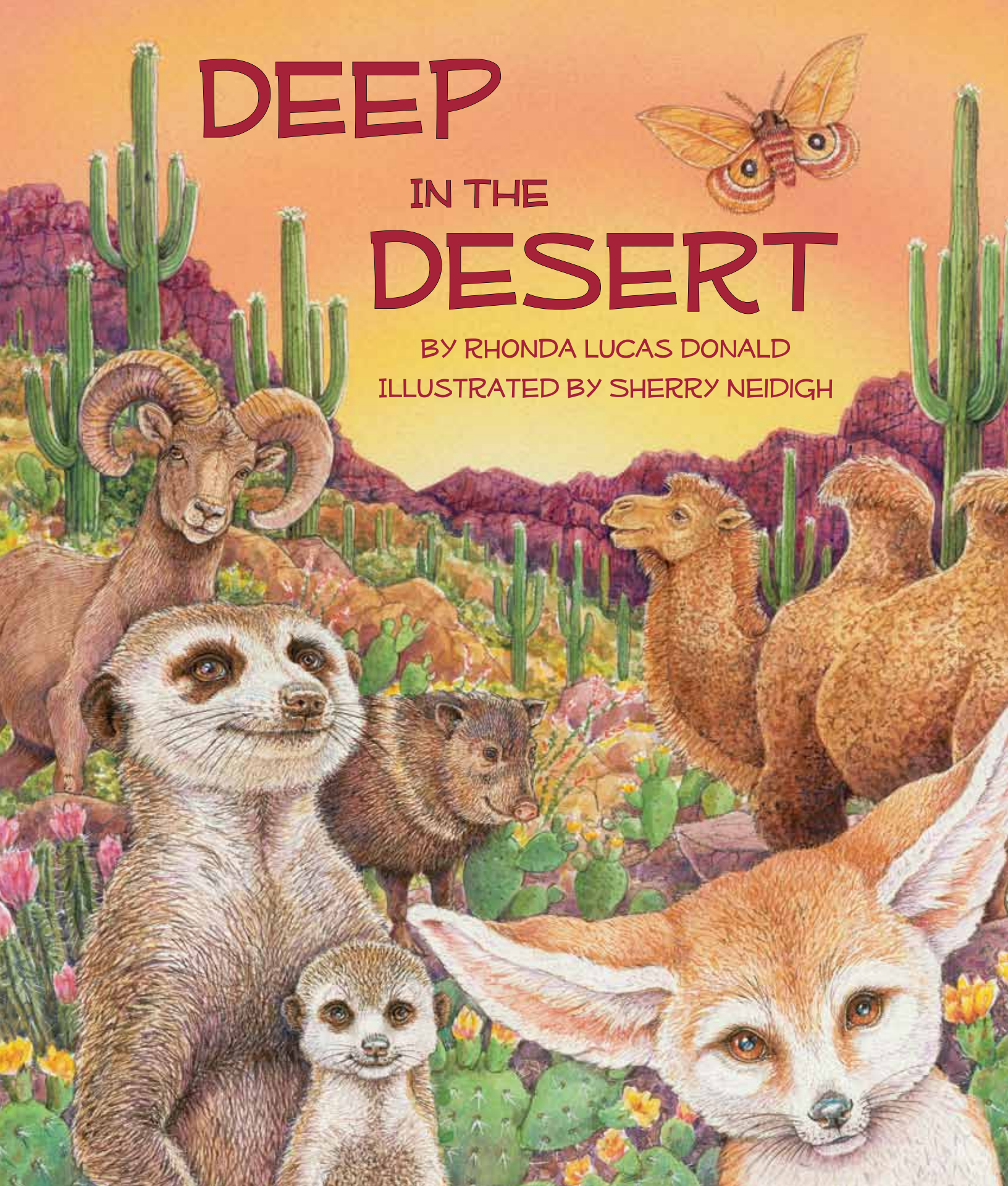


# DEEP

## IN THE DESERT

BY RHONDA LUCAS DONALD  
ILLUSTRATED BY SHERRY NEIDIGH



front flap

back flap

# DEEP IN THE DESERT



Catchy desert twists on traditional children's songs and poems will have children chiming in about cactuses, camels, and more as they learn about the desert habitat and its flora and fauna. Whether sung or read aloud, **Deep in the Desert** makes learning about deserts anything but dry.

Animals in the book include:

- bactrian camel
- javelina (collared peccary)
- desert tortoise
- fennec fox (similar to kit fox)
- Gila monster
- lesser long-nosed bat
- meerkat
- ostrich
- tarkawara (similar to kangaroo rat)
- thorny devil (similar to horned lizard)

It's so much more than a picture book . . . this book is specifically designed to be both a fun-to-read story and a launch pad for discussions and learning. Whether read at home or in a classroom, we encourage adults to do the activities with the young children in their lives. Free online resources and support for the book at [www.ArbordalePublishing.com](http://www.ArbordalePublishing.com) include:

- For Creative Minds as seen in the book (English & Spanish):
  - The Desert Habitat
  - Desert Fun Facts
  - Deserts of the World (with map)
  - Match the Desert Adaptations
- Teaching Activities: (to do at home or school)
  - Reading Questions
  - Math
  - Language Arts
  - Geography
  - Science
  - Coloring Pages
- Interactive Quizzes: Reading Comprehension, For Creative Minds, and Math Word Problems
- English and Spanish Audiobooks
- Related Websites
- Aligned to State Standards (searchable database)
- Accelerated Reader and Reading Counts Quizzes
- Lexile and Fountas & Pinnell Reading Levels

eBooks with Auto-Flip, Auto-Read, and selectable English and Spanish text and audio available for purchase online.

Thanks to Lisa Evans, Education Specialist, and Kelly Holler, Visitor Use Assistant, Amistad National Recreation Area and to David Elkowitz, Chief of Interpretation, Big Bend National Park, Rio Grande Wild and Scenic River for verifying the desert information in this book.

**Rhonda Lucas Donald** has written more than a dozen books for children and teachers including her most recent titles: *Animal Rights: How You Can Make a Difference* and *Life on Other Planets*. In addition, she has won awards for articles and stories appearing in *Ranger Rick* and *Your Big Backyard* magazines. Rhonda specializes in writing about science and has always found desert life fascinating, perhaps because it's so different from where she lives in Virginia. While researching for *Deep in the Desert*, she was intrigued to learn how plants and animals adapt to living in such harsh conditions. Rhonda and her husband share their home with dogs, Maggie and Lily, and their very dignified cats, Darwin and Huxley.

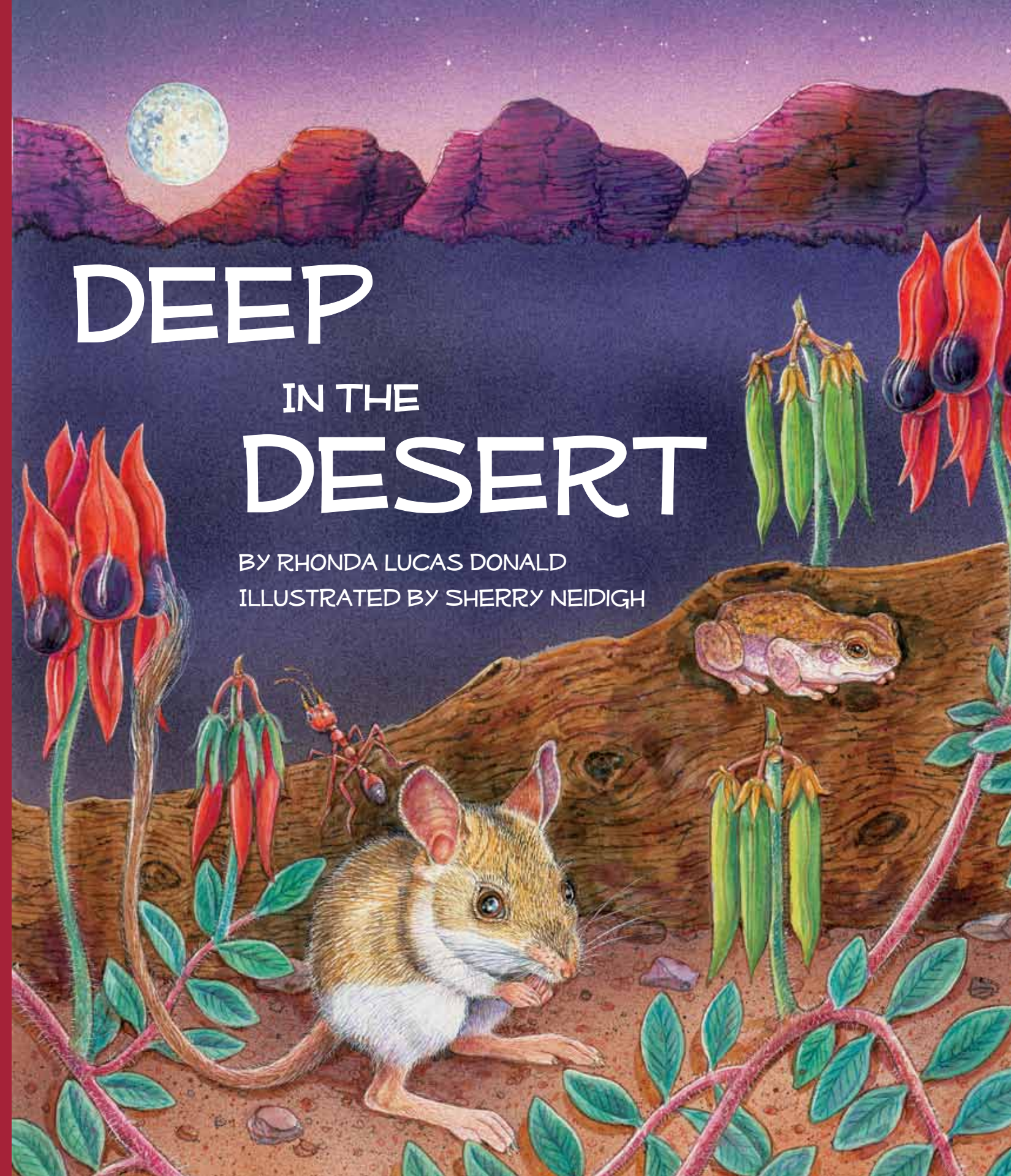
**Sherry Neidigh**, a graduate of Ringling School of Art and Design, has been freelance illustrating for fifteen years. Sherry's love of animals and nature comes through in her bright, colorful art. In addition to illustrating *Deep in the Desert*, the award-winning *Count Down to Fall*, and *The Best Nest* for Arbordale, Sherry has illustrated several trade and education titles including *Who Needs That Nose?*, *If I Had a Tail*, and *Black and White*. Sherry lives in upstate South Carolina.



Rhonda Lucas Donald



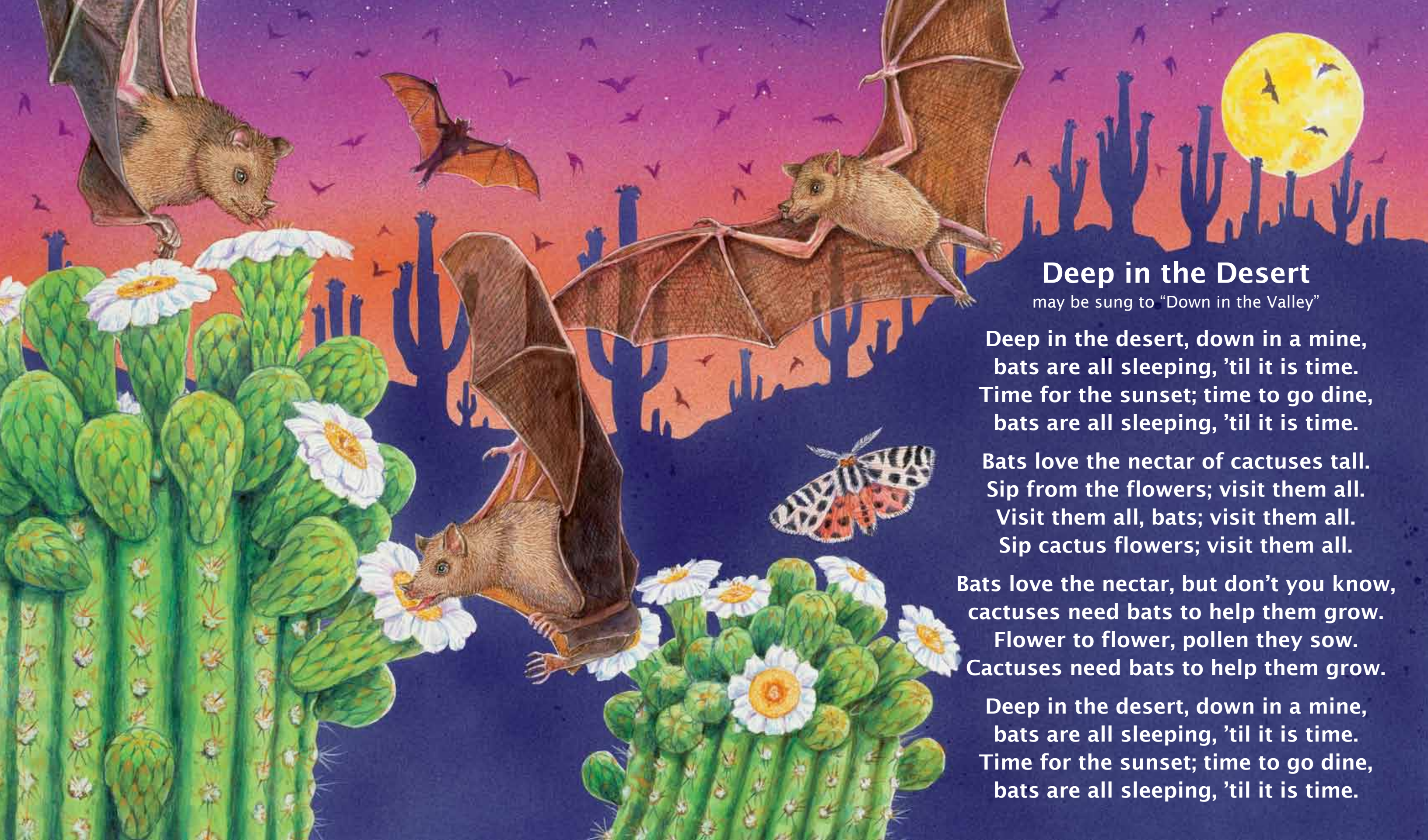
Sherry Neidigh



# DEEP IN THE DESERT

BY RHONDA LUCAS DONALD

ILLUSTRATED BY SHERRY NEIDIGH



## Deep in the Desert

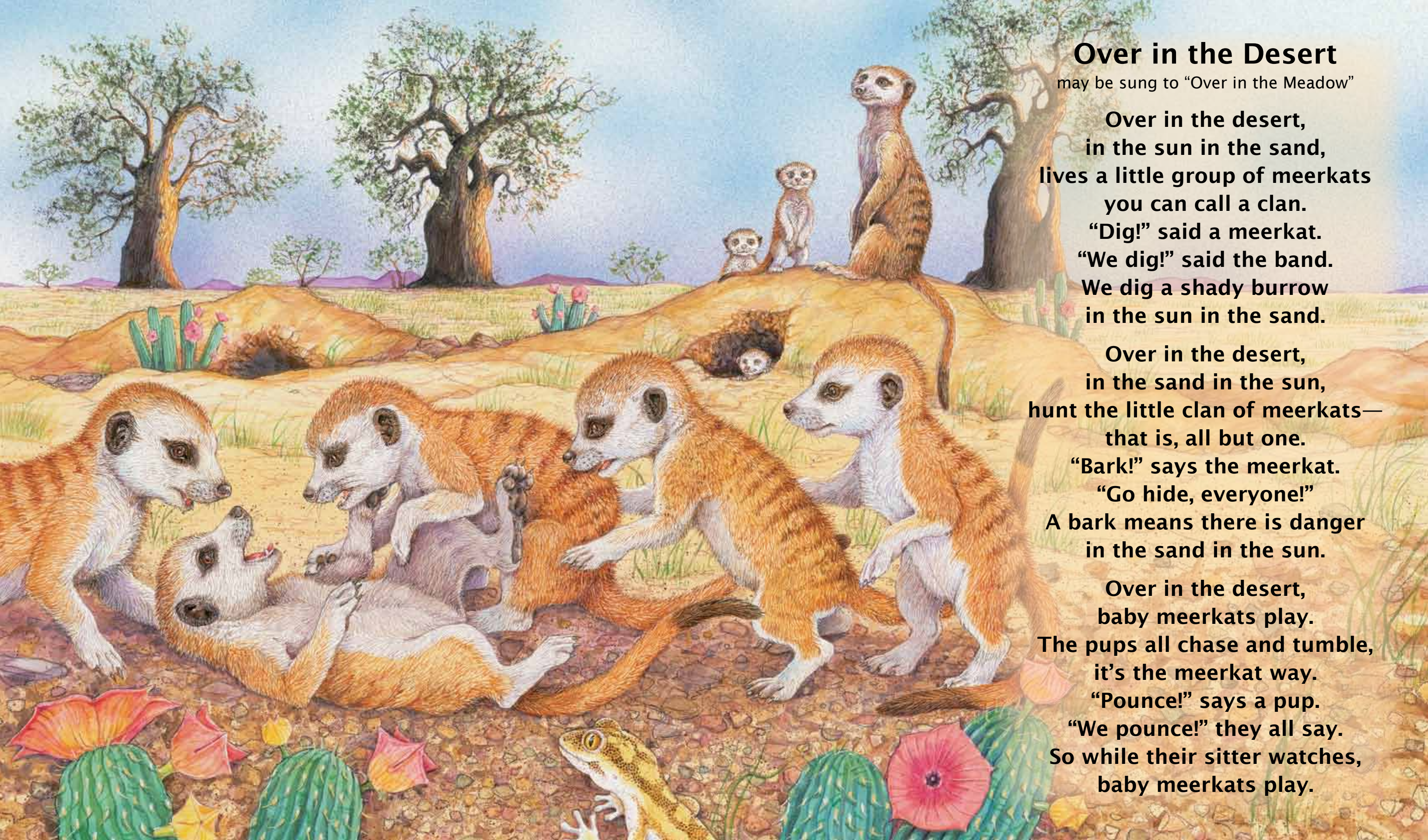
may be sung to "Down in the Valley"

Deep in the desert, down in a mine,  
bats are all sleeping, 'til it is time.  
Time for the sunset; time to go dine,  
bats are all sleeping, 'til it is time.

Bats love the nectar of cactuses tall.  
Sip from the flowers; visit them all.  
Visit them all, bats; visit them all.  
Sip cactus flowers; visit them all.

Bats love the nectar, but don't you know,  
cactuses need bats to help them grow.  
Flower to flower, pollen they sow.  
Cactuses need bats to help them grow.

Deep in the desert, down in a mine,  
bats are all sleeping, 'til it is time.  
Time for the sunset; time to go dine,  
bats are all sleeping, 'til it is time.



## **Over in the Desert**

may be sung to “Over in the Meadow”

**Over in the desert,  
in the sun in the sand,  
lives a little group of meerkats  
you can call a clan.**

**“Dig!” said a meerkat.  
“We dig!” said the band.  
We dig a shady burrow  
in the sun in the sand.**

**Over in the desert,  
in the sand in the sun,  
hunt the little clan of meerkats—  
that is, all but one.**

**“Bark!” says the meerkat.**

**“Go hide, everyone!”**

**A bark means there is danger  
in the sand in the sun.**

**Over in the desert,  
baby meerkats play.**

**The pups all chase and tumble,  
it’s the meerkat way.**

**“Pounce!” says a pup.**

**“We pounce!” they all say.**

**So while their sitter watches,  
baby meerkats play.**



## Desert Tortoise

may be sung to "Baa, Baa, Black Sheep"

**Desert tortoise,  
may I come inside?  
The sun is hot.  
I need to hide.**

**Come in my burrow  
for a shady rest.  
There is room for everyone,  
so please be my guest.**

**Desert tortoise,  
may I come inside?  
The sun is hot.  
I need to hide.**

# For Creative Minds

The For Creative Minds educational section may be photocopied or printed from our website by the owner of this book for educational, non-commercial uses. Sheet music for the songs, cross-curricular teaching activities, interactive quizzes, and more are available online. Go to [www.ArbordalePublishing.com](http://www.ArbordalePublishing.com) and click on the book's cover to explore all the links.

## The Desert Habitat

Some deserts are hot, and some are cold, but the one thing that all deserts have in common is that they are dry. On average, a desert gets less than 10 to 12 inches (25-30 cm) of rain a year. Some do not even get that much. The driest place on Earth, the Atacama Desert in South America has areas that haven't seen any rain in 400 years!

Hot (tropical or subtropical) deserts are warm throughout the year, but very hot in the summer. Temperatures drop at night to cool or cold. Rain comes in short bursts any time of the year and may even evaporate before it hits the ground. There are long, dry periods in between rain showers. The Chihuahan, Sonoran, and Mojave Deserts in Mexico and the American Southwest are hot deserts. The Sahara and Kalahari Deserts in Africa are also hot.

Polar deserts have long, cold winters and can have snow- or ice-covered ground. Antarctica and parts of Arctic Europe and North America are polar deserts.

Coastal deserts are found along continental coasts and have salty soils or sand. They generally have cool winters (with whatever rain there may be) and long, warm, dry summers. The Atacama in South America (Chile) and the Namib in Africa are coastal deserts.

Cold winter deserts (also called semi-arid deserts) have cold winters with some snow and long, dry, hot summers. Many are formed by a "rain shadow effect," which is when high mountains block precipitation from reaching the area. The Great Basin Desert in Utah and Montana and the Gobi Desert in Asia are cold winter deserts.



## Desert Fun Facts

Cacti can hold water in their stems (trunks). The spines (leaves) protect the plant from animals and break up airflow, helping the cacti to hold water.

One meerkat acts as guard while the rest of the clan hunts or plays. The guard barks a warning to let the group know to run to their burrow.

Lesser long-nosed bats depend on cacti (and agaves) for food. The bats spread the cacti's pollen to help the plants grow. The cacti bloom at night so the nocturnal bats can find them!

When scared, thorny devils tuck their heads and show a fake head. They can also change color to match the dirt.

Many desert animals spend their days hiding from the hot sun in burrows dug by desert tortoises.

Gila monsters have bright colors to warn animals that they are poisonous. We use this poison in a medicine to treat diabetes.

Male ostriches can be 9 feet (2.7 m) tall! They dance (bow, wave their wings, and bob up and down) to attract females. Ostrich eggs are about the size of a small cantaloupe.

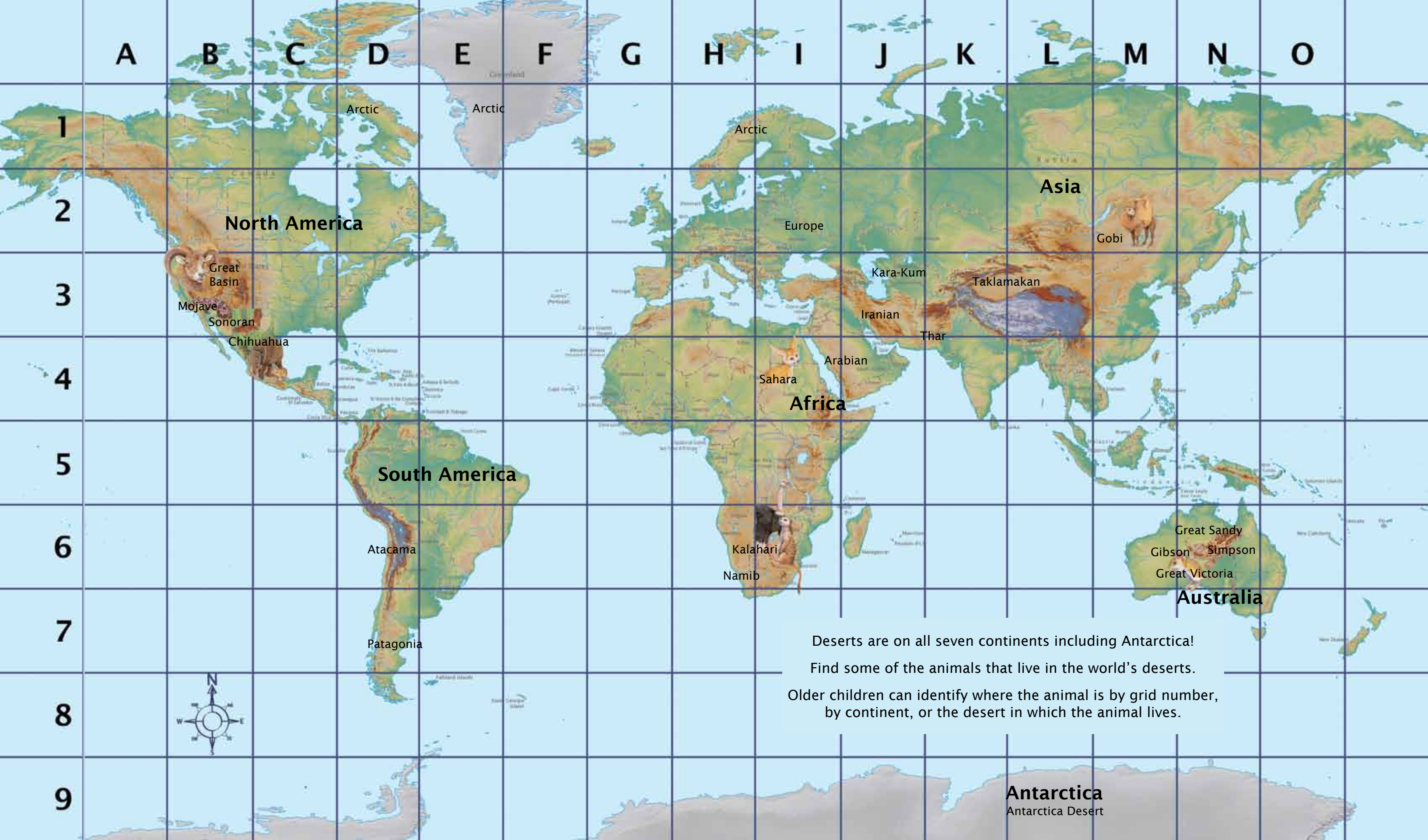
Javelinas, also called collared peccaries, have a ring of light-colored fur around their necks that looks a bit like a collar.

## Deserts of the World

Use the map on the next page to find the location or answer the following questions. Answers are upside down at the bottom of this page. Older children should identify animal locations with grid coordinates.

1. On what continent is the Sahara Desert?
2. In which desert do Bactrian camels live?
3. In which desert do fennec foxes live?
4. On what continent do tarkawaras and thorny devils live?
5. On what continent do lesser long-nosed bats and Gila monsters live?

Answers: 1) Africa; 2) Gobi; 3) Sahara; 4) Australia; 5) North America



**A B C D E F G H I J K L M N O**

**1**  
**2**  
**3**  
**4**  
**5**  
**6**  
**7**  
**8**  
**9**

**North America**

Great Basin  
Mojave  
Sonoran  
Chihuahuah

**South America**

Atacama  
Patagonia

Europe

**Africa**

Sahara  
Arabian  
Kalahari  
Namib

**Asia**

Kara-Kum  
Taklamakan  
Iranian  
Thar

Gobi

Great Sandy  
Gibson  
Simpson  
Great Victoria  
**Australia**

**Antarctica**  
Antarctica Desert



Deserts are on all seven continents including Antarctica!  
Find some of the animals that live in the world's deserts.  
Older children can identify where the animal is by grid number,  
by continent, or the desert in which the animal lives.

## Match the Desert Adaptations

Plants and animals that live in the desert have special body parts or behaviors (adaptations) that help them survive without very much water. Those living things that live in hot, tropical deserts have to protect themselves from the sun too. Match the plant or animal adaptations. Answers are upside down at the bottom of the page.

**1** My humps store fat to give me energy when I can't find food. I can go several days without drinking water, but when I do find water, I can drink gallons in minutes. I can close my nostrils so sand doesn't blow up my nose. Bushy eyebrows and two rows of eyelashes keep sand out of my eyes.

**2** I get water from eating prickly pear cactuses (spines and all) that most other animals can't eat. I hunt early in the morning and in the evening (crepuscular) when it is cool. If it gets too hot, I'll just hunt at night.

**3** I get most of the water I need from the plants I eat. I spend most of my time living in my underground burrow where it is cool. If it gets too hot in the summer, I go into a deep sleep—like summer hibernation (aestivation).

**4** My huge ears help to keep me cool like "air conditioners." I have fur on the bottom of my feet so the hot desert sand doesn't burn me. I sleep all day and am up at night (nocturnal) when it is cooler. I am similar to the kit fox found in the deserts of the American Southwest.

**5** I store fat and water in my thick tail and can go months between meals. In fact, I only eat three or four times a year. I spend most of my time in my underground burrow. My bright colors let other animals know that I am poisonous.

**6** I sleep in a deep, dark cave, mineshaft, or even in trees or cracks in rocks during the hot day. I come out at night (nocturnal) when it is cool. My very long tongue helps me to reach deep into cactus flowers to sip the nectar that I need to eat.



**7** I store water in long, flat, green stem "pads" and protect those pads with sharp spines. I grow low to the ground to help conserve any moisture I can find.

**8** My ears close to keep sand out and the dark patches around my eyes cut down the Sun's glare so I can see.

**9** Ridges between the thorns along my back carry rainwater and dew to my mouth. If it gets too hot during the day, I use my claws to dig a shallow burrow, or I find shade under a plant. I am similar to horned lizards found in the western part of the North American continent.

**10** I sleep with my family in a one-room burrow during the day (nocturnal). I get most of my water from the seeds that I eat, but I will also travel for long distances to find rain. I am similar to the kangaroo rat in the Mexican and American deserts and the jerboa in Africa and Asia.

**11** Like many types of cacti, I store water in my fleshy stems and have spines to protect them. My roots aren't deep, but they are very long to catch as much water as possible when it rains. My roots can be as long as I am tall!

**12** Like many desert-living animals, I can go for several days without drinking anything. If I do find water, I like to take a bath! My very long legs help me to see danger coming so I can run away—and I can run very fast! I can even kick a lion if I have to!



lesser long-nose bat

javelina

desert tortoise

Gila monster

fennec fox

Bactrian camel

Answers: 1. Bactrian camel; 2. javelina; 3. desert tortoise; 4. fennec fox; 5. Gila monster; 6. lesser long-nosed bat; 7. prickly pear cactus; 8. meerkat; 9. thorny devil; 10. tarkawara; 11. saguaro; 12. ostrich



For Bruce, my oasis, who makes life anything but dry—RLD

To my sister, Sandy—SN

Thanks to Lisa Evans, Education Specialist, and Kelly Holler, Visitor Use Assistant, Amistad National Recreation Area and David Elkowitz, Chief of Interpretation, Big Bend National Park Rio Grande Wild and Scenic River for verifying the desert information in this book.

Thanks to Laura Scoble for reviewing the songs' sheet music, which can be found in the online teaching activities. Go to [www.ArbordalePublishing.com](http://www.ArbordalePublishing.com) and click on the book's cover.

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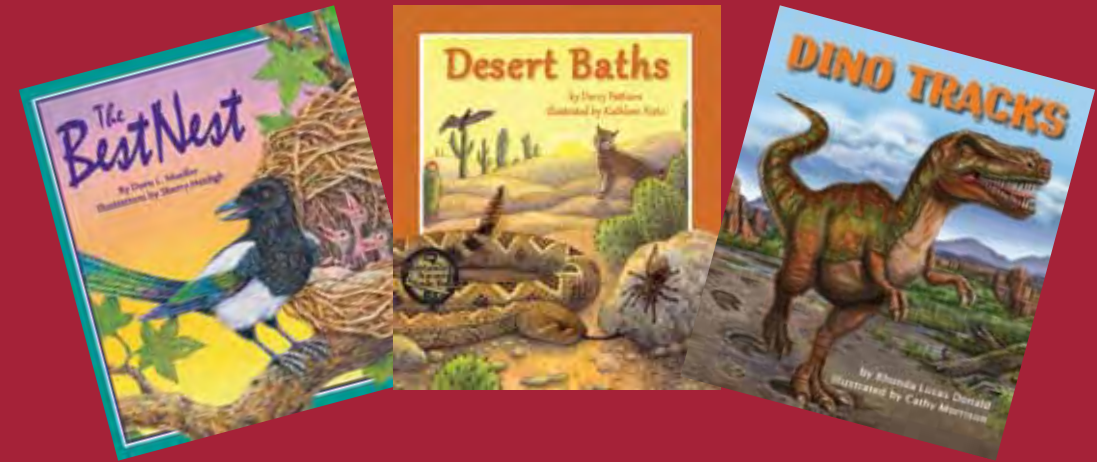
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