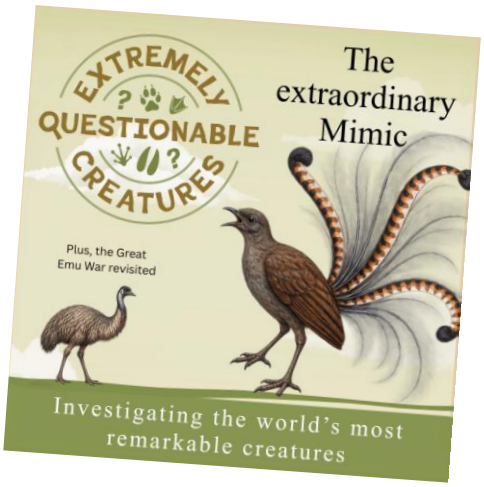
INTERNATIONAL INSTITUTE FOR THE STUDY OF EXTREMELY QUESTIONABLE CREATURES

TEACHER'S NOTES



Episode Three: The Extraordinary Mimic

Case File: #0003
Episode length: Approximately 20 minutes
Recommended levels: Years 3–6
Adaptable for: Years 1–2 with teacher support
Main investigation: Superb Lyrebird
Sub-investigation: Great Emu War / The Phoenix
Key question: Can the Lyrebird really mimic all those sounds?

EPISODE OVERVIEW

Deep in the Australian forest lives a bird with an extraordinary talent.
The Superb Lyrebird is famous for its ability to imitate sounds from its surroundings. Other birds are part of its repertoire, but reports suggest its performances can sound far stranger than that.
Can a bird really imitate sounds so accurately that it fools the people listening?

Senior Field Researcher Tom Bramble and the Institute team investigate the Extraordinary Mimic, exploring how and why lyrebirds copy sounds and what this remarkable behaviour tells us about animal communication.

Meanwhile, the Institute revisits one of the strangest chapters in Australian history:

The Great Emu War.

And a legendary Phoenix faces questions about its ability to rise from the ashes.
This episode encourages students to explore animal behaviour, adaptations, communication and the difference between observation and interpretation.

LEARNING INTENTIONS

Students will:

- Investigate how and why lyrebirds mimic sounds.
- Understand the role of communication in animal behaviour.
- Explore how adaptations assist animals with survival and reproduction.
- Distinguish between real, legendary and fictional creatures.
- Examine the historical events surrounding the Great Emu War.
- Evaluate claims using observations and scientific evidence.
- Develop questions and explanations about the natural world.

SUCCESS CRITERIA

Students can:

- Identify the Superb Lyrebird and describe its mimicry abilities.
- Explain at least one reason lyrebirds imitate sounds.
- Distinguish mimicry from ordinary animal communication.
- Identify the historical facts behind the Great Emu War.
- Explain why the Phoenix is considered legendary.
- Recognise that hearing a sound does not always identify its source.
- Use evidence to support a scientific conclusion

BEFORE LISTENING

Introduce the mystery

Tell students:
A bird has been discovered deep in the Australian forest.
Witnesses claim it can imitate other birds, camera shutters, alarms and even some human-made sounds.
Could a bird really do all that?

Ask students to predict which sounds a bird might be capable of copying.

Then discuss:

- Why do birds sing or call?
- Can animals learn sounds from other animals?
- Is making a sound the same as understanding its meaning?
- What evidence would convince you that a bird was imitating a camera?
- Could a sound be mistaken for something else?

Encourage students to record their predictions before listening.

DURING LISTENING

Suggested pause questions

During the Lyrebird investigation: What makes the bird's behaviour so extraordinary?
Why might it have evolved this ability?

During the Great Emu War, what caused the conflict between people and emus?
Why were the emus so difficult to control?

During the Phoenix interview, what is the difference between a legendary story and a scientific observation?

At the conclusion, which creatures are real?
Which claims require more evidence?

CREATURE CASE FILE

Superb Lyrebird



Scientific name: Menura novaehollandiae

Institute classification: REAL

Habitat: Forests of southeastern Australia

Extraordinary ability: Remarkable vocal mimicry

Main claim: A bird can imitate an astonishing variety of natural and human-made sounds.

WHAT MAKES LYREBIRD EXTRAORDINARY

The Superb Lyrebird is one of the world's most remarkable vocal mimics.

It can reproduce the calls of other bird species with extraordinary accuracy. Some lyrebirds have also been documented imitating human-made sounds, particularly birds that have been exposed to them.

Male lyrebirds use complex vocal displays, including mimicry, during courtship. Their performances can be accompanied by elaborate movements and displays of their spectacular tail feathers.

Four claims to investigate

1. A Lyrebird can accurately imitate other birds.
2. Some lyrebirds can imitate human-made sounds.
3. Male lyrebirds use songs and mimicry during courtship.
4. A Lyrebird can learn sounds from its environment and incorporate them into its repertoire.

Important scientific clarification: Although recordings of lyrebirds imitating camera shutters, chainsaws and other machinery exist, these are not necessarily common sounds among wild lyrebirds.
Students should distinguish between an individual bird's demonstrated ability and behaviour typical of the species.

HISTORICAL INVESTIGATION

The Great Emu War



Creature: Emu
Scientific name: Dromaius novaehollandiae
Classification: REAL
Historical event: The Great Emu War, 1932
Location: Western Australia

WHAT HAPPENED?

In 1932, large numbers of emus were moving through farming areas of Western Australia and damaging crops.

The Australian military was called upon to help reduce the number of emus using machine guns.

The operation was far less successful than expected. The birds moved quickly, scattered and proved difficult to target.

The campaign became famously known as the Great Emu War.

Discussion questions

- Why were farmers concerned about the emus?
- What made emus difficult to control?
- Did the emus know they were participating in a war?
- What other solutions might farmers and governments have considered?
- How should people balance agricultural needs with wildlife protection?

Teaching note: The Great Emu War is a popular humorous historical story, but it involved real attempts to kill wildlife. It is worth discussing the event sensitively and distinguishing its popular nickname from the historical reality.

REAL OR NOT?

The Phoenix

Classification: LEGENDARY

Origins: Ancient mythology and folklore

Extraordinary claim: The Phoenix can be reborn after its life ends, often associated with fire or ashes.

The Phoenix appears in stories and traditions from the ancient world and is commonly associated with renewal and rebirth.

Unlike the Lyrebird or Emu, there is no scientific evidence establishing the Phoenix as a real biological species.

Ask students:

- Why have people told stories about the Phoenix for so long?
- What does rebirth symbolise?
- Is a creature being legendary the same as a story being unimportant?
- What evidence would scientists require to classify a Phoenix as real?

COMPREHENSION QUESTIONS

Remembering

1. What Australian bird is famous for its remarkable mimicry?
2. Name two sounds a Lyrebird can imitate.
3. Why do male lyrebirds perform elaborate songs?
4. What happened during the Great Emu War?
5. What unusual ability is associated with the Phoenix?

Understanding

6. Why is mimicry useful to a Lyrebird?
7. How might a Lyrebird learn a new sound?
8. Why does hearing a camera-like sound not prove that a camera is nearby?
9. Why did the emus prove difficult to control?
10. What is the difference between a real creature and a legendary creature?

CLAIM, EVIDENCE AND CONCLUSION

Investigation One

Claim:
Lyrebirds imitate other birds

Evidence to Consider:
- Documented vocal recordings
- Scientific observations
- Recorded examples

Conclusion:
Classified as real and true, Lyrebirds do imitate their surroundings.

Investigation Two

Claim:
Emus were involved in a military campaign

Evidence to Consider:
- Historical Records from 1932
- Newspaper reports

Conclusion:

Real Historical Event

Investigation Three

Claim:

The Phoenix rises from its ashes.

Evidence to Consider:

- Mythology
- Traditional stories of various cultures

Conclusion:

Classified as Legendary.

Emphasise that scientists should not automatically reject something because it sounds unusual, but they also should not accept a claim without suitable evidence.

CLASSROOM ACTIVITIES

CLASSROOM ACTIVITY 1:

The Sound Detective Challenge

Time: 15 – 20 minutes

Play or produce a series of sounds without revealing their source: keys jingling, paper tearing, water pouring, a bird call or a phone notification.

Students record what they think produced each sound and how confident they are.

Reveal the sources and discuss the difference between hearing and identifying.

CLASSROOM ACTIVITY 2:

Create a Lyrebird Sound Map

Time: 20 - 30 minutes
Science and visual arts

Students draw a Lyrebird in the centre of a page, surrounded by sounds it might encounter in its environment.

Use arrows to show natural and human-made sound sources.

Discuss which sounds a wild bird is likely to hear and which would depend on its habitat.

CLASSROOM ACTIVITY 3:

The Great Emu War

Time: 30 – 40 minutes
History and design thinking

Imagine you are an agricultural adviser in Western Australia in 1932.

Design a non-lethal way to protect crops from emus. Students can consider fencing, crop protection, habitat management and costs.

Present a plan explaining the benefits and possible problems.

WRITING ACTIVITIES

Scientific explanation:

Write a paragraph explaining how and why lyrebirds imitate sounds. Include the terms mimicry, courtship and adaptation.

History:

Historical newspaper report: Write a 1932 newspaper report about the Great Emu War. Include what happened, why it happened and the outcome, while distinguishing historical facts from humorous exaggerations.

Creative writing:

Consider the same newspaper report as above, but write it from the Emu’s perspective where Emus and other forest creatures are also the readers.

Persuasive writing:

Respond to the statement, "The Lyrebird is Australia's most extraordinary entertainer." Support your opinion with three pieces of evidence

JUNIOR RESEARCHER FIELD ASSIGNMENT

The Great Sound Investigation

Students visit a safe outdoor area with a teacher, parent or responsible adult.

For five minutes, they listen carefully without talking.

They record:

- Five different sounds they hear.
- Which sounds appear to come from animals.
- Which sounds are human made.
- Whether they can identify each source.
- One sound they would like to investigate further.

Students then choose one sound and complete an Institute report.

Observed sound: Possible source: Evidence supporting my identification: Alternative explanation: Further investigation needed:

*Remind students not to approach, disturb or attempt to handle wildlife.

EXIT TICKET

Before leaving the lesson, students complete:

1. One extraordinary thing I learned about the Lyrebird was…
2. One thing that surprised me about the Great Emu War was…
3. The Phoenix is classified as…
4. One reason we cannot always trust our ears is…
5. One question I would like to ask a wildlife expert is…

TEACHER SUMMARY

Episode Three introduces students to the remarkable vocal abilities of the Superb Lyrebird while encouraging them to think critically about the information they receive through their senses.

The Lyrebird demonstrates how animal adaptations can support communication and reproduction.

The Great Emu War provides a historical example of the challenges involved when humans and wildlife share environments.

The Phoenix offers contrasting opportunities to explore folklore, imagination and scientific evidence.

The central learning message is:

Hearing something extraordinary does not always tell us what produced it. Good investigators observe carefully, consider alternative explanations and look for supporting evidence.

INSTITUTE CLOSING MESSAGE

Congratulations, Junior Researchers.
You've investigated one of Australia's most remarkable performers, revisited a very unusual chapter of Australian history and examined the claims of creatures both real and legendary.

CASE FILE: THE EXTRAORDINARY MIMIC
Superb Lyrebird REAL
Emu REAL
Phoenix LEGENDARY

Another investigation is ready to return to the Creature Archives.
Observe. Question. Imagine. Investigate.