Wildlife Express!

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Kokanee

Photo courtesy IDFG

IDAHO FISH & GAME

What's a Fish?

Photo courtesy IDFG

Fish are vertebrates. They have backbones, just like you. Fish also breathe through gills, have fins and live in water. That seems pretty simple, right? Well, in nature things aren't always as simple as we would like.

Take the backbone for example. We know what our backbone is like, but in the fish world, not all backbones are created equal. Sharks and sturgeon have a backbone made of the same stuff that supports your nose and ears! It is called cartilage. Cartilage is not hard at all!

Fish need oxygen to survive. Most fish have a special way to get oxygen out of the water they live in – gills. Water, with oxygen in it, passes over the gills when the fish swims. The skin on the gills is thin. Oxygen can pass through the skin into the fish's bloodstream.

Does this mean that all fish use gills to get the oxygen they need? No, some fish actually have lungs! In fact, the African lungfish is so dependent upon breathing air above the water's surface that it will "drown" if kept under water. The Australian lungfish can survive out of water for months if it is in a wet burrow. Lungfishes are examples of fish that break the "gill rule."

We usually think of fish as having fins on each side of their bodies, but what about lampreys? Lampreys look like eels. They don't have paired fins or jaws, but they are still fish. Lampreys represent some of the first freshwater fish to appear on Earth.

As you can see, a simple job like defining what a fish is, is not so simple. Fish have been a part of our planet for at least 450 million years. There are over 20,000 different species (kinds) of fish worldwide. Over time, they have adapted to many underwater (and even out of water) habitats.

Brrr... My Fins are Cold!

What happens to fish in the winter? Most fish are cold-blooded. Their body temperatures are the same as the temperature of the water in which they live. So what happens to fish when ice starts to form on top of the water and winter shows its bitter side?

For fish that live in rivers, things don't change too much. The temperature of the water does drop, but the moving water usually keeps ice from completely covering the surface of the river. Things are a bit different for ponds and lakes where kokanee live. Ice acts like a lid on top of the water. Light and oxygen can't get through the ice. Not only fish are affected, but everything living under the ice is affected as well.

One thing that ice can do is lower the amount of oxygen in the water. Fish and other animals that live in the water need oxygen to survive. One way oxygen gets into the water is by waves and splashes. Water can't move if it is covered by a blanket of ice, so less oxygen gets into the water to replace the oxygen used by animals. To lessen the amount of oxygen they use, fish and other animals slow down. They become less active, so they use less oxygen.

Just like many trees drop their leaves in the fall, so do many water plants. Plants need sunlight to make food. Ice acts like a curtain on top of a pond. It keeps much of the light from entering the water. This causes many plants to stop making food. Their leaves drop off. Sometimes even the stems die. With their leaves gone, plants shut down and rest for the winter. Plants are no longer making oxygen. This can further decrease the amount of oxygen in the water. If there is not enough oxygen in the water, fish may begin to die. When this happens, it is called a "winterkill."

Next time you see a pond or lake in the winter, think about the creatures living in it. What are the animals dealing with to try and make it through the winter?

Let's look at....

Kokanee

Kokanee salmon are fascinating fish that live in many of Idaho's lakes and reservoirs. They are actually land-locked salmon. This means they never travel to the ocean. Their close relative the sockeye salmon does travel to the ocean. Kokanee live similar lives to the sockeye salmon, but they do not grow as large. A sockeye may grow to be 21 to 26 inches long and weigh four to seven pounds. Kokanee usually reach a length of only 14 inches. A 20 inch kokanee would be a fish to mount and put on the wall. It would be considered a "trophy" fish. The reason sockeye get bigger than kokanee is because they travel to the Pacific Ocean where there is more food for them to eat.

Kokanee are very colorful fish. Actually the name kokanee came from a word that the Kootenay Native Americans used for the fish that means "red fish." The adults' bodies turn a deep red color, and their heads turn green just before they spawn or lay and fertilize their eggs. People also call kokanee silvers or bluebacks. Most of the time kokanee have silver colored bodies with dark blue backs. The silver color makes the kokanee shimmer in the water.

When ready to spawn, adult kokanee travel to gravel beds. The gravel beds are located in a nearby river or along the shoreline of a lake. Kokanee return to the same spawning beds where they hatched. The female digs a nest called a "redd" where she will lay her eggs. The male stays close by until the eggs are laid. Then the male fertilizes the eggs. The eggs incubate in the redd over the winter and hatch in late winter or early spring. The time the eggs hatch depends upon the temperature of the water. If the water is a bit warmer, the eggs will hatch earlier. When kokanee first hatch from their eggs, they have a yolk sac attached to their bellies. This will be the young kokanee's food until they are larger, and it is safe for them to leave the redd. When the yolk sac is gone, kokanee need to begin looking for food.

Kokanee have interesting diets. They eat mainly zooplankton. Zooplankton are animals that drift with the water currents. Kokanee love to eat a type of zooplankton called "water fleas." Water fleas are tiny. They are very hard to see without a microscope. They are about the size of the tip of a ball point pen. That's small! To capture zooplankton, kokanee have special "combs" on their gills called gill rakers. The gill rakers filter the zooplankton out of the water for the kokanee. If kokanee can't find enough zooplankton to eat, they will eat insects.

Where do we find kokanee in Idaho? We have kokanee living in many places throughout our state. See if you have you of these places where kokanee live: Coeur d' Alene Lake, Pend Oreille Lake, Dworshak Reservoir, Anderson Ranch Reservoir, Deadwood Reservoir, Lucky Peak Reservoir and Redfish Lake. Any place sound familiar? Next time you go to one of these places think about the kokanee fish that live there and try to catch one!

Photo courtesy Brenda Beckley

Kokanee Fishing

Let's go fishing! Okay kids, if you haven't tried fishing you should! Have you ever heard someone say that any day fishing beats a day of working? Just getting outside to enjoy the fresh air is a great thing. If you want to go fishing, ask a parent or friend to take you. Fishing may even be free for you. If you live in Idaho and are 13 years old or younger, you don't need a fishing license!

What if you don't know where to go? Fish and Game has great maps of the best places to go fishing for kids and families. Have your parents visit our website at http://fishandgame.idaho.gov for the latest fishing information.

Do you already fish? Then you're called an angler. One type of fish anglers like to catch is kokanee. Kokanee taste really good and when the fishing is good you can catch a bundle of them. Fishing for kokanee is a bit trickier than using a hook and worm. Catching kokanee takes some knowledge of how these fish live, their life cycle and how they move in the water at different times of year.

You can fish for kokanee from the edge, or bank, of a lake or in a boat. In a boat, you can move around to find where the kokanee are living. Kokanee move around a lot. They move in large groups called schools. Kokanee like very cool water that is around 50 to 60 degrees Fahrenheit. In the summer, they will move down deep in the water when the outside temperatures are hot. Sometimes they can go down as deep as 60 feet. In cooler weather, they move closer to the surface. Water in a large lake is always moving, so temperatures can shift. Adjust how deep you put your line until you are catching fish. Once you start catching fish, you have found a school of kokanee.

Many people use a boat to troll. Trolling is when you move your boat very slowly. The moving boat moves the lure at the end of the fishing line. The lure wiggles and moves and attracts a fish to bite. Lures come in all shapes, sizes and colors. Bright neon colors like orange, red, yellow and green seem to work best. The lure has a hook that holds your bait. What kind of bait should you use? A worm, salmon egg or piece of white corn works well.

Here's a tip. Don't fish for kokanee when they are starting to spawn and turn red. Their bodies get mushy and are not good to eat. Kokanee fishing is a lot of fun. Visit your local tackle shop to find out more about fishing for these fascinating fish!

Photo courtesy Brenda Beckley

Idaho is Wild about Reading!

Something wild is happening at Idaho public libraries and schools. The week of November 15 – 21 is Idaho Family Reading Week. This year's theme is "Idaho Is Wild about Reading." Libraries are planning many fun events that involve reading and the great outdoors. Grab your parents, sneakers and sense of adventure and walk, run, or ride over to your library to see what they have planned.

Libraries are great places to find books to help families discover wild Idaho. State Librarian Ann Joslin said, "Idaho is home to beautiful wild places that provide abundant recreation for families--from backyards to mountaintops. And libraries can guide parents to resources about nature they can share with their kids."

Libraries have great books that may help you identify plants, animals and animal tracks. Some libraries are offering special programs during the week on outdoor activities. So, don't be a couch slouch! Go to a library and discover how books can help you see wild Idaho in new and exciting ways!

Let's Have a Fish Fry, Outside!

Once you catch your kokanee, you need to cook them up! Why not cook them outside over a fire? Grab an adult and have them help you cook up some great kokanee dishes. Here are some recipes to try.

BE OUTSIDE

A great way to cook your kokanee is to fry them. Clean your fish and rinse them off. Before you make your fire, arrange three rocks in your fire ring where you can place an iron skillet. Now start your fire and wait for embers to form. In a shallow dish, mix about one cup of flour with one teaspoon of salt and pepper. You can also add seasoned salt or herbs if you like. Roll your fish in the flour so it is well covered on all sides. Place butter in the skillet and when it sizzles, put your fish in the skillet. Cook the fish in the butter for about five minutes on each side. Add more butter if needed. You will know your fish is done when the meat flakes away from the bones.

Cook the kokanee in your campfire! You will need two sheets of heavy-duty aluminum foil big enough for your fish to fit on with two or three extra inches around the edge. Clean your fish and place it on one sheet of foil. Sprinkle the fish with salt and pepper. Stuff the cavity of the fish with lemon slices and herbs. Whatever you like will taste great. Place the second piece of foil over the prepared fish and fold the piece together to make a pocket. Make sure that all edges are sealed. Using long tongs, carefully place the foil pocket in the embers of your campfire. You can also place the pocket on a hot grill. In about 10 minutes, your fish should be done - Yum!

Photo courtesy Brenda Beckley

KOKANEE LIFE CYCLE

In the lake, kokanee form schools and feed on zooplankton (tiny aquatic animals). At the age of 3 yrs, they will return to spawning grounds to complete their cycle of life.

In late August through November, the spawning cycle begins for the kokanee. Their silver color turns to red. Males develop a humped back and a kype (hooked jaw). They swim towards their spawning grounds where they hatched.

Kokanee spawn in tributary streams or along lake shorelines. A redd (fish nest) is scraped in the gravel where the female fish deposits her eggs and the male fish fertilizes them.

When the fry reach the size of 1 1/2 to 2 inches, they are known as "fingerlings." They will then move into increasingly deeper waters to feed and grow.

Soon after spawning, the adult kokanee die. Their bodies provide food for other animals and nutrients to the land and and water.

After the yolk sac is absorbed, the "fry" (young kokanee) emerge from their gravel hiding places. They feed on plankton (tiny aquatic plants and animals).

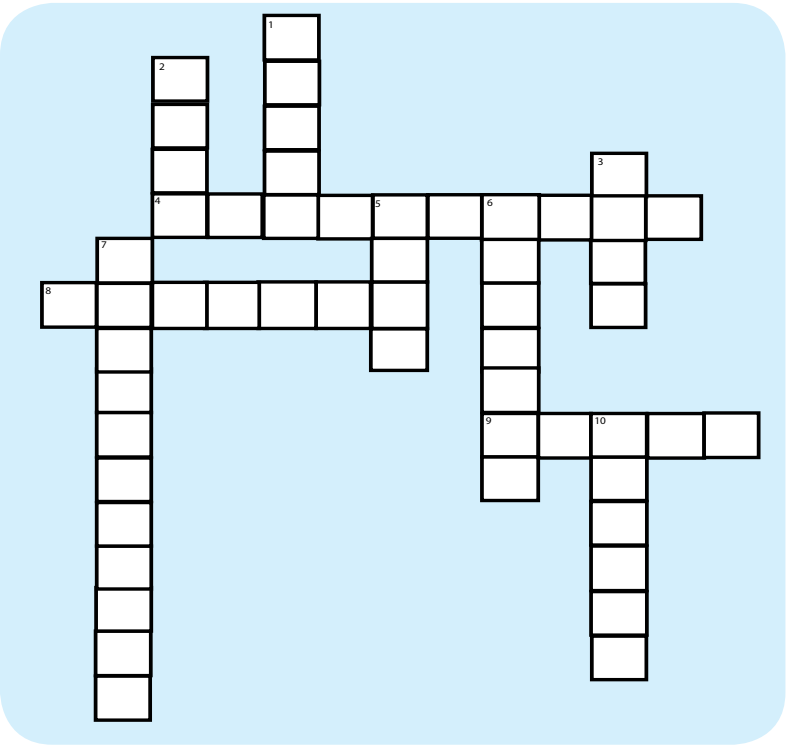
"Alevins" hatch in the spring. They have yolk sacs attached, which provide food, while the tiny fish hide in the gravel during this early stage of life.

Hungerhaus 08

IDAHO FISH & GAME

Idaho WATCHABLE Wildlife

Kokanee Criss Cross



Across

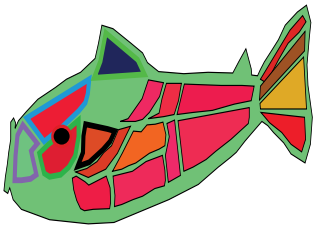
4. These fish break the "gill rule."
8. Kokanee are like _____salmon, but kokanee do not travel to the ocean.
9. _____wiggle and move and attract fish to bite.

Down

1. Kokanee turn red when it is time for them to _____.
2. Kokanee like to live in _____water.
3. A fish nest is called a _____.
5. Kokanee may be as deep as 60 _____down in a lake.
6. Kokanee move in large groups called _____.
7. _____is a kokanee's favorite food.
10. Gill _____help kokanee filter their food from water.

Words

Cool
Feet
Lungfishes
Lures
Rakers
Schools
Sockeye
Spawn
Zooplankton
Redd



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