

We Share One Place

Endangered Species of Oregon

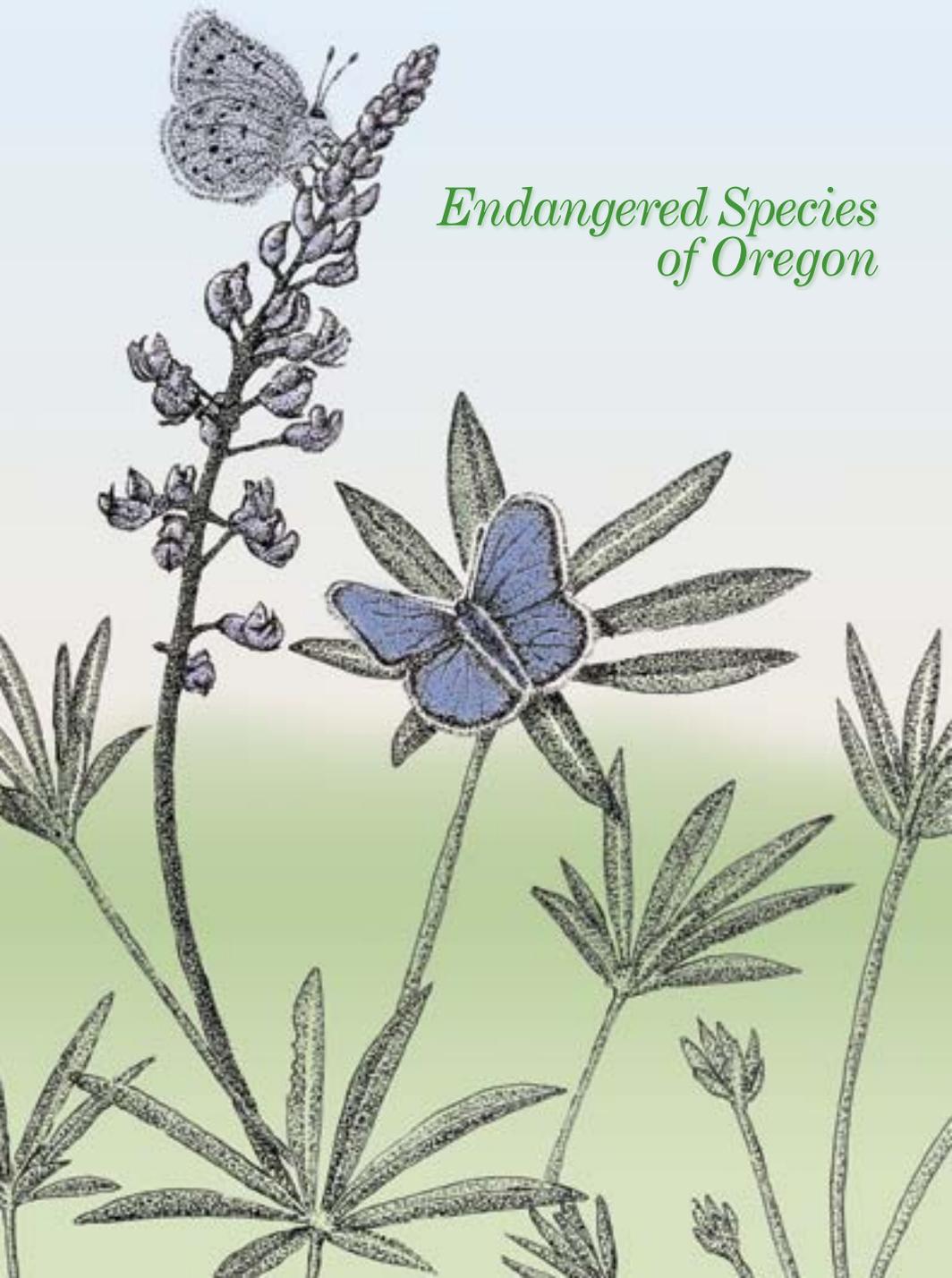


Table of Contents

4 Introduction

What is Biodiversity?

What is the Endangered Species Act?

9 Mammals

29 Birds

39 Reptiles

49 Amphibians

50 Fish

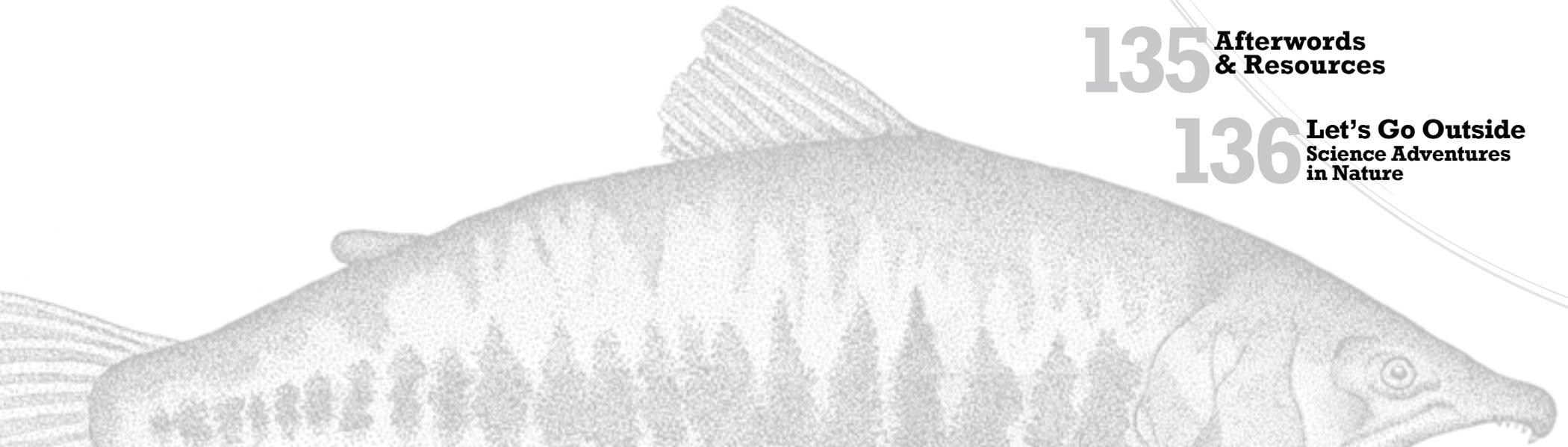
81 Invertebrates

88 Plants

124 Success Stories Recovered Species

135 Afterwords & Resources

136 Let's Go Outside Science Adventures in Nature



Life on the planet Earth: biodiversity sums it all up.

What is Biological Diversity or “Biodiversity”?

The prefix *bio* means life and the word *diversity* means variety. Biodiversity refers to the number of species and interconnectedness of all forms of life on earth.

Biodiversity is what’s called a **blanket term**. Scientists often use a blanket term for something that covers a very big subject and contains many, many categories. For example, biodiversity can be divided into some of these categories:

- *genes*—a storehouse (or library) found in every living thing contains information about earth’s changing environmental conditions, and the key to adapting to future changes
- *species*—the number and variety of life forms
- *ecosystems*—the variety of biological communities and how they interact with each other to maintain proper functioning
- *culture*—how humans interact with the natural world and how their actions contribute to shaping biodiversity.

One Big System

Because of the interconnection, all life on earth is viewed as one, big system in which all parts are interdependent and work together for continued existence. You might compare this concept to a basketball team. Each member has a role and must depend on the others to play their role to keep the game going.

Non-living Things

Non-living things are part of this interdependent system too. Oceans, fresh waters, rocks, air, wind, soil, fire; all interact with the rest of life to create the systems on which all species, including our own, depend for survival.

What about endangered species?

In this booklet, you will be taking a look at some species whose places in the system are affected by changes which threaten their survival to the point of nearing extinction. As you get to know these species, think of them not just as an animal or plant in trouble but as an important member of a team that’s working toward the continued existence of our earth.

Climate Change

Already on the brink of survival, endangered and threatened species now face a changing climate. Many of the world’s habitats and ecosystems depend on a delicate balance of rainfall, temperature, and soil type. A rapid change in climate could upset this balance and seriously endanger many living things. One example of upsetting this balance is the decline of polar bears due to the melting of large quantities of sea ice. Other examples are: more severe storms and floods that can affect salmon survival by washing away gravel spawning beds and salmon eggs; and prolonged droughts that can stress and kill plants on which wildlife depend for food and shelter. Can you think of other examples?.

For Critical Thinkers:

Since all forms of life have a role in the system of life on Earth, how does the importance of an African elephant’s role compare to the importance of a chinook salmon? How about a MacFarlane’s four o’clock?

What IS the Endangered Species Act and what does it do?

People in the United States have been concerned about native wildlife and plants going extinct for a long time. In 1973, our Congress passed the best law yet for protecting rare species and their habitats: the Endangered Species Act (called the ESA, for short).

Congress gave responsibility for the ESA to two federal agencies. The **U.S. Fish and Wildlife Service** takes care of terrestrial (land) and freshwater wildlife, fish and plants. The **National Marine Fisheries Service** takes care of most marine (ocean) species, including fish, invertebrates, sea turtles, whales and marine plants.

Here's how the ESA works:

Getting on the list: If a species is in danger of extinction, it can be added to the official List of Endangered and Threatened Species. When this is done, it is called a listing and the species is then referred to as a listed species.

A species listed under the ESA is put into one of two categories, endangered or threatened.

- **Endangered** is for species in danger of going extinct because there are too few of them left or because their habitat is too small or too damaged to support them much longer.
- **Threatened** is for species that are not endangered now but are likely to become endangered in the foreseeable future (the next 50 to 100 years).

Proposal to list

Before a species can be put on the ESA list, there is a process to follow which is called a proposal to list. Here scientists gather data and information to determine if the threats to the species' survival are so great that it needs the protection of the ESA. The decision to list a species must be based on the best available scientific information.

If the species qualifies to be listed, a proposed rule is written and people are given a chance to give their comments on the rule before it is made final.

Protection

Protection under the ESA means that people have to follow certain regulations or guidelines when they are doing things, like building roads or harvesting trees, that might have any effect on the species or its habitat. In addition, the ESA can provide money for research so scientists can study a species and figure out how to best help it avoid extinction. The ESA also requires a Recovery Plan to be written for each listed species which describes things people should do to help make sure the species will survive.

Getting off the list

When the species reaches a safe population level, it can be taken off the ESA list. After being removed from the list, the species will be monitored by researchers for at least five years to make sure that it is still safe.

For Critical Thinkers:

What might have happened to rare wildlife and plants if there had not been an Endangered Species Act?



What IS a...

MAMMAL?

ALL MAMMALS:

- ☛ produce live young (rather than lay eggs), which they feed with mother's milk;
- ☛ have (or once had) fur or hair for protection and warmth;
- ☛ have four limbs and a four-chambered heart;
- ☛ have the most highly developed nervous system of all the animals.

Biggest! *The largest mammal is the blue whale, which can grow to be 100 feet long. It is on the Endangered Species list.*

Smallest! *The smallest mammals are shrews, mice and bats. Many are less than two inches long (not counting their tails).*

Columbian White-tailed Deer

Odocoileus virginianus leucurus

Where is my home? I am a small red-brown deer and I live on a few islands in the Columbia River and also in oak woodlands near Roseburg*. I am usually found in wet meadows and shrubby forests near rivers and streams. Most of my habitat is gone because the land was cleared to make way for houses and farming. In the past, overhunting harmed my populations; today illegal hunting is still a problem. I am related to the eastern white-tailed deer but I only live in Washington and Oregon.

What do I eat? I graze on young grasses, green plants and branches of woody shrubs.

What is my survival strategy? I am a secretive animal. I feed mostly at night when I am hidden by the dark. My brown coat helps me blend in with the woods. My large ears and eyes help me see predators, like coyotes and cougars. I have one or two fawns a year. They are born in June with spotted coats that help camouflage them. They spend a lot of their time lying quietly to hide from predators.

How are people protecting your habitat?

I have two main areas set aside to protect my habitat. The Julia Butler Hansen National Wildlife Refuge, next to the Columbia River in Washington, is in my historic habitat and was created just to help my species. And in southern Oregon, the Bureau of Land Management traded land to acquire 6,000 acres of my habitat, which has helped with the delisting of the Roseburg population in 2003.



U.S. Fish and Wildlife Service

Height: 3 feet at shoulder
Weight: 80–120 pounds

I am about the size of a Great Dane (like Scooby Doo).

Canada Lynx

Felis lynx canadensis

Where is my home? I am a medium-sized cat and may be found high up in the Cascade and Blue Mountains of Oregon. I make my den in loose piles of logs that are often found in old forests. The logs provide cover for me and my kittens to hide. I like to hunt in dense thickets where most of my prey lives. My habitat has been degraded by forest thinning (a type of logging), roads and winter recreation.

What do I eat? I am a true specialist (I have one main food source). In winter, I eat mainly snowshoe hares but the rest of the year, I also eat squirrels, grouse and other small animals.

What is my survival strategy? I am adapted for life in the high mountains. I have large, furry paws and long legs for chasing hares over snow. My pale grey fur helps me blend in to the forest. My main predators are humans, who like to wear my beautiful fur. My population is linked very closely to the snowshoe hare. When there are lots of hares, more lynx survive but when hare populations decline, we go hungry and our population declines, too.



How do scientists look for lynx?

One of the ways they look for me is by scent stations. These stations are small carpet squares that are wetted with beaver scent, matted with catnip and nailed to a tree trunk. Scientists hope that I will smell the carpet, rub against it and leave some of my hair behind so it can be used to identify me!



Irene Stumpf

Length: 32–36 inches
Weight: 15–30 pounds

My cheek is about knee-high to most adults.

Sei Whale

Balaenoptera borealis

Where is my home? I am found in ocean waters around the world. In the northeastern Pacific Ocean, I can be found in the summer from Central California to the Gulf of Alaska. After humans hunted the blue, fin and humpback whales almost to extinction, they continued hunting my species into the 1960's until I was protected in 1970. Today there are about 65,000 of us.

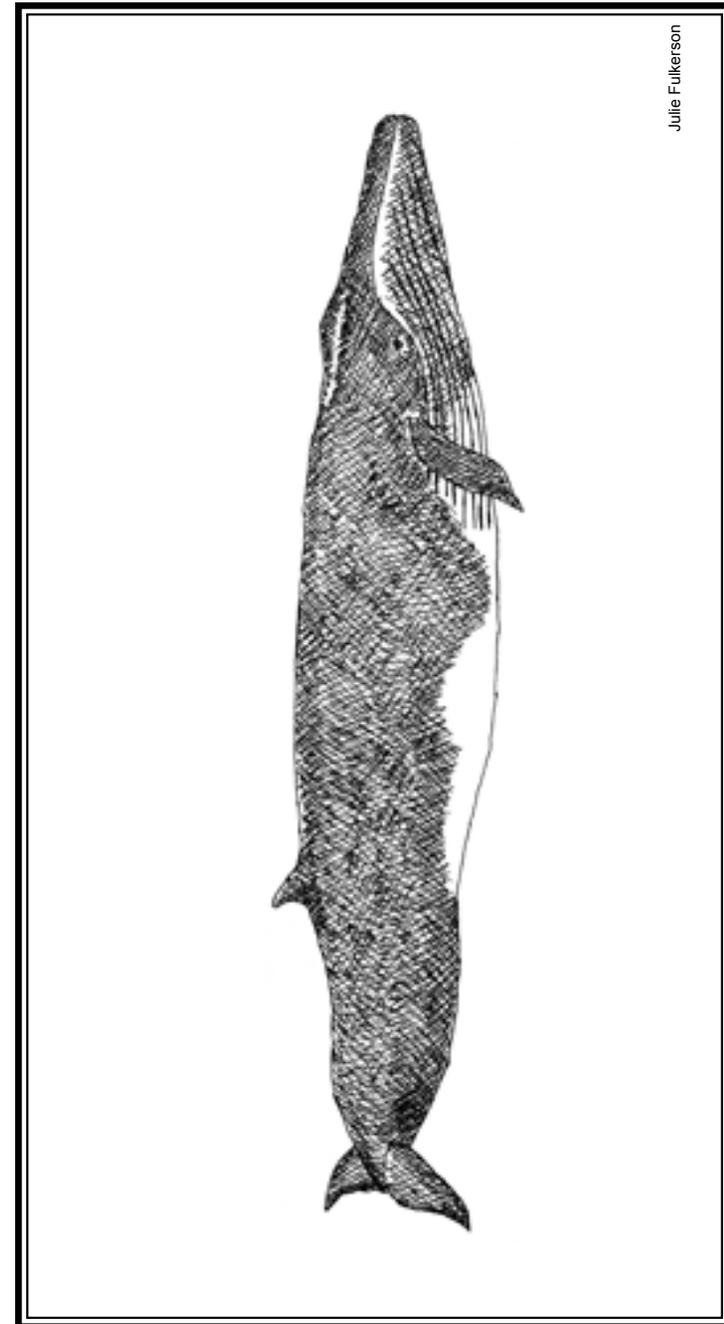
What do I eat? I eat tiny shrimp-like animals called krill, small fish and squid. I don't have teeth; instead I have comb-like filters in my mouth called baleen plates that I use to strain my food from water. Young whales drink mother's milk for the first five to nine months of their lives.

What is my survival strategy? Like many large whales, I am a long-lived species (my average age is 70 years). I have one calf every two to three years. This lets me spend lots of time raising each calf to help it survive better. I usually migrate north in the summer months when food is most abundant and south in the winter. I am often found in pods (groups) of two to five whales.



How fast can you swim?

I can travel 35 knots per hour (that's about 40 miles per hour)—as fast as some naval ships! I am the fastest swimmer of all the whales.



Julie Fulkerson

I weigh about as much as two school buses put together.

Length: 40–53 feet
Weight: 20–30 tons

ENDANGERED
Listed in 1970

Blue Whale

Balaenoptera musculus

Where is my home? I am found in ocean waters around the world. In the summer months, I migrate north to the polar regions where food is most abundant; in the winter I am found down near the equator. I was hunted almost to extinction until I was protected in 1967 by the International Whaling Commission. There are still less than 15,000 of us in the wild today.

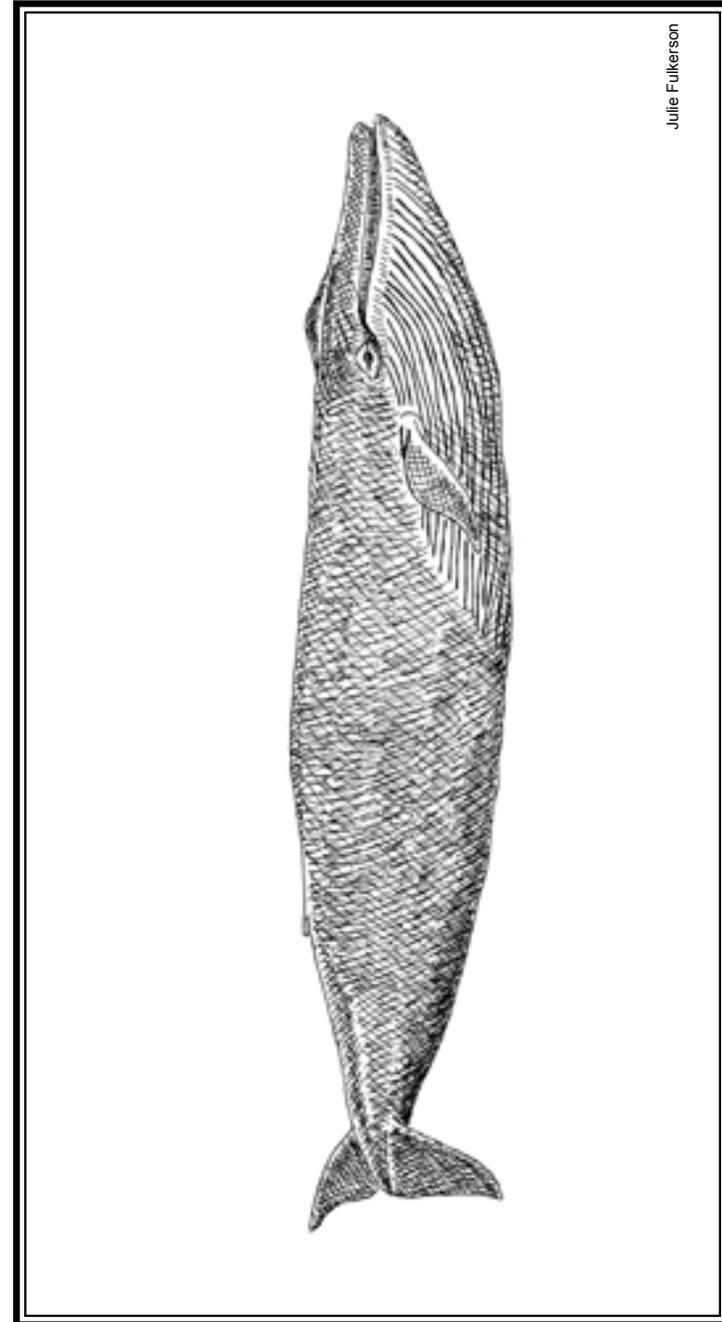
What do I eat? I eat tiny shrimp-like animals called krill and other crustaceans which I filter from water through my baleen plates. My stomach can hold one ton of food at a time.

What is my survival strategy? I am the largest living animal on the earth and can live to be 80 years old. I have one calf every two to three years. Except at the feeding grounds, I am usually found alone unless I am a mother with a calf. My only non-human predator is the orca which hunts in packs and sometimes kills younger whales.



Why do you spout water from the top of your head?

Even though I live in the sea, I am a mammal and have air-breathing lungs. When I come to the surface to take a breath, I blow air through my two blowholes. You see the air as vapor above the water. My blow can reach as high as 39 feet.



I am about the length of a basketball court! My heart is the size of a Volkswagen Beetle.

Length: 70–100 feet
Weight: 100–120 tons

ENDANGERED
Listed in 1970

Finback Whale

Balaenoptera physalus

Where is my home? I live in all major oceans. I spend summers feeding in cold polar waters and then migrate thousands of miles to winter in warmer waters near the equator. I was once of the most abundant of the large whales before heavy hunting hurt my populations. Now with protection, there are about 120,000 of my species.

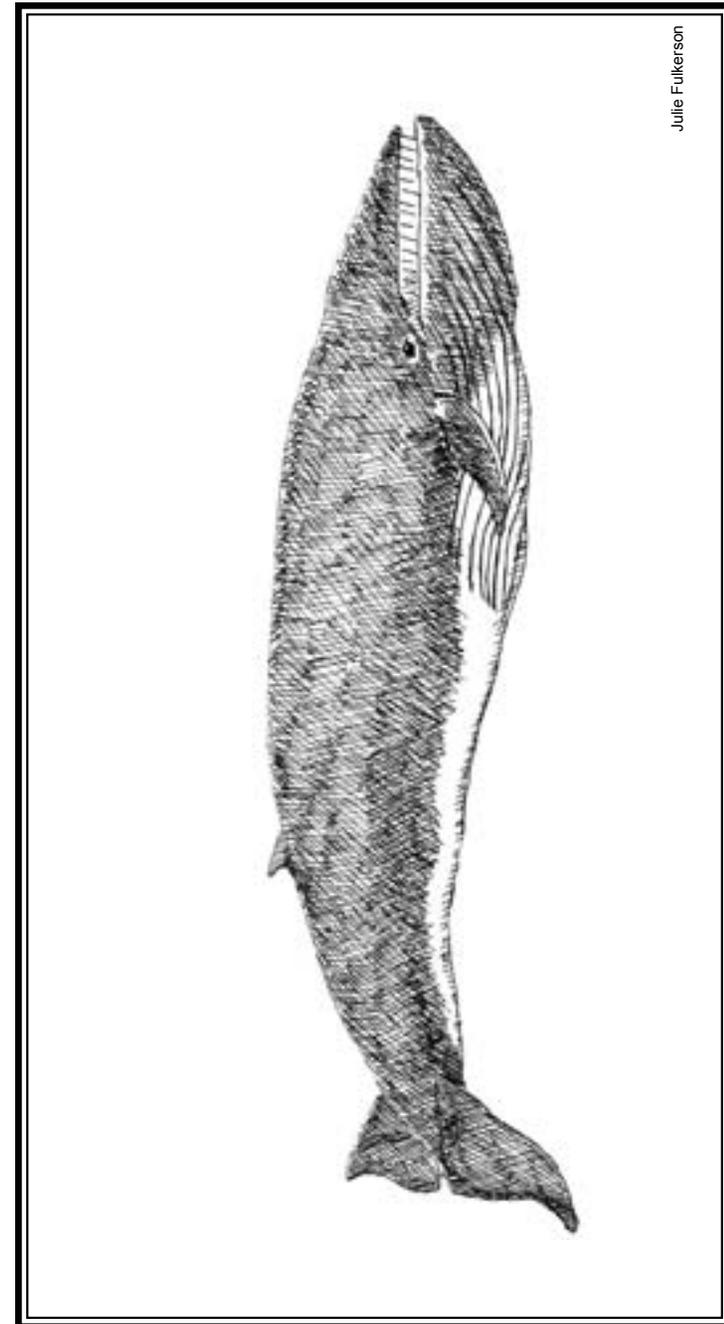
What do I eat? I eat tiny shrimp-like animals called krill, as well as squid, herring and other animals which I filter from water through my baleen plates. When I feed, I take in water in large gulps.

What is my survival strategy? I am a very large whale, second only in size to the blue whale, and I can live to be 60 years old. I have one calf every three years. This lets me spend lots of time raising each calf to help it survive better. I am a social animal, often found in pairs or small groups. On the feeding grounds, I am sometimes found in very large groups of up to 100 or more whales.



Why do you like to migrate?

Since we are such big animals, we need a lot of food and we can travel long distances to get it. We learned from our ancestors places where food is plentiful.



Julie Fulkerson

I can grow to be as long as a tennis court.

Length: 59–73 feet
Weight: 30–80 tons

ENDANGERED
Listed in 1970

Right Whale

Balaena glacialis

Where is my home? I live in the northeastern Pacific Ocean and can be found from Baja California to the Gulf of Alaska. It isn't often that anyone sees me because I am one of the rarest whale species: there are only 300–600 of my kind left. I was hunted almost to extinction before being protected in 1937 by the International Agreement for the Regulation of Whaling.

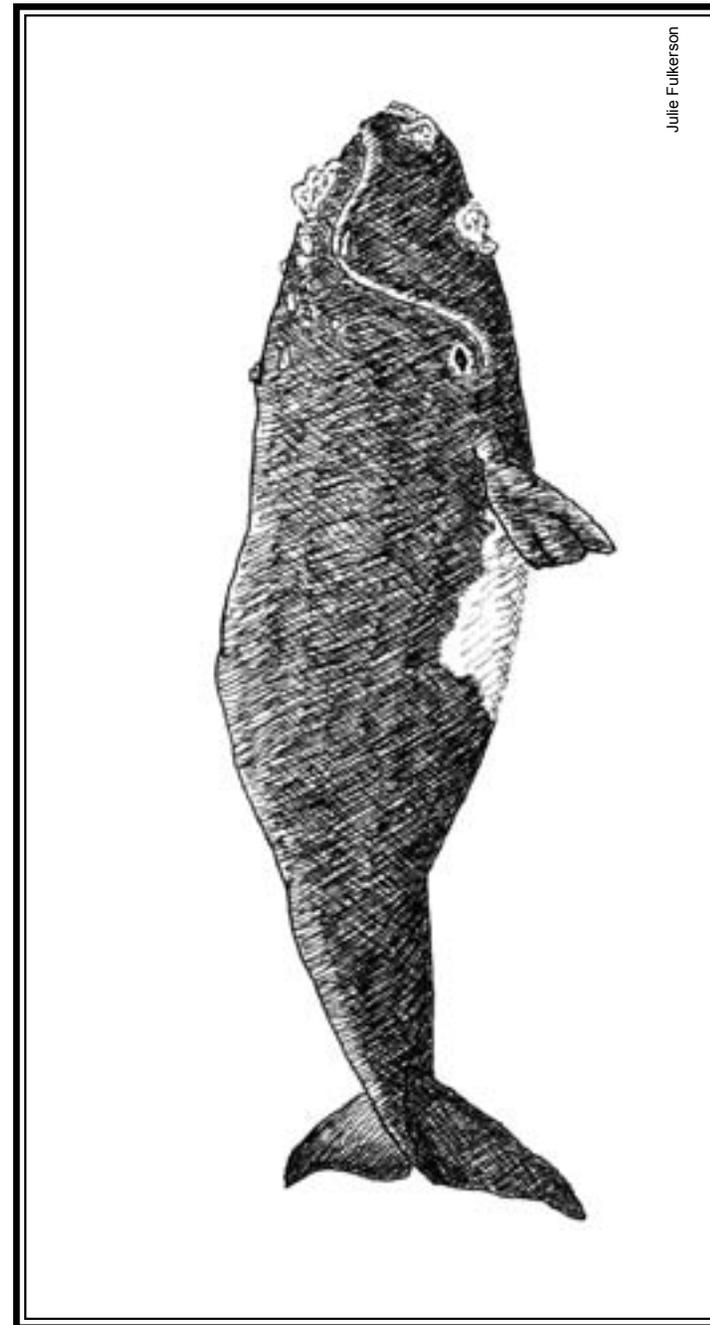
What do I eat? I eat tiny shrimp-like animals called krill and other small crustaceans. I don't have teeth; instead I have comb-like filters in my mouth called baleen plates that I use to strain my food from water.

What is my survival strategy? Like many large whales, I am a long-lived species. Scientists think I live to be 60 years old. I do not reproduce until I am five to ten years old and only have one calf every three to four years. This lets me spend lots of time raising each calf to help it survive better. I usually migrate to the north in the summer months when food is most abundant and then south in the winter.



How do researchers tell one whale from another?

Easy! Right whales have light-colored growths, called callosities, on their heads. Researchers learn to identify individual right whales by the pattern of their callosities.



Julie Fulkerson

I can grow to be as long as a volleyball court.

Length: 36–59 feet
Weight: 30–80 tons

Humpback Whale

Megaptera novaeangliae

Where is my home? I live in all major oceans. I spend the summer months feeding in cold polar waters and then migrate thousands of miles to winter in warmer waters near Hawaii and Bermuda. More than 100,000 of us were killed by whalers. We have been protected from hunting by the International Whaling Commission since 1966. Now, there are about 15,000 of us.

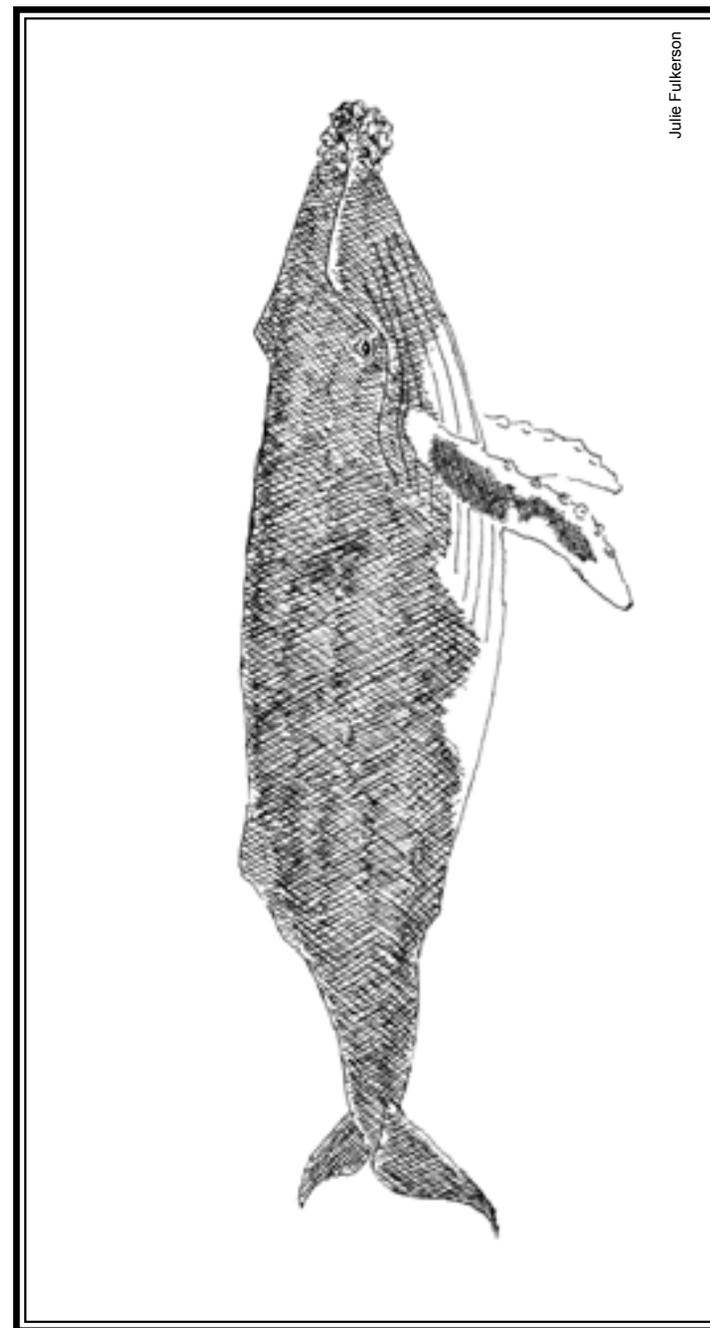
What do I eat? I eat tiny shrimp-like animals called krill and other crustaceans, as well as small fish, which I filter from water through my baleen plates. Sometimes I feed by swimming around my prey blowing a net of bubbles, which traps them until I swim up and catch them.

What is my survival strategy? I am a large, long-lived whale, averaging 50 years old. I have one calf every two to three years. I spend lots of time raising each calf to help it survive better. I am usually found alone or in small groups but I gather in large groups to feed and breed.



Do whales really sing?

People call the sounds whales make “songs” because they sound more like musical instruments than a language. Male humpbacks are the singers and make sounds through their blowholes. These songs can last from 35 minutes to whole days. Scientists are still trying to understand what these songs mean.



Julie Fulkerson

I can grow as long as two school buses put end to end.

Length: 38–49 feet
Weight: 25–30 tons

Sperm Whale

Physeter macrocephalus

Where is my home? I live in all major oceans. I don't have regular migrations but generally head towards the North or South poles in the summer. Older males travel farther than females and juveniles. In some areas, we are year-round residents. I was one of the most heavily hunted whales but I am still pretty common compared to other whale species.

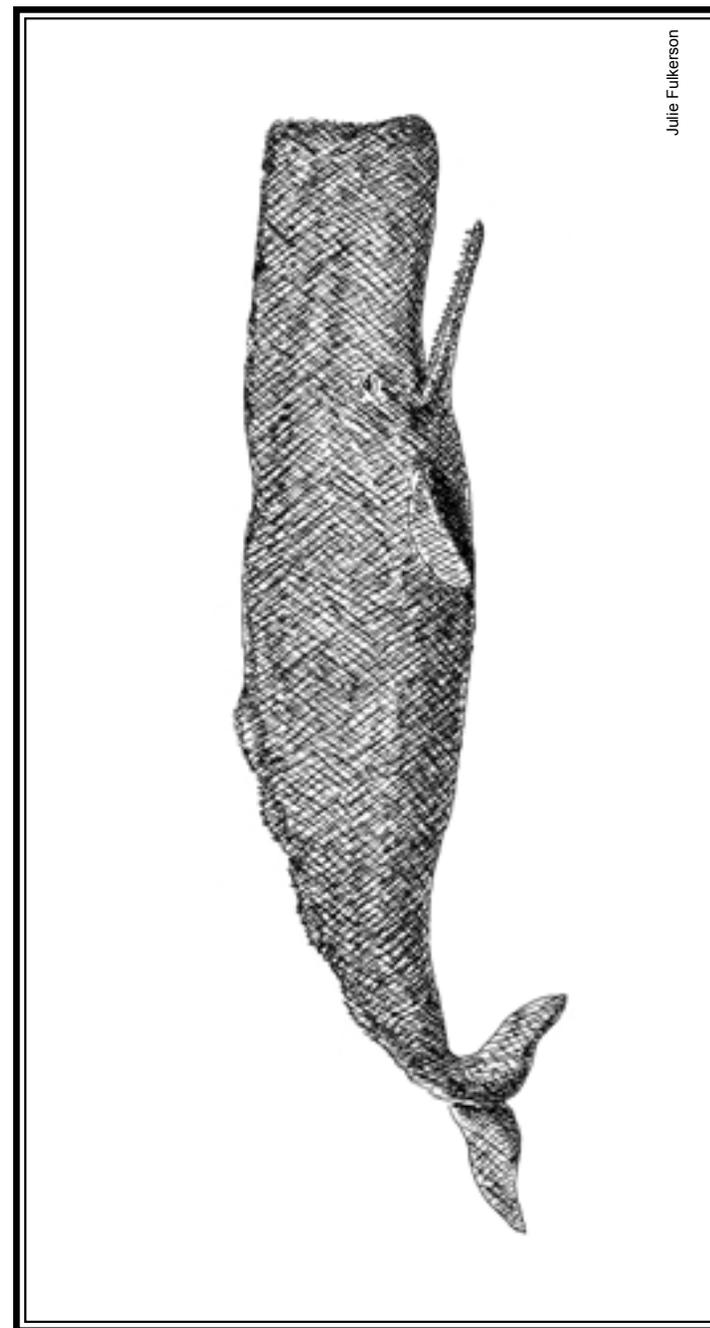
What do I eat? My favorite foods are giant squid and octopus but I also eat fish, like sharks and rays. Unlike the other listed whale species, I have teeth. I may have as many as 50 teeth in my lower jaw alone. They are cone-shaped and can grow to 8 inches long.

What is my survival strategy? I am a large, long-lived whale, averaging 70 years old. I have one calf every three to four years. I am a very social whale: male whales travel in bachelor pods together; females and young whales form groups called "breeding schools." Usually these groups are 20 to 25 whales but sometimes thousands of us travel together while we are migrating.



How long can you stay underwater without breathing?

I am the diving champion of the whales. I can spend up to 90 minutes at a time underwater and I can dive down almost 10,000 feet below the surface.



Julie Fulkerson

A newborn sperm whale is already over 11 feet long! Full-grown, it could be about the length of a volleyball court.

Length: 36–59 feet
Weight: 20–30 tons

Steller Sea Lion

Eumetopias jubatus

Where is my home? I live in the cooler regions of the northern Pacific Ocean, from central California to Japan. In Oregon, I can be found all along the coast near rocky islands or along the shore. I was harmed by humans over-hunting adults and pups for our meat, skins and oil. But we have been protected by the Marine Mammal Protection Act since 1972 and the ESA since 1990.

What do I eat? I eat almost any type of fish I can catch but my favorite food is a fish called a wall-eye pollock. I may also eat squid, clams and crabs.

What is my survival strategy? I am a social animal and live in large groups. Males (also called bulls) are much larger than females (cows). Dominant males guard a group of 10 to 30 females to mate with, fighting off other males. During the two-month mating season, these males do not eat but live off their body fat. When the pups are born, the mothers stay with them constantly for nine days and then leave them periodically to hunt for food. The pups gang up together to play and sleep. Orcas and some shark species are my predators.



How many seal pups are born at the Oregon coast every year?

About 500 to 600 pups are born in Oregon each year. This population is the largest breeding unit of Steller sea lions in U.S. waters south of Alaska.



Julie Fulkerson

Length: 7–10 feet
Weight: 600–2000 pounds

Males can grow to be as long
—or bigger— than a garage
door is wide!

What IS a...

BIRD?

ALL BIRDS:

- ✦ have a backbone;
- ✦ breathe air with lungs;
- ✦ are warm-blooded;
- ✦ lack sweat glands. Instead, they cool off by panting;
- ✦ have scaly legs and feet with claws;
- ✦ have feathers and hollow bones;
- ✦ have wings—but not all birds fly;
- ✦ lay eggs.

Biggest! *The biggest bird is the North African ostrich, which can't fly. It grows to 9 feet tall and weighs up to 345 lbs.*

Smallest! *The smallest bird is the bee hummingbird. It is 2.2 inches long and weighs 0.056 ounces.*

Marbled Murrelet

Brachyramphus marmoratus

Where is my home? I am a small seabird and I live on the coasts of the Pacific Northwest. Usually you will find me on the ocean looking for food but in the spring I nest up high in trees in older coastal forests. Logging and forest fires have taken most of my habitat. Other threats to me include oil spills and gill-net fishing. Scientists made a special plan to help protect my habitat in the Northwest (the Northwest Forest Plan).

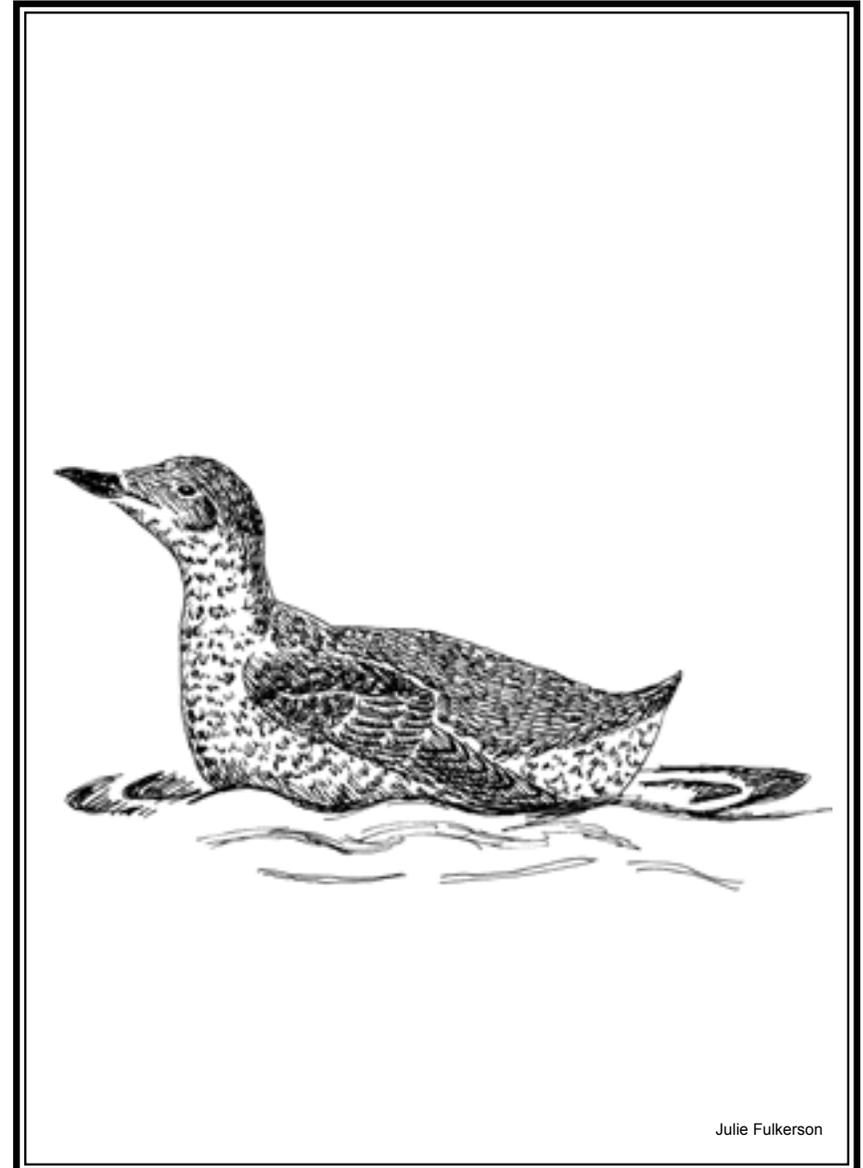
What do I eat? I dive underwater for small fish and shellfish. I usually feed near the shore in shallow water.

What is my survival strategy? I use camouflage to hide from predators. In the breeding season, my feathers are mottled brown to help me hide in the forest. I only fly from the ocean in to my nest tree at dawn and dusk when I am most safe and I fly very fast to escape notice. I sit very quietly on my egg so that I blend in with the tree branch. I have only one chick and it is also camouflaged: pale brown with dark spots. My predators are other birds: great horned owls, peregrine falcons, jays, crows and ravens. My chick sits very still at the nest site until it is time for its first flight: in one trip, it must fly from the nest tree to the ocean, which may be up to 60 miles away or more.



Where do you build your nest?

Unlike most birds, I don't build a nest. I lay my egg on the soft moss of a large tree limb. I am one of the few seabirds that nest in trees.



Wingspan: 16 inches
Weight: 8 ounces

I weigh about as much as a box of macaroni and cheese.

Western Snowy Plover

Charadrius alexandrinus nivosus

Where is my home? I am a small, pale shorebird found along the Pacific coast from southern Washington to Mexico. I nest on dry, sandy, open beaches. Much of my habitat has been lost because of non-native plants like the European beach grass, disturbance from humans, and housing developments.

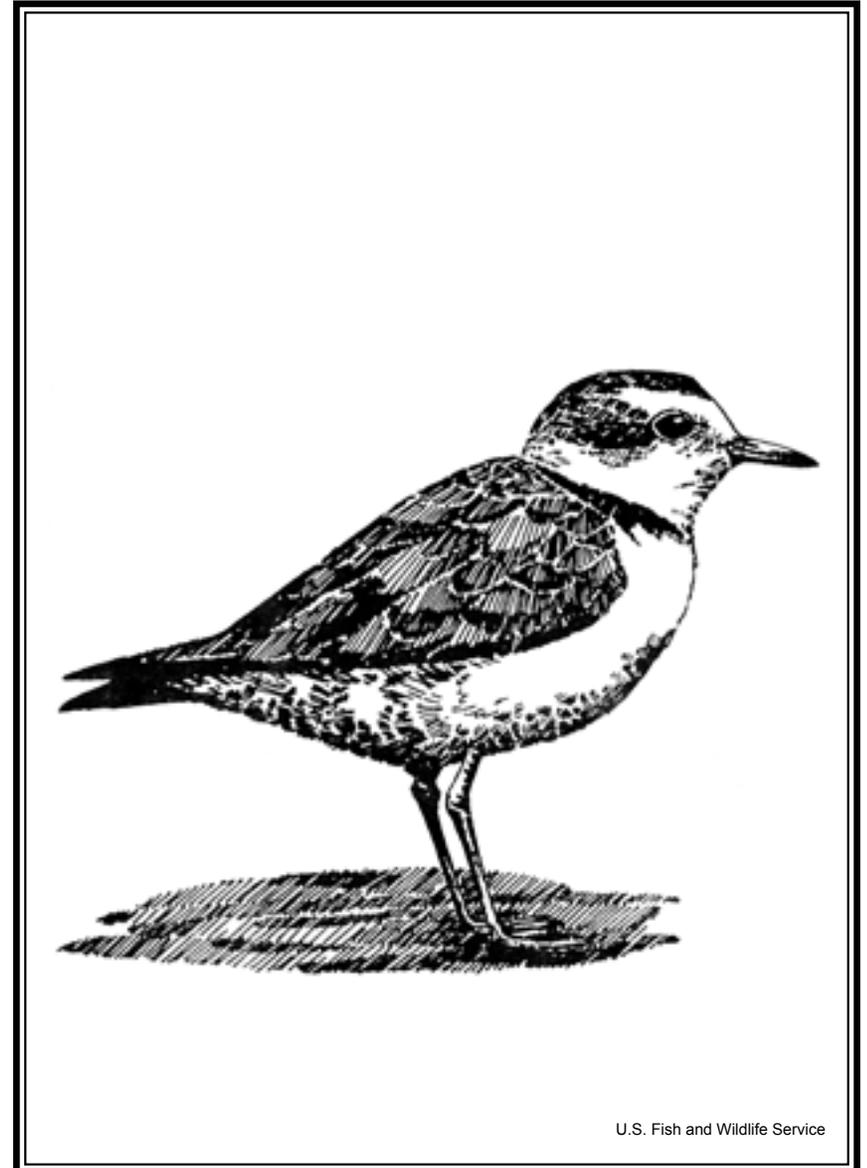
What do I eat? I eat insects, worms and crabs that I find in sandy areas where kelp has washed up on the beach and also along the edges of salt marshes.

What is my survival strategy? I rely on camouflage to hide from predators like crows, ravens, skunks, cats and raccoons. My pale feathers help me blend in with the sand. In the spring, I lay three eggs in a shallow hollow on the beach. The eggs are pale with spots and blend in with the ground. I stay on or near the nest to protect my eggs from harm. When my young hatch, they are not helpless like songbird chicks. They are pale in color, long-legged and walk away from the nest soon after hatching. I look out for them and show them good places and good things to eat.



How are people impacting your nesting?

My nest is hard to see and sometimes people walk or drive through my nest sites and crush eggs without knowing it. I can be frightened away from my nest if people or their dogs come too close, which means my eggs might be baked by the sun, buried by sand or eaten by predators. People are helping me by closing off my nesting areas from beachgoers.



U.S. Fish and Wildlife Service

Wingspan: 14 inches
Weight: 1.4 ounces

I weigh about as much as a tennis ball!

Short-tailed Albatross

Phoebastria albatrus

Where is my home? I am a large seabird found throughout most of the north Pacific Ocean and the Bering Sea. I only come to land to nest on two islands in Japan. I am endangered because I was once hunted for my feathers. At one time, scientists thought I was extinct. Fortunately, they were wrong and with protection, there are now about 1,200 of my species.

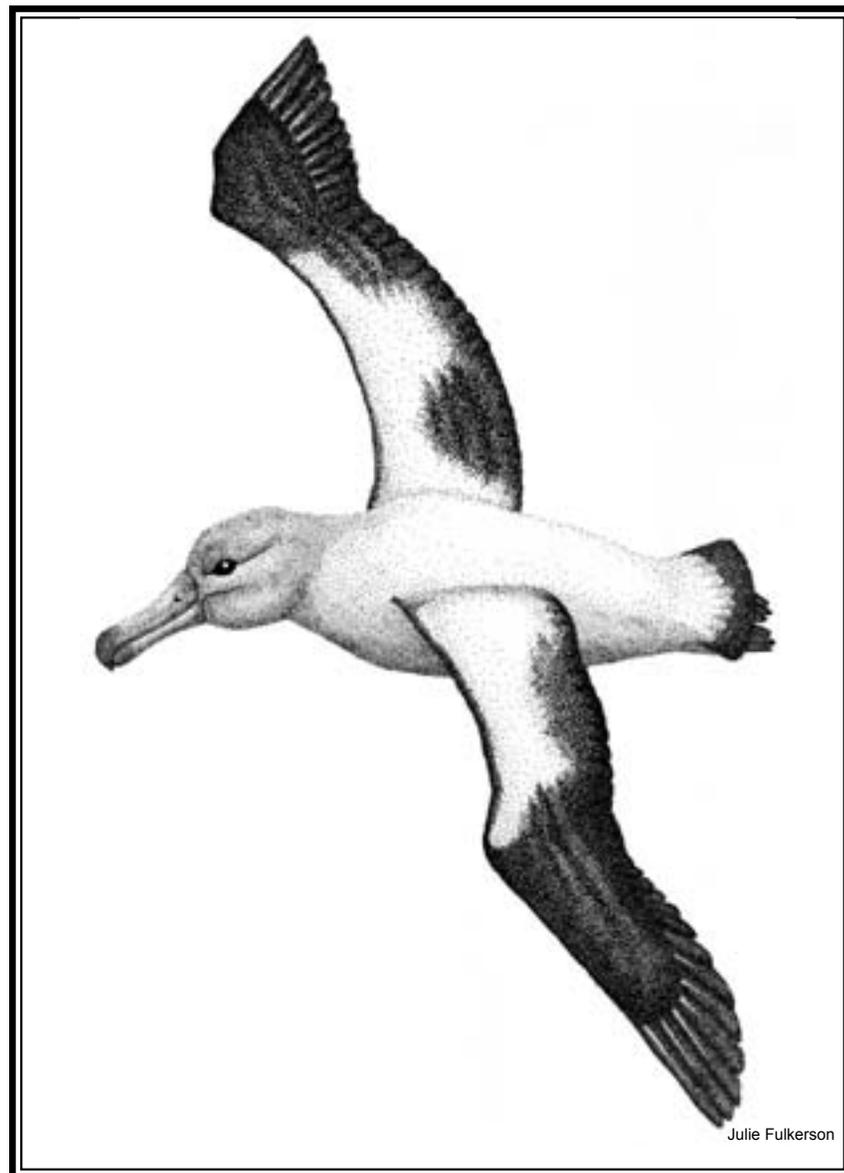
What do I eat? I eat mostly marine animals, including squid, fish, flying-fish eggs, shrimp and other crustaceans (marine animals with shells).

What is my survival strategy? I have long narrow wings for gliding over the ocean waves. I nest on volcanic islands in colonies. Nesting in groups helps us spot predators better and keeps our chicks safer. We live a long time (more than 30 years) and mate for life. The first year a pair forms, we go through long courtship rituals, which include touching bills, bowing and swinging heads. This helps strengthen our pair bond. We only raise one chick and may not nest every year because it takes so much energy. Our nesting season lasts eight months of a year.



What do you drink?

Because we are marine birds, we only have sea water to drink. But taking in too much salt is bad. To get rid of the extra salt in our bodies, we leak super-salty fluids through glands in our nostrils.



Julie Fulkerson

Wingspan: 7 feet
Body Length: 23 inches

From wingtip to wingtip, I am about as long as a professional basketball player is tall.

Northern Spotted Owl

Strix occidentalis caurina

Where is my home? I am a medium-sized owl living in forests of the Pacific Northwest, from Canada down into California. I am found either in old-growth forests (100 or more years old) or younger forests with old-growth features like large trees and downed logs. Logging, development and natural disturbances like fires have taken 60% of my habitat. My habitat has received special protection under the Northwest Forest Plan.

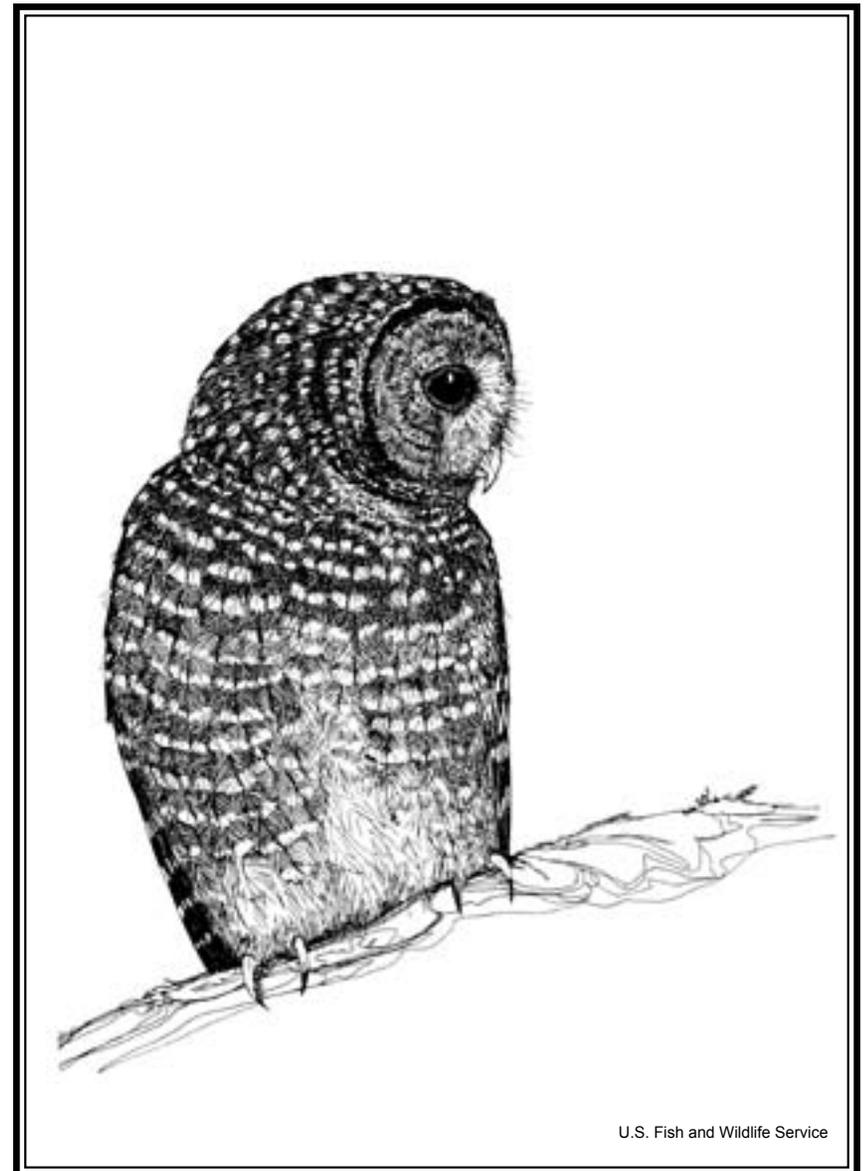
What do I eat? I hunt at night for mammals like woodrats, flying squirrels and voles. I sometimes eat birds, bats and insects. I like to perch in a tree and pounce down on my prey.

What is my survival strategy? I am adapted for life in the forest. I nest in large broken-topped or hollow trees. I have very sharp eyes and ears to help me find food. And the feathers in my wings have soft edges so that I can fly silently and sneak down on my prey. The old forests have lots of food for me to eat. Great horned owls, which are bigger than me, and barred owls are two of my main predators.



Is it true that all birds have a third eyelid?

Yes. The third eyelid, called the *nictitating membrane*, helps clean and moisten our eyes—which is really important when we are flying. In owls, this membrane is opaque (doesn't let light through), which helps protect our sensitive eyes from bright daylight.



U.S. Fish and Wildlife Service

Wingspan: 3.5 feet
Weight: 1.3 pounds

I weigh less than a regular-sized jar of spaghetti sauce.

What IS a...

REPTILE?

The word reptile means “to creep.” There are four major groups of reptiles: snakes, turtles, lizards and crocodiles.

ALL REPTILES:

- ☛ are vertebrates (have backbones);
- ☛ breathe air with lungs;
- ☛ have dry skin covered with scales;
- ☛ lay eggs with (usually) leathery shells on land;
- ☛ are ectothermic (cold-blooded).

Biggest! *The biggest reptile is the estuarine crocodile, an Australian species that grows to 21 feet long.*

Smallest! *The smallest reptile is the Jaragua dwarf gecko that measures 3/4 inch, approximately the size of a quarter.*

Loggerhead Sea Turtle

Caretta caretta

Where is my home? I am a medium-sized sea turtle found in warm ocean waters around the world. I like waters near coral reefs, shipwrecks and rocks, where there is lots of food. I nest on warm, coastal beaches near the equator. You might find me off the Oregon coast in late summer. Oil spills, commercial fishing, pollution and coastal development have harmed me. People are protecting my beaches and nests from human disturbance.

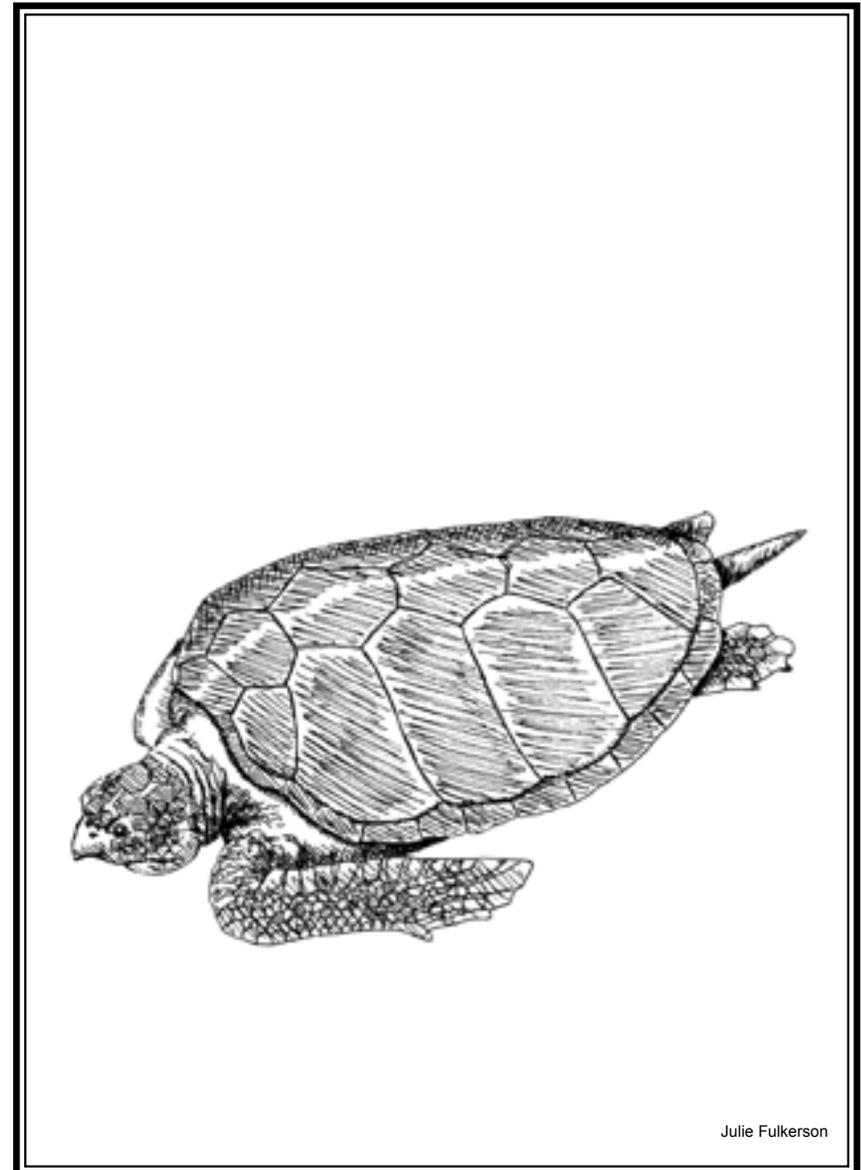
What do I eat? I am omnivorous: I eat both plants and animals. My diet includes seaweed, algae, crabs, jellyfish, sponges and other small sea animals.

What is my survival strategy? Like many reptiles, I do not take care of my young but make up for that by having lots of young. I nest every other year. Each one of my nests will have 120 eggs, about the size of ping-pong balls, and I may nest several times each year. I dig a hole in the sand to lay the eggs in and bury them, letting the sun keep them warm. When my young hatch, they dig their way up through the sand and crawl to the ocean. They are small but able to take care of themselves right away.



How do you protect yourself from sharks and orcas?

We sea turtles can't pull our heads or legs into our shells like land turtles. Sometimes predators attack my unprotected parts but my large size makes it hard for them to hurt me and I can swim very fast.



Julie Fulkerson

Length: 3–4 feet
Weight: 150–400 pounds

The span from the tip of one flipper to the other can be up to nine feet.

Green Sea Turtle

Chelonia mydas

Where is my home? I am a large sea turtle found in warmer ocean waters of the Atlantic and Pacific Oceans. Sometimes I travel as far north as Alaska. I like shallow waters inside reefs and bays with lots of marine grass and algae. When it is nesting time, I travel thousands of miles back to the place where I hatched. I nest on coastal beaches near the equator, particularly in Hawaii and Mexico. I am harmed when I am caught in fishing nets or hit by boats. Some people like to eat my eggs and meat. But other people are protecting my nests and beach habitat.

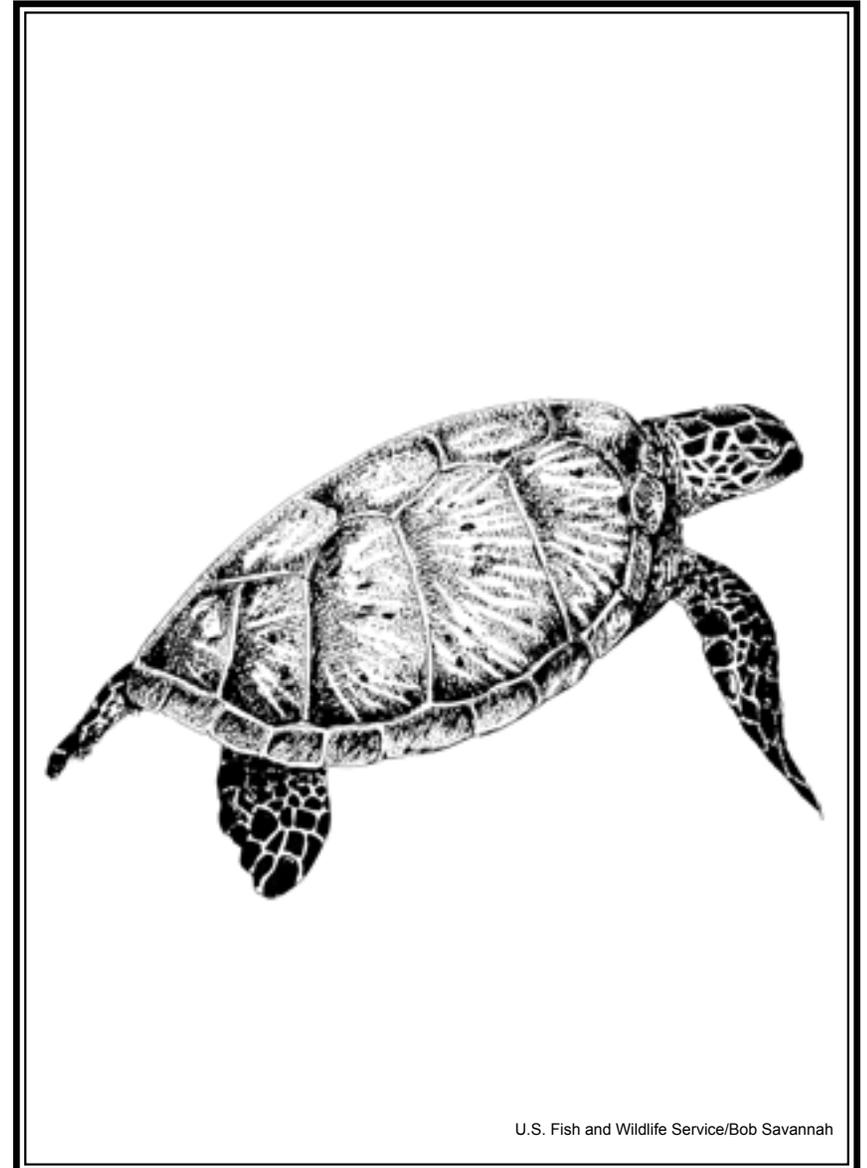
What do I eat? I am a vegetarian (plant eater) and eat mostly sea grasses and algae.

What is my survival strategy? I do not take care of my young but make up for that by having lots of young. I nest every two to three years and usually lay several nests in one breeding season. Each nest will have 100 to 150 eggs in it and the nests are laid two or three weeks apart. I dig a hole in the sand to lay the eggs in and cover them up, letting the sun keep them warm in the sand until they hatch. My hatchlings are small but able to care for themselves. Most of them will be eaten by predators, like sharks, fish and dolphins.



How did you get so green?

My body fat is green from all the sea grasses I eat. In fact, that's how I got my name—the “green sea turtle.”



U.S. Fish and Wildlife Service/Bob Savannah

Length: 5 feet
Weight: 150–400 pounds

I am almost as long as many adults are tall.

Leatherback Sea Turtle

Dermochelys coriacea

Where is my home? I am the largest of the sea turtles. I live in warm waters but migrate a long way to feed, into Arctic and Antarctic waters. I am usually far offshore but sometimes go into bays and estuaries. Large groups of leatherbacks have been found in the high seas, far off the California and Oregon coasts. I nest on coastal beaches near the equator. Beach development, human disturbance and commercial fishing have harmed me.

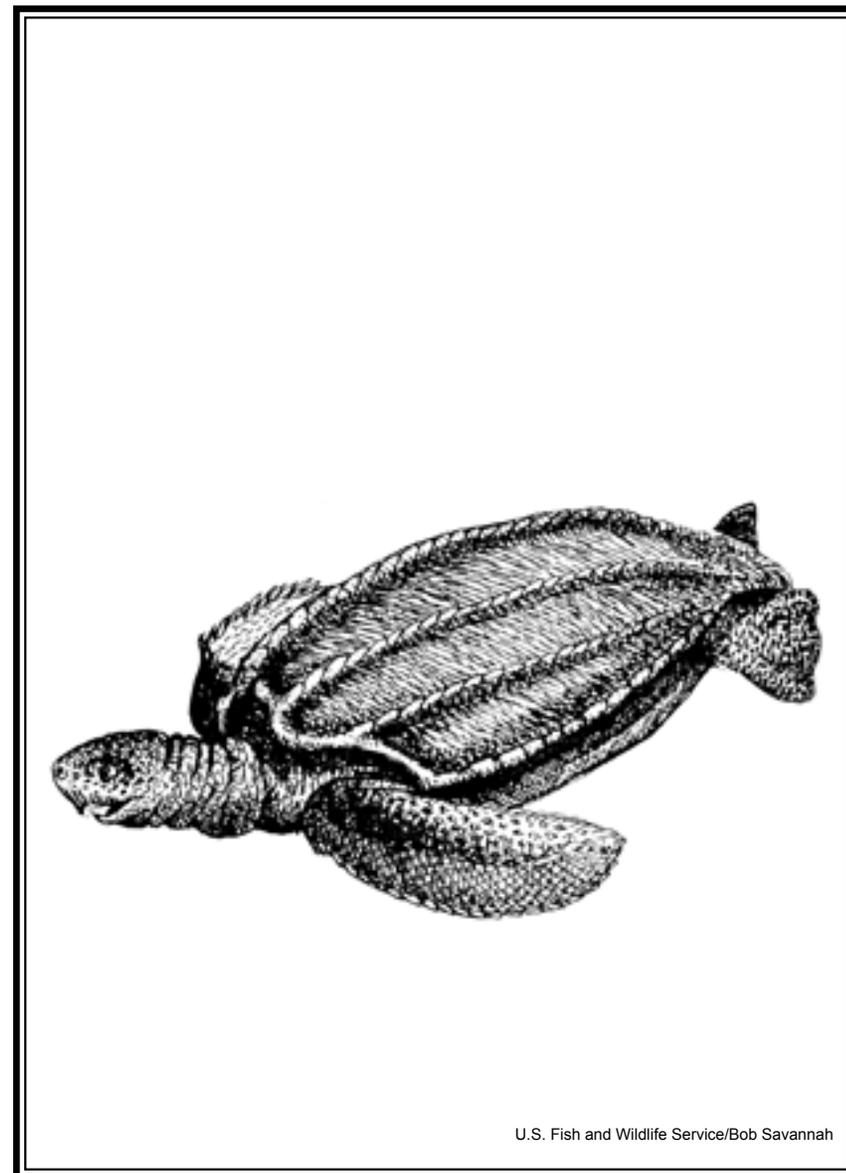
What do I eat? I eat only jellyfish. My favorite is the poisonous Portuguese man-of-war, whose poison doesn't bother me. I use my strong, sharp beak to catch my food.

What is my survival strategy? I do not take care of my young but make up for that by having lots of young. Each nest will have 50 to 170 eggs in it and I may nest several times each year. I dig a hole in the sand to lay the eggs in and then bury them. While I return to the ocean, the sun and sand keep my eggs warm. About two months later, my young hatch, dig up out of the sand and crawl to the ocean. My hatchlings are small but able to take care of themselves. Sadly, most of them will be eaten by predators like sharks and fish.



What makes you different from other sea turtles?

I have smooth skin (leather) instead of scales. With my kind of thick, oil-dense skin, I am able to go into colder waters than other sea turtles.



U.S. Fish and Wildlife Service/Bob Savannah

Length: 4–8 feet
Weight: 700–2000 pounds

I can grow to be as big as a small car but my brain is only about as big as an adult's thumb.

Olive (or Pacific) Ridley Sea Turtle

Lepidochelys olivacea

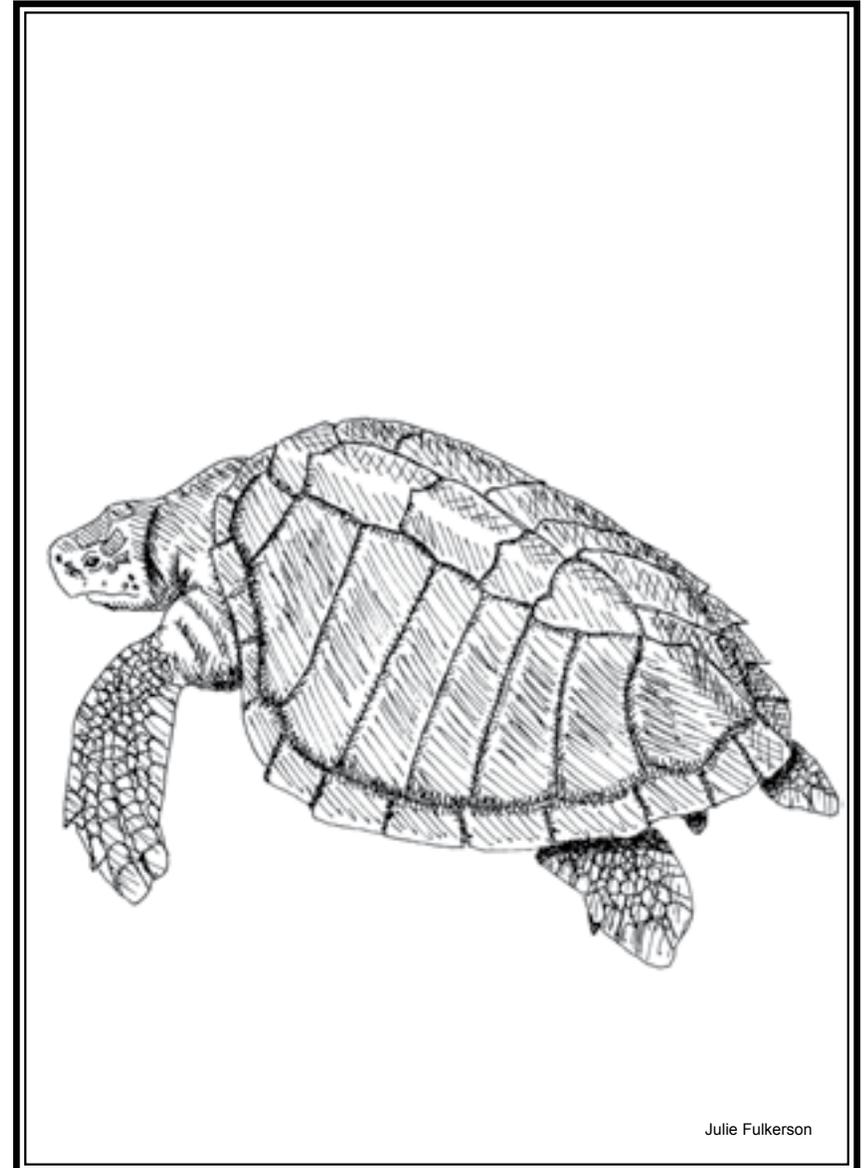
Where is my home? I am a small sea turtle and live in warm waters in the Pacific and Indian Oceans. I am a rare visitor off the coast of Oregon. I nest on coastal beaches near the equator and always return to the same beach to nest. My nesting habitat in the Pacific is from Sonora, Mexico, to Colombia, South America. Oils spills, habitat disturbance and poachers stealing adults and eggs are threats to my population. Many humans help me by protecting my nest sites.

What do I eat? I eat crabs, shrimp, rock lobsters, jellyfish, sponges and algae.

What is my survival strategy? I do not take care of my young but make up for that by having lots of young. I breed every year; each nest will have about 100 eggs in it and I may nest several times each year. I dig a hole in the sand to lay the eggs in and cover them up, letting the sun keep them warm in the sand until they hatch. My young are small but able to take care of themselves. Most of them will be eaten by predators like sharks and other fish.

For Critical Thinkers

Scientists don't exactly know what triggers my species to nest in large groups, called *arribadas*. Why do you think hatching out in big numbers would keep our young safer?



Julie Fulkerson

Length: 2.5 feet
Weight: 80–100 pounds

I am about as long as most desks are tall.

What IS an...

AMPHIBIAN?

MOST AMPHIBIANS:

- 🐸 start life in water as legless larvae with gills;
- 🐸 metamorphose (change) by growing legs and developing the ability to breathe air, which allows them to live on land;
- 🐸 must return to water to reproduce;
- 🐸 breathe through their skin and lining of their mouths as well as through their lungs (although some salamanders are lungless);
- 🐸 have the ability to regenerate (grow back) tails or legs.

There are no listed amphibians in Oregon.

For Critical Thinkers:

Herpetology is the branch of zoology that studies reptiles and amphibians. What are the differences between reptiles and amphibians? In what ways are they similar?



What IS a...

FISH?

ALL FISH:

- live their whole lives in water;
- Most have scales;
- are covered with slime that helps them move easily through the water and protects them from disease;
- have gills which help them to breathe by taking in oxygen from the water;
- have a backbone;
- are cold-blooded.

Biggest! *The largest fish is the whale shark which can grow to 50 feet in length and weigh several tons.*

Smallest! *The smallest fish in the world is the dwarf Gobi. It is 0.339 inches long —that's less than half an inch!*

WATER IS HABITAT

Fish have adapted in different ways to the different types of water on earth. Most fish are specialists and can only live in fresh water or salt water. But other fish have evolved to take advantage of the safety of small rivers and the abundant food of the ocean by living in both fresh and salt water.

Freshwater fish spend their entire life in fresh (non-salty) water, like lakes and rivers.

Marine fish spend their entire life in salt water (the ocean) or estuaries which are part salt and part freshwater.

Anadromous fish, like salmon, are born in fresh water, migrate to the ocean to become adults, then migrate back to fresh water to spawn (reproduce).



What does “anadromous” mean?

Anadromous comes from a Greek word that means “running up.” This describes salmon and steelhead because they move up the rivers from the ocean on their migration journey.

Warner Sucker

Catostomus warnerensis

Where is my home? I am found in the Warner Valley watershed in Oregon and Nevada. My species includes both stream and lake residents. Stream residents live in parts of streams with slow-moving water and long pools. Lake residents are found in the deepest water with lots of cover and food. My habitat is disturbed by ranching and farming, over-grazing by cattle and logging. People are helping by keeping livestock out of streams and improving logging and grazing methods.

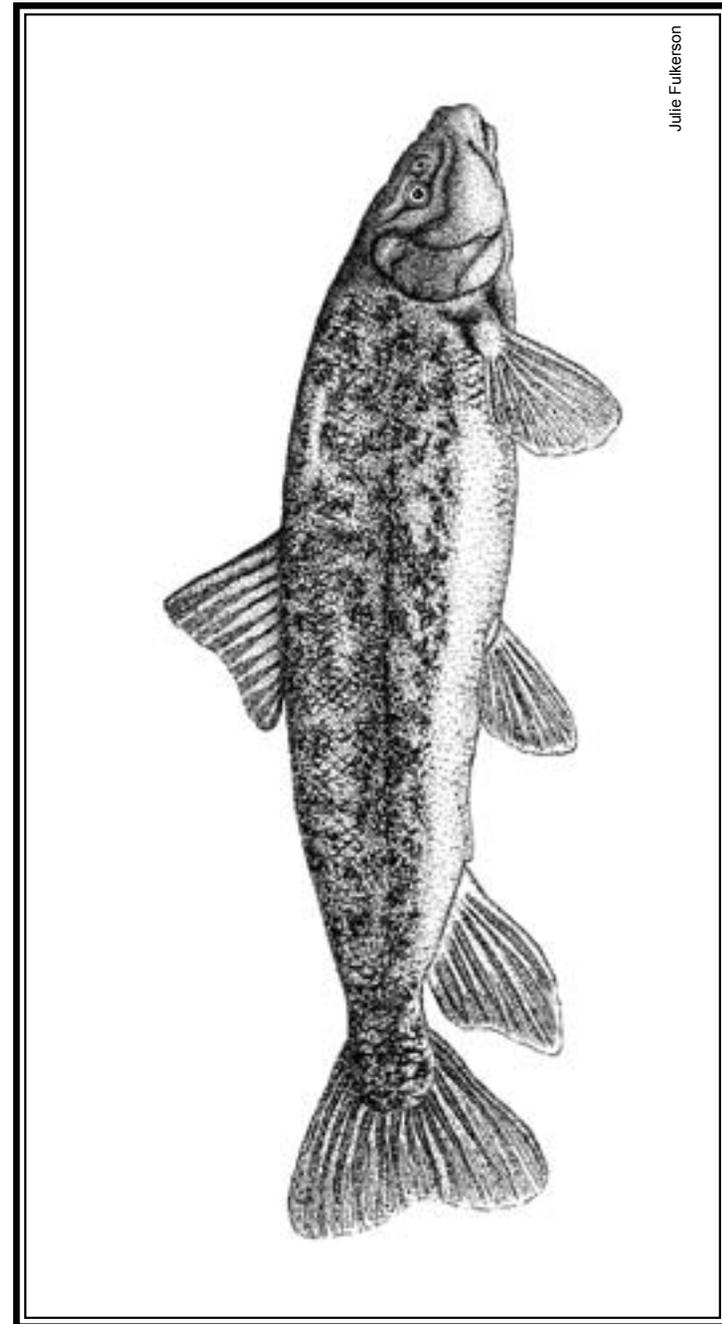
What do I eat? I am a bottom-feeder, eating algae and dead plant and animal matter. Stream residents forage (feed) at night on boulders, gravel and silt (sand and soil) while lake residents forage on the lake bottom.

What is my survival strategy? By using both streams and lakes, I keep my options open and occupy more habitat. I spawn (breed) in stream pools in sand or gravel beds. If the stream levels are too low for lake residents to swim to the gravel beds, then we spawn along the lake shoreline. When the lakes dry up during severe droughts, the lake residents die. Then stream residents recolonize the lakes after they have filled up again.



Are non-native fish a problem for you?

Yes, they eat me and take away my food and shelter. Bass, bullhead and crappie are my non-native predators. But non-native fish don't survive well in my habitat because they die out when the lakes dry up.



Warner suckers that live in streams are a little smaller than lake residents.

Length: up to 14 inches

Shortnose Sucker

Chasmistes brevirostris

Where is my home? I live in deep waters of lakes in the upper Klamath Basin. I migrate to streams and springs to spawn (breed). A lot of my historic habitat has been lost or damaged by people damming rivers, channelizing (straightening) streams and draining swamps. People are trying to protect and improve my remaining habitat.

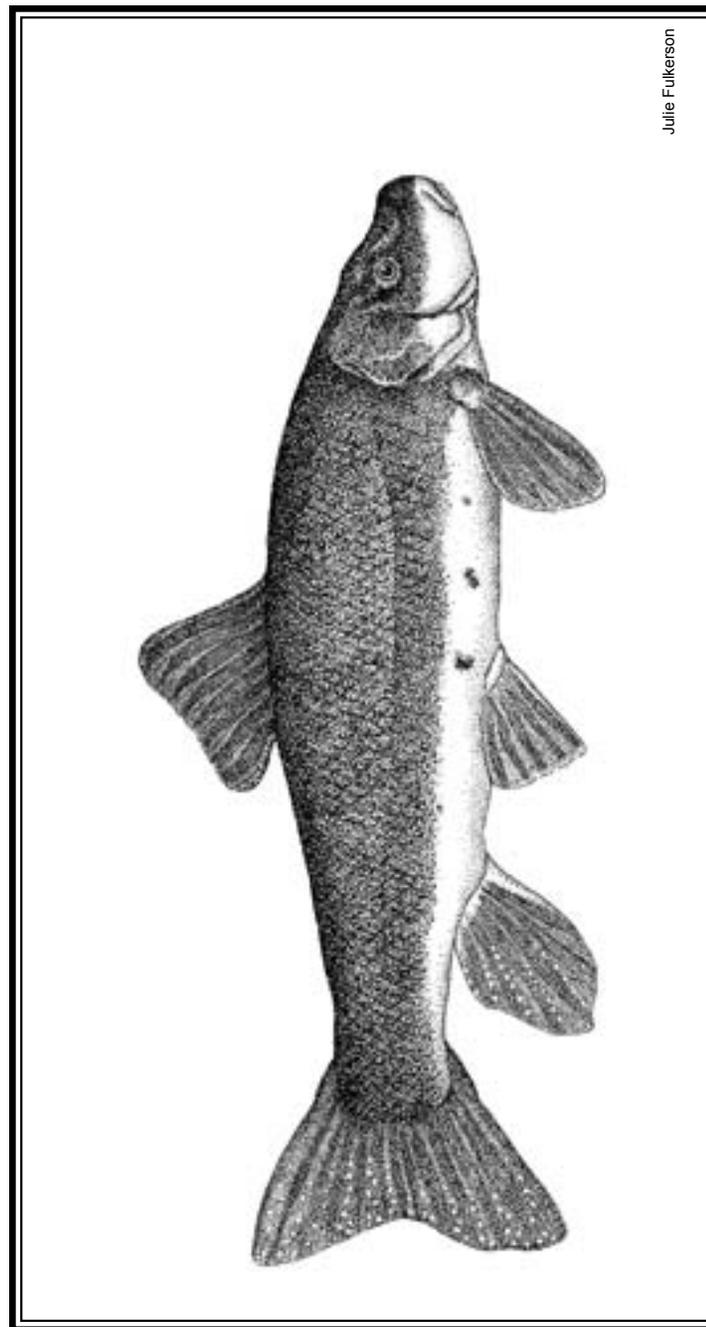
What do I eat? I eat decaying plants and animals, microscopic animals and larvae, algae and aquatic insects that I find on lakebeds.

What is my survival strategy? I use both lake and stream habitat. Adult fish migrate from the lakes to streams and springs to spawn from March to May. We lay 18,000–46,000 eggs each near the stream bottom in gravel or cobbles. Streambank plants are important to keep the water cool while my eggs develop and later give my young a safe place to hide. The young fish migrate back to the lakes, travelling at night. During the day they stay near the shoreline among vegetation for safety. Non-native fish are one of my main predators. They also compete with me for food. I am a long-lived fish, averaging 33 years old.



How have people utilized you in the past?

I used to be an important food fish for Native Americans and early settlers in the area. At one time, canneries were set up to process my meat, as well as that of the Lost River sucker.



Julie Fulkerson

I am at least as long as a sheet of notepaper and up to twice that size.

Length: 11–27 inches

ENDANGERED
Listed in 1988

Lost River Sucker

Deltistes luxatus

Where is my home? I live in deep, quiet waters of rivers and lakes in the upper Klamath Basin. I migrate to streams and springs to spawn. A lot of my historic habitat has been lost or damaged by people damming rivers, channelizing streams and draining swamps but now they are working on protecting and improving my remaining habitat.

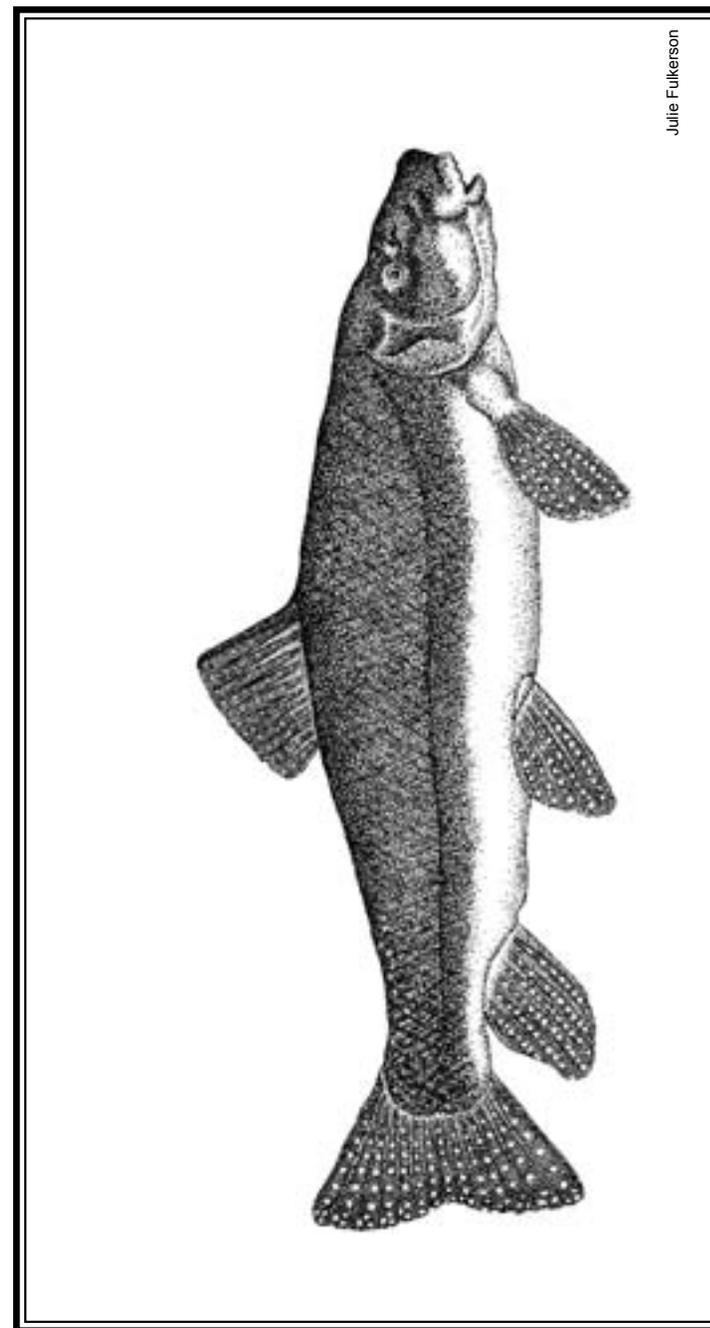
What do I eat? I eat decaying plants and animals, algae, microscopic animals and larvae and aquatic insects that I find on lake or riverbeds. I have specialized gills for straining my food from the water.

What is my survival strategy? I use both stream and lake habitat. From March to May, adult fish migrate to streams and springs to spawn. Females lay 44,000–218,000 eggs each near the stream bottom by gravel or cobbles. Streambank plants are important to keep the water cooler while my eggs develop and later give my young a safe place to hide. The young fish migrate back to the lakes, travelling at night. During the day they stay near the shoreline among vegetation for safety. Competition and predation by non-native fish is an ongoing problem for me.



How long do you live?

I can live to be 43 years old. The shortnose sucker and I look a lot alike and have similar life histories but I am larger and longer-lived.



Julie Fulkerson

Length: up to 3.3 feet

I am a big fish. I can grow about as long as an adult human's arm.

Hutton Tui Chub

Gila bicolor ssp.

Where is my home? I live in the Hutton Spring, a remote place in Lake County, Oregon. The spring is shallow (about 15 feet deep) and small, varying each year from 20 to 40 feet wide. Tules, sedges and saltgrass grow on the edges of the spring. The spring is located on private property and my habitat is in good condition because the owner protects it.

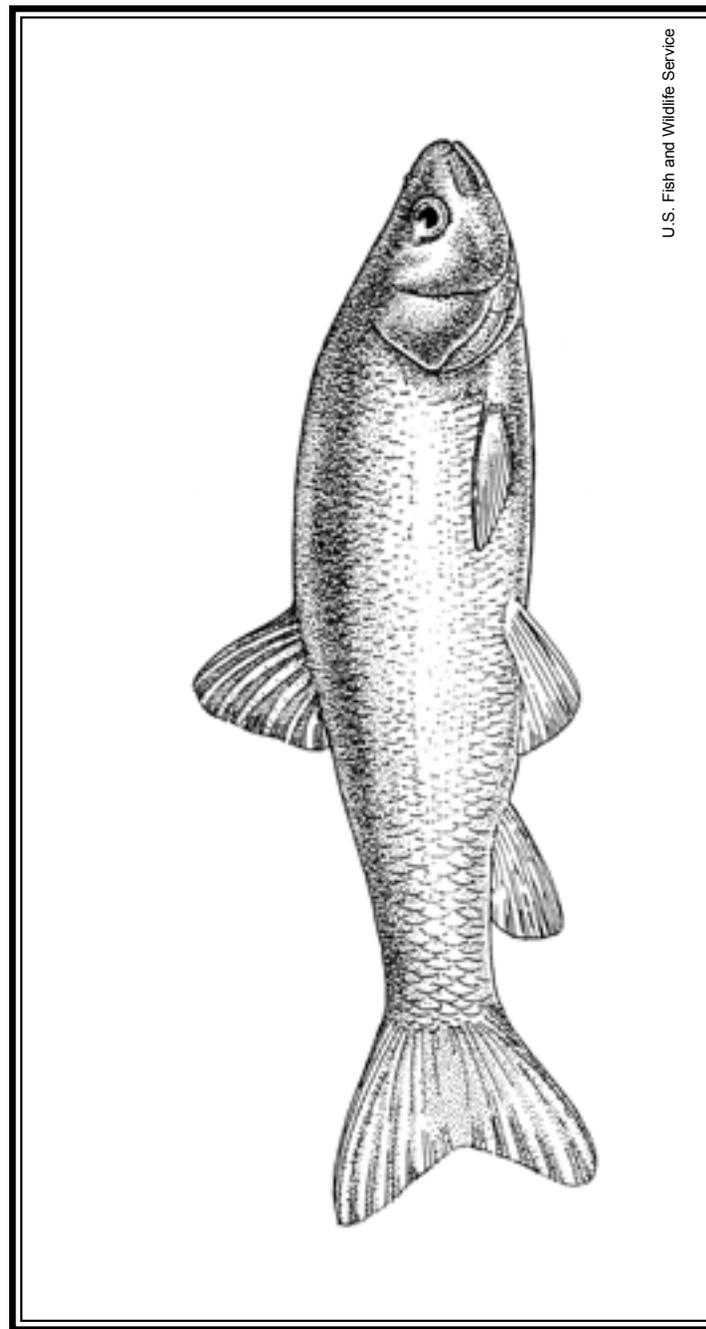
What do I eat? I am an omnivore (eat both plant and animal matter). I am an opportunistic feeder—I eat anything I can fit in my little mouth.

What is my survival strategy? I spawn between April and June over beds of plants in shallow water. The plants are important for providing cover and keeping the water cool. Females deposit from 4,000 to 25,000 eggs each in one spawning season. My eggs stick to aquatic plants or to the bottom soil. The eggs hatch in less than nine days and the larvae gather in places protected by cover.



How many of Hutton Tui chub are there?

Scientists estimate that there are no more than 450 Hutton tui chubs. I am part of a widespread minnow species living in dry western states. But because my population has been isolated so long from the other fish, I have been named a separate subspecies.



U.S. Fish and Wildlife Service

Big Hutton Tui chubonly get to be about as long as a lightbulb.
Many are half that size!

Length: 2–4 inches

ENDANGERED
Listed in 1980

Borax Lake Chub

Gila boraxobius

Where is my home? I am a very small fish living in the Alvord Basin in Harney County, Oregon. I am found in Borax Lake and its connected wetlands. Borax Lake is a ten-acre lake fed by hot springs. Water flowing out of the lake goes into nearby marshes and pools and Lower Borax Lake. People are helping me by protecting my habitat from cattle grazing, off-road vehicle damage and banning geothermal mining. Natural threats that I face are droughts and high water temperatures.

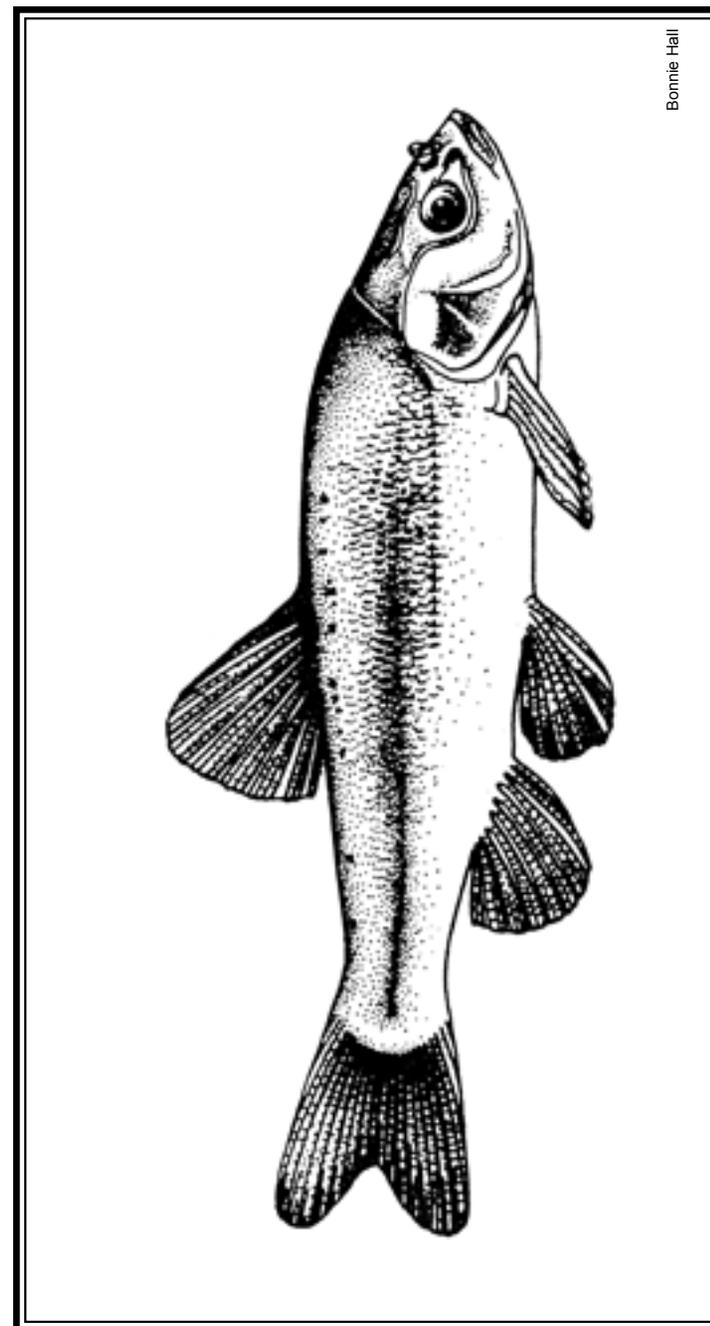
What do I eat? I am an omnivore (I eat both plant and animal matter). I eat insects and their larvae, algae, small crustaceans (animals with hard shells) and tiny invertebrates.

What is my survival strategy? I am adapted for life in a harsh climate. My small size means that I don't need as much food or space as larger fish and allows more of us to live together in one place. Because of the constantly warm waters of Borax Lake, I can spawn all year around in the gravel, rock and sand on the lake bottom. My diet changes seasonally depending on what food I can find.



Do you only live in Oregon?

Yes, I am **endemic** to Borax Lake in Oregon, which means in all the world, I am only found in this one spot.



Bonnie Hall

Length: 1.3–2 inches

I am a really small fish. I am only about as long as your pinky finger!

Lahontan Cutthroat Trout

Oncorhynchus clarki henshawi

Special Note: I was originally listed as endangered in 1970 but was reclassified as threatened in 1975.

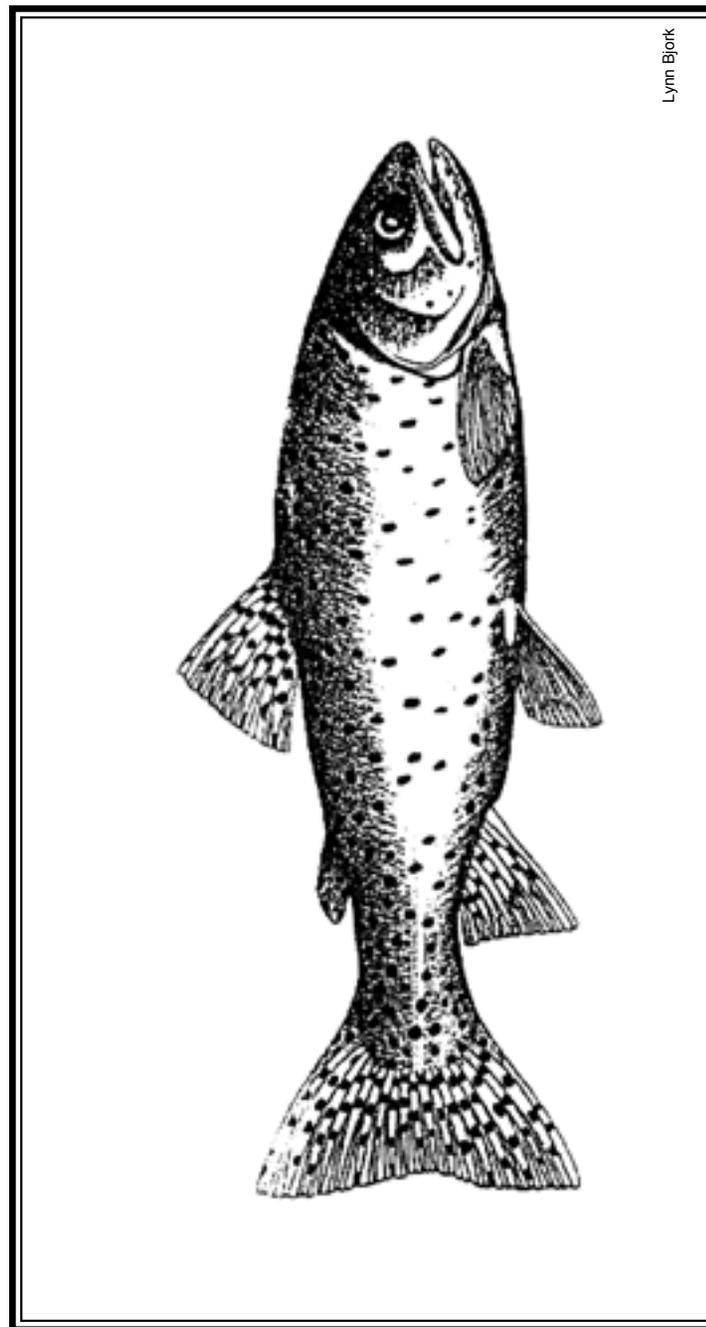
Where is my home? I am a subspecies of the cutthroat trout and live in the Lahontan Basin of California and Nevada. I am also found in southeastern Oregon, including Willow, Whitehorse, Little Whitehorse and Doolittle Creeks in Harney and Malheur counties. No one is quite sure how I found my way to Oregon; scientists think that people may have brought me here. My habitat is cold-water lakes and streams.

What do I eat? I eat anything I can catch. This includes insects and their larvae and small fish.

What is my survival strategy? I stay flexible. I can stand high water temperatures, high daily temperature changes and high levels of salt. I usually spawn from April through July, depending on water temperatures and stream conditions. Females use their tails to build a nest in the gravel, called a “redd”. After spawning, most of us die but some of us may reproduce more than once. Non-native trout are a problem for me because they compete for habitat and also eat me.

Where does your name come from?

I got my name from the blood red stripes underneath my jaw.



Lynn Bjork

I can grow pretty big in other states but in Oregon, I am pretty small—about as long as a pencil.

Length: up to 3 feet
Weight: up to 50 pounds

Oregon Chub

Oregonichthys crameri

Special Note: I was originally listed as endangered in 1993, but my status has improved to the point that I am no longer in danger of extinction. My listing status was changed to threatened in 2010.

Where is my home? I am a very small fish living in the Willamette River drainage in Oregon. I thrive in pools and sloughs of creeks and small rivers where the water moves very slowly and there are lots of plants for shade. Flood control projects like dams have taken a lot of my old habitat, keep new habitat from being made and prevent me from finding new places to live. I am endemic to Oregon, which means this is the only place I am found in the world.

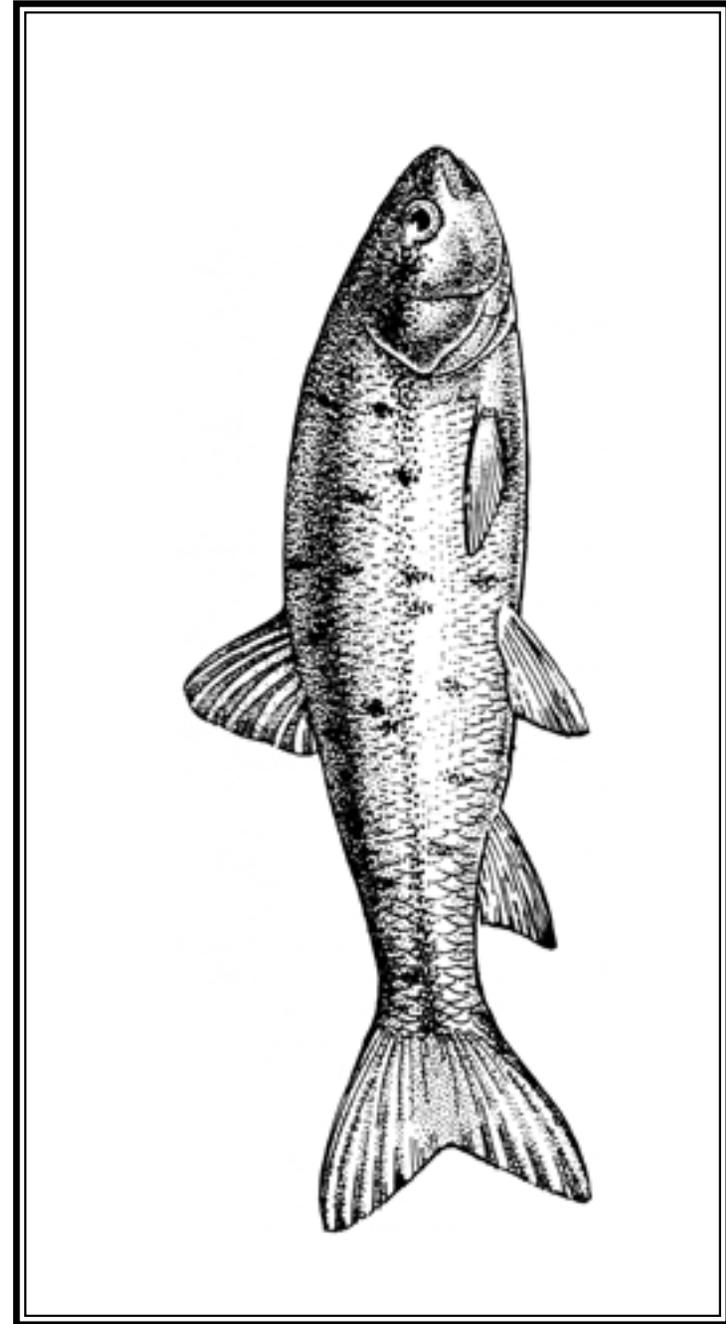
What do I eat? I eat small insects and their larvae. This includes mosquitos!

What is my survival strategy? I take advantage of floods and storms. Big water events like floods create new habitat and help transport me to new places to live. I spawn during April to August when waters are warm. Larger males defend territories in or near vegetation and females lay several hundred eggs.



What's so bad about bullfrogs?

Non-native animals like bullfrogs, mosquito fish and bass are a real problem for me. When they are introduced into my habitat, they eat a lot of the native species including small fish like me.



I may get to be as long as a tennis ball is wide.

Length: 1.5–2.5 inches

Foskett Speckled Dace

Rhinichthys osculus ssp.

Where is my home? I am a small minnow living in small, shallow springs in the high desert. I am currently found only in Foskett Springs in Lake County, Oregon, near the California-Nevada border. Biologists are attempting to reintroduce my species at Dace Spring. In 2010, they transferred 50 dace to two newly constructed ponds. If these fish do well, biologists will transfer more dace to establish a new population.

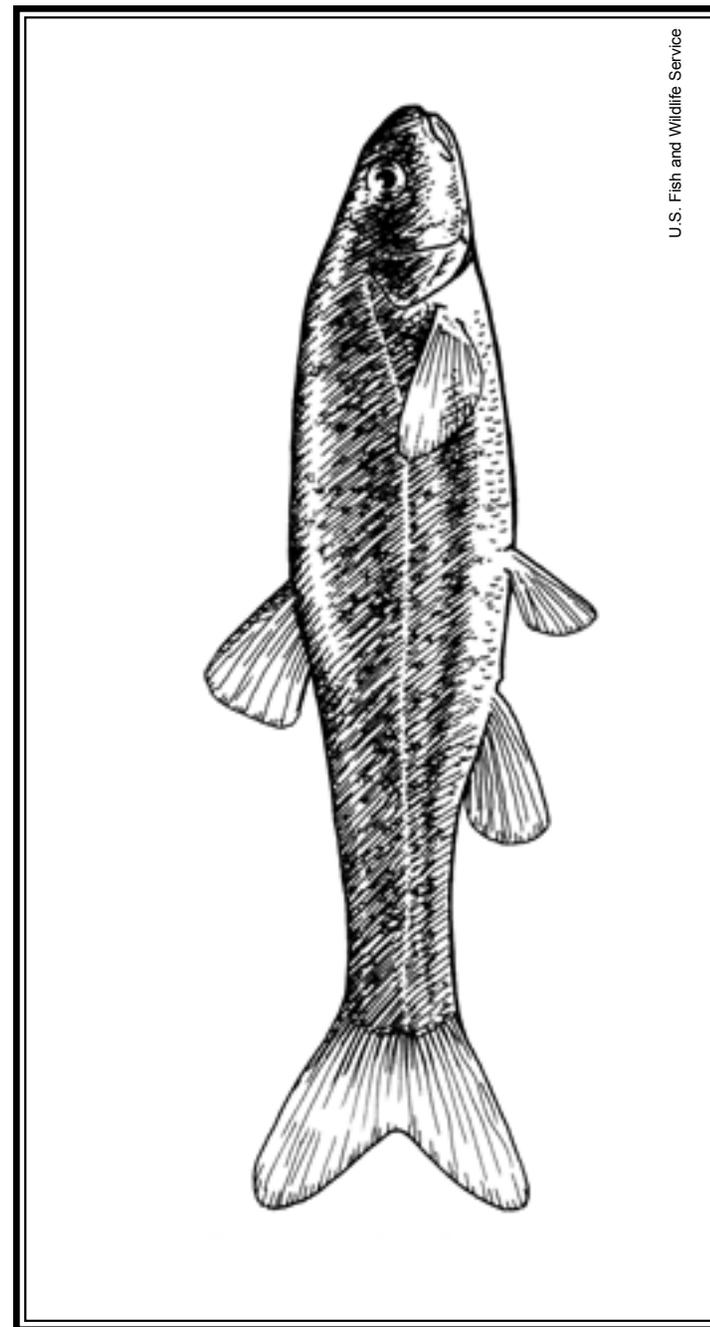
What do I eat? I eat small invertebrates (animals without a spine) found on the bottom of my springs or growing on plants in the water.

What is my survival strategy? I usually do not breed until I am two years old. I spawn in June and July. Males group together and clean off a small area of rock or gravel for spawning. The eggs hatch in six days and the larval fish stay in the gravel for about a week before gathering in warm, sheltered areas to grow.



How did you end up living in the desert?

Biologists think that in prehistoric times I was found all over Coleman Lake, a big lake formed by melting glaciers that covered parts of southeast Oregon, northern Nevada and northern California. When the ice ages ended, the lake started drying up and became very salty. Then my habitat became limited to springs, like Foskett, where the water is better for me. Today Coleman Lake is just a dry lake bed.



U.S. Fish and Wildlife Service

I am about the size of house or car keys.

Length: 2-3 inches

Bull Trout

Salvelinus confluentus

Where is my home? I am found in headwaters of tributaries to the Snake, Columbia and Klamath Rivers. I need cold, clean streams with stable banks and lots of cover. Much of my historic habitat has been degraded by timber harvests and roads or is blocked off by dams so that I cannot live there or even migrate through.

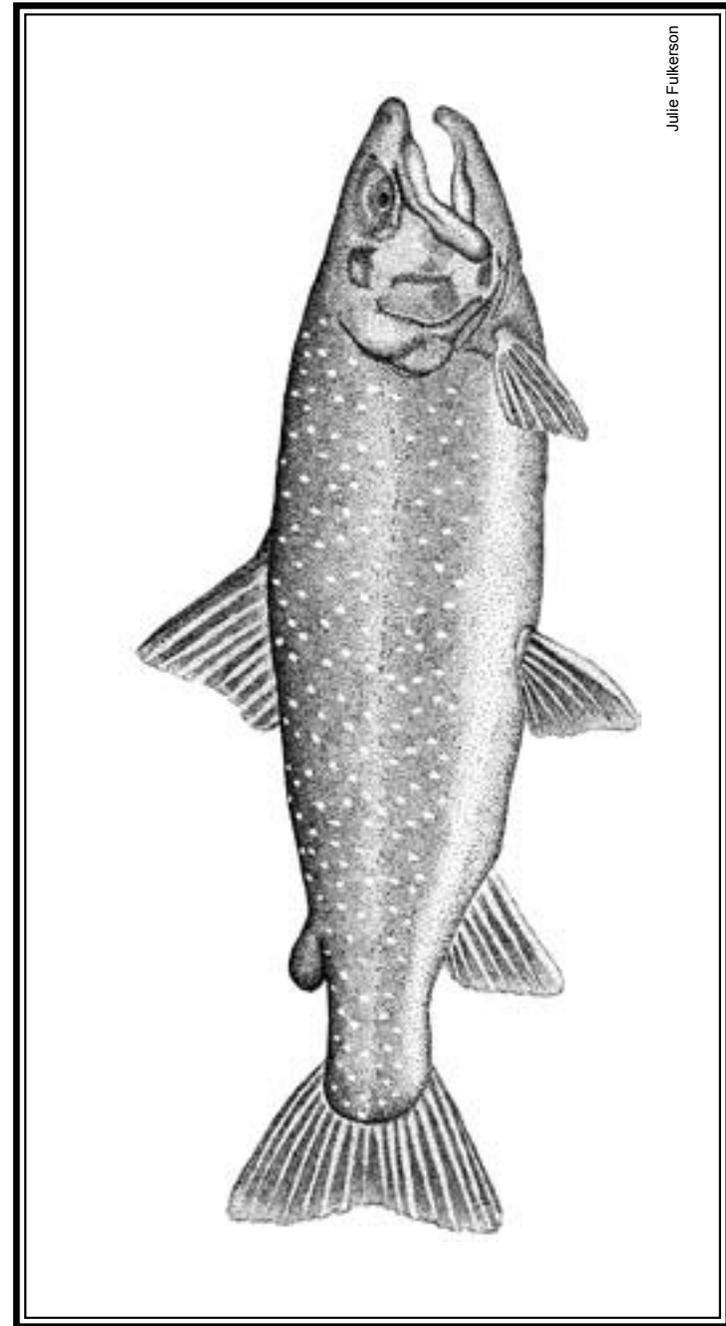
What do I eat? I eat other fish including whitefish, sculpin and other trout. I also eat invertebrates, salmon eggs, and even scavenge salmon carcasses. In the Columbia River Basin, young chinook salmon are an important food for me.

What is my survival strategy? I have multiple life history strategies: resident, anadromous (in the Puget Sound) or migratory fish. Resident fish are smaller and usually stay near the stream where they were spawned. Anadromous bull trout spawn in tributaries but spend most of their life in salt water. Migratory bull trout spawn in small headwater streams and then migrate to larger streams and lakes. The migratory fish are important because they keep my populations connected to each other.



How do Brook Trout interfere with your survival?

Brook trout, which are not native to the Northwest, have been introduced to streams for sport fishing. Brook trout out-compete me because they breed earlier and have more young.



Julie Fulkerson

I may get to be as long as a kitchen counter is tall.

Length: up to 36 inches
Weight: up to 32 pounds

Columbia River Chum Salmon

Oncorhynchus keta

Where is my home? I spawn in streams along the lower third of the Columbia River. Currently, there are only three known chum salmon populations along the Columbia; all three are on the Washington side. I need places with cold, clean water and clean gravel to spawn. I used to be one of the most abundant Pacific salmon species but now because of degradation and destruction of spawning habitat, overfishing and bad ocean conditions, my populations have declined. People are helping me by protecting and restoring my stream habitat.

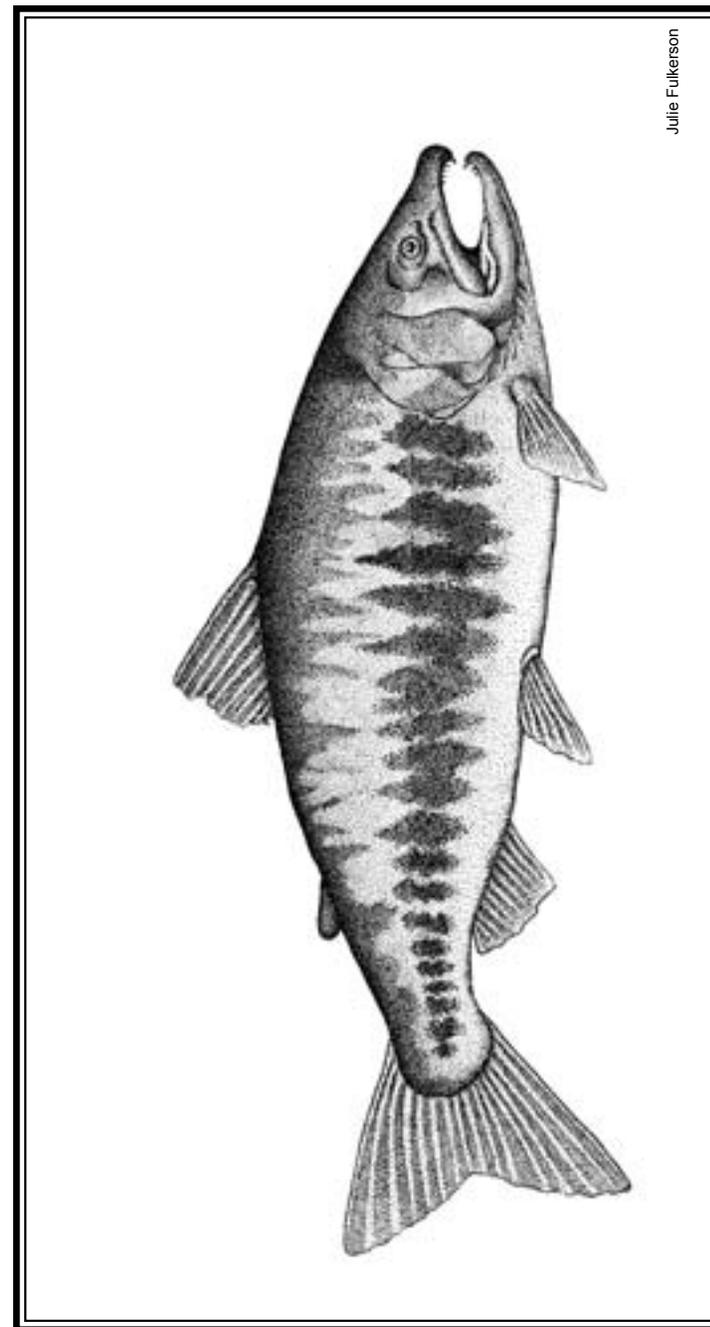
What do I eat? I eat fish and marine invertebrates like jellyfish. Eating lots of jellyfish gives my meat an unusual taste.

What is my survival strategy? I am an anadromous fish. Around ages three to five, we migrate back to our home grounds to spawn from mid-November through December. The female makes a nest in the gravel, called a “redd,” with her tail. After spawning, we die. Our young begin emerging from the gravel beds in March and migrate out to the ocean almost immediately.



How did you get the nickname “dog” salmon?

We are called dog salmon because of the spawning males’ large canine teeth. Other chum salmon runs spawn in coastal Oregon rivers but only Columbia River chum are listed under the ESA.



Julie Fulkerson

At full size, if I could stand on my tail I would be as tall as a four-year-old child.

Length: 38 inches
Weight: 8–15 pounds

Oregon Coho Salmon

Oncorhynchus kisutch ssp.

Southern Oregon Run	Listed in 1997
Oregon Coastal Run	Listed in 1998
Lower Columbia River Run	Listed in 2005

Where is my home? I spawn in the headwaters of streams along the coast from the Columbia River south down to Humboldt County, California. Most of my life is spent in the ocean where I am found from Alaska to central California. People are helping me by protecting stream habitat.

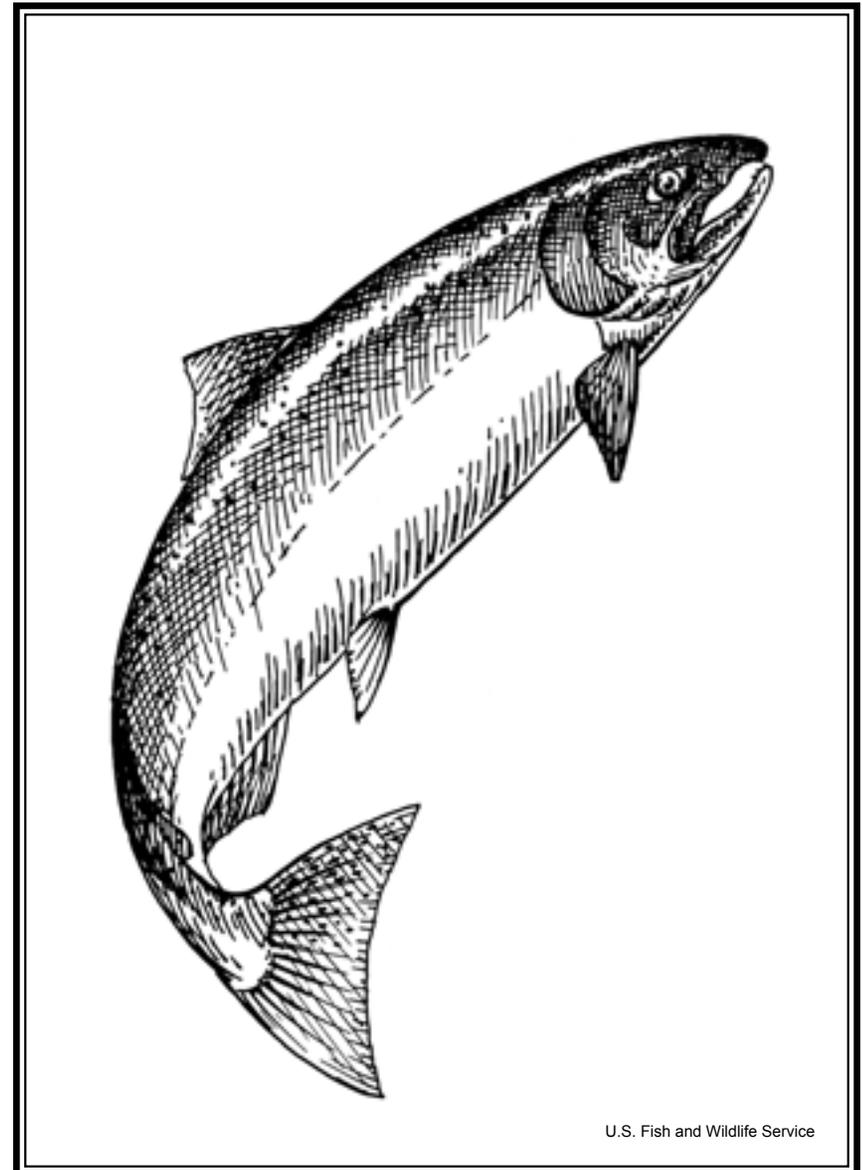
What do I eat? I eat mostly insects and small fish.

What is my survival strategy? I am an anadromous species. Around age three, we migrate back to our home streams to spawn from November through January. I am a powerful swimmer and leaper and can jump waterfalls that most salmon species can't clear. Females make a nest in the gravel, called a "redd," with their tails. They lay from 1,900 to 5,000 eggs each and cover them up with gravel after their mates fertilize them. After spawning, we die. Our young begin emerging from the gravel beds in April and May and live in the streams for about a year before migrating out to the ocean.



Why are you known as the "silver" salmon?

While we are in the ocean, we have silver-colored sides. When we come back up the rivers to spawn, males turn dark red with greenish backs and get large, hooked jaws.



U.S. Fish and Wildlife Service

Length: 31 inches
Weight: 6–12 pounds

I weigh about the same as a bowling ball.

THREATENED
Listed in 1997, 1998 & 1999

Steelhead

Oncorhynchus mykiss ssp.

Snake River Run	Listed in 1997
Lower Columbia River Run	Listed in 1998
Middle Columbia River Run	Listed in 1999
Upper Willamette River Run	Listed in 1999

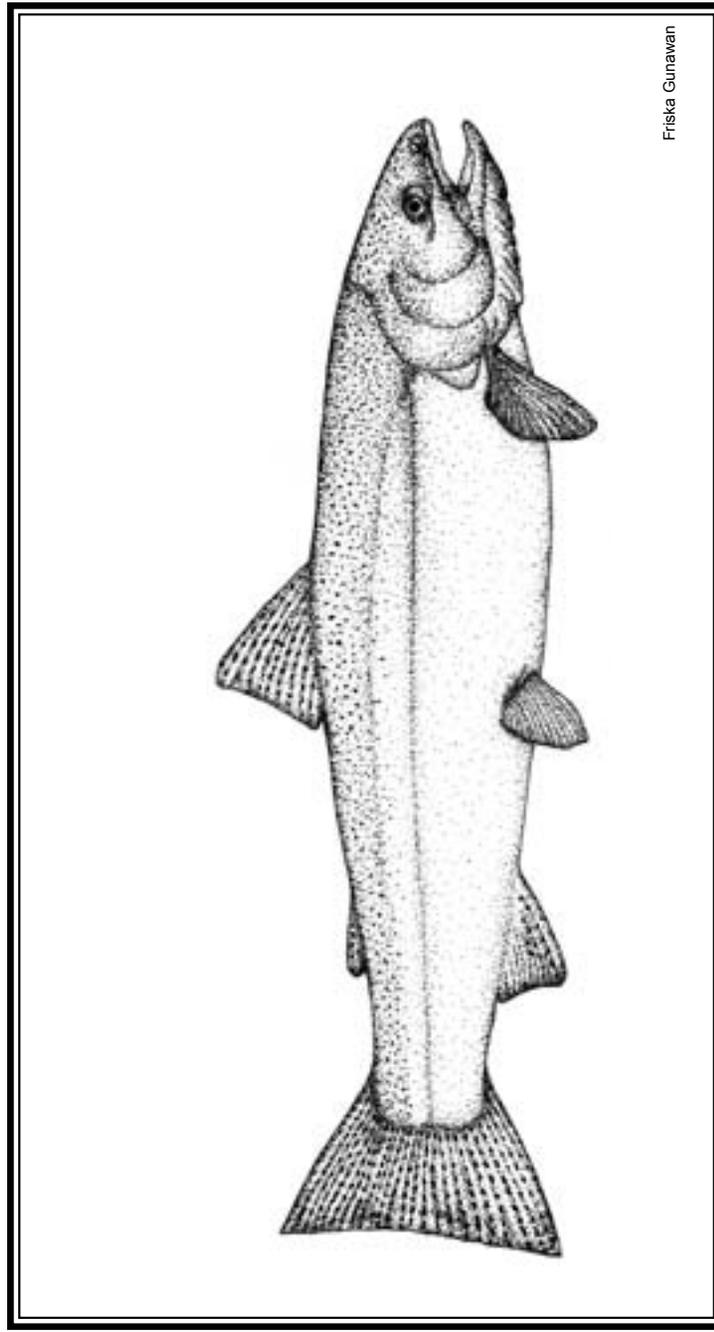
Where is my home? I live in the Snake River and its tributaries in Oregon, Washington and Idaho; the Columbia River and its tributaries from the Willamette up to the Yakima River in Washington; and the Willamette River from Willamette Falls to the Calapooia River.

What do I eat? I eat mostly insects, small fish and some marine invertebrates, like squid.

What is my survival strategy? I am an anadromous species. Around ages three to five, we migrate back to the headwaters of our home streams, where we spawn from December through June. Females make a nest in the gravel, called a "redd," with their tails. They lay 2,000 to 10,000 eggs each and cover them up with gravel after their mates fertilize them. After spawning, most of us die but some return to the ocean to spawn again; a few return up to four times. Our young live in the streams for about two years before migrating out to the ocean.



Are you related to rainbow trout?
I am a migratory form of rainbow trout; other rainbow trout spend their whole lives in rivers.



Friska Gunawan

I am about as long as an adult human's arm.

Length: 2 feet
Weight: 5-15 pounds

ENDANGERED
Listed in 1991

Snake River Sockeye Salmon

Oncorhynchus nerka

Where is my home? I travel up the Columbia and Snake Rivers to spawn at Redfish Lake in Idaho. In Oregon, there are sockeye that are resident year-around in the Deschutes Basin but only the Snake River salmon are protected under the Endangered Species Act. The land-locked (non-migratory) sockeye are called “kokanee.” In Redfish Lake, there are both sockeye, like me, and kokanee but we don’t interbreed.

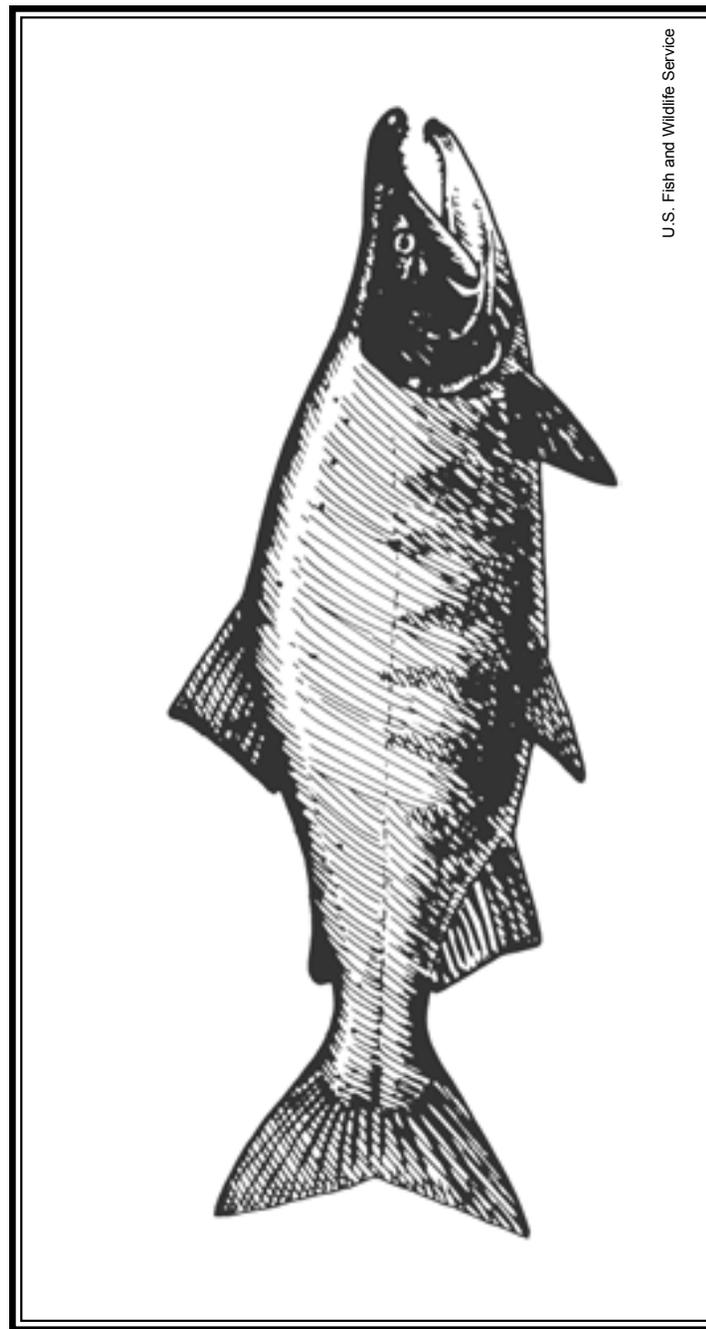
What do I eat? I have a varied diet. I eat insects, invertebrates, small fish and some squid.

What is my survival strategy? I am an anadromous species. At four or five years old, I leave the ocean for the long journey to Redfish Lake. I arrive in August and start spawning in October along the shores of the lake. Females make a nest in the gravel, called a “redd,” with their tails. They lay about 2,000 eggs each and cover them up with gravel after their mates fertilize them. After spawning, we die. Our young live at the lake for one to three years before migrating out to the ocean.



How far do you travel to spawn?

Of all the western salmon species, I have to complete the most amazing journey to spawn: I travel 900 miles upriver with an 8,500 foot climb in elevation. Along the way, I have to pass around four dams on the Columbia River and four more dams on the Snake River.



U.S. Fish and Wildlife Service

Length: up to 33 inches

I can grow to be about as long as the leg of an average adult.

Chinook Salmon

Oncorhynchus tshawytscha

Snake River Run	Listed in 1992
Lower Columbia River Run	Listed in 1999
Upper Willamette River Run	Listed in 1999

Where is my home? I spawn in the headwaters of rivers and streams in three separate runs. These include streams along the lower Columbia River from its mouth to the Willamette River; the Willamette and Clackamas Rivers; and in streams along the Snake River in eastern Oregon.

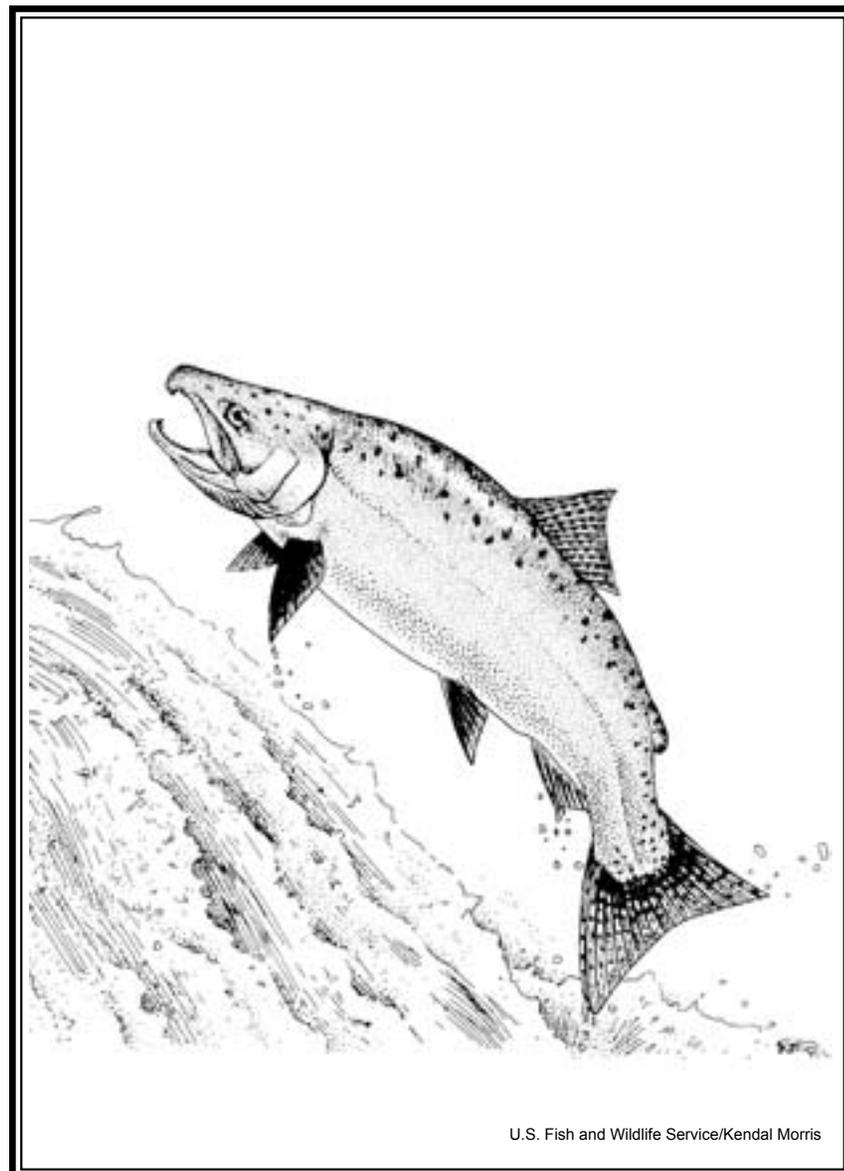
What do I eat? I have a varied diet. I eat small fish, like sandlance and herring, crustaceans, squid and krill.

What is my survival strategy? After two to four years in the ocean, I migrate back to my home stream to spawn. Females make a nest in the gravel, called a “redd,” with their tails. They lay 3,000 to 7,000 eggs each and cover them up with gravel after their mates fertilize them. After spawning, we guard the redd for 4 to 25 days and then we die. Our young live at the stream for three months to two years and then migrate out to the ocean.



How big are you when you come back to spawn?

My size at spawning time depends on how old I am when I return. “Jacks,” which are usually males, return to spawn after only spending one year in the ocean. Fish that stay in the ocean longer are larger and produce more young.



U.S. Fish and Wildlife Service/Kendal Morris

Weight: 15–80 pounds

I can get as big as some kids are tall!

What IS an...

INVERTEBRATE?

ALL INVERTEBRATES have no backbone.

MOST INVERTEBRATES:

- ✿ have an outer skeleton or shell, instead of skin, to help protect them from predators and from water loss;
- ✿ have segmented bodies (they are made up of repeating units).
- ✿ Invertebrates include insects, spiders, centipedes, shellfish, mollusks (snails, slugs) and worms.
- ✿ Insects are the most numerous animals in the world. There are more species of insects than all other animals combined. In fact, 95% of all animals are invertebrates!

Biggest! *The biggest invertebrate is the giant squid—it can grow to 60 feet long.*

Smallest! *The smallest invertebrate on the Endangered Species List is the Tooth Cave spider—it's only 1/16 of an inch long.*

Vernal Pool Fairy Shrimp

Branchinecta lynchi

Where is my home? I live in vernal pools (seasonal wetlands) in California and the Agate Desert of Oregon, near Medford. These pools fill up from rainwater in the fall and winter and dry up in the summer. The pools have become more rare because of land development and farming. In Oregon, citizens are working with the government to create a plan to protect my habitat while still allowing some development to occur.

What do I eat? I use my legs to scrape off algae and plankton from plants and rocks in the pool. I mix this with a glue-like substance that I make and eat it.

What is my survival strategy? I am well-adapted for life in vernal pools. Because we are so small, a lot of us can live in a small area. My eggs are very hard so they can survive the dry hot summers on the ground. When the pools fill up with the winter rains, eggs begin to hatch. We grow, mate and die by the time the pool dries up in the summer. Lots of predators find us tasty, including insects, waterfowl and amphibians. We are an important energy source for migratory birds. Sometimes we hitch a ride on the legs of wading birds and get transported to new habitats.



How many legs do you have?

I have eleven pairs of legs that I use for both swimming and feeding and I always swim on my back.



Julie Fulkerson

Length: 0.5–1 inch
At my biggest, I am still less than the length of a straight pin.

Fender's Blue Butterfly

Icaricia icarioides fenderi

Where is my home? I live in native prairie habitat in the Willamette Valley of Oregon. Less than 1% of my habitat remains because of development, fire suppression and farming. Fires create my habitat and keep shrubs and trees from taking it over.

What do I eat? An adult butterfly drinks nectar from flowering plants with a long proboscis (tongue). My young eat lupine leaves, especially Kincaid's lupine, which is also protected by the Endangered Species Act.

What is my survival strategy? I am a prairie species. In late spring or early summer, females lay eggs on the leaf stems of our host plant, the Kincaid's lupine. The eggs are only the size of a pin-head. When the tiny eggs hatch, the pale green larvae feed on lupine leaves. Caterpillars are on the lookout for predators like birds; sudden movements near the host plant will make the caterpillar drop to the ground to hide. In late summer, the larvae drop down to the ground and hibernate near the base of the plant, a little bit underground, through winter. The following spring, the larvae wake up and begin feeding. In May, they transform into butterflies. Males are bright blue and females are brown. We both are spotted underneath on our wings.



Why did they think you were extinct?

Scientists thought I was extinct because I wasn't seen from 1937 until I was rediscovered in 1989. Seems they were looking for me near the wrong lupine plants!



Julie Fulkerson

Wingspan: 1.25 inches

Can you find the larva in the image above? It's small and blends in with the plant leaves.

Oregon Silverspot Butterfly

Speyeria zerene hippolyta

Where is my home? I live in native coastal grasslands, a rare habitat found along the coasts of Oregon, Washington and California. Today, because of development and overgrazing, my habitat is even more scarce. Non-native plants and fire suppression have reduced the quality of my remaining habitat.

What do I eat? As an adult butterfly, I drink nectar from flowering plants, like asters, with my long proboscis (tongue). My young eat the leaves of western blue violets, my preferred host plant.

What is my survival strategy? I am a coastal grassland specialist (I only use this habitat type). Meadows are a nursery area for my young but we adults hang out in nearby brush and trees, where we are sheltered from coastal winds and cold air. In late summer and early fall, females lay eggs on violet plants. The eggs hatch soon and the larvae feed on the plant leaves. In late fall, the larvae drop down to the ground and hibernate at the base of the plant through winter. The following spring, the larvae wake up and begin feeding. In late summer and fall, they metamorphose (transform) into butterflies.



What is the Oregon Zoo doing to help me?

The Oregon Zoo is rearing my larvae in a facility at the Zoo (this is called captive breeding). Annually they release my young into the wild.



Julie Fulkerson

Wingspan: 2 inches

Newly hatched larvae are very tiny: only 0.08 inch. That's about the size of a ballpoint-pen tip.

What IS a...

PLANT?

MOST PLANTS:

- ✚ make their own food;
- ✚ have chlorophyll to photosynthesize (convert sunlight to food);
- ✚ keep growing their entire life;
- ✚ are stationary (fixed to one spot).

Tallest! *The tallest living things are the redwoods of California. They can reach 200–400 feet tall and 10-15 feet wide.*

Oldest! *The oldest living thing is a bristlecone pine in the White Mountains of California. It is over 4,700 years old and was growing when the pyramids were being built.*

Biggest! *The largest living thing in the world is a quaking aspen tree. It covers 200 acres and weighs 6,600 tons. It is a forest made of clones growing from one original tree.*

ANCIENT LIFE

Plants are the oldest form of life. Scientists think the first plants, microscopic ocean algae, developed more than three billion years ago.

The first land plants appeared more than 400 million years ago. Ferns are one of the oldest plant types living today. Conifers (pines and firs) are some of the oldest types of trees.

Flowering plants showed up about 256 million years later. Today, about two-thirds of all plant species are flowering and they dominate most habitats.

PLANTS ARE ALSO HABITAT

Plants form the basis of wildlife habitat in many ways. They provide food and shelter for animals. Even fish in our rivers need plants. Trees provide shade; logs provide habitat to hide in; aquatic plants are eaten or used as shelter. Leaves and pine needles are eaten by other animals that fish eat.

Plants are our environmental regulators. They take the carbon dioxide that animals and humans breathe out and use it to produce oxygen, which animals and humans breathe in. Plants help keep our planet cooler and our water cleaner.

McDonald's Rockcress

Arabis mcdonaldiana

Where is my home? I live in the Siskiyou Mountains of southwest Oregon and California. I prefer dry, open woods or grassy slopes below 5000 feet elevation. I wasn't discovered in Oregon until 1980. Mining and land development have hurt my habitat. I am also harmed by people taking me from the wild. They like to collect me because I am a pretty plant.

What is my survival strategy? I am a perennial plant (I live from year to year) and I bloom from late April through June. I have pretty purple flowers, each about one inch wide. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. I live on serpentine soils in the Siskiyou Mountains, which have high levels of metals like magnesium, iron and some toxic metals. Not many plants can live here because of these metals and the dry, rocky soil. This reduces competition for my habitat.

Who is my family? All plants are grouped into particular families based on their similar characteristics. I belong to the mustard family. We are herbs, often having a strong, sometimes bad, taste and we have similar seed pods. Mustards are also unique because we have four petals. I am related to brussels sprouts, broccoli and cauliflower.



Height: 4–12 inches

I have also been called the Red Mountain rockcress.

Applegate's Milk-vetch

Astragalus applegatei

Where is my home? I live in moist meadows and grasslands near Klamath Falls, Oregon. My habitat is threatened by land development, farming and flood control. Fire suppression has also hurt me because fire helps maintain my habitat by keeping other plants (like sagebrush) from living there, which decreases my competition for space. Some of my habitat is protected in a preserve owned by the Nature Conservancy.

What is my survival strategy? I am a perennial plant (I live from year to year) and bloom from June to early August. I have clusters of white flowers which have a raised, light purple ridge. My flowers are about one-half inch big. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. After blooming, I grow flat green pods with eight to ten seeds inside. When ripe, the seed pods split open and the seeds scatter on the ground to start new plants. I live on very alkaline (salty) soils with native grasses and greasewood, a sagebrush shrub. Most plants cannot tolerate the soil's saltiness, which reduces my competition for habitat.

Who is my family? I belong to the pea family; members of my family have pods similar to pea plants. Other family members are locoweed, mimosa, alfalfa and clover, as well as another listed plant, Kincaid's lupine.



Height: 12–16 inches

All milk-vetch plants are also called locoweeds because cattle that eat us get sick and act strange.

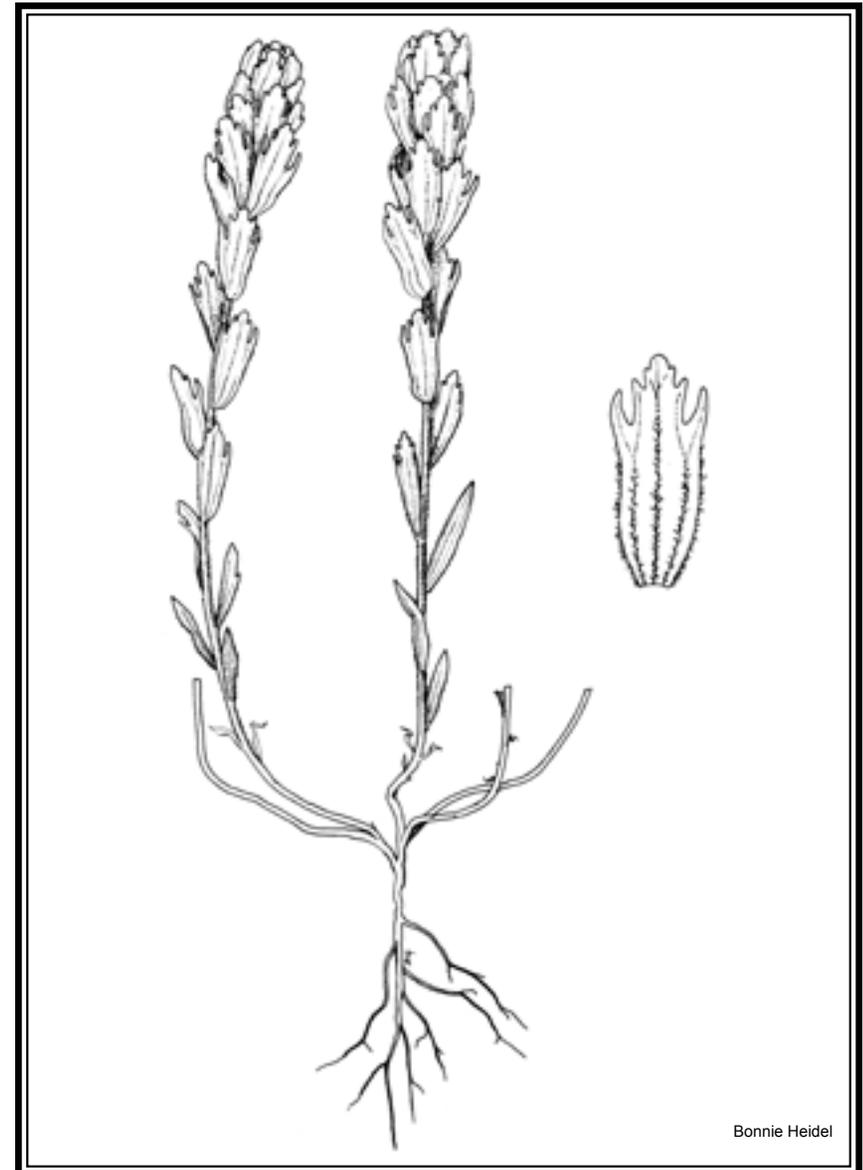
Golden Paintbrush

Castilleja levisecta

Where is my home? I live in moist prairie habitat with lots of gravel at low elevations. I am currently found on Vancouver Island, in British Columbia, and in Washington. I've also been transplanted and am now growing in Oregon's Willamette Valley at William L. Finley and Baskett Slough National Wildlife Refuges. Livestock grazing, land development and fire suppression have reduced or taken much of my habitat. Non-native plants compete with me for habitat. As my habitat decreased, my populations became smaller, more separated and more vulnerable to extirpation (local extinction).

What is my survival strategy? I am a perennial plant (I live from year to year) and bloom from April to early September. My flowers grow in dense spikes but you won't see them because they are covered by bright yellow bracts (modified leaves). My leaves and yellow bracts turn red-orange as I grow older. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. Paintbrush species need other plants around us to survive. We connect our roots to theirs so we can parasitize (take food from) them. But because we also make food for ourselves, we don't harm our hosts by taking too much of their food.

Who is my family? I belong to the figwort family, which includes snapdragon, toadflax and mullein. Some of my relatives, like foxglove, can be poisonous, but also produce an ingredient that is used in some medicines.



Height: 6–12 inches

I went 40 years without being seen in Oregon, but now grow here as a transplant.

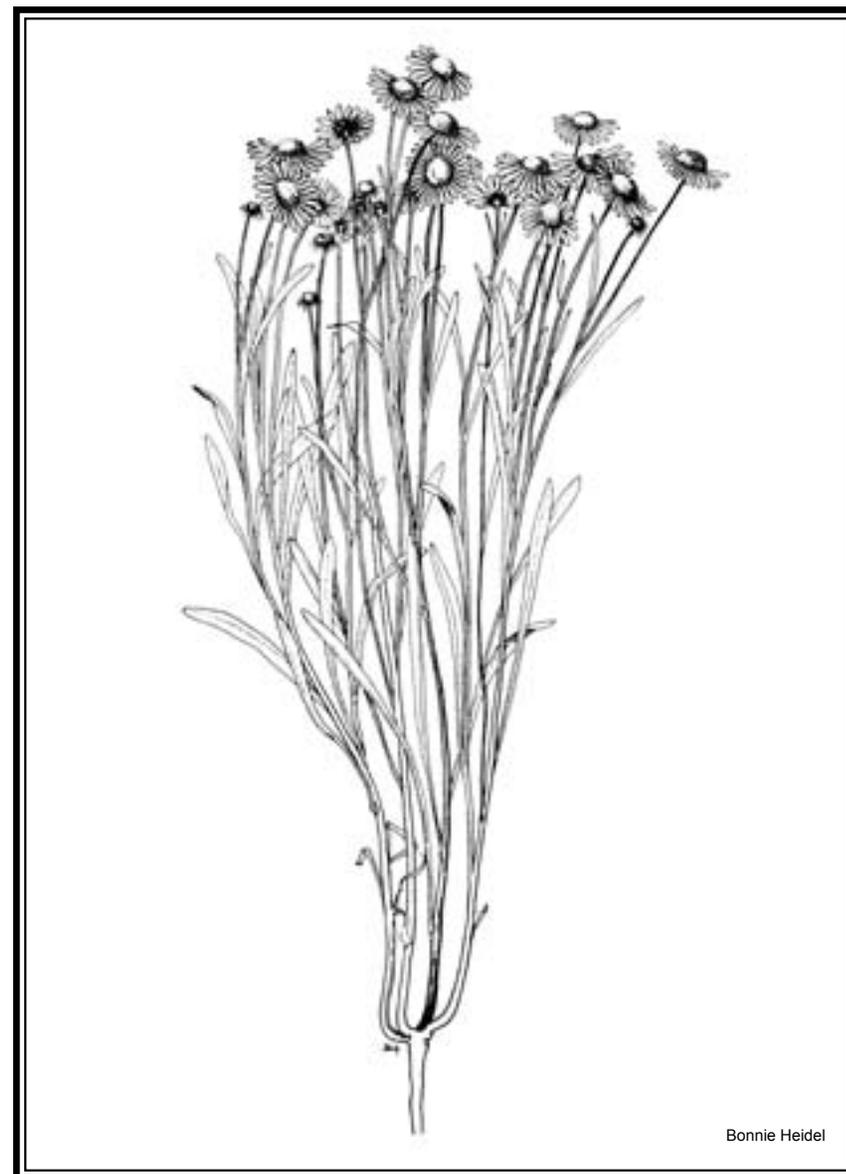
Willamette Daisy

Erigeron decumbens var. *decumbens*

Where is my home? I live in bottomland prairie habitat in the Willamette Valley in Oregon. Development, farming and fire suppression have left less than 1% of the Valley's prairie. Both natural wildfires and Native American-set fires used to maintain prairie habitat. Fires kill shrubs and trees and keep them from taking over the grasses and other plants.

What is my survival strategy? I am a perennial plant (I live from year to year) and bloom in June and early July. My flowers are pink to blue and often fade to white as they age. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. Disturbances like fires create my habitat and open up spaces for me to grow. A few of my sites are protected in nature preserves.

Who is my family? I am a member of the sunflower family, which have special flowers. My flower heads are actually made of two types of flowers. In my yellow center are disk flowers. On the outside, what looks like petals are actually ray flowers. These flowers have five petals but they are fused together into one.



Bonnie Heidel

Height: 6–24 inches

The word “daisy” comes from England. It refers to a flower that closes at night but opens at dawn—“day’s eye.”

Gentner's Fritillary

Fritillaria gentneri

Where is my home? I live along the edge of open woodlands in southwest Oregon in the Illinois and Rogue River drainages. Sometimes, I am also found in open grasslands within or next to forests where I grow near shrubs or bushes, protected from the sun and wind. I cannot grow on really dry sites. Development, farming, logging and recreation have damaged my habitat. In addition, people like to collect me from the wild because I am rare and lovely but this causes my numbers to decline.

What is my survival strategy? I am a perennial plant (I live from year to year) and have short, slender leaves. I flower from April to June. My flowers are reddish-purple with streaks of yellow and are one to two inches big. In the winter, my growth dies back above ground but my bulb is still alive. I regrow in the spring when the weather warms up.

Who is my family? I am a member of the lily family. Like some other lily species, I usually make new plants from bulblets (small bulbs). These bulblets form on my stem, fall off when ripe and begin growing. Many members of my family grow from bulbs, including camas and another listed plant, the western lily.



Frank Lang

Height: 1.5 feet

The bulbs of some lily species were eaten by Native American tribes. But don't try it yourself — some species are poisonous!

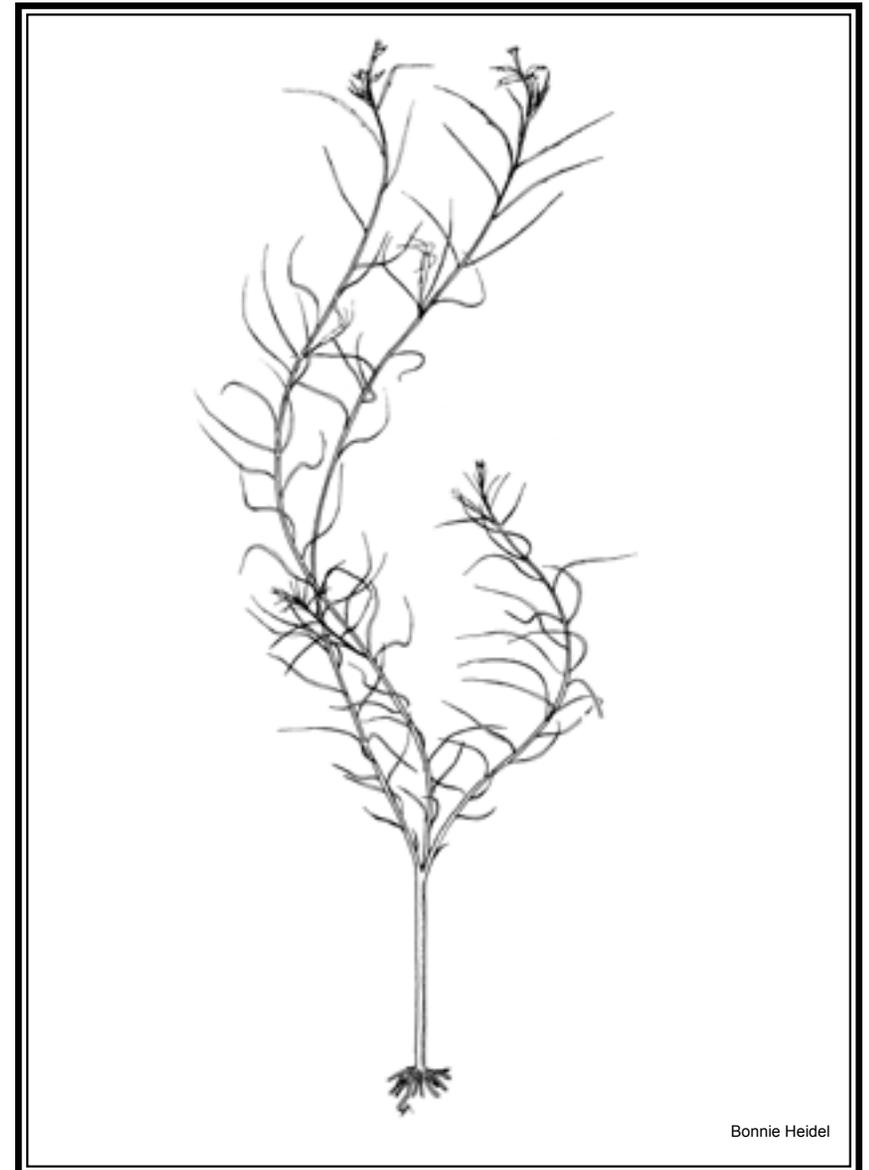
Water Howellia

Howellia aquatilis

Where is my home? I am an aquatic plant (living in water) with my roots growing in soil. I am found in small, shallow ponds or around the edges of deeper wetlands. I am currently found in Washington, California, Montana and Idaho. Historically, I occurred in the Columbia and Willamette River floodplains, though I have not been seen in Oregon for many years. Grazing, logging, dams, river channelization (straightening) and farming have hurt my habitat. The introduction of non-native plants, like reed canary grass, has also harmed me because they occupy habitat that I could use.

What is my survival strategy? I am an annual plant (I live for one growing season only) and usually grow completely underwater with my roots planted in the pond bottom. Like many aquatic plants, I have very thin slender leaves and a flexible stem. I bloom from May through August and have white or pale lavender flowers. My seeds are self-fertilizing, which means that I don't need pollen from other plants of my kind to make seeds. This is helpful when there aren't many other plants to pollinate with.

Who is my family? I belong to the bellflower family, which includes garden flowers like lobelias and bluebells.



Bonnie Heidel

Stems: 16– 28 inches long

Scientists think that migrating ducks and geese may scatter my seeds or plants to new places.

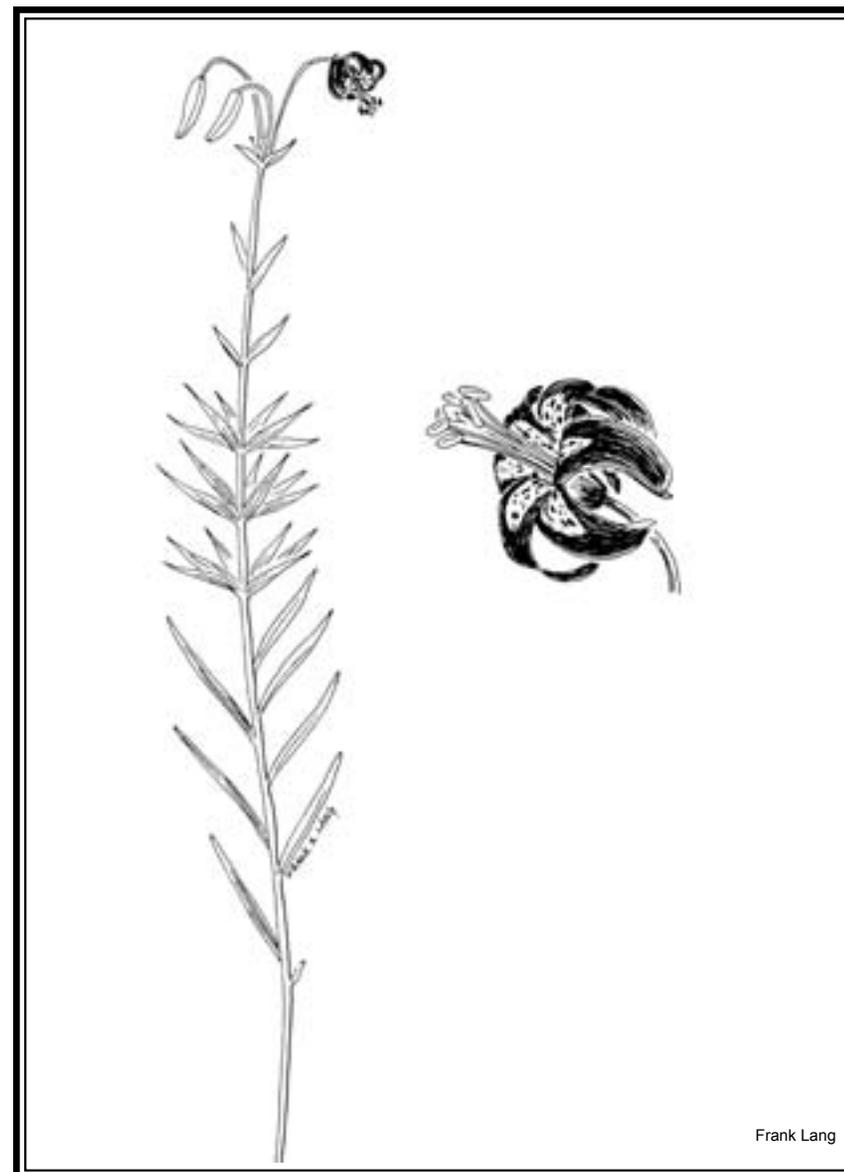
Western Lily

Lilium occidentale

Where is my home? I grow in bogs (wet spongy ground) near the ocean in southwestern Oregon and am found within four miles of the coast. Agriculture, including grazing and cranberry farms, recreation and roads are the primary threats to my habitat. I am also taken by collectors because of my lovely red flowers.

What is my survival strategy? I am a perennial plant (I live from year to year) and have a long stalk with one to ten flowers on top. My flowers are large and deep red and bend over on their stems. At their centers, the flowers are yellow or orange with dark spots. I bloom from mid-June to early August. In the winter, my growth dies back above ground but my bulb stays alive. I regrow in the spring when the weather warms up.

Who is my family? I belong to a large family of plants, the lily family. Most plants in the lily family have bulbs. Some of my relatives are edible like onions, garlic and asparagus but other relatives are poisonous, such as death-camas, a native wildflower. Scientists have written a recovery plan to help save me from extinction.



Frank Lang

Height: 24–32 inches

I look a lot like the Columbia lily, a common wildflower. It has orange blooms but mine are red.

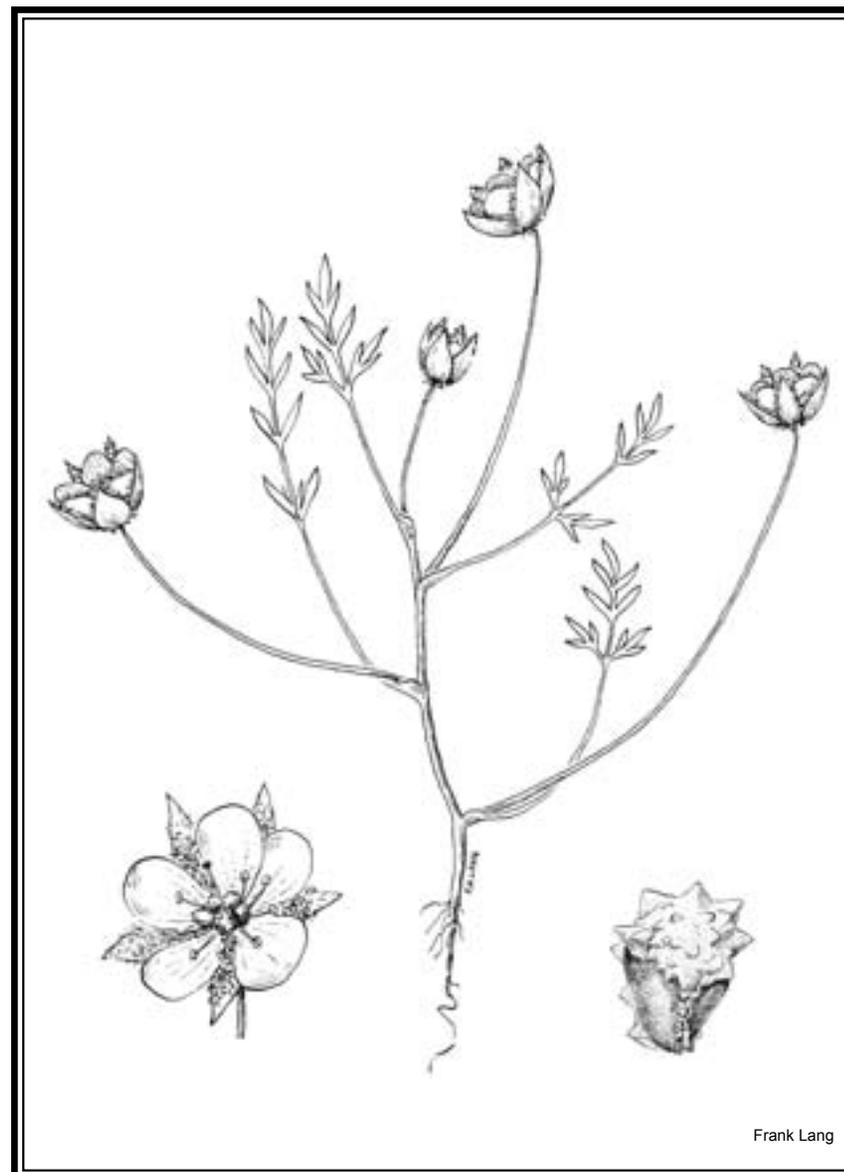
Large-flowered Woolly Meadowfoam

Limnanthes floccosa ssp. *grandiflora*

Where is my home? I live on the edge of vernal pools (seasonal wetlands) in the Agate Desert near Medford, Oregon. My habitat has been lost to roads, agriculture, development and powerlines. Mowing, herbicide spraying and competition with non-native plants for habitat have also harmed me. Cook's lomatium, another endangered species, and the vernal pool fairy shrimp, a threatened species, are also found in my habitat.

What is my survival strategy? I am an annual plant (I live for only one growing season) and bloom from April through May. I have yellow to white flowers with five small petals, about 0.2 to 0.5 inches long.

Who is my family? I am in the meadowfoam family. My family is endemic to North America (found only here) and occurs mostly in California. Oil taken from seeds from my relatives have been used as industrial lubricants and could be used for cooking and cosmetics. Possibly my seeds could be used in the same way, if they were taken from domesticated plants.



Frank Lang

Height: 2–6 inches

There are other meadowfoam species in Oregon which look similar to me but aren't endangered.

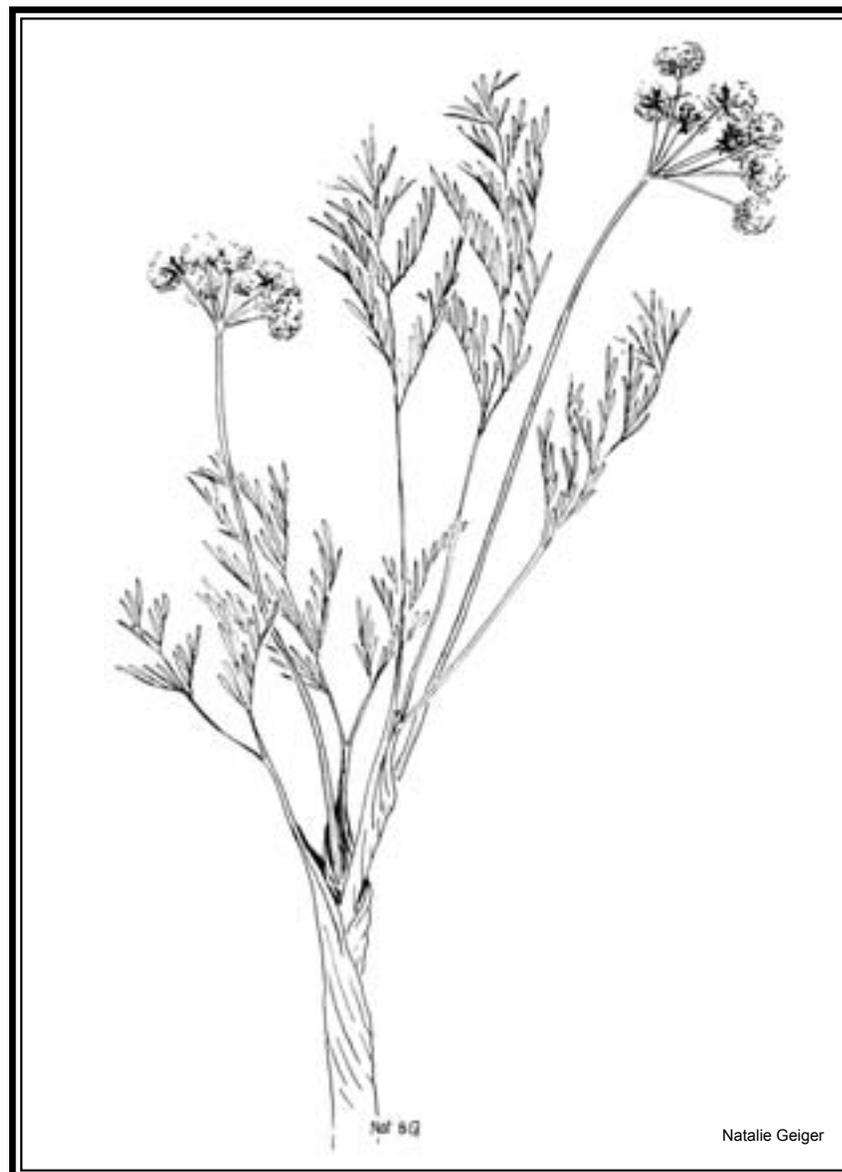
Bradshaw's Lomatium

Lomatium bradshawii

Where is my home? Also called desert parsley, I live in wet prairies, usually near creeks and rivers, in the Willamette Valley, Oregon, and Clark County, Washington. I need open areas without trees or shrubs that would block the sun. Agriculture, development and water control projects have changed or taken much of my habitat. Lack of flooding and fires is converting my habitat to woodlands, where I can't live because of the shade.

What is my survival strategy? I am a perennial plant (I live from year to year) and I bloom in April and early May. I have lots of small yellow flowers which are pollinated by beetles, ants and native bees. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up.

Who is my family? I belong to the parsley family and have one long root, called a taproot, pretty much like a carrot, my relative. Other members of the parsley family include fennel, licorice-root, dill and parsnip. We are an aromatic family (our leaves often have a nice smell) and several family members are used as cooking spices, although some family members are very poisonous.



Height: 8–20 inches

Many lomatium species were important food for the eastern Oregon tribes.

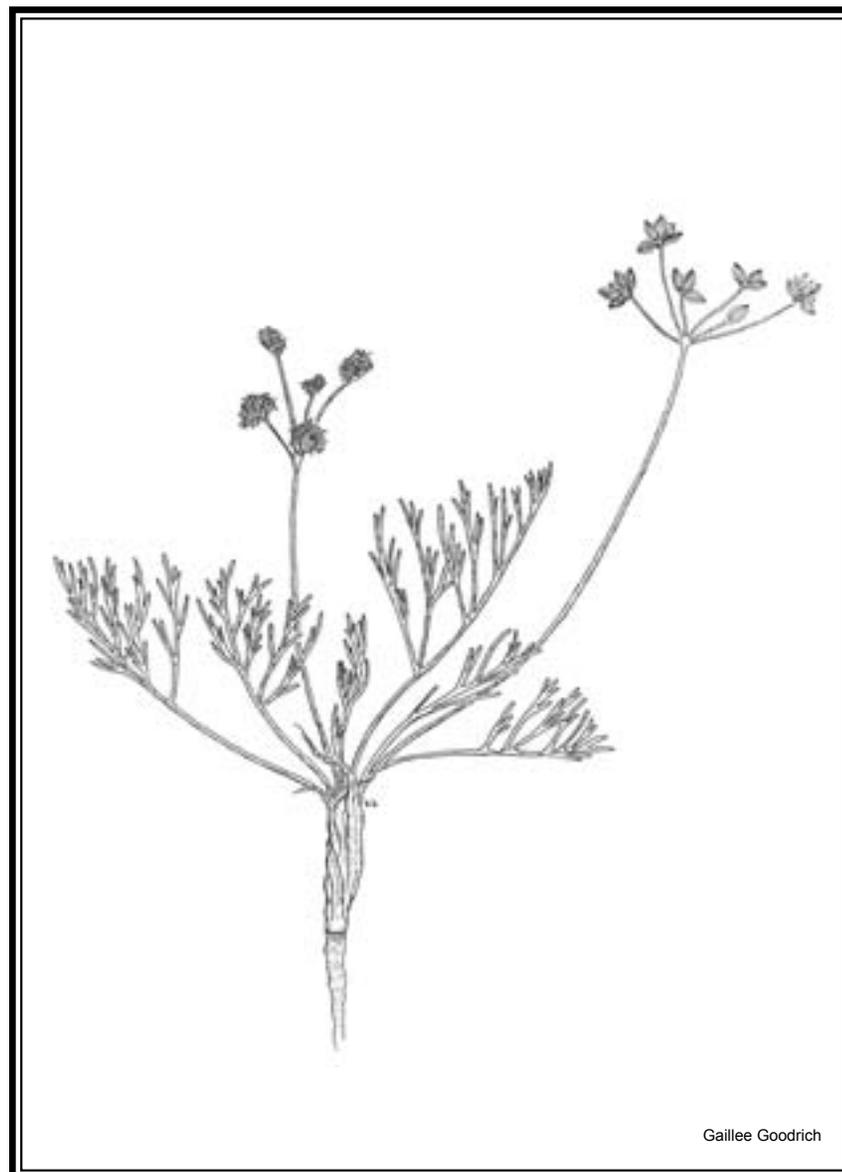
Cook's Lomatium

Lomatium cookii

Where is my home? I live near vernal pools in the Agate Desert near Medford and also in seasonally wet soils in French Flat in the Illinois Valley, Oregon. I am endemic to Oregon—which means in the whole world, I am only found here. My habitat has been lost to agriculture, development, roads, powerlines, logging and gold mining. Mowing, roadside spraying, fire suppression, off-road vehicle use and competition with non-native plants for habitat have also affected me. Some of my habitat is protected in a private preserve.

What is my survival strategy? I am a perennial plant (I live from year to year). I bloom from mid-March through mid-May and have small, pale yellow flowers. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. I am sometimes eaten by gophers, other rodents and black-tailed jackrabbits. I am found with other rare plants like the endangered large-flowered woolly meadowfoam.

Who is my family? I belong to the parsley family, which includes Queen Anne's lace, carrot, dill and fennel. Also known as umbels, we have flower stalks that come from a common point, like the ribs of an umbrella. Our leaves often have a nice smell and several relatives are used in cooking.



Gaillee Goodrich

Height: 0.5–1.6 feet

I am a recently discovered species. I was first collected in 1981 at the Agate Desert.

Kincaid's Lupine

Lupinus sulphureus var. *kincaidii*

Where is my home? I live in upland prairie habitat in the Willamette Valley of Oregon and also in southwestern Washington. Less than 1% of my habitat remains in Oregon because of development, farming and fire suppression. Fires create my habitat by keeping shrubs and trees from taking it over. Non-native species like Himalayan blackberry also take over potential habitat and crowd me out. Some of my habitat is protected in preserves and scientists are studying how to restore native prairie. Currently, both mowing and controlled fires are used to maintain my habitat.

What is my survival strategy? I am a perennial plant—which means I come back every year—and I have been known to live as long as 100 years. I bloom from April through June. I have many cream-and-purple-colored flowers and my seeds grow in pods, like peas. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. I am the preferred host plant for the Fender's blue butterfly, an endangered species. Its caterpillars eat my leaves for food and I also supply nectar to the adults.

Who is my family? I belong to the pea family. This is a really big family with over 13,000 species. They include trees, shrubs and herbs like me. We all produce seeds in pods.



University of Washington Press/Jeanne R. Janish

Height: 16–30 inches

Lupines have the unique ability to take nitrogen from air and use it as fertilizer, thanks to bacteria on our roots.

MacFarlane's Four O'Clock

Mirabilis macfarlanei

Special Note: I was first listed as endangered in 1979. In 1996, I was reclassified to threatened after many more plants and acres of my habitat were discovered. Scientists realized that the threats to my future were not as bad as first thought.

Where is my home? I live in canyonlands along the Snake, Salmon and Imnaha rivers in northeastern Oregon and Idaho. I grow in loose, rocky soils on steep canyon walls. Most of my sites can only be reached by boat. Threats to me include trampling by recreationists, cattle grazing, being taken by collectors and competition from non-native plants.

What is my survival strategy? I am a perennial plant (I live from year to year), growing in large clumps. I bloom from May through early June and have large purple flowers shaped like a trumpet. My flowers are pollinated by insects, including bees. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. Insects like spittle bugs harm me by eating my flowers and leaves.

Who is my family? I belong to the four o' clock family, named for their habitat of closing their flowers in the afternoon but unlike many of them, I do not.



Bonnie Heidel

Clump width: 3 feet

I was named after a boat pilot, Ed MacFarlane, who pointed out my flowers to scientists in 1936.

Rough Popcornflower

Plagiobothrys hirtus

Where is my home? I live in seasonal wetlands in the interior valley of the Umpqua River in southwestern Oregon. Much of my potential habitat has been damaged or lost because of development, agriculture and construction of reservoirs. Other threats include roadside mowing, herbicide spraying and competition from non-native plants.

What is my survival strategy? My strategy depends on what kind of site I am growing on. On drier sites, I am an annual plant (living for only one growing season) and grow each year from seeds. But on wetter sites, I am a perennial plant (I live from year to year). We perennials die back above ground in the winter but re-grow from our roots in the spring when the weather warms up. I bloom in June and July and have many small white flowers. My flowers are usually pollinated by insects but I can also self-pollinate. In the past, disturbances like floods and fires kept my habitat open, and limited competition from other plants. Scientists think that my seeds were probably dispersed by floods to new areas.

Who is my family? I belong to the borage family. We are mostly herbs and usually have bristly hairs on our stems and leaves. My relatives include forget-me-nots, blue bells and comfrey.



Height: 1–2 feet

Plagiobothrys means “placed sideways, pit.” It refers to my fruits, which are nut-like with a groove.

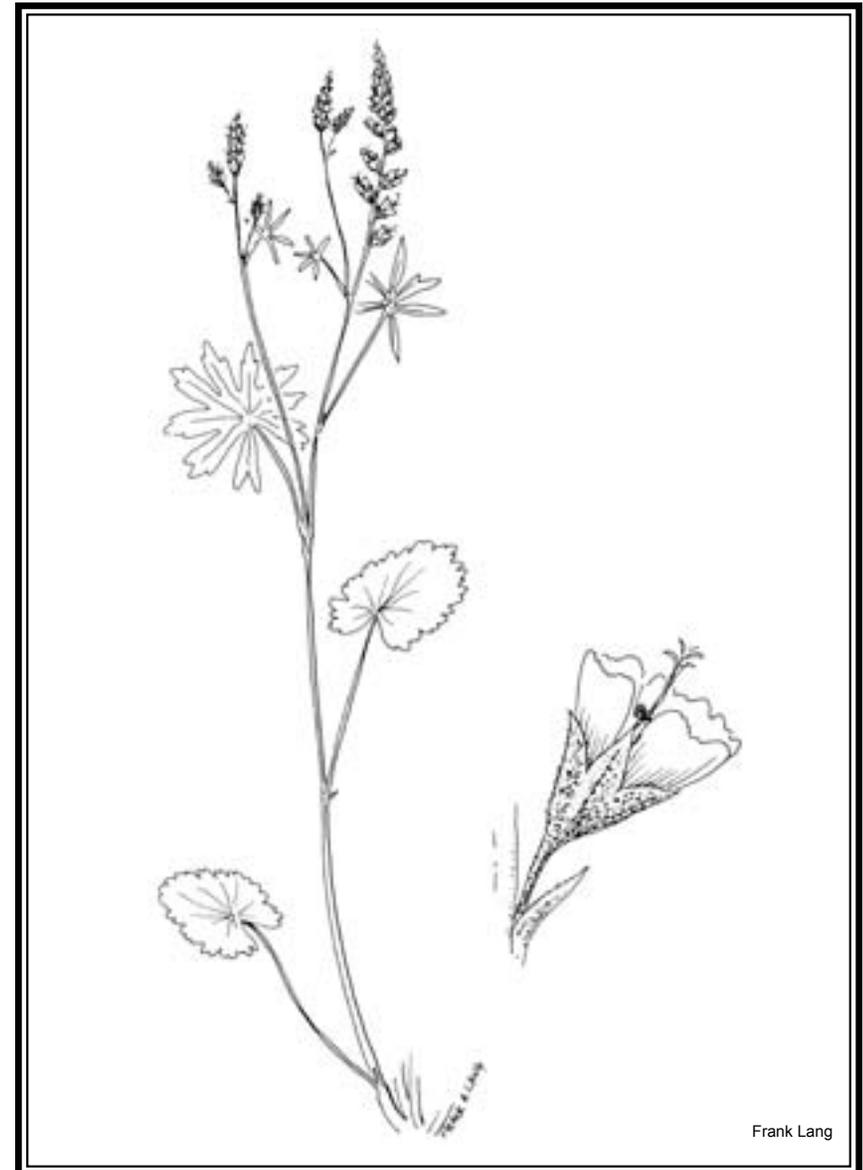
Nelson's Checker-mallow

Sidalcea nelsoniana

Where is my home? My habitat is wet meadows along streams and in native prairie. I need open areas with little or no shade and won't grow near trees. I am found mostly in the Willamette Valley but there are a few locations in Oregon's Coast Range as well as in Washington. Much of my potential habitat has been damaged or lost because of development and agriculture but some acres are being protected in preserves.

What is my survival strategy? I am a perennial plant (I live from year to year) and bloom from mid-May until September in the Willamette Valley. In the Coast Range, my growing season is shorter so I don't bloom as long and make seeds earlier. I have long clusters of pink-purple flowers. Some plants have perfect flowers (both male and female parts) and some plants have pistillate flower (female parts only). I can make new plants either from seeds or by rhizomes (underground stems). In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. In the past, my habitat was maintained by fires, some naturally occurring and some set by Native Americans. Fires kept my habitat open and prevented trees and shrubs from taking it over.

Who is my family? I belong to the mallow family. There are several species of checker-mallow in Oregon. We are related to hollyhocks, a garden flower.



Frank Lang

Height: 1.6–5 feet

Checker-mallows are sometimes called marsh hollyhocks.

Spalding's Catchfly

Silene spaldingii

Where is my home? I live in native prairies at low to middle elevations in Oregon, Washington, Montana, Idaho and British Columbia. Much of my habitat has been degraded by grazing, development and agriculture. I have also been affected by fire and flood control and competition from non-native plants. What is left of my habitat is very fragmented (broken up), making me more vulnerable to extinction. Some of my habitat is protected on preserves.

What is my survival strategy? I am a perennial plant (I live from year to year) and bloom from June until September with many white flowers. In the winter, my growth dies back above ground but my roots are still alive. I regrow in the spring when the weather warms up. In the past, my habitat was maintained by fires, some naturally occurring and some set by Native Americans. Fires kept my habitat open and prevented trees and shrubs from taking it over.

Did you know? I am a member of the pink family. We are herbs with simple leaves that are opposites (right across from each other). My famous relative is the carnation.

For Critical Thinkers:

Why does fragmented habitat make me more vulnerable to extinction?



Height: 8–24 inches

I am called “catchfly” because my foliage is covered with sticky hairs that can trap small insects.

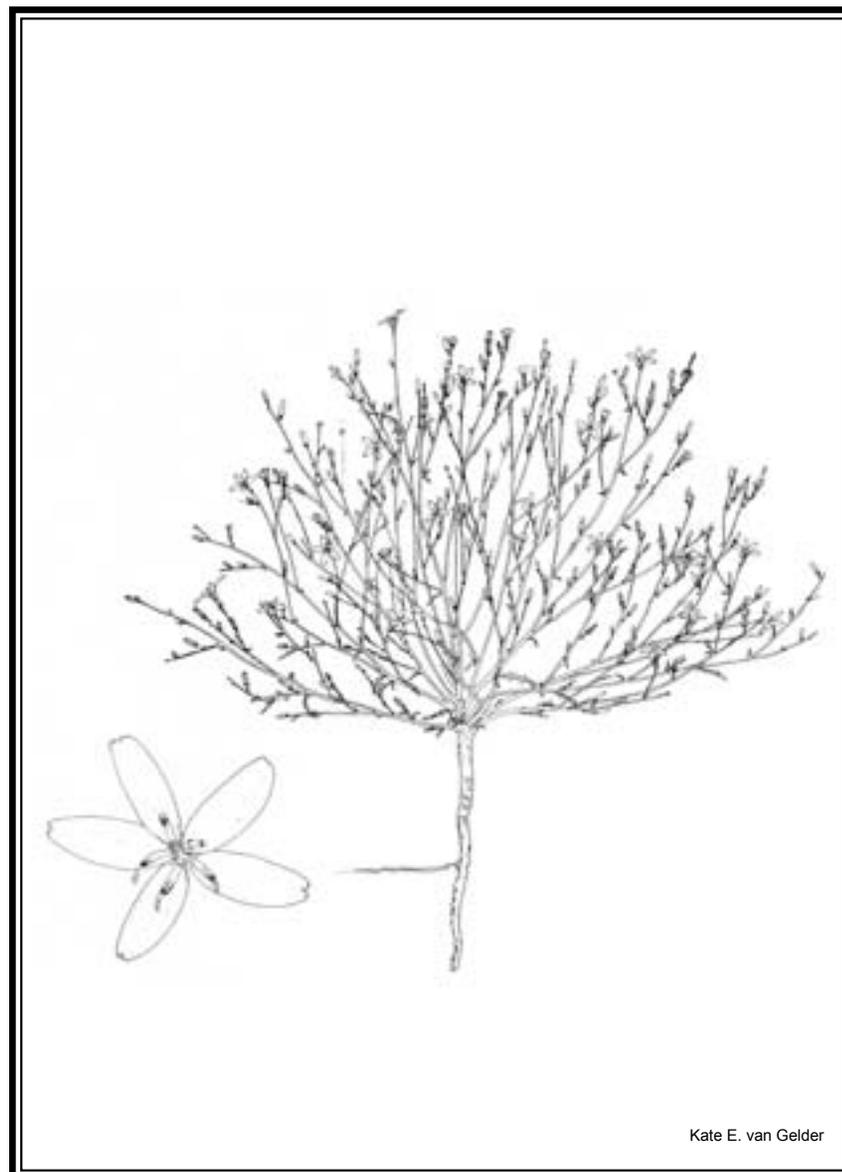
Malheur Wire-lettuce

Stephanomeria malheurensis

Where is my home? I live on volcanic soil that is mixed with limestone on one hill, about 70 acres, near Burns, Oregon. I am endemic to this area (I occur nowhere else in the world). Threats to my survival include competition from cheatgrass, a non-native grass species, and predation by native grazers like black-tailed jackrabbits. My only known site is in public ownership and is fenced and protected.

What is my survival strategy? I am an annual plant (I only live for one growing season). I bloom in July and August and have lots of pink, white and sometimes orange-yellow flowers. I am self-pollinating, which means I don't need others of my kind to produce seeds. My population size depends on the amount of rainfall each year and can vary a lot from year to year—which makes me more vulnerable to extinction in dry years. During the 1980's, my population was very low. Some years, they couldn't find me at all. For a while, scientists had a reintroduction program to help me out. My numbers are better now but still pretty low.

Who is my family? Like the Willamette daisy, I belong in the sunflower family. We are related to marigolds, zinnias, daisies and dandelions. I am a recently evolved species, which makes me very interesting to scientists. My ancestor is the small wirelettuce.



Height: 20 inches

I am one of the few species at my site able to survive on harvester ant hills.

Howell's Spectacular Thelypody

Thelypodium howellii var. *spectabilis*

Where is my home? I live on moist meadow sites in eastern Oregon. These sites have alkaline soils (they contain metallic salts) which most plants cannot tolerate. My habitat has been lost to agriculture and development and degraded by grazing and water control projects. I am also eaten by cattle and have to compete with non-native plants for habitat. I was first officially described by scientists in 1932. For a time, I was thought to be extinct until I was rediscovered in 1980.

What is my survival strategy? I am a biennial plant (I live for two growing seasons). I grow and develop in the first year and bloom and make seeds in the second. I bloom from June through July and have four-petaled flowers that are lavender to purple. Floods from nearby streams open up places for me to colonize.

Who is my family? Like McDonald's rockcress, I belong to the mustard family. We are herbs, often having a strong, sometimes bad, taste and we have similar seed pods. I am related to brussels sprouts, broccoli and cauliflower.



Linda Vorobik

Height: 24 inches

I am "endemic" to Oregon, which means that of all the places in the world, I am only found here in this state.

Recovered Species

Species are delisted (taken off the endangered species list) when they have “recovered,” meaning they have reached a safe population level.

To remove a species from the endangered species list, the U.S. Fish and Wildlife Service follows the same kind of process it uses when a species is put on the list. According to the Endangered Species Act, the Fish and Wildlife Service must:

- 1) Assess the population and its recovery achievements**
- 2) Evaluate any existing threats**
- 3) Seek advice from species experts.**

Next, the public is invited to submit comments and share their ideas about the delisting.

Lastly, the ESA requires the Fish and Wildlife Service to work with the state and monitor the species for a minimum of five years in order to assess the species’ ability to sustain itself without the protections of the ESA.

Bald Eagle

Haliaeetus leucocephalus

Why am I a “success story?” After being on the Endangered Species List for 40 years, I am now off the list. Because scientists helped solve the problems caused by DDT, and people created laws to protect me from being shot, I am thriving again and have become a success of the Endangered Species Act. I am still protected by some laws, and scientists will check up on me to make sure I continue to do well into the future.

Where is my home? I am a large bird of prey found from Alaska down to northern Mexico. I live in forested areas near lakes, rivers and streams in every state except Hawaii. I am the national bird of the United States.

What do I eat? I eat mostly fish but will also eat waterfowl, mammals and dead animals.

What is my survival strategy? I nest in the tops of tall trees close to water, where I find easy food. I make my nest with sticks and branches; I often re-use the same nest from year to year, which saves me time and energy. Over time, my nest can become very large and weigh over a ton! I usually mate for life. My mate and I will raise two eaglets a year. During the winter, I leave my territory and head to places with lots of food. Sometimes hundreds of eagles can be seen together and we often share a roost tree.



Wingspan: 6–7.5 feet
Weight: 8–14 pounds

From one wingtip to another is about the same as the height of a door in your house.

Brown Pelican

Pelecanus occidentalis

How did I make a “comeback?” I have been hunted for my feathers, suffered devastating effects from the pesticide DDT, and lost much of my coastal habitat. Even after all of that, I have been able to make a remarkable recovery because of strong and continuing partnerships between citizens and government agencies who worked together to protect me and restore my habitat. As of 2010, there are 650,000 brown pelicans in the U.S. and I’ve been taken off the ESA list!

Where is my home? I am a large water bird with an enormous bill. I live along the ocean and bays of both coasts of North and South America. On the Pacific Coast, I nest in southern California, Mexico and South America but in winter I may travel north to Oregon and up to British Columbia.

What do I eat? I eat mostly marine fish. I am a diver and will plunge from the air when I see my food. Sometimes I dive from 60 to 70 feet in the air.

What is my survival strategy? I usually nest in colonies (groups of my species) on steep, rocky islands along the coast. Nesting in groups helps us spot predators better and keeps our chicks safer. We don’t always breed every year; only at times when there is enough food for our chicks and a safe place to breed. We choose places where humans and predators like foxes and coyotes can’t disturb us.



Wingspan: 6.5–7.5 feet
Weight: 8 pounds

I am a big bird but I weigh less than many adult housecats!

Gray Wolf

Canis lupus

Where is my home? I am a large, furry mammal related to the dog. My species, like humans, can adapt to almost any type of landscape and climate and we lived all over the U.S. Many people feared wolves and, thinking they were protecting themselves, would shoot us. We almost went extinct. There were no wolves at all in Oregon for over 50 years, but now we are starting to make a comeback.

What do I eat? I prey mainly on large, hoofed mammals: deer, elk, moose, and bighorn sheep. I also eat smaller prey: snowshoe hare, beaver, rabbits, opossums and rodents. Parents feed pups by regurgitating food for them until they are about four weeks old.

What is my survival strategy? I am highly intelligent (if I do say so myself). My family structure is a lot like human family structure in the way we develop close relationships and strong social bonds. All adults share parental responsibilities for pups. My acute hearing and exceptional sense of smell – up to 100 times more sensitive than that of humans – makes me well-adapted to my surroundings and to finding food. I can run as fast as 40 miles an hour. When hunting, members of my pack often work as a team to locate and stalk prey.

For more information about gray wolves:

<http://animals.nationalgeographic.com/animals/mammals/wolf.html>
<http://www.fws.gov/mountain-prairie/species/mammals/wolf/>

*Northern Rocky Mountain populations



Armon Barrows

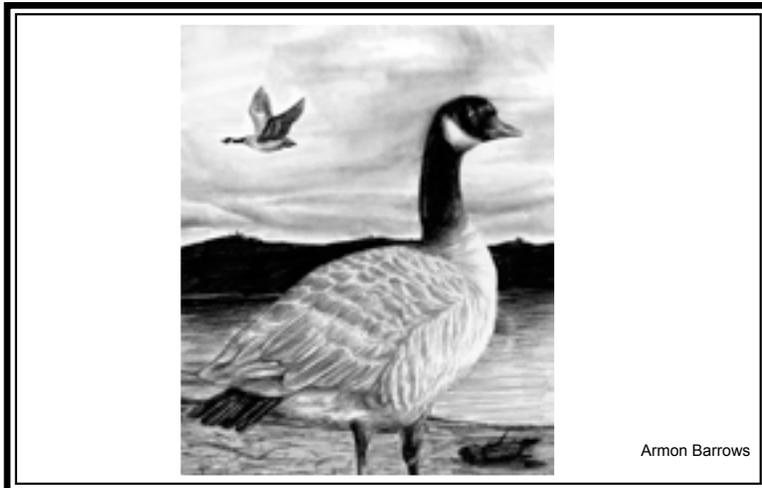
Height: Head & Body is 36 to 63 inches, Tail is 13 to 20 inches.
Weight: Averages between 60 to 100 lbs.
Number of Teeth: 42 (adult)

DELISTED
2001

Aleutian Canada Goose

Branta canadensis leucopareia

The Aleutian Canada goose declined partially because Arctic foxes were introduced onto the islands where the geese nested and were eating the adults, eggs and young. The geese were also harmed by lead shot poisoning: lead pellets used to hunt waterfowl were accidentally eaten while the geese were feeding. Lead in their bodies made them weak and unable avoid predators or to eat. The goose recovered because the foxes were removed and lead shot was banned to protect all waterbirds.



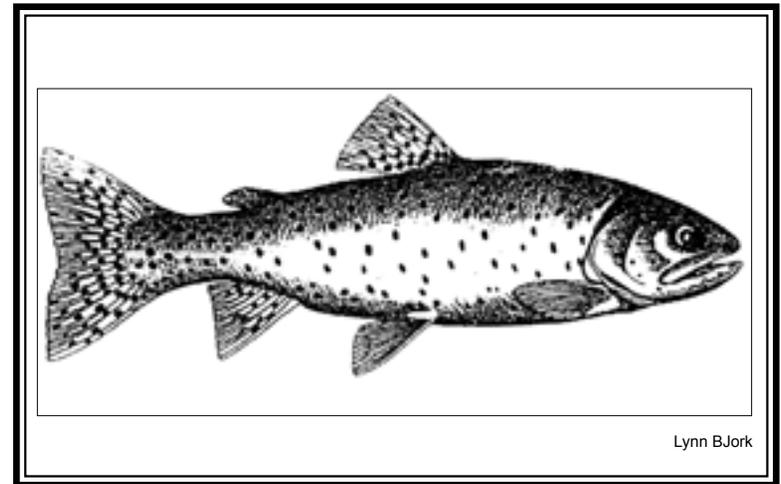
One of the smaller subspecies of the Canada goose, numbers of the Aleutian Canada goose plummeted into the hundreds in the mid-1970s but are now estimated at over 37,000.

DELISTED
2000

Umpqua River Cutthroat Trout

Onchorynchus clarki clarki

The Umpqua River population of coastal cutthroat trout was listed in 1996. Impacts to spawning habitat from logging, agriculture and development were causing population declines. Later scientists re-examined the data and determined that the Umpqua was not a separate population but part of the larger population of Oregon coastal cutthroat trout and therefore did not warrant ESA protection



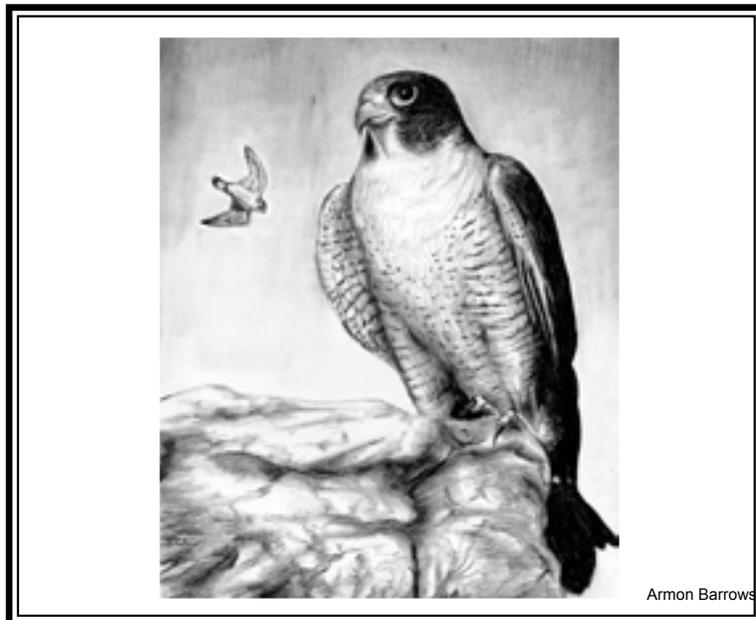
Length: Mature fish range from 6 inches for populations that remain in headwater streams, to 20 inches in populations that migrate to and from the ocean.

DELISTED
1999

American Peregrine Falcon

Falco peregrinus anatum

The peregrine was originally listed after its populations crashed due to contamination from the pesticide DDT, which caused eggshell thinning and led to the death of unhatched young. The peregrine recovered because of the combined effects of the banning of DDT and many years of breeding birds in captivity and releasing the young into the wild.



Weight: About 2 lbs.

Wingspan: Long, pointed wings can reach a length of 3 ft.

Males and females look identical but the female can be a third larger than the male.

Afterwords & Resources

The list of federally protected endangered species in Oregon often changes as new species are added and others are removed from the list. To keep up to date on the latest information for Oregon's species, please visit this U.S. Fish and Wildlife Service website:

<http://www.fws.gov/oregonfwo/Species/default.asp#FactSheets>

There, when the status of a species changes, you will find an updated sheet which can be printed and added to your booklet.

Let's Go Outside

Science Adventures in Nature



The Secret World of Wildlife

Tools of observation:

- Field Journal
- Pencil
- Binoculars & Magnifying Glass
- Healthy Snack
growing stomachs scare wildlife



Operation: Habitat Watch

Habitat loss and fragmentation are factors that threaten populations of plants and animals. Certain species need a very specific habitat to survive. But before we can protect habitats, we need to understand them.

Your Mission (should you choose to accept it)

Using your powers of secret observation, over the next two weeks you will compare two different habitats and the animals and plants living there. By collecting data you can then infer (make an educated guess) whether the animals and plants in one habitat can survive in the other.

Be Prepared!

As part of your mission, you'll need to record your observations. Since a good secret observer is a resourceful one, hone your super-sleuthing skills by making your own field journal.

1. Take 4-5 sheets of regular paper
2. Fold in half to make a booklet (staple on fold if desired)
3. Draw an outdoor scene on the cover
4. Write your name inside
5. Use blank pages to record your field observations
6. On the last two pages, draw a picture of your favorite species and write some ideas for helping it survive

Put the "Secret" in Secret Observation

Wildlife are very aware of human presence and tend to be more shy when we're around, so we need to observe them in secret.

Pick two different areas that you'll call your habitats (schoolyard, backyard, park, etc.). Spend time in each over the course of two weeks. With your field journal in hand, find a good "blind" (hiding spot) where wildlife are less likely to notice you. Using the tips on the next page, notice how the plants and animals interact with their habitat. Record your observations of each habitat in your journal. Share your findings with your classmates and see what you can figure out about how and why habitat is important to the survival of animals and plants.

Field Observation Tips

- Use as more than your sense of sight. Listen, touch, and even *smell!*
- Be patient. Wildlife might be frightened away at first, but if you pick a good blind and stay in that spot for a while, they often come back.
- Move slowly and speak quietly.
- Ask and answer lots of questions:

Good Wildlife Questions

- What is it doing?
ex: eating, sleeping, pecking
- What is it eating?
- How does it move around?
ex: fly, swim, walk, hop
- If flying, where does it land?
- How far away is it from you?
- Does it react to your presence?
- What sounds is it making?

Good Plant Questions

- Is it flowering?
- Are there many or few?
- Are they all at the same stage of growth?
- What is the habitat like?
ex: marshy, dry, shady, sunny
- Are there insects on/near it?

Record a Sequence

Example: Small brown bird landed about 20 feet from me on short grass. Pecked at ground 3 times. Caught worm. Ate it. Flew to tree limb 10 feet above ground. Began singing.



Wildlife and Habitat Secrets Revealed

What did you find in the habitats you observed?

- Trees?
- Bushes? Low or tall?
- Flowers?
- Sunny or shady spots?
- Water?
- What else?

What wildlife behaviors did you observe?

- Gathering food (foraging)
By pecking on trees, eating insects while flying, riffling through leaves on the ground?
- Singing
where and when?
- Nesting
Where; and what materials were used?

**U.S. Fish & Wildlife Service
Oregon Fish and Wildlife Office
2600 SE 98th Avenue
Portland, OR 97266
503/231-6179
<http://www.fws.gov/oregonfwo>**

**Columbia River Fisheries Program Office
1211 SE Cardinal Ct., Suite 100
Vancouver, WA 98683
360/604-2500
<http://www.fws.gov/columbiariver>**



May 2011