



WHAT SNAKE AM I?

A CLUE BOOK OF SNAKES FROM AROUND THE WORLD

BY THE CONSERVATORY LAB
CHARTER SCHOOL
2010-2011 2ND GRADE CLASS

ABOUT CONSERVATORY LAB

Conservatory Lab is a K1 – 8 music-infused charter school in Boston. We believe in the power of music to transform the lives of children and adolescents.

We use **Expeditionary Learning** as a framework for our unique, interdisciplinary curriculum. Our learning expeditions are discovery operations. They start from scratch and travel light, relying on courage, compassion, and creativity as much as on intellectual acumen. We cherish active, hands-on situations where what we are doing matters to us and has consequences.

To encourage deeper learning, our expeditions demand fieldwork and assistance from experts. The photographs at the end of this book feature fieldwork experiences at the Broadmoor Wildlife Sanctuary and at the Harvard Museum of Natural History, as well as experts who guided students during their six-month learning expedition on snakes. As you can see from the children’s faces, when you have a need to know, when you have to do something, a different level of energy kicks in.

Conservatory Lab is also the only school in the country to incorporate **El Sistema** Program and Methods into its core school day. **El Sistema** is a unique program designed to effect social change and nurture promising futures for underserved communities through intensive, ensemble-focused music education. During the snake expedition, our El Sistema resident artists worked with second graders to create an original song with an infectious tune about their beloved pet snake Lily.

Since the original snake expedition (2010 – 2011) that culminated in this engaging clue book, our second graders have continued to dazzle us with their expert knowledge and high-quality snake products. Please look for these inspiring products on our website. They include a stunning poster of scientifically accurate snake drawings, a rousing music video entitled “Snakes Are Born This Way” that rapidly became both a YouTube sensation and a hallmark for how Common Core standards can be taught in a way that deeply engages students in meaningful work and joyful learning, and a groundbreaking audio eBook of nonfiction snake narratives, accompanied by detailed drawings and orchestral music.

Our students will remember their experience at **Conservatory Lab** with stories about problems they solved, ways they helped the community, performances they participated in, and exciting projects they worked so hard on. They will remember being challenged to push themselves to accomplish things they did not think they were capable of accomplishing. I am deeply proud of all of our second graders for their incredible perseverance and for giving us a powerful message about how knowledge can help conquer fear. I am profoundly grateful to them and to their teacher for inspiring us with such extraordinary examples of scholarship and artistry.

Diana Lam, *Head of School*



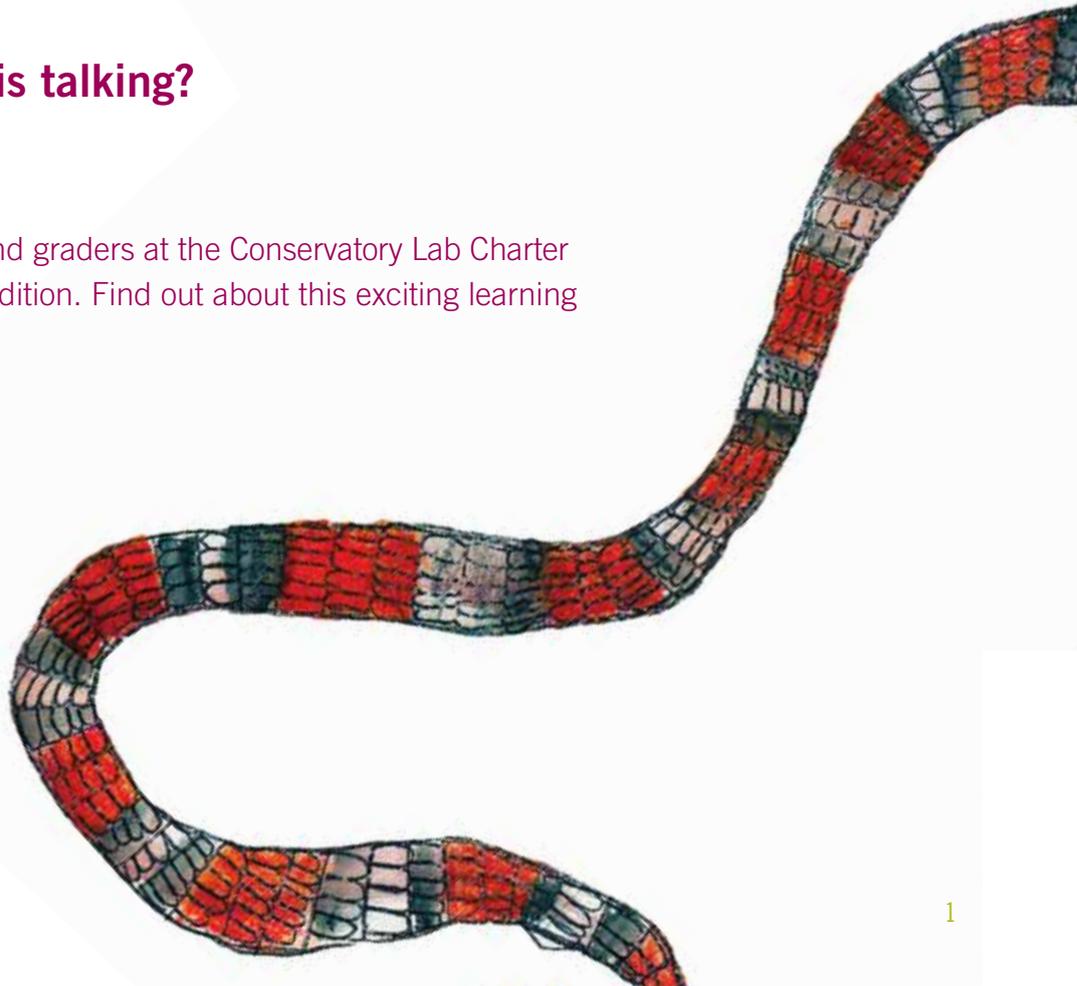
WHAT SNAKE AM I?

A CLUE BOOK OF SNAKES FROM AROUND THE WORLD

In this book, you will meet eleven of your favorite snakes from around the world. Read the clues about each snake's physical features, habitat, prey, predators, and life cycle.

**Can you guess what snake is talking?
Turn the page and find out.**

This snake clue book was created by 2nd graders at the Conservatory Lab Charter School during an in-depth science expedition. Find out about this exciting learning experience at the end of this book.



I have eyes on top of my head. Can you guess why? I like to camouflage. That's why I am dark green and black. I can be very scary sometimes.

I'm one of the world's biggest snakes. I have a long body and I'm very fat. My head is very big. I have big scales. They are dark and shiny and shaped like a big diamond. Can you see my thick tracks? I don't have scutes, but I have scales on my underside.

If you can't find me in swamps and streams, try looking for me in tropical rainforests. I'm bound to be there because I LOVE water. I love the PERFECT water of the Amazon River in Brazil. I also can be found in Trinidad, Colombia, and Venezuela. The reason I love water is because I can find yummy capybaras. It also moisturizes my skin so it doesn't get dry.

Did that ground just move? Looks like I'm hunting again! I eat wild pigs, deer, iguanas, capybaras, reptiles, birds, fish, and large rodents. I usually constrict an animal and then eat it head first.

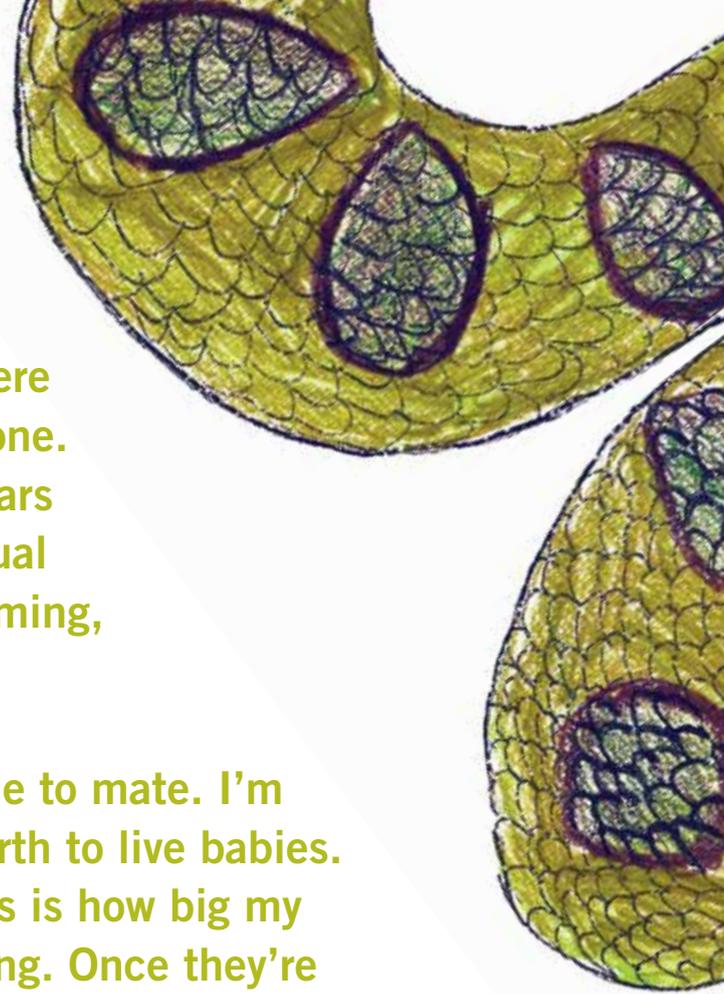
I don't have a lot of predators—only jaguars and some people, and those people are mean. They kill my kind!

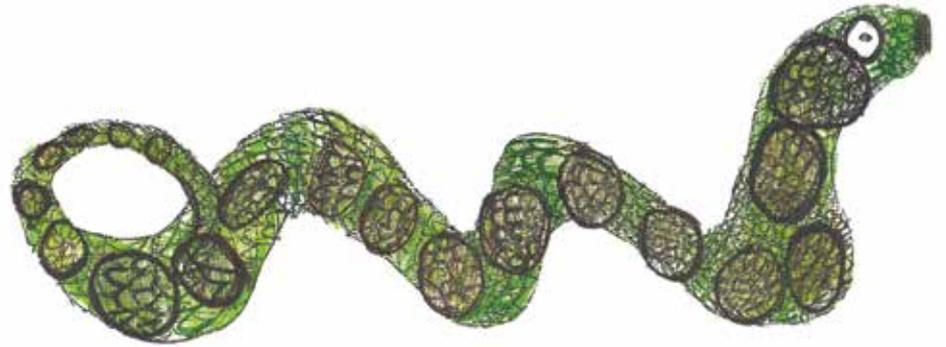
When I'm swimming I have to be careful. There are jaguars on the prowl! Shh!! Here comes one. I go back into the water because I know jaguars can't swim. It went away. I go back to my usual schedule of eating, swimming, resting, swimming, and resting.

Once each year, male snakes of my kind come to mate. I'm about 100 times bigger than males! I give birth to live babies. I can give birth to 20 or 40 or even 100. This is how big my babies are when they are born: 1 to 3 feet long. Once they're out they crawl right away with no help from me. They take care of themselves.

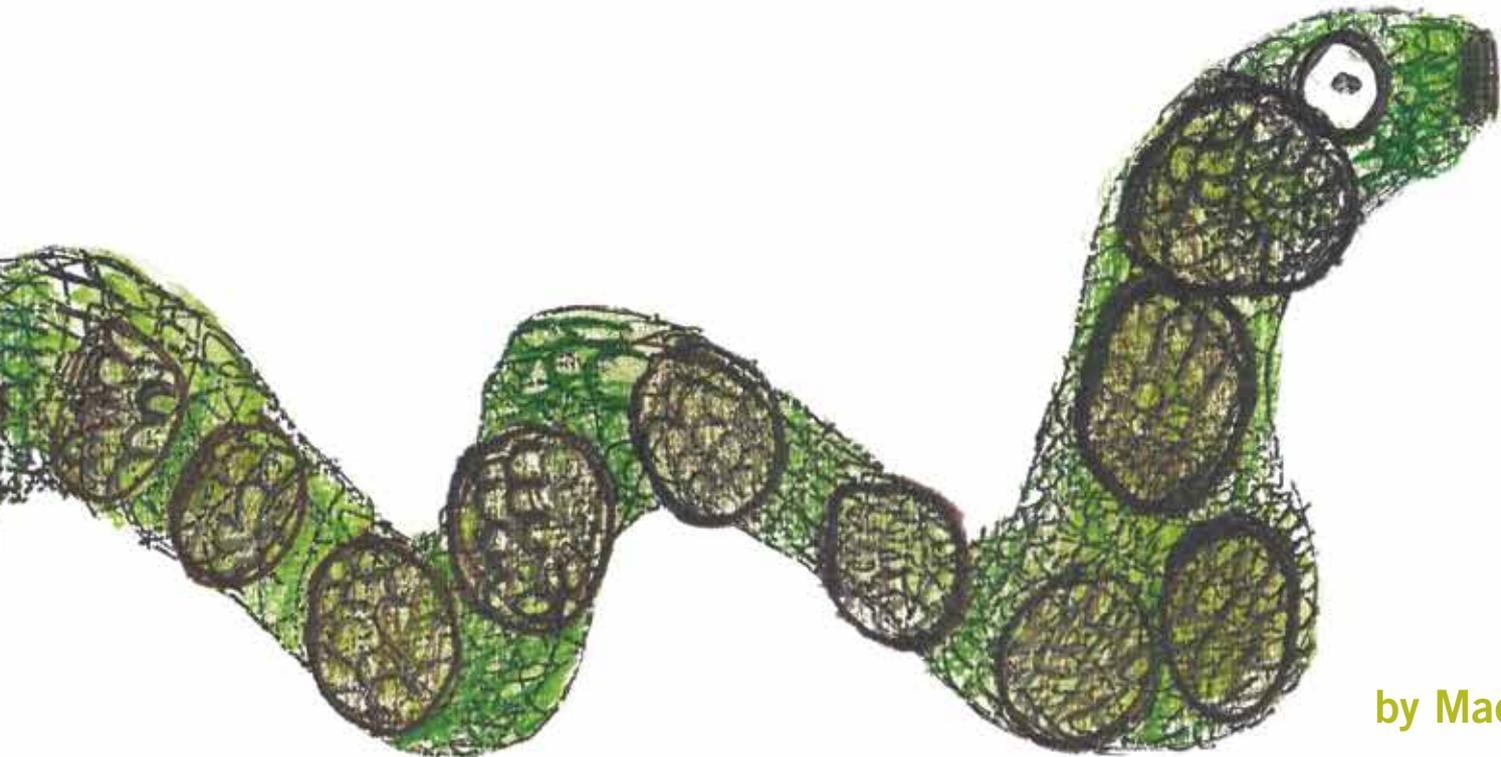
by Madison and Olivia

What snake am I? Turn the page and find out.



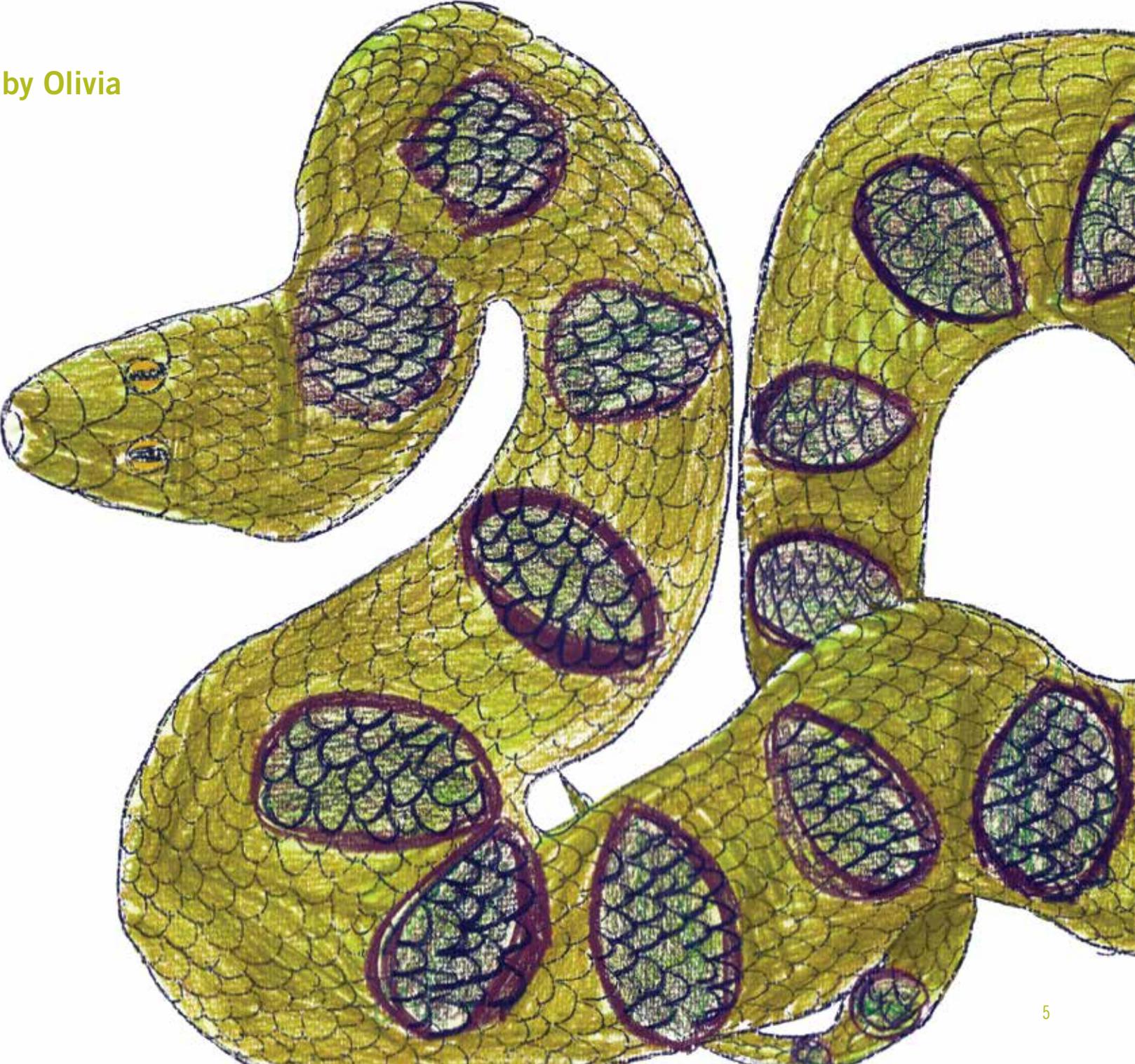


I am the Anaconda.



by Madison

by Olivia



I am long and very heavy. I can be as long as 6½ to 10 feet and I can be 300 to 550 pounds. Did you notice my large, triangle-shaped head? I have very dark, smooth skin. I also have diamond scales and brownish, blackish eyes.

Did you know I live in the forests where rain falls on me and in the desert? I live in Mexico or Argentina. I will shade myself under the tree in the desert. In the rainy forest, I love to drink the water so I won't get thirsty. I sneak in the leaves to catch my prey.

I eat monkeys, lizards, birds, frogs, rats, and bats! I bite my prey quickly with sharp teeth. My teeth point backward so the animals cannot get loose. I have heat sensors to catch my prey. I eat every two weeks and it takes some days to digest.

I give birth to live babies. I can give birth to up to 20 to 60 babies that are 18 inches (146 cm) long. I mate once a year and shed in the summer. I can live up to 40 years old.

Guess what? I am a predator, but my babies have some predators like lizards, birds, and sometimes humans. My heat sensors let me know if birds try to take my babies.

by Elijah A. and Nehemiah

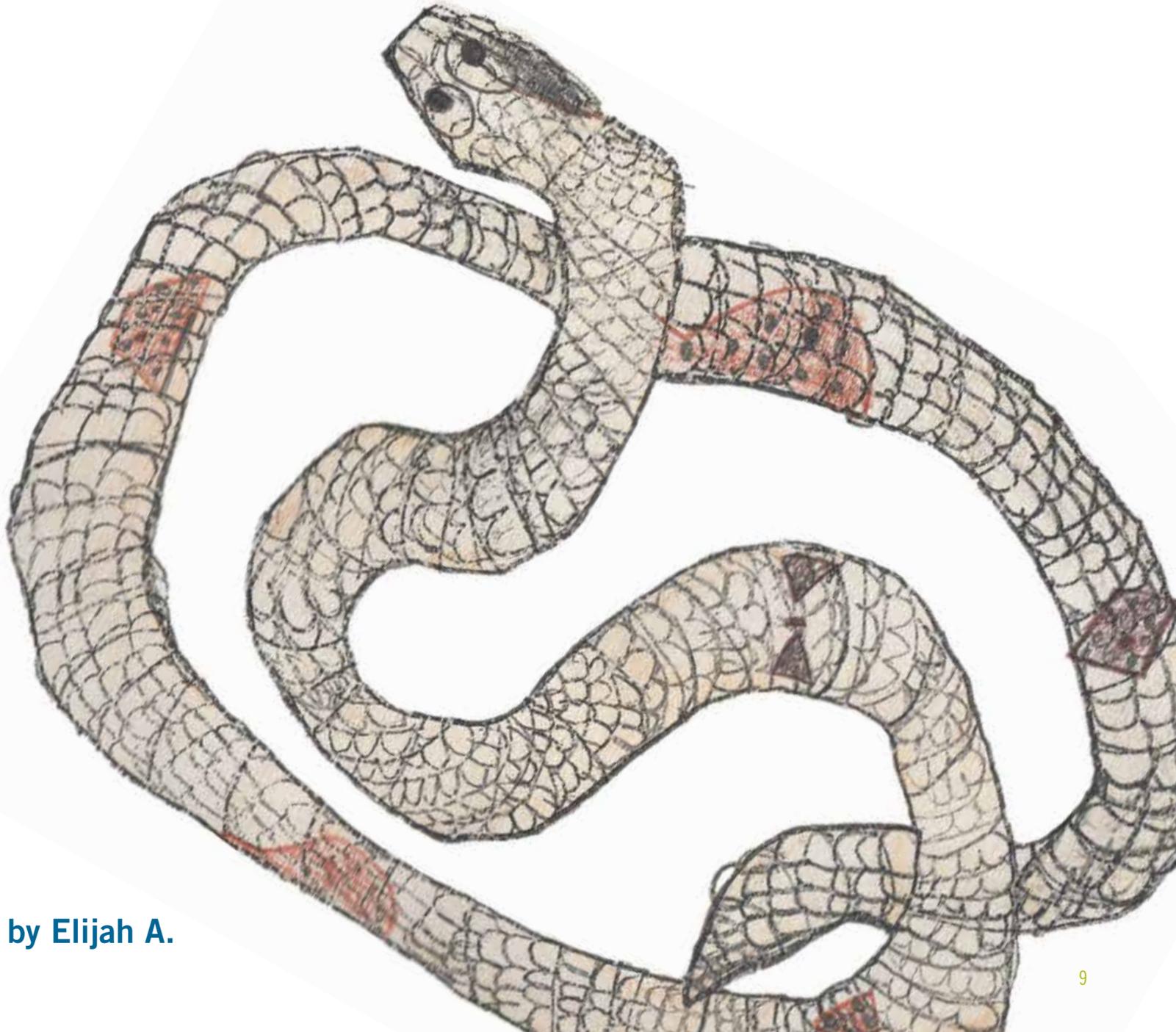


What snake am I? Turn the page and find out.

by Nehemiah



***I am the
Boa Constrictor.***



by Elijah A.

I have a long, slender body. Did you know I have three layers of shiny skin and my scales are my middle layer? My thin body can be black, brown, or even yellow, orange, or red. I have a hood that has a colorful pattern.

The maximum I can grow is 18 feet and the minimum is 3 feet. I can weigh 5 to 45 pounds. I have half circled scales.

Look at my black tongue. Why do I have a black tongue? If you said that it shows that I am poisonous, you are right.

When I'm born I am 8 to 16 inches. I double my length once a year. When it's mating time in the spring I can lay up to 10 to 40 eggs. For my newborn babies, I make a nest out of dead leaves. The heat of the leaves keeps my babies warm.

I live in Asia, Africa, India, and the Middle East. I love wet rain forests and hot, dry deserts the most but I really do like

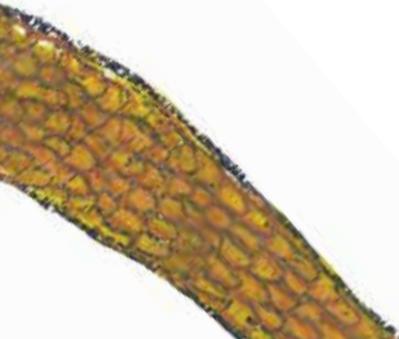
grasslands, mountains, and water too. Water is mostly where I catch my scrumptious food. I live in deserts because I can't control my temperature.

My predators are secretary birds, eagles, lizards, and most of all I am scared of mongooses. When I am angry or scared I raise my head and lift the upper half of my body off the ground. My neck skin gets bigger. That is what I call hooding. If my predators don't go away, I'll strike.

I'm hungry! I devour a lot of different kinds of food—juicy fish, birds, mice, frogs, other reptiles, and eggs. Yum yum! I chase my prey rather than ambush it. An ambush—so unoriginal. I kill my prey by biting it with my two hollow fangs. The venom paralyzes the prey, then I eat the prey whole.

by Douglas, MarkAnthony, and Scott

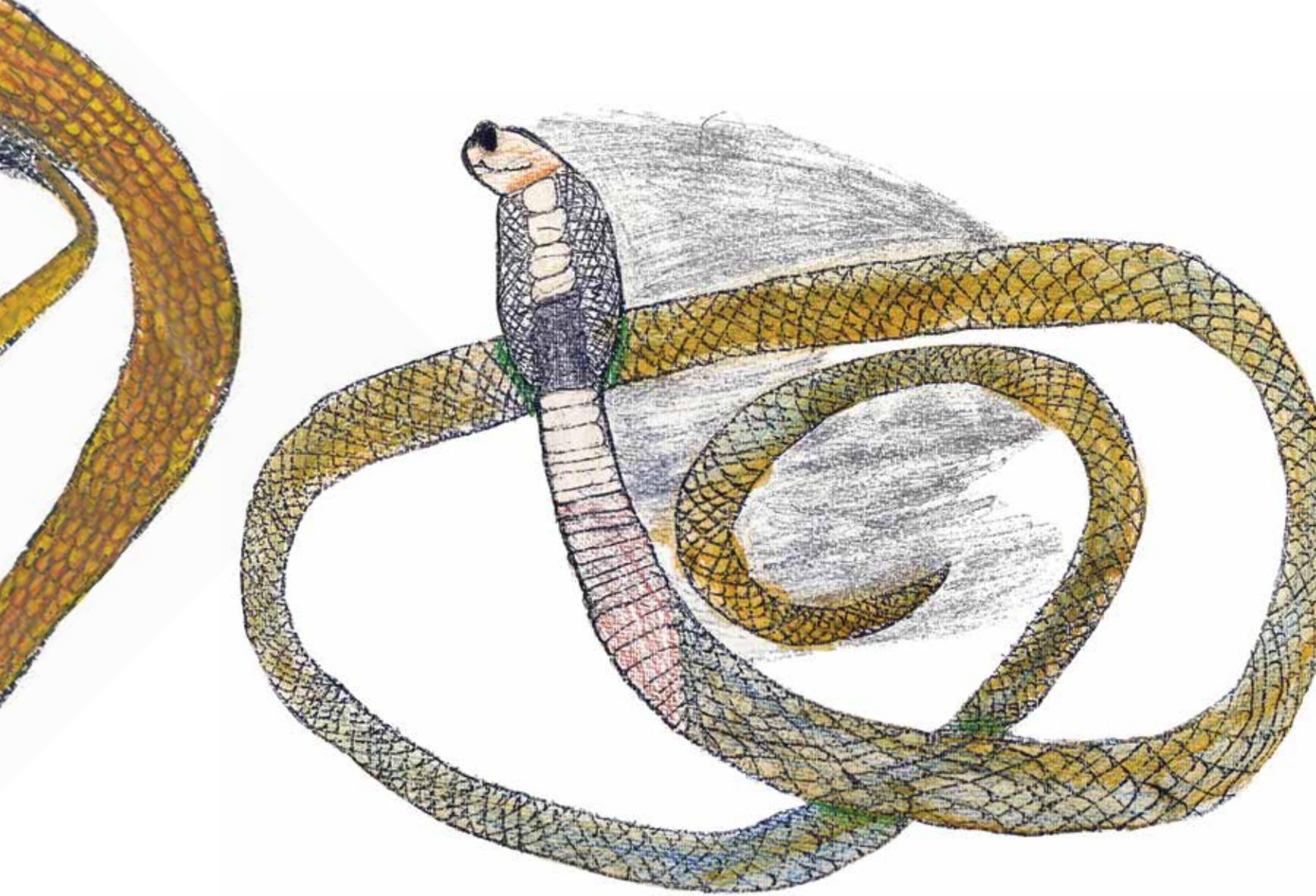
What snake am I? Turn the page and find out.



by Douglas



by Scott



by MarkAnthony

***I am the
Spitting Cobra.***



I am the color of a penny. See the brown spots and bands on my body. The colors provide great camouflage.

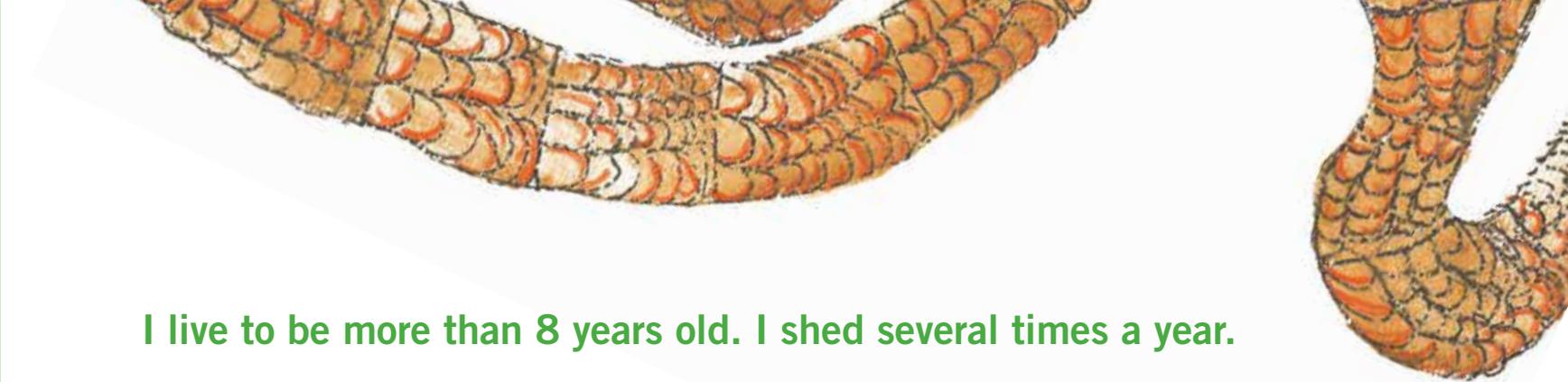
I am 3 feet long! My scales are really dry. I have pits.

Guess where I live? In Texas! I live in hot places and dry places. My habitats are rivers, ponds, rocky hillsides, and tree logs.

I eat rats, mice, frogs, small snakes, pigs, and birds. I am not a vegetarian and I love meat. I swallow my prey whole. I catch my prey with my fangs. The venom kills it.

My babies grow in eggs inside my body. Did you know that I lay between 7 and 14 babies? My young, growing babies like to eat when they are born. The babies are about 8 inches.

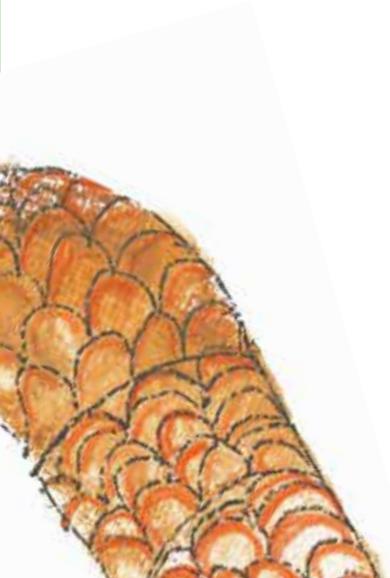




I live to be more than 8 years old. I shed several times a year.

I love the dry leaves but I can't go to sleep or the birds will catch me and bring me home and eat me. I do not like that. I camouflage in the dry leaves and rocks. My predators are roadrunners, hawks, eagles, and other birds. I see one now. I lie very still.

by Victoria and Zahndreya



What snake am I? Turn the page and find out.



by Victoria

***I am the
Copperhead.***



by Zahndreya

I am black and red with yellow or white bands in between. I have a narrow body and oval shaped head. Also, I have a stout nose.

Did you know I have very smooth, glassy scales? Like all snakes, I have something that moves in and out—a forked-shaped tongue!

I live somewhere very hot, dry, and sandy. If you guessed dry, sandy deserts, you are definitely right! I live in Asia and South Africa. I can live in other places too. You can find me in grasslands. I have food and water in my various habitats. Did you know that?

Guess what? I eat lizard and fish and other snakes and frogs too. How does this snake kill its prey, you may ask. Well, I'm very poisonous, so I can kill my prey easily. I must hold my victim and chew in order to penetrate its skin.

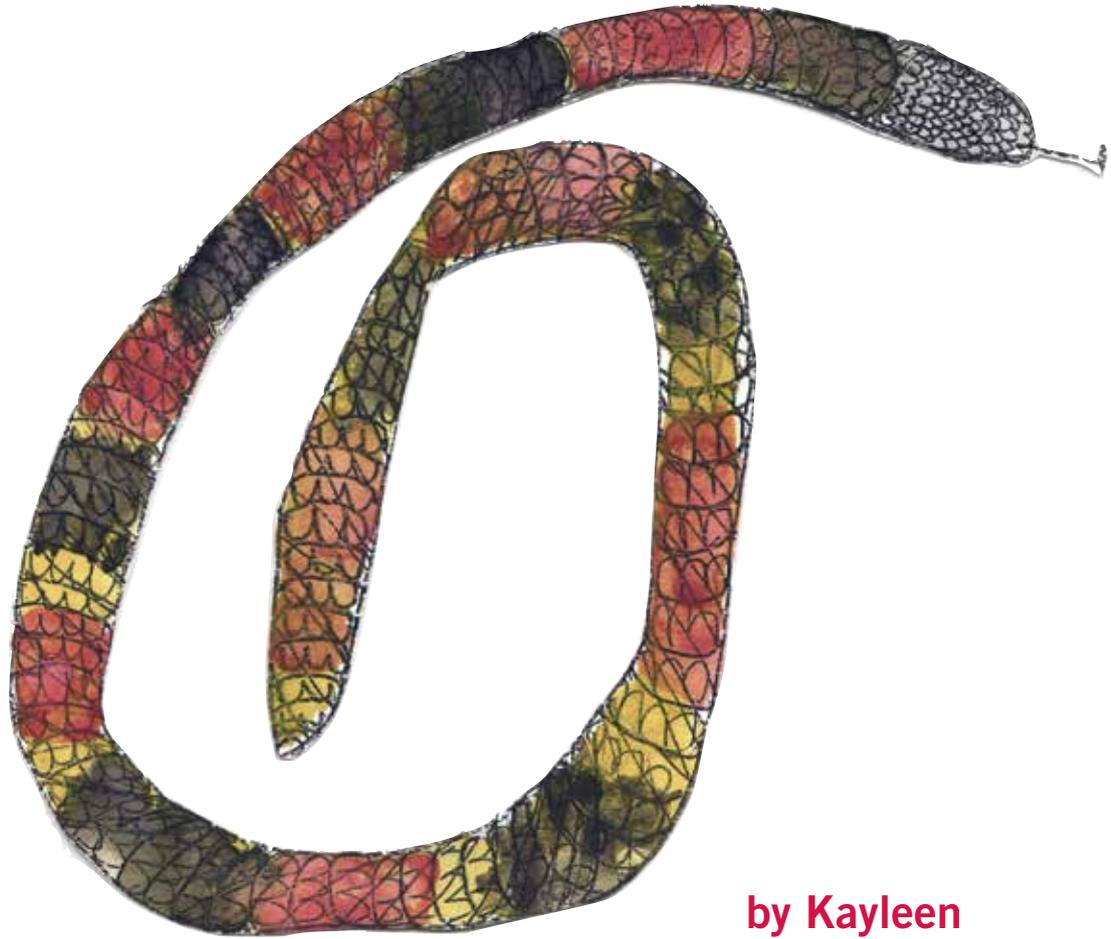


You might think I'm small, but if you mess with me, you'll be dead in about 5 minutes. If that's not true, you must be a coyote, fox, or a bird. Those are my predators. I can be a tasty snack to any of my predators. That is, if they survive.

Guess my life cycle! Usually, I shed once every 2 years. I mate in the spring. I lay eggs—soft yet firm to protect the growing babies. No, I do not stay with my babies when they hatch. Let's just say they're gonna have to fend for themselves. If they survive, they can live up to 30 years.

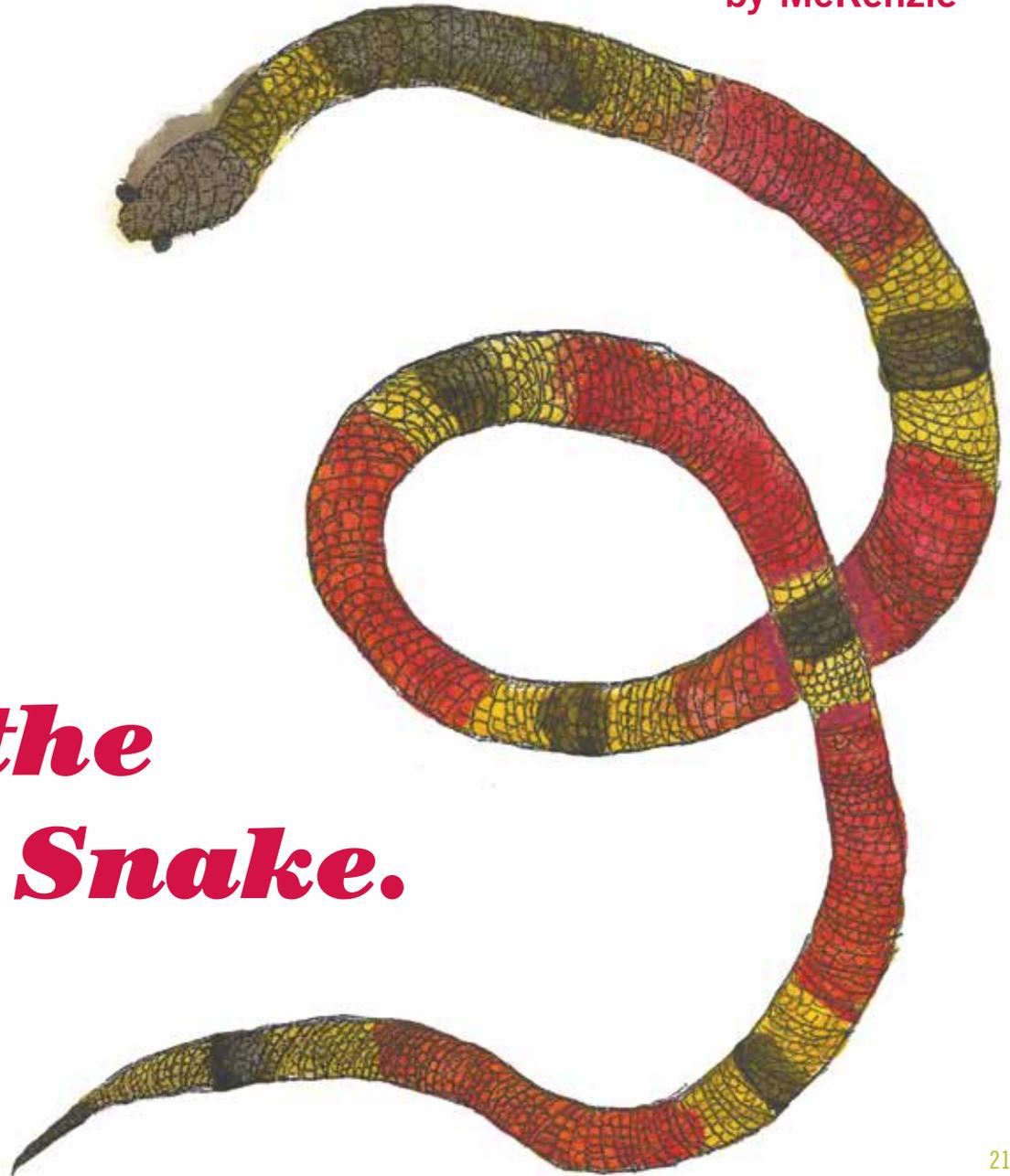
by Kayleen and McKenzie

What snake am I? Turn the page and find out.



by Kayleen

by McKenzie



***I am the
Coral Snake.***

I have long stripes and I have yellow stripes and sometimes I even have green and orange stripes. Did you notice that I'm skinny?

Did you know that I mate in the spring, fall, and summer?
Some of my friends mate with different females.

I live in mountains. If you come too close and if you see a long black thing sliding so fast away from you, I am going home. I like my home under a rock on the mountains. I had an adventure so I'm sleeping until tomorrow.

When I sense my prey I climb a tree and when I see it lying down I strike my prey and then I go home. I eat crickets, bullfrogs, other snakes, grasshoppers, earthworms, mice, and rats. I catch my prey and eat it head first. It is the best food ever!

Boas, owls, hawks, raccoons, bobcats, and cats are my predators. I protect myself by going in the grass and slithering. I hear a noise. I stop. It gets closer. I slither a little bit more and get away.

by Elijah S. and Gabriel



What snake am I? Turn the page and find out.

***I am the
Garter Snake.***

by Elijah S.





by Gabriel

You may think I'm black but I'm brown. People think I'm black because my mouth is inky black. I look brown, gray, or green. But not black.

I am 14 feet long and skinny. My scales on my head are big. My head is oval-shaped. I'm the fastest snake that you have ever seen. I can move 20 miles per hour.

I am a deadly snake. I bite with my sharp back fangs. The venom in my bite can kill 5-10 people.

I love the hot sun in South Africa. My habitat has giant trees and small rocks. Ahh. The shade in the hollow trees. All the rats in Africa are delicious. Aw. Back to my burrow.

My yummy prey is behind a bush. Mmmmm. That delicious squirrel. SNAP!! I bite the prey and let go. My yummy prey is in my dark, black mouth. My venom kills the animal. What a crunchy meal. Bon Appetit.

I also eat juicy prey like rats, small birds, other snakes, and lizards. My prey makes me grow.

I'm at the tree and an eagle is chasing me. If I get caught, I will be taken to the baby eagles as their lunch! I give a frightening hiss and puff up my hood. I get away! My predators are mongooses, eagles, and hawks.

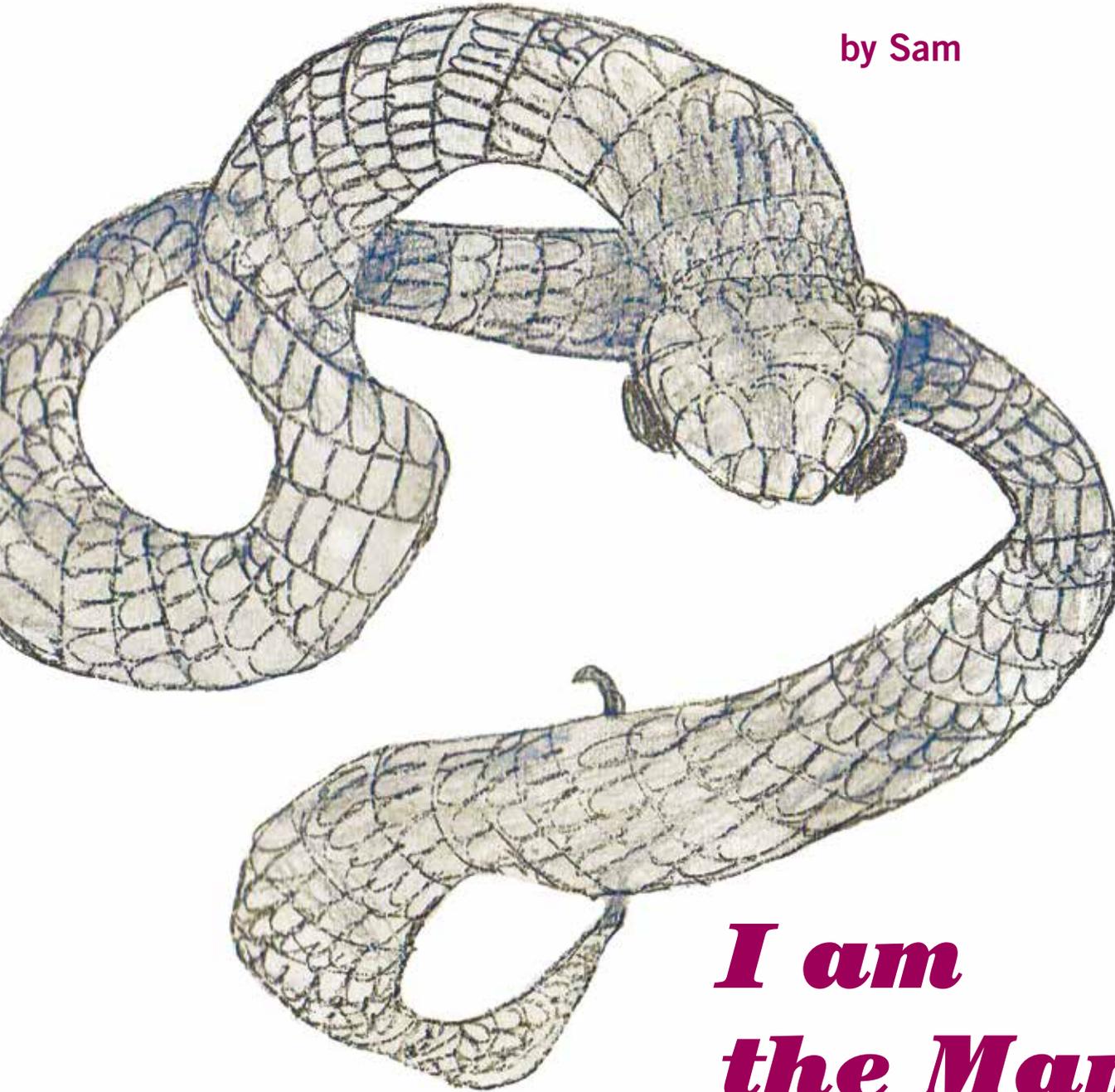
I am a male snake and I need to find a female snake that looks like me. When I find her we will lay 6 to 25 eggs. Then our young snakes will look like me.

by Elijah R. and Sam

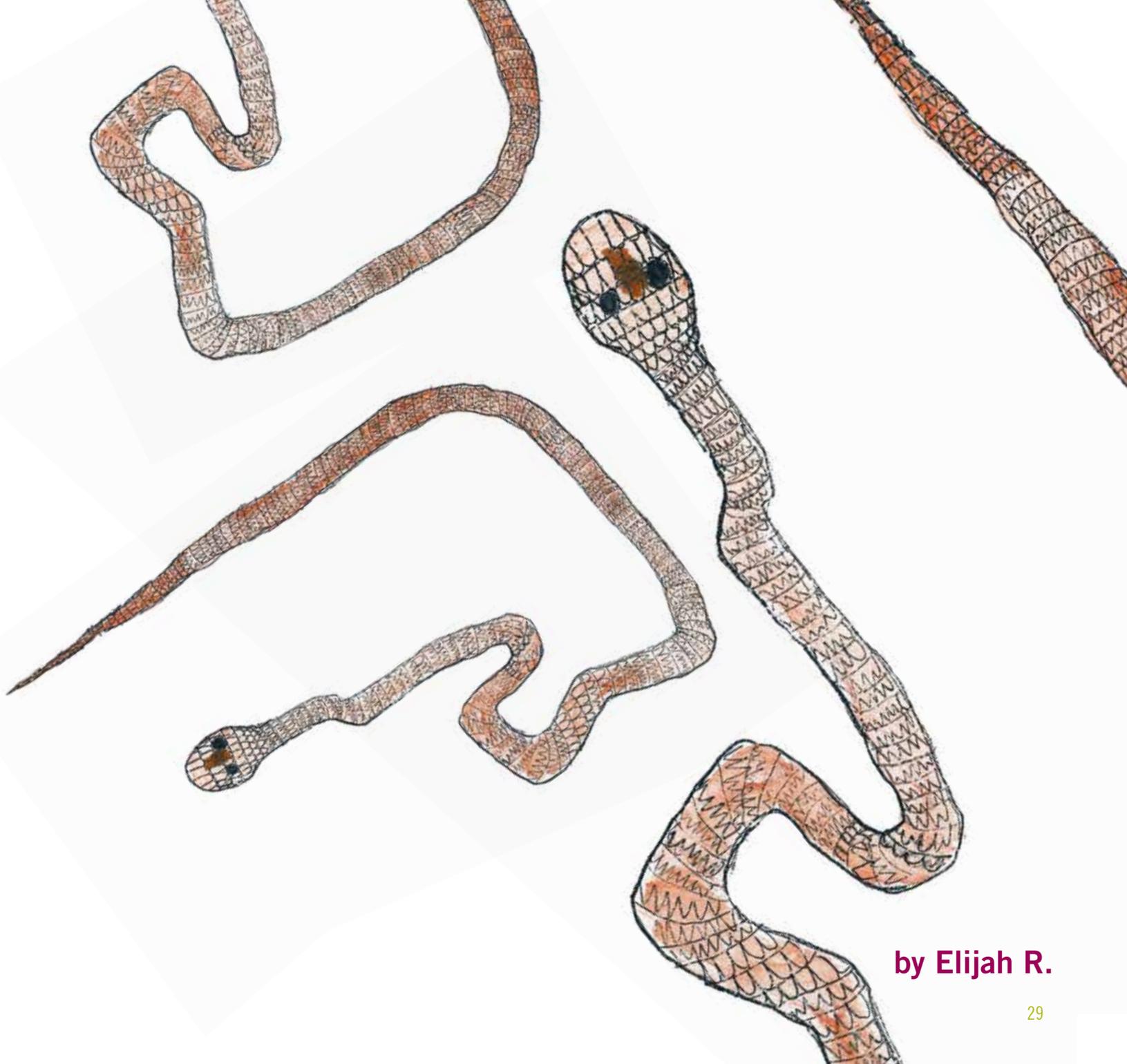


What snake am I? Turn the page and find out.

by Sam



***I am
the Mamba.***



by Elijah R.

I am not a cow. I'm certainly not a duck, but I can be found on a farm.

Guess what? I can have many homes. I live in farmlands and woods. I live in grasslands near mountains or deserts in New Mexico. I love cliffs, rocky hillsides, and cedar glades.

Did you know I have a long body and I'm a good hider? Look at my pattern of red, yellow, black, orange, and brown colors.

I slither away from coyotes and skunks. I hide from raccoons, foxes, and I'm so scared of big birds. I think they think I am scrumptious and very tasty.

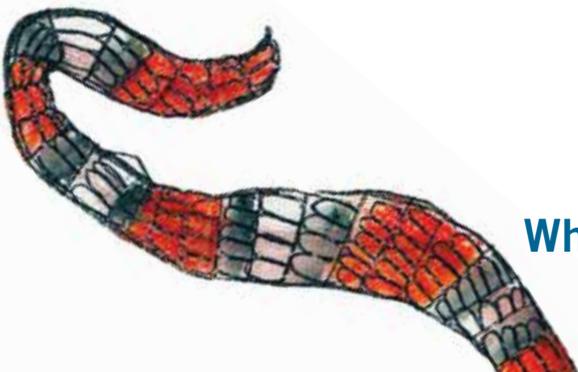
Foxes are so, so scary to me too. Oh no! It's coming after me! Help me! It is the fox. Yes, I hide. I told you I'm a good hider.

I usually mate during the spring or early summer. I lay 30 eggs. My babies can live to be 20 years old. They are 5½ inches long when they are born. I do not stay with my babies. I shed my skin several times each year.

I eat juicy rats and tasty mice. Mmmmm! That is good! I eat snakes, other animals' eggs, and lizards too.

I love to hunt at midnight, but I have to be careful. An owl might swoop down and eat me.

by Libbah and Zahra'Bey



What snake am I? Turn the page and find out.



by Zahra'Bey

by Libbah



***I am the
Milk Snake.***

I have a long tail. I have really sharp teeth. I can have 150 teeth. Do you see my back jaw teeth? I open my jaw wide.

I have a large, thick body. I am mostly green but on the sides I'm black. My babies are yellow, red or blue. I can have many colors to camouflage in my surroundings. My scales are shiny and light. I have a semi-triangular shaped head and I am not poisonous.

Did you know I live in hot places like Southeastern Asia? You can also find me in the East Indies, Africa, Australia, Central America, and India.

I live in the forest, rivers, and near the ocean. You may see me living in bushes so I can hide from my predators and ambush my prey. I love tropical areas because I have a lot of fresh water to drink and swim in.

I mate in the summertime. I lay eggs instead of giving birth to live babies. When my precious brood are about to hatch I have to leave them, but I know they can survive on their own.

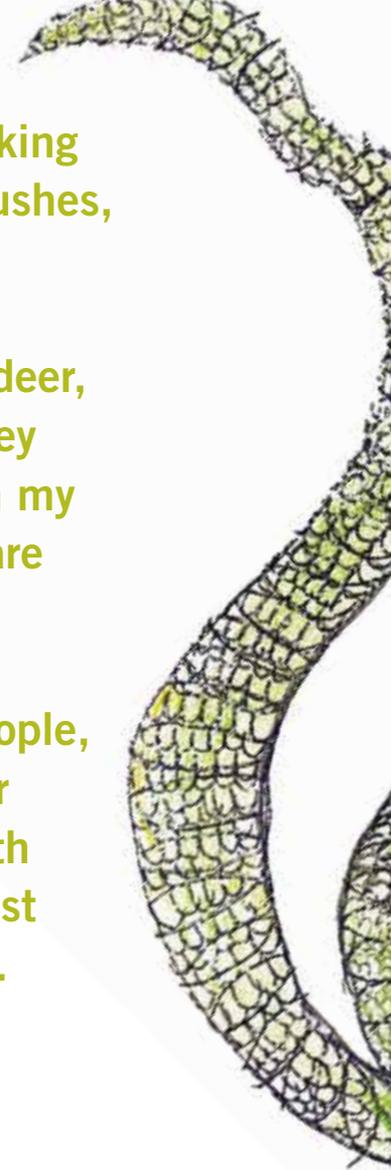
When they come out of their soft-shelled eggs, they start looking for food. Where will you see my babies? On the ground, in bushes, and up in the trees, camouflaged.

Did you know I feast on scrumptious crocodiles, rats, mice, deer, boars, and impalas? Look at me wrap my body around my prey and squeeze it to death. I ate a good, plump deer. Yummy in my tummy! Well, I guess I'll eat again next year. Huge animals are great because I don't have to hunt for a long time.

My predators are wild boars, eagles, baboons, crocodiles, people, tigers, and hyenas. Roar! Yikes! I hear a tiger nearby. I better camouflage before he sees me! I dash into a nearby bush with green leaves and I go into the water. I see a crocodile! At least I'm a very good camouflager. Yahoo! That crocodile is gone... for now.

by Junior and Josh

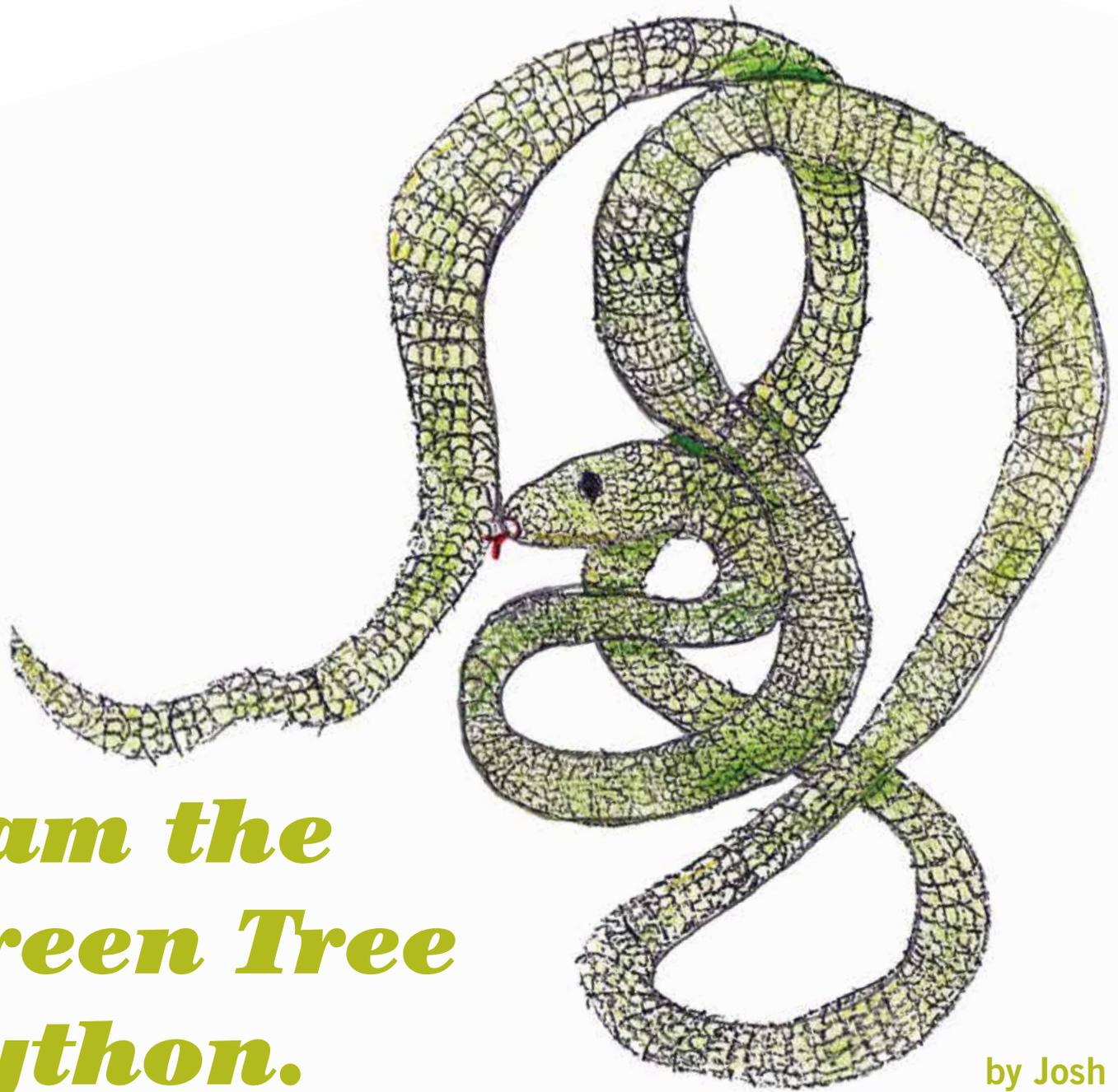
What snake am I? Turn the page and find out.



***I am a baby
Green Tree Python.***



by Junior



***I am the
Green Tree
Python.***

by Josh

I live in deserts that are really sunny and hot. I also live in swamps, mountains, woods, and you can see me in Mexico.

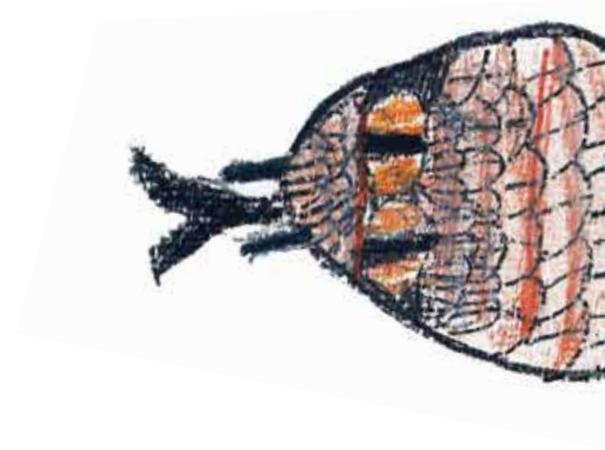
This is my life. I start as an egg. When I mate a baby is born. My babies weigh 12 ounces. I stay with my babies for a week or two. When my gorgeous babies shed, they earn a new piece of their shaker.

After mating, I get to hunt and catch my prey all by myself. But I have to watch out for my predators. I have three predators. They are humans, owls, and hawks. That's why I camouflage. Camouflage means to hide from your predators. It's just like hide and seek but if they catch you, you're dead.

**My gliding prey flies and dives but I eat it quickly. It is a bird!
My juicy prey hates my venom. It runs speedy fast. If you
guessed a mouse you are right. I eat my prey head first.**

**I have a forked tongue. My keeled scales are really bumpy. My
tail or shaker is made out of rings of hard skin. I shake it to
warn people.**

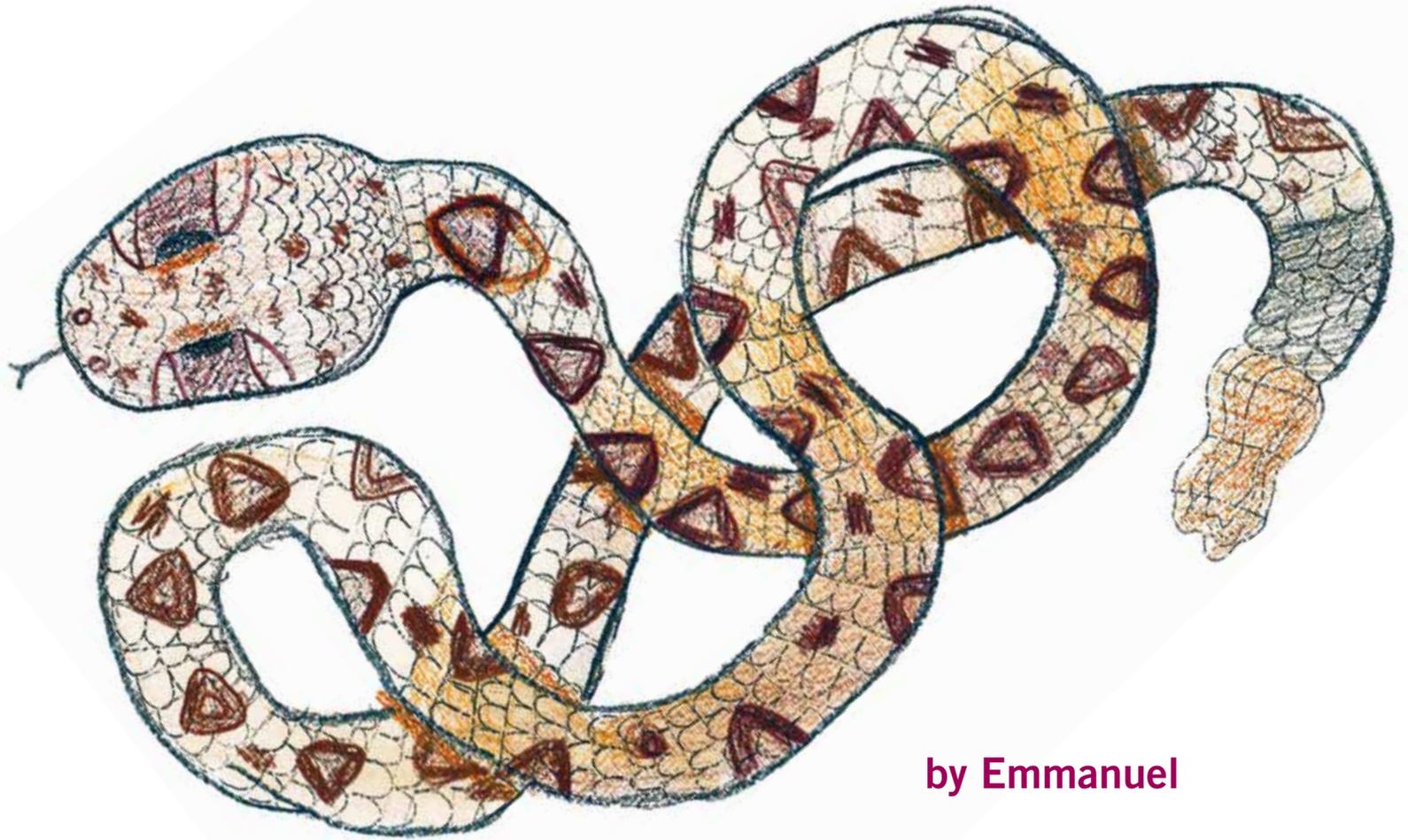
by Emmanuel and Goodness



What snake am I? Turn the page and find out.



by Goodness



by Emmanuel

***I am the
Rattlesnake.***

I win every staring contest.

Did you know that some of my kind have a diamond-shaped head and others have a triangle-shaped head? Some of us are black, orange, brown, and grey. Others are brown and grey or green.

I'm a saw-scaled snake, which means I'm a deadly, pointy-scaled snake. When I rub my scales it makes a sizzling noise to warn my enemies. My enemies have claws and beaks that are powerful and strong. Others of my kind have very smooth scales. All of us are deadly.

I live in rain forests in Africa. I love the raindrops that drop in my habitat. All the water in my habitat cools me off just like winter. Be careful, my habitat is full of dangerous animals like me.

Did you know I have predators like owls and hawks? But my biggest predators are humans because they want to hurt me because I'm dangerous. I use my camouflage to hide myself but if my camouflage doesn't work I play dead! If that doesn't work I will strike. I am known to strike quickly.

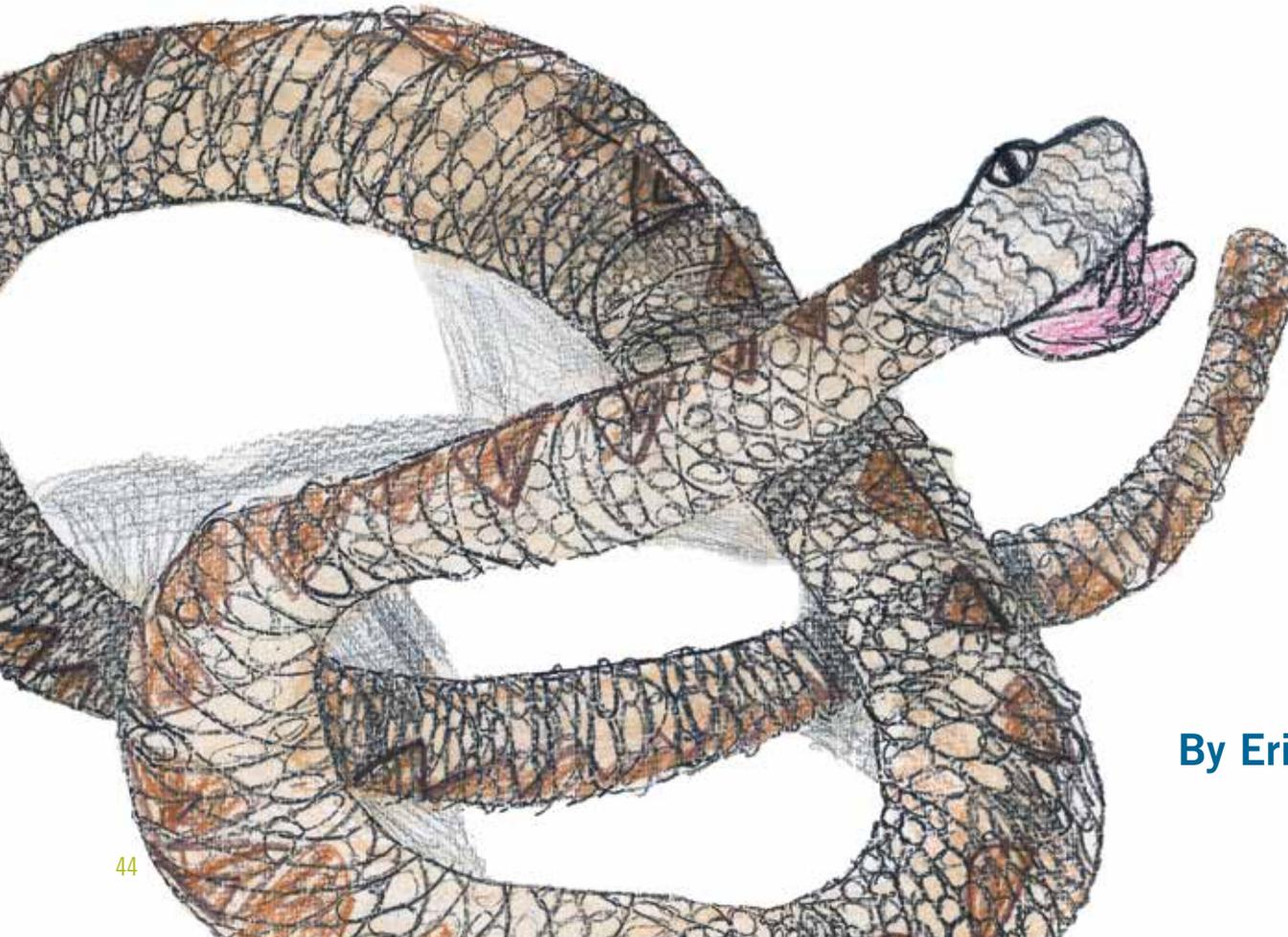
I love birds, rats, rabbits, bugs, snails, frogs, and blue snakes. Rats so sweet, bug so slimy, and frogs so gooey and tasty. Did you know I use my back small teeth to eat my prey? And I love to use my venom. I strike my prey so fast. It's just a blur.

Do you know that I lay up to 12 eggs? I grow up to 12 feet. Guess what? I don't care about my babies when they are born. They have strong venom and kill their own prey. I might never see them again.

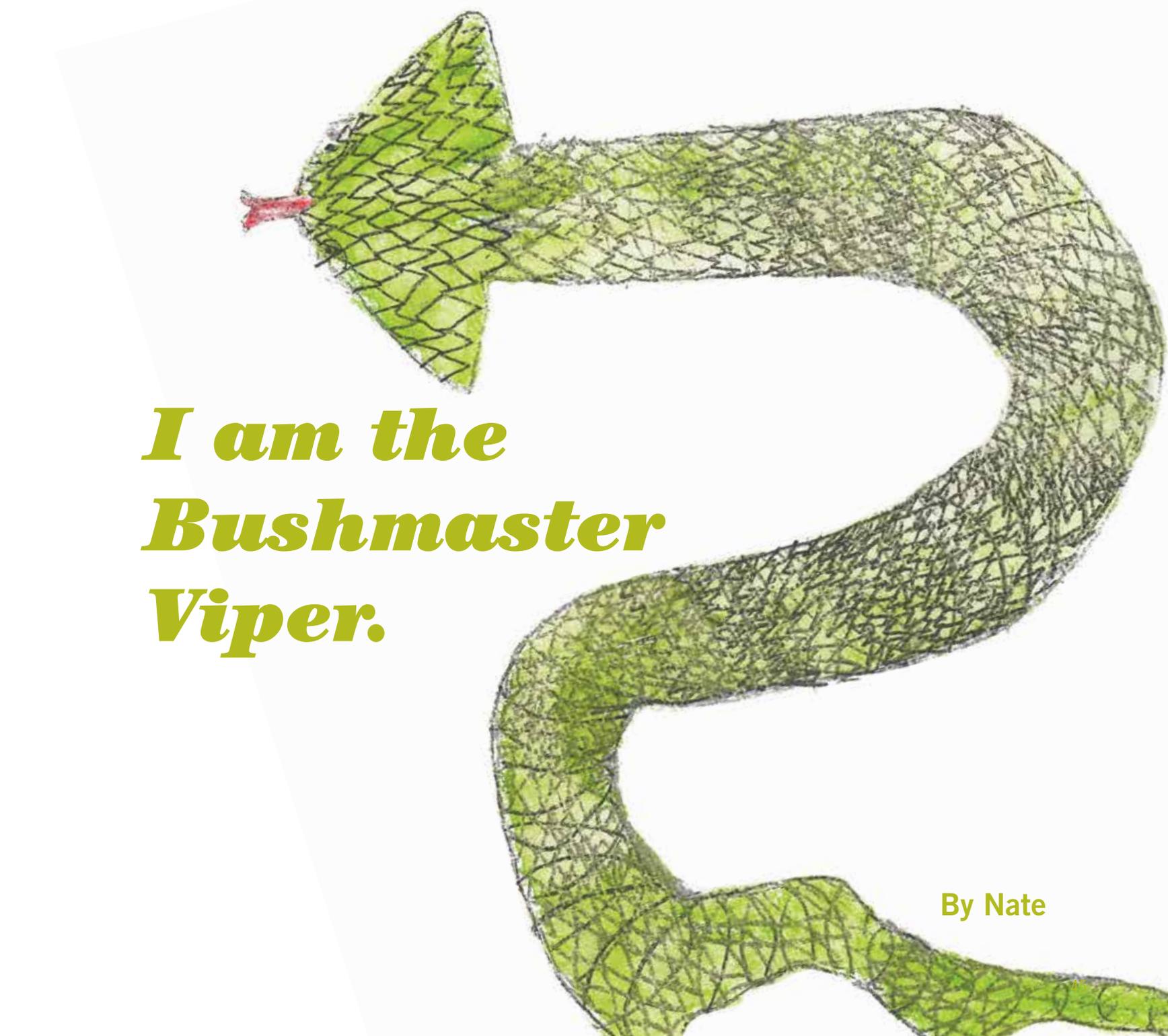
By Eriber and Nate

What snake am I? Turn the page and find out.

I am the Saw-Scaled Viper.



By Eriber



***I am the
Bushmaster
Viper.***

By Nate

Snakes

- 2 Anaconda
- 6 Boa Constrictor
- 10 Cobra
- 14 Copperhead
- 18 Coral Snake
- 22 Garter Snake
- 26 Mamba Snake
- 30 Milk Snake
- 34 Python
- 38 Rattlesnake
- 42 Viper

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Cover illustration by Olivia

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- Madison and Olivia
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- Douglas, MarkAnthony, and Scott
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- Elijah S. and Gabriel
- Elijah R. and Sam
- Libbah and Zahra'Bey
- Junior and Josh
- Emmanuel and Goodness
- Eriber and Nate

Glossary

camouflage: a way an animal hides from its predators by looking like a part of its habitat

constrict: to squeeze

habitat: the place where a plant or animal lives

predator: an animal that eats other animals

prey: an animal that is eaten by other animals

scutes: wide scales on a snake's belly

venom: a poisonous liquid used to kill prey

Don't Be S-s-scared:

The Truth About Snakes

A Second Grade

Learning Expedition



When we first began our snake expedition in the fall of 2010, many of us were scared of snakes. Lily, an Albino Corn Snake we took care of in our classroom, forever changed the way we feel about snakes. We fell in love with Lily. We watched her shed her skin, dance to drum music, and digest the dead mice we fed her. We learned a lot about snakes from researching in books and from experts, but Lily was our best teacher. To share our learning about corn snakes and to convince others not to fear them, we wrote a song and made a music video about Lily. We are scientists and musicians!

Lily inspired us to learn about other kinds of snakes and to write this clue book. Students worked in pairs to research the physical features, habitat, prey, predators, and life cycle of a favorite snake from around the world. Conducting fieldwork at the Harvard Museum of Comparative Zoology was a highlight of the expedition. Guided by expert herpetologists, students examined specimens of the snakes they were researching and viewed an incredible collection of 90,000 different kinds of snakes.

Before writing, students listened to several mentor texts. They noticed

how an author grabs a reader’s attention by writing in the first person and asking questions. They noticed, too, how descriptive and action words help readers form pictures in their minds. Students used these techniques to step into their snake’s skin, speak in their snake’s voice, and write detailed clues to their snake’s identity. Each student wrote a clue page with a snake illustration. To create this book, each pair’s written pages were merged during the editing process.

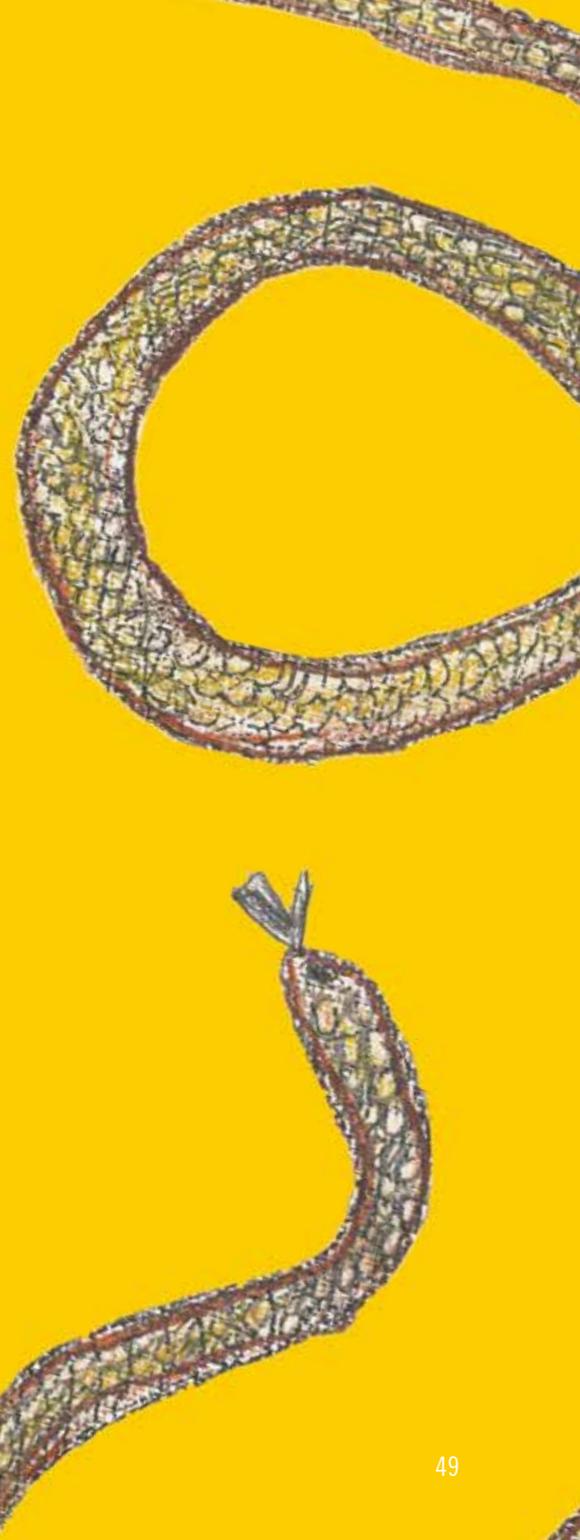
Perseverance is one of the “keys to harmony” that guides our school.

To learn more about *Don’t Be S-s-scared: The Truth About Snakes* expedition, curriculum, and student products, visit our website at www.conservatorylab.org.

Students demonstrated remarkable patience and perseverance to create the scientific snake drawings in this book. The intricate snake scales and patterns you see are the result of hours of diligent work and many, many drafts.

In this expedition, learning went far beyond the state science standards. Second graders grew as scientists, musicians, artists, readers, writers, and mathematicians—all through the lens of studying snakes.

Jenna Gampel, 2nd grade teacher

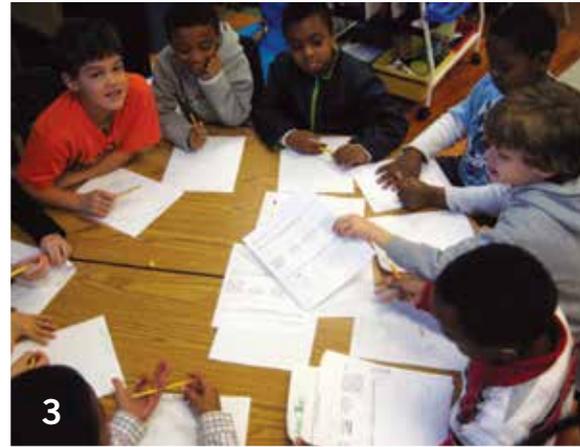


Photos

by Toni Jackson, Jenna Gampel, and Amy Ellingsen

Clockwise from Image 1:

- 1 Joy Marzolf at the Broadmoor Wildlife Sanctuary teaches us how to hold a snake.
- 2 Writing about Lily in our field journals.
- 3 Collecting and analyzing snake survey data.
- 4 Lily sheds her skin.
- 5 Feeding Lily.
- 6/7 Composing and performing our song, "Lily You Are Nice."
- 8/9 Measuring and comparing the lengths of our snakes.





4



5



9



8



7



6



4



3



2



1

Clockwise from Image 1:

- 1/2/3 Fieldwork at the Harvard Museum of Comparative Zoology with herpetologists Joseph Martinez and Jose Rosado.
- 4 Conservation biologist Jon Regosin introduces us to a corn snake.
- 5 Researching snakes for our clue book.
- 6/7 Sketching snakes for our clue book.

thank you!

THANK YOU!

Joy Marzolf from Broadmoor Wildlife Sanctuary for introducing us to our first live snakes and teaching us how to handle a snake.

Conservationist biologist, Jon Regosin, for teaching us why it's important to save endangered species, like the Timber Rattlesnake, and for connecting us to Pete Mirick.

Pete Mirick, for lending us your Albino Corn Snake for several months, and allowing us to name her Lily.

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Brian Kaufman for helping us to produce our music video about Lily.

The Newton Public Library, for your awesome snake book collection.



WHAT SNAKE AM I?

Do you know your snakes? Read this clue book by the second grade class at the Conservatory Lab Charter School and find out.

From the amazing Anaconda to the venomous Viper, you'll meet eleven of your favorite snakes from around the world. You'll find out what they look like, where they live, what they eat, who their enemies are, and more.

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