

Endangered Species Coloring Book



U. S. Fish and Wildlife Service
2004/2005

Dear Teacher, Parent, and Student,

The U.S. Fish and Wildlife Service hopes that you enjoy our 2004/2005 endangered species coloring book.

It has pictures to color and stories to read. You can test your endangered species know-how by taking the quiz inside the back cover.

The learning library at the end of each species account features scientific definitions and Web sites for more information.

Remember to check out the US. Fish and Wildlife Service educators' page at <http://educators.fws.gov/>

Enjoy!



If you have downloaded the coloring book from the internet, copy it so that the stories are adjacent to the pictures.

Special thanks go out to the endangered species staff!

Quiz answers: 1. bald eagle, 2. bull trout, 3. Karner blue butterfly, 4. green pitcher plant, 5. manatee, 6. gray wolf, 7. American alligator, 8. California red-legged frog.

“Working together to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.”

U.S. Fish & Wildlife Service



Bald Eagle

Scientific name: *haliaeetus leucocephalus*

The bald eagle was chosen as our national symbol in 1782! In 1967, the bald eagle within the "lower 48" was "listed" under the **Endangered Species Act**, providing the species with protection from **threats**. These handsome eagles fly the skies all over North America, from Alaska and Canada to Mexico. Bald eagles are large, powerful, brownish-black birds, with white heads and tails. Bald is the old fashioned word for "white;" hence "bald" eagles. They don't get their distinctive white heads and tails until they are adults at age 4 or 5 years. How can you tell an immature bald eagle from a golden eagle, another large raptor that is all brown? Bald eagles are fishermen and have their "pants legs" rolled up. Golden eagles have feathers all the way down their legs. Bald eagles will also eat ducks, rodents, snakes and **carrion**. Males weigh from 7 to 10 pounds, and with wings outstretched, they measure $6 \frac{1}{2}$ feet wide! But wait, females are bigger—they can weigh up to 14 pounds with a wingspan of 8 feet! Bald eagles mate for life and build huge nests of sticks in the tops of large trees near rivers, lakes, marshes, or other wetland areas. They use the same nest each year. Some nests may reach 10 feet across and weigh as much as 2,000 pounds! Usually two chicks hatch, both looking as though they are having a "bad hair" day!

Twenty-five years ago, bald eagles were in danger of **extinction** due to the effects of the pesticide DDT. DDT was sprayed to control mosquitoes, but it also entered the **food chain**. The DDT caused the bald eagle's eggs to have very thin shells, which meant that many of the eggs were easily crushed. Bald eagles were also shot because it was believed they were a threat to cattle and sheep. Bald eagles and golden eagles are now protected under the Eagle Act and the Migratory Bird Treaty Act so they will not be shot, and it is now illegal to use DDT in the United States.

What can you do? Tell your parents how important it is to follow the label directions on pesticides, herbicides, and rodenticides. Many are very dangerous to wildlife if not used properly. Find out what people are doing for your local wildlife, and volunteer with a conservation group. It's fun!

Learning Library

Endangered Species Act - Federal agencies administer this law to conserve species of wildlife and plants that are in danger of extinction or likely to become so.

Threats - Threats are activities or conditions that threaten wildlife. Loss of the species' habitat, incorrect application of pesticides, and collecting species to trade or sell them are a few examples of threats.

Carrion - Carrion is the word for animals that are dead and decaying. Some animals, insects, and even plants eat carrion, and if they didn't, all that carrion would pile up.

Extinction - When a species is extinct, it no longer exists. Dinosaurs are a common example, but there are more recent examples as well, such as the passenger pigeon whose numbers were once so great that the birds were said to have darkened the skies as they flew by.

Food chain - The food chain follows a single path taken as different creatures eat each other for energy. For example, grass (is eaten by a) grasshopper (which is eaten by a) frog (which is eaten by a) snake (which is eaten by a) hawk.

To learn more go to:

<http://endangered.fws.gov/i/BOH.html> and

<http://midwest.fws.gov/eagle>

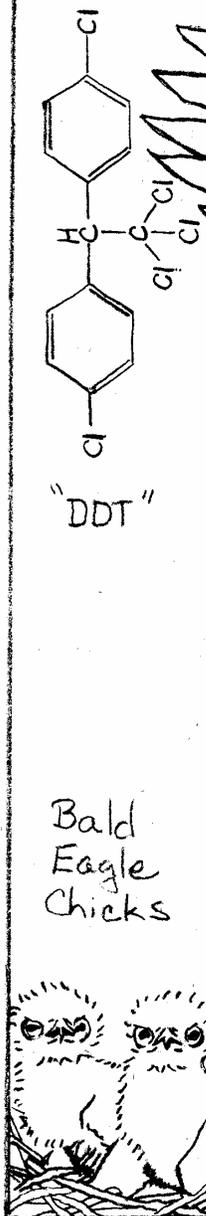
and to see eagles in action at the Eagle Nest Cam go to:

<http://www.iws.org> and click on "interactive."

Bald Eagle



Trout



Fun Fact

Do you know that I am the national symbol? They almost chose a turkey!

California red-legged frog

Scientific name: *Rana aurora draytonii*

This red-legged frog is a **threatened amphibian** that lives in California where it makes its home in ponds, streams, and other wetlands.

Attached to common wetland plants, you can see a frog egg-cluster at the bottom of a cattail and a damselfly on a bulrush. The frog and the damselfly are a good example of what is sometimes called the "web of life," showing how nature is connected. When the damselfly is in the **larval** stage, it eats the eggs of the frog. From those eggs not eaten, a hatchling tadpole emerges. When tadpoles undergo **metamorphosis**, they first become "metamorphs" and then frogs. Metamorphs and frogs eat damselflies and their larvae! The "red-eggs" are on the inside of the frog's back legs. Frogs are great jumpers. Mark Twain wrote of them in *The Celebrated Jumping Frog of Calaveras County*.

Amphibians are declining at an alarming rate, and no one knows exactly why. Some people believe that aside from losing their habitat, widespread pollution has changed conditions for these sensitive creatures. The California red-legged frog has also been affected by its own fame as a "jumping" frog and its tasty legs (frog legs are considered good-eating). People thought bigger frogs might be better and brought the non-native bullfrog into California. Escaped bullfrogs and goldfish, which families release into neighborhood ponds, eat the red-legged frog adult or its eggs. People are helping the red-legged frog by removing bullfrogs from ponds.

What can you do? Never release pets into the wild; they can cause serious harm to native animals. Don't pollute the water with trash or motor oil, or by putting too much fertilizer or pesticides on lawns as it can run-off into the water and kill frogs.

Learning Library

Threatened - The term "threatened species" has a specific meaning under the Endangered Species Act, roughly - any species likely to become endangered in the foreseeable future. These species are often declining in numbers and/or faced with threats to their existence, such as habitat loss.

Amphibian - Amphibian means "double life." Typically, the double life is one spent first in an aquatic larval stage and then in a terrestrial (on land) adult form. All amphibians depend on water or moist environments. Because all amphibians breathe through their skin to some extent (oxygen is also absorbed through lungs, gills, and/or membranes), they must remain moist.

Larval - The immature form, or larvae, of certain animals is different in structure from the adult and must undergo metamorphosis. Tadpoles are larvae of frogs and toads, grubs are larvae of beetles, and caterpillars are larvae of butterflies and moths.

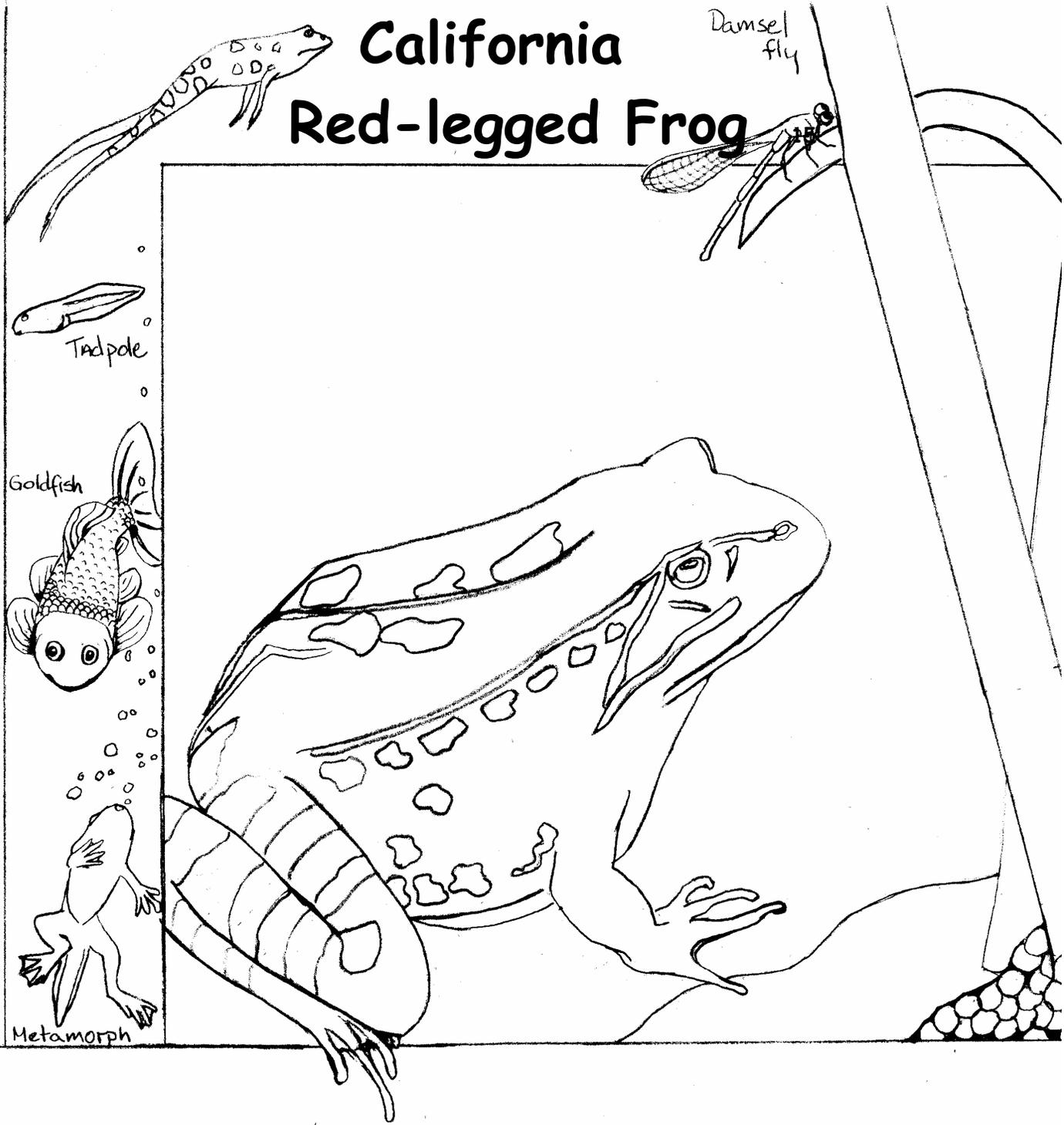
Metamorphosis - A change in form, as in the changes undergone by an animal going from larvae to an adult.

To learn more go to:

<http://endangered.fws.gov/i/DON.html>

and for a fun frog quiz, go to:

<http://magma.nationalgeographic.com/ngexplorer/0403/games/game.cgi>



Fun Fact

I can jump more than 5 feet!

Can you?

Karner Blue Butterfly **Scientific name:** *Lycaeides melissa samuelis*

No bigger than a postage stamp, the Karner blue butterfly is an **endangered** species. The Great Lakes and northeast pine barren and oak savanna habitats are where you can see this butterfly flying over the blue lupine, its **host plant**. The butterfly starts its life as a very small egg—you need a magnifying glass to see it! In the summer, the butterfly lays eggs on the leaves of the wild blue lupine. Later, the leaves fall to the ground and get buried and cushioned by the snow. When spring comes, the eggs hatch into larvae, better known as caterpillars. A Karner blue caterpillar only eats blue lupine leaves. The caterpillar then **pupates**. You can just make out eyes and antennae of the developing butterfly in the cocoon. It only takes a few days before you'll see a butterfly emerging, as blue as peacock feathers, with orange trim on the edge of the wings. Even though each butterfly doesn't live long—only about 2 weeks—it is a great **pollinator**. Never flying far from home, it needs blue lupines so that it can lay eggs to start the next generation.

The Karner blue butterfly is on the Endangered Species List because more than 90 percent of its grasslands, including blue lupine plants, have been converted to agriculture, forestry, and development use. Many rare and endangered butterflies are favored by butterfly collectors, and often they are scooped up in nets and pinned to boards before having a chance to lay eggs. Now the Fish and Wildlife Service and partners are helping to restore the host lupine by planting its seeds, and the Endangered Species Act protects endangered butterflies from collection.

What can you do? Don't collect Karner blue butterflies, or any wildlife. Enjoy watching them in their natural habitat. Grow butterfly habitat at your school or house by planting bushes and plants that attract local butterflies.

Learning Library

Endangered - "Endangered" has a specific meaning under the Endangered Species Act: a species in danger of extinction throughout all of a significant portion of its range.

Host Plant - A plant that is essential to another species' survival. For the Karner blue butterfly, blue lupine is the only plant that its caterpillars eat and butterflies lay their eggs on. Without this host plant, there would not be any Karner blue butterflies.

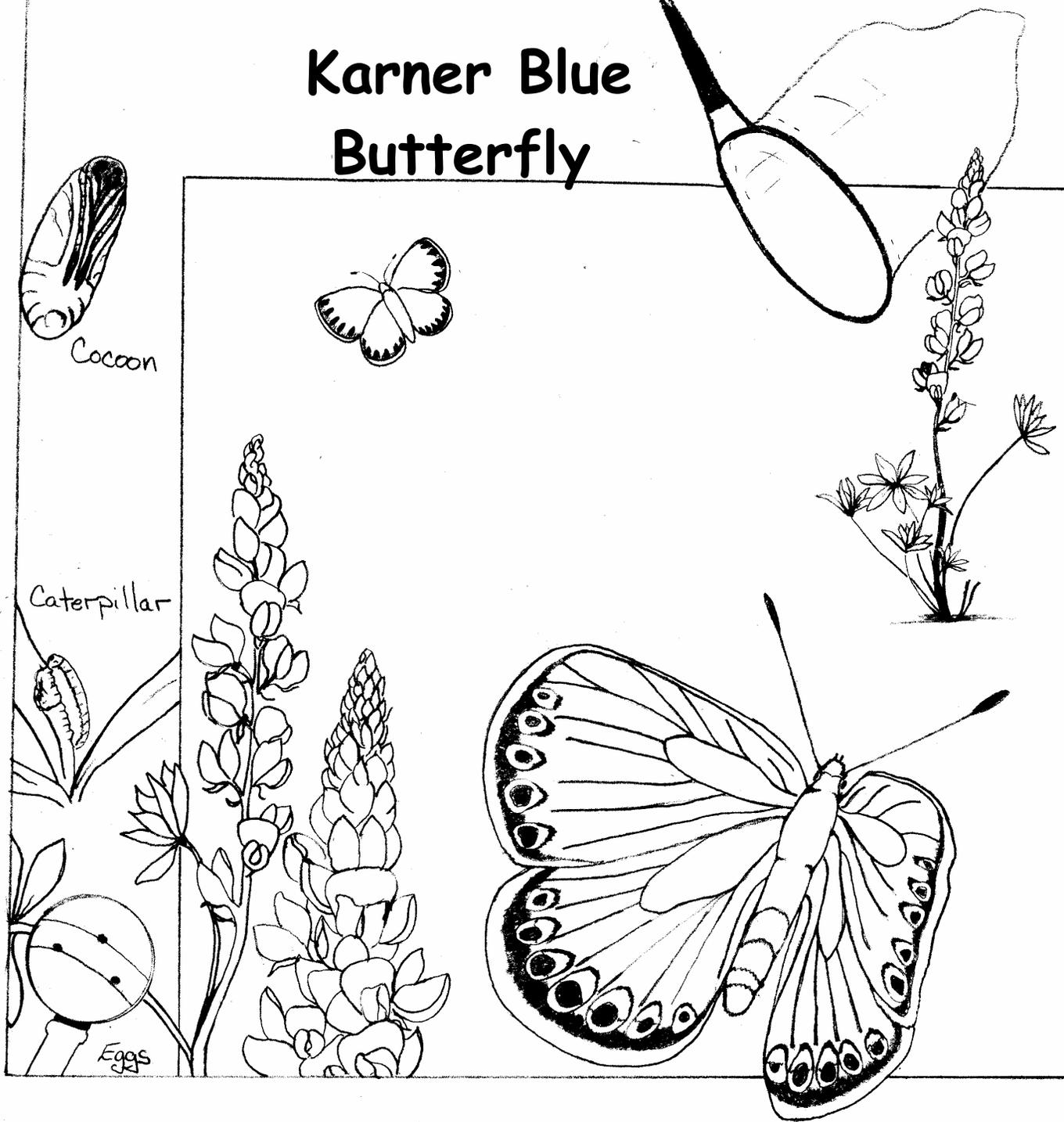
Pupate - This is the process that a caterpillar uses to form its chrysalis (cocoon) to protect it as it turns into a butterfly.

Pollinators - An insect or other agent, such as wind, that pollinates -- that is, moves pollen -- from one flower to another. Some insects are adapted to only pollinate one plant species, which often has features to attract those insects.

To learn more go to:

<http://midwest.fws.gov/Endangered/insects/kbb/index.html> and
<http://dnr.state.wi.us/org/caer/ce/ee/earth/kcycle.htm>

Karner Blue Butterfly



Fun Fact

My eggs are buried in the snow for the winter... brrrrr!

American Alligator **Scientific name:** Alligator mississippiensis

Although this "gator" is now **recovered** -- that is, no longer in danger of extinction, his cousin, the American crocodile, is still endangered. But because they look so much alike, the alligator remains **listed** due to **similarity of appearance**. With both "listed," the Endangered Species Act protects them both. How do you tell them apart? Well, don't get too up-close and personal, but the 'gator has a snub-nose compared to the "croc's" long, thin snout, and the 'gator has a toothless grin. His large 4 tooth does not show when his mouth is closed; the croc's does. The American alligator likes freshwater swamps, marshes, rivers, and lakes. The crocodile, on the other hand, can tolerate **brackish** water because he has special salt-secreting glands that the alligator lacks. The alligator's black coloring with yellowish cross-bands forms disruptive **camouflage**, helping the animal to hunt. Adults tackle prey in the water or on land -- mostly fish, turtles, and birds. If the green-backed heron in the picture can stay perfectly still on that lily leaf, it just might survive; if not, chomp! But alligators are not all bad news to other species; the American alligator is a **keystone species**, modifying its habitat in a way that benefits other wildlife. Here's how. Just about the time of year when the snow-birds (*Homo sapiens* from northern climes) are heading south for some sun, alligators are hibernating! The "alligator hole" they dig to protect themselves during hibernation also hold water during dry times and give other animals an oasis. Also, nests so carefully built by alligator moms double as nests for the Florida red-bellied turtle, as shown in the margin.

The belly skin of the alligator produces high-quality leather. Alligator products -- belts, purses, and cowboy boots -- became a fashion statement. Killing alligators for their skins almost drove this species to extinction. Through the protection of laws, such as the Endangered Species Act, the species was saved and returned to healthy populations.

What can you do? Never feed wild animals. They come to expect food and can become aggressive and dangerous. The animals are then killed to protect human safety. Here's another tip: wear bug repellent. You're more likely to get bitten by the mosquito, which shares the alligator's habitat, than you are by an alligator!

Learning Library

Recovered - Because its populations are healthy and stable, the American alligator no longer needs protection under the Endangered Species Act. Threats to the species have been removed.

Listed - This refers to species on the Endangered Species "List," a formal list published by the federal government.

Similarity of appearance - Two species look so much alike that for purposes of enforcing the Endangered Species Act, both are protected to ensure the well being of the one threatened with extinction.

Alligator and crocodile skins look similar.

Brackish - Brackish water is somewhat salty, like a marsh near the ocean.

Camouflage - Colors or patterns such as stripes or spots that help the animal hide by blending with the background.

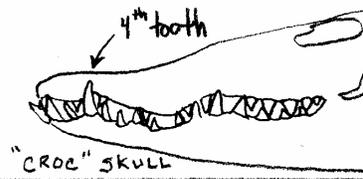
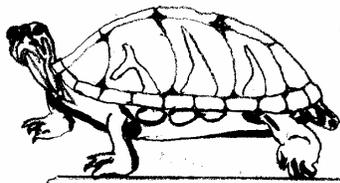
Keystone species - Species that play a key role in maintaining ecosystems.

To learn more go to:

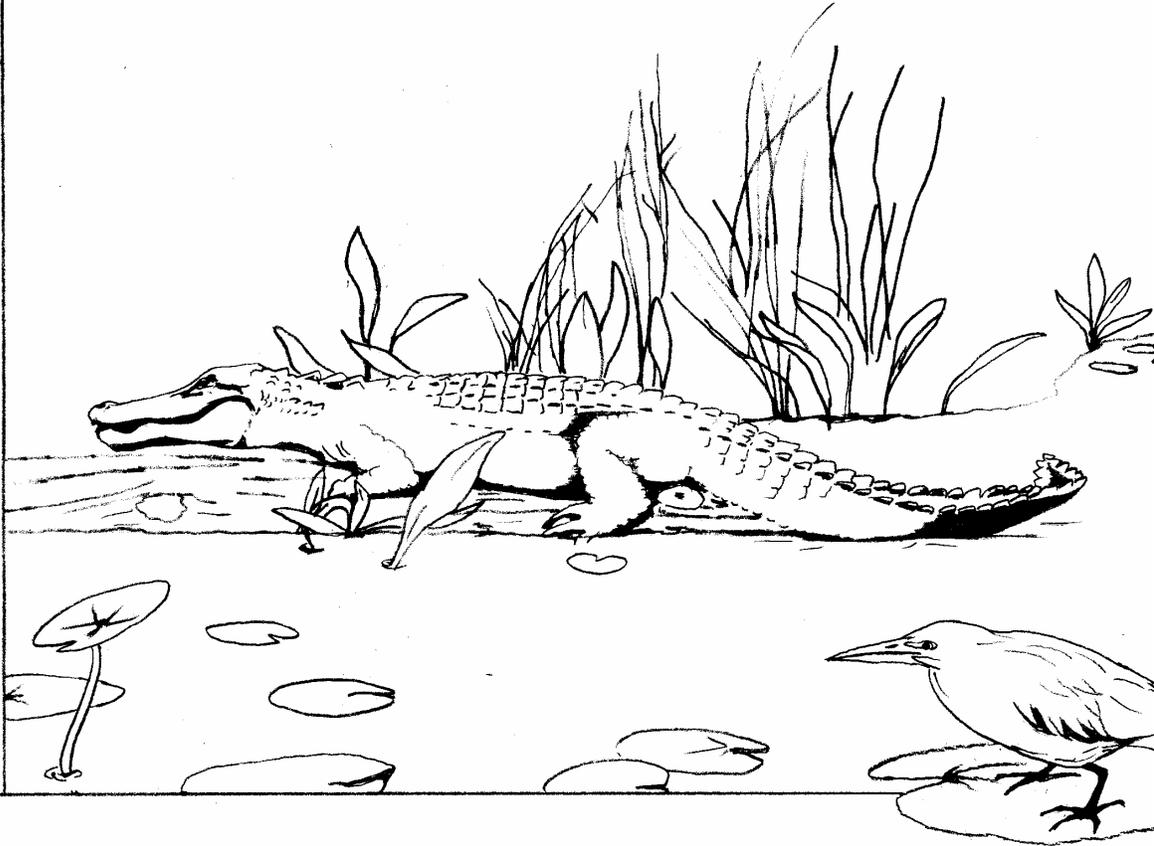
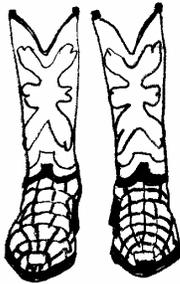
http://www.flmnh.ufl.edu/natsci/herpetology/brittoncrocs/csp_amis.htm

American Alligator

Florida red-bellied turtle



Mosquito



Fun Fact

When I was a baby, my mom carried me to the swamp in her mouth. Yuck!

Florida Manatee

Scientific name: *Trichechus manatus*

Looking a bit like a gray walrus without tusks, the manatee is an endangered marine **mammal** that swims in the shallow warm waters around Florida, Georgia, and Puerto Rico. In the summer, you might even see manatees as far north as Virginia or as far west as Louisiana. One of the most famous manatees is a young female who was named Chessie after she made news by wandering north into the Chesapeake Bay- maybe she was trying to visit the U. S. Capitol? Because of their need to stay warm, manatees gather at warm water **springs** in the winter, almost packed like sardines. These slow-moving, gentle giants eat sea grass and other plants, an activity that may take 5 hours a day. Gentle and giant, these "sea cows," as they are sometimes called, may have been what sailors called mermaids! Growing up to 13 feet (so, minivan-sized) and weighing up to 3,500 pounds (just like small hippos), they are impressive to see. Instead of arms, manatees have flippers that help them steer and scoop up food. Instead of legs, they have one large flattened paddle-like tail that propels them through the water. Just like mermaids, manatees never get out of the water.

While manatees can see and hear relatively well, it takes a bit of effort for them to move, so boats easily hit them accidentally.

Mortality from boats is a very real threat: propellers can cut manatees, and the animals that survive have scars for life. Boats also need places to dock, and in doing so, they destroy the manatee's sea grass beds. To help manatees, there are special sanctuaries where the animals can retreat from people. During the winter, manatees gather around the warm water released from power plants that the Florida Power and Light Company keeps continuously operating to provide safe, warm-water areas.

What can you do? When you travel by boat in manatee areas, slow down! Encourage adults driving boats to observe the speed limits and enjoy the antics of these graceful creatures. You can also visit special manatee **refuge areas**, where you might see a cow (mother manatee) and her calf (baby manatee) playing. If you live in Florida, you can even buy a manatee license plate for the car!

Learning Library

Mammal - Animals like us (humans) that nourish their young with milk. For example, elephants, whales, jaguars, and bats are also mammals.

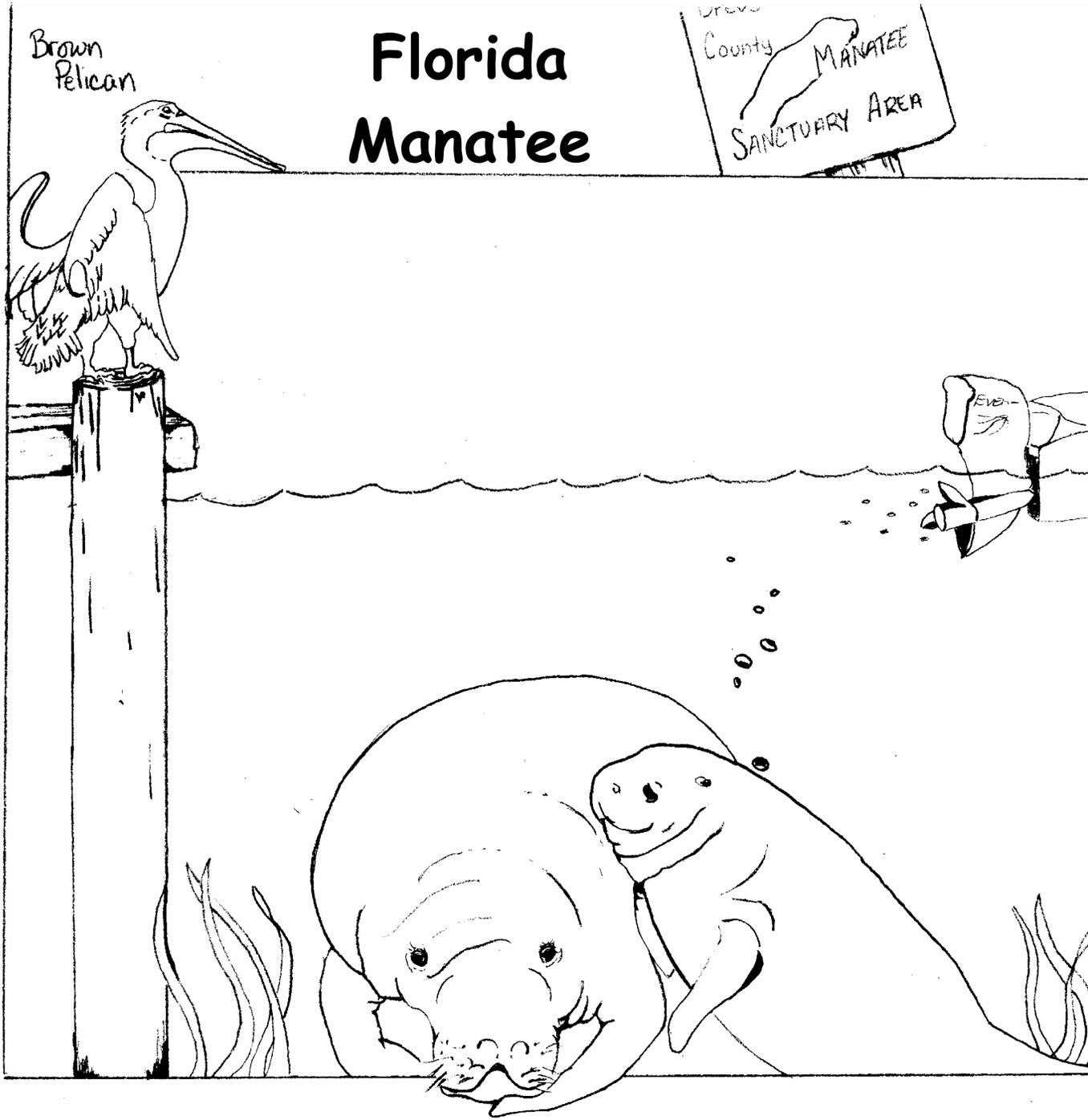
Springs - Flows of water coming to the surface from underground or up through a river bottom.

Mortality - The death of individuals in a population. Boats are a source of mortality for manatees.

Refuge areas - Zones or places where special rules, such as speed limits, are established to protect the species from the most likely cause of death.

To learn more go to:

<http://northflorida.fws.gov/Manatee/manatee-gen-facts.htm>



Fun Fact

When I am resting, I can hold my breath for 20 minutes!

Green pitcher plant

Scientific name: *Sarracenia oreophila*

There are just 34 **populations** remaining of this unique endangered plant. Now found only in Georgia, North Carolina, and Alabama, it was once also found in Tennessee. The plant's habitat is moist areas such as seepage bogs and stream banks where its nodding yellow flowers can be seen in the spring. What is so unique about this plant? It's **carnivorous!** The green pitcher-like leaves trap insects that have fallen in. The plant then enjoys bug-soup, thanks to enzymes or friendly bacteria that do the digesting. Different insects like ladybird beetles (ladybugs), siphrid flies, and bumblebees are frequent visitors to pitcher plant flowers. Oh no! Oops, that little beetle on the leaf slips— and down it slides into the "belly" of the green pitcher plant.

Habitats often need **natural disturbances** to remain suitable for the plants and animals that live there. Biologists have discovered that the green pitcher plant needs occasional fires. Having fires go through moist upland areas seems a bit odd, but the plants and their habitat are **adapted** to and dependent on this disturbance. Smokey Bear has taught us all to prevent forest fires. This is good advice. However, along with Smokey came the idea that all fires were bad, not just the ones started by careless campers. With people quickly putting out all fires, even ones started naturally by lightning, the pitcher plant and many other species that depend on fire have suffered. Our biologists, with fire crews, are working to return fire to these areas by using **prescribed fires**.

What can you do? Learn about how fire is useful for different habitats, and remember—don't ever start a wildfire. You can buy non-endangered carnivorous plants at your local nursery. This is a great way to see how unique they are. But, please don't collect the wild ones; they are needed where they are, and it might be illegal!

Learning Library

Populations - The group of animals or plants that live in a certain place.

Carnivorous - Only plants that attract, capture, kill, digest, and absorb prey are truly carnivorous (pitcher plants, Venus flytraps, and sundews). The more common use of this word is to describe animals that eat other animals.

Natural disturbances - These naturally occurring disturbances include fire, drought, landslides, and floods; things we think of as disasters and want to control. Many species need these disturbances, and they cannot survive without them.

Adapted - Species that are adapted to certain conditions are modified in some way. For some plant species, fire is needed to reduce plant growth that might otherwise shade them out; for other plants, it might be needed before seeds will grow.

Prescribed fires - These are fires that are planned and designed to meet a goal. Professionals only carry out prescribed fires under a written wild land fire management plan.

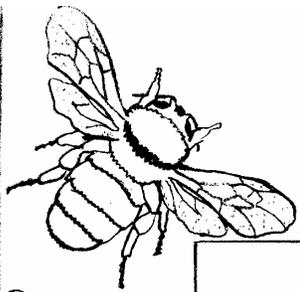
To learn more go to:

<http://endangered.fws.gov/i/q/saq0p.html>

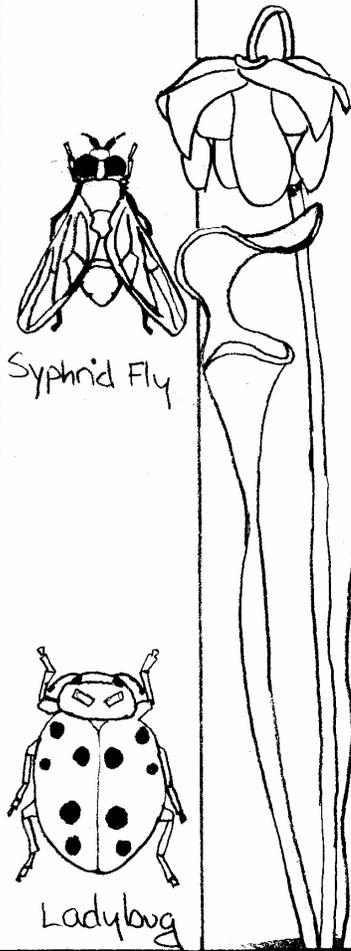
and to learn more about prescribed fires go to:

<http://fire.fws.gov/>

Green Pitcher Plant

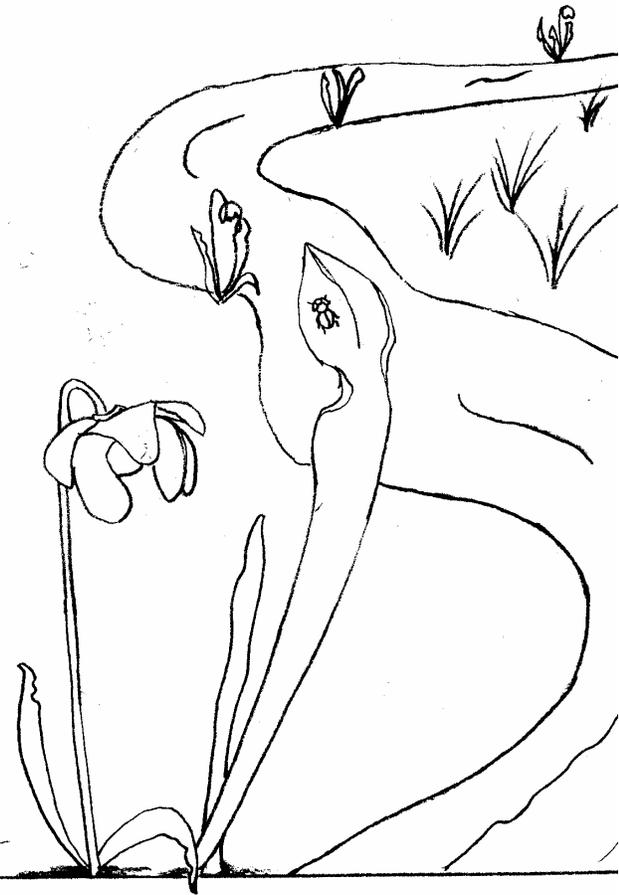
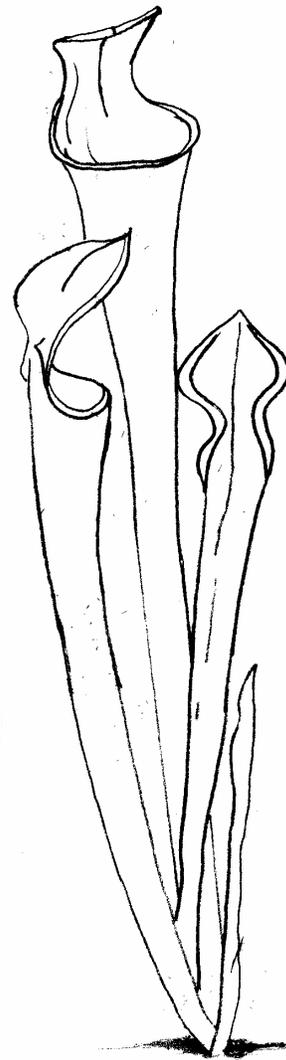


Bumblebee



Syphid Fly

Ladybug



Fun Fact

I love to eat insects!
Do you?

Bull Trout

Scientific name: *Salvelinus confluentus*

Now found in just five Pacific Northwest states, the bull trout lives in the streams, rivers, and lakes of Montana, Idaho, Oregon, Washington, and Nevada. A threatened species, the fish needs clean, clear, and cold water, usually below 59°F, the coldest required by any trout. Some bull trout stay in the same stream or lake all their lives, but some **migrate**, even to coastal areas. In the fall, when stream temperatures drop below 48°F, bull trout **spawn** on **redds**. The eggs may take five months to hatch into **fry**! Although the young fish eat insects, adults eat other fish. Migratory bull trout tend to be bigger than the resident fish because they have access to more food and different kinds of food. Some bull trout can grow to 2 feet, weigh more than 20 pounds, and live 12 years! As shown in the picture, all life-stages of bull trout seek cover, including large rocks or fallen trees, deep pools, and undercut banks, where they hide from predators, keep cool in the shade, and find food. When mayflies hatch, bull trout jump for joy at the prospect of one of their favorite foods.

Threats to bull trout include inadequate or poor-quality water that is warm or polluted over-fishing, and dams or other structures that block migration routes. For example, too much logging or grazing may allow large amounts of dirt to fall into a river, making the water muddy and smothering bull trout eggs by filling the gaps between the gravel in redds. The Fish and Wildlife Service and timber companies and ranchers are working to prevent this from happening by planting trees and other vegetation near streams—that is, riparian buffers—and by creating off-site watering areas for their livestock.

What can you do? Always know the kind of fish you are trying to catch — if the trout-like fish does not have black on its **dorsal fin**, it may be a bull trout. So remember, “No black, put it back!” Work with your school or another group to clean up trash, and plant trees along rivers.

Learning Library

Migrate - To move from one area to another to find food or shelter or to breed.

Spawn - The term used when fish, amphibians, or mollusks lay eggs.

Redd - A gravel-bed on the bottom of the river or lake where bull trout lay their eggs.

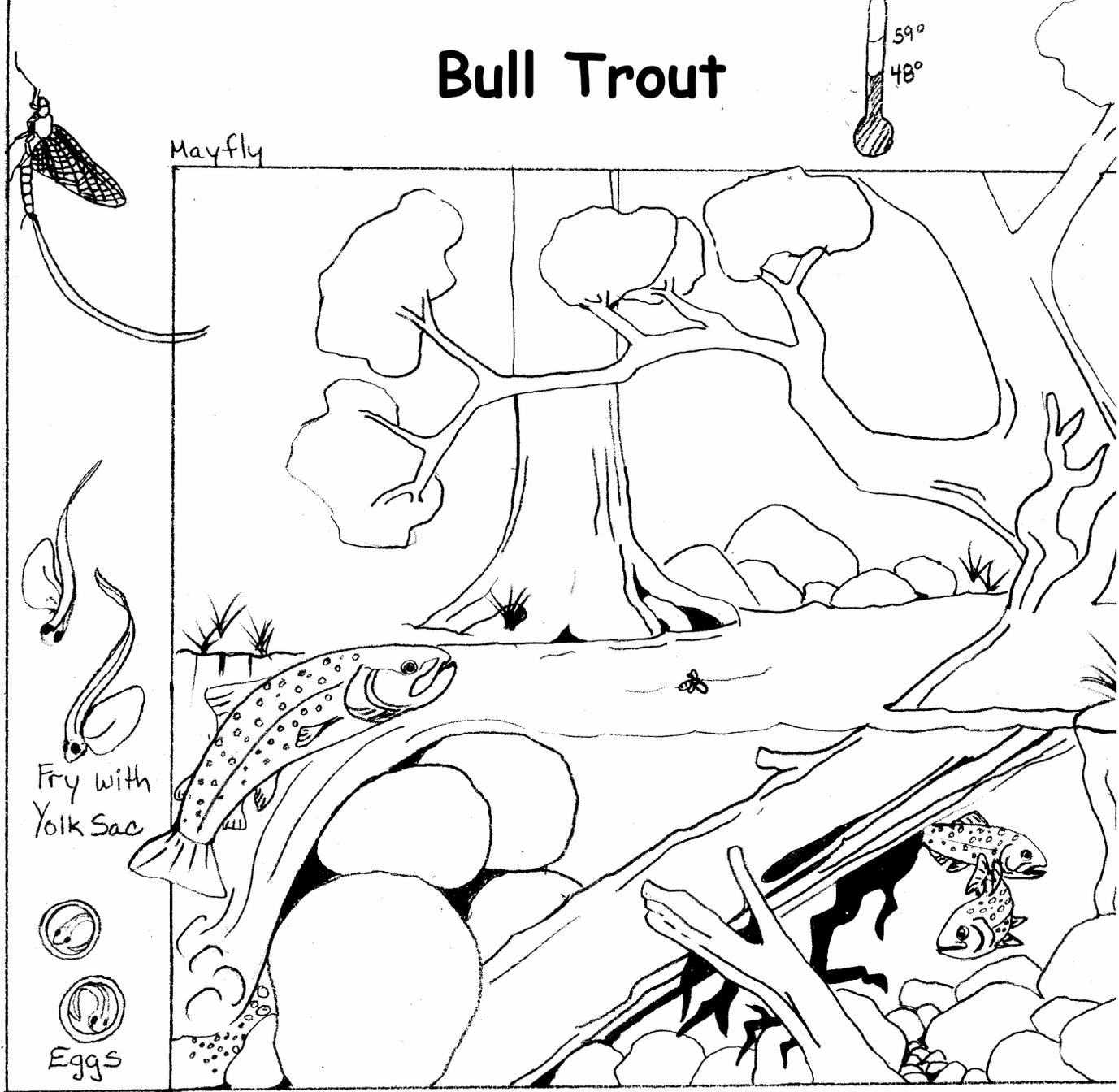
Fry - The life-stage of young fish in the first few weeks after hatching.

Dorsal fin - This is the single, large fin on the back of the fish.

To learn more go to:

<http://training.fws.gov/library/Pubs/bulltrt03.pdf>

Bull Trout



Fun Fact

Some redds are as big as trucks. That's a lot of fish eggs!

Gray wolf

Scientific name: *Canis lupus*

The gray wolf is a **canid** with an undeserved bad reputation. Gray wolves from the Rocky Mountains are on the "road to recovery" and have recently been reclassified from endangered to threatened. The Mexican wolf remains endangered. Although gray wolves used to roam over the mountains, prairies, and forests in much of the United States and Canada, by 1950, the voice of the wolf had been mostly silenced. Wolves are like dogs in many ways. They have two fur coats—and wear them both at the same time. An undercoat keeps the wolves warm, and an overcoat keeps them dry. Beautiful gray with shades of brown is a very common color for wolves, but they also come in black and white. Wolves "talk" to each other, a common practice with **pack** animals. Not only do they howl, but they also "talk" by wagging, bowing, and **scent-marking**—an easy way for a wolf to tell who was at this spot last! Wolves are **predators**, often eating large prey, and when they do, hunting in a pack helps them get their meal. What the wolf leaves as leftovers is food for many other species, from the large grizzly bear to the small crow.

In the west, gray wolves hunted buffalo and elk, but they got scarce, too. Without buffalo and elk to eat, wolves preyed on cows, an activity that got them shot and poisoned. Some people killed wolves so they could wear wolf coats. *Little Red Riding Hood* and *The Three Little Pigs* may just be children's nursery rhymes, but the idea of the Big Bad Wolf scared people, and so more wolves were killed. Wolves are shy, typically avoid people, and are not to be feared. The Canadian wildlife biologist, Dr. Douglas H. Pimlott, was one of the first scientists to write a book for parents and children to let them know why wolves did not deserve their bad reputation.

Because wolf mothers have many pups, sometimes ten—wolves, protected from guns and poison, have made a remarkable comeback. The Fish and Wildlife Service and others brought wolves back into Yellowstone National Park. Gray wolves are again the voice in the

wilderness, and they aren't saying "I'll huff and I'll puff and I blow this house down;" they are howling to their families.

What can you do? Just what you're doing! Learn about wildlife.

Learning Library

Canid - A member of the family of carnivorous mammals that includes dogs, foxes, coyotes, jackals, and wolves.

Pack - A pack of wolves is a grouping of two to 20 animals, including many family members.

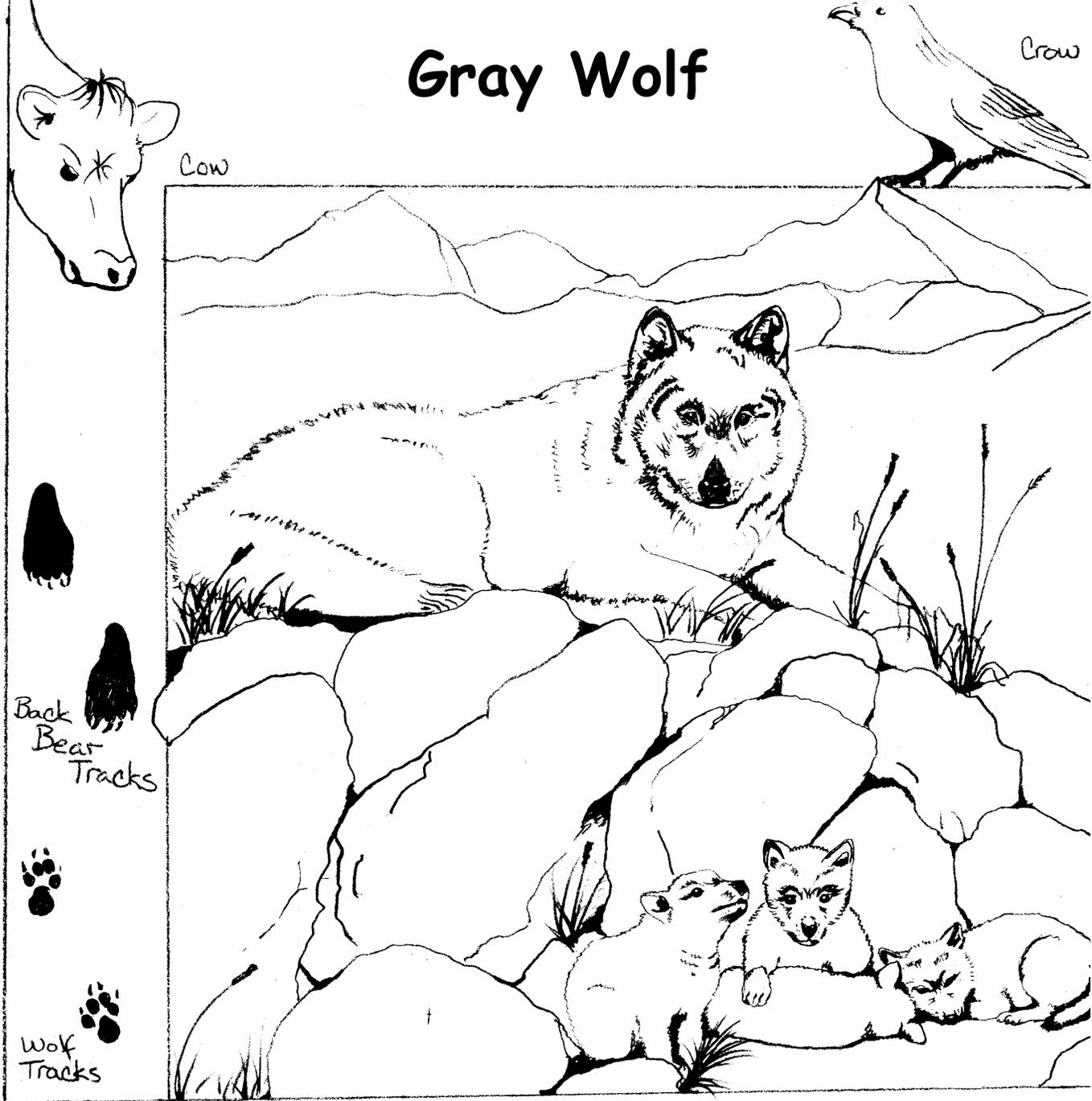
Scent-marking - An animal's use of scent-glands or urine to mark its territory.

Predator - An animal that preys on another.

To learn more go to:

<http://midwest.fws.gov/wolf> and <http://www.r6.fws.gov/wolf/>

Gray Wolf



Fun Fact

I live with my parents,
aunts, and uncles in dens.

Our family is close!

Create your own!

Species common name:

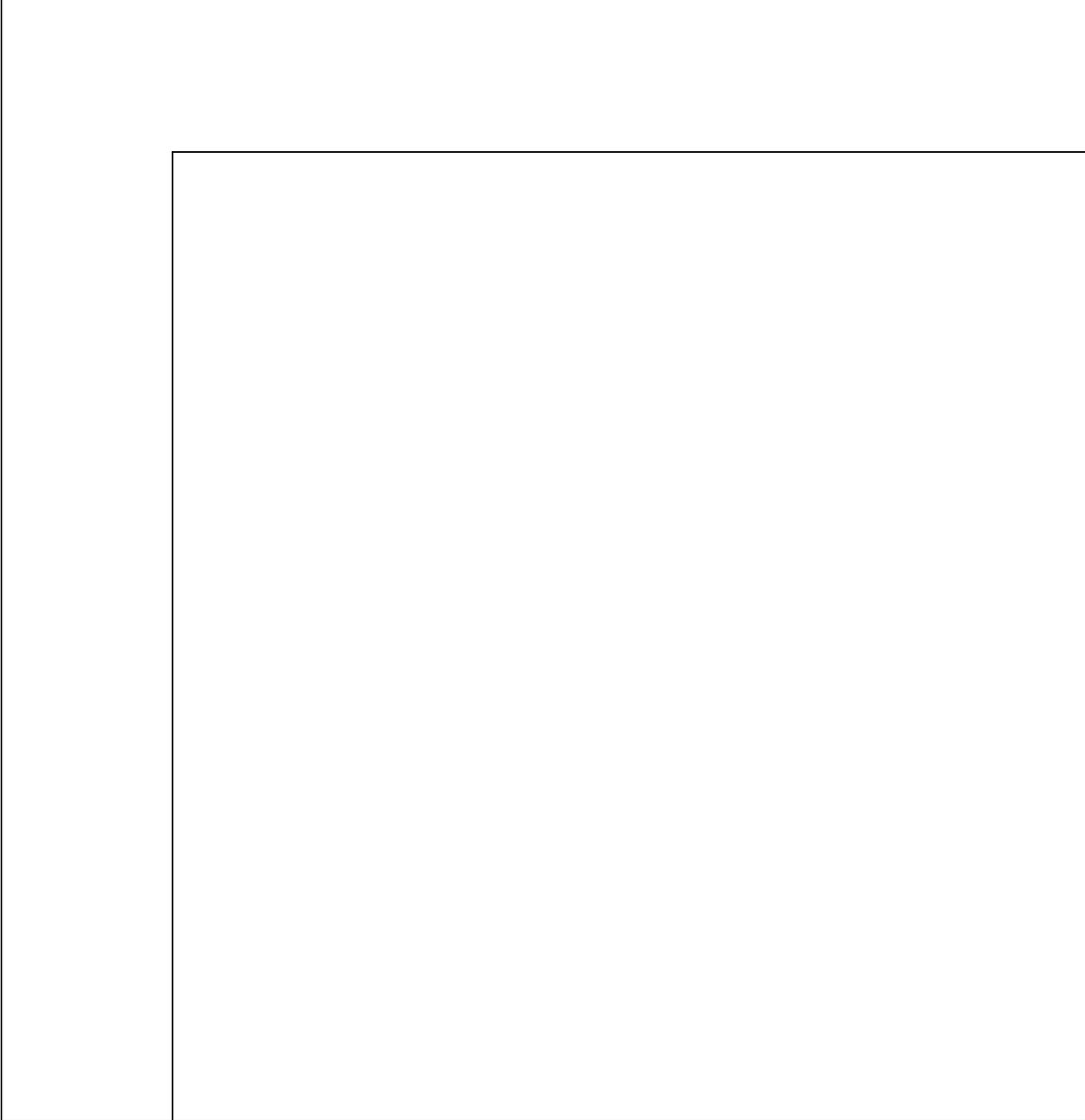
Scientific name:

Species account:

What can you do?

Learning Library

To learn more go to:



Fun Fact

Pictures for Quiz

1.



5.



2.



6.



3.



7.



4.



8.



Quiz

Using the pictures on the adjacent page, draw a circle around the correct species name below. For example, is the picture labeled #1 a bald eagle, a chickadee, or a robin? Have fun!

1 bald eagle
chickadee
robin

5 tuna
manatee
dolphin

2 shark
bull trout
Nemo

6 golden retriever
Pluto
gray wolf

3 Karner blue butterfly
blue bird
hummingbird

7 Barney the dinosaur
American alligator
sea otter

4 dandelion
sea lion
green pitcher plant

8 sea turtle
Kermit the frog
California red-legged frog



Bull Trout



Florida Manatee



Green Pitcher Plant



Bald Eagle



Karner Blue Butterfly



American Alligator



Gray Wolf



California Red-legged Frog

<http://endangered.fws.gov>