sightings?
- How can we help?



## Swift parrot superhero pledge!



I pledge to be a **SUPERHERO**  
for the **SWIFT PARROT** by taking  
the following actions...

1. I will talk to your family and friends about the swift parrot and why they're in trouble.
2. I will plant native flowering trees and shrubs in my garden to provide food for the swift parrots during their migration.
3. I will make sure all rubbish goes in the bin at home and school. This helps keep swift parrots safe from accidentally eating harmful litter.
4. I will do as much as I can to protect swift parrot habitat.
5. I will learn more about how I can help protect the swift parrot.
6. I will make a swift parrot poster to spread awareness about this amazing bird.
7. If I'm lucky enough to see a swift parrot in the wild, I will report the sighting to my local Landcare group, teacher or use apps like BirdData or iNaturalist to help scientists track the birds and their migration patterns.

Sign

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# Glossary

**Acoustic monitoring:** Using sound to study animals in their natural habitats.

**Adaptation:** Changes in an organism that help it survive in its environment.

**Apex predator:** The top predator in a food chain with no natural predators of its own.

**Behavioural characteristics:** The ways animals act or behave.

**Classification (of species):** Organising living things based on their similarities and differences.

**Conservation:** Protecting and taking care of the environment and wildlife.

**Critically endangered:** A species at very high risk of becoming extinct.

**Decomposer:** Organisms that break down dead plants and animals into nutrients.

**Drone:** An unmanned flying vehicle, often used for research.

**Eucalypt:** A type of tree with aromatic leaves.

**Food chain:** The flow of energy in a sequence of organisms.

**Habitat:** The place where a plant or animal naturally lives.

**High-resolution observation:** Detailed and clear viewing or recording of something, often used in scientific observations.

**Hollows:** Empty spaces in trees where animals can live. For more detail, get a copy of *A Hollow is a Home* book and teacher notes at [publish.csiro.au/book/7729](http://publish.csiro.au/book/7729)

**Invasive native species:** Australian plants or animals that cause harm to an ecosystem when introduced to new areas.

**Land management:** Taking care of the way land is used.

**Lerps:** Protective covers made by tiny insects on leaves.

**Life cycle:** The stages a living thing goes through, from birth to death.

**Migratory bird:** A bird that travels between different regions or habitats during different times of the year.

**Monitoring:** Observing and checking something over time to track changes.

**Nectivorous:** Animals that eat nectar from flowers.

**Parrot:** Colourful birds known for their ability to mimic sounds.

**Physical characteristics:** Features and traits of how something looks.

**Plumage:** The a bird's feathers.

**Pollination:** The transfer of pollen between flowers, essential for plant reproduction.

**Primary consumer:** An organism that feeds on plants or other producers in a food chain.

**Primary producer:** Organisms that produce their own food through photosynthesis.

**Radio-telemetry:** Using radio signals to track and study the movements of animals.

**Raise awareness:** Informing and educating people about an issue to inspire action.

**Recovery plan:** Strategies and actions to help endangered species increase in numbers and recover.

**Secondary consumer:** An organism that feeds on primary consumers in a food chain.

**Taxonomy:** The science of naming, describing, and classifying organisms.

**Temperate:** Regions with moderate climate conditions, not too hot or too cold.

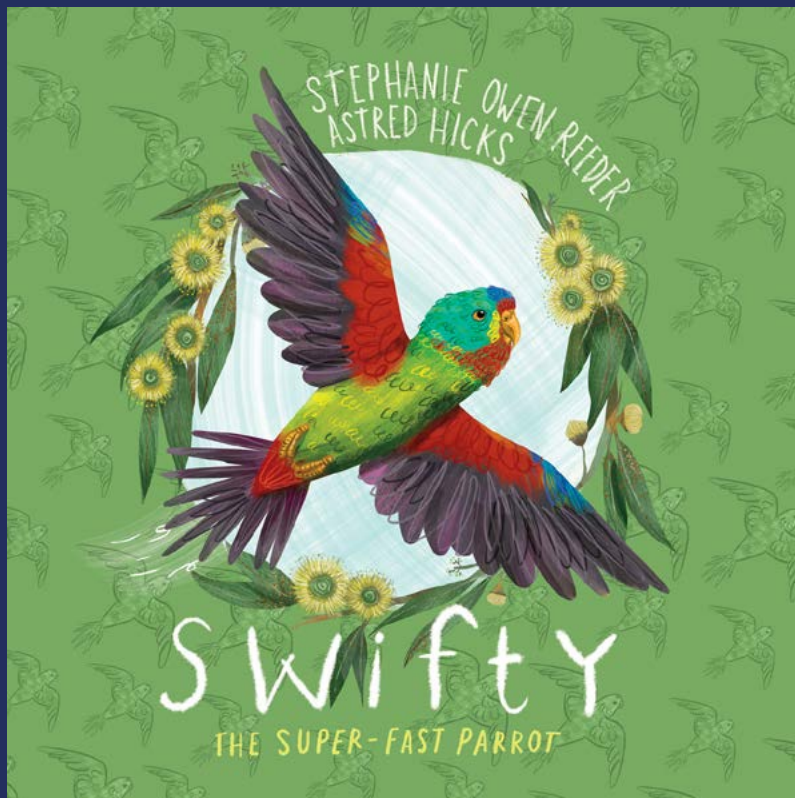
**Thermal imaging:** Using infrared radiation to create images that show variations in temperature.

**Threatened:** Species that are at risk of becoming endangered if conservation efforts are not taken.

**Tracking:** Monitoring and following the movements of animals using various methods.

**Woodland:** A type of ecosystem characterised by the open nature of their canopy and the wide spacing between trees.

**Zygodactyl feet:** A bird's feet with two toes pointing forward and two toes pointing backward, allowing for strong grasping ability.



## Swiftly the super-fast parrot

Fly with Swiftly on the swift parrot's challenging migration journey following the blossom trail.

A captivating story of the remarkable, but critically endangered, swift parrot—the fastest parrot in the world!

Included on the website is a video trailer as well as some Teacher Notes you can download as a free PDF to support the use of this book in the classroom.

Available at  
**CSIRO Publishing**

Scan or click  
QR code to buy

