



United States Department of Agriculture

Natural Inquirer Reader Series

Meet Dr. Flitcroft!



Forest Service

FS-1028g

November 2015

Meet Dr. Flitcroft!

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Glossary words are in **bold**.

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<http://www.naturalinquirer.org>



Dr. Flitcroft loves working outside. When she was in college, she knew she wanted to become a scientist.



Dr. Flitcroft spent a lot of time exploring outdoors when she was young.

Dr. Flitcroft pays close attention to nature. She is also very curious.



These children pay close attention to the world around them.

Dr. Flitcroft is a scientist who studies fish.
One type of fish she studies is called Coho
salmon (sa mən).

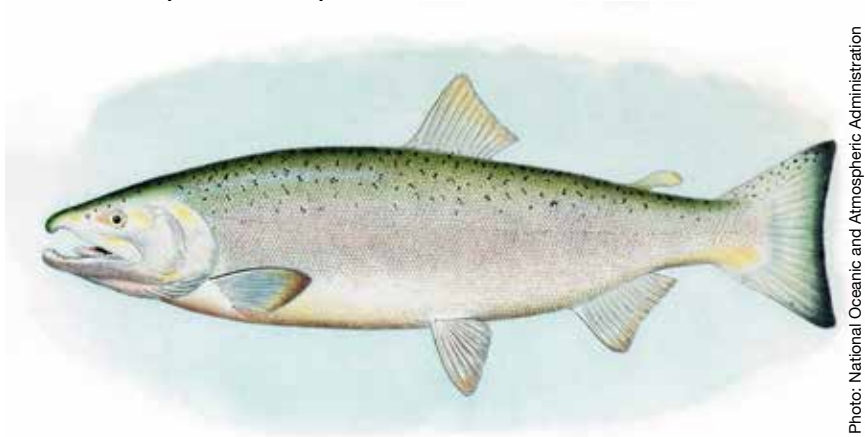
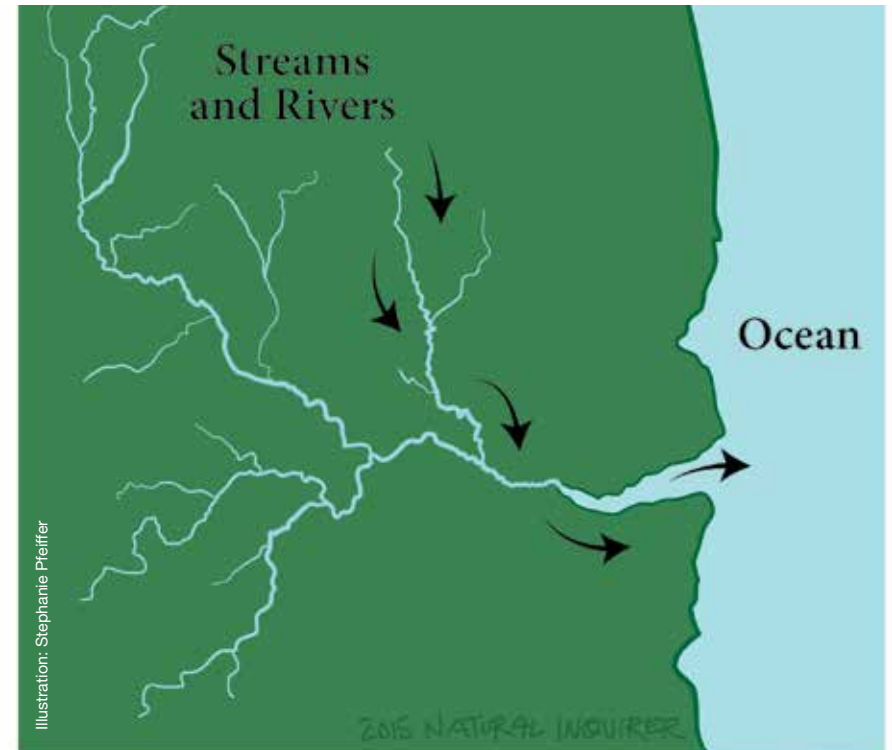


Photo: National Oceanic and Atmospheric Administration

Fish are animals that live in water.



Coho salmon live in **streams**, rivers, and the ocean.

Dr. Flitcroft knew that salmon are important for the **environment**. Salmon eat other fish and animals. Salmon are also eaten by some animals.



Salmon are also important to humans for many reasons. Some **American Indians** (ə mer ə kən in dē ənz) and **Alaska Natives** (ə las kə nā tivz) use art to show that salmon are a part of their lives.



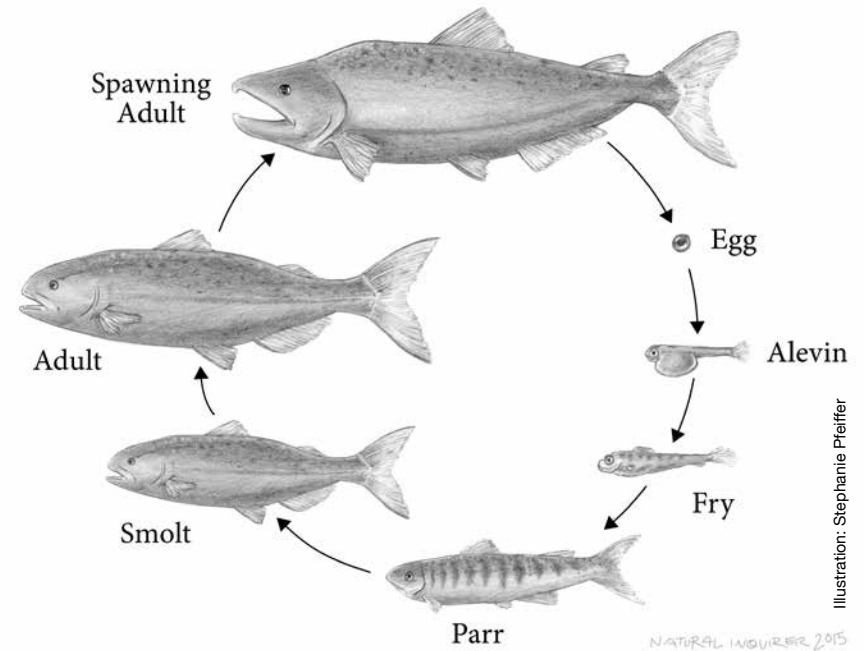
Salmon are sometimes shown on totem poles made by American Indians and Alaska Natives.

Some people catch and sell salmon as a part of their job.



Some people like to eat the salmon they catch. Other people sell the salmon.

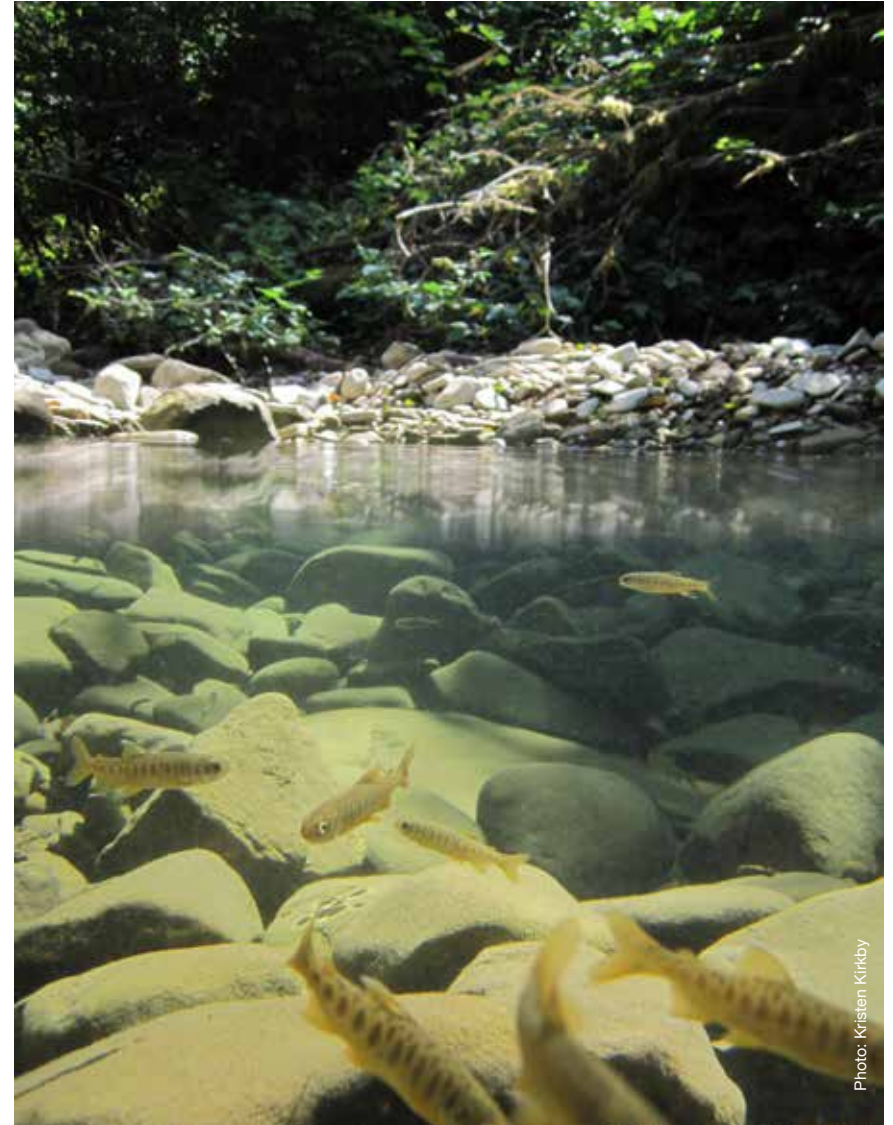
Dr. Flitcroft knew that salmon have a **life cycle**. Salmon need healthy **habitat** at each point in their life cycle.



Salmon lay eggs in streams and rivers. The eggs **develop** as part of the salmon life cycle.



Dr. Flitcroft likes to ask questions about our world. Dr. Flitcroft asked, “Why do young salmon live where they live?”



Dr. Flitcroft worked with a team of scientists to answer the question.



When have you worked with a team?

Dr. Flitcroft and her team used tools to help answer the question. Masks and snorkels are two tools they used. Snorkels helped the scientists **observe** if salmon were in the streams and rivers.





Photo: Brian Cooke

A mask and snorkel allow humans to see and breathe under the water.

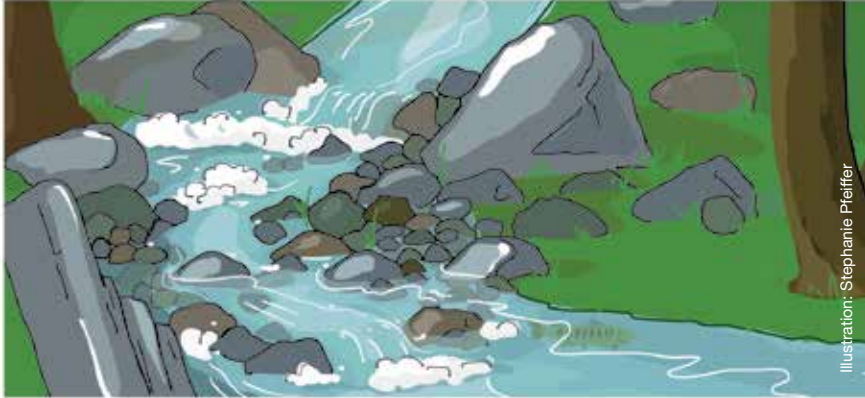
Dr. Flitcroft and her team observed many young salmon in streams and rivers. The team discovered a **pattern**. Streams and rivers with more young salmon had three types of healthy habitat that were close together.



Photo: Kristin Kirkby

Healthy habitat can help young salmon at each stage of their life cycle. Young salmon need all three types of healthy habitat.

Young salmon need areas with small rocks and water that is not deep. These areas are where the eggs are laid.



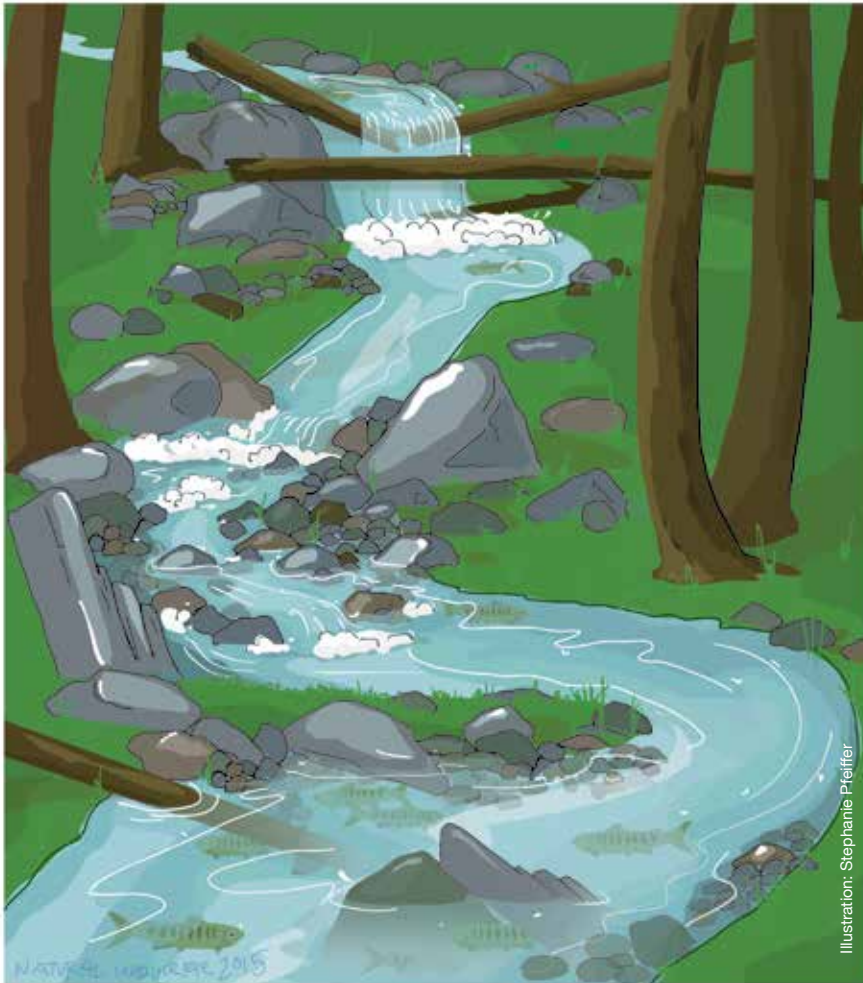
Young salmon need slow moving water with logs and rocks. These areas let young salmon hide.



Young salmon need areas with deep pools in the summer. Pools are areas of deep water in a stream or river. Deep pools have cold water during dry, hot summers.



Dr. Flitcroft thinks that young salmon need habitat close together because they have not yet become strong swimmers.



Streams and rivers with all three types of habitat help young salmon survive. Find all three types of habitat.



Learning how to swim takes hard work. What do you do that takes hard work?

Critical Thinking Questions:



- Young salmon need healthy habitat to survive. What is one other thing young salmon need to survive?
- All animals need healthy habitat to survive. What is one thing that you need to survive?
- Dr. Flitcroft worked with a team of scientists. What is good about working with a team?
- Dr. Flitcroft likes to ask questions. Why do you think it is important to ask questions?

Glossary:

Alaska Natives (ə **las** kə **nā** tivz): People who are a part of the first communities that lived or still live in Alaska.



American Indians (ə **mer** ə kən **in** dē ənz): People who are a part of the first communities that lived or still live in North America or South America.

develop (di vel əp): To grow or change.

environment (in **vī** rə(n) mənt): The living and nonliving things that are a part of the natural world.

habitat (**ha** bə tat): The place or environment where a plant or animal naturally or normally lives and grows.

life cycle (**līf** **sī** kəl): Stages in the life of a plant or animal.

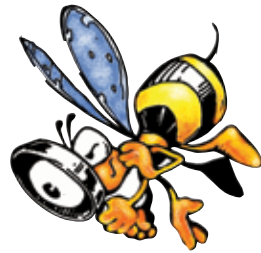
observe (əb-**zərv**): To watch something.

pattern (**pa**-tərn): Something that happens in a regular or repeated way.

salmon (**sa** mən): A large fish that is born in streams or rivers but that lives most of its life in the ocean.

stream (**strēm**): A body of running water —such as a river, creek, or brook— flowing on Earth.

Try This!



The map on page 26 shows streams and rivers where young salmon live. Young salmon move through the water to find healthy habitat. The healthy habitat helps them survive at each part of their life cycle. On the map, each habitat type that young salmon need has its own color.

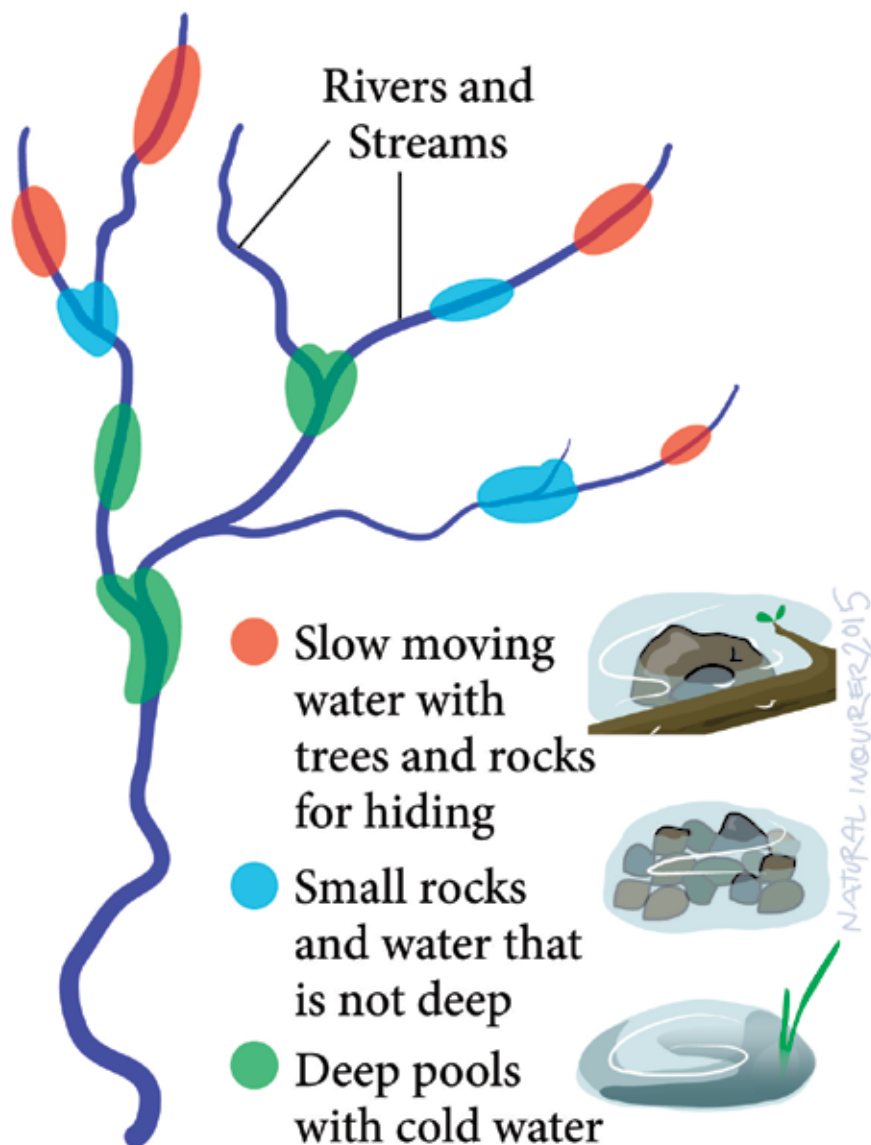
The color **red** shows habitat that has slow moving water with trees and rocks for

hiding. The color **blue** shows habitat that has small rocks and water that is not deep. The color **green** shows habitat with deep pools that have cold water during the summer.

Dr. Flitcroft found that young salmon like to live in streams and rivers where the three healthy habitat types are close together.

Look at each of the streams and rivers on the map.

- Count the number of streams and rivers. How many streams and rivers do you see?
- How many of the streams and rivers have all three types of habitat to support young salmon?
- Which stream or river do you think is the best for young salmon? Why?
- Compare your answer with your neighbor or partner.



Natural Inquirer Reader Series

Number 7

Grades K–2

Word Count: 1014

Genre: Nonfiction

Background Information: Coho salmon are both environmentally and culturally important in the Pacific Northwest of the United States. The life cycle of sea-run salmon begins in streams and rivers, where the young salmon travel to areas that best support each portion of their life cycle. During these phases of their life cycle, salmon are sensitive to the availability of seasonal habitats. For instance, when they are young and cannot swim well, salmon need slow-moving water for refuge from fast-moving water brought by heavy precipitation. The scientists found that juvenile salmon were more likely to be found in streams where diverse and high-quality habitat was available within short distances. In this journal, students will learn that salmon are fish that live in fresh and salt water. They will be introduced to the idea that animals move through the environment and have various habitat requirements for survival. They will also learn about fun methods that scientists use to study their interests and questions.

Note: For more background information and a lesson plan, visit <http://www.naturalinquirer.org> and click on "Natural Inquirer Reader Series."

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Be a Possibility Possum

Scientists make things possible;
They ask and answer questions.

You can make things possible
If you follow these suggestions.

Observe your world and wonder;
Ask how, what, why, and who?

Ask and answer questions
To make things possible for you.

Wonder is a good thing;
It is very plain to see.

When I ask and answer questions,
I make things possible for me.

