

Rockie's

# SAGEBRUSH ADVENTURES





AUDUBON ROCKIES IS A REGIONAL OFFICE OF NATIONAL AUDUBON SOCIETY. WE WORK WITH PEOPLE AND COMMUNITIES TO PROTECT BIRDS AND THEIR HABITAT IN WYOMING AND COLORADO.

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## DEDICATIONS

FOR DUSTY, MELIBE, AND AVENLEE – MY FELLOW SAGEBRUSH EXPLORERS.

- JTD

TO MY FATHER & MOTHER, FOR ALWAYS ENCOURAGING MY ADVENTUROUS SPIRIT.

- ZH



# Rockie's SAGEBRUSH ADVENTURES

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IN A SEA OF SILVER-GREEN NOTHING APPEARS TO BE HAPPENING,  
BUT IN A HOLE IN THE GROUND...

...SOMETHING MORE IS STIRRING.

### FUN FACT:

SNOW IS CAPTURED BY  
SAGEBRUSH AND HELPS THE  
WHOLE ECOSYSTEM BY  
STORING THIS MOISTURE FOR  
USE THROUGHOUT THE YEAR.

### DID YOU KNOW?

THE SAGEBRUSH ECOSYSTEM  
IS FOUND IN 13 STATES AND 3  
CANADIAN PROVINCES.



### Sagebrush Field Guide



Big Sagebrush  
*Artemisia tridentata*  
Most abundant  
type of sage



Fringed Sage  
*Artemisia frigida*  
Found in harsh,  
windy areas



Silver Sage  
*Artemisia cana*  
Found near water  
or moist areas



AS WE DIVE INTO THIS TUNNEL AS DEEP AS YOU ARE TALL, WE SEE THE FIRST GLIMPSE OF OUR HEROINE.

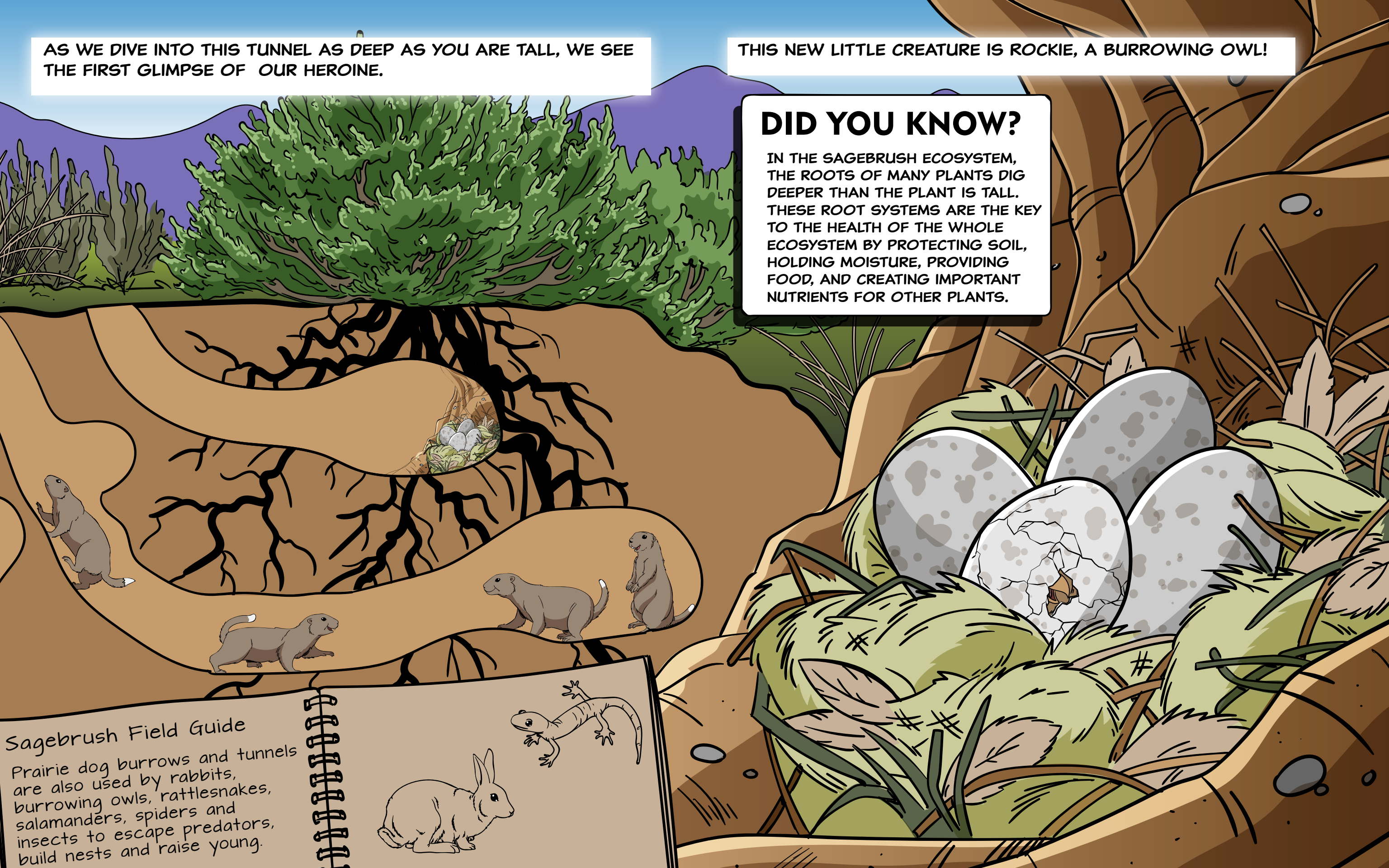
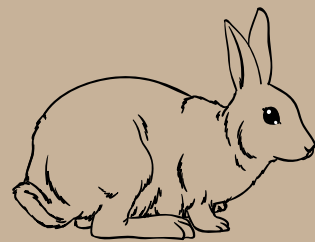
THIS NEW LITTLE CREATURE IS ROCKIE, A BURROWING OWL!

## DID YOU KNOW?

IN THE SAGEBRUSH ECOSYSTEM, THE ROOTS OF MANY PLANTS DIG DEEPER THAN THE PLANT IS TALL. THESE ROOT SYSTEMS ARE THE KEY TO THE HEALTH OF THE WHOLE ECOSYSTEM BY PROTECTING SOIL, HOLDING MOISTURE, PROVIDING FOOD, AND CREATING IMPORTANT NUTRIENTS FOR OTHER PLANTS.

### Sagebrush Field Guide

Prairie dog burrows and tunnels are also used by rabbits, burrowing owls, rattlesnakes, salamanders, spiders and insects to escape predators, build nests and raise young.





SUDDENLY, A FACE APPEARS IN THE OPENING. IT'S ROCKIE'S MOTHER!

**FUN FACT:**

COWBOYS SOMETIMES CALLED THESE OWLS "HOWDY BIRDS," BECAUSE THEY SEEMED TO NOD IN GREETING FROM THE ENTRANCES TO THEIR BURROWS IN PRAIRIE-DOG TOWNS.

OH LOOK!

MY BROTHERS AND SISTERS WILL JOIN ME SOON!

WHAT FOOD HAVE YOU BROUGHT ME?



Sagebrush Field Guide  
Burrowing Owls

Burrowing owls lay between 3-12 eggs each year.

The nests are often in prairie dog or other rodent burrows using cow dung as nesting material! Young owls are called owlets.

These birds are 10 inches tall and unlike other owls, they are active during the day.

They eat mainly insects but also small rodents, amphibians, and reptiles.



AS ROCKIE GROWS FROM NESTLING TO FLEDGLING, SHE'S NOW BIG ENOUGH TO SEE THE WORLD OUTSIDE THE BURROW FOR THE FIRST TIME.

ROCKIE SEES A FEATHERLESS ANIMAL APPROACHING HER...

**FUN FACT:**  
WHILE ON THEIR HISTORIC JOURNEY, LEWIS AND CLARK SENT PRESIDENT JEFFERSON A SHIPMENT CONTAINING A GROUSE, FOUR MAGPIES AND A PRAIRIE DOG – ALL ALIVE.

WHO ARE YOU?

I'M DAISY DOG, A WHITE-TAILED PRAIRIE DOG.  
WHO ARE YOU?

I'M ROCKIE, THE BURROWING OWL.

HOW BIG AND BRIGHT IT IS OUTSIDE!

WHERE ARE WE?

**DID YOU KNOW?**  
PRAIRIE DOGS "TALK" TO EACH OTHER THROUGH A SERIES OF YIPS AND BARKS COMMUNICATING EVERYTHING FROM HELLO TO WARNING OF DANGERS.

**Sagebrush Field Guide**

Prairie Dogs are a type of ground squirrel. There are 5 different types of prairie dog in North America.

Historically, the endangered black-footed ferret was their main predator. Today, coyotes, badgers, snakes, and raptors are their main predators.

Prairie dogs eat mainly plants, their roots and some insects.

White-tailed

Black-tailed

Gunnison's



ROCKIE SOON DISCOVERS THAT THE PRAIRIE DOG TOWN IS A REALLY BUSY PLACE - FULL OF STRANGE SOUNDS, ANIMALS, AND SMELLS.

### DID YOU KNOW?

LARGE NUMBERS OF MALE GROUSE WILL GATHER IN SPRING ON TRADITIONAL DANCING GROUNDS, CALLED LEKS, AND STRUT WITH THEIR CHESTS PUFFED OUT AND SPIKY TAILS SPREAD, HOPING TO ATTRACT FEMALES.

THIS IS OUR HOME.

IT WAS MADE BY MY REALLY LARGE FAMILY!

HI I'M SAMMY!

I'M A SAGE-GROUSE.

NICE TO MEET YOU.

### FUN FACT:

THE PLAINS INDIAN TRIBES HUNTED SAGE-GROUSE AND IMITATED THE MALE STRUTTING DISPLAYS IN CEREMONIAL DANCES.

### Sagebrush Field Guide

Sage-grouse mainly eat the leaves of sagebrush, chicks eat insects.

Nesting females and their eggs are difficult to find because they are so well camouflaged in the sagebrush.

Golden eagles, ravens, badgers and coyotes are predators.





AS THE TRIO EXPLORES OUTWARD FROM THE TOWN, THEY GET TRAPPED IN A CLOUD OF DUST. AS IT CLEARS, THEY MEET A NEW FRIEND!

### FUN FACT:

PRONGHORN CAN REACH SPEEDS OF 55 MPH, MAKING IT THE SECOND FASTEST LAND ANIMAL (BEHIND THE CHEETAH).

### DID YOU KNOW?

PRONGHORN HAVE EXCELLENT EYESIGHT. NOT ONLY CAN THEY OUTFRAN THEIR PREDATORS, BUT THEY CAN ALSO SPOT THEM FROM FAR AWAY, GIVING THEM A HEAD START!

WHAT'S ALL THIS COMMOTION?

THAT'S POLLY PRONGHORN AND HER EXPEDIENT FAMILY.

PHEW, IT CAN BE EXHAUSTING CHASING EACH OTHER AROUND!

### Sagebrush Field Guide

Pronghorn often have twins.  
They eat plants including sagebrush and rarely need to drink water because they get most of what they need through their food.  
Pronghorn have existed in North America for over 1 million years. So long, that original predators like the dire wolf and American cheetah went extinct many years ago.



A NEW FACE APPEARS AS THE FRIENDS CONTINUE EXPLORING.

### DID YOU KNOW?

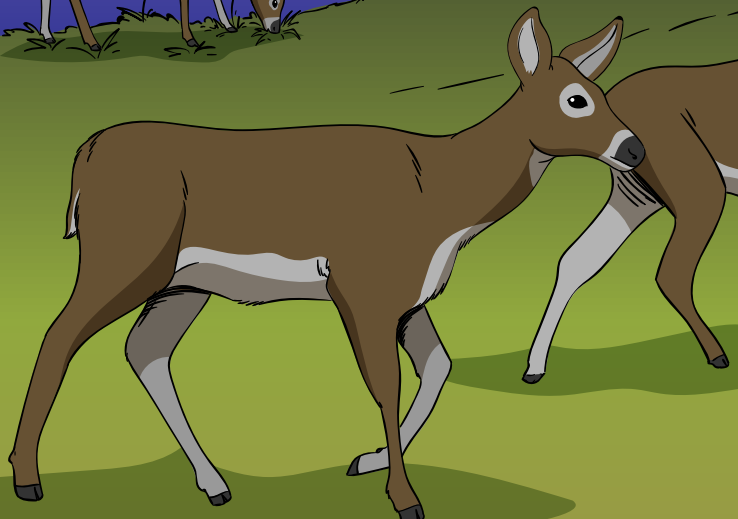
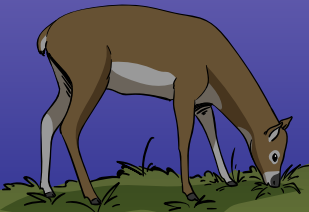
DEER, MOOSE, AND ELK HAVE ANTLERS WHICH ARE MADE OF BONE, ARE OFTEN BRANCHED AND ARE SHED EACH YEAR. SHEEP, COWS, AND GOATS HAVE HORNS WHICH ARE PERMANENT AND MADE OF A BONY CORE WITH A COVERING MADE OF A MATERIAL SIMILAR TO OUR HAIR AND NAILS. PRONGHORN ARE AN UNUSUAL HORN GROWER, THEY HAVE BRANCHED HORNS AND SHED THEIR OUTER SHEATHS ANNUALLY.

ARE YOU A PRONGHORN TOO?

OH NO, I'M A MULE DEER!

MY NAME IS MARTY.

I'M MIGRATING TO SAGEBRUSH SO MY FAMILY HAS PLENTY TO EAT.



### FUN FACT:

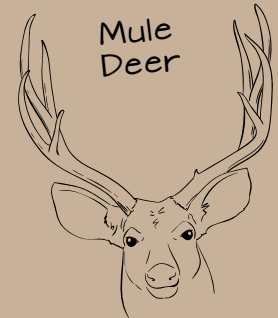
SCIENTISTS HAVE FOUND THAT SOME MULE DEER MIGRATE OVER 150 MILES, TRAVELING BETWEEN SAGEBRUSH AND MOUNTAIN RANGES EACH YEAR.

### Sagebrush Field Guide

White-tailed Deer



Mule Deer



Mule deer eat shrub leaves and twigs.

They have fantastic sense of smell, it's reported that they can detect predators half a mile away.

Male deer are called bucks, females are called does, and their young are called fawns.

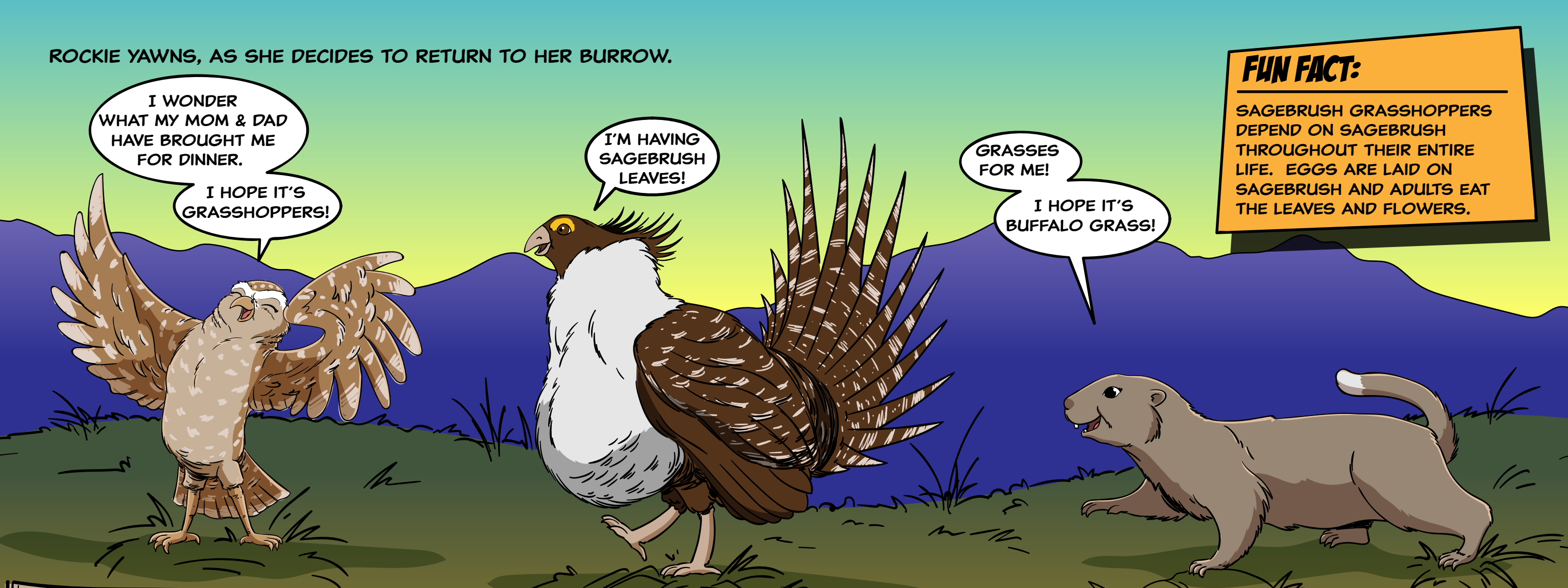
ROCKIE YAWNS, AS SHE DECIDES TO RETURN TO HER BURROW.

I WONDER  
WHAT MY MOM & DAD  
HAVE BROUGHT ME  
FOR DINNER.  
I HOPE IT'S  
GRASSHOPPERS!

I'M HAVING  
SAGEBRUSH  
LEAVES!

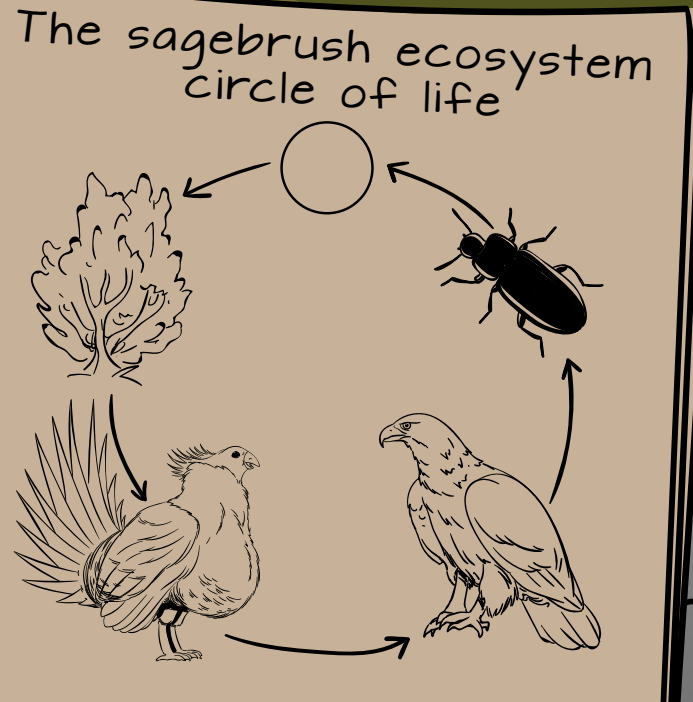
GRASSES  
FOR ME!  
I HOPE IT'S  
BUFFALO GRASS!

**FUN FACT:**  
SAGEBRUSH GRASSHOPPERS  
DEPEND ON SAGEBRUSH  
THROUGHOUT THEIR ENTIRE  
LIFE. EGGS ARE LAID ON  
SAGEBRUSH AND ADULTS EAT  
THE LEAVES AND FLOWERS.



**Sagebrush Field Guide**

Food chains begin with the sun, which gives energy to producers such as a sagebrush. The plant then feeds a consumer, like sage-grouse, which in turn feeds another consumer, such as an eagle. When the eagle dies, the body is broken down by a decomposer, such as a beetle. The decomposing process supplies nutrients to the soil, which allows another plant to grow with the sun's energy.



**DID YOU KNOW?**  
PRAIRIE DOGS ARE A KEYSTONE SPECIES, IF THEY WERE REMOVED FROM THE ECOSYSTEM, IT WOULD CHANGE DRASTICALLY. MORE THAN 160 SPECIES DEPEND ON THEM IN SOME WAY!



AS THE NEW FRIENDS WALK HOME, THEY TALK ABOUT ROCKIE'S ADVENTUROUS FIRST DAY IN THE SAGEBRUSH ECOSYSTEM.

**DID YOU KNOW?**  
THE SAGEBRUSH ECOSYSTEM IS HOME TO OVER 350 DIFFERENT PLANTS AND ANIMALS.

BOY, CAN YOU BELIEVE HOW FAST POLLY COULD RUN?

OR HOW ABOUT THOSE IMPRESSIVE ANTLERS ON MARTY?

I CAN'T WAIT TO EXPLORE IT ALL AGAIN TOMORROW WITH MY NEW FRIENDS!

I AM HAPPY TO HAVE MY FRIENDS AND THE SAGEBRUSH ECOSYSTEM THAT I CALL HOME!

**FUN FACT:**  
LIKE MANY OTHER SPECIES, BURROWING OWLS IN THE SAGEBRUSH ECOSYSTEM MIGRATE TO CENTRAL AND SOUTH AMERICA IN THE WINTER.



## VOCABULARY

**ADAPTATION** – AN ADAPTATION IS THE WAY IN WHICH AN ORGANISM HAS DEVELOPED UNIQUE FEATURES TO HELP IT SURVIVE IN ITS ENVIRONMENT. FOR EXAMPLE, THE PRONGHORN HAS HOLLOW FUR WHICH IS AN ADAPTATION THAT HELPS TO KEEP IT WARM IN THE HARSH WINTER.

**ANTLER** – ONE OF A PAIR OF BONY GROWTHS ON THE HEADS OF MOST KINDS OF DEER. THESE ARE GROWN EACH YEAR. ANTLERS ARE GROWN ONLY ON THE MALES WITH THE EXCEPTION OF CARIBOU AND REINDEER WHO GROW ANTLERS ON BOTH THE MALES AND FEMALES.

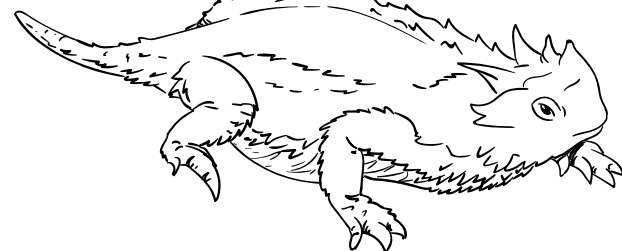
**CONSUMER** – AN ORGANISM, USUALLY AN ANIMAL, WHICH GENERALLY OBTAINS FOOD BY FEEDING ON OTHER ORGANISMS OR ORGANIC MATTER. FOR EXAMPLE, A MULE DEER IS CONSIDERED A CONSUMER OF PLANTS.

**DECOMPOSER** – AN ORGANISM, SUCH AS A BEETLE OR MUSHROOM, THAT FEEDS ON DEAD AND DECAYING ORGANISMS. FOR EXAMPLE, A MUSHROOM GROWING ON A FALLEN LOG GETS NUTRIENTS FROM THAT TREE AND OVER TIME, THE TREE WILL DECOMPOSE AND BE RETURNED TO SOIL.



**ECOSYSTEM** – A COMMUNITY OF LIVING THINGS, ALL CONNECTED WITH THEIR ENVIRONMENT. THE SAGEBRUSH ECOSYSTEM IS A COMMUNITY OF MORE THAN 350 PLANTS AND ANIMALS AND IS CHARACTERIZED BY BEING DRY AND HOT IN THE SUMMER, COLD AND WINDY IN THE WINTERS AND DOESN'T GET A LOT OF MOISTURE.

**FOOD CHAIN** – A SERIES OF ORGANISMS IN WHICH EACH BECOMES FOOD FOR THE NEXT. FOR EXAMPLE, A SPARROW IS EATEN BY A WEASEL, WHO IN TURN IS EATEN BY A FOX. A FOOD WEB IS MANY FOOD CHAINS INTERLOCKING.



## VOCABULARY

**HABITAT** – THE NATURAL ENVIRONMENT OF AN ANIMAL OR PLANT. THE HABITAT OF A BURROWING OWL IS OFTEN IN AN ABANDONED HOLE IN THE GROUND MADE BY ANOTHER ANIMAL, SUCH AS A GROUND SQUIRREL, RABBIT, OR PRAIRIE DOG.

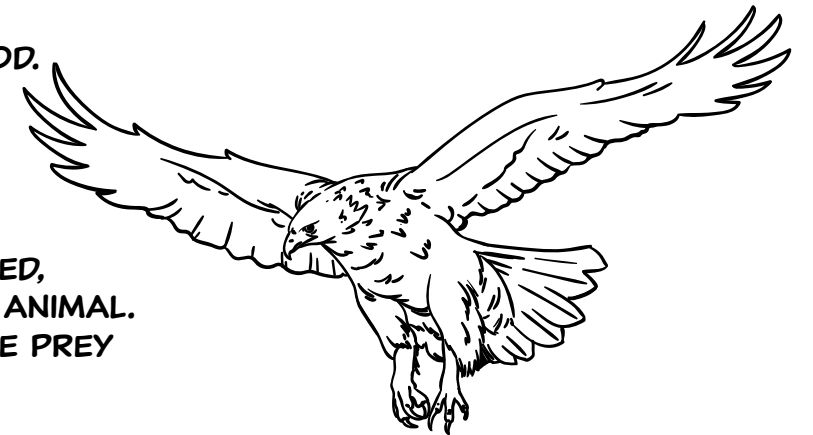
**HORN** – A HARD, HOLLOW GROWTH ON THE HEAD OF ANIMALS SUCH AS COWS, GOATS, AND SHEEP. THESE CAN BE FOUND ON BOTH THE MALE AND FEMALE, OFTEN TIMES THE MALES WILL HAVE MUCH LARGER HORNS THAN THE FEMALES. HORNS ARE USUALLY PERMANENT AND NOT SHED EACH YEAR AS WITH ANTLERS. PRONGHORN ARE AN EXCEPTION HAVING HORNS WITH AN OUTER SHEATH THAT ARE SHED YEARLY.

**LEK** – A PLACE WHERE MALES GATHER EACH SPRING IN ORDER TO DISPLAY DANCE-LIKE MOVES, IMPRESSIVE FEATHERS, ATTENTION GETTING SOUNDS AND OTHER ACTIVITIES THAT ATTRACT FEMALES. THE FEMALES WILL THEN CHOOSE A PARTNER BASED ON THESE DISPLAYS.

**MIGRATION** – THE MOVEMENT OF A GROUP OF ANIMALS FROM ONE PLACE TO ANOTHER AND IN MOST CASES, BACK AGAIN. THESE MOVEMENTS USUALLY TAKE PLACE IN SPRING AND FALL. FOR EXAMPLE, PRONGHORN HAVE THE LONGEST LAND MIGRATION OF ANY NORTH AMERICAN MAMMAL.

**PREDATOR** – AN ANIMAL THAT HUNTS OTHER ANIMALS FOR FOOD. FOR EXAMPLE, A BADGER IS CONSIDERED A PREDATOR OF SMALL RODENTS.

**PREY** – AN ANIMAL BEING HUNTED, CAUGHT, AND EATEN BY ANOTHER ANIMAL. FOR EXAMPLE, PRAIRIE DOGS ARE PREY TO FERRETS.



**PRODUCER** – AN ORGANISM, USUALLY A PLANT, WHICH IS CAPABLE OF MAKING ITS OWN FOOD. FOR EXAMPLE, A PEA PLANT CAN USE THE ENERGY FROM THE SUN AND THE NUTRIENTS IN THE SOIL TO LIVE, IT DOES NOT NEED TO EAT ANOTHER ORGANISM.

**SAGEBRUSH** – A BUSHY PLANT WITH GREY-GREEN LEAVES THAT HAS A PLEASANT PINEY SMELL. IT HAS WHITE OR YELLOW FLOWERS AND GROWS IN THE PLAINS OF NORTH AMERICA.





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