

Wildlife Express!



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Great-horned
Hunters





Fruit bat

Nocturnal

Do you know anyone who works during the night? Some doctors, nurses, police men and other people who work for companies that are open all night long have to work the nightshift. Some animals work the nightshift, as well. As twilight deepens into the forests and fields, these nightshift animals begin to come out. Working the nightshift can pose lots of problems for animals. These animals, like all animals, need to find food and keep away from predators. Why do they choose nighttime to make their living? A lot of it has to do with the competition during the daytime. If all the animals were trying to make their living during the day, it might be pretty crowded. Another reason might be that the animal is trying to keep out of the heat. This is especially true for desert animals. It might just be too hot during the day!

One of the most obvious problems for nighttime animals is the lack of light. Many nocturnal animals have specialized eyes to help them see in the night. Other animals, such as bats, might rely on specialized hearing. Bats, for example, use echolocation

(EK- O-low-ka-shun) to help find insects. They send out a high pitched sound that echoes off an object (hopefully an insect) and bounces back to the bat's ears. Similar to this, scorpions have fine hairs on their legs that they use to sense vibrations.

Other animals that work the night shift include crickets, coyotes, racoons, skunks and mice! If you were an animal, would you prefer to "work" the day or night shift?

Owl Pellets

Scientists call them owl pellets, but students who have dissected them before have given them some other interesting names...fur balls, tater tots, owl upchuck. What exactly is an owl pellet? Remember that an owl likes to swallow its prey whole. Besides taking in the big gulp, can you think of any other problems that might arise? Digesting bones and fur is impossible for birds. How does the owl eliminate the stuff that can't be digested? He upchucks it. Yes, that's right, he burps up the ball of fur and bones. It comes out in the shape of a pellet about six to 12 hours after eating. Depending on the owl, the pellets are usually about the size of a person's thumb. When you break open these pellets, you can find out a lot about what the owl eats. Most times, the skull of the eaten animal is still whole. Scientists can identify what kinds and how many critters the owl had for dinner.

Look for owl pellets near old barns, under trees or cliffs. Remember the pellets come out the owl's mouth. It's not poop!

You can dissect a "virtual" (on the computer) owl pellet on the following website: <http://www.kidwings.com/owlpellets/index.htm>. You can even pick your species of owl! Better yet, ask your teacher to let you study owl pellets in your classroom. It's a fascinating way to learning about food chains!



Diurnal

Most of us are creatures of the day. We do our best work during the day and use the nighttime to get our sleep. Animals that are out during the day are called **diurnal** (die UR nal) animals. Just like us, they've adapted to the daylight and are most productive at that time. What adaptations do diurnal animals have? Well, compared to nocturnal animals, diurnal animals rely much more on their sense of sight. Their eyes are not as large as nocturnal animals, but the vision is much more finely tuned. During the daylight, a predator is less likely to be able to sneak up on its prey. Perhaps this is why diurnal raptors, such as falcons or hawks, are much quicker than owls. Diurnal animals also tend to have better **camouflage** techniques than those of nighttime animals. Being able to blend in during daylight is important for prey species. Of course, nighttime hunters don't always have a place to hide out, so it is to their advantage to blend in with the environment during the day as well. Pygmy owls are unique diurnal hunters who have eyespots on the back of their heads. These spots make it look like the owl has eyes in the back of its head. Why do you suppose this is?

Some animals are most active at dawn and dusk. These animals are called **crepuscular** (kre PUS Q lar). Crepuscular animals include mule deer, coyotes, desert cottontails, black-tailed jackrabbits, and many songbirds. Some owls are crepuscular, too.



Burrowing owls

Egg-cellent Eggs

The eggs in your refrigerator are probably the ones you're most familiar with. They're usually white or brown. Eggs are really quite unique; they come in an amazing variety of colors, shapes, and sizes. There are about 9000 kinds of birds in the world, and each kind lays its own special egg. What do you suppose is the purpose of all the different colors, sizes and shapes? The colors or patterns help camouflage the egg from predators. Birds that nest on cliffs, like seabirds, have eggs that are smaller at one end than at the other. This is to make them roll in a circle and not fall off the cliff. Birds with round eggs, build deep nests that keep them from rolling out.

Hummingbirds lay the smallest eggs of any birds—their egg is no bigger than a jellybean! The largest egg comes from the ostrich—an ostrich egg is bigger than a grapefruit and weighs as much as two dozen chicken eggs!

Although all these eggs look different from the outside, the insides are very similar. Bird eggs, not to be confused with fish eggs, are fertilized inside the female bird's body *before* the shell has developed. Fish lay eggs, too, but the fertilization takes place out of the fish's body, *after* the eggs are laid. As you know, the shell of a bird egg is very hard. It acts as a protective layer around the growing **embryo** (em BRE o) until the chick is ready to hatch. Most of you are familiar with the yellow part, or yolk. This is the food supply for the developing embryo. The main function of the egg white is to cushion the yolk and the embryo.

Most birds will not lay all their eggs at once; instead they lay one egg per day, or one egg every two days. The length of time for development depends on the species of bird. A chicken will develop in 21 days. An owl egg will develop in about 28 days.

Have you ever heard of an egg tooth? This is a special point on the chick's beak that allows the chick to break a hole in the egg. When the chick is ready, it uses its tooth to break open the egg. The tooth eventually disappears. The development of the baby birds is different in many species. In most species, the chicks enter the world naked, with closed eyes and are helpless. The parents take care of the chicks for up to a month. The chicks then begin to fly and get food on their own. Other species, such as quail, are what scientists call **precocial** (pre-CO-shal). They are well developed. These chicks are capable of moving around on their own right from the start. Some are known to stay with parents only a few days before venturing off on their own.

Hope that answered all your questions about eggs!



Let's Look At...Great Horned Owls

Have you ever seen an owl that looks like it has great big ears on the top of its head? These "big ears" are actually not ears at all but are big tufts of feathers. These tufts are what give the owl its name, great horned owl. The scientific name for this owl is *Bubo virginianus* (bu-BO- vir-JIN-e-an-us). This name comes from two parts, *Bubo* is Latin for horned or hooting owl. *Virginianus* is Latin for "from Virginia, which is where the first one was discovered. The range for great horned owls runs from Canada to South America. These owls choose a wide variety of

habitats from forests, swamps, orchards or deserts. Some great horned owls even live in cities!

Great horned owls stand from 18 to 25 inches high and have wingspans of 36 to 60 inches. The female is quite a bit larger than the male. Most great horned owls are brown and have a white bib at their throat. Their eyes are yellow with round, black pupils. The easiest way to recognize great horned owls is by the feather tufts on the top of their heads. Some people like to call this owl the "cat owl", because these tufts make the owl look a lot like a cat.

Cats can't fly, but cats do like some of the same food as owls. Owls are meat eaters. They hunt many small mammals, including mice. Like a cat, they also will eat birds. Owls are swift and powerful and can eat fairly large birds including crows or even geese. They will also eat reptiles, large insects and road kill. Oh, and, an owl might even eat a cat!

Owls hunt at night. Usually they perch on trees or poles and wait quietly for their prey. Their eyesight and hearing is outstanding. They also will glide slowly above the ground in search of food. When an owl sees what it wants to eat, it can fly silently and swiftly down on it. It catches its prey with its large talons. Dinner is usually killed instantly. If the animal is small enough, the owl will swallow it whole.

Great horned owls can be most aggressive when protecting their young. They will attack whatever comes near their nests, even humans! Biologists studying these birds have worn hard hats to protect themselves.

January and February is mating time for the great horned owl. They are one of the earliest species of bird to mate. The male and female call to each other during courtship. After finding an abandoned hawk or crow nest, the female lays two to three eggs. Both the male and the female take care of the eggs, which usually hatch in about four weeks. The nestlings are downy-white, weak and blind. Both the parents continue to care for the young by providing food for them. The young owls begin flying at about 4 weeks and can fly well by the time they are nine to ten weeks old. They continue to be dependent upon their parents for several more weeks before taking off on their own.

In Idaho, owls can be found nearly anywhere in state. They're a sight to see. Get together with a few of your friends and an adult and head out into the night to see if you can see or hear one. Listen for their series of deep hoots.

Birds of Prey

You probably remember what makes a bird a bird, but do you know what it takes for a bird to be a bird of prey? Birds of prey include our national symbol, the bald eagle, hawks, falcons, kites, harriers, vultures and owls. To classify a bird of prey, you'll first have to think about the word prey. This refers to an animal that is eaten by another animal. Are all birds that eat other animals called birds of prey? Not necessarily, a robin eats worms, but it isn't considered a bird of prey. We have to look more specifically at what it is that truly classifies a bird of prey.

Birds of prey are also called raptors. Raptor comes from the Latin word **rapere** (RAP ere), which means to seize and sweep away. Raptors hunt small mammals (mice, rabbits), reptiles (snakes), amphibians (toads or frogs), fish and other, smaller birds. To hunt these kinds of animals, you would have to be able to seize and sweep away food quickly. Birds of prey have many specialized parts that make them outstanding hunters.

We can start with their beaks. All birds of prey have strong, hooked beaks that allow them to tear the food they eat. They also have very keen eyesight that allows them to spot their prey from high in the sky. These birds are built for speed. Some have been clocked going 200 miles per hour! That's fast!

Talons are another characteristic that separates raptors from other birds. Talons are like toes, or claws, on the birds' feet. Can you guess what kind of talons raptors have? If you guessed strong and curved, you're right. They need these "super feet" to grab and carry the prey that they are after. When combined with their powerful leg and toe muscles, raptors' feet become lethal weapons. Raptors also have strong flight muscles and special flight feathers.

If you've ever seen a bird of prey, you know how cool they are. They're fun to watch and have a very important role in nature. There are over 420 different kinds of raptors in the world. They can be found on all continents, except Antarctica. A person can find raptors in many different types of habitats, as long as there is enough food to prey upon.

A bird of prey is an awesome hunter who, in most cases, takes live prey. Other birds hunt, but they do not have the extraordinary hunting skills and adaptations of raptors.



Bald Eagle



Barn owl

Other Owls

Most owls look similar to one another with round heads, large eyes and a short hooked beak. Owls come in many sizes. The world's biggest species of owl, the Eurasian eagle owl, has a body that is two to three feet long. The biggest owl in North America, the great gray, stands about two feet high. That's about as long as your teacher's arm. The elf owl is the smallest owl in North America. Its only about five inches tall. Compare that to the length of your hand.

Owls are divided into two families – true, or typical, owls and barn owls and their relatives. Barn owls are known by their heart-shaped faces and their shrieking cry. Some of them have strange calls, which might sound more like screaming or a barking dog. Most like to nest on ledges. They are often found nesting on open rafters in barns.

True, or typical, owls are known for their large eyes and round faces. Most owls fall into this family. Great horned owls are considered true owls.

Sometimes in bird families you'll see a great difference in the appearance between males and females. This is not the case with owls of the same species. They usually look very similar to one another. As with most birds, however, the female is larger than the male.

Owls are well-adapted birds. They live in almost every type of habitat you can think of. Owls can be found in warm climates, cold climates, dry climates, wet climates, forested areas and open plains. There are only a few places, such as Antarctica, that have no owls. There are about 130 species of owls in the world.

The snowy owl prefers the cold Arctic tundra up north. Its white feathers with brown outlines help it to blend in with the snow and mud. These owls eat lemmings, which are small rodents on the tundra. Snowy owls keep the lemming numbers under control.

Another specialized owl, the burrowing owl, is about eight to 10 inches tall. This tiny owl gets its name from the type of home it has. Can you guess what that is? A burrow!

The elf owl also lives in an interesting home. No...not the North Pole. They are the smallest owl in the country and are about the size of a large sparrow. Their size allows them to nest in cavities of trees and sometimes even cactuses!

No matter where an owl lives, what size it is or what color it is, it has an important role in the habitat. Many owls are helpful in reducing the number of rodents in an area. They also keep up the overall good health of small mammal populations by picking out the sick, injured or old individuals.



Owl Adaptations

Every animal is unique, one of a kind. Every creature looks and acts differently because of its adaptations, the special features that help it survive. Adaptations allow animals to do at least one of three things: find food, protect and defend themselves, or find and attract mates.

Owls have unique adaptations to help find and eat food. First of all, they must have good eyes to search out the food they want to eat. Their eyes are very large, almost as large as our eyes! The large eyes allow more light to enter the pupil, which helps them when they're trying to see in the dark. Their eyes are different than ours in that they are fixed in their sockets. We can move our eyeballs around. Owls can't, but to make up for this, owls are able to turn their heads a lot further than we can. Try looking over your shoulder. How far can you turn your head? You can probably turn it about 90 degrees or just to your shoulder. If you were an owl, you could turn your head past your shoulder around your back and almost touch your other shoulder. It can't turn a full circle, but almost. Think how much trouble you could get in talking to the person sitting behind you if you had this ability!

Owls also have awesome hearing. In fact, their ears are so extra sensitive, they are considered to have some of the best hearing in the animal world. Most owls' ears are found behind their facial disks. They are openings, or holes, surrounded by feathers that the owl can spread to funnel sound into the ear. Owls also have what you might call lopsided ears. One ear is placed higher on the owl's head than the other. This helps to pinpoint where the noise is coming from. When an owl hears a noise, it tilts its head in order to identify the exact location.

Wings of owls are unique, as well. They have to be large to allow for gliding, and they have to have soft feathers instead of stiff feathers. Most birds have smooth and glossy feathers. As they fly, they make noise. The soft and fringed edges of an owl's feathers allow it to silently approach prey. They catch their prey by surprise instead of by speed like a falcon might.

Once they have reached their prey, they have to have sharp talons to grab and hold onto their dinner. Like your fingernails, the talons of raptors grow constantly, but they are worn down and sharpened through daily use. Their rough toes help them to hang onto even slippery prey. Once an animal is in the owl's grasp, it rarely escapes.

Speaking of sharp, a raptor's beak is sharp as well. How do you suppose this helps an owl? If you said to tear up pieces of meat that are too big to swallow, you're right. An owl's beak is never used to catch prey. The talons are used for that.

One more adaptation that helps the great horned owl is that it, like most birds, has very poor sense of smell. This allows it to eat a variety of animals, including one of its favorite meals, the skunk! Would you eat a skunk? Phew wee!

Myths and Legends

Many myths and legends have been created about animals. Maybe it's because animals are so cool! You know about myths and legends, right? Those are the stories and beliefs that were passed down from generation to generation. Many people use the terms in the same way. Actually a myth and a legend aren't exactly the same. A myth is a made-up story about nature and why things are the way they are. They're fun to read, and most of the time, seem to make sense. That is, of course, if you believe animals have the ability to talk.

Myth is also the word we give to something that is untrue. For example, some people, who don't know about bats, believe that they get caught in people's hair. We know this is not true! It is just a belief that has been passed down and people, who don't know better, believe it.

A legend is a story from the past usually about something historical. These stories have, in most cases, been blown out of proportion. Legends concern people, places, events and sometimes animals. Many people classify stories such as "Why Owl Has Big Eyes," as a legend, when really it should be called a myth. It's a confusing thing!

You're probably wondering why this information is included in a newspaper about wildlife? Well, it's simple. There are so many myths and legends created about animals that we thought we should straighten out the confusion.

Did you know that a lot of myths passed down had to do with owls? You've all heard the saying "as wise as an owl." Why is the owl looked upon as being so smart? Could it be that owls have such big eyes? Or that they stand upright? Maybe it's their quiet ways. Have you heard this rhyme? "The wise old owl lived in an oak...the more he heard the less he spoke...the less he spoke the more he heard...the wise old owl was a wise old bird."

Owls have held a spot in society for thousands of years. In early Greece, the owl was considered the mascot of the Athenians. The Goddess of Wisdom, Athena was also named after an owl. In Japan, pictures of owls in the home were thought to ward off evil spirits. The Dakota Hidatsa Indians saw the burrowing owl as a protective spirit for brave warriors. Even owl "parts" did positive things for people. Some North American Indian tribes believed that eating an owl's eyes could restore one's sight. Owl soup was thought to cure whooping cough in England.

Some cultures did not value the owl in such a positive way. More than one culture associated the owl's cry with death. In the Sierras, native peoples believed that the great horned owl captured the souls of the dead and carried them to the underworld.

A culture's beliefs are sacred to them. They were developed for a reason. We all have the right to our own personal beliefs. To find out more interesting beliefs, go to <http://www.owlpages.com/mythology/>. It's really exciting.

Oh, and you might want to put an owl feather under your pillow tonight, it's thought to ensure a good night's sleep! Of course, you might be arrested because collecting feathers of most birds, including owls, is against the law!



Snowy owl

Owl Word Search

G	K	A	E	B	A	R	N	E	D	T	F
R	S	U	T	C	A	C	Y	E	R	P	R
E	G	E	S	B	U	R	R	O	W	S	I
A	N	H	A	N	K	H	N	E	S	N	N
T	I	Q	W	O	S	W	O	O	P	O	G
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D	B	L	K	S	E	G	A	M	U	L	P
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|-----------|--------------|
| BEAK | BARN |
| BURROWS | TUFTS |
| SPOTTED | HOOT |
| NOCTURNAL | ELF |
| FRINGE | CACTUS |
| BURROWING | WINGS |
| PYGMY | SCREECH |
| OWLET | GREAT HORNED |
| PLUMAGE | HABITAT |
| SWOOP | TALONS |
| SAWWHET | PREY |
| | SNOWY |

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Writers & Contributors: Lori Adams • Brenda Beckley • Dave Cannamela • Adare Evans • Kevin Frailey • Ed Mitchell • Renai Brogdon
 Layout and Design: Alyssa Faaborg • Web Design: Gina Glahn • Masthead Design: Eric Stansbury

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!

Home On The Range

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



Express Yourself!

*Out at night
 Wandering over fields
 Looking for mice to eat
 Sammy Saw-whet, Hoots Elementary*

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.