

# Explore Your World #4: Creepiest Crawly Critters

AUTHORS

**TIM FLANNERY AND EMMA FLANNERY**

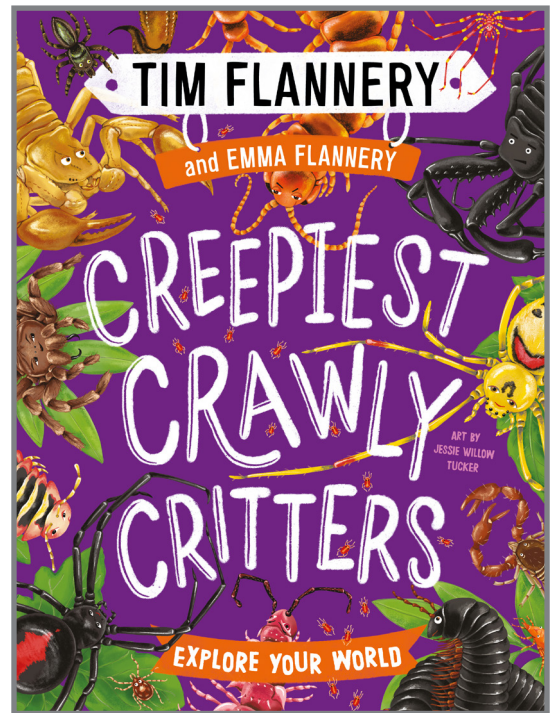
ILLUSTRATOR

**JESSIE WILLOW TUCKER**

**SCIS:** 5425620

**ISBN:** 9781760509033

**RECOMMENDED FOR:** Mid to Upper Primary



## SYNOPSIS

Tim and Emma Flannery follow up the first three books in their popular 'Explore Your World Series' with Creepy Crawly Critters, an exploration into the fascinating world of arachnids and other interesting arthropods. This book is an entertaining, informative (and occasionally gross) look into all the things that creep and crawl.

## ABOUT THE AUTHORS

Professor Tim Flannery is one of the world's leading scientists, explorers and conservationists. He has held positions in renowned institutions across Australia and internationally, including Director of the South Australian Museum, Visiting Chair in Australian Studies at Harvard University and Distinguished Research Fellow at the Australian Museum. He was named Australian of the Year in 2007. He has published more than thirty books, including the award-winning *Here on Earth* (2010), *The Weather Makers* (2005) and *Atmosphere of Hope* (2015). He is a frequent presenter on ABC Radio, NPR and the BBC, and has also written and presented several series on the Documentary Channel. This is his third book for children.

Emma Flannery is a scientist and writer whose curiosity for the natural world has seen her travel and work in some of its most wild and interesting places. She has explored caves, forests and oceans across most of the globe's continents in search of the elusive fossils, animals and plants that help us understand our planet and who we are in it. With postgraduate experience in geology, chemistry and palaeontology. Emma's research and writing has been published in scientific journals, children's books and a number of museum-based adult education tours. She has worked for and with universities, government agencies and museums. She is the co-founder of Museophilic, and independent curatorial service that has produced programs for the City of Sydney and the Australian Museum, aimed at bringing science to life for a range of audiences. Her passion for science has an infectious and playful enthusiasm that inspires curiosity in children and adults alike. She hopes to continue to produce fun and accessible science communication.

## ABOUT THE ILLUSTRATOR

Jessie Willow Tucker is a cross-disciplinary artist. She has a Bachelor of Fine Arts (painting) from RMIT and a Post Graduate Diploma in Theatre Arts from the Victorian College of the Arts. In addition to working as an illustrator, she has exhibited her fine art, worked in theatre design, fashion design, textile design and managed her own fashion label.

## THEMES

- Creepy crawlies
- Understanding our local environment
- Conservation and caring for our world
- Evolution and survival
- Facing our fears
- Being curious about our backyards

## STUDY NOTES

- The authors, Tim and Emma Flannery, combine fascinating facts with anecdotes from their own life, bringing out some of the unique characteristics of creepy crawlies to encourage readers to view them in an entirely new way. Do Tim or Emma sound afraid when they share some of their more alarming encounters with creepy crawlies? Would you feel differently about the creepy crawlies if they did? Think about how we can use tone in our writing to guide the emotions of our reader—what kind of language do the writers use to show that there’s really nothing to be afraid of?
  - Why do you think these anecdotes in the ‘Flannery Files’ are included in the book? What details do they include in each piece? Write your own Flannery File, that details an encounter you’ve had with a creepy crawly.
- Jessie Willow Tucker’s illustrations are bright, colourful, and mostly realistic. The illustrations are realistic, but also gives each of the creepy crawlies a personality. Some of the creepy crawlies are given cheeky expressions, or the illustrations are used to show-off their unique quirks. How do these personalities help you to see creepy crawlies differently?
  - Draw a creepy crawly of your own showing off something interesting that you’ve discovered about it from the book.
- Do you know how to understand the meaning of their scientific names, or what family they belong to?

## DISCUSSION QUESTIONS AND ACTIVITIES

- Where do you find creepy crawlies? Draw a map of your house and the creepy crawlies that live there. Where do they live? Are they dangerous? Draw a picture of the creepy crawlies who live with you and make a list of all the things you know about them.
- How long have some creepy crawlies been around for?
- What does Tim Flannery believe our relationship with creepy crawlies should be?
- What is a phyla? What phylum do creepy crawlies belong to? What do creatures belonging to this group have in common?
- Make a list of five creepy crawlies that are mentioned in the introduction that you’d like to learn more about.
- What is so special about the web of the golden orb weaver? What do you do when you come across spider webs at home?
- Why do we need creepy crawlies?
- What should you do if you encounter a creepy crawly?
- Why is the life of a creepy crawly ‘ruthless’ (p 12)? What are some of the threats creepy crawlies face?
- What is the ‘very special creepy crawly that isn’t an arthropod’ (p 12)? How did you figure this out?
- What is the difference between a common name, and a scientific name? What do the parts of a scientific name reveal about the creature they describe?

## SPIDERS

### Comprehension

- What are three characteristics of a spider?
- Spider hairs are hydrophobic—what does this mean? How does this come in useful for spiders? What are some of the ways that hydrophobic materials could be useful for humans?

- What are the parts of a spider's body? Draw a picture and label each of these parts. What are some of the interesting things about spider bodies?
- What is antivenom? Where does it come from? What should you do if you get bitten by a spider?
- What's so special about spider silk? What are some of the clever ways that spiders use their silk? What do humans use silk for?
- What are some of the threats to spider habitats? What can we do to help?
- What letter does a golden orb weaver start with when spinning her web?
- How do spiders live in or around water? What are the names of some of the spiders that live in this environment?
- What is the goliath birdeater's claim to fame?
- What are some of the defences that spiders have against predators?
- Which spider has the deadliest venom on earth?
- What are some of the ways that spiders interact with other animals (apart from eating them!)?
- What are some famous spider (or spider-inspired) characters from film and fiction?
- Why do some spiders have colourful bodies? How do they use this colour?

### Discussion Questions and Activities

- Try to imagine yourself into the spider's shoes (web?) for a moment and write a day in the life from the spiders perspective. How would they describe encounters with humans? What else do they do or see while you're at school all day?
- Flannery describes some pretty amazing ways that spiders disguise themselves to hide from their prey. If you were a spider, how would you disguise yourself? Draw a picture of your spider in disguise, waiting to catch its prey.
- Read about the ways that all the different spiders build their webs—how do each of the unique shapes and designs work to keep the spider safe, and provide them with food? Using materials that you can find around your house, make a 3D model of one of the webs in the book, and explain to your classmates how it works.

## HARVESTMEN

### Comprehension

- How is a harvestman different to a spider?
- How do we know that harvestmen have been around for more than 400-million years? How long is that compared to human civilisation?
- What beneficial role do harvestmen play in the garden?
- What do harvestmen eat?
- What is so unique about the Bunny Harvestman?

## SCORPIONS

### Comprehension

- What are some of the characteristics of a scorpion?
- What do scorpions use their pincers for?
- Which scorpions should humans be afraid of?
- Why do scientists think that scorpions glow under UV light?
- What superstar scorpion is usually used in movies? Why?
- Where are you most likely to find a scorpion?

### Activity

- Scorpions are pretty tough, but are they the toughest creepy crawly? Imagine a battle between a scorpion and one of the other creepy crawlies in the book. What are their strengths and weaknesses? Describe how a battle between these two creepy crawlies might play out. Who do you think will emerge victorious? Make a deck of creepy crawly cards, giving each creepy crawly in the book attack points and damage points based on their strengths and weaknesses. Use them to defeat other creepy crawlies from your classmates' decks.

## PSEUDOSCORPIONS

### Comprehension

- What is the closest relative of a pseudoscorpion?
- List three characteristics of a pseudoscorpion.
- What is it called when a female animal can reproduce without a male?
- How do pseudoscorpions travel?
- How are pseudoscorpion mothers different to scorpion mothers when it comes to sharing the food?

### Activities

- Pseudoscorpions can travel by 'phoresy', which is when a creature hitches a ride on the body of another creature. Write (or draw) a short story that imagines an adventure that a pseudoscorpion might take when travelling the beetle express.

## ODD BUNCH

### Comprehension

- How many kinds of tailless whip scorpions are there?
- Where do you find a tailless whip scorpion? Should you be afraid of them?
- How does the tailless whip scorpion hunt for food?
- Why do you want to hold on tight if you're a baby tailless whip scorpion?
- What is the 'cool nickname' of a camel spider?
- What noise do camel spiders make to warn predators to stay away?
- Where do you find camel spiders?
- Do sea spiders swim in the sea?
- How many kinds of sea spiders can you find? What are some of their distinctive characteristics?
- What would you find inside a sea spiders' leg?
- What does a tardigrade look like? How big are they?
- What would happen if a tardigrade dried out?
- What do tardigrades eat?
- What kind of extreme environments can the tardigrades survive?

### Activities

- A tailless whip scorpion looks as though it's made up of the parts of several other creepy crawlies. What are they?
  - Design your own creepy-crawly mash up. Take your favourite parts of some of the other creatures described in the book and put them together to make a new creepy crawly. Draw a picture of it in its natural habitat then give your new creepy crawly a scientific and a common name. Think about these other questions for your new creepy crawly:
    - What does it eat?
    - Where might you find it?
    - Is it dangerous?

Compare your new creepy crawlies to your classmates.

## TICKS

### Comprehension

- How do ticks move from one place to the next?
- Who is Otzi? How did he die?
- What is co-extinction? Why are certain ticks in danger of this?
- What are some of the useful things scientists might be able to learn from tick venom?
- Where do ticks like to hide in humans?

### Activities

- Make a poster that highlights some of the dangers of getting bitten by a tick. How will you illustrate your poster? Who is the information for? What can people do to avoid a tick bite?

## MITES

### Comprehension

- What is distinctive about the bodies of mites? How many eyes do they have?
- What are some of the useful things that mites do around our homes?
- What is the name of the mightiest mite?
- Why should we be careful with biological control agents?
- How big are the mites that live on our faces?
- What do mites eat?

## CENTIPEDES & MILLIPEDES

### Comprehension

- What group do centipedes and millipedes belong to?
- How does a centipede's body differ to a millipede's?
- What important function do millipedes play in nature?
- What is it called when a creature uses colour to show that it's dangerous to eat?
- When does a creature become a pest? What kinds of millipedes are pests in Australia?
- What is the fastest centipede on earth?
- What are some of the ways millipedes protect themselves against predators?