



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

Farm Service  
Agency

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# Seriously Sage-Grouse

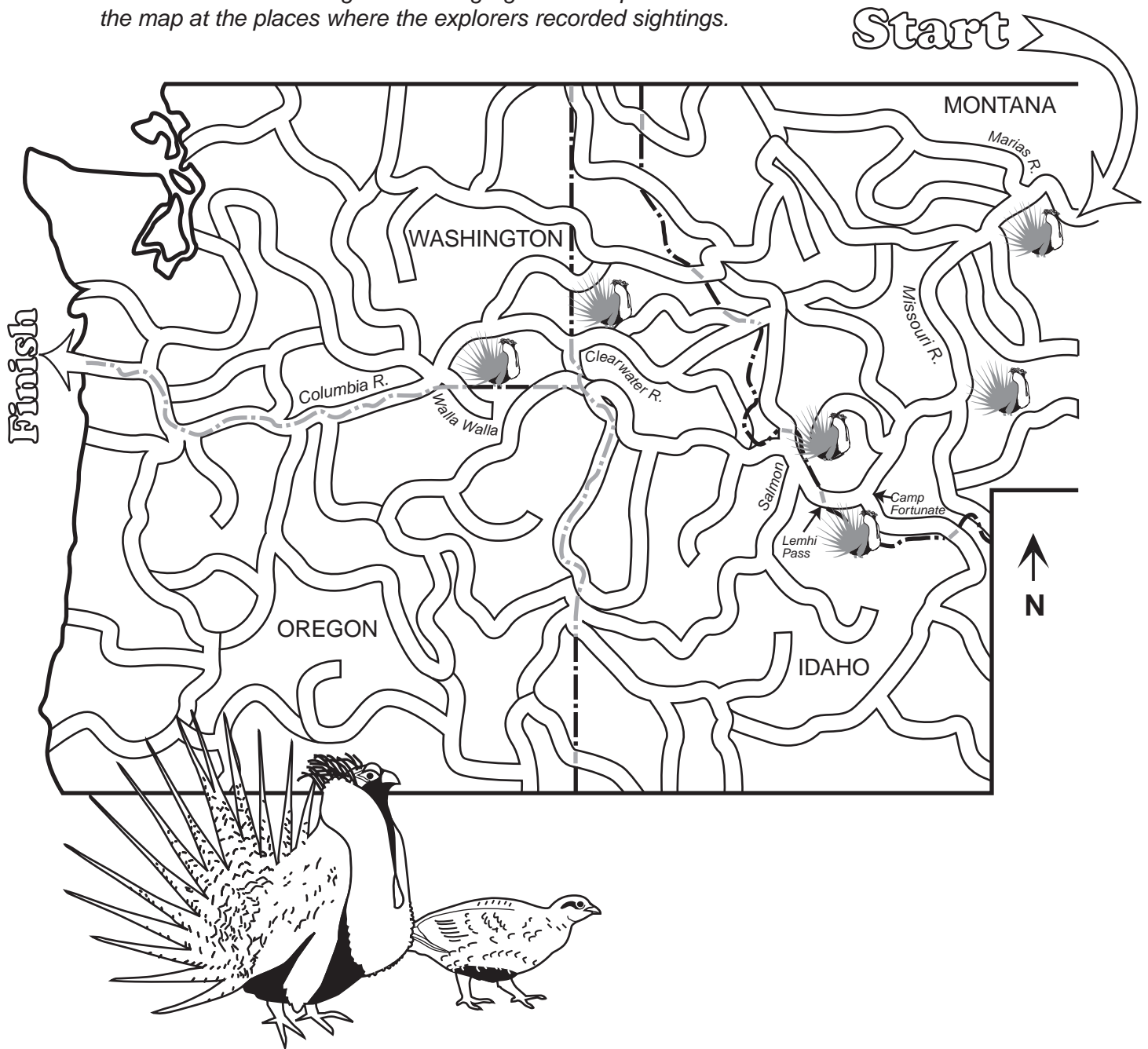


Helping People Help the Land

# How Science Heard About Sage-Grouse

Meriwether Lewis first observed sage-grouse at the mouth of the Marias River on June 6, 1805. The bird was new to science then and plentiful throughout the western part of what is now the United States. Journals from the Lewis and Clark expedition record sage-grouse encounters from the mouth of the Marias River, up the Missouri River to Camp Fortunate, along the trail to Lemhi Pass, along the Salmon River, down the Clearwater River, then to the confluence of the Walla Walla River with the Columbia. Since its first recorded sighting more than 200 years ago, the sage-grouse has experienced a large decline in population.

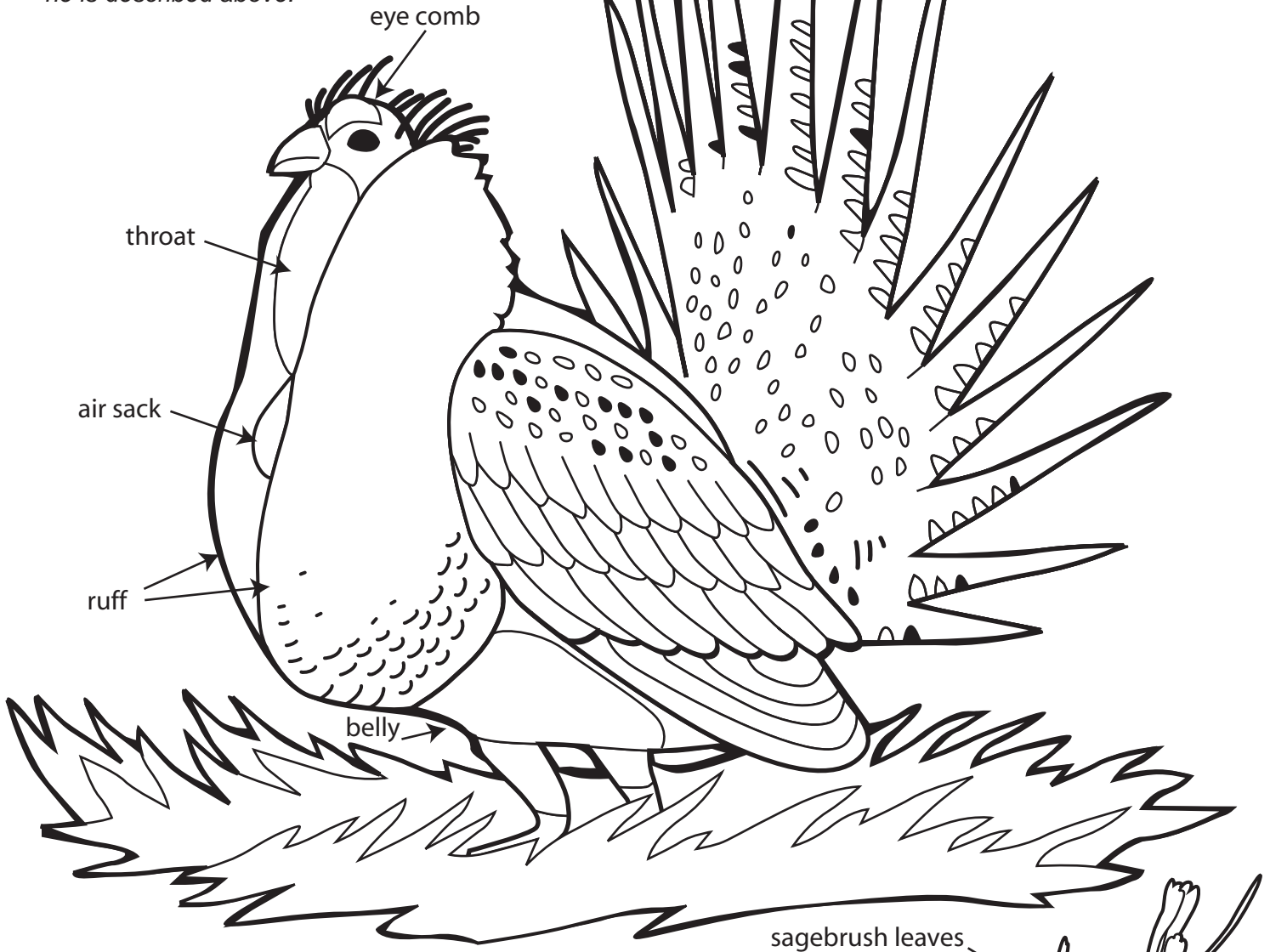
*Find the way through this maze and you will see the route Lewis and Clark took from the mouth of the Marias River in Montana to the Pacific Coast in Oregon. Hint: sage-grouse are pictured on the map at the places where the explorers recorded sightings.*



## What Do They Look Like?

Females are mottled brown, black, and white. Males are larger and, in spring, they have a large white ruff around their necks, a yellow eye comb, and bright yellow air sacks on their breasts, which they inflate to show off to females. Males have a black throat. The feathers on the back, wings, and tail are mostly brown, with some white and black spots. Both sexes have black bellies outlined with white.

*This male sage-grouse is showing off to a female. Color him in so he looks the way he is described above.*

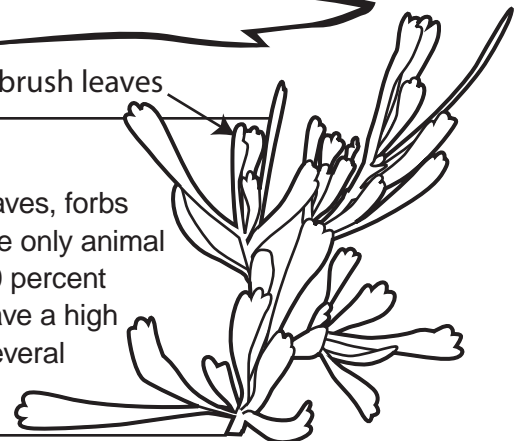


### How big do they grow?

The greater sage-grouse is a large, round-winged, ground-dwelling bird. It can grow up to 30 inches long and two feet tall, weighing from 2 1/2 to 7 pounds. It has a long, pointed tail with legs feathered to the base of the toes.

### What do they eat?

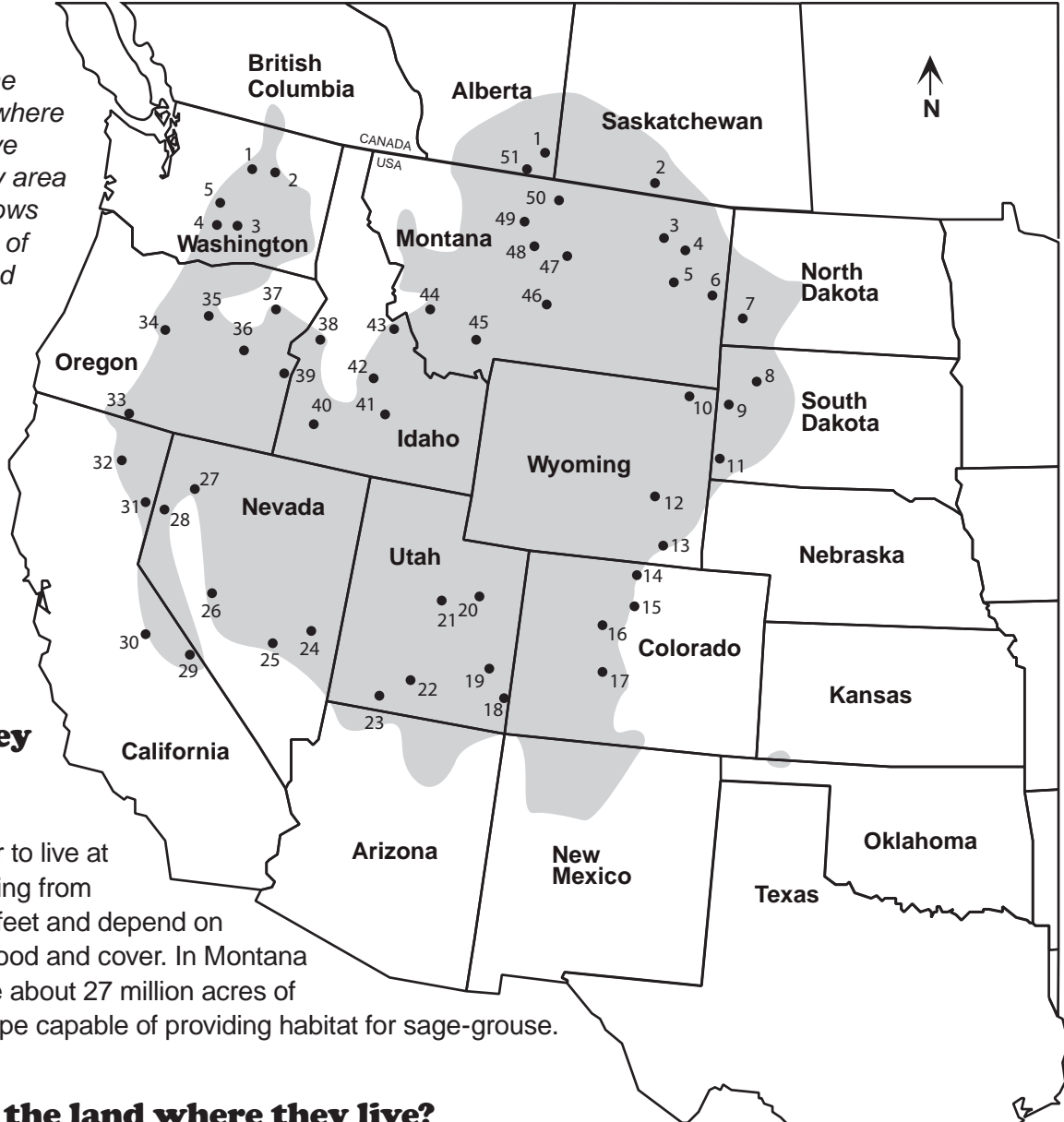
Sage-grouse eat sagebrush leaves, forbs (wildflowers) and insects. It's the only animal that, in winter, can live on a 100 percent sagebrush diet. Chicks must have a high quality insect diet for the first several weeks after hatching.



# Where Do They Live?

Saage-grouse live in Montana and 10 other Western states (California, Colorado, Idaho, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming). They also live in the Canadian provinces of Alberta and Saskatchewan.

*Connect the dots to show the boundaries of where sage-grouse live today. The gray area on the map shows the boundaries of where they lived in the past.*

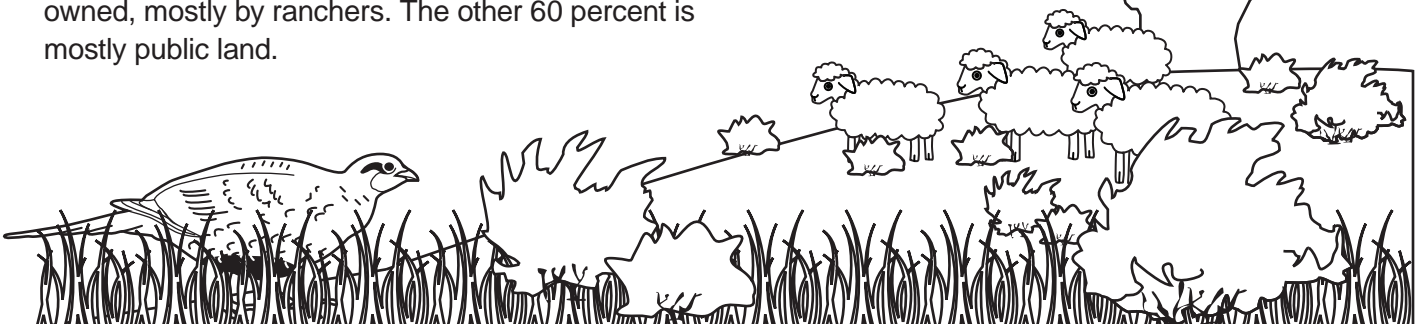


## Why do they live where they live?

The birds prefer to live at elevations ranging from 4,000 to 9,000 feet and depend on sagebrush for food and cover. In Montana alone, there are about 27 million acres of sagebrush steppe capable of providing habitat for sage-grouse.

## Who owns the land where they live?

About 40 percent of sage-grouse habitat is privately owned, mostly by ranchers. The other 60 percent is mostly public land.



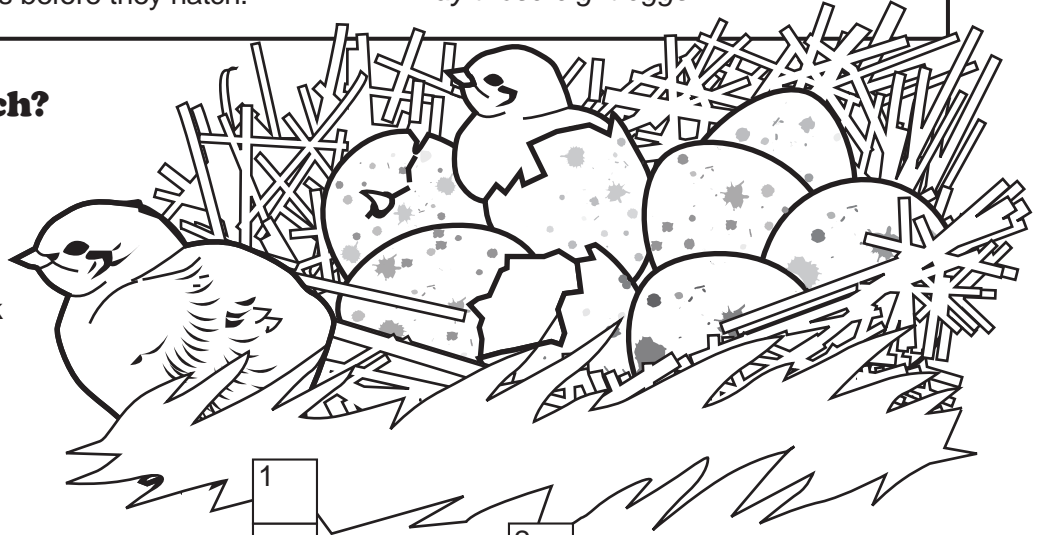
# How Do Sage-Grouse Have Babies?

Sage-grouse reproduce by laying eggs. Female sage-grouse (hens) lay two eggs in three days. One nest can have seven to nine eggs in it. Chicks inside the eggs grow (or incubate) for 28 days before they hatch.

*If a hen has eight eggs in her nest, how many days did it take her to lay those eight eggs? \_\_\_\_\_*

## How does an egg hatch?

The chick inside the egg chips its way through the eggshell with an egg tooth, a temporary tip on its bill that helps the chick break the shell. The chick hatches after one to two days of pecking circular fractures around the large end of the egg, finally breaking through it.



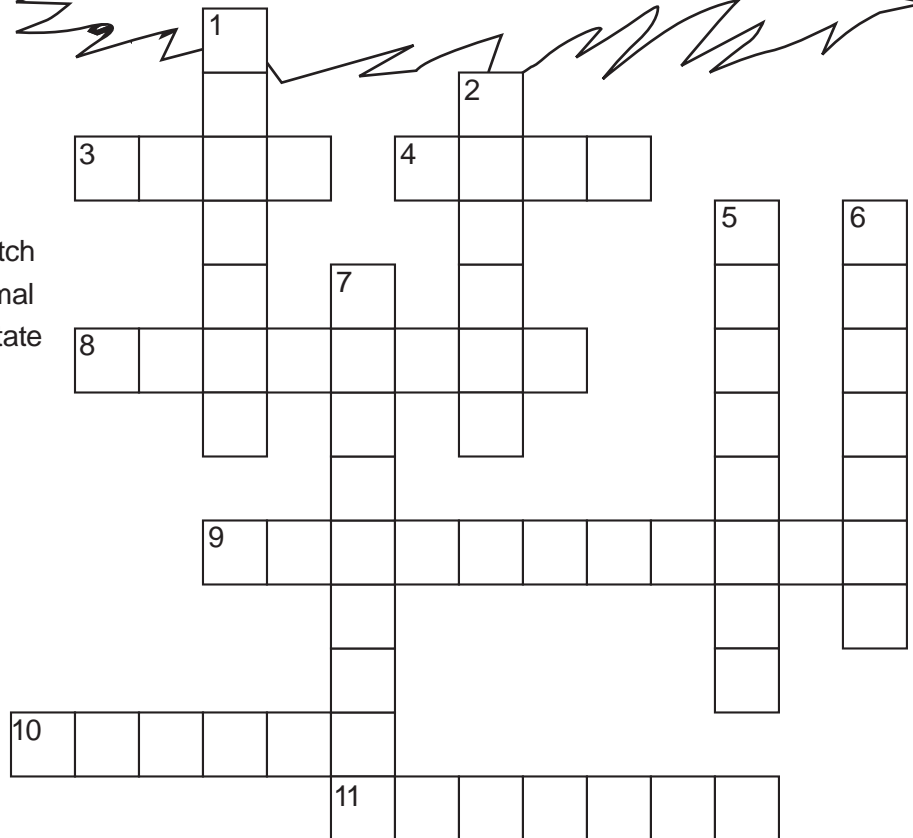
## Crossword puzzle

### ACROSS

- 3. Female sage-grouse (pl.)
- 4. Where eggs stay before they hatch
- 8. An animal that eats another animal
- 9. Land divided into lots for real estate
- 10. Baby sage-grouse (pl.)
- 11. A place where an animal lives

### DOWN

- 1. Evergreen tree or shrub
- 2. The color of the air sacks on a male sage-grouse
- 5. Animals living in the wild
- 6. When a cow or other animal eats grass for food
- 7. Provides food and cover for sage-grouse



## What is a lek?

One of the most unique characteristics of the greater sage-grouse is the ritual used for mating. A lek is a gathering of males for the purpose of competitive display (strutting) and mating. Males commonly roost overnight near the lek, and before sunrise, will move to the lek and display. This will continue for a couple of hours following sunrise, March through May.

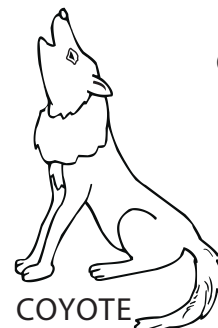
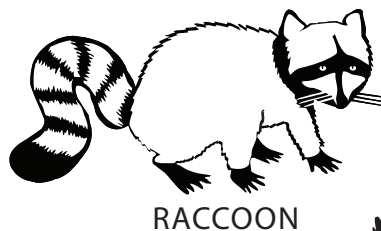
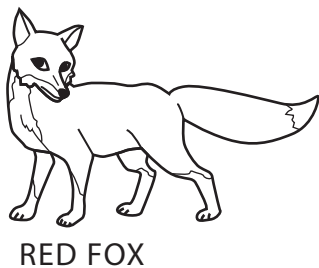
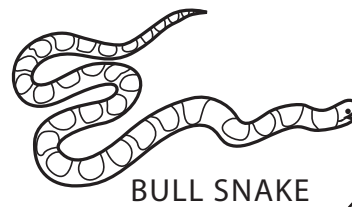
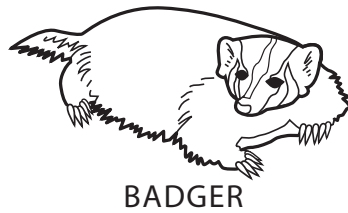
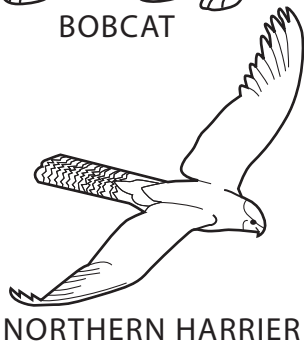
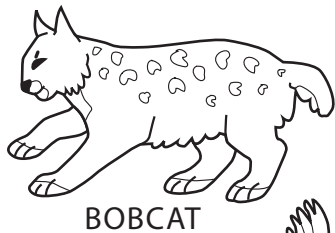
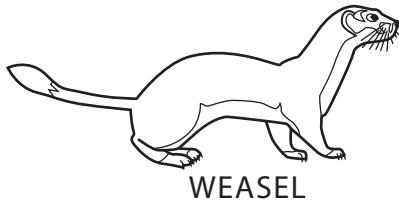


# Who Are the Predators of Sage-Grouse?

A predator is an animal that eats another animal. Predators of sage-grouse can be either other birds or animals that hunt on the ground.

Other bird predators: black-billed magpie, common raven, Golden eagle, Northern harrier, and prairie falcon. Ground predators: badger, bobcat, bull snake, coyote, raccoon, red fox, skunk, and weasel.

Find and circle the names of these predators of sage-grouse in the word puzzle.



O	B	M	N	N	X	J	N	D	Z	O	X	I	O	L	M	C
B	U	Z	O	G	W	E	A	S	E	L	A	X	U	B	C	O
B	L	A	C	K	B	I	L	L	E	D	M	A	G	P	I	E
P	L	R	L	N	P	Q	R	E	G	D	A	B	B	A	F	Q
W	S	I	A	P	X	C	T	C	M	J	E	N	F	X	Y	K
C	N	X	F	H	G	O	L	D	E	N	E	A	G	L	E	K
A	A	P	E	A	D	M	S	Q	L	V	C	G	B	K	F	H
W	K	M	I	N	Z	J	O	T	A	Z	J	S	B	A	O	R
R	E	I	R	R	A	H	N	R	E	H	T	R	O	N	A	X
K	T	H	I	S	R	A	N	B	O	M	Y	A	P	C	O	I
G	O	R	A	O	K	O	J	R	Z	E	G	D	C	F	O	W
Z	Y	S	R	V	M	U	A	T	S	X	V	O	D	B	J	Z
X	O	O	P	M	J	Z	N	L	X	T	O	E	Q	I	O	X
X	C	V	O	T	S	U	A	K	J	N	R	T	C	U	Y	B
K	F	C	I	A	O	X	I	B	M	L	Z	N	F	D	L	O

# Why Are There Fewer Sage-Grouse Now?

Fragmentation (breaking a large area up into several unconnected areas) of sagebrush habitats from a number of sources is the main cause of the decline in sage-grouse populations. Other reasons include exotic species invasion, unsustainable grazing systems, sodbusting, subdivision, and conifer encroachment.

## What do these words mean?

Draw a line from the word to its definition.

Fragmentation

Sagebrush

Habitat

Population

Predator

Exotic

Invasion

Unsustainable

Grazing system

Sodbusting

Subdivision

Conifer

Encroachment

All the individuals of one species in a given area

To be broken apart

A place in which an animal or plant normally lives or grows

To move beyond an established limit

An animal that lives by capturing and eating other animals

To break land out of grass to plant to a crop

The act of spreading into or over

Cannot be supported or maintained

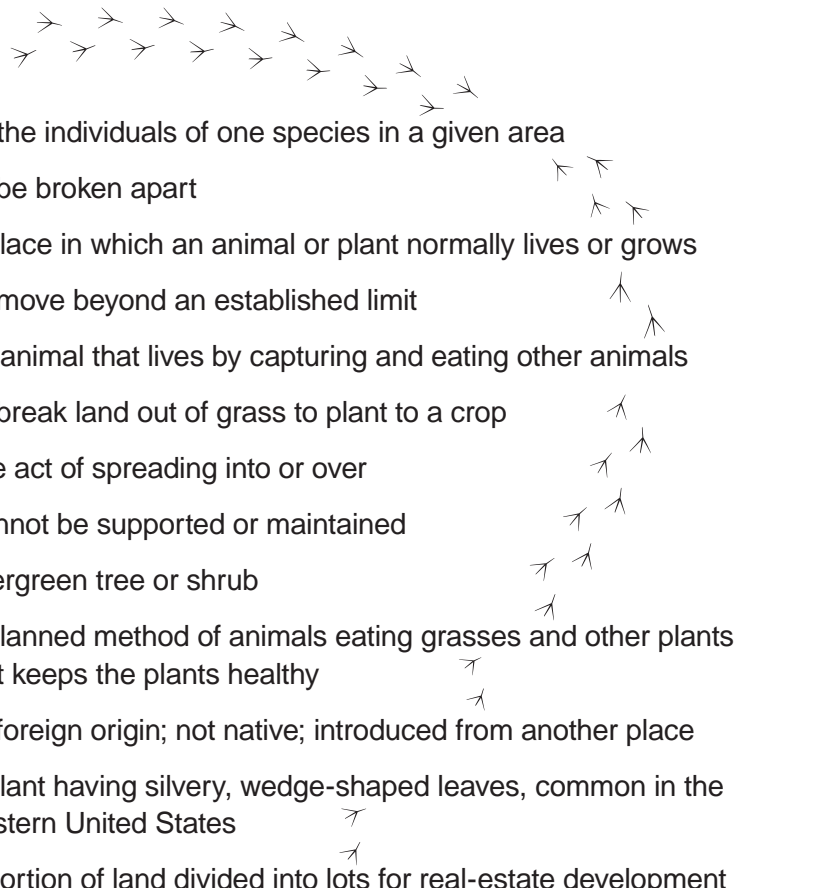
Evergreen tree or shrub

A planned method of animals eating grasses and other plants that keeps the plants healthy

Of foreign origin; not native; introduced from another place

A plant having silvery, wedge-shaped leaves, common in the western United States

A portion of land divided into lots for real-estate development



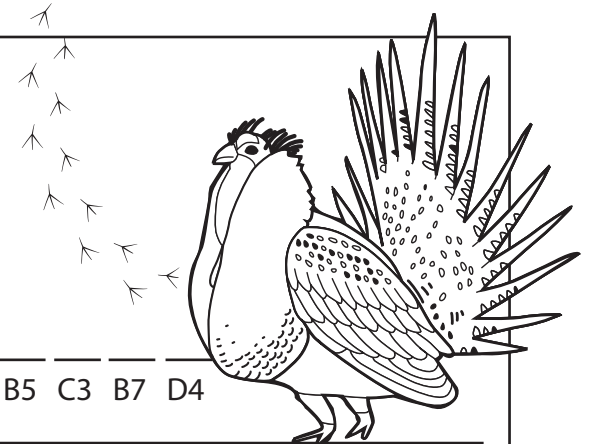
## Break the code

D4 A5 C3 B7 C4 B1 C3 B1 B6 B2 A4 B7 C3

D2 B7 C4 B7 D3 B4 A6 B2 D6

B2 C7 D4 A5 C3 C4 B4 C3 B6 D2 D1 C4 C1 B5 C3 B7 D4

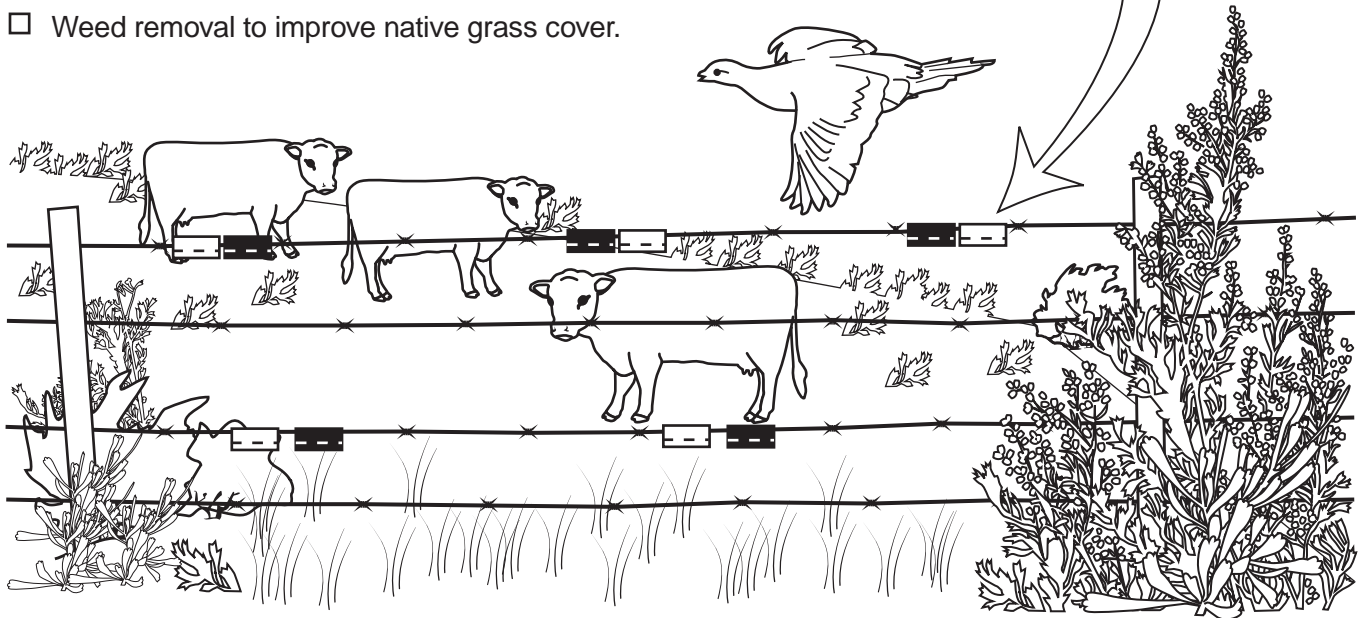
	1	2	3	4	5	6	7
A	J	D	Q	U	H	B	Z
B	G	O	K	M	W	R	S
C	N	R	E	A	Q	X	F
D	C	I	Y	T	P	L	V



# How Can We Help?

What's good for cows is generally good for sage-grouse, too. The USDA Natural Resources Conservation Service (NRCS) works with ranchers to develop grazing systems that are good for their land, their cows or sheep, and the sage-grouse. Ranchers often use the following practices that are good for the land and good for the sage-grouse:

- Grazing systems that allow cattle and sheep to be moved from pasture to pasture to keep grass high enough to hide sage-grouse nests.
- Markers placed on fences so sage-grouse see the fences and don't fly into them.
- Escape ramps placed in stock water tanks for sage-grouse and other wildlife to use if they get into a stock water tank by accident.
- Weed removal to improve native grass cover.

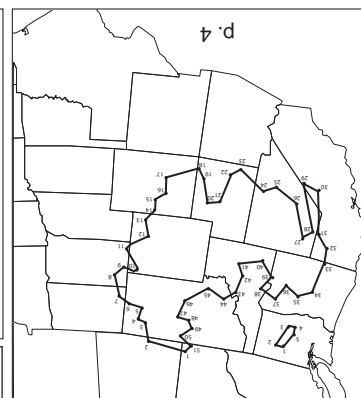


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T	H	E	S	A	G	E	-	G	R	O	S	E				
D4	A5	C3	B7	C4	B1	C3	B1	B6	B4	A4	B7	C3				
L	S	A	S	Y	M	B	O	L								
D2	B7	C4	B7	D3	B4	A6	B2	D6								
O	F	T	H	E	A	M	E	R	I	C	A	N	W	E	S	T
B2	C7	D4	A5	C3	C4	B4	C3	B6	D2	D1	C4	C1	B5	C3	B7	D4

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O	B	M	N	X	J	N	D	Z	O	X	I	O	L	M	C			
B	U	Z	O	G	W	E	A	S	E	L	A	X	U	B	C			
P	L	R	L	N	P	Q	R	E	G	D	A	B	A	F	O			
W	S	I	A	P	X	C	T	C	M	J	E	N	F	X	K			
C	N	X	F	H	G	O	L	D	E	N	E	A	G	L	E	K		
A	P	E	A	D	M	S	O	V	C	G	B	K	F	H				
W	K	M	I	N	Z	J	O	T	A	Z	J	S	B	A	O	R		
R	E	I	R	A	H	N	E	H	T	R	O	M	A	X				
K	T	H	I	R	A	N	B	O	M	Y	A	C	O	I				
G	O	R	A	O	J	R	Z	E	G	D	E	F	O	W				
Z	Y	S	R	Y	M	A	T	S	X	V	O	B	J	Z				
X	O	O	P	M	J	Z	N	X	T	O	I	O	I	X				
X	C	V	O	T	S	U	A	V	I	N	B	L	Z	N	F	D	L	O

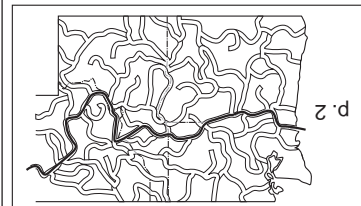


p. 7

Fragmentation	To be broken apart
Sagebrush	A place in which an animal or plant normally lives or grows
Habitat	To move beyond an established limit
Population	An animal that lives by capturing and eating other animals
Predator	To break land out of grass to plant to a crop
Exotic	The act of spreading into or over
Invasion	Cannot be supported or maintained
Unsustainable	Evergreen tree or shrub
Sodusting	A planned method of animals eating grasses and other plants that keeps the plants healthy
Grazing system	Of foreign origin; not native; introduced from another place
Conifer	A plant having silvery, wedge-shaped leaves, common in the western United States
Encroachment	A portion of land divided into lots for real-estate development

p. 5

C	O	H	I	C	K	S		H	A	B	I	T	A	T
L	I	R	E	D	A	T	O	R						
S	U	B	D	I	V	I	S	I	O	N				
E														
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Answer Keys: