

Wild Times

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THE HABITAT CONNECTION: SAGEBRUSH

Do you know what a sagebrush habitat looks like? If you live in Wyoming, you have probably seen a lot of it. Sagebrush grows in dry plains, mesas or rocky areas with deep soils. The plants are found from 4,000 to 10,000 feet in elevation. Sagebrush covers nearly 470,000 square miles across 11 western states, but Wyoming has more sagebrush than any other state. In fact, there are 13 different types of sagebrush in Wyoming. One of these, Wyoming big sagebrush, gets its name from its size and can grow up to 7 feet tall.



gets most of its food from the sagebrush plants in the winter months. The sage grouse is called a sagebrush obligate species and could not survive without sagebrush.

The strong scent of sagebrush is unmistakable. If you walk near it, you can smell its rich, strong scent. Sagebrush plants also fill the air with a sweet aroma after a rainstorm. That's because the leaves contain special oils to prevent herbivores from digesting their leaves. But many animals will feed upon sagebrush when other food sources are scarce.

Sagebrush provides habitat for several species of mammals, birds, reptiles and amphibians. One of these species, the sage grouse, builds its nest under a sagebrush plant and even

A sagebrush plant grows two sets of leaves. Large leaves in the spring allow the plant to take in water and grow rapidly. These leaves are dropped in the summer, and a smaller, year-round set exposes less area to evaporation. These are the leaves the sage grouse eat during the winter months. Can you think of other wildlife species that live in sagebrush habitats?



Young
sagebrush

Images by Mark Gocke

FIELD Wildlife Journal

Field Wildlife Journal

Brian Jensen, Habitat Extension Biologist

As a wildlife biologist, Habitat Extension Biologist Brian Jensen spends a lot of time studying wild animals and working on habitat projects to give these animals a place to call home.

“Part of my job is to focus on sagebrush grasslands, and many of the projects I do have benefits for sage grouse as well,” Biologist Jensen says.

One of the projects he is currently working on is the Hat Six Sage Grouse Research Project. In order to learn more about sage grouse, Jensen and fellow biologists captured several of the birds and fitted them with radio collars. The biologists then track the birds with special receivers that can read the signal from the radio collar. Tracking the sage grouse allows biologists to learn more about their behavior and habitat needs.

In order to catch the sage grouse, biologists shine spotlights at the birds at night. The bright light causes the birds to “freeze” for a few moments, giving the biologists an opportunity to capture them in a net. Biologists then put a small radio collar on each bird, making certain that it does not interfere with the bird’s ability to eat or escape predators. Biologists then track the collared sage grouse from the ground or airplanes.

“Knowing where the sage grouse spend their time helps us target our habitat work and identify areas that we might need to protect for these birds,” Biologist Jensen says.

The radio-tracking project also provides information on the types of projects that might be necessary to improve sage grouse habitat. Some of these projects include burning old patches of sagebrush to allow new plants to grow, developing natural springs to provide water for wildlife, and preventing the spread of non-native plant species. Biologist Jensen said he enjoys working to help many kinds of sagebrush grasslands species, especially sage grouse.



Biologist Brian Jensen works with sage grouse.

WILDLIFE PROFILES

Robert Shantz



LadKey Parks



Mark Goeke



Robert Shantz



WILDLIFE PROFILES

Pygmy Rabbit

- Size:** Smallest rabbit in North America; about 1 foot long and weighs 1 pound
- Eats:** In winter, it eats mostly sagebrush. In summer, it eats grasses and other plants.
- Lives:** Big sagebrush habitats with deep, soft soils.

Did you know that a pygmy rabbit is small enough to fit in the palm of your hand? This tiny rabbit lives in the southwestern part of Wyoming but is not found anywhere else in the state. The Pygmy rabbit has a small, buff-colored tail, which is hard to see. The Pygmy rabbit is highly dependent on sagebrush to provide both food and shelter throughout the year. It digs its own burrows in soft, deep soil. Its burrow has several entrances and is usually located at the base of a sagebrush plant. Many pygmy rabbits may share several burrows. Weasels, hawks, foxes, owls, and many other animals hunt the pygmy rabbit for food.

Brewer's Sparrow

- Size:** About 5 inches long, with an 8-inch wingspan.
- Eats:** In the summer, it eats insects such as caterpillars, ants, spiders and grasshoppers. In winter, it eats mostly seeds.
- Lives:** In sagebrush habitats.

Did you know the Brewer's sparrow is a common bird in Wyoming during the summer? It migrates to warmer climates during the winter months. Like the sage grouse, it is a sagebrush-obligate species, which means it must have sagebrush habitats to survive. The Brewer's sparrow builds its nest in tall, thick patches of sagebrush. The nest is made out of grass, other plants, and sometimes even hair or fur from other animals. There aren't as many Brewer's sparrows as there used to be because a variety of things are destroying their habitat. But improving habitat for sage grouse will also provide more places for the Brewer's sparrow to call home.

Sage Sparrow

- Size:** 5 to 6 inches.
- Eats:** Eats many insects during the summer months. Will also eat seeds.
- Lives:** In prairie and foothills habitat where sagebrush is present.

Did you know the sage sparrow is a secretive bird and will run along the ground much like a mouse when it is approached? During the breeding season, the male returns to the same nesting site each year and defends a territory by singing from a high perch. Both males and females have a habit of flicking their tails while hopping around on the ground. When perched, the birds often bob their tails up and down. These birds will build their nests in the fork of a sagebrush plant, or occasionally on the ground. Both parents help feed the young, which leave the nest at 9 to 10 days. Fledglings cannot fly when they leave the nest, and the parents continue to provide them food.

Sage Thrasher

- Size:** 7 inches; 1.5 ounces.
- Eats:** Insects and berries.
- Lives:** In sagebrush habitats in the prairies and foothills.

Did you know the male sage thrasher performs an impressive flight display during the breeding season? He zigzags swiftly over the sagebrush and then lands in the brush with his wings held up. Sage thrashers spend much of their time on the ground. When something scares them, they often run with their tails cocked up, rather than fly away. The sage thrasher makes its summer home in Wyoming, where it builds its nest and raises its chicks. The nest is built in sagebrush plants or occasionally on the ground. The nest is cup-shaped and is made of twigs, then lined with grasses and other soft materials. The eggs are a deep blue or greenish blue with large spots or blotches. Sometimes the sage thrasher will build a protective canopy over its nest.

OUR Wildlife Heritage

Sage Grouse

Sage grouse have always been a part of Wyoming and the Wyoming way of life. Native Americans, such as Sioux, Cheyenne, Blackfoot and Shoshone, imitate the sage grouse in their dances. Early travelers wrote about them, and pioneers used them for food. Generations of Wyoming hunters anxiously wait for the opening day of “sage chicken” season. And in recent years wildlife watchers have been fascinated by the birds’ dramatic spring courtship dances.

When the first settlers arrived in Wyoming, there were sage grouse everywhere. At that time sage grouse were found in 15 western states, but now are found only in 11 states. Sage grouse numbers have dropped a lot over the past 100 years, mostly because of the loss of good sagebrush habitat.



Wildlife managers perform “lek” counts. A lek is a spring breeding ground for sage grouse. Biologists count the number of birds that use a lek to help get a good idea of the size of the sage grouse population. Wyoming has also joined several other Western states to create management plans for sage grouse. These plans will help biologists, ranchers, developers and other people make better decisions

that will help protect sage grouse from further habitat loss. Can you think of things your or your class can do to help sage grouse?



Sage grouse need large expanses of sagebrush to meet their habitat needs. Sadly, many sagebrush plants across Wyoming are in poor condition. Drought, oil and gas development, urban growth and other factors are all taking a toll on sagebrush habitats. And when the sagebrush suffers, so do the sage grouse. That’s why wildlife managers are working to restore sagebrush habitat in many areas.



Around Wyoming

What is a lek?

Each spring, male sage grouse perform an elaborate sunrise display on breeding grounds known as “leks.” Leks are generally open areas near sagebrush stands. The open areas allow the males to easily be seen and heard.

The males dance or “strut” around, sometimes flapping their wings, and blow air through the air sacs on their necks. This movement of air causes a “popping” sound that can be heard from a short distance away.

Groups of females observe these displays and select the most attractive males to mate with. Only a few males do most of the breeding. Males perform on leks for several hours in the early morning and evening during the spring months.

Visit a lek

The dramatic display makes viewing sage grouse a popular recreational activity across much of Wyoming. Do you think your class would like to watch sage grouse during their “strutting” season? If so, check out these lek-viewing locations:

Baggs

Upper Red Creek Lek – Take Hwy

789 north of Baggs about 7 miles to the Red Creek Road (no sign), which is on the west side. Go west on the Red Creek Road about 4.3 miles to an intersection, then go right (north) about 1 mile. The lek is in the road on a small curve.

Casper

Hat Six Lek – Take I-25 east of Casper to the Hat Six Road (Hwy 253).

Travel south on Hat Six Road about 7 miles to Country Road 605. Turn left (east) on 605. The lek is about 0.25 mile down the road and is marked by a large sign.

Cody

Windy Flats Lek – From Cody, take Hwy 120 south about 2.9 miles to the first turnoff to the left (east). Take the gravel road east 0.8 mile past a large gravel pit on the right.

Stop on the hill and look southeast to see the lek in a large flat along Sage Creek.

Gillette

Cottonwood Lek – From Gillette, drive south on Hwy 50 about 14 miles. Turn right (west) on the Napier Road. Take the Napier Road about 8 miles. The lek is on the left (south) side of the road, but some males may strut on the road.



Male sage grouse displaying on Cottonwood Lek.

Outdoor Classroom

Sage Grouse Challenge

The sage grouse is a large, ground-nesting bird that makes its home on the sagebrush-covered plains. Sage grouse are fairly common in much of Wyoming, which has more sagebrush and sage grouse than any other state. A sage grouse is considered sagebrush obligate, which means that it cannot survive outside a sagebrush habitat. Can you think of other animals that need certain habitat types in order to survive?

What does a sage grouse look like?

Sage grouse have short wings, small heads and stocky bodies. Males are about 30 inches long and weigh up to 7 pounds. The female is smaller. Both the male and female have mottled brown, gray and black feathers on their tops and sides and black bellies. The male has a black throat and a white chest and a long pointed tail that opens up to a large fan. He also has yellow air sacs that push his neck and chest feathers up when they are inflated.

Can you tell the male sage grouse from the female in photographs 1 and 2 on this page?

Answers on page 8.



SAGE GROUSE FACTS:

Weight: Around 7 pounds; the female is smaller than the male.

Life span: Up to 5 years.

Range: Parts of 11 western states (Wyoming, Washington, Oregon, California, Idaho, Nevada, Utah, Colorado, Montana, North Dakota, South Dakota).

Diet: Sagebrush in winter; grasses, forbs and insects when available.

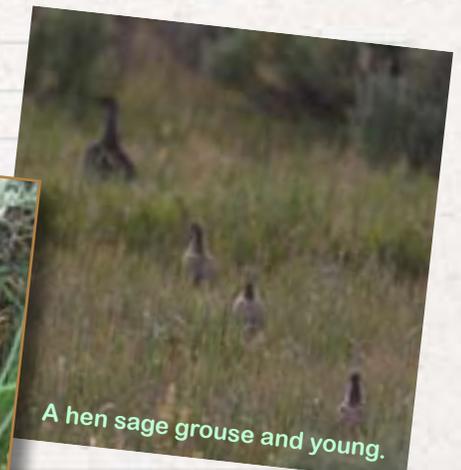
Reproduction: Clutch size six to nine eggs; nests in spring.

Habitat requirements: Large areas of sagebrush with understory vegetation of forbs and grasses.

Other names: Sage hen, sage chicken.

Growing the next generation

After breeding, the female lays six to nine eggs in a nest under a sagebrush plant. The female incubates the eggs, which hatch in about three weeks. The young chicks eat insects for the first few weeks but soon move on to forbs (flowering plants), grasses and sagebrush. The protein in the insects helps the chicks grow fast.



A hen sage grouse and young.



2

▶ TEST YOUR KNOWLEDGE ◀

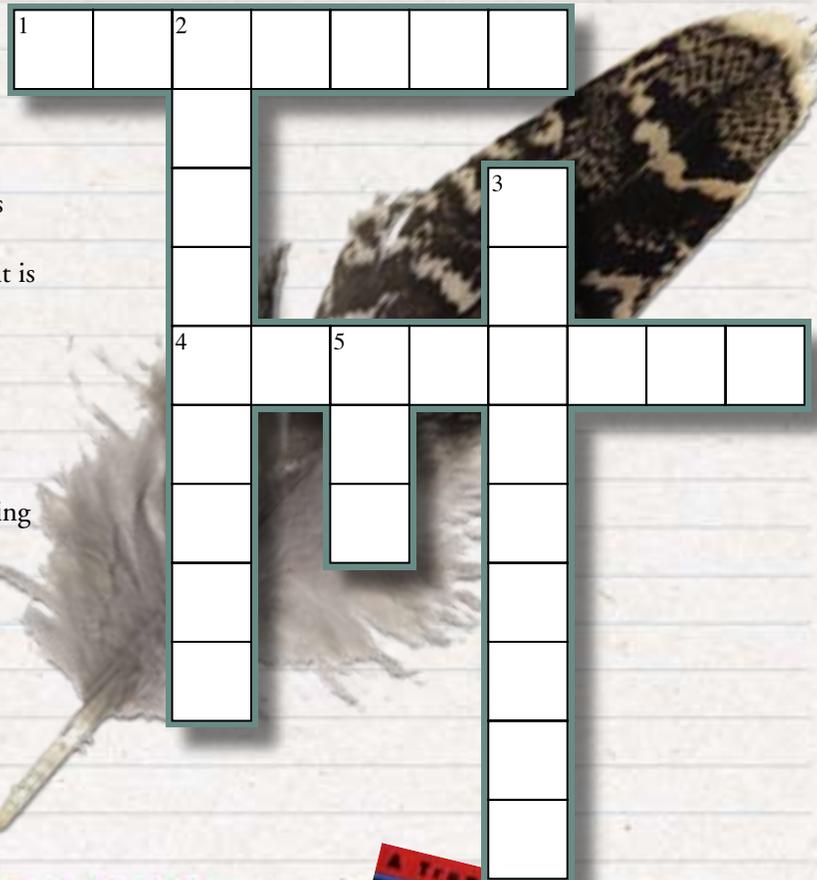
Crossword Puzzle

ACROSS

- The area certain animals need to survive. It provides them with food, water, shelter and space.
- If a species depends on a certain habitat to survive, it is called an “_____” species.

DOWN

- This person studies wildlife.
- This plant makes up much of Wyoming and other Western states.
- This is the area where sage grouse perform their spring mating rituals.



Sage Grouse Challenge Answers
① Male ② Female



ACROSS 1. Habitat 4. Obligate
DOWN 2. Biologist 3. Sagebrush 5. Lek

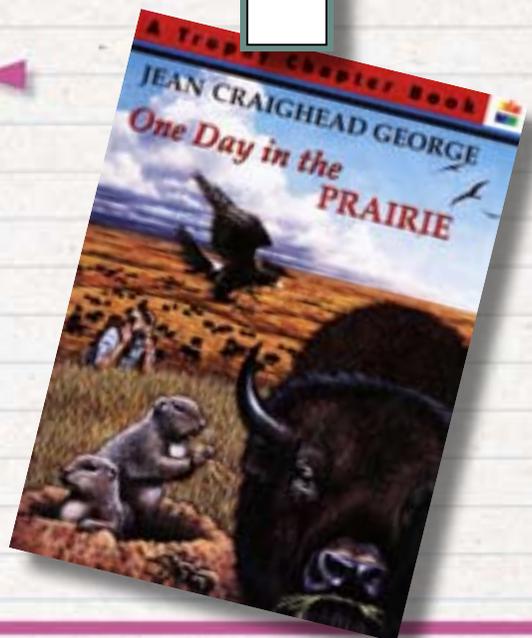
▶ LEARNING LINKS ◀

Book

One Day in the Prairie

by Jean Craighead George

Do you know what kinds of animals you might find on the prairie? Young Henry Rush is spending the day at the Prairie Wildlife Refuge, and he's determined to photograph prairie dogs. Many wild animals share this habitat with the prairie dogs, but will Harry notice them before a fierce storm hits?



Website

<http://www.blm.gov/education/>



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Editor: Janet Milek; Assistant Editor: Ty Stockton
Guest Writer: Robin Kepple
Contributor: Mark Gocke
Graphic Design: Byron Hardwick

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