Wildlife Express!

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What is Migration?

Do you have a special place you go to during the summer or winter? Your family may like to camp by a lake to escape the hot, dry days of summer. A sledding trip sure can brighten a long, gray winter day. People often take vacations in the same place year after year. Often these places mean something special to us. Many animals travel too. When wildlife travels from one habitat to another habitat, we call it migration.

During the fall and spring, we often see animals on the move. They are migrating from one habitat to another. An animal may migrate thousands of miles or ten feet. The distance an animal moves is not important. What is important is that the animal moved between habitats during the year to survive.

Animals migrate for many reasons. The main reasons why animals migrate are to find food and find safe areas to breed and raise young. During the fall, days become shorter; nights become longer. The amount of sunlight reaching us is less, and temperatures are cooler. Shorter days mean animals have less time to look for food. Many plants die off for the winter or are buried under snow. It can be difficult for animals to locate food. Migrating to areas that have food is a life-saver to wildlife that depend on plants and insects.


Photo courtesy Mike Reynolds

Sometimes habitats that are good places for eating are not good places for breeding or raising a family. Young animals often need special attention. They may need areas with more trees or bushes to hide from danger. Having babies can also be stressful for the mother. It takes a lot of energy to have and raise young. Mothers may need to eat more food or eat food that has more nutrients. Sometimes moving is the only way to find a habitat that meets the needs of mother and young. Migrating is the solution to make sure that the young will survive.

Migration is a wonderful thing. It is a tool animals can use when their habitat is not meeting their needs. Can you think of an animal that migrates? Look inside this issue of Wildlife Express to learn about some of Idaho's migrating animals. You might be surprised at what you read!

Watching Migration

Idaho has many different kinds of migrating animals. From birds to salmon to elk to monarch butterflies, migration is all around us at certain times of the year. So how do you see migration? The first step is to become a good observer. Pay attention to what is around you. Make a record of the animals you see during every month. This could be a list, drawings or notes of your sightings. Your observations can show you migration patterns of the animals you see in your area. After awhile, you can predict what kind of animals you will see when. It's kind of exciting to see if your predictions are correct!

Watch for different animals during different seasons. If you observe elk during the winter on bare hillsides, but they are not there in the summer, that is a migration pattern. Check out the birds that visit your backyard feeders. While some of the birds may hang around all year, other birds will be around only in different seasons.

Plan to take a family trip to a wildlife refuge in each season. Keep a list of what you see on each visit. Compare your list of observations. What has changed? Visit the Salmon or Clearwater Rivers to check out the migrating salmon. Make a trip to Stanley to see migrating sockeye salmon. Take a cruise on Lake Coeur d' Alene to see bald eagles spending the winter in Idaho. Visit a wildlife management area to see thousands of migrating snow geese in the spring. Use binoculars to watch birds as they fly past a full moon when migrating at night. By paying attention, you can observe one of nature's most amazing cycles.

Finding Their Way

How animals migrate is a great puzzle. Long ago, people had some strange ideas about migration. Some thought that birds spent the winter under the mud of lakes. Other ancient scientists thought that birds changed into different birds in the winter. Today, these explanations sound pretty silly. While we have not uncovered all the secrets of how animals find their way, we have some pretty good ideas:

Sun Compass

Some migrating animals use the movement of the sun across the sky to find their way. The sun changes position as the Earth rotates. Because of this, animals need to be able to make adjustments to their travel direction so they don't just follow the sun. This is called "time compensation." Experiments with birds showed that this is what happens. Animals that migrate during the day are likely to use a sun compass.

Star Compass

The star compass is like a nighttime version of the sun compass. So far, it has only been found in birds. Scientists discovered that young birds learn to find north by observing the pattern of stars around the North Star. This pattern includes the Big Dipper, Little Dipper, and other stars. As these constellations rotate around the North Star, they stay in the same position from each other. This allows birds to find north. Many songbirds and shorebirds migrate at night using a star compass.

Magnetic Compass

Earth has two magnetic poles, the South Pole and the North Pole. These two poles turn the Earth into a big magnet. Between the two poles are invisible magnetic lines of force. They make up the Earth's magnetic field. This makes your compass work. The magnetic field is stronger at the poles and weaker at the magnetic equator. At some points, the magnetic field touches the earth at an angle called the dip angle. Birds and other animals like sea turtles can find north and south because they can detect these magnetic lines of force. Scientists believe that birds can also detect the dip angles. This would help them know how far to the north or south they have moved.

Polarized Light

Polarized light comes from special kinds of light waves. It creates a special pattern in the sky. This pattern stays the same as the sun moves across the sky. Even if the sky is cloudy, animals can still detect the polarized light pattern. This tells them the position of the sun. Insects, amphibians, fish, and birds use polarized light to migrate.

Landscape Maps

How do you find your way to school? Do you turn right at a certain block by a specific house? These are examples of landscape clues you use to navigate. Scientists think that some animals use landscape maps when they migrate. Things like mountain ranges, rivers, or coastlines can be part of landscape maps.

Migration is still mysterious. We don't understand all the ways migrating animals find their way. The one thing we do know is that these amazing migratory animals understand exactly how to get where they are going!

Fishy Wanderings

Birds migrate. So do mammals and insects. But fish? You bet! Idaho is home to some of the champions of fish migration---salmon and steelhead. These fish are anadromous (a-NAD-ro-mus). This means that they are born in freshwater, migrate to the ocean, and return to freshwater as adults when it is time to spawn. Idaho's sockeye salmon make a 1,800 mile round trip in their lifetime.

Fish that are not anadromous also migrate. Like anadromous fish, their migration is to find food and to spawn. Bull trout have an average round-trip migratory journey of 85 miles. Cutthroat trout average 78 miles for their round-trip migration. These fishes leave wintering areas in the spring. They arrive in their spawning areas where they hang out for the summer. Come fall, they spawn then head back to their wintering areas. Radio tagging studies have shown that some of these fish return to the exact pool where they started their journey.

So, how does a fish know which way to go? Studies indicate that fish can detect polarized light patterns. This could be one way they find their way. Smell is definitely an important way for fish to navigate. To a fish, water has very specific smells. Fish are able to smell their way back to the same stream where they were born! Could you smell your way home from school?

Bye-Bye Birdie

When we think about migration, we usually think of birds. All around the world, birds migrate. They use many different ways to navigate. Birds are also pretty reliable migrants which make them easier to study. Many of the things scientists have learned about migration, they have learned from birds.

Bird migration is usually tied to food. How far a bird migrates often depends on what it eats. If a bird can find the food it needs to survive in one area, it probably will not be a migratory bird. These birds are called residents. Black-capped chickadees and red-tailed hawks are examples of bird residents that live in Idaho. Birds that depend on seasonal foods such as insects or fruits are often migratory. Idaho has a lot of insects in the summer. These bugs feed many adult birds and their babies. As summer fades, so do most insects. The summer birds need to migrate to places where they can find the insect foods they need.

Bird migrations can be short trips or long journeys across continents. For example, the mountain bluebird, our state bird, spends the winter in the southwestern United States. Swainson's hawks spend the summer in Idaho, but migrate to South America for the winter. Some birds spend the summer in the mountains. When fall arrives, these birds move into mountain valleys where they can find food. Come spring, they head back into the mountains.

Sometimes severe weather or lack of food can cause birds to show up in some strange places. Snowy owls live in the Arctic. But this winter, snowy owls are being seen in many northern states including Idaho. These unusual migrations are called "irruptions." They are one of the things that make migration such an interesting event.

Mammals on the Move

Many mammals migrate between summer and winter habitats. Deer and elk migrate to find food. During the winter, deep snow makes it harder for deer and elk to get food. To avoid snow, deer move down the mountains to lower elevations where the snow is not as deep. They may also move to south-facing hillsides. The sun hits these areas more, so snow melts faster and the deer get warmed-up by the sun. When summer and spring arrive, deer and elk migrate back up the mountainsides where new plants are growing.

Caribou are also members of the deer family that migrate. Barren-ground caribou live in the Arctic. They are known for their long-distance migrations. Some barren-ground caribou migrate thousands of miles between their summer and winter habitats. Woodland caribou live in Idaho. They also migrate, but they are different. Most animals travel down mountains in the winter to stay away from deep snow. Not woodland caribou. They migrate up to the tops of mountains! Caribou hooves are large and round, so they don't sink as deep in the snow. Their feet work like snowshoes. Woodland caribou move to the tops of mountains where there are fewer predators and more food. During the winter, caribou eat lichen (LI-ken) growing on trees. Lichen looks a bit like green or brown spaghetti hanging from tree branches. It is also called old man's beard. Lichen is the most important winter food for caribou. As the snow gets deeper in the winter, caribou can reach lichen growing higher in the tree. The snow is a bit like a step ladder allowing them to reach food that was once out of reach. During the summer, caribou move down into thick forests lower on the mountainsides and in valleys. Here they hide and give birth to their young.

There are even bats in Idaho that migrate. Most of Idaho's bats hibernate for the winter, but the pallid bat and hoary bat do migrate. They fly south where the weather is a bit warmer to wait out the winter. When temperatures get warmer and insects start to appear in the north, they fly back to Idaho to spend the summer and give birth to their young.

Amazing Migrating Amphibians

Do frogs and salamanders migrate? They sure do! Spotted frogs that live in southern Idaho migrate from hibernating sites to breeding and feeding sites. The dry desert of southern Idaho is not a place many people think of as wonderful frog habitat. Frogs have moist skin and they need to keep it that way! If a frog dries out, it may die. Spotted frogs have adapted to Idaho's dry desert by migrating between pools of water. They live around springs and streams. Some of the springs will dry up by the end of summer, so the frogs need to move. Spotted frogs migrate one-fourth to one-half of a mile between pools of water. One lap around a race track may not seem long to you, but for a frog that would be like running a marathon! Moving that far for a frog is an amazing feat.

Many salamanders also migrate between the areas where they lay their eggs and where they spend the rest of their time. Salamander eggs need to be kept wet, just like frog eggs. In the spring, long-toed salamanders migrate to lakes and ponds. Here they court and lay eggs. Once the eggs are safely in the water, the long toed-salamanders move back to drier land to live out the rest of the year.

Dashing Dragonflies & Cruising Crickets

Migrating insects, you say? Believe it or not, there are insects that migrate. In Idaho, we have four dragonflies that migrate – common green darners, wandering gliders, variegated meadowhawks, and black saddlebags. The green darner dragonfly is the largest dragonfly in Idaho. It can be up to three inches long! The green darners we see in June emerged from ponds and lakes in the southern part of the United States. They fly to Idaho, lay eggs and then die. The eggs laid by the dragonfly will hatch, and the young dragonflies will stay in their watery home for two to three years. In August, they leave their watery home and fly south. Here they lay more eggs that will hatch to continue the cycle. The black saddlebags and the variegated meadowhawk dragonflies are sometimes seen traveling south in swarms with the common green darner.

Another migrating dragonfly in Idaho is the wandering glider. These brown and orange dragonflies use stored fat in their abdomens to give them energy needed for migrating. They travel hundreds or even thousands of miles looking for seasonal ponds in which to lay their eggs. The young dragonflies eat a lot and grow quickly before their ponds dry up. This dragonfly is found all around the world. In Idaho, they are found along the Snake River Plain.

The Mormon cricket is actually not a cricket at all. It is a type of shield-backed katydid. Mormon crickets all hatch from their eggs around the same time, and they are hungry! They start to eat and eat. Once they have eaten everything in an area, they start to migrate in search of food. Thousands of Mormon crickets all begin to move in the same direction. They will eat any plant that they come across, including farmer's crops. Mormon crickets can wipe out an entire field in just a few hours. They continue to move until it is time to lay eggs. They mate, lay their eggs in the soil and die. The migration of the Mormon cricket is over until the eggs hatch and more Mormon crickets emerge in the spring and start looking for food.

Wandering Words

Find the following migration words and phrases in the word search puzzle.

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

ANADROMOUS
FLOCK
HABITAT
HERD
JOURNEY
LACK OF FOOD
LIGHT
MAPS
MIGRATION
RAISE YOUNG
STAR COMPASS
SUN COMPASS
SURVIVE
SWARM
TRAVEL

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