

Wildlife Express!

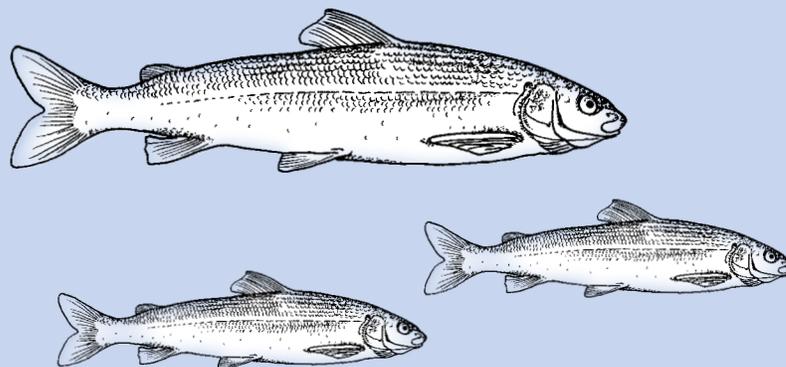
Volume 21

Issue 3

November 2007



Wonderful Whitefish



LET'S LOOK AT...

MOUNTAIN WHITEFISH

The mountain whitefish might not look that pretty. It doesn't have any spots on its body or bright reddish-pink colors, but take a closer look! This fish is a silvery-white beauty. Its subtle shades of brown, silvery-gray and blue can be striking.

The scientific name for the mountain whitefish is *Prosopium williamsoni* (pro-SOAP-ee-um will-yum-SON-eye). They are very common throughout larger streams and rivers, and are the most common game fish in Idaho. A game fish is a fish that you can catch and eat. Mountain whitefish are true natives. In many of Idaho's streams, they used to be the only fish you could catch and eat. Rainbow trout were actually put in many of Idaho's streams and lakes many years ago.

The mountain whitefish looks a bit like a sucker and a bit like a trout. Its body is round and streamlined like a trout. The small mouth with big lips and no teeth is similar to a sucker's mouth. The small mouth limits the size of food a whitefish can catch. They usually feed on the bottom looking for aquatic insects, fish eggs and smaller fish, but no whitefish is going to turn down a feast. Mountain whitefish will sometimes feed on the water's surface when aquatic insects are hatching. This is the time when aquatic insects leave the water for a life on land; it's like setting a buffet table for fish.

Mountain whitefish live a long life – at least for a fish. One mountain whitefish in Idaho was found to be 23 years old! A cutthroat trout would be lucky to make it to 10 years of age. An old whitefish doesn't mean a giant though. Most whitefish are around 10 to 18 inches long.

Late September through November is when mountain whitefish spawn or lay their eggs. They like the water to be fairly cool. The water temperature usually needs to be around 42°F or colder for spawning to take place. Mountain whitefish often spawn at night. The darkness offers the eggs some protection from hungry predators. Unlike trout and salmon, mountain whitefish do not dig a gravel nest. The female finds a spot of clean gravel and just releases her eggs. She may release as many as 40,000 eggs! The eggs are fertilized by the male, sink and stick to the gravel. The eggs incubate in the cool, calm winter waters and then hatch in March. If the young whitefish are able to avoid predators, including larger whitefish, they will spawn in about three years.

The mountain whitefish might not be the most colorful fish in Idaho, but it is top fin in many rivers and streams in the state.



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 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. In fact, lampreys represent some of the first freshwater fish to appear on Earth.

So 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 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, like the mountain whitefish, 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. 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, too.

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. Some animals enter a sort of hibernation.

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 off. 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 will the animals do to try and make it through the winter?

THERE'S NO PLACE LIKE HOME

Are you a native to Idaho? If you were born in Idaho, you are! You are also native to America, because you were born in the United States.

We say animals are native if their species has lived in the same place a very long time. Whitefish have been in Idaho for millions of years, so they are definitely native to Idaho!

Mule deer are native, too. So are black bears, moose and bald eagles. These species have lived in Idaho for thousands of years. They may be native to other states as well, like Montana or Utah. These animals can't move around as easily as we can, so they usually stay in the same place unless people move them.

Sometimes, a species can disappear from its native land altogether! Grizzly bears once lived as far east as Iowa and were native in all of the western states. Now they only live in small pockets around Yellowstone National Park, northern Idaho, Canada and Alaska. Wolves are native to Idaho, too. They lived here for thousands of years but then disappeared. Now they are back.

Wildlife managers in America are trying to restore wildlife to areas where they once were native. Why? Native wildlife has had a very long time to adapt to the climate and habitats that exist in an area. You might say they know it like their own backyard. The ecosystem is healthiest when native animals and plants live there.

LET'S GO FISHING!

Fishing in November? You bet! Fall and winter can be a great time to get out and enjoy the fresh, crisp air. It is also a great time to fish for mountain whitefish. Many rivers and streams are closed to trout fishing in the winter, but you can still catch whitefish. Check the Fish and Game regulations before you go, because there are a few exceptions.

It is important to stay dry and warm when fishing this time of year. You should dress in layers, wear waterproof gloves, and bring an extra set of clothes and a pair of shoes just in case you get wet. Most important of all - don't forget the thermos of hot chocolate! Hot chocolate always has a way of making even the coldest day feel warm!

You don't need a fancy fishing rod to catch mountain whitefish. A simple spinning rod and reel is fine. Remember whitefish have a small mouth, so you will need a smaller hook. Put a grub, single salmon egg or small piece of worm on the hook, and you are set! Using artificial flies can also be a lot of fun.

To catch mountain whitefish, you need to know where they like to hang out and eat. They usually don't hide under deep undercut banks like a trout might. The best place to put your bait is in deep pools and deep water runs below fast water riffles. Mountain whitefish like to run in schools or groups. So once you find one, you usually have found a bunch. You can catch whitefish there until your arm gets tired!

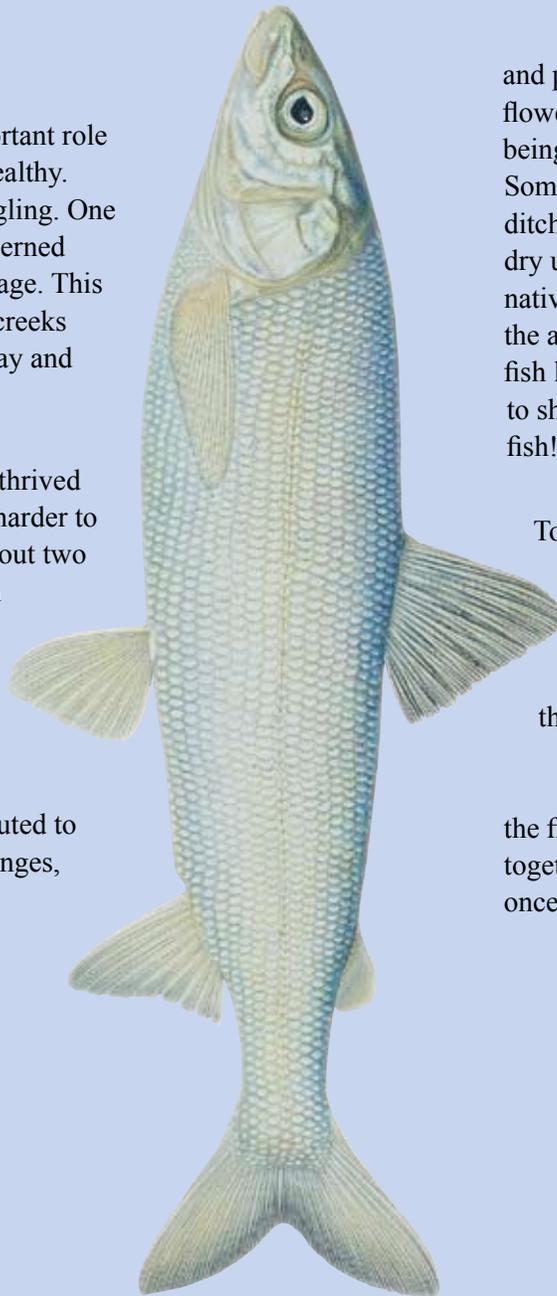
Now that you know a bit about mountain whitefish, grab an adult and go fishing! Fall is a great time to sharpen your fishing skills. You might even catch dinner in the process!

KEEPING WHITEFISH IN IDAHO

Mountain whitefish play an important role in keeping Idaho's ecosystems healthy. Yet, in some areas they are struggling. One place that fish managers are concerned about is the Big Lost River drainage. This drainage includes the rivers and creeks found around the towns of Mackay and Arco.

At one time, mountain whitefish thrived in this area. Now they are much harder to find. Scientists think that only about two percent of the historic population remains. That means if there was once 100 fish living in a section of river now there would only be two!

Many factors might have contributed to the decline. Some are habitat changes, irrigation, non-native fish



and people. Some of the water that once flowed through the rivers and creeks is now being used to water fields and pastures. Sometimes fish get caught in irrigation ditches and canals. When the water starts to dry up in the ditch, the fish get caught. Non-native fish have also been introduced into the area. At one time, only three kinds of fish lived in the area. Now the whitefish has to share its home with 11 different kinds of fish!

To help the whitefish make a comeback in the Big Lost River drainage, scientists will be keeping a close eye on the population. No fishing for mountain whitefish is allowed in this area. Habitat changes and irrigation canals and ditches will be looked at to see if ways can be found to help the fish. Hopefully, with everyone working together, the mountain whitefish will thrive once again in this area.

Fish illustration © Joseph Tomelleri

STRANGER IN A STRANGE LAND

If you moved to Idaho from another state or country, you are a “non-native.” Idaho may have seemed strange to you when you first arrived. You may have been used to a different climate or culture. But most people probably made you feel welcome. Many people in America move around and don’t live in one place forever.

Sometimes, a plant or animal species can be a non-native, too. Plants and animals are a bit different than people. Most don’t move on their own, especially plants. People have moved both plants and animals - sometimes on purpose and sometimes by mistake.

Are you having a big turkey for thanksgiving? Your turkey probably came from the store and was raised on a farm. Maybe your mom or dad went out and hunted a wild turkey for your dinner table. The wild turkey is not native to Idaho, but we have them now. They were brought to Idaho for people to hunt. The turkey has adapted well to its new homeland.

Sometimes, non-native species adapt too well. They can actually push out and replace native species. This can cause problems. All over America, there are examples of non-native species taking over habitats. More than 250 non-native species make their home in the Great Lakes! Many of these hitchhiked their way into the Great Lakes from other countries far, far away. Scientists are worried that over time, these non-natives will change the entire Great Lakes ecosystem. Non-natives are not always welcome!

COOK UP SOME **WHITEFISH!**

Some people think that whitefish aren’t good to eat, but they can be delicious. Here are some recipes to try from *Idaho’s Wild 100!* a cookbook of recipes from employees at The Idaho Department of Fish and Game. Happy Cooking!

Broiled Whitefish Burgers

Fry up enough whitefish to make 4 cups of cooked, flaked whitefish. Pull the flesh off the bones and refrigerate for a while to firm up. Place the following in a large bowl:

$\frac{3}{4}$ cup finely chopped celery

$\frac{3}{4}$ cup finely chopped onion

Juice of 1 lemon

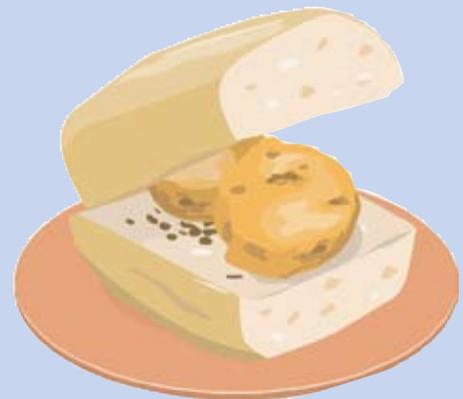
1 $\frac{1}{2}$ cups grated cheddar cheese

About 2 Tablespoons mayonnaise or enough to hold things together

Add fish. Fold everything together.

Place on English muffins and broil 5 minutes.

Makes about 10 broiled whitefish burgers





Smoked Whitefish

Fillet whitefish and leave the skin on. Layer fillets in glass or plastic container with a 50-50 mix of brown sugar and table salt between each layer. Refrigerate overnight. Rinse fillets and place in an electric smoker for 12 to 16 hours.

Pickled Whitefish

Cut skinned whitefish fillets in 2 inch chunks and soak overnight in a brine of 1 cup salt in 1 quart water. Rinse the chunks in water and layer in a crock or jar with sliced onions, lemons, celery and carrots. Sprinkle each layer with whole mixed pickling spices or your own mix of mustard seed, allspice, peppercorns and bay leaves. Cover with a 50-50 mix of white vinegar and water and refrigerate. It will be ready in about a week.

IT'S THANKSGIVING TIME

Thanksgiving is 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.

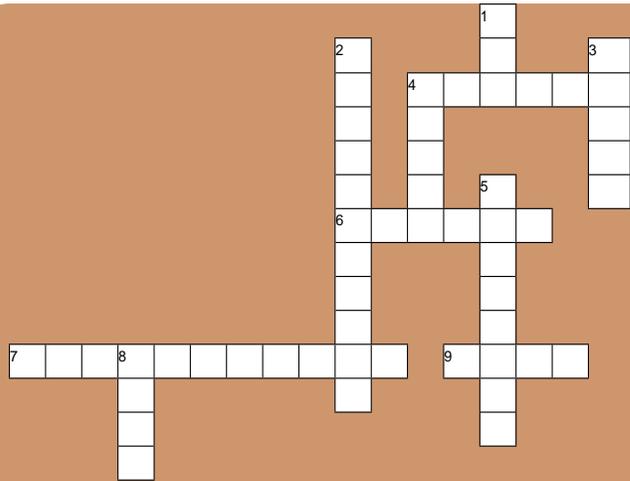
Do you think the pilgrims and Native Americans ate the same foods we eat today? Some were the same. They ate deer, fish, wild turkeys, ducks, geese and other birds. They also ate Indian corn, wheat and berries. Do you think they ate corn on the cob? No, corn on the cob was not eaten. Indian corn was 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 started with a harvest feast?

WORD BANK

native
eat
teeth
night
mountain
bottom
coldblooded
game
deep
vertebrates



Whitefish Wordcross

Across

4. Mountain whitefish are _____ to Idaho.
6. Whitefish usually look for food on the _____ of a stream.
7. Most fish are _____.
9. Mountain whitefish are the most common _____ fish in Idaho.

Down

1. Whitefish are good to _____.
2. Fish are _____.
3. With a small mouth and no _____, mountain whitefish must eat small things.
4. Spawning at _____ helps to protect whitefish eggs from predators.
5. _____ whitefish spawn in November.
8. Put your bait in a _____ pool to catch mountain whitefish.

WILDLIFE EXPRESS

Volume 21 • Issue 3 • Mountain Whitefish • November 2007

Wildlife Express is published nine times a year (September-May) by the Idaho Department of Fish and Game. Classroom subscriptions and an Educator's Guide are available for \$30.00 per year and includes a classroom set of 30 copies mailed to your school each month. Subscriptions of 10 copies or less are available for \$15.00.

This publication is made possible through the sale of wildlife license plates.

Wildlife Express is also available on the Idaho Department of Fish and Game website at no charge at <http://fishandgame.idaho.gov>

For more information, call or write: Wildlife Express, Idaho Department of Fish and Game, 600 South Walnut, PO Box 25, Boise, Idaho, 83707
(208) 287-2890.

Lead Writer: Adare Evans Layout: Donna Dillon Contributors: Renai Brogdon • Lori Adams • Vicky Runnoe • Cristina Watson

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 the address printed above!