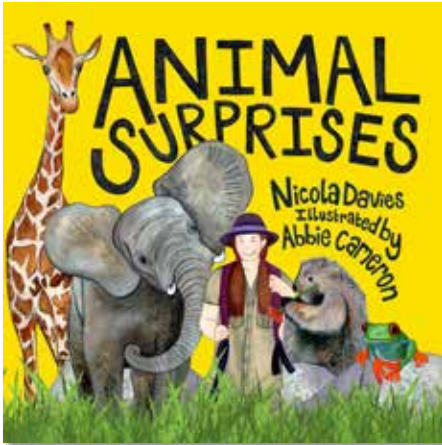


# Animal Surprises by Nicola Davies Resource Notes



## Animal Surprises

- Author Nicola Davies
- Illustrator Abbie Cameron
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## Extra Information about the birds in this book

### Giraffe, elephant beaver and red eyed tree frog



**Giraffes'** long necks allow them to eat leaves at the very tops of trees, that other animals can't reach. A real advantage on the dry African grasslands, where green leaves at ground level can be in short supply. Their necks have just the same number of bones in them as your do 7, but each one can be 25 cm tall! And a neck that length creates problems... blood needs to get up it to the brain, and so giraffes have incredibly high blood pressure, and skin like an astronaut's pressure suit to keep it under control.



The big ears of the **elephant** on the cover (which is a baby probably about 5 years old) show that it's an African elephant. Indian elephants are a quite different species with smaller ears and different shaped head, trunk and different behaviour. African elephants are plains animals like giraffes and those big ears help them to lose heat on hot days. Tusks that help elephants defend themselves, break open tough tree trunks to find plant food, and dig for water are also their downfall. People kill elephants for the ivory that their tusks are made of. It is made into all sorts of ornaments and is very popular in China.



**Beavers** are rodents, relatives of rats and mice! There are two species, one in North America and one in Europe but they both live in rivers and build dams from trees which they fell using their sharp front teeth. Dams create deep ponds that help the beavers in two ways. First, they allow the beavers to have an underwater front door to their homes – or lodges, chambers built within the dam – and they give the beavers a nice cool, but not frozen place to store yummy green twigs and branches that they can eat over the winter when everything is frozen and covered in snow.



**Red eyed tree frogs** live in the treetops of hot, humid forests of Central America. Those big red eyes may help to startle predators when the frog can't jump out of danger. The big orange toes have sticky pads to help the frog keep its grip on big wet slippery leaves. Red eyed tree frogs are not endangered but many other species of frogs are disappearing across the world. It seems that frogs are badly affected when a habitat is disturbed and can be the first clue that a habitat needs better care and protection.

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## Tapirs, armadillos and lions



**Tapirs** are pig-sized forest animals with long, moveable noses that help them to root out food and grab leaves from above their heads. There are four different specials from south and central America which have dark coats, and one from Asia which is half black and half white. All their babies have coats spotted with white, like the patches of sunlight on the forest floor, to help keep these little ones camouflaged and safe from predators.



**Armadillos** are South American mammals with bony plates in their skin and can roll up into a ball so their soft tummies are tucked away and protected by the tough armour of their backs. There are around 20 species of armadillo, the largest is the size of a large domestic cat and the smallest the size of a hamster – all of them are eaten by many different kinds of predator so they need their armour. They have strong front limbs and claws that

help them to break through hard dry ground to reach juicy ants and other insects which are their food.



**Lions** are known as the king of the jungle but lions don't live in jungles, but on hot dry savannah. They are the only big cat that doesn't live a solitary life, but live together in family groups called prides. Only the males have manes as it's their job to look as big and scary as possible and defend the pride's territory from invaders. A good territory is the secret to any lion pride's success – the best territories have water, to draw prey animals to drink, and plenty of cover such as trees, rocks and hillocks so lions can creep up on their prey.

## Tigers and rhinos



**Tigers** hunt in amongst trees and tall grass where their stripy coats keeps them hidden amongst the striped pattern of the shadows. They live alone and only keep company when they have cubs.

Tigers were once found across a much wider area, all the way from Iran to China. Thanks to human hunting and destruction of their habitat they are now found in small patches of India, south-east Asia, China and south-east Russia.



### Rhinos

Although they look big and fierce, rhinos are plant eaters. They have very poor eyesight but good hearing and a fantastic sense of smell. When they want to they can move fast and will charge anything they see as a threat; a rhino weighing almost a ton and travelling at 30 mph can do a lot of damage, so it's best to get out of the way. Sadly all five species of rhino are in trouble and have been hunted to brink of extinction for their horn, which is thought to have all sorts of magical properties.



**Aye ayes** are one of the world's strangest animals. They are a type of lemur, a group of animals found only on the island of Madagascar,

off the coast of Africa. Aye ayes come out at night and clamber about the forest tapping branches with their very long middle finger, and listening carefully with their big ears. They are listening for the hollow sound of wood, bored into by insects, and for the tiny munching sounds these insects make. When they detect one, they winkle it out using that long finger.

## Sperm whales, clown fish and microbes

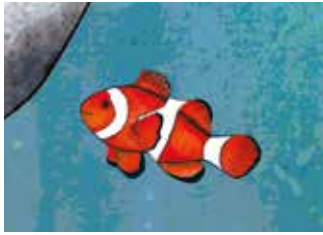


**Sperm whales** with their big square heads are almost as weird as aye ayes! They are the deepest diving of all whales and regularly go down to depths of 1000m and more to hunt for squid. Down there, there is no light so sperm whales use echolocation to find their prey. That's what their big head is all about...it's filled with their echolocation system, including a huge acoustic lens made of oil. This oil is the so-called spermaceti for which sperm whales were once hunted and killed and which was used to light lamps across Europe and America before electricity. Unlike baleen whales, which have no teeth, sperm whales have big peg teeth in their lower jaws, which shows they are more



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closely related to dolphins than to other big whales like blues, fins and humpbacks.



**Clown fish** were made famous in the film *Finding Nemo*. Nemo is a clown fish and his home is in an anemone. Real clown fish really do live in anemones. But sea anemones are not plants! Their tentacles are covered with stinging cells for killing prey, but they don't sting the clown fish, and clown fish live safely in the ring of stinging fingers.



## Microbes

There is an invisible world of life all around us, living things too small for us to see. They are of many kinds, as many different kinds as the larger life forms, and in spite of their tiny size they have a huge effect on the world we live in. Some, of course, can make us sick, but others keep us well by living in our tummies and helping to digest our food. Microbes in the soil break down dead plants and keep the soil fertile; microbes in the sea are minute plants that do more to give us the oxygen we breathe than all the world's great forests.

## Vine snake, hippos, pika, porcupine and pangolin.



### Vine snakes

It's amazing what snakes manage to do with bodies that are just elongated sausages! Vine snakes are treetop predators in tropical forests. Their strong slender bodies allow them to twist round twigs and slither along branches at speed. Like all snakes their sharpest sense is their combined sense of smell and taste – that flicking tongue takes small samples of the world around them into their mouths where there is a very sensitive smelling-tasting skin; this is mostly how they track their prey, although vine snakes have eyes that are good at detecting movement. Snakes kill prey by using their bodies to strangle it or by a venomous bite. Then, as they have no chewing teeth they have to swallow it whole. Vine snake bite is venomous but its venom works well on small mammals and birds and has little effect on humans.



**Hippos** spend their days lolling about in big African rivers, keeping safe and cool in the hot African days. Although they are plant eaters they can be very dangerous to humans, as their big mouths and strong teeth can crunch a small boat to matchsticks. At night they come out of the river and come onto the river bank to graze, leaving piles of smelly dung as a marker to help them find their way in the dark.



**Pikas** are one of the world's most endearing creatures. They live high in mountains in western America and north-east Asia, upon where snow covers the ground all winter. In summer they collect grass and flowers and store them in amongst rocks, creating big stores of hay to keep them going through the cold winter months. Climate change isn't good for pikas as they can't survive without their cold mountaintop home and as the climate warms they are driven further and further up mountains, but a pika can only go just so high.



**Pangolins** are also known as scaly anteaters. They look like elongated living pinecones. The largest is from Africa and lives on the ground, breaking open termite mounds and anthills with strong front claws and licking out the small insects with its sticky tongue. The smaller species live in treetops. Pangolins are killed for their scales which are believed to have power to cure illnesses, and they are now threatened with extinction.



**Porcupines** are relatives of the rats and mice and use strong front teeth to gnaw through tough plant food. There are 20 species found in Africa, Asia and America. They vary in spininess and size. The one in the picture is a crested porcupine from Africa, which is about the size of a large terrier dog and has very long spines. When threatened, a crested porcupine will rattle its spines in warning, and if the foolish predator keeps up the attack the porcupine will shake its tail; the loosely rooted spines will work their way into the predators face like barbs and can cause enough damage and infection to kill.

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**Sea lions** are different from seals. They have longer front flippers and back flippers which they can use for walking. Seals can only really dollop like slugs on land, whilst sea lions can move quite well. But both seals and sea lions are most at home in the water, where they are fast and graceful swimmers, and can chase after fish. Sea lions were once hunted for their dense furry coats.



## Lion fish

One of the first tropical reef fish I ever saw was a lion fish, which was a bit scary as the long spiny fins of these fish are poisonous. The lion fish's bold colours are a warning to anything that might want to eat it – or touch it (like a rookie snorkeler) – that it is a dangerous fish to get close to.



The **maned wolf** looks rather like a fox on stilts but it is more closely related to wolves. Its legs help it to hunt in the long grass of south American savannahs where it stalks pacas (rodent like animals about the size of a fat domestic cat), rabbits, armadillos and birds. Maned wolves are threatened by hunting (even their poo is thought to be able to cure diseases) and habitat destruction and breeding them in zoos is tricky as they are shy and need very big enclosures.



**Blue Cranes** must be one of the most beautiful birds in the world. It is the National Bird of South Africa. Unlike other cranes, blue cranes don't need wetland areas all year round and spend most of their year in dry grassland where they pick insects, small reptiles, frogs and snails. When it comes to nesting season they move closer to marshes, lakes and river edges, and males and females dance as part of their courtship. Once common across South Africa

their numbers have dropped in the last thirty years.

## Numbers of legs

If it has six legs it's an insect – insects often have wings too...two pairs or just one pair.



Eight legs means it's a **spider** and more than ten usually means a **centipede** or **millipede**, although most centipedes don't have a hundred legs and millipedes certainly don't have a thousand! Centipedes are predators whilst millipedes are plant eaters.



## Commerson's dolphin

There are 36 species or more of dolphins – from killer whales (yes, they are just a big kind of dolphin) to the lovely Commerson's, which is the smallest kind, at 1.2m long. They live only off the coast of South America in the Strait of Magellan and, like many species of dolphin, we know very little about their lives in the wild. So become a marine biologist and find out what Commerson's dolphins get up to on a Tuesday afternoon!



## Bats

There are more than a thousand different kind of bats, from the flying foxes with wingspans of nearly two meters, to the tiny bumblebee bat which is the smallest mammal on earth. They can fly around at night because the other secret to bats' success along with flight is echolocation...they shout, listen to the echoes of their voices and get a picture in sound of all their voice has touched. Some, like the flying foxes, eat fruit, some are pollen feeders, some, like the three species of vampires, eat blood; a couple of kinds eat fish and one eats other bats. But most eat insects; all the bats you see in Europe – and there are more than 15 species here – eat insects and they have a huge effect on the numbers of insects that might eat our crops or bite us in our sleep. The ones in this picture are mouse eared bats – once found in the UK but now only found in mainland Europe



## Peacock spider

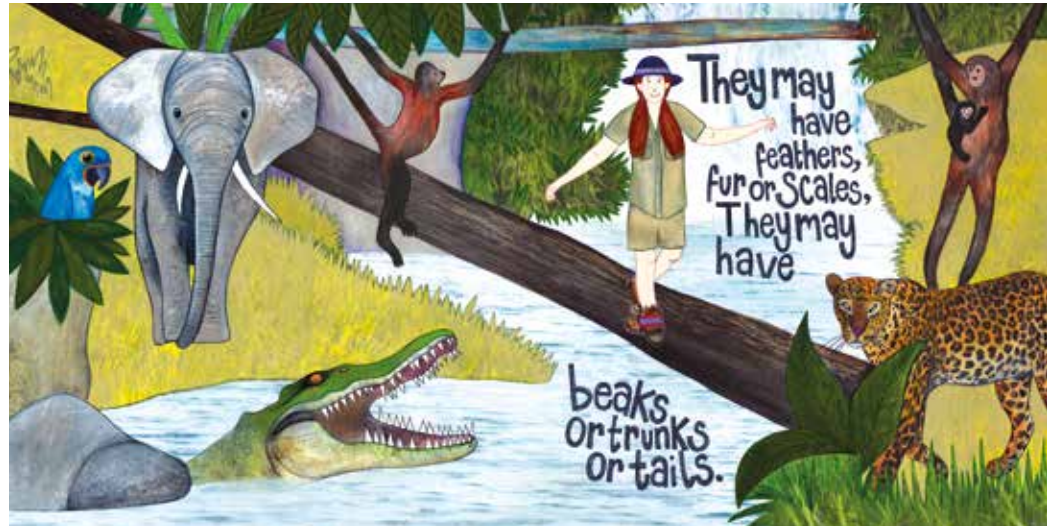
One of my all time favourites the peacock spider. You are not going to believe how wonderful THEY are!



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## Match the names to the birds

And now for the last few pages it's your turn...here are the animals featured but you have to match the name to the picture and find out something about them...



Sea anemone

Ladybird

Hyacinth macaw

Spider monkey

Red eyed tree frog

Jaguar

Crocodile

Yemen chameleon

Hedgehog

Sengi (elephant shrew)

Dung beetle

Giraffe

Elephant

Starfish

