

This month's theme:
Salmon Fishing



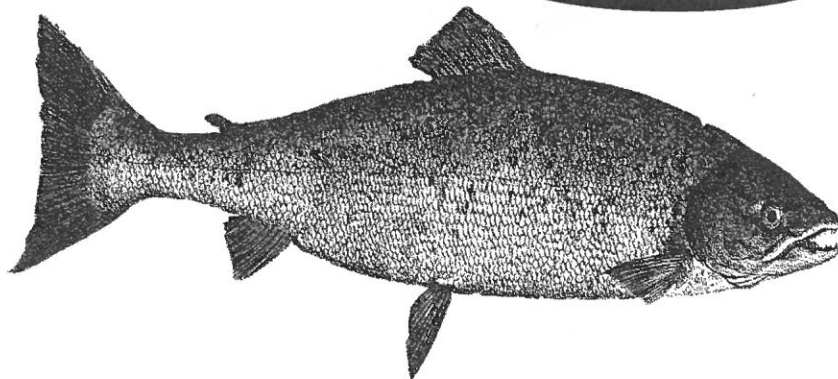
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The Newsletter of the Idaho State Historical Society's Junior Historian Program

PROSPECTOR

November, 2004



Native American Salmon Fishing

The first residents of Idaho were the Native Americans. Long before the Oregon Trail pioneers came through in their wagons, before the fur traders roamed the mountains in search of beaver pelts, even before Lewis and Clark passed through on their way to the ocean, Native American had settled the land. There were seven distinct cultures or tribes in Idaho. In the North lived the Kutenai, Kalispel, and Coeur d' Alene. In the central region lived the Nez Perce, and in the south were the Shoshone, the

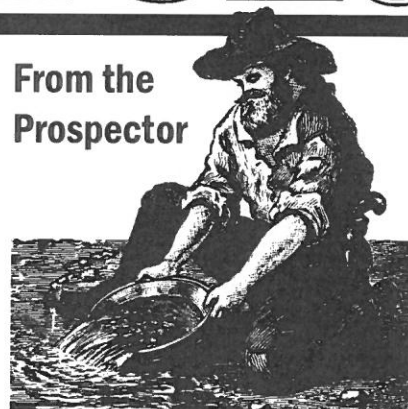
Bannock, and the Northern Paiute. Although each tribe was unique, they all had one thing in common. All of the Indians in Idaho relied on salmon fishing to survive.

Salmon are anadromous. Anadromous fish are born in fresh water, like a lake or stream. Later when they are about one-year old, they follow rivers to the ocean where they grow and develop. After a few years in salt water, the salmon return to the rivers, swimming hundreds of miles to lay eggs in the very area where they had hatched.

The main waterway into

Continued on next page

From the Prospector



Howdy Prospectors!

This month my best friend, my mule, tried to convince me to write an entire issue on food. Seeing as though the critter is always hungry, he thought it was a good idea. "We can write about hay, and apples, and alfalfa" he said, "everyone likes to read about alfalfa." Well, I don't know about you guys, but I've never been too interested in alfalfa, especially at the dinner table. But, my mule's idea got me thinking. Is there a food that is really important to Idaho history? Is there something tastier than hay that goes back to the early days of the Native Americans? After a little thinking it came to me, salmon. Even though my mule's not too fond of fish, he agreed, if you want to know about the history of Native Americans in Idaho, you have to know a little about salmon fishing.

Idaho is the Columbia River. Fish swam up the Columbia every spring and summer and continued to connecting rivers like the Snake, Salmon, and Clearwater. In the 1800's an estimated 10 to 16 million salmon filled the Columbia River network. When the fish arrived, some parts of the river were nothing, but a teeming mass of scales and fins.

There are several different types of salmon, but the most important species was the chinook (also known as king salmon). Chinook salmon are huge. They are the largest salmon in the Pacific

Ocean. In Alaska some have even been caught that weigh over 90 pounds. When the Chinooks swam up the Columbia, the Indians of Idaho had a great food source.

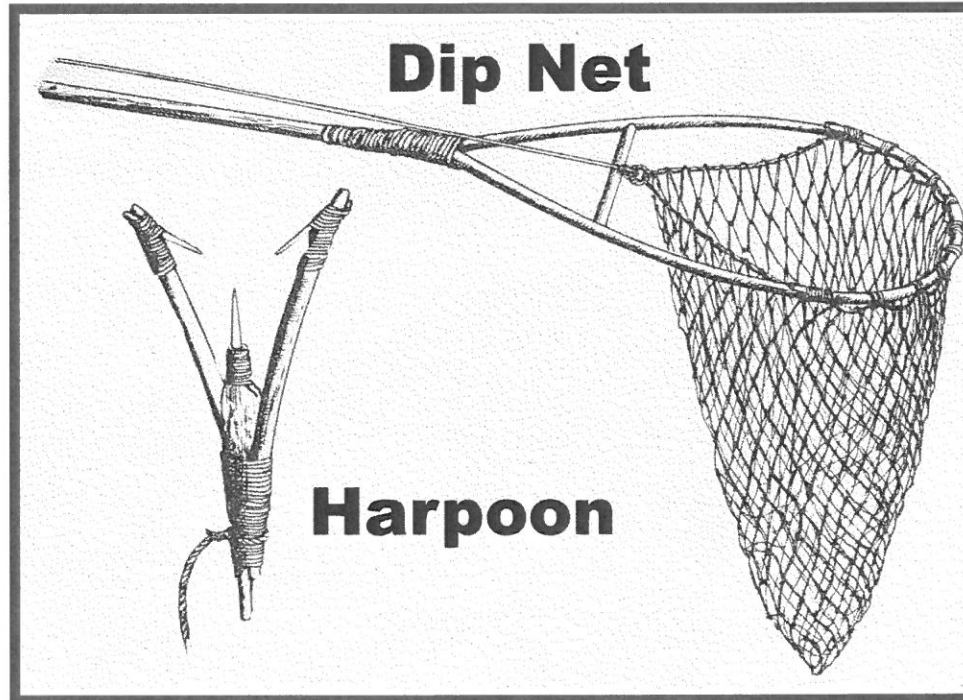
In most tribes the men were the fishermen. Women also helped with the salmon harvest, but their job was to dry and store the fish. There were many methods the Indians used to catch salmon. One of the most common ways to fish was with a spear or harpoon. Spears are long wooden shafts with a fixed point at the end. These point could be simple sharp tips made of bone or wood or elaborate constructions with three barbs that looked like giant forks. A spear fisherman

waited patiently on a rock in the river and quickly stabbed at a passing fish. He never let go of his spear, so he could only hunt fish that swam close by. Most harpoons look like spears but the point was detachable. Another

most of the fisherman's work for them, while they simply waited for the traps to fill.

Once the fish were caught they had to be preserved so that they would last into the winter. The simplest method of preservation

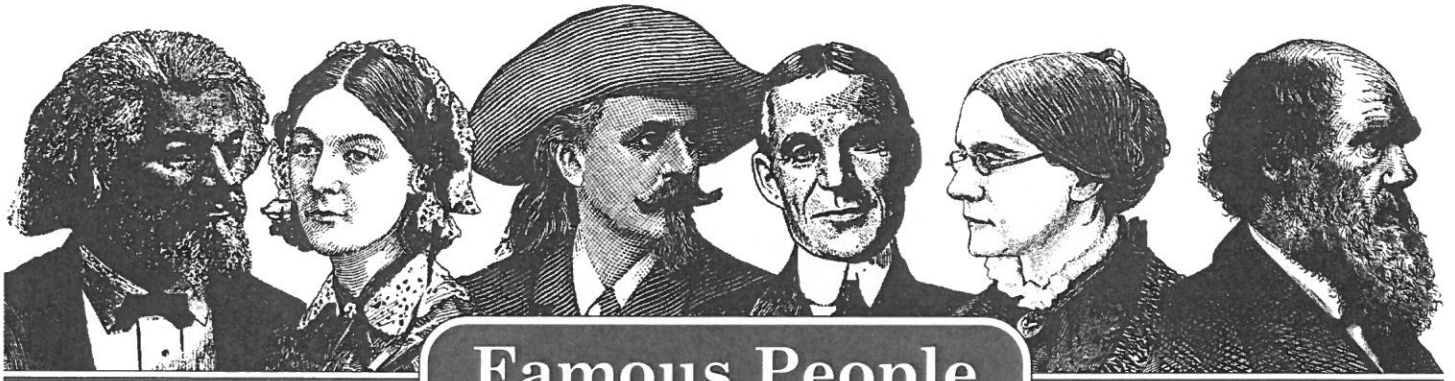
was drying. To dry a fish, it was first cleaned and split into thin sections. These sections were left outside on racks, where the hot sun would burn away all of the moisture and turn the fish into a tough long-lasting piece of jerky. Another way



difference was that a rope connected the point to the shaft. When a fisherman stabbed a fish, the point stuck in the animal but slid off the shaft. As the fish tried to swim away it was stopped by the rope that still connected the harpoon tip to the long shaft. The fisherman could then pull in the fish, much in the same way as a modern fishermen reels in a fishing line. Indian fisherman also used large nets made of plant fibers. When the rivers were full of returning salmon, a fisherman could simply dip the net into the water and wait for the salmon to swim in. In other areas, large traps made of rock and wood called weirs were built. Once they were built, weirs could do

to preserve the fish was to smoke them. In this method, fish were put into a small building with a slow burning, smokey fire. The heat and smoke would dry out the fish, making it ready for winter storage.

In the past, the Indians of Idaho relied on the salmon for survival. Unfortunately, most of the great salmon runs have disappeared. Changes to the environment, like building great dams across the rivers, have made it difficult for large numbers of fish to return to our state. Many of the Idaho tribes are fighting for changes in our laws, so that one day conditions might be favorable for the salmon to return.☞



Famous People

Lewis and Clark

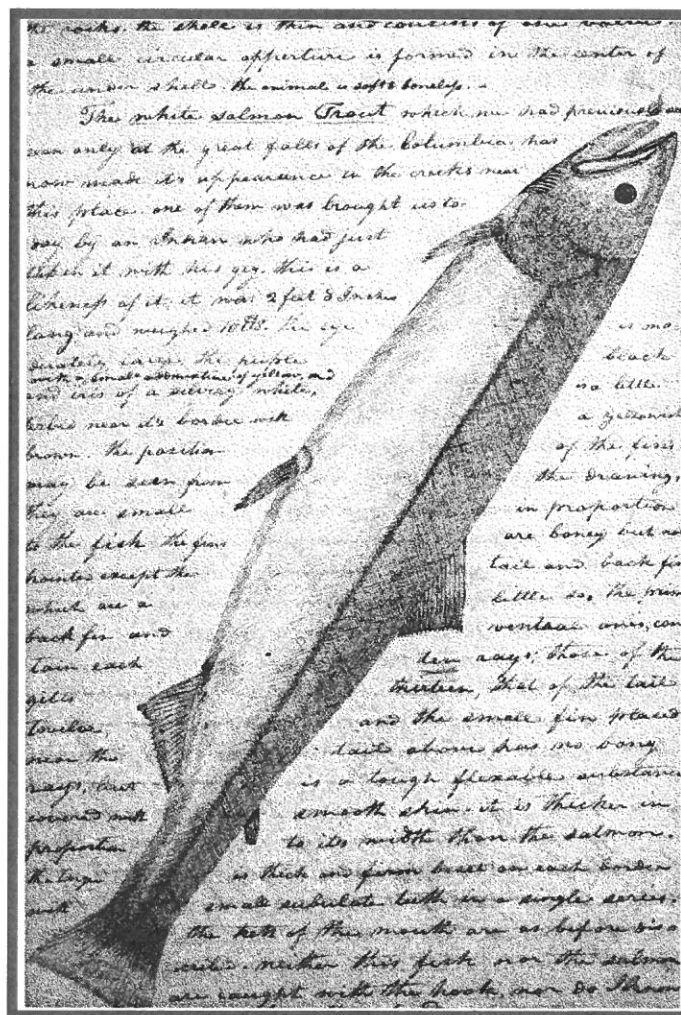
Finding out how the environment looked two hundred years ago can be difficult. None of the Indian tribes of Idaho had a written language, so they relied on storytelling to pass information from generation to generation. Listening to these Native American stories can be a great way to learn about the past. Unfortunately, because of changing traditions, many of the people who knew these stories have died without passing on the information to the next generation.

Another way to learn about the environment in the past is to read the journals of early European explorers. In 1805, Meriwether Lewis and William Clark led an expedition that passed through Idaho on the way

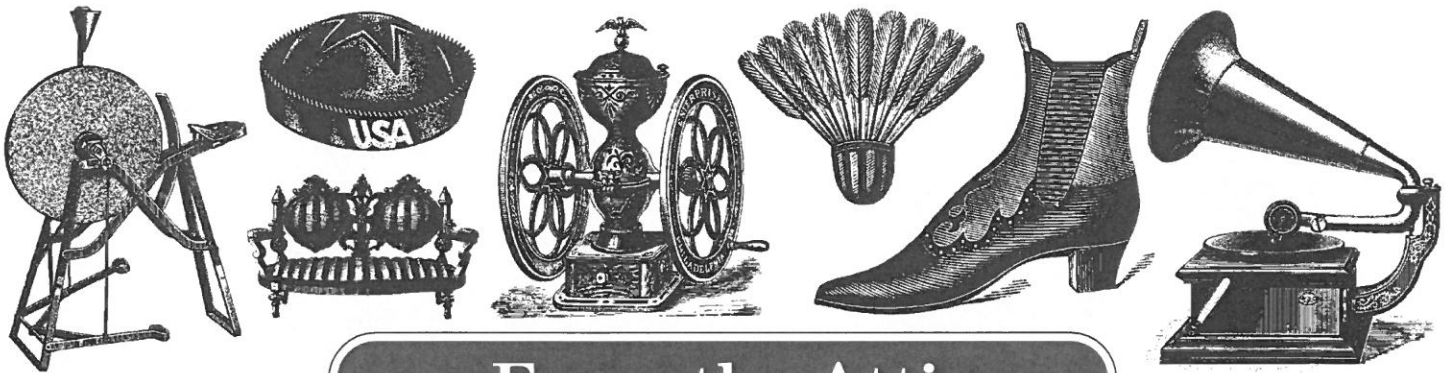
to the Pacific Ocean. Usually explorers don't have the time to record detailed information about the natural world, but this expedition was different.

The man who initiated the expedition was president Thomas Jefferson. President Jefferson was very interested in science and one of his instructions to Lewis and Clark was to study the new plants and animals they came across in the West.

The two explorers wrote about the many creatures they encountered on their travels, including salmon. In their journals is information on how the Shoshone and Nez Perce captured and dried salmon, what rivers the creatures used, and how tasty the fish were. At one point in the expedition, after climbing through the Bitterroot Mountains, Lewis and Clark's men ate so much salmon and camas root that they all got terribly sick. It took almost a week for the soldiers' stomachs to return to normal.☞



A drawing of a salmon from Meriwether Lewis's journal



From the Attic

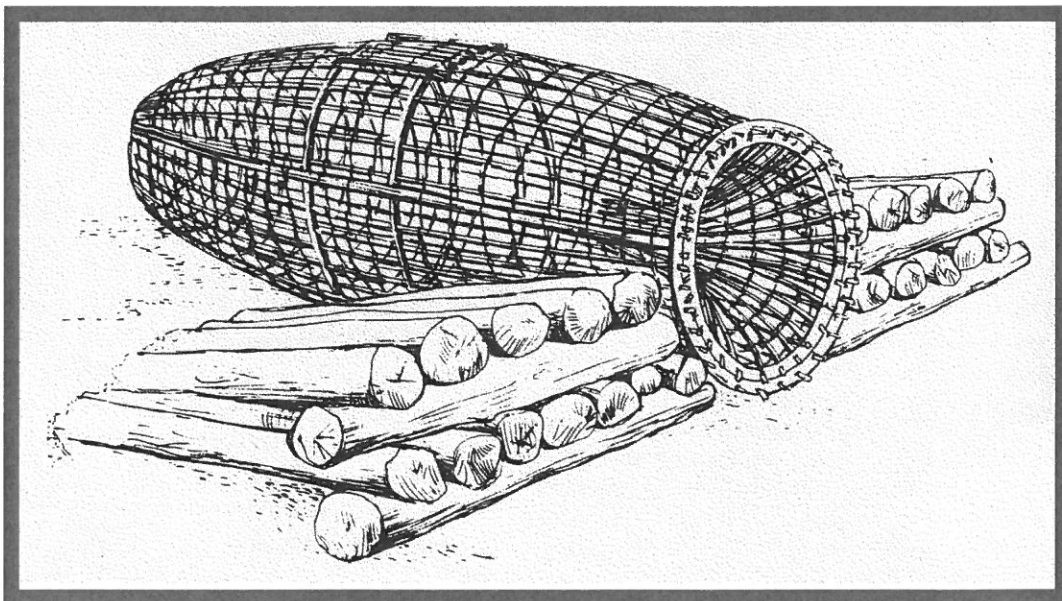
Weirs

One of the methods Native Americans used to catch fish was to build weirs. Weirs are fences that were built in streams and rivers to trap fish. These clever traps could be used to harvest large numbers of salmon when the rivers were filled with the spawning fish.

There are many different kinds of weirs, but most of them worked in the same way. Built of rocks,

sticks, or logs, most weirs consist of a long wall or dam that blocks the salmon and forces them to swim to a certain point in the river. Some weirs were shaped like the letter V and would stretch from bank to bank. The salmon, who were trying to swim upriver, would enter the open end of the V and be forced by the walls to swim toward the narrow point. At this tight junction, the Native

Americans left an opening for the helpless fish to swim through. This hole was actually the mouth of a basket, cage, or small walled pool. The fish could easily swim in, but once inside they had a difficult time getting out because of the tiny exit. Later, the trapped fish would be lifted out, cleaned and prepared for the hungry tribe. ☞



A dam of logs attached to a basket trap



The Fun Page

Salmon Word Search

B	B	F	E	B	J	S	Y	G	A	O	O	C	E	N	F	B	B	E	K
Y	A	N	E	C	A	G	K	P	K	J	Z	O	K	A	I	S	K	O	X
R	Y	X	H	L	R	N	N	V	K	T	H	E	H	E	S	U	O	M	T
G	G	K	M	J	G	E	N	W	S	B	N	U	Q	C	H	N	O	K	A
V	W	O	J	Z	W	H	P	O	N	J	O	R	K	O	I	X	I	E	O
E	N	O	H	S	O	H	S	Z	C	A	O	D	E	H	N	L	S	A	L
E	S	U	N	I	E	Y	G	I	E	K	P	A	C	V	G	D	N	S	R
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Z	V	O	G	J	X	C	S	B	N	D	H	N	E	R	I	W	G	V	T
Y	O	N	X	X	R	J	V	V	S	Z	G	E	O	B	V	N	G	P	A
X	N	Q	T	L	V	D	F	M	T	S	O	M	J	P	W	K	Y	N	H
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O	Z	X	J	I	M	J	K	D	N	U	Z	Q	L	Y	Y	H	O	O	K
A	O	U	F	I	T	I	M	V	S	F	Y	P	V	Q	V	W	V	R	Y
X	J	Y	Q	U	B	B	Z	D	Q	E	P	P	K	M	X	W	C	G	K
L	R	U	B	Z	R	Y	J	Y	M	T	H	C	F	I	T	T	N	W	Y
X	X	G	L	W	D	N	A	Y	W	Y	F	J	T	E	N	P	I	D	T
X	T	U	N	M	K	R	N	C	E	Y	H	G	L	E	R	V	Q	W	Y
L	D	V	E	Z	F	Y	C	P	K	I	Y	V	F	O	U	B	R	B	U

ANADROMOUS
BANNOCK
CHINOOK
COEUR D' ALENE
DIP NET
FISHING
HARPOON
HOOK

KUTENAI
NEZ PERCE
OCEAN
RIVER
SALMON
SHOSHONE
WEIR



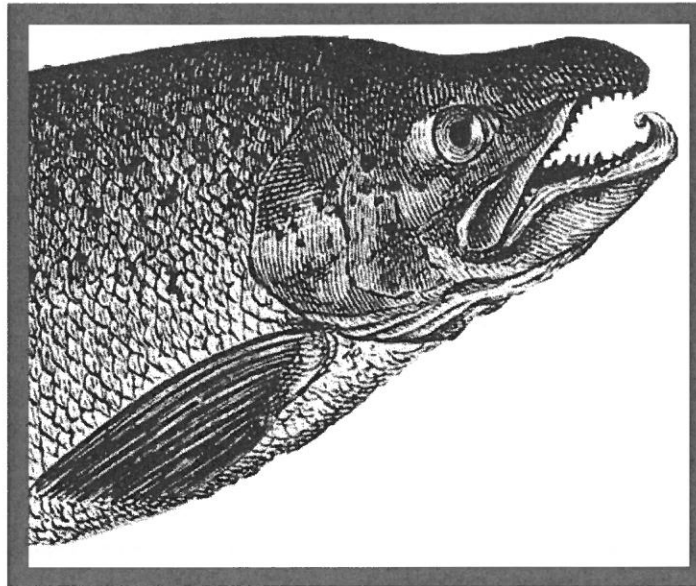
Next Month's Activities

Well, we've told you all we know about salmon fishing, but we need your help so that we can learn more. Pick from one of the activities below or make up your own salmon project and send it in to our Prospector Headquarters. We'll take some of your best work and print it in next month's magazine. Remember to include your name, where you're from, and the name of your Prospector chapter. We can't wait to see what you send in!

Salmon Stories: In the winter, Native Americans often sat around the campfire and told stories. These stories were used mostly to entertain the tribes on cold nights, but they were also used to teach children about geography, hunting, and good behavior. Many of the stories featured talking animals that acted like humans. Can you write a campfire tale? Tell us a short story about a talking salmon and the creatures he meets in Idaho. Does he make friends with a coyote?

Does she have to escape from a hungry bear?

Fish Trap: Native Americans often made clever fish traps called weirs. These traps, made of rocks and wood, were placed in rivers



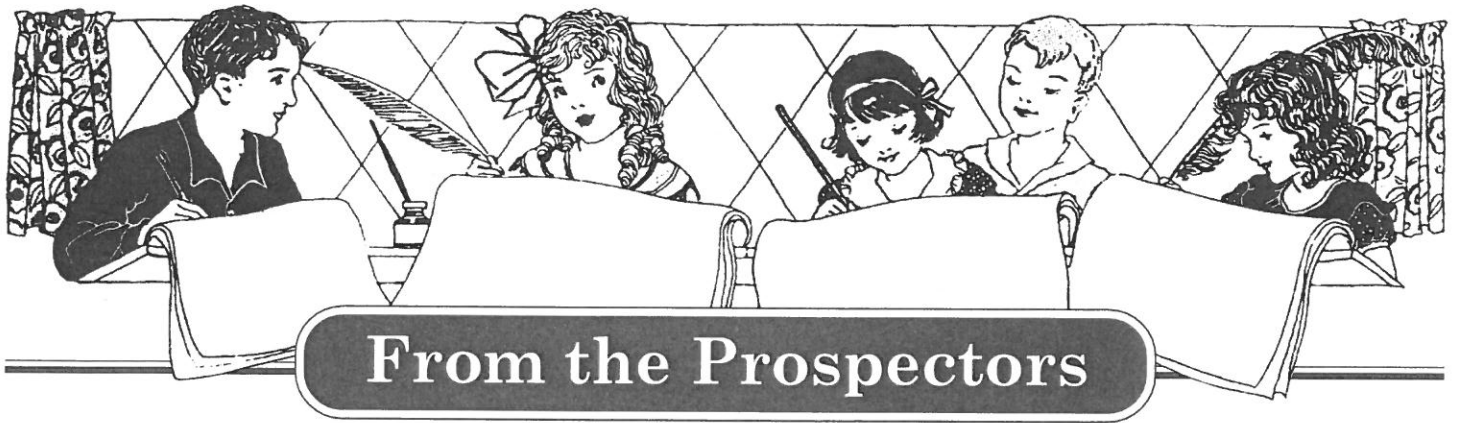
and streams, and helped the tribes catch lots of salmon. How would you design a fish trap? Using only materials you would find in the forest or mountains, design and draw a trap that will ensure your tribe has a successful salmon harvest.

Salmon Confusion: What's the difference between a coho salmon and a sockeye salmon? How can we tell if that big fish swimming in the river is a kokanee or a chinook? Is a steelhead a salmon? Fish biology can be pretty confusing. With so many types of salmon in the Pacific Northwest it's hard to tell sometimes which fish is which. Do some research in the library or on the internet and help the rest of us Prospectors out. Write a short report about the different kinds of salmon in the area and how we can tell them apart.

Send in your work by December 13th to:

Prospector Club
Lucky Noah
Idaho State Historical Museum
610 North Julia Davis Drive
Boise, ID 83702

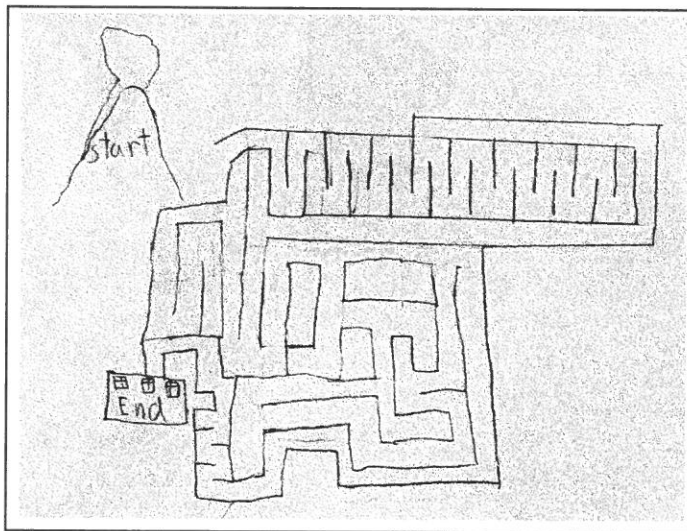
Or email it to us at
kzwolfer@ishs.state.id.us.



From the Prospectors

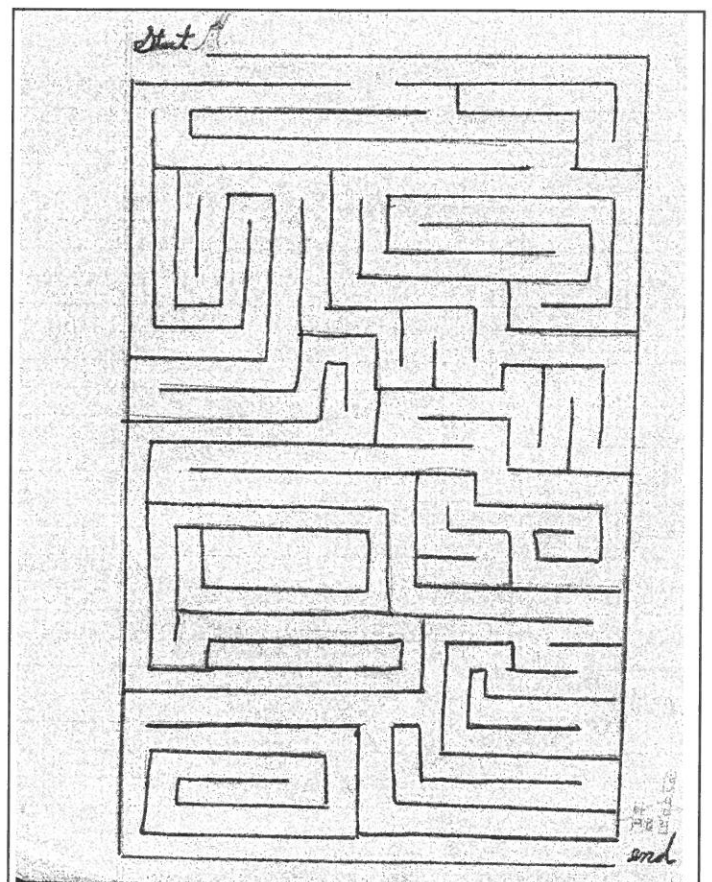
Look at all of these great projects inspired by volcanoes

aMAZing Volcanoes



Chris Thorton
Riverside Elementary
Boise

Nick Lodge
Riverside Elementary
Boise



Mount St Helens Stirs

Mount St. Helens, an active volcano, is found in southwestern Washington in the Cascade Range. This volcano had been dormant since 1857 but began to show signs of activity in 1980, when magma began pushing inside the mountain causing the north face to bulge. On May 18, 1980 an earthquake caused a landslide on the mountain taking its top off. The eruption gave off a cloud of ash and gases as high as 12 miles. The eruption killed 57 people, and damaged life in an area of some 70 square miles. Because of the eruption, the mountains elevation was lowered from 9,677 feet to 8,365 feet. A minor eruption occurred in 1982. The last eruption was in 1986. The Mount St. Helens National Volcanic Monument was established there in 1983.

Emma Ryan
Riverside Elementary
Boise

Mount St. Helens has erupted several times in its history. The most major eruption in current history was the one on May 18, 1980 at 8:32 a.m. The eruption was triggered by a 5.1 earthquake centered beneath the mountain. The eruption lasted nine hours.

My uncle is a geologist and was working on Mt. St. Helens when it erupted. He was measuring activity as part of his job with the U.S.G.S. (United States Geological Survey). His close friend, who was also a geologist, was on the face of the mountain that collapsed and was killed. My mom who was in Vancouver,

Washington at the time of the eruption saw the sky filled with an enormous plume of ash. She had no idea what it was and feared that there was a nuclear bomb that had exploded.

There is an eruption in progress in the volcano right now. A new lava dome is growing inside the crater. There could be another big eruption but scientists are not sure when this might occur. Mount St. Helens has blown up many times in the past and is an interesting part of Northwest History.

Alexander Hardesty
Riverside Elementary
Boise

Mt. St. Helens is a strato volcano located in the state of Washington. A strato volcano is made of layers of lava and pyroclastic materials. The alert as to whether or not Mt. St. Helens will erupt is at '2' on a 0 to 3 scale. Mt. St. Helens had been asleep for 123 years before it awoke on March 20th, 1980. However, if Mt. St. Helens erupts again, scientist think it won't be as bad as the eruption on May 18th, 1980 when 57 people died. After only 10 minutes of the eruption, the ash was 12 miles in the sky. Then the wind carried the ash and the ash spread over 11 states. The eruption also made the largest mud slide in U.S. history. Mt. St. Helens continues to be an active, dangerous volcano.

Eric Weimer
Riverside Elementary
Boise

Mount St. Helens volcano in Washington State last erupted on May 18, 1980. The eruption lasted almost 9 hours and everybody heard about it. There was an earthquake and ash was everywhere.

Scientists expect it to erupt again. There is a lava dome inside the crater at Mount St. Helens that continues to grow¹. Changes in the activity could result in another eruption with very little warning so scientists are keeping a close eye on it. Visitors to the forest by the volcano need to be prepared for another eruption. Listen or read local news reports for current information and be careful! KGW reported that Mount St. Helens has an "ongoing steam event" with a plume rising 10,000 feet in the air². They also reported there was no ash, only steam in the plume.

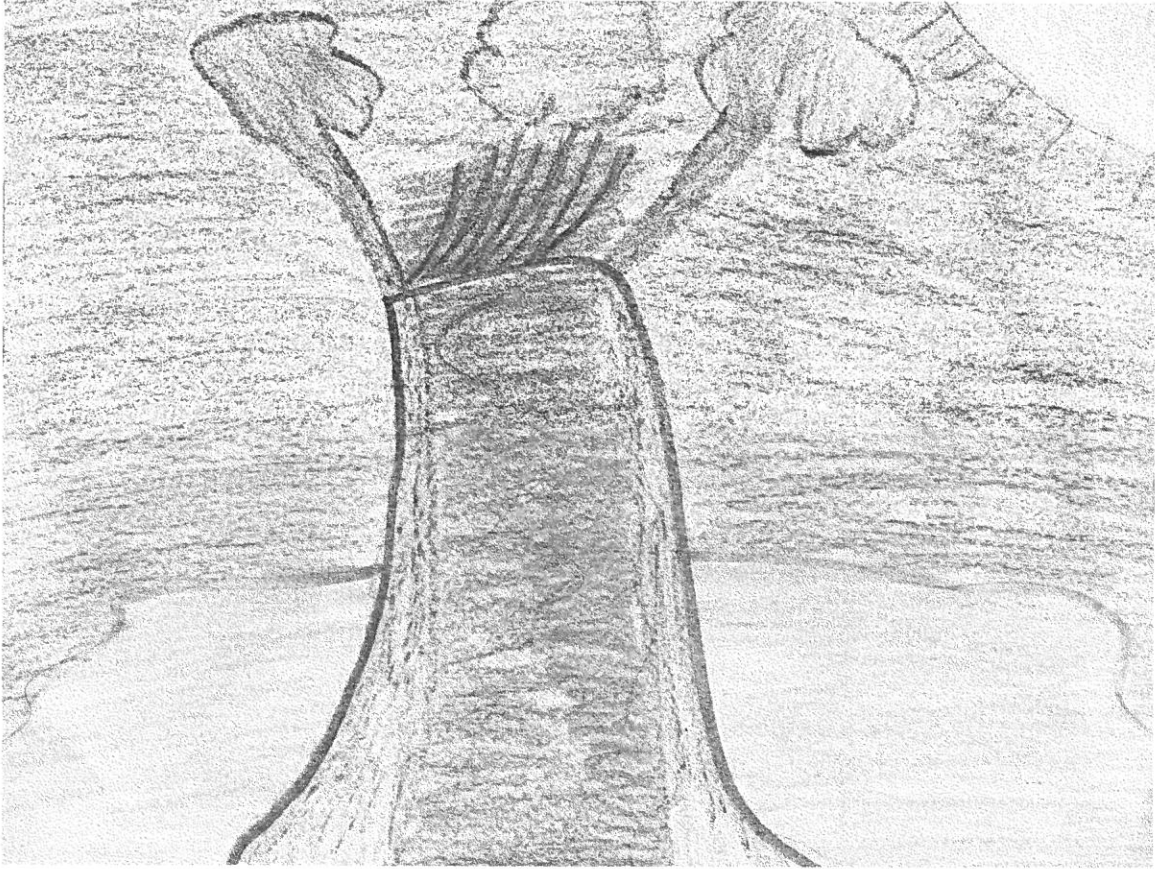
The Mount St. Helens National monument has also installed a live web camera where anyone can see what is happening at the volcano. The VolcanoCam is located at the Johnston Ridge Observatory and can be found online at www.fs.fed.us/gpnpf/volcanocams/msh/.

¹. Mount St. Helens National Volcano Monument website, October 30, 2004. <http://www.fs.fed.us/gpnpf/mshnvm>.

² KTVB.com website, "Mount St. Helens 'steam event' produces 10,000 foot plume", kgw.com staff and wire reports, October 27, 2004

Kyle Tucker
Riverside Elementary
Boise

Backyard Volcano



**Erica Dick
Riverside Elementary
Boise**

Resources for Teachers

Field Trip Ideas

Unfortunately, Idaho's rivers no longer teem with the mass migration of salmon. The best way to get a close look at the fish is to visit one of the state's many fish hatcheries. Not all hatcheries have education programs, but at the very least, a hatchery representative will be able to point you to useful resources for your classroom. You can find a comprehensive list of Idaho's hatcheries at <http://imnh.isu.edu/digitalatlas/geog/fishery/hatchery.htm>

Books

Cutright, P.R.
Lewis and Clark: Pioneering Naturalists
University Of Nebraska Press, 1989

The natural history of the Lewis and Clark expedition

Landeem, D. and Pinkam, A.

Salmon and his People: Fish and Fishing in Nez Perce Culture
Confluence Press, 1999

Salmon fishing from the Nez Perce perspective

Simpson, J. and Wallace, R.
Fishes of Idaho
University Press of Idaho, 1982

A comprehensive field guide to the fish of the state

Stewart, H.
Indian Fishing: Early Methods on the Northwest Coast
University of Washington Press, 1977

Although this work is on the tools and methods of Native American tribes on the Pacific Northwest coast, much of its information on salmon fishing is relevant for the early resident of Idaho.

Walker, D.E.
Indians of Idaho
University of Idaho Press, 1978

A great book on the cultures of the seven tribes of Idaho.

Web Sites

<http://www.nwr.noaa.gov/1salmon/salmesa/>

This site from NOAA has a nice selection of maps showing where different species of salmon still spawn.

<http://www.riverdale.k12.or.us/salmon.htm>

The students of a Washington grade schools created a site on every aspect of salmon

<http://www.adfg.state.ak.us/pubs/notebook/fish/chinook.php>

Alaskan Fish and Game site on the biology of the Chinook salmon

<http://www.streamnet.org/pub-ed/ff/Factsheets/Lifecycle.html>

A basic review of the life cycle of the salmon

Lesson Plan

Gyotaku

Goals of Lesson

Gyotaku (guh-yo-tah-koo) is a technique used by Japanese fisherman to record the size of their catch. Fish are coated with a water soluble, non-toxic paint and then covered with a thin sheet of paper. When the paper is pulled away from the paint, the fisherman has a visual proof of the size of their catch. Although gyotaku was originally developed for a simple utilitarian purpose, the technique eventually evolved into an art form. In this activity students will get their own opportunity to make gyotaku salmon prints. The prints can be a great way to jump start a lesson on fish biology, the importance of salmon, or just the beauty of the printing method.

Inventory

Salmon (real or rubber), washable ink or paint, brushes or rollers, thin paper (like newsprint), table coverings.

Activity

In advance you have to make the decision whether to use real or rubber fish. Real fish are more authentic and give sharper impression, but create obvious problems of cost, storage, and smell. Several companies make rubber fish replicas molded from the real thing. The rubber can easily be washed and reused, although it provides less detail than the real fish. Rubber salmon can be obtained from Acorn Naturalist in California, 1-800-422-8886, www.acornnaturalists.com.

This project can be messy. Start by covering your work surface. If you are using real fish make sure to wash them in the sink and thoroughly dry them off before you begin. Lay the fish on the work surface and then cover it with paint or ink using brush and roller. Multiple colors can be added to the same fish. At first it might be fun to try to mimic the natural colorization of the salmon,

but kids will also want to try wild and imaginative combinations on their fish.

Once the painting is complete, press the paper carefully over the fish. Be careful not to slide the fish or paper around or the print will smear. Gently lift the paper and your gyotaku print is complete. Both real and rubber fish can be reused by quickly cleaning and drying their surface.

Discussion

Gyotaku is a fun art project all on its own, but it can also be used as an introduction to other subjects. Many Indian tribes gave special attention in their art and culture to creatures that were important to their survival. Regional Native American stories often feature talking salmon that interact with humans and other creatures. Similarly the prints could be used as inspiration for the students to write their own stories in Native American styles.☞

