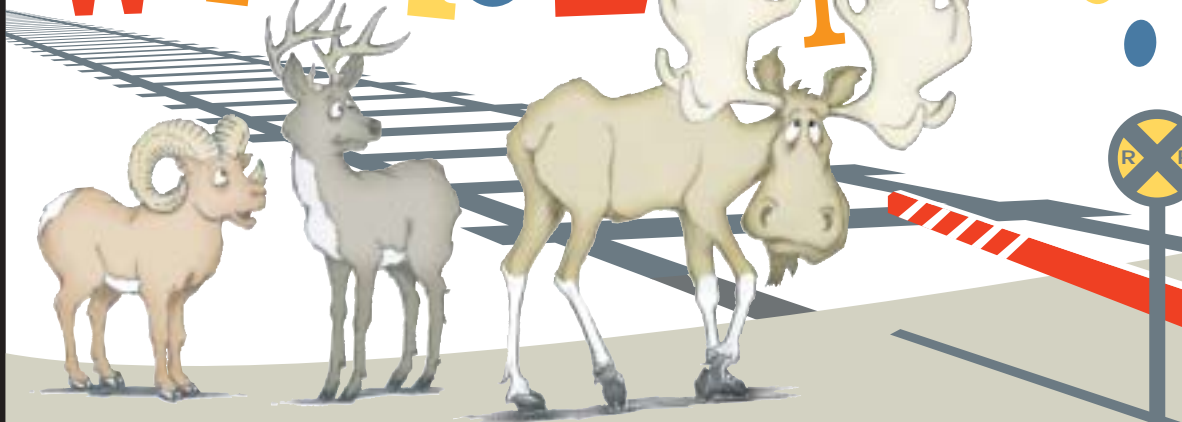


Wildlife Express!



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Magpie
Mischief



The Black-billed Magpie



On a cool summer morning you and your family head out for a hike. Suddenly, the quiet is broken by loud “cack, cack, cack” calls from nearby. More and more sound fills the air, and you look around wondering what in the world is making such a racket. Three large black and white birds eye you from the trees, and you know that black-billed magpies have just announced your arrival.

Black-billed magpies belong to the crow or corvid family and are found in the western United States. They are large, heavy-looking birds often

measuring 19 inches long with a two-foot wingspan. Black-billed magpies are the only songbirds in the west that have tails longer than their bodies. With their black and white body and shimmery green wings and tails, they are handsome birds. In fact, the name magpie comes from the word “pied”, which means having two or more colors.

Magpies prefer to live in open woodlands and brush-covered areas along streams. Here they look for food, which includes just about anything. You name it! Magpies will eat insects, rodents, reptiles, fruits and grains, even dead animals, called carrion (KAR-ee-on). Magpies take advantage of a wide variety of foods, just like you. They prefer to search for food on the ground and are often seen holding food in their foot and pecking at it. Magpies will also visit bird feeders, where they eat peanuts, peanut butter and animal fat called suet (SOO-it).

When magpies find a good food source, they often cache (KASH) or hide food. Hiding food can help magpies survive times when food is scarce. Quite a few kinds of birds such as nutcrackers, jays and chickadees hide food. Ornithologists (or-ni-THAL-o-jists), or scientists who study birds, think the birds are able to remember where their food is hidden for several months. Of course, some hidden food is forgotten. It may be found by another animal that benefits from the magpie’s hard work.

Like other members of their family, magpies are social birds. They usually stay together in family groups of six to ten birds. During winter, these family groups come together to form larger flocks of 40 or 50 birds. Having so many eyes searching for food in tough winter conditions helps the entire flock. When one magpie spies something to eat, it lets the rest of the group know, and everyone gets a meal. How do you think it lets the flock know where food is?

You can expect to see magpies in most of Idaho. They live just about anywhere they can find food, especially in winter. Their bold coloring, noisy calls, and fearless behavior make them easy to spot. Who knows? You might even see them in your own backyard!





All in the Family

Black-billed magpies belong to a large family known as the Corvidae (kor-VI-day) or corvids. It is also called the crow family. Members of this group can be found all over the world. Twenty different species live in the United States. Eight of those live in Idaho.

As a family, this group of birds is considered to be the boldest, noisiest and most aggressive of all. They are often very curious. They can make a quiet walk in the woods impossible! Their loud calls ring through the forest. The nickname "camp robber" is well earned by several species. Lewis and Clark even noted this boldness when they had magpies march into their tents and take food right off the explorer's plates! Corvids are not afraid to take on eagles and even grizzly bears. Corvids will steal meat scraps from right under the larger animals' noses. This brave attitude is one of this family's best-known characteristics.

You probably see several different corvids in your own community. Common crows are, well, pretty common. They make themselves at home just about anywhere and are easily identified by their jet-black feathers and loud "caw, caw, caw". Black-billed magpies are pretty easy to observe, too. Some of Idaho's other corvids are found in more out-of-the-way places.

When you travel to higher elevations, look for the beautiful dark blue Steller's jay. This bird has a brownish crest on its head. Another corvid that lives in the mountains is the Clark's nutcracker. They are gray with black wings. Nutcrackers are often seen in the tops of pine trees. Their long beak helps them feed on pine seeds. Another gray corvid is the well-named gray jay. Can you guess what color it is? The largest corvid is the raven. This bird is large and heavy looking with a big, stout beak and black feathers. Even though they are called a songbird, their call is a harsh "croak, croak." It does not sound like a song at all!

Observing members of the crow family is not too hard. Often they seem to be just as interested in watching you, as you are in watching them.

Bird Bungalows

Winter can be a great time to look for bird nests. Leaves have fallen from trees, and nests can be easier to spot.

Birds use many different materials to build their nests. They use what ever they can find. They may use grass, twigs, moss, spider webs, plant seeds, animal hair, feathers or man-made materials. Osprey often include man-made objects in their nests. People have found shorts, bath towels, garden rakes, brooms, fishnets, toy boats, shoes, hats and sponges in osprey nests!

Nests come in all shapes and sizes. Scientists often group nests according to how they are built and the shape that they take. The most common nests are round and look like a cup. Songbirds, like robins, usually build cup shaped nests.

Cavity nests are the safest nests. These nests are found in holes in trees or buildings. Can you think of a bird that makes a cavity? Cavity nests are hard for predators to get to, so many birds use the cavity made by woodpeckers. Bluebirds, wood ducks and saw-whet owls are just some of the birds that nest in cavities.

Scrapes are shallow spots scratched into the ground or leaves. Birds sitting on these nests need to be well camouflaged (KAM-o-flazhed). Turkeys and killdeers nest on the ground.

Platform nests are the type of nest that magpies make. Platforms are usually built in trees. Some platform nests may be huge. Magpie nests may be four feet high, and eagle nests can be nine feet across!

Adherent (ad-HIR-ent) nests are what barn swallows make. They are a cup nest that is plastered with mud to buildings and stone ledges.

Nests that look like a basket and hang from forks in trees are called pensile (PEN-siil) nests. Little birds called vireos (VEER-e-os) make pensile shaped nests.

Another nest that hangs from a tree is called a pendulous (PEN-je-les) nest. They look like bags. Orioles are known for weaving beautiful pendulous nests.

Nests may be different shapes and sizes and made from different materials, but all nests are just right for each bird's way of life. When you see a nest, think about the bird that built it. Do you think the bird is small or large? Would the nest hide the eggs and bird sitting on them, or would the bird need to have colors that would camouflage it? Looking at a nest can tell you a lot about the bird that built it.

Bird Brains or Brainy Birds?

As a group, birds are not thought to be the brightest of critters. But birds do quite a few amazing things that leave us wondering. After all, could you weave a nest out of grass? Or travel thousands of miles without a map? Birds are pretty incredible creatures. The black-billed magpie and its family are considered to be the most intelligent of all birds for a number of reasons.

Quite a few members of this family hide food and are able to remember exactly where they left it. Clark's nutcrackers can find the food they hide seven out of 10 times. One nutcracker was seen burying a pinecone in the fall. Later, this same bird found the cone, even though it was covered by eight inches of snow. Not bad for a birdbrain!

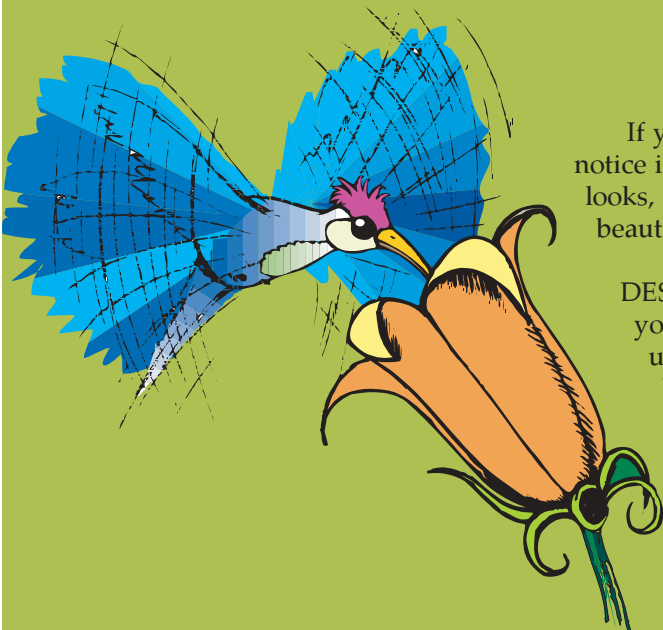
Other members of this family are good at solving nature's puzzles. Crows that live along the ocean have learned to feed on animals such as mussels, clams, scallops and sea urchins. These animals have shells, and crows can't break them with their beaks. So the crows figured out another way. They carry the shells high into the air and drop them on rocks. The shells break open, and the crows get a tasty meal. Young crows watch their parents feeding like this and learn how to do it themselves.

Gray jays and several other members of this family have learned that certain noises mean food. The sound of a gunshot will often bring a gray jay or magpie to the hunted animal long before the hunter arrives. The sound of an axe chopping wood might also bring a jay or magpie. They have learned freshly chopped wood contains insects to eat. This sound also means people, and people can mean food.

These birds are excellent at copying or mimicking sounds. The jays are very good at copying calls of other birds, including hawks and songbirds. They can also imitate a dog barking and man-made things like a car horn or door closing. A jay pretending to be something else has tricked many birdwatchers!

Perhaps the thing that makes these birds truly unique is their ability to imitate us. Captive crows and black-billed magpies have learned to speak simple words and even to count to four. They can even laugh! Because of these things, crows and their relatives are thought to be the brains of the bird world.

Iridescence



If you watch a black-billed magpie, one of the things you notice is the shimmering green on the tail and wings. Sometimes it looks, well, just black. Then the bird turns and you see the beautiful green again. What's up with that?

What you are seeing is something called iridescence (ir-i-DES-ens). It is caused by the way light hits something. Have you ever noticed how a bubble reflects light? Light is made up of waves, and these waves have different sizes or lengths. When these wavelengths hit a feather, they are reflected (like a mirror), or they are broken apart. The result is that some of the wavelengths become stronger, and others become weak. The weak ones can no longer be seen.

Feathers have a very fine coating on them. This coating acts like a soap bubble to reflect light. When light hits the feathers, the coating scatters the light, and we see the brilliant shimmering colors reflected back at us. We only see the iridescence when the light hits the feathers at the proper angle.

Hummingbirds have the most beautiful of iridescent feathers. They seem to shimmer and gleam brightly. Other birds that have iridescent feathers include European starlings and grackles. Can you think of any others?

Dumb and Dumber?

Since magpies and their relatives are supposed to be the “smartest” members of the bird family, does that mean the others are dumb? Intelligence in animals is a matter that has been debated by scientists for a long time. Many studies have been done to measure the intelligence of a variety of animals. The results are just as varied as the animals that are tested.

A lot of the time, we rate an animal’s intelligence by comparing it to ourselves. Is that really the best way to measure how smart an animal is? After all, we humans have done some pretty dumb things since we have lived on Earth.

Perhaps the best way to look at animal intelligence is to look at how well an animal is adapted to survive. Opossums, for example, have very small brains and are considered by many to be dumb. However, they are one of the oldest living mammals on the planet. Every kind of critter does some pretty amazing things. If you compare what a person does with some of the things animals do, we can sometimes come out not looking too bright.

For example, look at the honeybee. A worker bee can fly several miles to a specific flower patch, gather nectar and pollen fly back and “tell” the other workers exactly where to find that flower patch by doing a dance. Can your dance steps give directions? How about the wolf pack that tests animals to see if they are easy prey? What about migration? From birds, to whales, to monarch butterflies, lots of animals do some big time traveling throughout their lifetimes. All with no maps or compasses. Wow!

Some may chalk all that up to instinct. But where do we draw the line between instinct and intelligence? Are they one and the same thing or are they different? No matter what the answer, these questions will provide scientists with fascinating puzzles to solve for years to come. For now, the best answer seems to be to just appreciate the amazing things animals do.



Opossum—Smarter than he looks

Nature’s Clean-up Crew



Vulture

One of a magpie’s favorite wintertime foods is roadkill. Sound yummy? Well, probably not to you, but animals, like magpies, that feed on dead stuff have a very important job. Imagine the numbers of dead animals that would pile up if nothing ate them. Imagine the germs that all those dead animals could spread. Ugh! Imagine the smell! Okay, let’s not go there, but you get the idea.

Animals that eat dead animals are called scavengers (SKAV-en-jers). They are incredibly important in helping keep things cleaned up. Scavengers come in all shapes and sizes from bacteria to grizzly bears. The scavengers we are most familiar with are the ones we see most often such as magpies, crows, ravens, coyotes and vultures. An awful lot of other species depend upon dead stuff, or carrion, to survive. Carrion is especially important during the winter when food is scarce. Even majestic birds, like golden and bald eagles, eat carrion. Ravens, crows and magpies keep a close watch on these larger birds. They follow them to food, and even feed right next to their bigger cousins.

One of the best-known scavengers is the vulture. Large and black they can be seen soaring effortlessly in search of food. They find food using their sense of smell. Finding dead stuff by smell works well for them since dead stuff is usually pretty stinky. If you can smell it, you can find it, and dinner is served! In fact, the turkey vulture is the only bird that has a well-developed sense of smell. Turkey vultures also have another great adaptation for feeding on dead animals, naked heads! Since dead stuff would stick to feathers, having a naked head helps vultures stay clean.

By feeding on dead animals, scavengers help keep the food chain flowing. They use the energy stored in dead animals for their own survival. They also help break them down, so smaller living things, like bacteria, insects and plants, can use them. While we see death as being a bad thing, it really is just a part of the circle of life. Roadkill anyone?

Fabulous Feathers

Today, all birds, and only birds, have feathers. Scientists think that feathers evolved from scales on reptiles thousands of years ago. They have actually found lizard-like fossils that have feather-looking scales.

Feathers are made of keratin; just like your hair and fingernails. They are lightweight but strong. The hard center of a feather is called the shaft or rachis (RAA-kis). Rows of barbs branch off of the rachis. To keep the barbs together, they are covered with hundreds of tiny barbules (BAR-byuls). The barbules have very small hooks on them. The hooks work like Velcro or zippers to hold the feather together.

Have you ever seen a bird zipping up its feathers? They are preening. Birds run their beaks and feet over their feathers. When they do this, they straighten out the barbs and make sure that they are locked tightly together. To help them keep their feathers well groomed, birds have preening glands. The glands make oil that the birds spread with their beaks.

There are many different types of feathers. Flight feathers are on a bird's wings and tail. These feathers are stiff and straight. They overlap when a bird pushes down with its wings. This helps the bird go up when flying. When the bird lifts its wings, the flight feathers separate. The feathers then won't cause drag and slow the bird down.

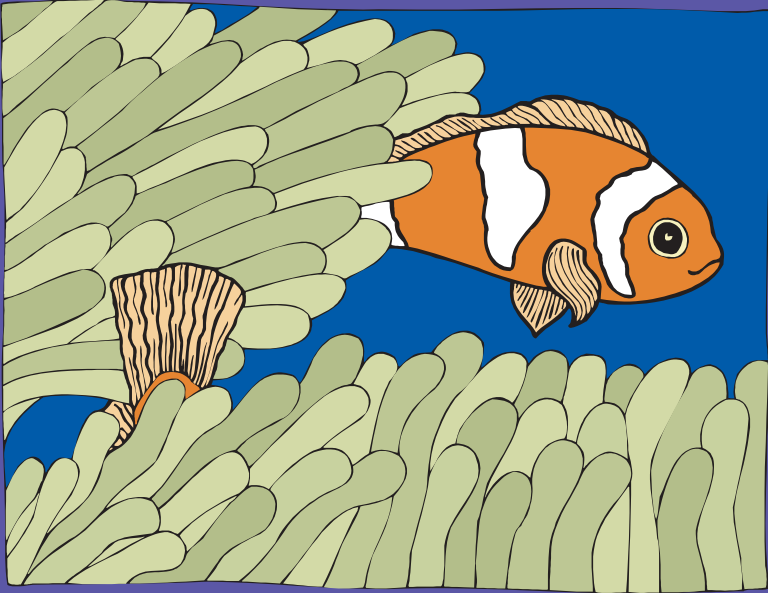
The feathers on the outside of a bird are called the contour (KON-toor) feathers. They overlap like theingles on a roof. These feathers keep out the wind and cold.

Close to a bird's body are down feathers. Down feathers are very fluffy. A bird traps air in its down feathers. The trapped air is the bird's insulation against the cold.

Have you ever looked at a chicken or turkey before it is cooked and noticed the "goose bumps"? Each bump is where a feather used to be. All the bumps are arranged in a pattern called a feather tract. Different kinds of birds have different feather tracts. People who know birds can tell a species of bird just by looking at the feather tract. They don't need to see a feather at all!

Feathers are fabulous. What a wonderful way to stay warm and get around.





Helping Hands. . . Beaks

Have you ever seen someone riding a horse? How about a magpie riding a horse? Or a cow? Or an elk? Or a rhino? Wait a minute, birds don't ride on animals! Or do they? Magpies have learned that large animals, such as horses, cows, elk and deer, can provide a great source of food. The best way to get

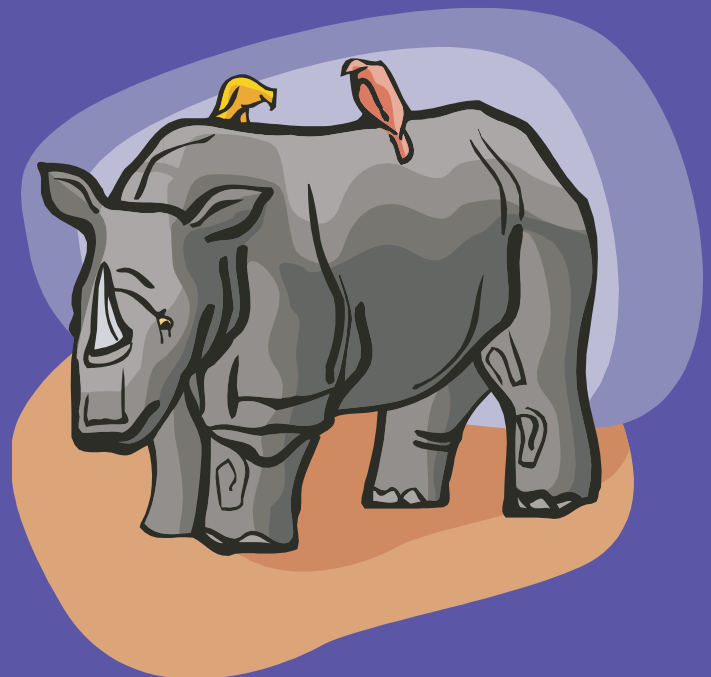
it is to hitch a ride.

Critters that live on wildlife and livestock are called parasites (PAR-a-sites). They include lice, fleas and ticks. Ticks are large enough to be a good snack for a magpie. The birds will land on the larger animals and pick the ticks off and eat them. As they pull off the ticks, they help the deer or elk by getting rid of the parasite. Some parasites can cause real problems for animals by spreading diseases and making them weak from blood loss. By removing the ticks, the magpies get a meal, and the tick's host gets free pest control.

This relationship is called symbiosis (sim-be-O-sis). Two different animals help each other out and both benefit. If you saw the new Disney movie *Nemo*, you saw another kind of symbiosis. Nemo is a clownfish. These fish live in sea anemones (a-NEM-a-nees). The clownfish has a special protective slime. The slime protects the fish from the anemone's stinging tentacles. So, the clownfish can have the protection of the stinging tentacles without being stung. It also eats the food scraps left by the anemone. The anemone benefits when the clownfish attracts other fish to the anemone. Anemones cannot move. Both animals benefit from their relationship.

Cleaner fish are another example of symbiosis. These are fish or sometimes shrimp. They clean food, parasites, dead skin and slime from fish. The larger fish stays healthy by the cleaning, and the cleaner fish gets food.

Some animals, like clownfish, spend their whole lives in a symbiotic relationship. Others, like the magpie, just take advantage of it when they have the opportunity. The more ways they have to find food, the better. Brainstorm with your class other symbiotic relationships.



Magpie Word Search

Find the following words in the puzzle. All the words relate to magpies in some way.

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

- | | |
|---------|-----------|
| Magpie | Carrion |
| Curious | Corvid |
| Cache | Beautiful |
| Smart | Scavenger |
| Nests | Noisy |

Home On The Range

Each month we will show you the geographical range or distribution of our featured animal.



Express
Yourself!

*There once was a bird named a magpie
Its loud voice told us it wasn't shy
When it discovered a good meal
Its loud "cack, cack, cack" was for real
And to the food all the others did fly.*

Marty Mimick, Corvid Elementray

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Ask your teacher for a list of animals that will appear in Wildlife Express this year and send us a poem about your favorite. We'll put one in each issue with your name and school. Send them to our address listed above.