

Wild Times

A Free Publication of the Wyoming Game & Fish Department

Summer 2005

THE HABITAT CONNECTION: HOLES AND RIFFLES

A river gradually carves away at the soil and rock in its bed. Twisting and turning, it loosens boulders and dead trees and makes holes under the bank. All these places can become habitat, or homes, for fish. Fish prefer dark places where they can hide. An undercut stream bank with grass or bushes hanging over the water

is a perfect place for a fish to hide because of the shadows. Big fish take the choicest holes. Smaller fish get what is left over. When fish feed, they come out and often go to sunny riffles in the stream where insects and other small water creatures float by.

Some kinds of fish living in lakes will leave the lakes to spawn. They don't leave the water, though—they swim up into the streams that flow into the lake.

Whether they live in lakes, rivers or small creeks, fish need the right kind of habitat, including places to hide, places to feed and places to spawn.



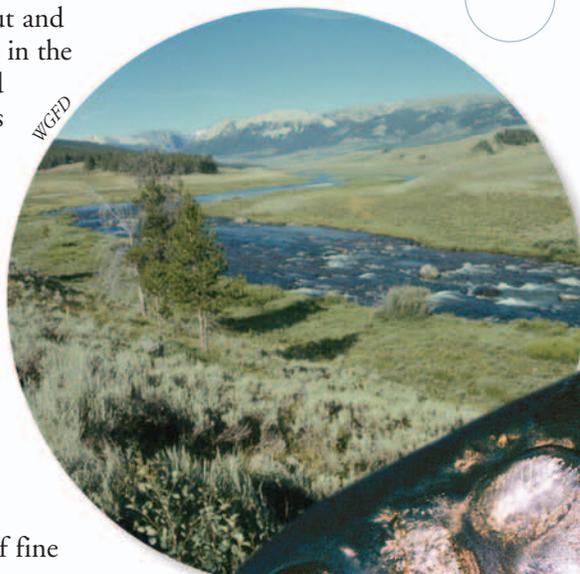
Bernie Kuntz

A stream winds its way across Wyoming.

things get dirty. We need to keep the water—their habitat—clean for them. Fish not only swim in water, they breathe through it, too. Fish use oxygen like we do, but theirs is mixed (or dissolved) in water. Not having lungs, fish take in oxygen through their gills. For many fish, water temperature is an important part of habitat. Cold water holds more oxygen than warm water.

Fish can't always pack up and leave when

Fish also need spawning habitat—places to lay their eggs. Trout in rivers spawn in beds of fine gravel in shallow water. Here, the water can wash over the eggs, bringing them plenty of oxygen.



WGFD



Larry Parker

Fish hide in shady streams.

The Green River—important fish habitat in western Wyoming.



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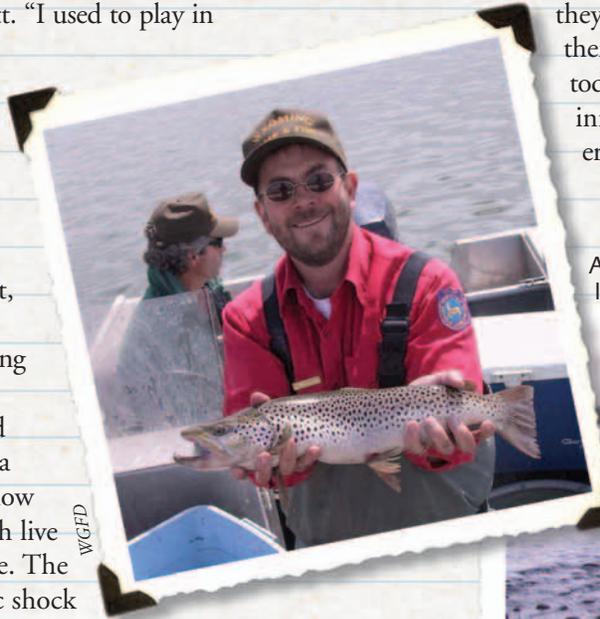
The mountain whitefish is a Wyoming native.

FIELD Wildlife Journal

Wouldn't it be cool to have a creek running through your back yard? Scott Covington did as a kid in Arkansas. That's how he got interested in water and fish. "I always had an interest in water," says Scott. "I used to play in

it all the time, poking at bugs." Later, Scott came to Wyoming to see the West and to study trout in college. "I was amazed that big fish could live in small streams," he says. Working as a fish biologist, Scott still spends a lot of time in water. Electro-fishing is his favorite thing to do. This is how biologists find out how many fish are in a river. They also find out how many different kinds of fish live there and how big they are. The biologists shoot an electric shock into the water. The shock stuns the fish for a few minutes, and they float to the top. Then the biologists can look at them. "One person holds down a foot pedal in the boat," says Scott. "This controls the electricity. Then I pick up the stunned fish with a net." Scott counts the fish, figures out what kind they are and weighs them. Then he releases them in the river. He also looks at frogs,

salamanders, crawdads and other water creatures. "It's important to know about everything in the water," says Scott. He and his fellow biologists learn even more when they talk to people who are out fishing. "We ask them questions like 'How many fish did you catch today?' and 'How many hours did you fish?' All this information we gather from water and from fishermen lets us know if we are doing our jobs well."



WGFD

A nice trout from a lake near Laramie.



WGFD

The fish biologist and his shock boat.

WHOPPERS

Below are some Wyoming State record fish. Someday you might get into the record books with your own whopper.

FISH	HOW BIG?	WHERE CAUGHT?
Lake trout	50 pounds	Flaming Gorge Reservoir
Ling	19 pounds	Pilot Butte Reservoir
Cutthroat trout	15 pounds	Native Lake
White sucker	3 pounds	Big Horn River
Rainbow trout	23 pounds	Burnt Lake

Biologists handle many strange creatures.



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WILDLIFE PROFILES

Wyoming has a number of different kinds of fish. Some are natives, others have been brought to Wyoming from other states by the Wyoming Game and Fish Department and released in our waters. Some fish prefer to live in lakes, and

Continued on Page 4



WILDLIFE PROFILES

Continued from Page 3

others seem to like streams. Many fish can live in either one, as long as the water is clean and there is good habitat. Below are four native Wyoming fish.

SUCKERS

Suckers are strange looking fish. Their small, tube-like mouths are down where their chins should be. Suckers swim on the bottoms of lakes and streams poking around for food in the mud and rocks. Not having a mouth full of big, sharp teeth, a sucker can't prey on other fish or frogs. Several different kinds of suckers are native Wyoming fish. Some of them can grow to several pounds. Anglers often hook suckers while trying to catch other fish. Most people do not like to eat suckers, but the smaller kinds are important food for large trout and other game fish.

LING

The ling, or burbot, is a Wyoming fish that looks like it belongs in the ocean. Its long, narrow body gives it an eel-like look. The ling's head is flattened, and a barbel, or whisker like catfish have, grows from its chin. Ling are predators. They eat other fish and do most of their hunting at night. Ling prefer very cold water. They live in the northern states and in Canada where they haunt the deepest parts of lakes. Ling also live in big rivers. Clean water is very important to them. They begin to die if their water gets muddy and polluted. Can you find where they live in Wyoming?

CUTTHROAT TROUT

The cutthroat trout gets its name from the bright red stripes under its jaw.

Wyoming has four kinds of cutthroat trout. They live in different parts of the state. These trout are very popular with anglers and are easier to catch than some of the other kinds of trout. Cutthroats will bite on bait, lures or artificial flies. Cutthroats are the only kind of trout native to Wyoming. Sometimes cutthroat trout and rainbow trout cross breed and lay eggs. After hatching, the young trout look a bit like cutthroats and a bit like rainbows—they are called cuttbows.

SHOVELNOSE STURGEON

Unlike many animals, sturgeons have not changed much over time. Sturgeon fossils from millions of years ago look much like today's sturgeons. The shovelnose sturgeon, a river fish, is becoming rare in Wyoming. Like the sucker, it has a small, weak, toothless mouth made for feeding on small water creatures it finds on sandy stream bottoms. It also has long, finger-like barbels on its mouth to help it find food. The shovelnose disappeared from some Wyoming rivers during the 20th century, but it still lives in the Powder River of northern Wyoming. Sturgeons migrate downstream hundreds of miles.

OUR Wildlife Heritage

EARLY FISH STOCKING

Remember the brook trout you caught in the mountains last summer? Do you think brook trout have always lived in Wyoming? They haven't. Brook trout are not native to Wyoming. How, then, did they get in our mountain lakes and streams? They were planted. Fish planting began in the 1880s. But for many years, tiny fish were carried to mountain lakes in old fashioned milk cans loaded on the backs of horses. It was slow and hard work. In the 1940s, the Game and Fish Department began dropping fish from airplanes. This was faster than bringing them in on horses, but it had some drawbacks. Sometimes the fish missed the target and didn't make it into the water. Later on, the Game and Fish tried helicopters. These worked better than airplanes for dropping fish because helicopters can hover in one place. Trucks do much of the

fish planting today. But for some remote mountain lakes, fish culturists still carry in containers full of fish on foot. If they could talk, the brookies in your creel might tell some wild stories about how they or their ancestors first got into the lake.



LuRey Parker



LuRey Parker

The endangered Kendall Warm Springs dace.

Kendall Warm Springs—home of the Kendall dace.

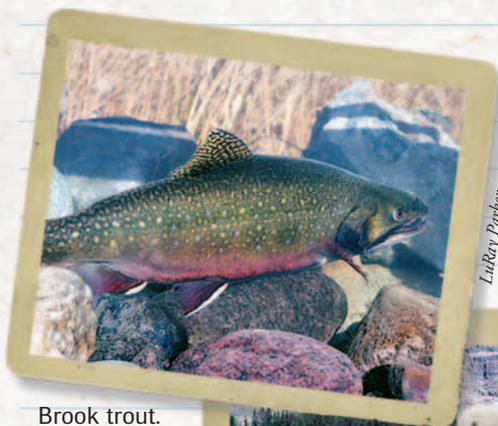
SPECIAL FISH

Wyoming is home to some unusual and even rare fish. One of the most famous of these is the Kendall Warm Springs dace, a tiny, drab-colored fish from a small natural spring in western Wyoming, near the town of Pinedale. It lives nowhere else in the world. Since these fish are so few and special, they have been named an endangered species by the government. They are protected by law.

STATE FOSSIL

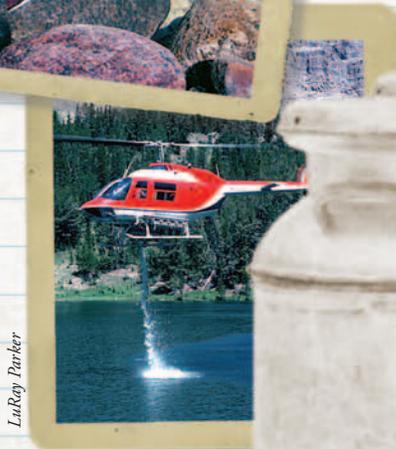
Wyoming's state fossil is Knightia, a fish named after a Wyoming geologist. Knightia was an ancestor of the ocean fish we call herrings today. It lived in what is now Lincoln County, Wyoming, 50 to 60 million years ago. At that time, the area was covered by water. Pictures of Knightia fossils appear somewhere in this issue of Wild Times. Can you find them? The answer is on page 8.

Fish were once carried to lakes in old fashion milk cans.



LuRey Parker

Brook trout.



LuRey Parker

Planting fish with a helicopter.



Courtesy of Wyoming State Archives

Around Wyoming



LutRay Parker

Inside a fish hatchery.

WHIRLING DISEASE

Whirling disease is a sickness trout can get. It is caused by a parasite too small to be seen without a microscope. Whirling disease makes the backbones of young trout grow crooked. Fish crippled by whirl-

ing disease can't swim well. They spin around in circles. That's where the disease gets its name. Biologists have found whirling disease in some of our lakes and streams. People can't get sick from whirling disease; it only effects trout.



WGFD

Whirling disease causes fish to swim in circles.

FREE FISHING DAY AND CLINICS

Saturday, June 4, will be a free fishing day when anyone in Wyoming can fish without a license. This summer, the Game and Fish Department will hold fishing clinics around the state where you can learn the fine art of fishing. Check your newspaper or your local Game and Fish office for information on clinics in your area.



A rainbow trout gets hooked.

Duane Michmore

HERITAGE EXPO

Don't forget to attend the Wyoming Hunting and Fishing Heritage Expo. At the Expo, you can learn outdoor skills like fishing, hunting, camping and canoeing. You will see live demonstrations by experts who will show you how to fly-fish. You will learn about Wyoming's wildlife. The Expo will be held at the Events Center in Casper on September 9th, 10th and 11th of 2005.

The Wyoming Hunting and Fishing Heritage Expo in Casper.



Outdoor Classroom

CUTT-SLAM

Want to have fun and learn about trout at the same time? Try for a Cutt-slam certificate from the Game and Fish Department. To earn it, you must catch each of Wyoming's four kinds of cutthroat trout. But you must also catch each of them in their native habitats. Photograph your fish close-up and note when and where you caught each. See your local Game and Fish office for details.



A small Wyoming stream.

LuRay Parker



Many insects live in streams and are eaten by fish.

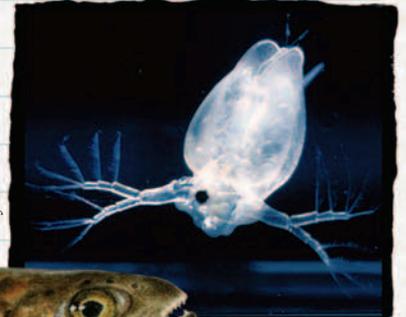
WATER IS ALIVE

Water is alive. Fill a big glass jar with water from a pond. Put it against a dark background and shine a light into it. Through a magnifying glass, you can see thousands of tiny creatures swimming and twitching.

Scoop up some mud from the bottom of a creek. Rinse it through a strainer, then dump the strainer's contents out in a flat pan with some clean water. How many different kinds of mud-dwellers can you find?

A stream carries many kinds of living creatures. All are part of the food chain. Put an insect net across the narrowest part of a creek and let the water flow through it for a few minutes. Empty out the net's contents on a white sheet. What kinds of animals did you catch?

LuRay Parker



Daphnia: a tiny water creature related to shrimp and lobsters.

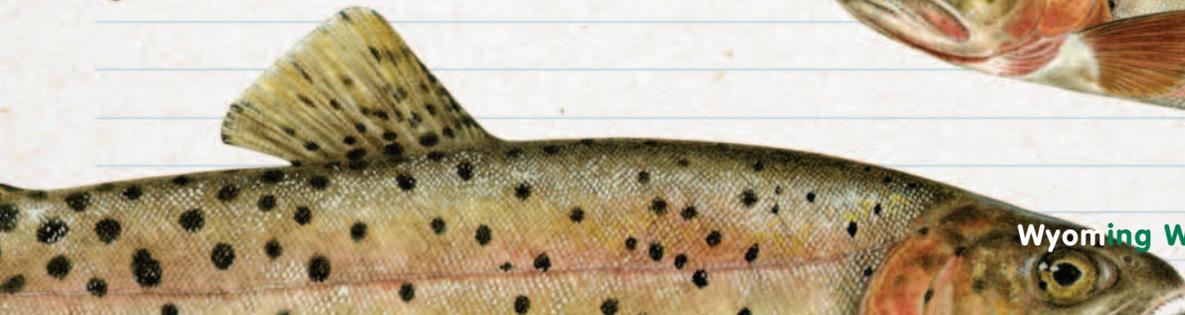
WGFED



Colorado cutthroats live in southern Wyoming.



Mitchell LaGory



▶ TEST YOUR KNOWLEDGE ◀

WARM OR COLD?

Suppose you measure the temperatures of two deep lakes. Both have clean water. One is 38 degrees at the bottom. The other lake measures 55 degrees at the bottom. Which lake would be better habitat for ling?

 (Answer: The colder lake. Ling prefer cold water.)



Pike are predators.



TRUE OR FALSE?

1. T F Biologists do their electro-fishing from a helicopter.
2. T F A warm pond has more dissolved oxygen than a cold pond.
3. T F Cutthroat trout are true Wyoming natives.

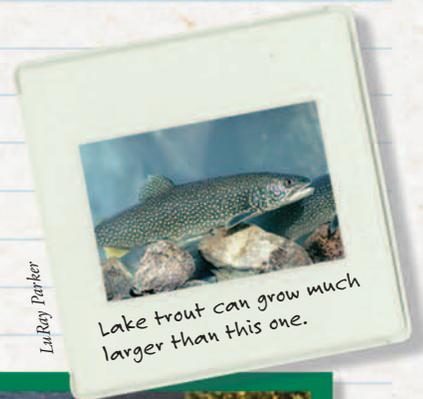
 (Answers: 1-F; 2-F; 3-T)



Fish biologists at work in a stream.

STATE FOSSIL

Answer from page 5: Knightia fossils are in the letters of the words "Wild Times" at the top of page 1.



Lake trout can grow much larger than this one.

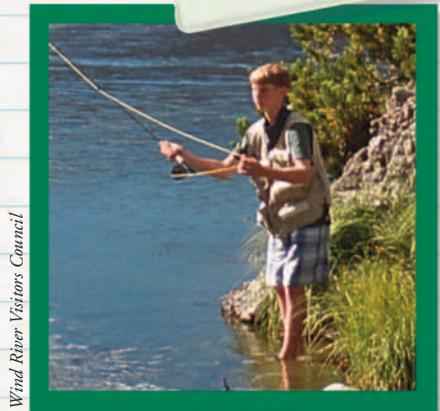
▶ LEARNING LINKS ◀

WEB SITES:

Check out the KidZone at the National Wildlife Federation's Web site: www.nwf.org/kids/

BOOKS:

Kids' Incredible Fishing Stories by Shaun Morey



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