



Volume 32/Issue 3

Kokanee

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KOKANEE



INSIDE:
What's a Fish?
Kokanee Fishing
Five Fingers for Five Salmon

Kokanee



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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.

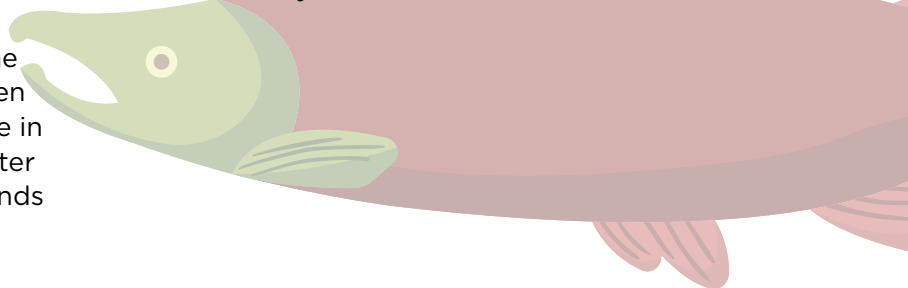
Kokanee are very colorful fish. Actually the name kokanee came from a word that the Kootenay Native Americans used for the fish that means "red fish." The adults' bodies turn a deep red color, and their heads turn green just before they spawn or lay and fertilize their eggs. People also call kokanee 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

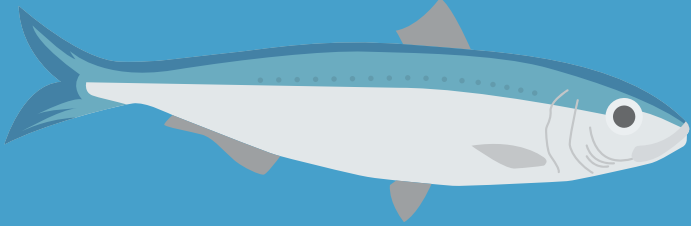
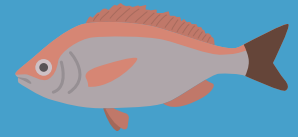
upon the temperature of the water. If the water is a bit warmer, the eggs will hatch earlier. When kokanee first hatch from their eggs, they have a yolk sac attached to their bellies. This will be the young kokanee's food until they are larger, and it is safe for them to leave the redd. When the yolk 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 heard 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!



WHAT'S A FISH?



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 them to be.

Take that backbone for example. We know what our backbone is like. 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.

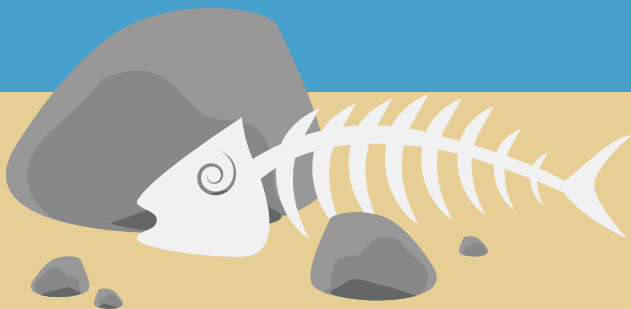
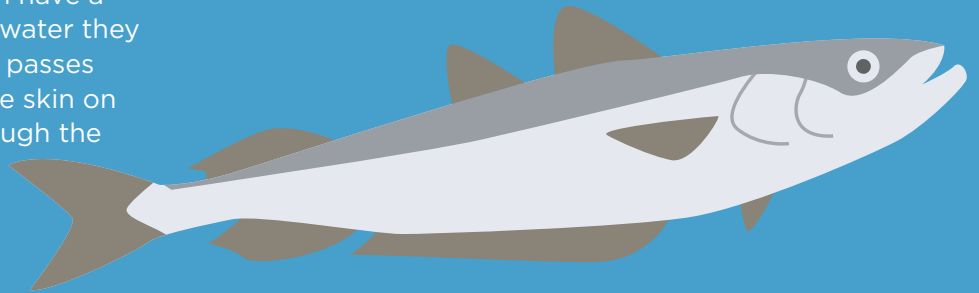
Fish need oxygen to survive. Most fish have a special way to get oxygen out of the water they live in – gills. Water, with oxygen in it, passes over the gills when the fish swims. The skin on the gills is thin. Oxygen can pass through the skin into the fish's bloodstream.

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, yet they are still fish.

So as you can see, defining what a fish is may not be so simple. Fish have been a part of our planet for 450 million years. There are over 20,000 different kinds of fish worldwide. They have had time to adapt to many underwater (and even out of water) habitats.





Brrr... My Fins are Cold!

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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.

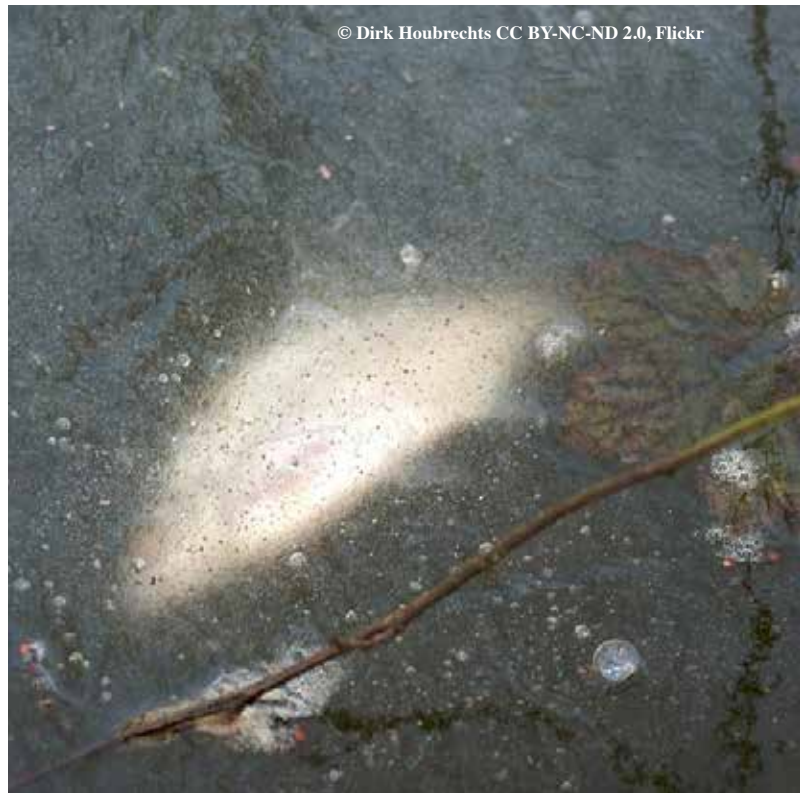
One thing that ice can do is lower the amount of oxygen in the water. Fish and other animals that live in the water need oxygen to survive. One way oxygen gets into the water is by waves and splashes. Water can't move if it is covered by a blanket of ice, so less oxygen gets into the water to replace 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 make it through the winter?

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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 the best day at work? 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 idfg.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.

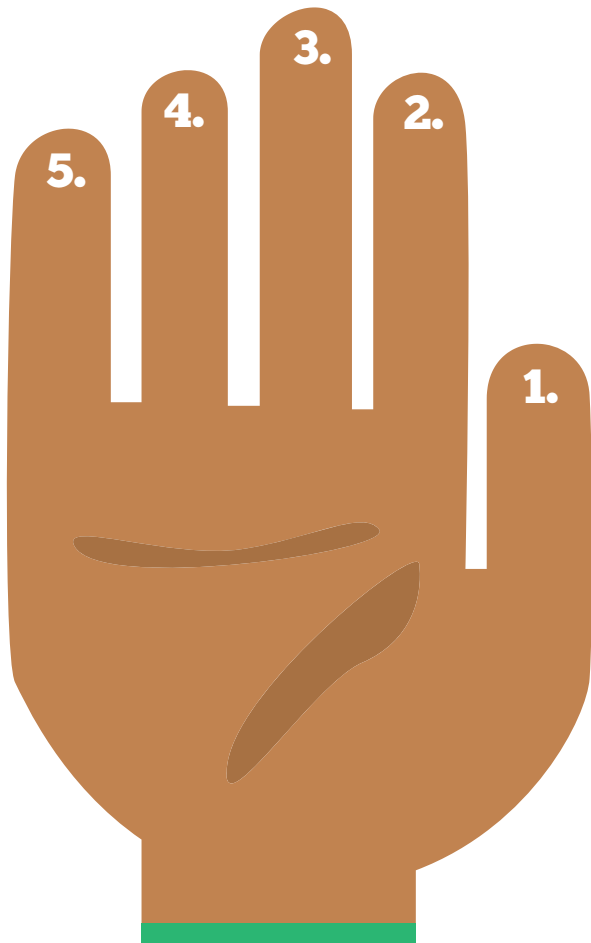
Here's a tip. Don't fish for kokanee when they are starting to spawn and turn red. Their bodies get mushy and are not good to eat. Kokanee fishing is a lot of fun. Visit your local tackle shop to find out more about fishing for these fascinating fish!



FIVE FINGERS FOR FIVE SALMON

Kokanee salmon are land-locked salmon. This means they never travel to the ocean. Their close relative the sockeye salmon is an ocean traveler. The Pacific Ocean is home to five species or kinds of salmon that travel to the ocean. They are the chum, sockeye, Chinook, coho and pink.

Here is an easy and fun way to learn and remember the names of the five salmon that live in the Pacific Ocean - use your hand as a guide! The thumb stands for chum. Use your pointer finger to sock your eye (sockeye). The largest finger is the king or Chinook. Coho is the ring finger. Pink, the smallest salmon, is the pinkie. Now whenever you want to remember the names of the five Pacific salmon, all you have to do is look at your hand!



1. Chum



© Timothy Knepp

2. Sockeye



© Joseph R. Tomelleri

3. Chinook or King



© Joseph R. Tomelleri

4. Coho



© Joseph R. Tomelleri

5. Pink



© Timothy Knepp



It's Thanksgiving Time



Thanksgiving's here! It's time to eat and stuff our stomachs with yummy food. Thanksgiving and Pilgrims seem to go together like bread and butter, but the Pilgrims never really held a Thanksgiving feast. Now, before you cancel dinner read on and learn how our Thanksgiving came to be.

The Pilgrims did have a feast in 1621 after their first harvest of crops. This is the feast people often refer to as "The First Thanksgiving." This feast never happened again, and the Pilgrims would not have called it a "Thanksgiving." To the Pilgrims, a day of thanksgiving was a day of prayer and fasting, not eating!

The first harvest feast was held around the first of October and lasted three days! The pilgrims didn't have a building large enough to hold 140 people, 50 pilgrims and 90 Native Americans, so the feast was held outside.

Do you think the pilgrims and Native Americans ate the same foods we eat today? Some were the same. They ate deer, fish, wild turkeys, ducks, geese and other birds. They also ate Indian corn,

wheat and berries. Do you think they ate corn of the cob? No, corn on the cob was not eaten. Indian corn was only good for making cornmeal. What about ham or sweet potatoes? Nope, the Pilgrims didn't have pigs, and sweet potatoes hadn't been brought to New England yet. They did have cranberries, but they did not have sugar to make cranberry sauce. Do you think they ate pumpkin pie? Pilgrims did have pumpkins. They most likely made a pumpkin pudding sweetened with honey or maple syrup, but their pudding would not have had a crust.

The Pilgrim's feast was different from ours, but it became the model for our Thanksgiving of today. In 1863, Abraham Lincoln made the last Thursday in November a national holiday of Thanksgiving. Up to that time, no permanent holiday had been set. President Roosevelt changed the day of Thanksgiving to the fourth Thursday in November in 1941, and this is when we celebrate Thanksgiving today. Wow! Who would have thought all this could have evolved out of a harvest feast?



Let's Cook Up Some Salmon

Cooking and eating kokanee can be just as fun as catching them. If the weather is nice, why not cook them outside? Grab an adult and have them help you cook up some great kokanee dishes. Here are some ideas and recipes that will help you cook up some great fish.

Your kokanee will taste its best only if you care for it properly after you catch it. Many people will leave the fish they catch on a stringer in the water. This may seem like a good idea, but it may spoil your fish and make it mushy. The best thing to do is put your fish in a cooler full of ice and clean your fish as soon as possible. Cook your fish within two days after you catch it or freeze it. Fish will keep in the freezer for three to six months if vacuum packed or frozen in water in a zip top freezer bag.

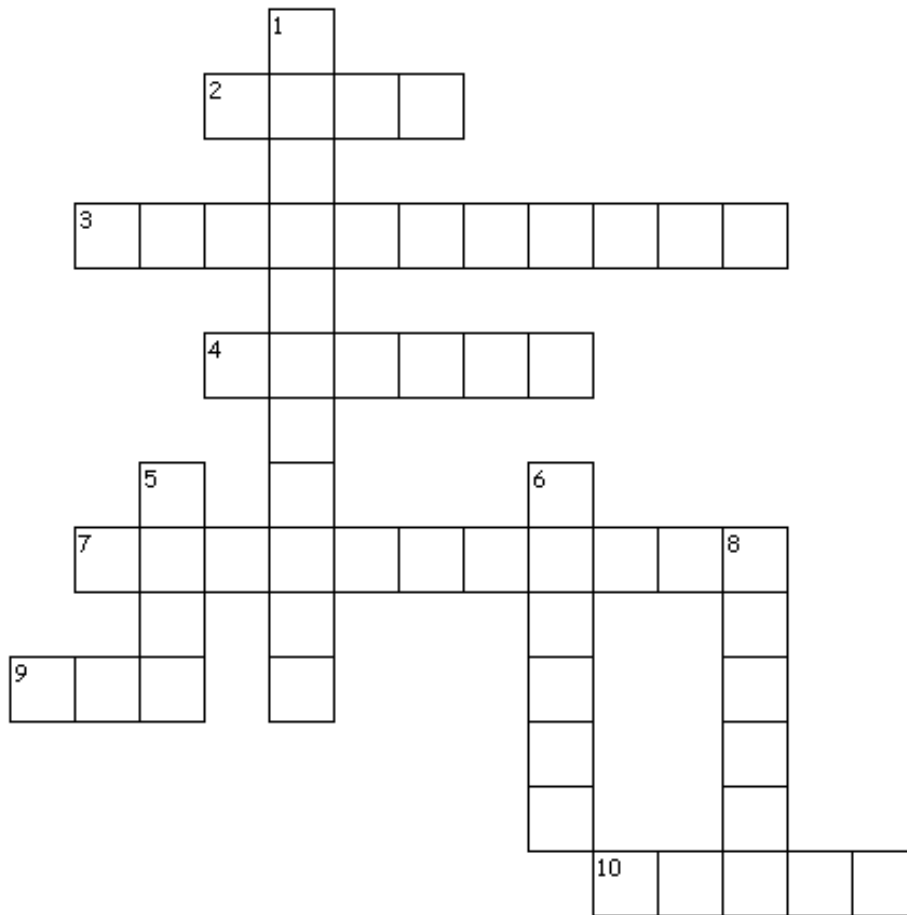
A great way to cook your kokanee is to fry them over a fire outside! Before you make your fire, arrange three rocks in your fire ring where you can place an iron skillet. Now start your fire and wait for embers to form. In a shallow dish, mix

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 fire! 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 fire. You can also place the pocket on a hot grill or in the oven. In about 8 - 10 minutes, your fish should be done - Yum!



Kokanee Crossword



- WORDS**
- Gills
 - Rakers
 - Red
 - Redd
 - Salmon
 - School
 - Temperature
 - Vertebrates
 - Yolk
 - Zooplankton

Across

- 2. A kokanee's first food comes from its _____ sac.
- 3. The _____ of water affects when kokanee eggs will hatch.
- 4. Gill _____ help kokanee get food out of the water.
- 7. Fish are _____.
- 9. This is the color kokanee turn right before they spawn.
- 10. Fish get oxygen out of the water with _____.

Down

- 1. This is what kokanee eat.
- 5. The name given to a kokanee's egg nest.
- 6. Kokanee are a land-locked _____.
- 8. This is what a group of kokanee are called.

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WE WOULD LIKE TO HEAR FROM YOU!

If you have a letter, poem or question for Wildlife Express, it may be included in a future issue! Send it to:

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or

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