

Wild Times

A Free Publication of the Wyoming Game & Fish Department

Summer 2008

THE HABITAT CONNECTION: WINTER RANGE

Have you seen elk on a windswept ridge, deer on open sage flats, or moose along streams browsing willows, and wondered how wildlife survives the winter? Wyoming is known for its long, snowy winters with severe temperatures and howling wind, yet its wildlife can survive these conditions by using very specific, crucial habitat. Winter habitat is probably the most important factor for Wyoming's wildlife, especially for ungulates. Ungulates are animals like elk, mule deer, moose, and bighorn sheep that have hooves. Healthy winter range protects wildlife from starvation but also makes them less vulnerable to predators and less susceptible to diseases.



Mark Gocke

they don't need to use as much energy digging through the snow to find food. Moose diets are almost entirely willow.

Because winter habitat is so important, the Wyoming Game and Fish Department and other agencies work hard to protect and enhance these ranges. One of the tools used in the case of elk habitat is prescribed fire. Biologists use data that show them areas that elk use in the winter.

By burning these areas intentionally, it helps new, highly nutritious grasses and forbs to grow. Biologists may also use cattle grazing to help reduce old, tough, cured forage, but leave new growth for wildlife when they need it most ... in the winter!

Winter range can be located all over Wyoming and comes in all shapes and sizes, and is different among species. Deer and antelope rely heavily on sage and woody shrubs for their winter needs. Elk eat grasses and forbs, but they will use hillsides that face the south and are windswept. That way

People need to know the value of winter range and know that animals are very vulnerable during these times. Any disturbance to wintering wildlife can cost that animal calories and lessen its chances for survival. Do you have winter range for wildlife near your home?

LuRay Parker



Mule deer on winter range

FIELD Wildlife Journal

The BFH Program

The Brucellosis-Feedground-Habitat program is a section of the Wyoming Game and Fish Department. It is made up of four biologists in Jackson and Pinedale. This group is responsible for the management of brucellosis in wildlife and combining research with new techniques to help find solutions for brucellosis.

Several research projects have been started in the region to help fight brucellosis. Biologists dart and immobilize elk during the winter and implant transmitters that give a signal when an elk gives birth, or calves. These transmitters are then retrieved in backcountry areas by biologists on horseback or foot. They then collect habitat data on the location and birthing material to test for brucellosis. This is just one of the many ways the state is researching this disease.

Next time you are out in the backcountry, look for Game and Fish biologists working hard to study brucellosis.



What is brucellosis, you ask?

Brucellosis is a disease that infects elk and bison in western Wyoming and threatens cattle. The disease causes animals to abort their calves. If the disease is transmitted to domestic cattle, it has consequences for the agriculture industry and the economy of the state, because ranchers are unable to market their cattle.



A WGFD biologist homes in on a BFH Program transmitter.

WILDLIFE PROFILES

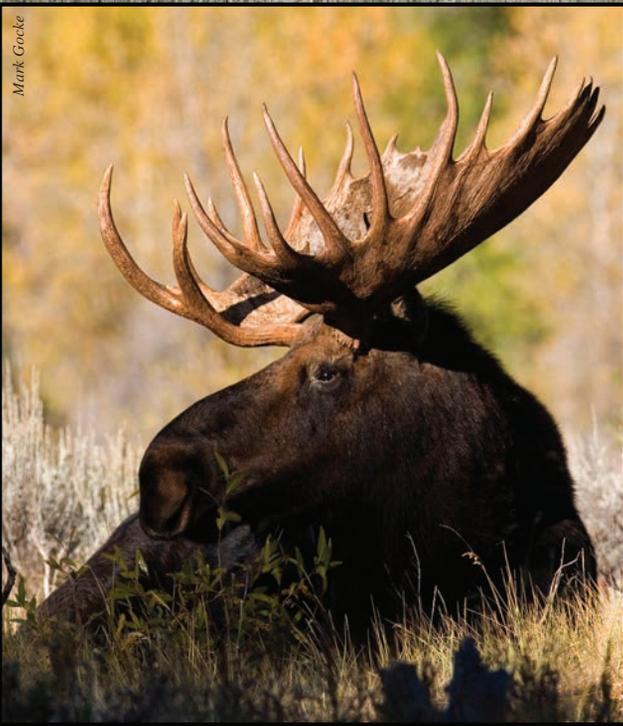
Mark Gocke



Mark Gocke



Mark Gocke



Lanby Parker



WILDLIFE PROFILES

Bighorn Sheep

- Size:** Bighorn rams can weigh up to 300 pounds, while mature ewes can weigh 200 pounds.
Eats: Lichen, grasses, alpine wildflowers.
Lives: On rugged mountainsides or steep canyons.

Did you know that bighorn sheep can survive the tough Wyoming winters at an elevation of 12,000 feet? Bighorn sheep have crucial migration corridors, or passageways, that they follow down the mountains in the winter in search of food. Some corridors have excess forest growth that blocks these routes, because we prevent wildfires. Bighorn sheep struggle to cross these overgrown corridors. Controlled burns by wildlife managers are critical for bighorn sheep survival. Unlike members of the deer family who have antlers, which are shed each year, bighorns have horns that continue to grow throughout their life. In fact, both sexes of sheep have horns, with the male, or ram, having curled horns that can weigh up to 30 lbs.!

Elk

- Size:** One of the largest mammals in North America. Adult males can weigh up to 1,100 pounds, and females can weigh 650 pounds. Antlers can weigh up to 30 pounds and span 5 feet.
Eats: Grasses and forbs.
Lives: In mountain meadows to sagebrush flats.

Did you know that elk migrate up to 60 miles to their winter ranges? Elk rely on windswept ridges and sagebrush flats for winter range. Many of these lands lie close to private ranches and can create conflicts with livestock. Some elk in north-west Wyoming are also infected with brucellosis, which can be transmitted to cattle. Around 30 percent of the elk that visit feedgrounds may have brucellosis, while around 5 percent that use native winter range show signs of the disease.

Mule Deer

- Size:** Adult bucks can weigh up to 250 pounds, and does can weigh up to 170 pounds.
Eats: Shrubs like sagebrush, bitterbrush, and rabbitbrush.
Lives: Almost everywhere in Wyoming, but numbers are shrinking.

Did you know that mule deer live in virtually every ecosystem in the Rocky Mountain west? The habitat that is most crucial for deer is their winter range. Deer can't handle deep snow like the larger members of the deer family. They rely on what forage is available above the snow, which is almost entirely woody shrubs. However, shrubs can become decadent, meaning they aren't growing new tender and nutritious branches. Overgrazing and fire suppression have harmed many of our winter ranges for mule deer. This, combined with oil and gas development and the building of houses and roads in migration corridors, has led to decreasing mule deer populations across the west.

Moose

- Size:** Moose are the largest members of the deer family. Wyoming is home to the Shiras moose, the smallest of the four North American subspecies, weighing between 600 and 1,400 pounds.
Eats: Woody vegetation, especially willows and aspen.
Lives: In riparian areas and sage meadows.

Did you know that around 60 percent of Wyoming's riparian land, or wetlands, are privately owned? These are the areas where the majority of Wyoming's moose spend the winter. Moose rely almost exclusively on willows to survive the winter. Their stomachs are specially designed to digest the woody material and bark. If you have a chance to examine moose scat, it looks like they have been eating sawdust. Riparian areas aren't only important for moose, they're the home to 94 percent of Wyoming's wildlife, but only 3 percent of the state consists of wetlands. This makes riparian areas one of the most crucial habitats to protect in the state!

OUR Wildlife Heritage

Winter Elk Feedgrounds



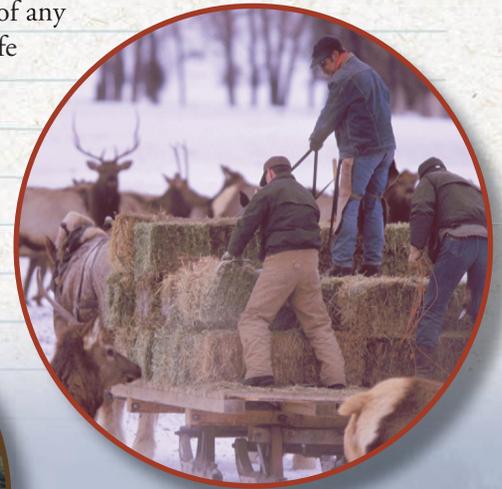
Elk feedgrounds began in Wyoming in 1912. They started with the feeding of wild elk on the National Elk Refuge to prevent starvation of animals and to compensate for the loss of habitat in Jackson Hole. Habitat loss was due to people moving into the valley and migration corridors being blocked. Another main reason for feedgrounds was to keep elk away from cattle, where they could transmit diseases like brucellosis. Elk can also cause damage to hay. The other reason for all of the feedgrounds is elk require a lot of habitat to survive the winter, and this habitat is no longer available because of human uses. The Wyoming Game and Fish Department now has 22 state-run feedgrounds around Jackson and Pinedale for a variety of reasons. Some of the feedgrounds operate to prevent elk collisions

on highways; some are to keep elk numbers high for hunters and others who like to see elk.

Unfortunately not much was known about wildlife diseases and brucellosis when feedgrounds began. Because feedgrounds congregate elk and bison in a small area during the winter season when brucellosis is easily transmitted, the disease infects many of the animals on feedgrounds. Today, wildlife managers are faced with weighing both sides of the argument in trying to do what is best for the elk and the people of the state.

Elk feedgrounds have become a social dilemma for the state. There are so many interests in livestock and wildlife in Wyoming that no solution has been found. This means that elk management is often front-page

news. Can you think of any answers to help wildlife managers? Do you know of other major dilemmas in wildlife management?



Images by Mark Gocke

Around Wyoming

Visit a Winter Range

If you're interested in how wildlife copes with tough winters, there are many opportunities to view wildlife on their winter range. Remember that all wintering wildlife are vulnerable, and harassment of wildlife costs calories that help them live. Viewing from within a vehicle or from a designated area is recommended. Here are some places that might be near your home:

Red Canyon Wildlife Habitat Management Area (WHMA)

Elk use these open slopes along Wyoming 28 east of South Pass. Stop at the Red Canyon overlook and look for areas that are south-facing and windswept. Five hundred to six hundred elk may use this area and be visible to wildlife watchers throughout the winter.

Bud Love Wildlife Habitat Management Area (WHMA)

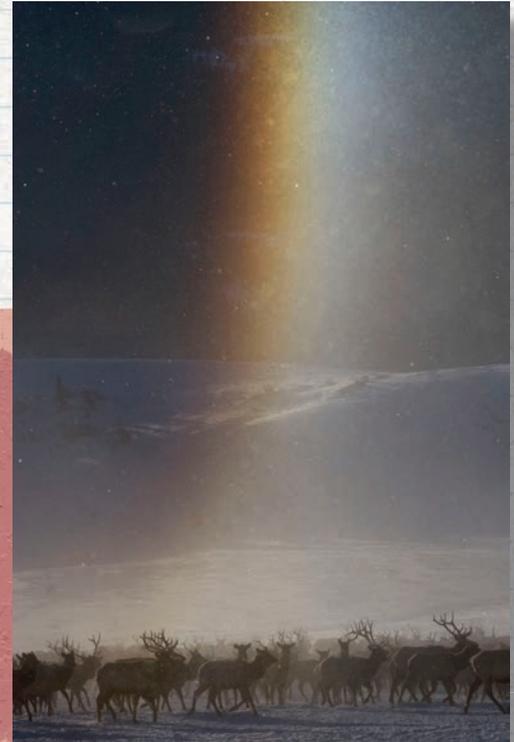
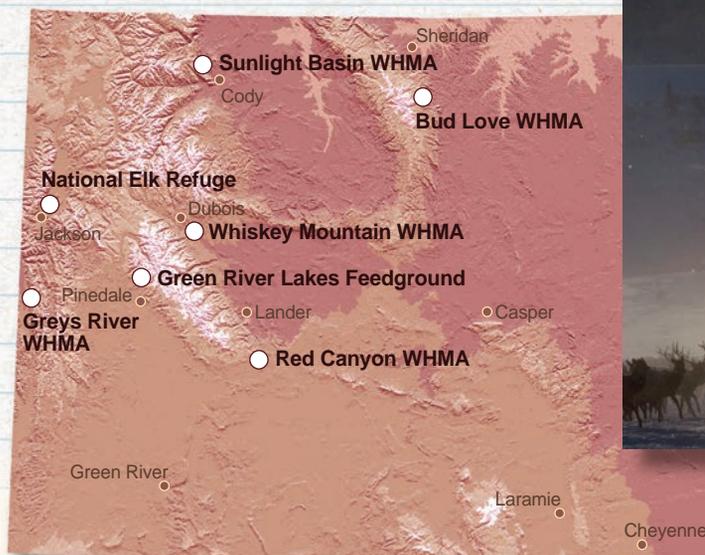
This area was established in 1970 to provide crucial winter habitat for big game species. Elk, deer, and a few antelope use the area for winter range. The area lies six miles northwest of Buffalo. County Road 131 to County Road 80 is a loop that allows viewing with binoculars, but the area is closed to hiking from November 24 through May 14 to protect big game.

Sunlight Basin WHMA

Take Wyoming 120 north of Cody 16 miles and turn west onto Wyoming 286 for 21 miles, then turn left on Sunlight Road. The Sunlight Basin Meadows are considered crucial winter range for nearly 1,000 elk, as well as mule deer, bighorn sheep, and moose.

Whiskey Mountain WHMA

This area is located 5 miles southeast of Dubois off of U.S. 287. Turn onto County Road 257 (Trail Lake Road) and travel about 2.5 miles. View bighorn sheep on native winter range from a viewing building that includes spotting scopes and interpretive signs.



Mark Gocke

Greys River Wildlife Habitat Management Area

This area is located about 1 mile south of Alpine on U.S. 89. It caters to winter viewing of elk on a feedground with a viewing blind and interpretive signs.

National Elk Refuge

The elk refuge viewing site is located at the Jackson Hole Visitor Center on U.S. 89/189 1 mile north of Jackson. Horse-drawn sleigh rides take you out among the elk. The National Elk Refuge offers sleigh rides daily from 10 a.m. to 4 p.m. from mid-December to April. Adults are \$16, Children between 5 and 12 years old are \$12, and those 4 years old and younger are free. Call 733-0277 for more information. These sleighs offer the chance to view elk on a winter feedground.

Green River Lakes Feedground

This feedground is remote and requires a snowmobile to view, but it is on a popular, groomed snowmobile trail. Take U.S. 189/89 west of Pinedale 5 miles to Wyoming 352. Take this north to the Bridger-Teton National Forest boundary. Snowmobilers are asked to maintain low speeds and avoid stopping while passing near winter elk feedgrounds.

Outdoor Classroom

Brucellosis Challenge:

Brucellosis was first brought to Wyoming by cattle. Before much was known about diseases, it was common for people to graze cows with elk or bison. This practice has been stopped, and cattle are now free of the disease in Wyoming. Unfortunately, some elk and bison are still infected. Because we have used so much of the native winter range for elk, feedgrounds were developed. These feedgrounds continue the problems of diseases, because the animals are feeding so close together, just like the flu can transmit through your classroom.



What is being done?

Biologists have several new research projects focused on brucellosis to better understand the disease. There are vaccination programs that are being used. To vaccinate elk, wildlife managers use a “bio-bullet,” or a small pellet, containing vaccine that is shot out of an airgun into the muscle, where it dissolves. Another of the projects being worked on is preventing “commingling,” or mixing, of elk and cattle or bison and cattle during the winter when brucellosis is most likely to be transmitted.

Because winter is the season of most concern, winter range is very important to these elk and bison. To improve winter range and spread elk out, biologists design habitat improvement projects usually involving prescribed fire to increase forage where elk winter. Also, to help reduce elk mixing with cattle, the state operates 22 feedgrounds that separate the animals from cattle. However, these feedgrounds have increased the rates of disease in the elk that use them. Wildlife managers are constantly faced with the dilemma of feeding elk or not feeding elk.

Brucellosis Facts:

What causes Brucellosis?
A bacteria called *Brucella abortus*

Life Span: Up to 120 days outside of an animal in cool, moist, shaded areas

Range: Found in elk and bison in the Greater Yellowstone Ecosystem

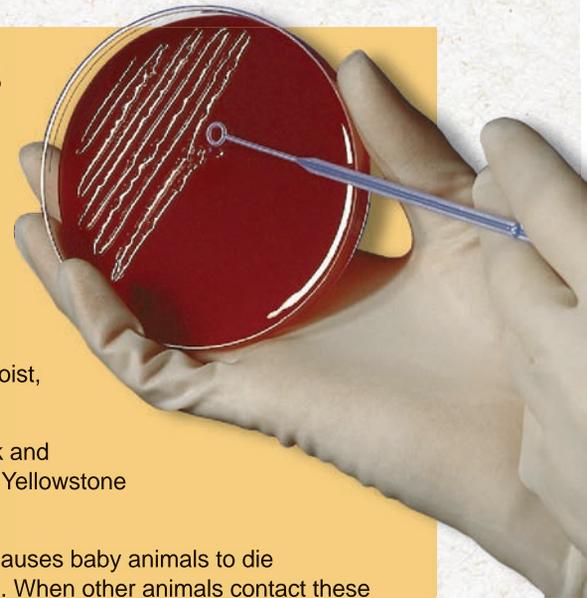
How's it spread? Causes baby animals to die before they are born. When other animals contact these materials they can be infected.

Size: Microscopic, can hide inside individual cells

Can it infect humans? Yes

How? Veterinarians and meat processors are most at risk; elk and bison hunters should use safety precautions like gloves and thoroughly cook meat

Other Names: Undulate fever, Malta fever, Mediterranean fever, Bangs disease



Images by WCFD Staff

Can you identify the management actions we've discussed earlier occurring in photographs 1, 2, and 3?



Answers on page 8

▶ TEST YOUR KNOWLEDGE ◀

Crossword Puzzle

ACROSS

- When animals leave an area for the winter, they _____.
- A disease that some elk have and may pass on to wildlife is called _____.
- Elk having long legs to walk through winter snow is an example of an _____.

DOWN

- Do bighorn sheep have antlers or horns?
- An animal that has hooves is called an _____.



Brucellosis bacteria growing on a petri dish.

ACROSS
1. Migrate 2. Brucellosis
DOWN
3. Adaptation 4. Ungulate



Brucellosis Challenge answers for page 7:

- Vaccinating elk for brucellosis
- Using fire to improve forage
- Separating elk from cattle.

▶ LEARNING LINKS ◀

Books

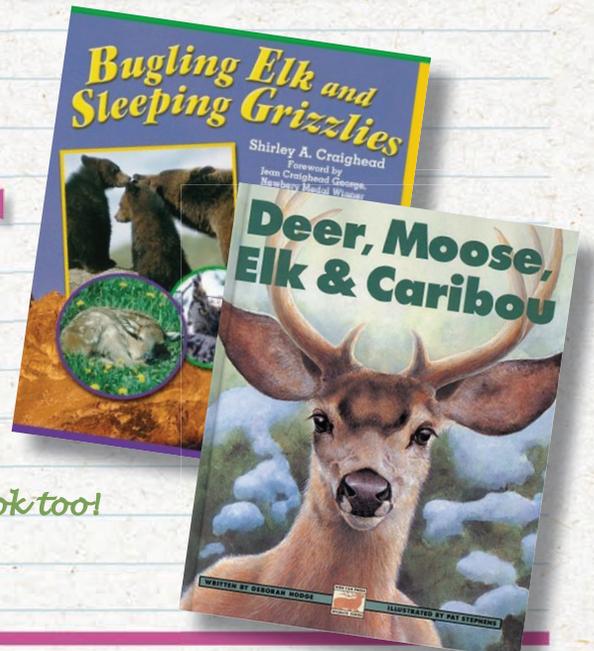
Bugling Elk and Sleeping Grizzlies: The Who, What, and When of Yellowstone and Grand Teton National Parks

by Shirley A. Craighead

Want to learn more about wildlife? Check out this book too!

Deer, Moose, Elk and Caribou

by Deborah Hodge and illustrated by Pat Stephens



Volume 6, No. 4
Summer 2008
Editor: Janet Milek Assistant Editor: Ty Stockton
Guest Writer: Chris Colligan
Contributor: Mark Gocke
Graphic Design: Byron Hardwick

Wyoming Wildlife's Wild Times is published four times during the school year (October, December, February and April). Please direct inquiries and changes of address to Wild Times, Education Branch, 5400 Bishop Blvd., Cheyenne, WY 82006; (307) 777-4538.

Printed in the USA. Copyright 2008 by the Wyoming Game and Fish Department. All rights reserved.

The Wyoming Game and Fish Department receives financial assistance in Sport Fish and Wildlife Restoration. Under title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, sex, or disability. If you believe that you have been discriminated against in any program, activity, or facility as described above, or if you desire further information please write to: Department of Interior, U.S. Fish and Wildlife Service, Division of Human Resources, 4401 N. Fairfax Drive, Mail stop: 2000, Arlington, Virginia 22203.