

Teacher Notes

Themes

- Australian birdlife
- Migratory shorebirds
- Interconnections between birds and ecosystems

Key learning outcomes

- Recognise a variety of shorebird species
- Learn about the various habitats these birds rely on
- Identify some of the obstacles these birds face in their lives

Key curriculum areas

- **Science:** Science Understanding (Biological sciences); Science Inquiry Skills
- **English:** Language
- **Mathematics:** Data Representation and interpretation
- **The Arts:** Music
- **Cross Curriculum Priority:** Sustainability

Publication details

A Shorebird Flying Adventure

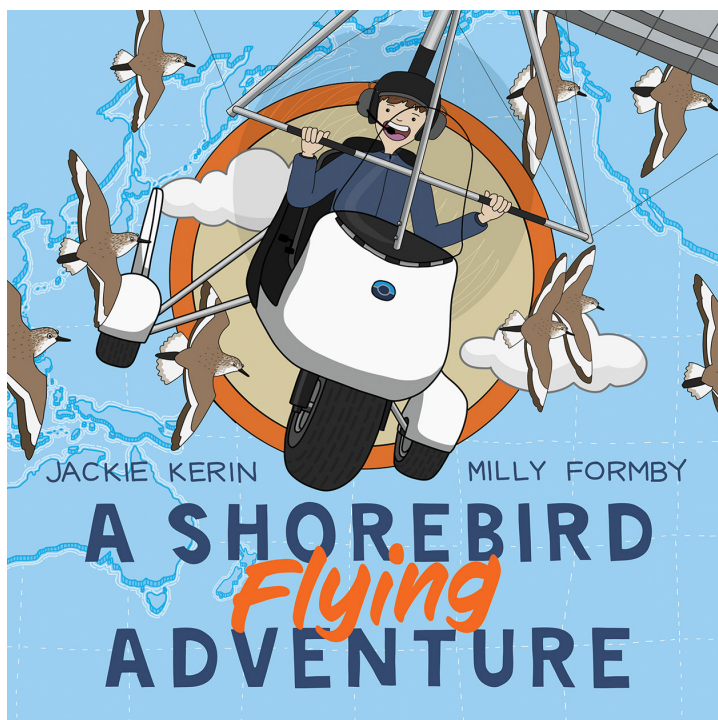
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A Shorebird Flying Adventure

Jackie Kerin and Milly Formby

About the book

Join Milly on her microlight adventure and discover how amazing and awesome migratory shorebirds are!

In *A Shorebird Flying Adventure* you'll take a trip to the Arctic tundra and back. On the way you'll meet the birds who travel phenomenal distances every year and explore their precious wetland habitats and breeding grounds. Learn fascinating facts about their diet and find out Milly's top tips to tell one species from another. Grab your binoculars, hop on board and let's go bird watching!

Recommended for

Primary school readers aged 6 to 9 (Years 1 to 4)



PUBLISHING

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About the author and illustrator

Jackie Kerin is the author of several non-fiction books for children and has a deep interest in connecting children to nature, encouraging their curiosity and inspiring them to become advocates for a better world. See <https://www.jackiekerin.com.au/>.

Amellia 'Milly' Formby is a pilot, zoologist, illustrator and bird nerd! She combines these skills to create stories that empower others to become strong voices for nature. Milly will be flying her microlight around Australia to raise awareness for migratory shorebirds in May–November 2022. Follow her amazing journey around Australia at wingthreads.com.

Pre-reading questions or activities

There are birds who migrate, or travel, thousands of kilometres between the Arctic and Australia each year. Watch this video about a special wetland habitat in South Australia, to start learning about migratory shorebirds: <https://youtu.be/1WokMcl2ylw>. What are some of the obstacles they may come across in their lives?

Foxes and other introduced predators; human disturbance; loss of feeding habitat.

The East Asian–Australasian Flyway Partnership (EAAFP) has some great resources on their website for more information on migratory shorebirds. Visit <https://www.eaaflyway.net/> to start exploring!

Discussion questions

Science

1. One of the authors, Milly Formby, has combined some of her interests into her work studying migratory shorebirds. What are the activities that are important to her investigations into these birds? Maybe you can think of some things you love to do that could also be useful in scientific pursuits.

Being a zoologist; bird-watching; drawing/sketching/illustrating; flying/piloting; navigating (just like the birds!).

2. Three distinguishing features of birds are their feathers, their beaks and their feet. The book makes some important points about these body parts in migratory shorebirds. What are they?

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Feathers: plumage changes for breeding purposes; feathers moult sequentially to enable birds to escape predators.

Beaks: a variety of shapes and sizes; bendy bills (rhynchokinesis); pressure sensors that help with locating food.

Feet: unlike seabirds, shorebird feet are not webbed.

3. Several wetland habitats are shown throughout the book. How many different ones can you find? What does it mean that 'Wetlands are important for biodiversity'?

Freshwater wetlands, grasslands, saltmarsh, marine wetlands, rocky beaches, sandy beaches, salt lakes, mudflats, mangroves, tundra.

Wetlands support a variety of vegetation, birds, reptiles, insects as well as invertebrates in the mud that are necessary for the food chain to be robust.

English

Some of the words in the book may be unfamiliar to you. From the illustrations or their placement on the page or in the sentence, can you figure out the meaning of these words?

- wheel spat (*cover for a wheel*)
- tatty (*ragged, torn*)
- shimmering (*faintly shiny, softly glowing*)
- juvenile (*young, not yet matured*)
- aquaculture (*intentional farming of marine food, like salmon or oysters*)

Sustainability

The book asks us to imagine a world where people, pets and birds can share the beach respectfully. What are these things?

Leave the wetlands undeveloped; keep dogs on a lead; no hunting of shorebirds; stop climate change; keep the wrong plants and animals out of the wetlands; put all rubbish in the proper bins; don't disturb the birds when they nest (resident shorebirds) or feed; minimise aquaculture so birds have plenty to eat and there are no nets to get tangled in.

What other ways can you imagine to make our beaches safe places for all life?

Activities

Science

Unmix and catalogue

Using the worksheet provided on page 6, students need to rearrange the letters of each word to discover which bird it is, and record it as either a Resident shorebird or Migratory shorebird in the last column.

Answers

- | | |
|-------------------------------|----------|
| 1. <i>Pied oystercatcher</i> | <i>R</i> |
| 2. <i>Grey-tailed tattler</i> | <i>M</i> |
| 3. <i>Terek sandpiper</i> | <i>M</i> |
| 4. <i>Masked lapwing</i> | <i>R</i> |
| 5. <i>Pied stilt</i> | <i>R</i> |
| 6. <i>Bar-tailed godwit</i> | <i>M</i> |
| 7. <i>Eastern curlew</i> | <i>M</i> |
| 8. <i>Hooded plover</i> | <i>R</i> |

Bird flag

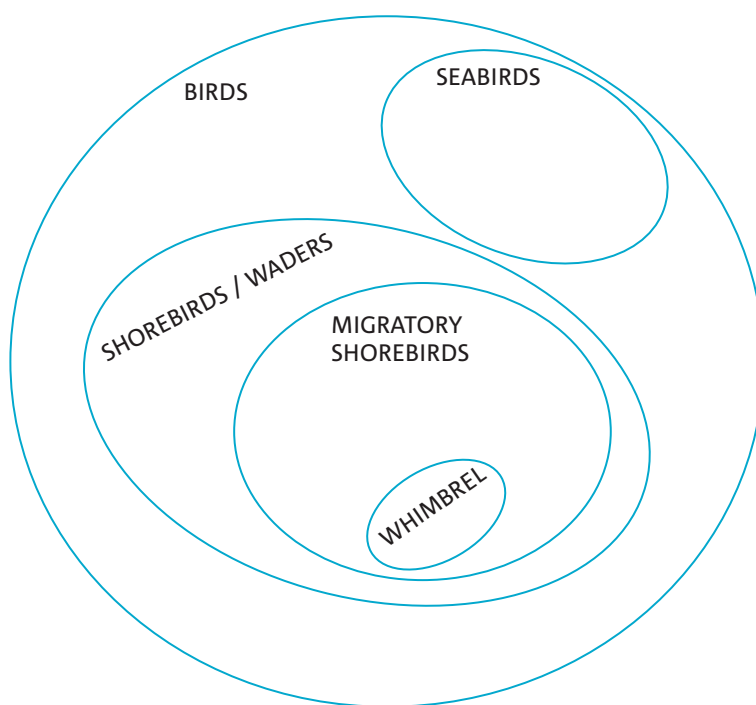
Unlike the resident shorebirds, the migratory shorebirds in this book don't belong to just one country, but rather, could be considered citizens of many countries. Using the worksheet on page 7 as inspiration, choose a bird that travels along the East Asian–Australasian Flyway to create a new flag to represent it. Include a particular wetland, colour, feather, food or fact on the flag to help convey this bird's life.

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Mathematics

Creating a Venn diagram

Ask students to put the following words into a Venn diagram: birds, migratory shorebirds, seabirds, shorebirds, waders and whimbrel. It should look similar to this:



The Arts

Listen and connect

In the front of the book is a quote from a piece of music by Laura Brearley called *Acknowledgement of Country Song*, with a line that says, 'For we are all connected as one.' And towards the end of the book the author says, 'Shorebirds teach us that all life is connected through land, sea and sky.' While you listen to the whole song (<https://soundcloud.com/laura-brearley/we-honour-the-land-call-and-response-acknowledgement-of-country-250121docx>), think about how the book demonstrates how shorebirds connect land, sea and sky, and write a few sentences or draw a picture to show your understanding.

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Worksheets

Unmix and catalogue

	Mixed-up letters	Unmixed letters	Resident or Migratory?
	Example: Ted-knorvac deece	Red-necked avocet	R
1	Dopy teacherscriet		
2	Teal-tidget trayler		
3	Treen kidsapper		
4	Klaned swimgap		
5	Sitt plied		
6	Dig-ratted bowail		
7	Western claure		
8	Phodde volore		

Bird flag



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Australian curriculum links

Year level	Learning area: Science	Other learning areas
Years 1/2	<p>Science Understanding: Biological sciences</p> <ul style="list-style-type: none">Living things live in different places where their needs are met (ACSSU211) <p>Science Inquiry Skills</p> <ul style="list-style-type: none">Represent and communicate observations and ideas in a variety of ways (ACSI029)Use a range of methods to sort information, including drawings and provided tables and through discussion, compare observations with predictions (ACSI040)	<p>English</p> <ul style="list-style-type: none">Understand the use of vocabulary about familiar and new topics and experiment with and begin to make conscious choices of vocabulary to suit audience and purpose (ACELA1470) <p>The Arts</p> <ul style="list-style-type: none">Respond to music and consider where and why people make music, starting with Australian music, including music of Aboriginal and Torres Strait Islander Peoples (ACAMUR083)
Years 3/4	<p>Science Understanding: Biological sciences</p> <ul style="list-style-type: none">Living things can be grouped on the basis of observable features and can be distinguished from non-living things (ACSSU044) <p>Science Inquiry Skills</p> <ul style="list-style-type: none">Represent and communicate observations, ideas and findings using formal and informal representations (ACSI071)	<p>Mathematics</p> <ul style="list-style-type: none">Construct suitable data displays, with and without the use of digital technologies, from given or collected data. Include tables, column graphs and picture graphs where one picture can represent many data values (ACMSP096)
All	<p>Cross Curriculum priority: Sustainability</p> <ul style="list-style-type: none">OI.2 All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.	

Related books from CSIRO Publishing

For younger readers:

- *Windcatcher: Migration of the Short-tailed Shearwater* (<https://www.publish.csiro.au/book/7851>)

For older readers:

- *Animal Migrations: Flying, Walking, Swimming* (<https://www.publish.csiro.au/book/8044>)

For adults:

- *The Australian Bird Guide*, Revised Edition (<https://www.publish.csiro.au/book/7906>)

Other CSIRO resources

CSIRO has developed and delivered a broad range of high-quality STEM education programs and initiatives for nearly 40 years. Our programs aim to inspire the pursuit of further STEM education among students and the community, to equip the emerging workforce with tomorrow's skill sets, and to strengthen collaboration between industry and classrooms across Australia. For more information visit: <https://www.csiro.au/en/Education>