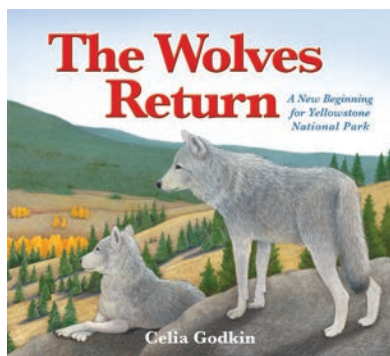


A New Beginning for Yellowstone National Park



STORY SUMMARY

In 1995–96 two packs of Canadian gray wolves were released in Yellowstone National Park where, due to over-hunting, there had been no wolves at all for almost seventy years. This reintroduction project was an overwhelming success. Over twenty years later we can still see the changes the gray wolves brought to Yellowstone.

Now that the elk graze higher ground to escape the wolves, tree seedlings in the valley are growing tall. Rivers change as beavers use the trees to build dams, and thriving wetlands have been established. This true story offers an important lesson about the difference one creature can make in creating a healthy, thriving world.

Celia Godkin is an award-winning author and illustrator best known for her debut book, *Wolf Island*, which won the Children’s Literature Roundtables of Canada Information Book Award. She has continued to write and illustrate children’s books with environmental themes, including *Fire!* which was shortlisted for the Norma Fleck Award for Canadian Children’s Non-Fiction. *Skydiver: Saving the Fastest Bird in the World* was nominated for the Green Earth Book Award and the Hackmatack Children’s Choice Book Award. Born in England, Celia lives in Eastern Ontario.

WOLVES IN YELLOWSTONE NATIONAL PARK

In the 1800s, as settlers spread westward and began to farm the land, they replaced the wolves’ natural prey species with livestock. The wolves turned to eating livestock instead, so the settlers began killing wolves. In 1926, the last pack in Yellowstone National Park was killed. In 1995–96, two wolf packs caught in Canada were reintroduced to the park. By 2016, the park’s wolf population was at least 98.

FURTHER RESOURCES:

Books

Decade of the Wolf: Returning the Wild to Yellowstone by Douglas W. Smith and Gary Ferguson
Wolves in Canada by Erin McCloskey

Websites

The National Park Service: Wolves in Yellowstone
<https://www.nps.gov/yell/learn/nature/wolves.htm>

The National Park Service: Wolf Facts

<https://www.nps.gov/yell/learn/ys-24-1-yellowstone-wolf-facts.htm>

Films

Lords of Nature: A Film on the Discovery of Trophic Cascades
<http://www.lordsofnature.org/>

Online Videos

Inside Yellowstone—Wolf Cascade
<https://youtu.be/PE0vRfClinU>

Picture Book Ages 6–9 | ISBN: 978-1-77278-011-6 | Pages: 32

THEMES

Wolves, Ecosystems, Environment, Conservation

BISAC CODES

JNF003240 JUVENILE NONFICTION / Animals / Wolves & Coyotes

JNF037020 JUVENILE NONFICTION / Science & Nature / Environmental Conservation & Protection

JNF051100 JUVENILE NONFICTION / Science & Nature / Environmental Science & Ecosystems

COMPARISON: HUMAN HUNTERS AND WOLVES

Human Hunters	Wolves
<p>Target the biggest and healthiest animals</p> <p>Why? Because, with modern weapons (guns, traps, poison), they can usually do so without risk to themselves</p> <p>Result: Over time, prey species become less healthy</p>	<p>Targete the weak and sick animals</p> <p>Why? It's a waste of energy to chase a healthy animal, and it's a risk to take down a large, healthy animal that will fight back.</p> <p>Result: Over time, prey species become more healthy</p>
<p>Kill more than they need for food</p> <p>Why? Because they can usually do so without serious consequences to themselves, such as starvation</p> <p>Result: Species go extinct, which means there is less biodiversity</p>	<p>Never hunt an animal to extinction</p> <p>Why? Because they depend on their prey for survival. If prey numbers are low, they move to another area or switch to a different, more abundant prey species</p> <p>Result: Biodiversity is maintained</p>

BEFORE READING

Discuss

- Wolves used to live all across North America, but after European settlers came they disappeared from most of the United States and Mexico. Why did the settlers hunt the wolves?
- Other than hunting, what else might have caused there to be fewer wolves?
- Do you think bringing wolves back to wild places where they used to live is a good idea?
- Can you think of bad things that might happen when people reintroduce wolves to their old habitats?

- Can you think of good things that might happen when people reintroduce wolves to their old habitats?
- Think about the word “biodiversity.” What do you think it means? Why might high biodiversity be better than low biodiversity?

ACTIVITY

In the gymnasium or outdoors, scatter an area with Popsicle sticks or other small items to represent “food.” Tell your students that they are “elk,” and the goal of the game is for each to collect as much food as possible. At your signal, let them play until the food is gone.

Scatter the food again for a new round. This time, assign one or two students to be “wolves” who will try to tag the elk and get them “out.” However, the wolves will spend most of their time in one half of the playing area. At your signal, let them play for a similar length of time. When you stop the game, there will likely be food left on the ground in the wolves’ area.

Discuss:

- What do you notice about the food that is left?
- Why is there so much more food left on that side?
- How could so few wolves keep so many elk away from that area?
- Imagine that our food tokens represent baby trees. What might happen if the wolves keep most of the elk out of one area for a long time?

AFTER READING

Discuss:

- Think about all of the events that happened in Yellowstone National Park after the wolves were reintroduced. Did any of them surprise you?
- Name an animal that lives in your area. What might happen to other parts of the ecosystem if it were gone?

ACTIVITY: FOOD CHAIN

Share the attached Food Chain diagram and tell students, “This picture shows two food chains, one long and one short. A food chain is a way of picturing the relationships between plants and animals in terms of food. We get energy from the food we eat, and so the arrows go from the organism that is being eaten to the organism that eats it, because that is the direction of the energy flow.

Discuss:

- Where do plants get their energy?
- What is the role of decomposers?
- What is another name for plant eaters? (herbivores) For meat eaters? (carnivores)
- What is another name for animals like us, that eat both plants and animals? (omnivores)

Have students create their own food chains using living things in your area.

ACTIVITY: FOOD WEB

Share the attached Food Web diagram and tell students, “This picture shows how food chains connect to make food webs. It also shows how different habitats (land and water) may be connected via food chains.” Define “**predator**” and “**prey**.”

Discuss:

- Can you find some animals that are both predator and prey?
- Can you find an animal that, like us, eats both plants and animals?
- Which organisms live in water and which are found on land?
- Do some animals live both in and out of the water? Which ones?
- Where have you seen the food chain on the far left before?

Assign each student an animal represented on the endpapers of *The Wolves Return*. Have each student perform research to answer the following:

- What does your animal eat?
- What eats your animal?

Have the students draw a picture of the animal they are representing, write the name of that animal, together with what it eats and what it’s eaten by. Have students tape their picture to their shirts and stand in a circle. Help them to create a food web by using lengths of yarn to join each animal to its food and its predator(s); for example, the cutthroat trout would hold one end of a piece of yarn, and a stonefly, its prey, would hold the other. The cutthroat trout would share another piece of yarn with the osprey, its predator. It might be helpful to tie loops in the ends of the yarn to help students hold onto multiple pieces. Link all the vegetarian animals (herbivores) with yarn to a large, stationary, preferably green object, such as a mat or a piece of furniture, that represents plants.

When the food web is complete, simulate the pressure put on the ecosystem by changes to a single organism’s population. Ask one student at a time to pull gently on all of his/her pieces of yarn. Every student whose yarn is being pulled should then do the same. Experiment with different starting organisms to see how many steps it will take for every organism in the web to feel the pressure.

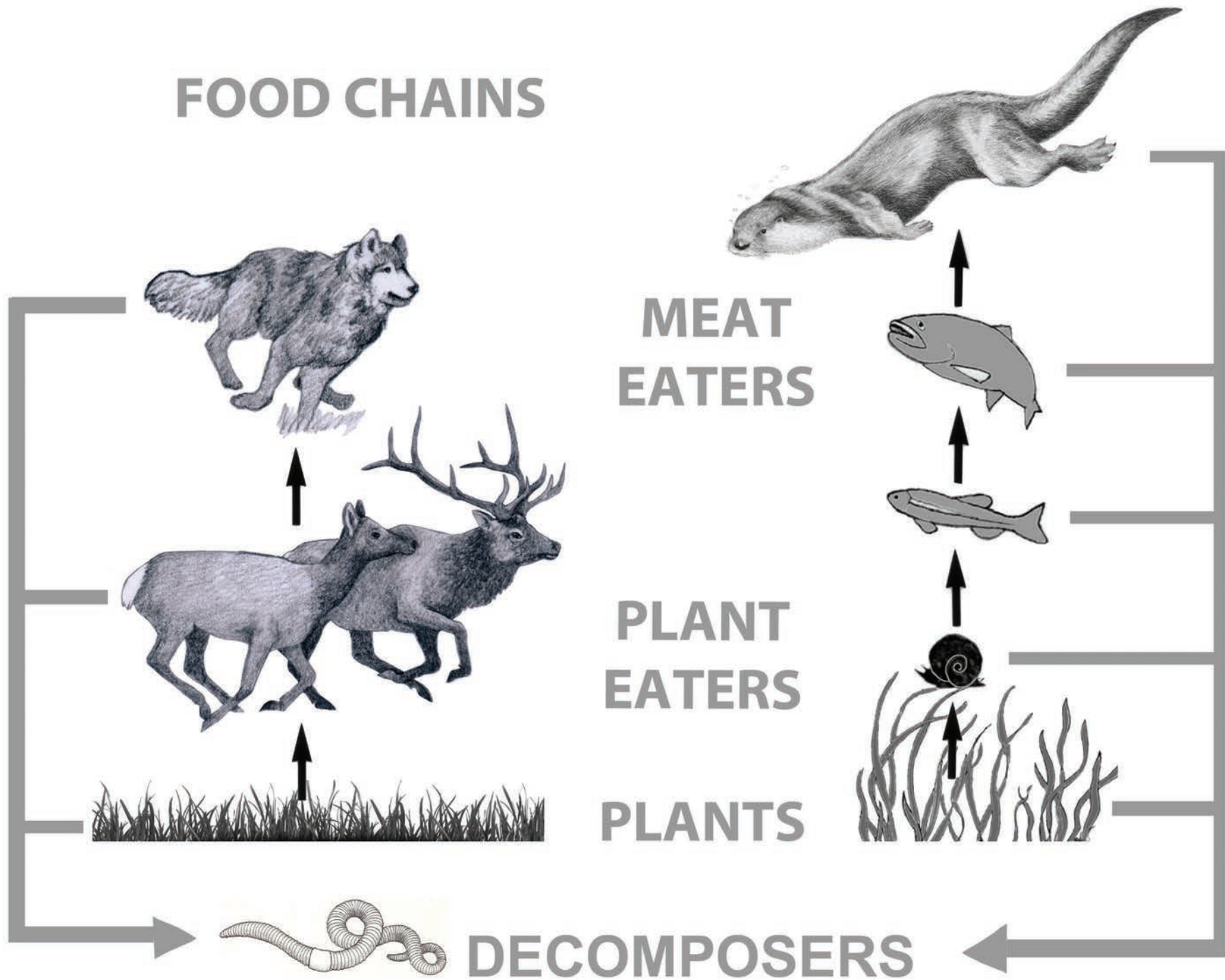
Discuss:

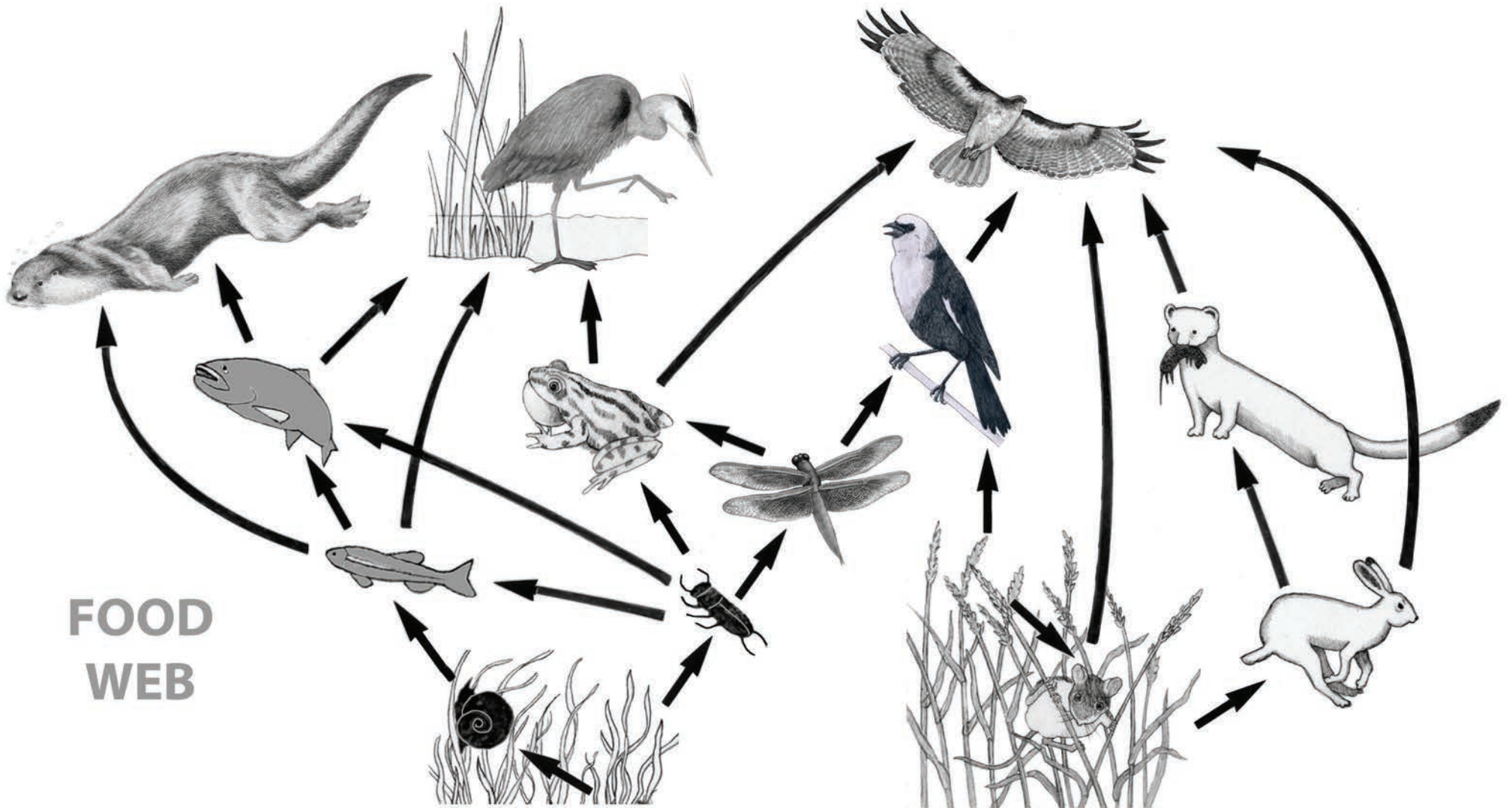
- Every living thing is connected to other living things, but not always through food. *The Wolves Return* describes some less obvious connections. What are they?

ACTIVITY

Watch the video *Inside Yellowstone—Wolf Cascade* (link on the previous page). Discuss how similar information is presented in both the book and the video, and the impacts of each medium. Ask students to come up with other types of media they can use to share information about the wolves’ effect on Yellowstone (e.g. poster, news article, oral presentation, etc.)

FOOD CHAINS





**FOOD
WEB**