WILD TIMES

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Habitat can benefit from fire

By Jill Randall
Terrestrial Habitat Coordinator

Summer is a time of year when it can be very hot and dry in Wyoming. Of course, heat and lots of dry plants and trees make a perfect recipe for forest fires. We have all been warned by Smokey the Bear about preventing forest fires, and these fires can certainly cause a lot of danger and damage when it happens in places that people have built homes and other buildings. However, forest fires are not always a bad thing, especially for nature.

Jill Randall, a Wildlife Biologist for Wyoming Game and Fish, knows quite a lot about forest fires. She says that forest fires can be good for plants and the wildlife that depend on them. Some plants begin to grow back again just a few weeks after a fire. Often, these new plants are found to be even healthier than nearby plants that did not get burned. Some plants, such as aspen, actually depend on forest fires to remove the evergreen trees (like pine trees, spruce trees, and fir trees) that compete with them for sunlight, water, and nutrients. When evergreen trees are removed by a fire, the aspen trees will quickly fill in the landscape. This is helpful because aspen trees are a main food source for species such as mule deer and elk, who love to eat their twigs and buds.

Aspen trees offer important habitat for many species of wildlife by providing both food and cover. Sadly, we have lost about half of the historic aspen stands found in the Rocky Mountain West due to preventing wildfires over the past century. While some people may think a burned forest is ugly or useless, these burnt forests actually contain lots of opportunities for new plants to grow, which is a welcome sight for most wildlife. This increase in plants for animals like deer and elk to eat is a great result of fire being an important part of a natural ecosystem. When the deer and elk have more food to eat, they are stronger and can have more young to join their herd in the future!

Game wardens have many responsibilities

By Kristen DaVanon
Game Warden

Imagine you are fishing at a local lake with your family. A woman walks up to you wearing a red shirt, shiny gold badge, and a big belt with a gun on it. Your first thought might be that the woman is a police officer. While not far off, she is actually a game warden. Kristen DaVanon is a game warden for the Wyoming Game and Fish Department. Game wardens are people who help protect wildlife.

Kristen DaVanon during watercraft training.

Kristen DaVanon, bottom right, inspects a boat.

As a game warden, Kristen has a wide range of responsibilities and each day of work is different from the one before. In Wyoming, game wardens focus on three main job duties: law enforcement, wildlife management, and helping the public.

Game wardens spend a third of their time making sure that people follow the laws that help to protect Wyoming's wildlife. This includes making sure everyone out fishing, hunting, or boating is following the law and being safe. Sometimes for this part of the job, wardens get to be wildlife detectives and solve crimes like finding out if an animal was killed without a proper hunting license. While warden DaVanon is talking with you and your family, she finds out what has been caught and seen in the lake. She will give this information to the local fish biologist to monitor the fish so people can continue to catch big, healthy fish.

Game wardens spend another third of their time managing wildlife. Wardens work closely with wildlife biologists to collect and analyze data used for managing Wyoming's wildlife. This includes everything from collecting samples from deer and other wildlife during hunting season to flying in a helicopter to count the number of moose in a specific area.

Game Wardens spend the final third of their time helping the public. Wardens communicate with landowners to make sure their needs are being met, help when humans have close encounters with wildlife, and educate the public. This can include going to local schools to talk to classes or relocating a bear from a busy neighborhood. Most of the time, this part of the job includes answering phone calls and questions from the public.

Being a game warden is a very challenging job. Game wardens must first have a college degree in biology, wildlife management, or something similar. They must pass a test that includes knowledge of wildlife, laws, and issues involving wildlife and people in the outdoors. With hard work and dedication, they could be offered a job in this fun and rewarding career. While there are many aspects to being a game warden, Kristen's favorite part is the adventure each day holds! Whether it is capturing deer to put a collar on it to track where it lives or chatting with a local hunter while checking licenses, each day is new and exciting.

WILDLIFE PROFILES

Grizzly bear

Range: In North America, grizzly bears are found in western Canada, Alaska, Washington, Wyoming, Montana, Idaho. Within Wyoming, grizzly bears are found in the Northwest corner near Yellowstone and Grand Teton National Parks and south as far as Lander and the Wyoming Range.

Size: Grizzlies can be 6-7 feet long, with a height of about 3.5 feet at the shoulder. They weigh between 300 to 800 pounds, with males being larger than females.

Habitat: Grizzlies like to live in valleys, mountain forests, and meadows, usually near streams and lakes.

Young: Grizzlies mate every 3 years and give birth to 1-3 cubs that are born blind and hairless in their den over the winter. These cubs nurse and grow in the den until springtime, when they emerge. They stay with their mother for 2 years before going off on their own.

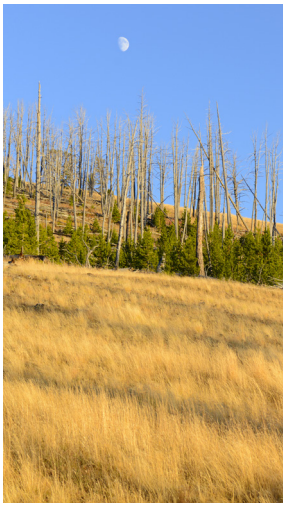
Predators: Grizzlies are a top predator and have no natural predators, meaning nothing else in the wild eats them.

Food: Grizzly bears are omnivores, meaning they survive by eating plants and animals, including mammals, fish, insects, fruit, nuts, leaves, and carrion (the remains of animals that have died).

Did you know? Grizzly bears benefit from forest fires! In the late summer, grizzly bears love to eat shrubs that produce berries, such as buffaloberry, currants, gooseberries, cranberries, huckleberries, bilberries, blueberries, salmonberries and even blackberries. These bushes tend to survive best with lots of sunlight in open areas, so when forest fires remove many of the trees that usually shade the forest floor, these plants do very well and grizzlies have plenty to eat of a favorite food.

WILDLIFE PROFILES

White-tailed Deer



Range: The white-tailed deer is found across North America, especially east of the Rocky Mountains.

Size: White-tailed deer weigh about 80-180 pounds with females being slightly smaller than males.

Habitat: White-tailed deer tend to be found in foothills and valleys near streams and rivers, often near agricultural lands.

Young: Females give birth to 1 or 2 fawns (baby deer) in the springtime. These fawns start out with spotted coats to help them camouflage, which is another way to say that they blend in with their surroundings.

Predators: Mountain lions and wolves will usually eat adult deer while coyotes, bears and golden eagles prefer to eat fawns.

Food: White-tailed deer are herbivores, meaning they eat only plants. These include grasses, leafy plants, shrubs, and new twigs and buds on trees such as willows and aspens.

Did you know? White-tailed deer also benefit from wildfires. If fires do not pass through nature, big trees and shrubs can start to take over grassy areas. This is bad news for animals like deer that eat grass, leafy plants called forbs, new growth on shrubs, and younger trees. So, when fires do pass through a forest, they remove lots of thick, built up brush and allow lots of new grass and little bushes to grow that the deer love to eat!

Habitat managers may start prescribed fires

Sometimes people who manage habitats and wildlife, like Wyoming Game and Fish, the U.S. Forest Service, and the Bureau of Land Management (also known as the BLM for short) see an area that is adapted for natural fires to burn the landscape, but for some reason a fire has not burnt the land in a while. Places that have adapted to fire have plants that might require hot temperatures in order to let their seeds out, or have plants that are not damaged much by fire. In this case, these people work together to decide if they should have a prescribed burn of that area. A prescribed burn is a fire that land managers light and take care of very carefully to be sure that only the area they want to burn catches fire. Fire is a tool that is good in some places, but not in all places, so the biologists have to evaluate the situation and decide if a different tool will do a better job of keeping the plants and animals healthy. When biologists and habitat managers use prescribed burns as a tool, they light the fires in a very safe way while keeping a lot of factors such as wind and the shape of the land in mind so that the fire does not burn anything that it is not meant to.

A prescribed burn is a fire that land managers light and take care of very carefully to be sure that only the area they want to burn catches fire.

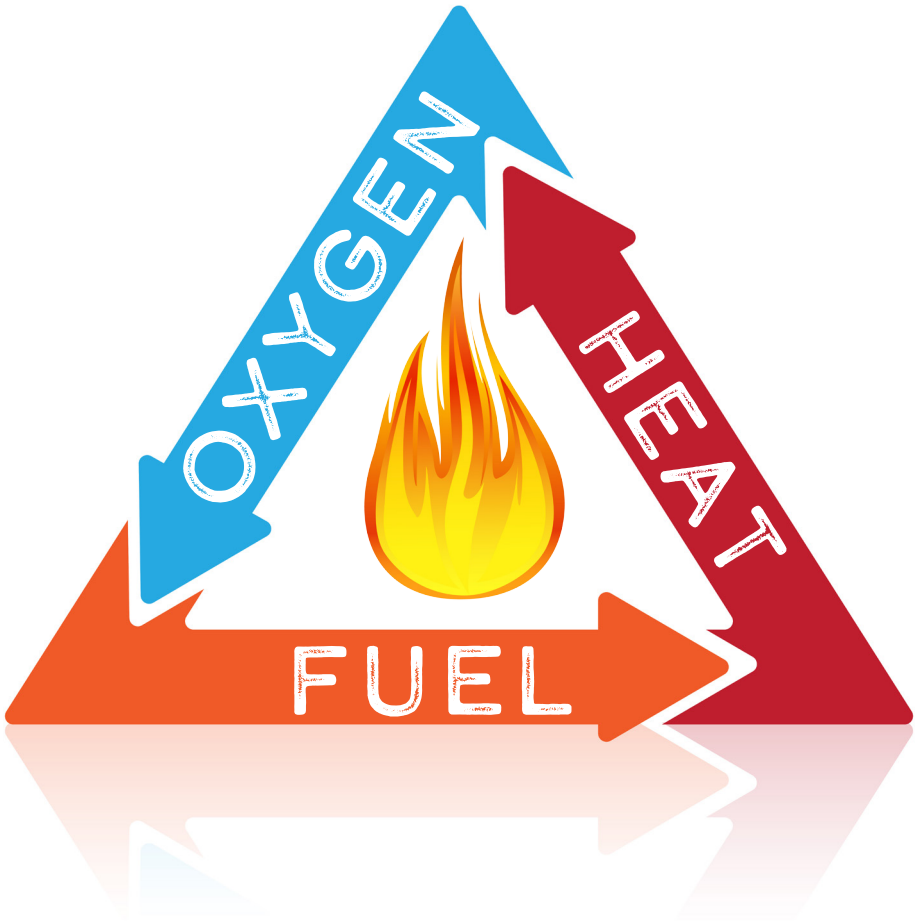
Wyoming Game and Fish habitat biologist Jill Randall says:

We try to meet multiple goals with one prescribed burn. For example, we may use a prescribed burn to remove pine trees that are taking over a grove of aspen to make way for young aspens, flowers, and grasses while also helping reduce too much fuel from building up to lower the risk of future wildfires that are not prescribed. Most of the time we are trying to get more young plants to grow since they produce better food for wildlife. A lot of wildlife that eat plants such as deer, elk, and bighorn sheep like recently burned areas because of the good quality of plants that grow after the fire and because the fire removed trees that were in their habitat that could have been blocking their view of the landscape and making it harder for them to see danger on the horizon.

A recipe for fire

Fire has a few ingredients that it needs in order to burn. Do you know what they are?

- Heat
- Oxygen
- Fuel



That's right! A fire needs heat, oxygen, and fuel to burn.

The heat is what gets the fire started. Without a hot spark, either from natural lightning or a campfire that a person did not fully put out, a fire cannot get started. The oxygen and fuel keep the fire going through chemical reactions. If any of these three ingredients are not available, a fire cannot burn.

Try this experiment with a teacher or parent to explore what fire needs to burn:

Light a birthday candle with a match. You can stick the candle in a bit of clay to make it stand up on a safe surface such as a metal baking sheet. The match provides a hot spark to light the candle.

Notice how the candle burns. What is the fuel in this situation? If you guessed the wick, you are correct! The wax is there to prevent the wick from burning too quickly. What other things can be used as fuel for fire?

When you are ready to put out the candle, you can do it in a few different ways. All of these ways need to make either the heat, oxygen, or fuel go away so that the fire cannot continue to burn. One way to do this is to put a jar over the top of the candle. You will notice that the candle goes out once it uses up all of the oxygen inside of the jar. Another way you can put out a candle is by pouring water over it. This not only takes away the oxygen from the flame- it also takes away the heat! If you let the candle burn until there is no more wick left, it will run out of fuel and eventually go out. Finally, you can blow the candle out. Although oxygen is an important ingredient in fire, if you give a fire too much of an ingredient, it can put it out. Just like a recipe, the ingredients need to be balanced out just right in order to make a fire. This is why it can sometimes be challenging to build a campfire!

Great job! Now that you have explored the ingredients it takes for a fire to burn, you need to always keep in mind that although fire is an important part of nature, it can be very dangerous as well. Leave it to nature to start its own wildfires and be sure to keep your campfires in a safe area and put them out all the way.

TEST YOUR KNOWLEDGE

Forest fires: True or false

1) All forest fires are bad.

True ***False***

2) The three parts of the fire triangle are heat, fuel, and oxygen.

True ***False***

3) It is okay to start a forest fire by not putting your campfire out all the way.

True ***False***

4) Bears, deer, and many other wildlife benefit from the new growth after a forest fire.

True ***False***

5) Game wardens have a busy job enforcing laws, managing wildlife, and helping the public.

True ***False***

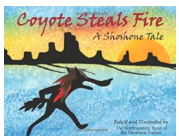
Answers:

1. False 2. True 3. False 4. True 5. True

LEARNING LINKS

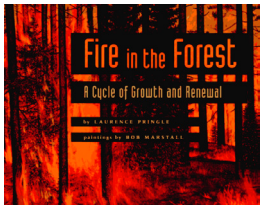
Books to check out

Coyote Steals Fire: A Shoshone Tale by Northwestern Band of the Shoshone Nation



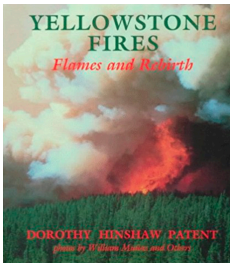
This book is a traditional tale for the Shoshone and has been passed down generation to generation about how the Shoshone tribe made fire. The coyote travels to a desert land and sets his wig on fire to bring it back to his village and his fellow animals.

Fire in the Forest: A Cycle of Growth and Renewal by Laurence Pringle (Author), Bob Marstall (Illustrator)



This book depicts the stages of fire and regrowth in Western lodgepole pine forests while discussing the fire cycle and role of fire in forest ecology.

Yellowstone Fires: Flames and Rebirth by Dorothy Hinshaw Patent (Author), William Munoz (Photographer)



This book Describes the massive forest fires that burned almost one million acres of Yellowstone National Park in 1988 and the effects, both positive and negative, on the ecology of the forest there.

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Editor/writer: Ashley Andersen
Design: Justin Joiner
Contributors: Jill Randall, Kristen DaVanon

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