I'd like to say a special thank you to Harley Price-Davis, Mel Brown and Phil Trenerry for all their help and support.

– JAKE WILLIAMS

First published in the United Kingdom in 2018 by
Pavilion Children's Books
43 Great Ormond Street
London
WC1N 3HZ

An imprint of Pavilion Books Limited.

Publisher and Editor: Neil Dunnicliffe
Assistant Editor: Harriet Grylls
Art Director: Anna Lubecka, Banana Bear Books
Scientific Advisor: Dr Daniel Pincheira-Donoso

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise, without prior permission of the copyright owner.

Text and illustrations © Jake Williams 2018

The moral rights of the author and illustrator have been asserted

ISBN: 9781843653721

A CIP catalogue record for this book is available from the British Library.

10 9 8 7 6 5 4 3 2 1

Reproduction by Mission, Hong Kong

Printed by 1010 Printing International Limited, China

This book can be ordered directly from the publisher online at www.pavilionbooks.com, or try your local bookshop.

Contents

About reptiles 4
Reptile timeline 6
Reptile life cycle 8
Lizards 10
Snakes 34
Turtles and tortoises 54
Crocodiles and alligators 68
Habitats and environments 82
Glossary 96

About reptiles

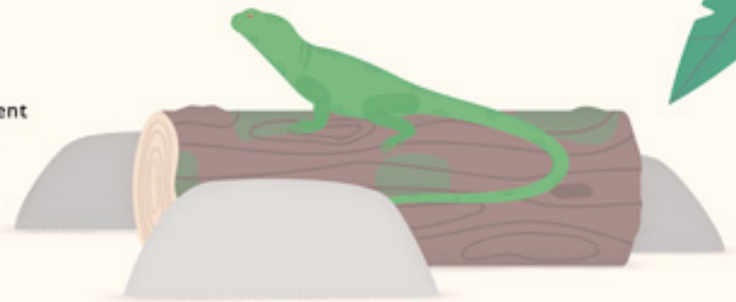
What are reptiles?

Reptiles are cold-blooded vertebrates that have scales or a shell. They are found on almost every continent on Earth; they thrive in all climates and all places except for inhospitable Antarctica.

Being cold-blooded means that reptiles cannot regulate their own body temperature, unlike humans. Instead they need to get light and heat from the sun. That's why you will often see reptiles basking in the sun.

Vertebrates are creatures that have a spinal column or back bone. As well as reptiles, these include humans, other mammals, birds, amphibians and fish.

Today, there are over 10,000 different species of reptiles known to us.



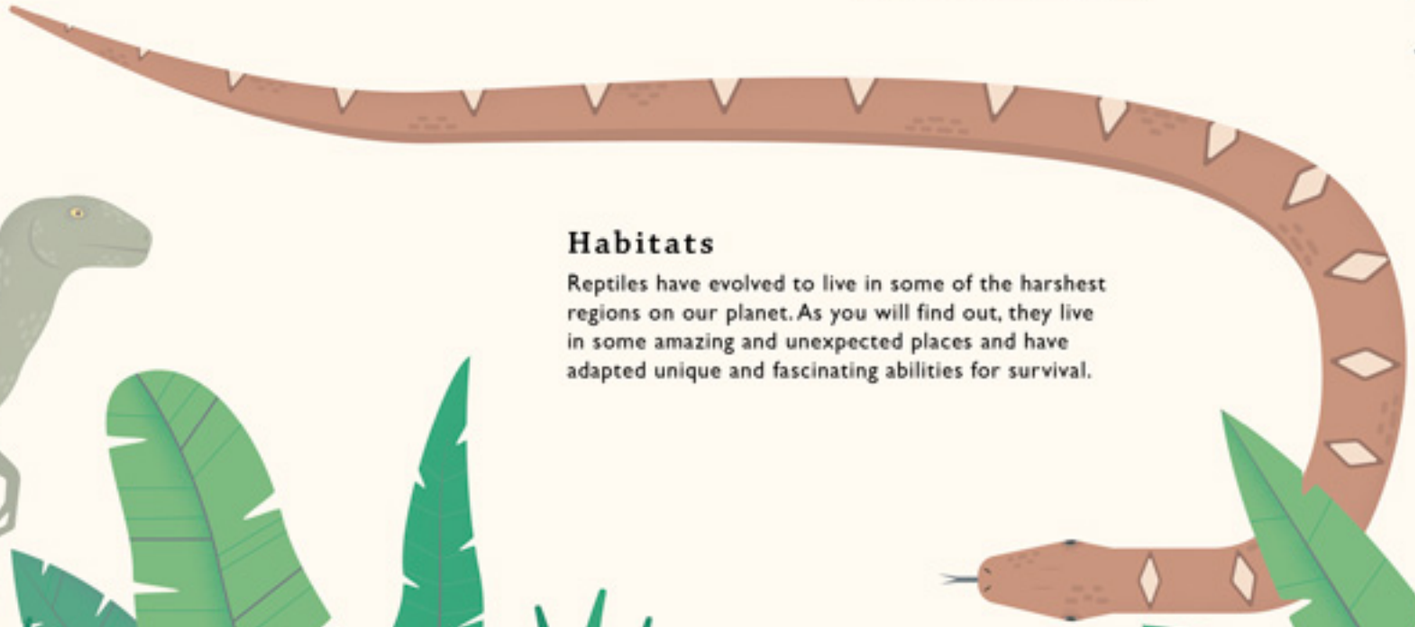
Hatchlings

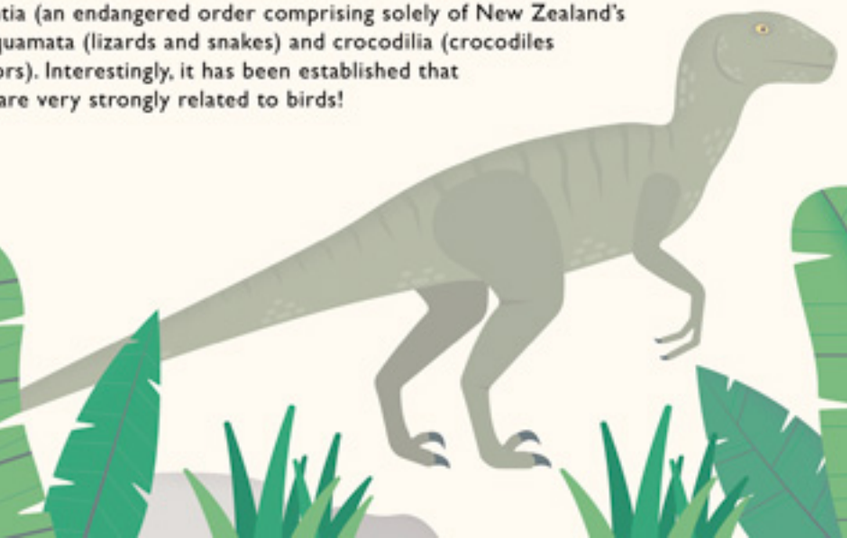
While mammals and some reptiles give birth to live young, many reptiles lay eggs (this is another similarity between birds and reptiles). Laying eggs keeps the mother and her babies safe, giving the mother the ability to hide her eggs, and making sure she is not weighed down by her young.

Evolution

The earliest known reptiles are dated to 312 million years ago. Over the next 80 million years, these early reptiles evolved into large vertebrates – the dinosaurs.

Modern reptiles have evolved into four orders – testudines (turtles), sphenodontia (an endangered order comprising solely of New Zealand's tuatara), squamata (lizards and snakes) and crocodilia (crocodiles and alligators). Interestingly, it has been established that crocodilia are very strongly related to birds!





Habitats

Reptiles have evolved to live in some of the harshest regions on our planet. As you will find out, they live in some amazing and unexpected places and have adapted unique and fascinating abilities for survival.

Geckos

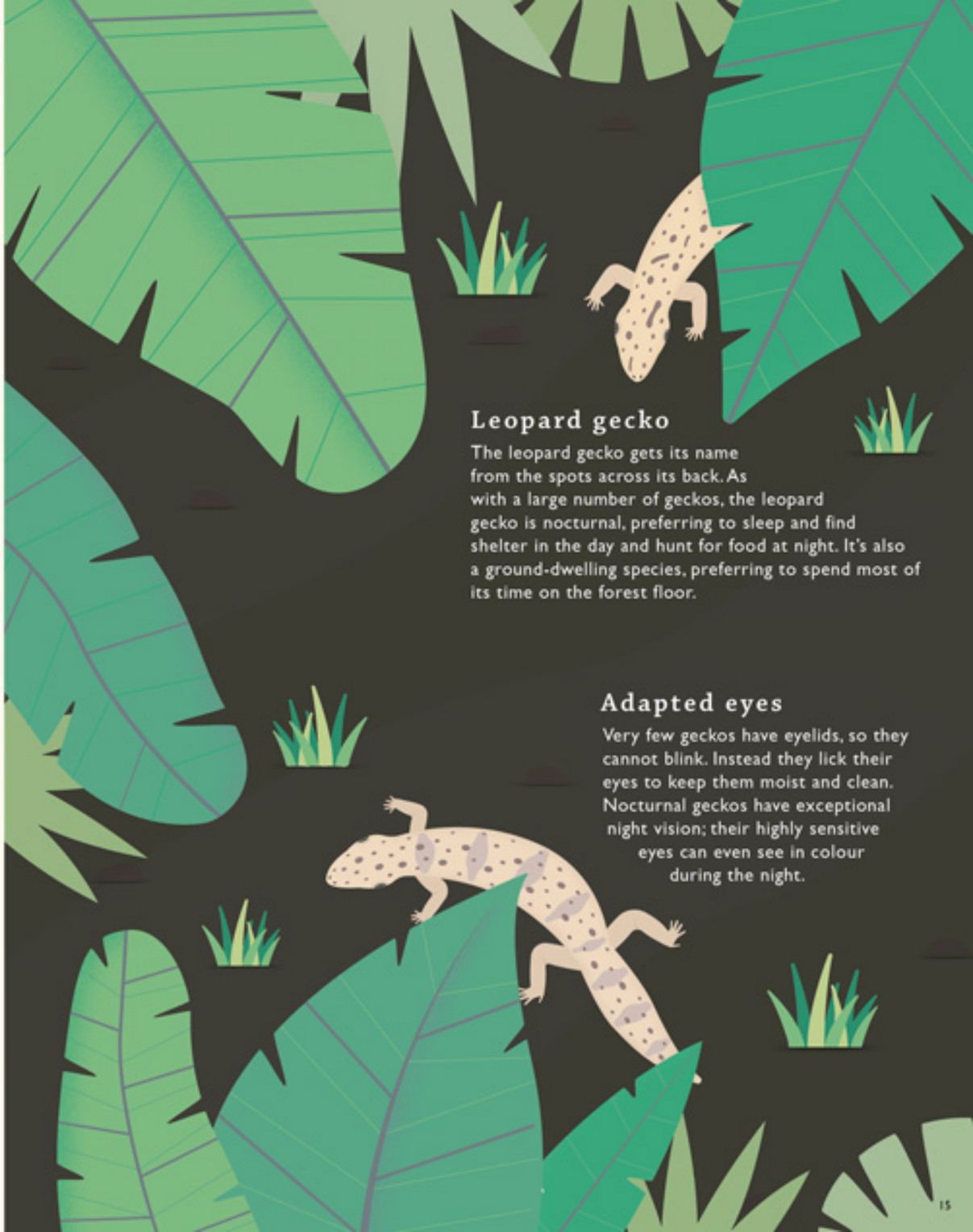
Geckos have the largest number of species of any lizard – over 1,500 different variations! Named after the 'gecko' chirping sound that they make, geckos have many unique and interesting characteristics. For example, most gecko species can shed their tails to escape from predators, and many have extremely sticky toepads that could adhere to glass. They also have exceptional colour vision that is over 350 times better than the human eye.

Madagascan day gecko

Although many geckos are nocturnal, the Madagascan day gecko is diurnal (it is active during the day and sleeps at night; the same as us). It is one of the largest daytime geckos, growing up to 22cm in length. It likes to spend most of its day climbing in trees, looking for insects and fruit to eat.

Pygmy gecko

Contrasting with the large Madagascan day gecko, the pygmy gecko is one of the smallest reptiles in the world. It only grows to a little over 2cm long. This is so small that it can easily drown in small pools of water in the rainforest in which it lives. However, the pygmy gecko has developed special skills that are handy for this environment. For example, its skin is water-repellent. This, combined with its miniature size, means that it doesn't break the surface of the water when it walks across it.



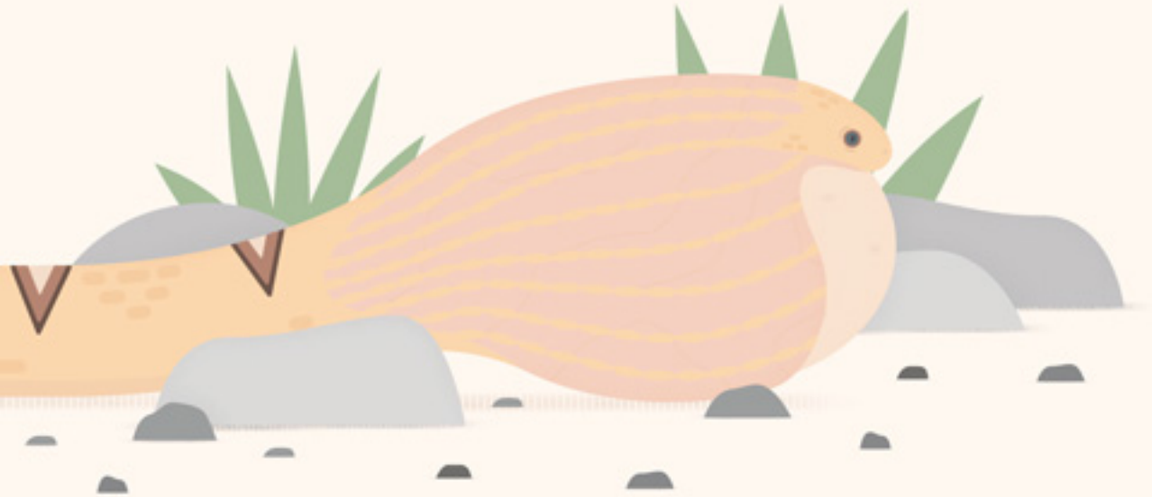
Leopard gecko

The leopard gecko gets its name from the spots across its back. As with a large number of geckos, the leopard gecko is nocturnal, preferring to sleep and find shelter in the day and hunt for food at night. It's also a ground-dwelling species, preferring to spend most of its time on the forest floor.

Adapted eyes

Very few geckos have eyelids, so they cannot blink. Instead they lick their eyes to keep them moist and clean. Nocturnal geckos have exceptional night vision; their highly sensitive eyes can even see in colour during the night.

Egg-eating snake

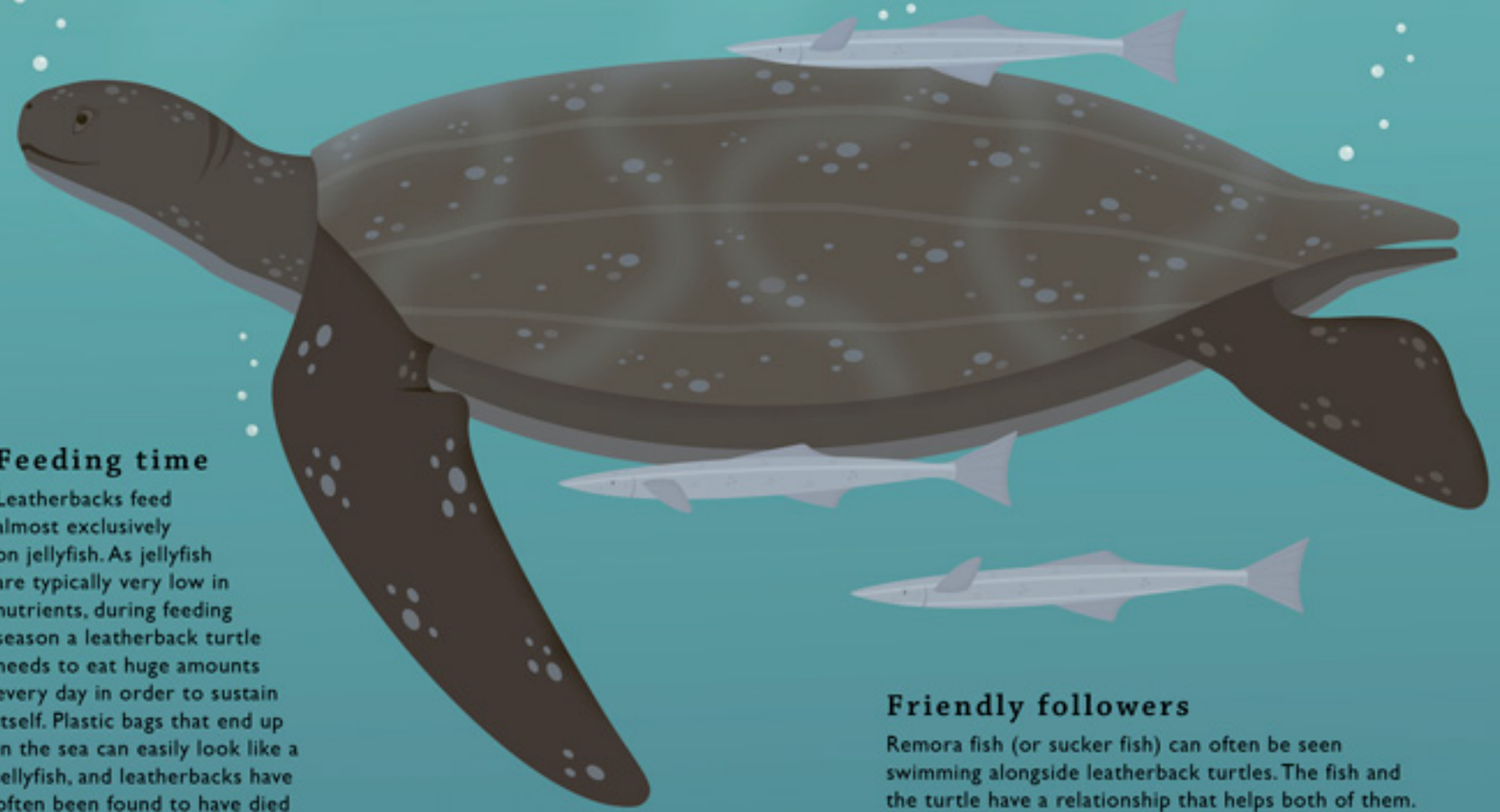


Although there are several species of snakes that eat bird eggs, the egg-eating snake is unique because it will eat nothing else. Egg-eating snakes will consume a range of birds' eggs, but their favourites are those of the weaverbirds. Weaverbirds make elaborate hanging nests for their eggs. These nests are left undefended when the weaverbird ventures off to find food or extra building materials. The egg-eating snake will take advantage of this, swooping in to swallow the eggs.

Every part of this snake's body has adapted to this hard-to-swallow diet. Like other snakes, the egg-eating snake has an incredibly flexible jaw that can stretch around an egg even larger than its own head. The egg is swallowed whole, cracking only when it reaches a series of ridges along the spine. Once the contents of the egg have been digested, the snake will then regurgitate the leftover broken shell.

Leatherback turtle

The leatherback turtle is the largest of all turtles. It gets its name from the soft rubbery shell that sweeps across its back. Most turtles have a stiff, bony shell, but the leatherback's shell is much more flexible.



Far and wide

Leatherback turtles have the ability to swim great distances. Ridges on its shell help the turtle to conserve energy on its huge migrations, which can sometimes be over 4000 miles.

Feeding time

Leatherbacks feed almost exclusively on jellyfish. As jellyfish are typically very low in nutrients, during feeding season a leatherback turtle needs to eat huge amounts every day in order to sustain itself. Plastic bags that end up in the sea can easily look like a jellyfish, and leatherbacks have often been found to have died due to plastic consumption. To avoid this, we should all ensure that we recycle plastic bags rather than throwing them away.

Friendly followers

Remora fish (or sucker fish) can often be seen swimming alongside leatherback turtles. The fish and the turtle have a relationship that helps both of them. The remora fish help the turtle by eating any dead skin, algae or parasites that have become attached to the turtle, and in exchange they get a free meal!