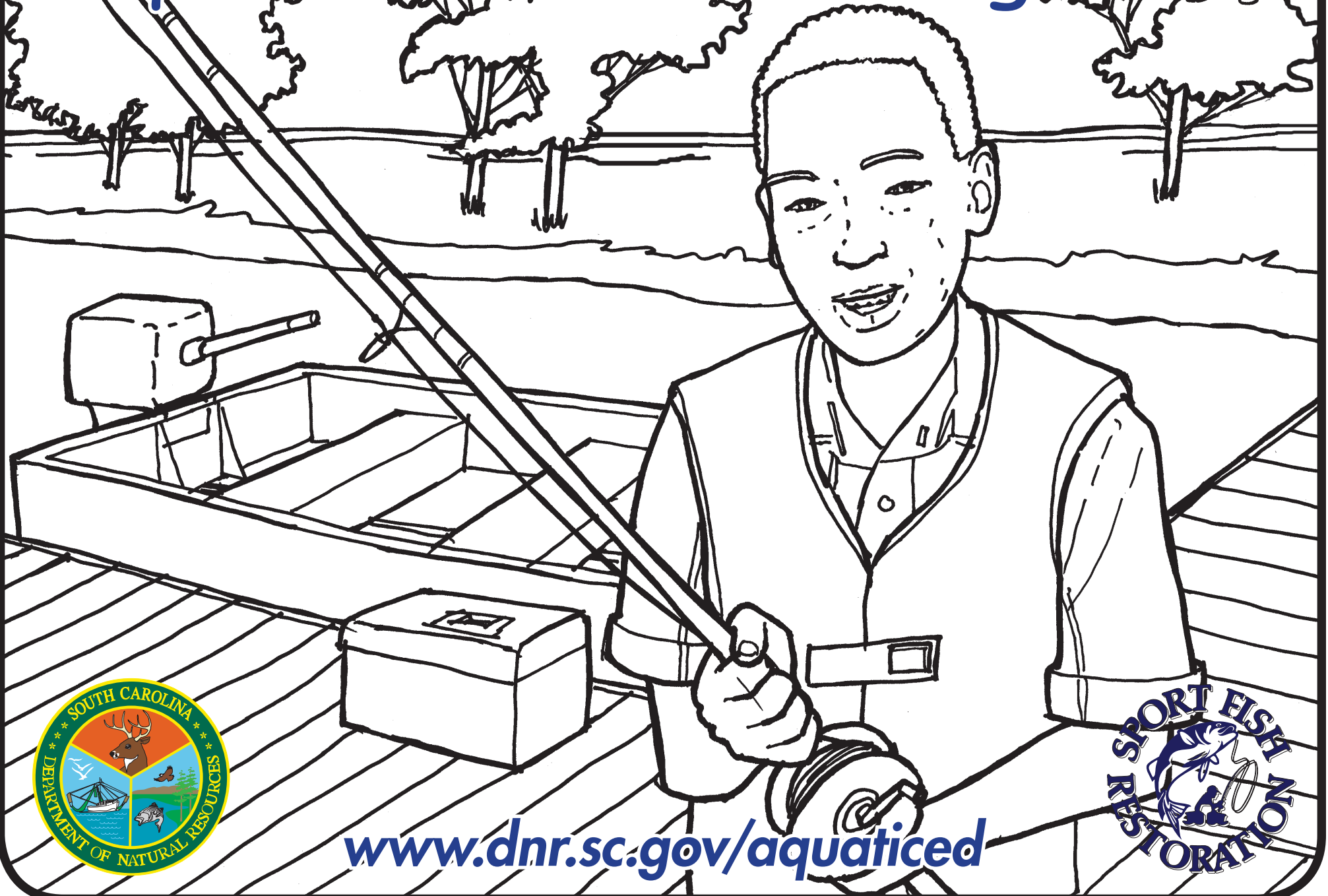


Aquatic A to Z Coloring Book



www.dnr.sc.gov/aquaticed

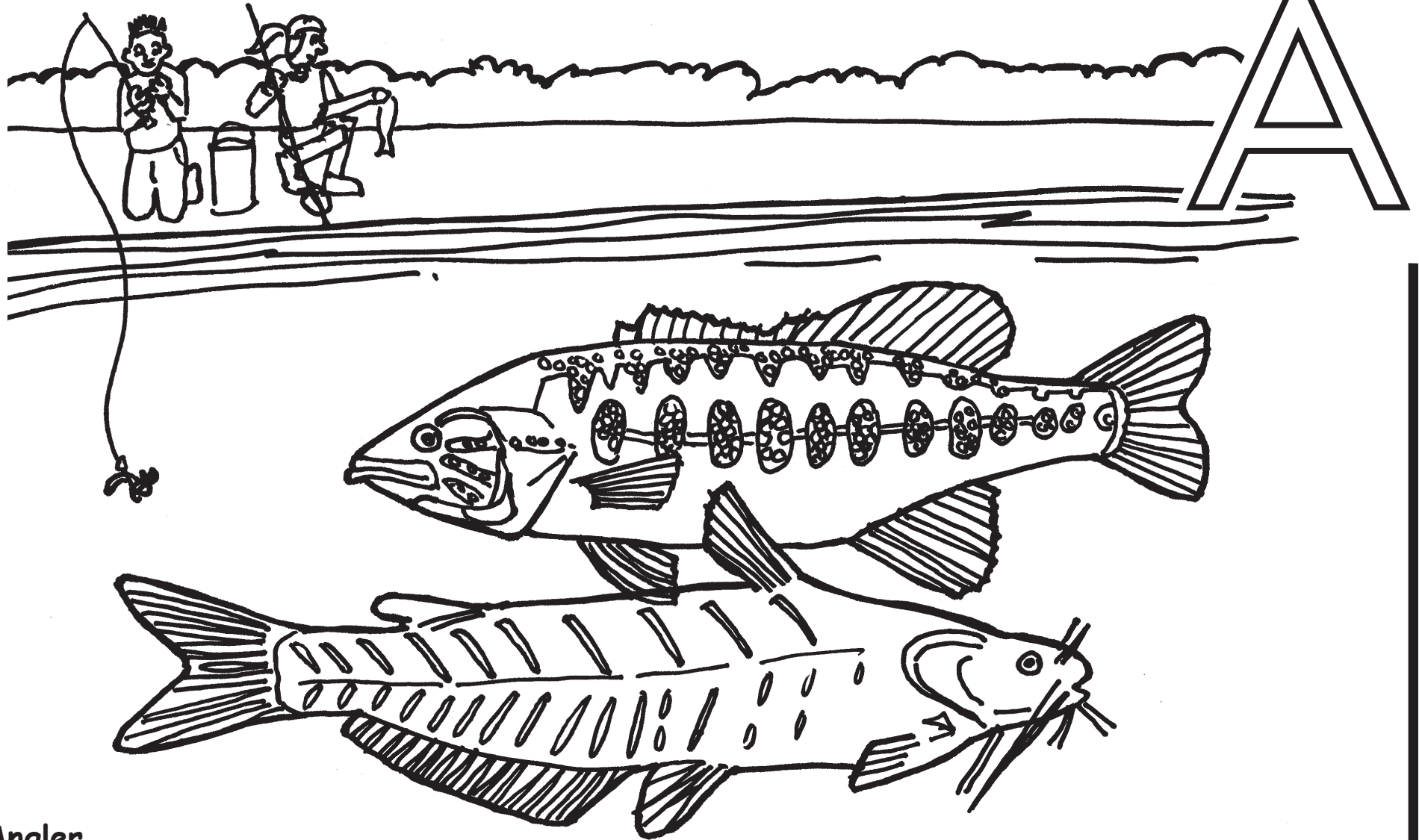




The South Carolina Department of Natural Resources is responsible for the wise management of the State's natural resources from the mountains to the sea.

Color by Numbers!

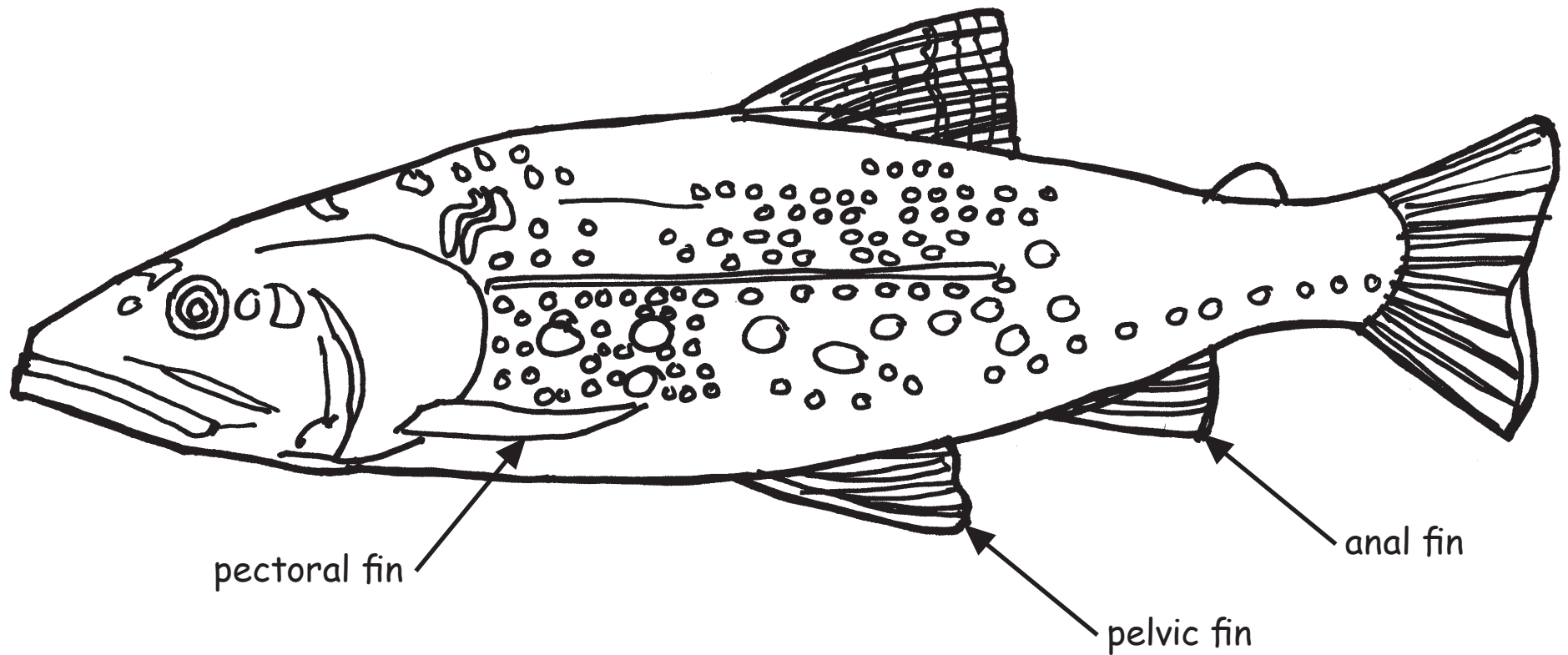
- #1 = red
- #2 = brown
- #3 = green
- #4 = light blue
- #5 = blue
- #6 = yellow



Angler

An angler is a person who fishes with a rod and a line. Anglers today have many different rod and line combinations to choose from, including spinning reel combos, fly rod and reel combos, and bait casting combos. Anglers can fish from docks, banks or boats. Purchasing a fishing license, paying your boat registration, and purchasing hunting and fishing equipment help fund the conservation of South Carolina's natural habitat, clean water and the fish and wildlife that live here.

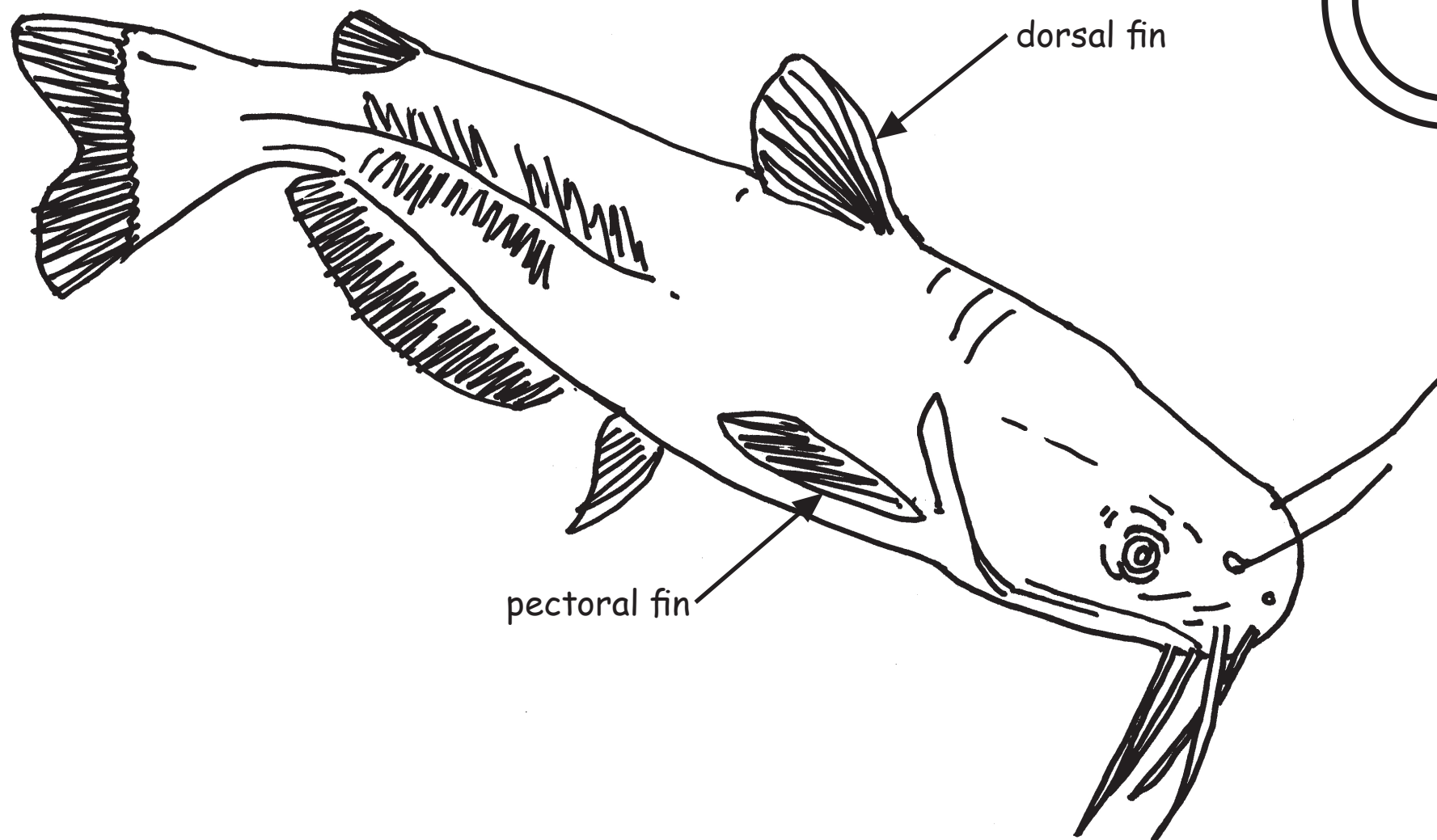
B



Brook Trout

Brook trout are the only native trout to South Carolina! They are typically olive-green with red and yellow spots. The pelvic, pectoral and anal fin are outlined with a black line. They will generally grow to be about 7 inches long and live in clean, cool mountain streams.

C



Catfish

Catfish are bottom-dwelling fish with whisker-like barbels around their mouth. The barbels are not harmful, though the dorsal and pectoral fins have sharp spines that will poke you if the fish is not handled correctly. Catfish are "optimistic eaters" and like to eat any sort of food they can find.

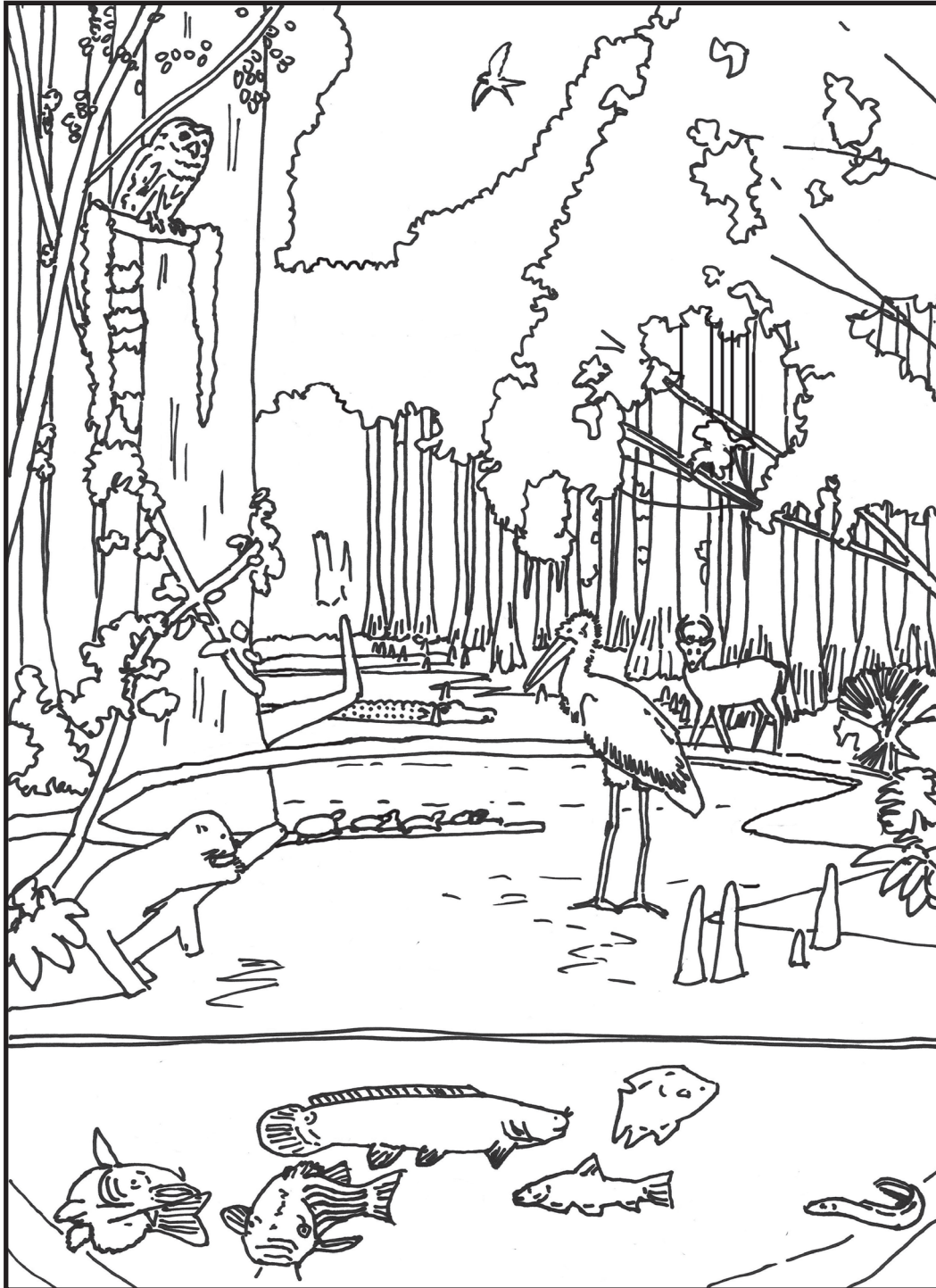
D



Diurnal

Diurnal species are mostly active during the daytime, as opposed to nighttime. Freshwater ecosystems can contain multiple diurnal species, including various fish, reptiles and amphibians. This characteristic can affect many daily activities, such as feeding, schooling and mating. The spotted salamander, the state amphibian, has great camouflage!

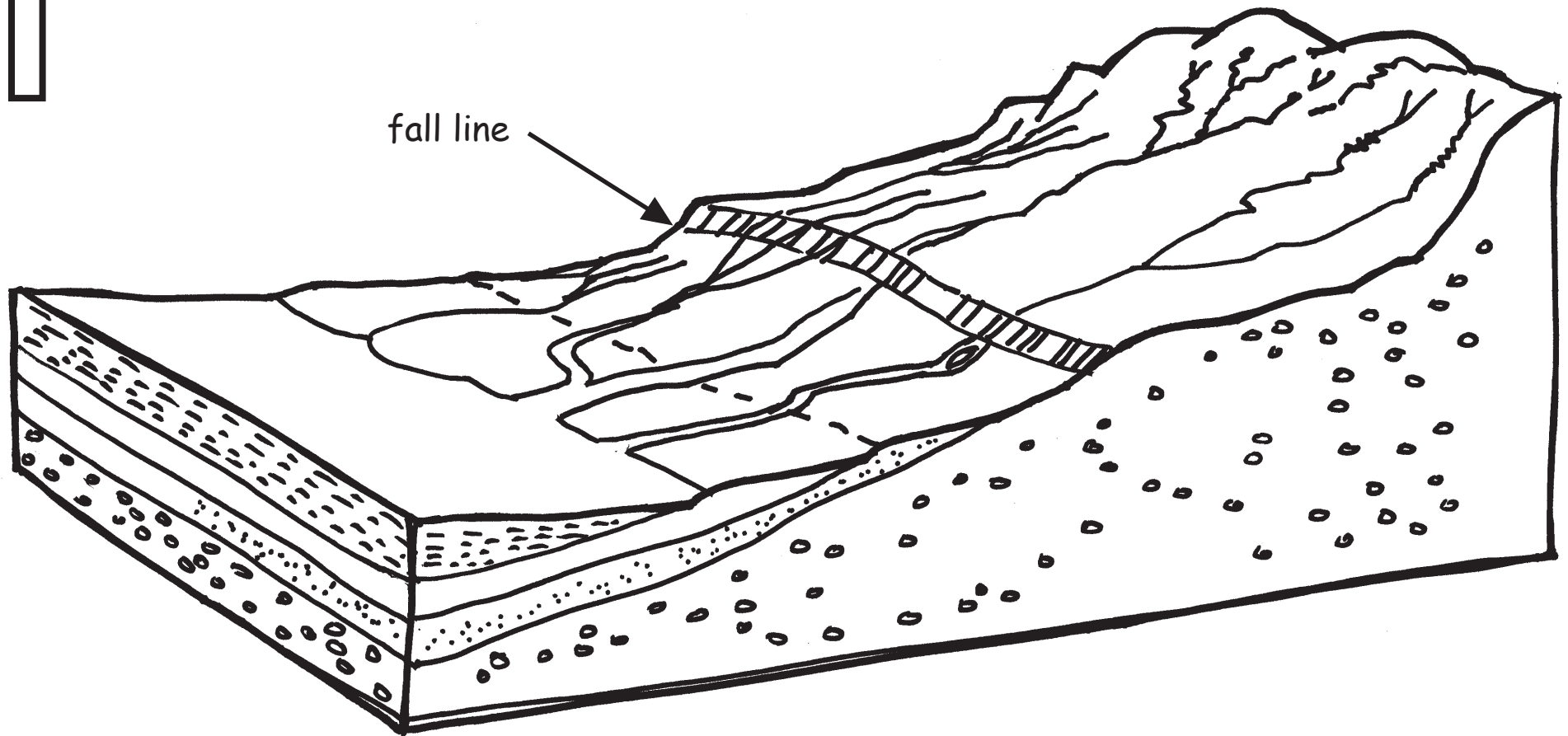
E



Ecosystem

An ecosystem is a group of communities of numerous species interacting with each other and their environment. Ponds and lakes are ecosystems where many kinds of fish interact with each other, the water, aquatic plants, and abiotic (non-living) materials such as rocks. Organisms in an ecosystem are dependent on one another for a healthy life.

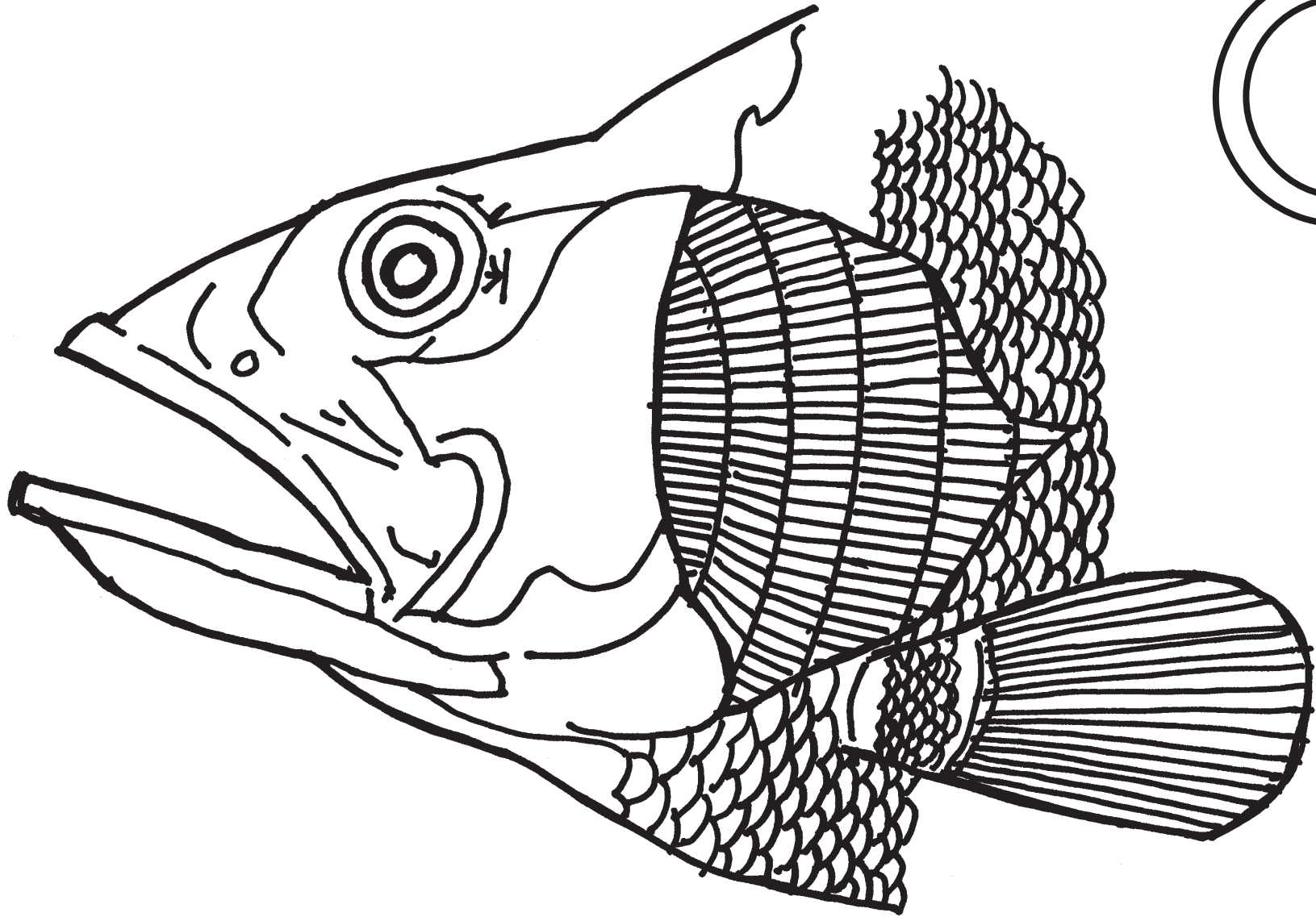
F



Fall Line

This line is not easily visible to the eye, it is a natural border that divides regions and is caused by geological activity. They cause a change in elevation on both sides and often create watersheds (area of land where the water all flows to the same place). Many cities developed along the fall line because boat travel could not continue on the river beyond the waterfalls that are frequently found at the fall lines.

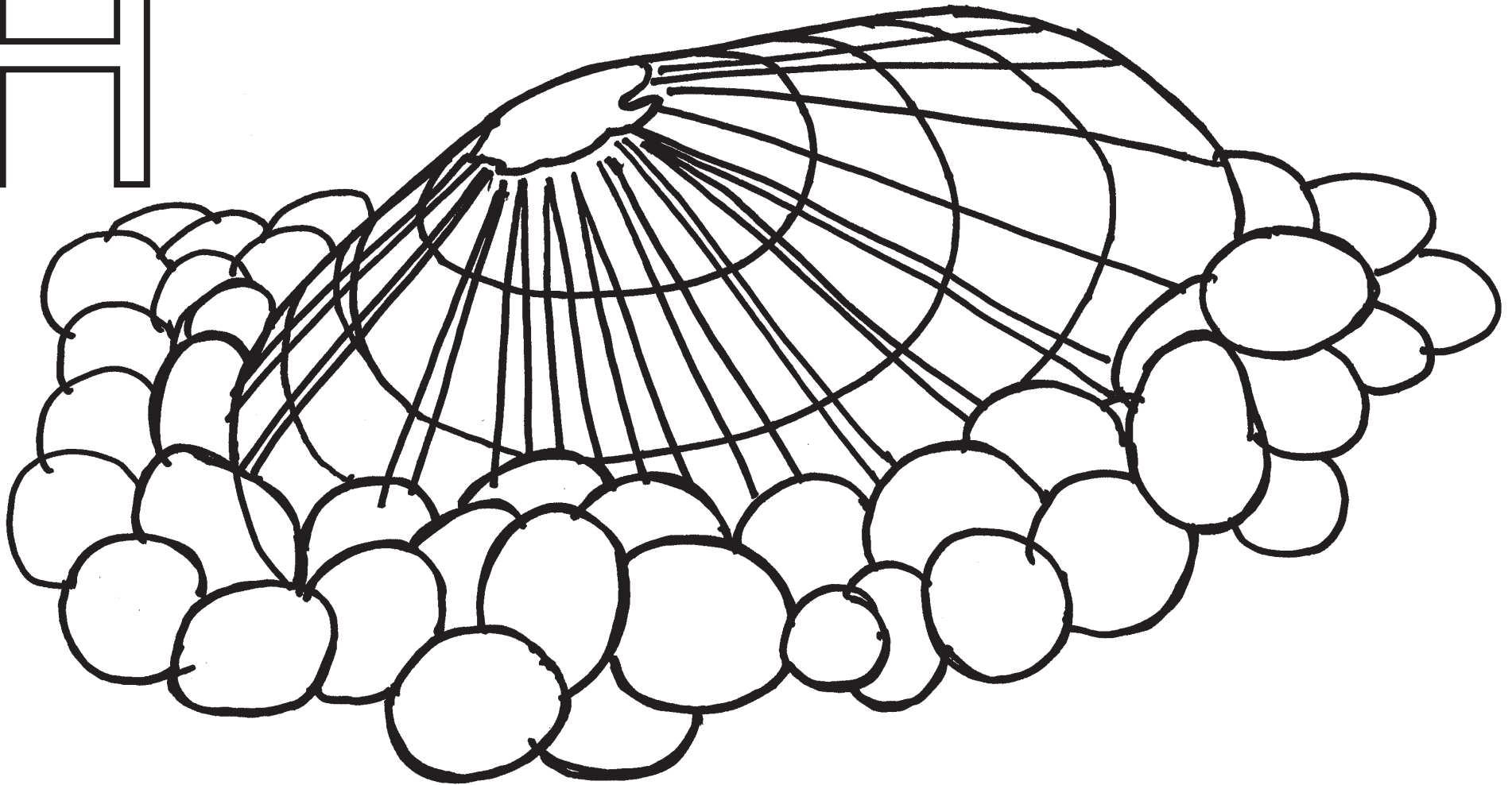
G



Gills

Gills are the respiratory organ of the fish that take in dissolved oxygen from the water. Fish cannot breathe outside of water because the gills cannot take in atmospheric oxygen. These organs are sensitive to damage, so they must not be grabbed when a fish is being handled.

H



Heelsplitter

The Carolina heelsplitter is a greenish-brown mussel. It is considered to be the rarest and most critically endangered mussel in the Eastern United States and is limited to very few river systems in North and South Carolina. The heelsplitter is sensitive to poor water quality and habitat conditions.



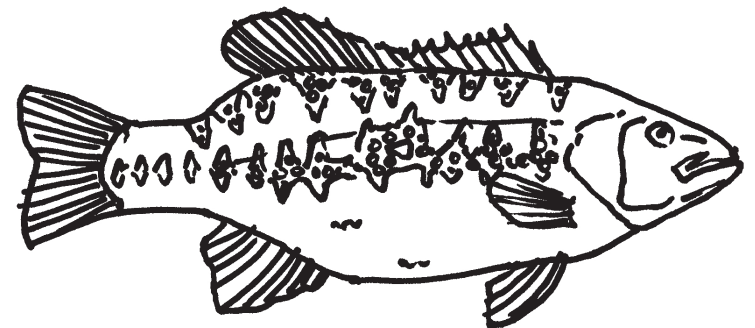
Hydrilla

Invasive Species

Invasive species are plants or animals that are not native to specific locations. They can adapt quickly and easily to new locations, making them spread faster. Invasive species can cause harm to habitats by outcompeting native species for resources. They are usually spread by human activity, but by accident. You can help reduce the spread of invasive species by not releasing your bait bucket, freeing unwanted pets and by cleaning fishing equipment and boats.

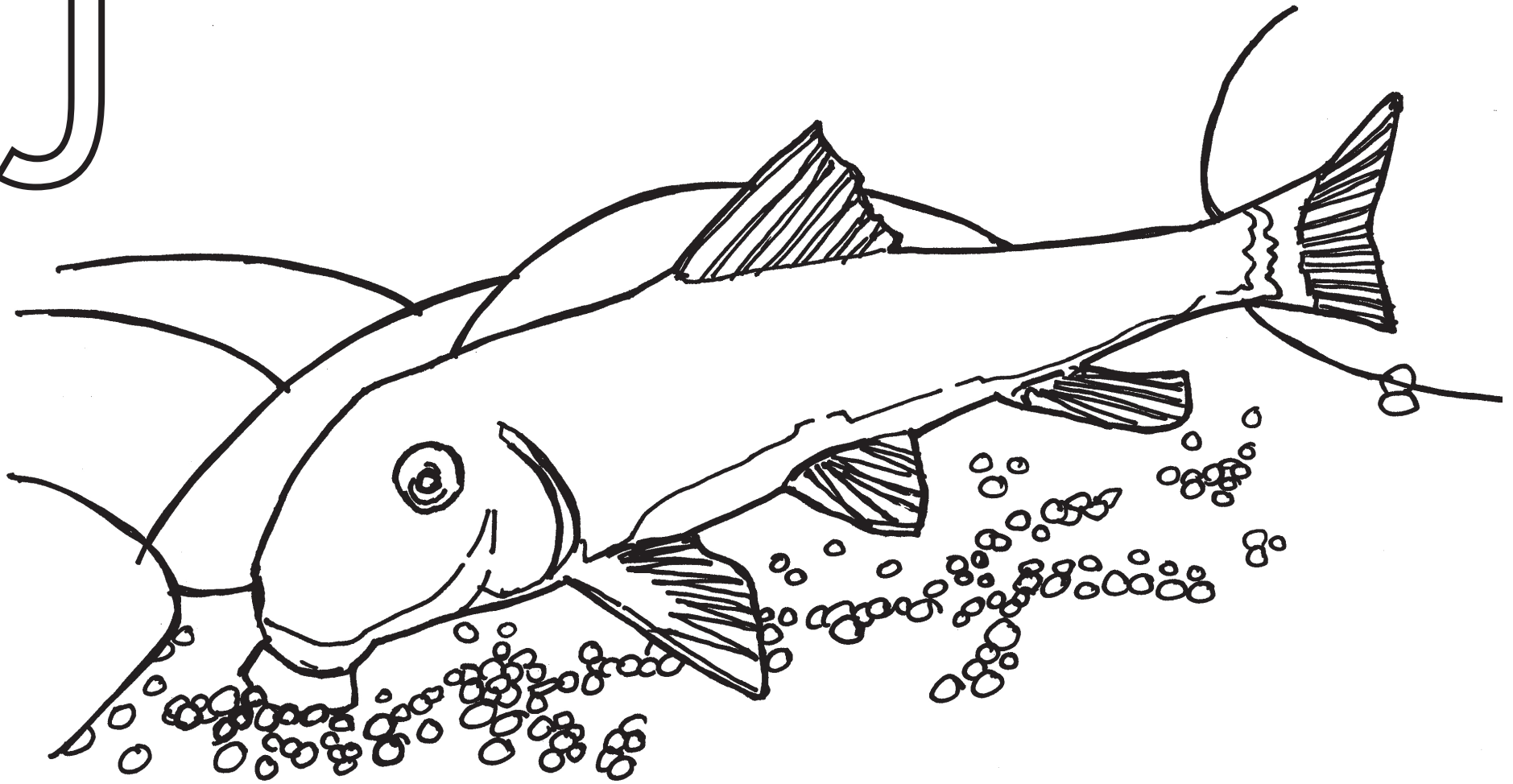


Feral hog



Spotted bass

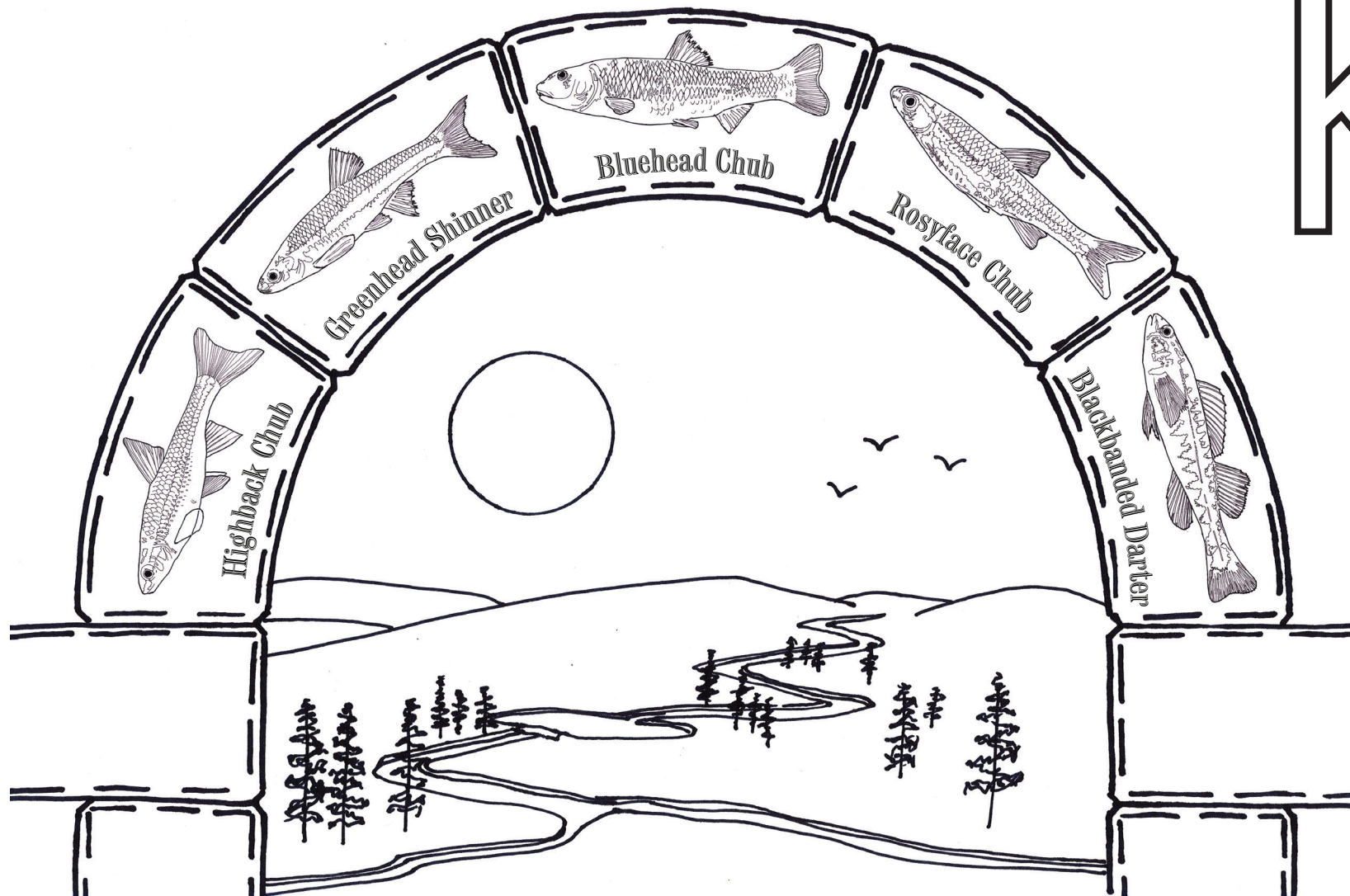
J



Jumprocks

Jumprocks are a type of freshwater fish related to suckers, a species of fish that use their vacuum-like mouth to feed on algae and other organisms that grow on submerged objects. Both the striped jumprock and brassy jumprock are found in the Blue Ridge and Piedmont regions of the southeastern U.S. They prefer to live in shallow, rocky areas of small to medium-sized rivers and streams.

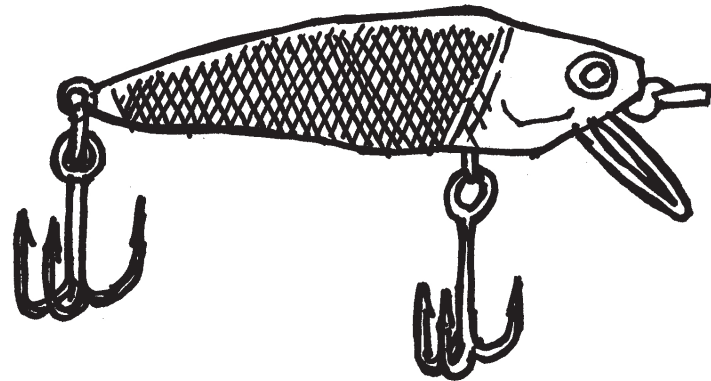
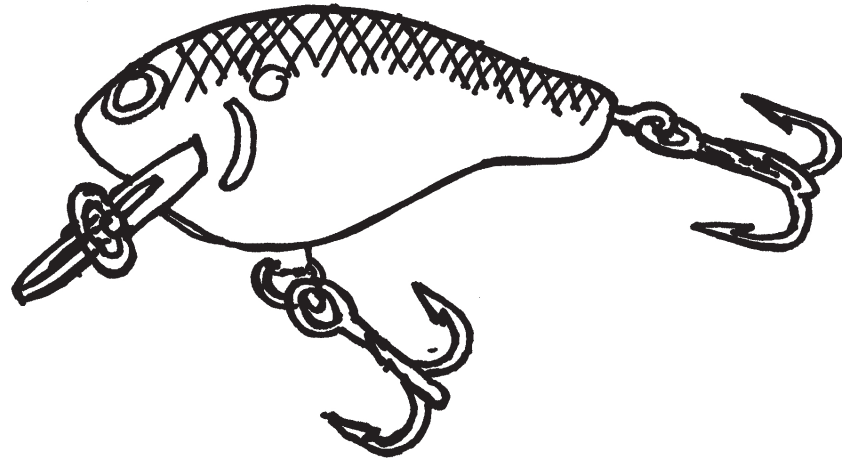
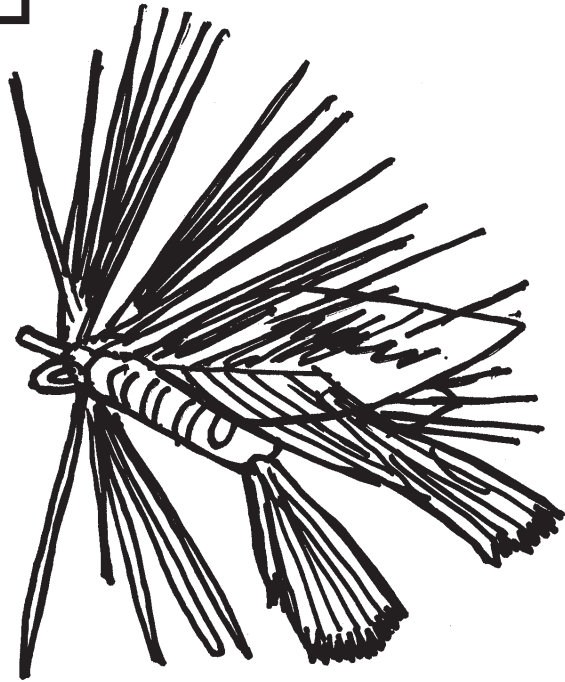
K



Keystone Species

In an ecosystem, all living things rely on each other and work together to be healthy, but some species are crucial to the way all species interconnect. This network helps to maintain the structure of communities. If a keystone species is removed from a habitat, it can change dramatically and some animals may disappear. In South Carolina, rivers and creeks, the Bluehead Chub is an example of a keystone species. They build nests using gravel, which are used by many other local species, some which depend entirely on the Bluehead Chub nest for their own reproduction.

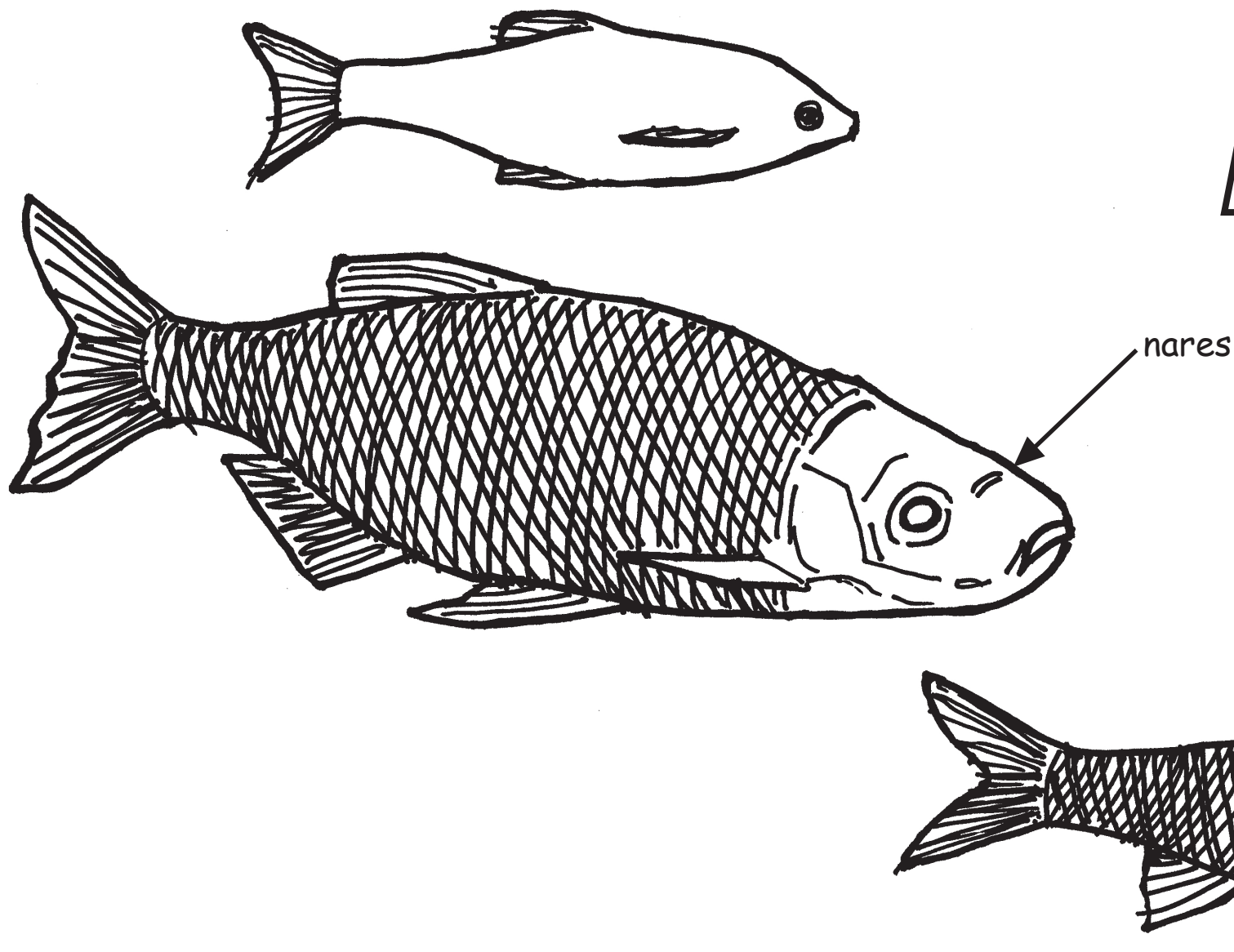
L



Lure

Lures are types of artificial baits used to attract the attention of a fish. They come in various shapes, sizes and colors and sometimes must be tugged on with the rod to mimic the motions and movement of live bait. Lures usually come equipped with one or more hook.

M



Minnow

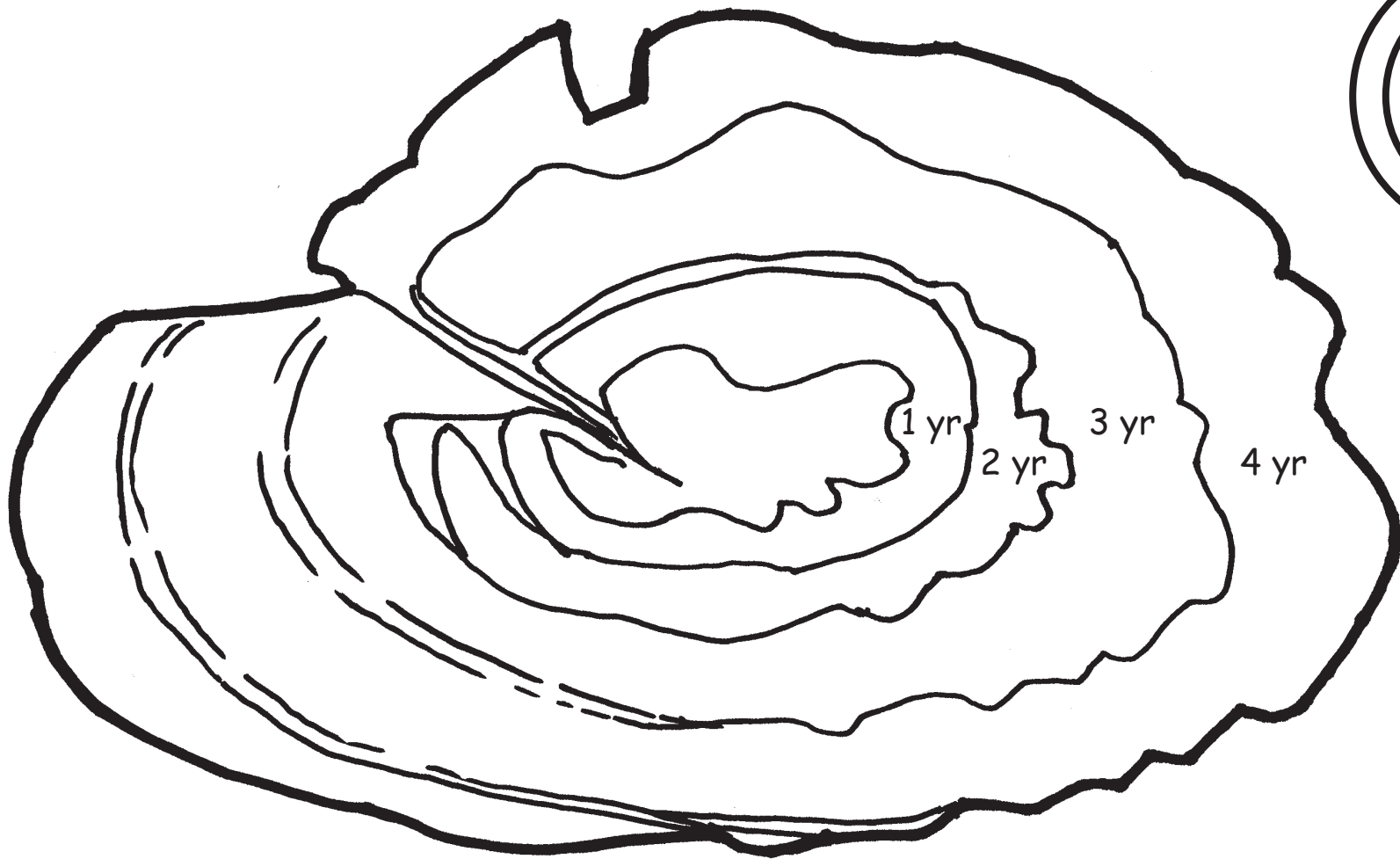
Minnows are very small fish that live in lakes and rivers. Minnows can be hooked in between nares (nostrils) or under their dorsal fin and used as live bait to catch larger fish, such as largemouth bass. "Minnow" is the common name of the largest family of fishes in North America, Cyprinidae.

N



Nonpoint Source Pollution

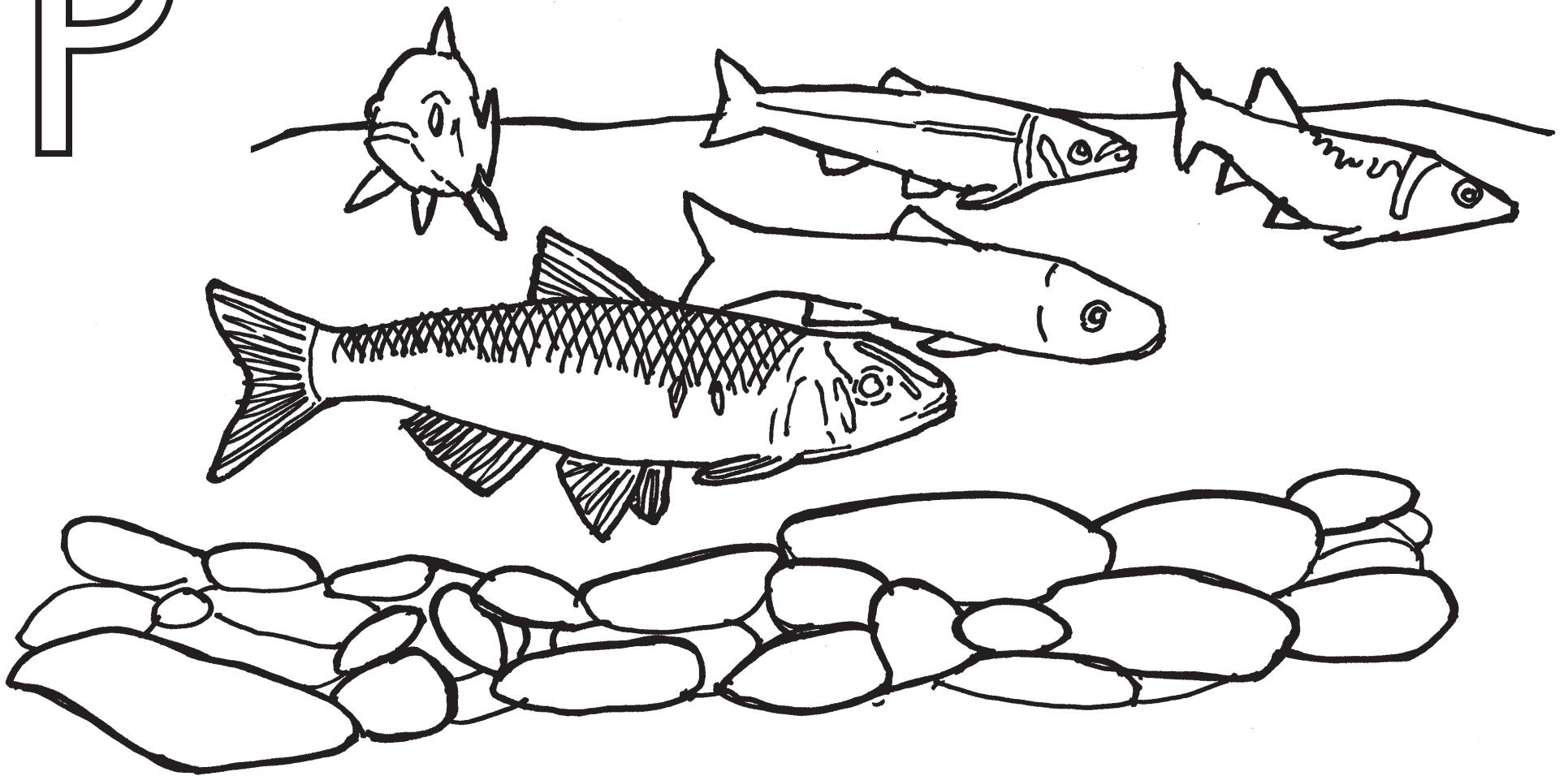
This type of pollution usually results from stormwater runoff after rain or snow melts. Nonpoint source pollution can come from many sources as it travels over land, picking up and carrying natural and human-made pollutants before depositing them into lakes, rivers and wetlands. This can be harmful to fish, wildlife and humans. Like the name suggests, nonpoint, this type of pollution can be very hard to pinpoint to one cause. You can help prevent nonpoint source pollution by participating in a litter clean-up, planting grass and trees in bare areas, and disposing of household chemicals properly.



Otolith

Fish have an inner ear bone, called an otolith, which assists the fish with balance, gravity and movement. Otoliths are hard calcium carbonate (commonly found in rocks and even chalk) structures located directly behind the brain of bony fishes. Biologists can determine the fish's age by counting the darker-colored zones on the otolith which are found in between periods of growth, much like counting the rings of a tree. Different fish species can have differently-shaped otoliths. For example, this fish is approximately 4 years old.

P



Population

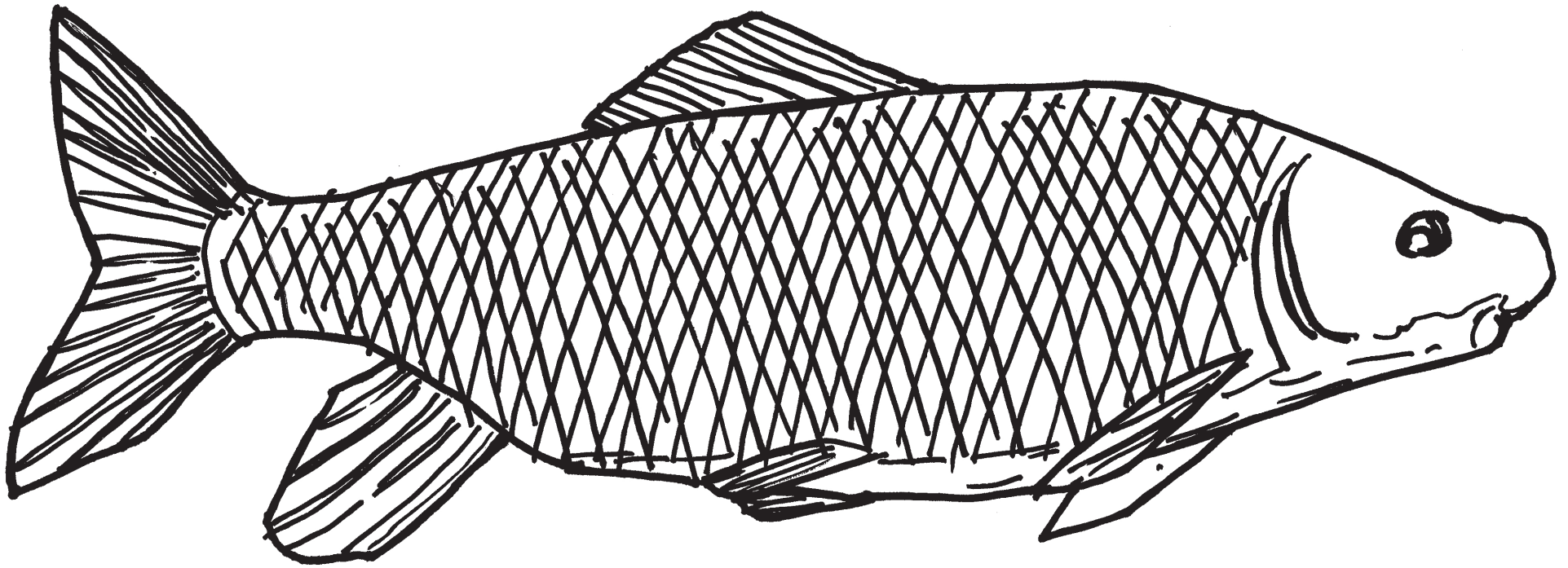
Populations are groups of the same species living in the same location at the same time. Lake and pond communities are comprised of numerous populations of different fish species that interact with each other. More or larger populations exist for some species than for others.



Quahog clams

Quahog clams are hard-shell clams that live in mudflats along the entire Eastern Coast. These organisms are bivalves, meaning that their soft bodies are protected by a two-part shell. They are able to extend feeding tubes above the surface of the mud; they use these to suck in water and filter out oxygen and plankton for food using their gills. They are able to move through the mud using a muscular foot.

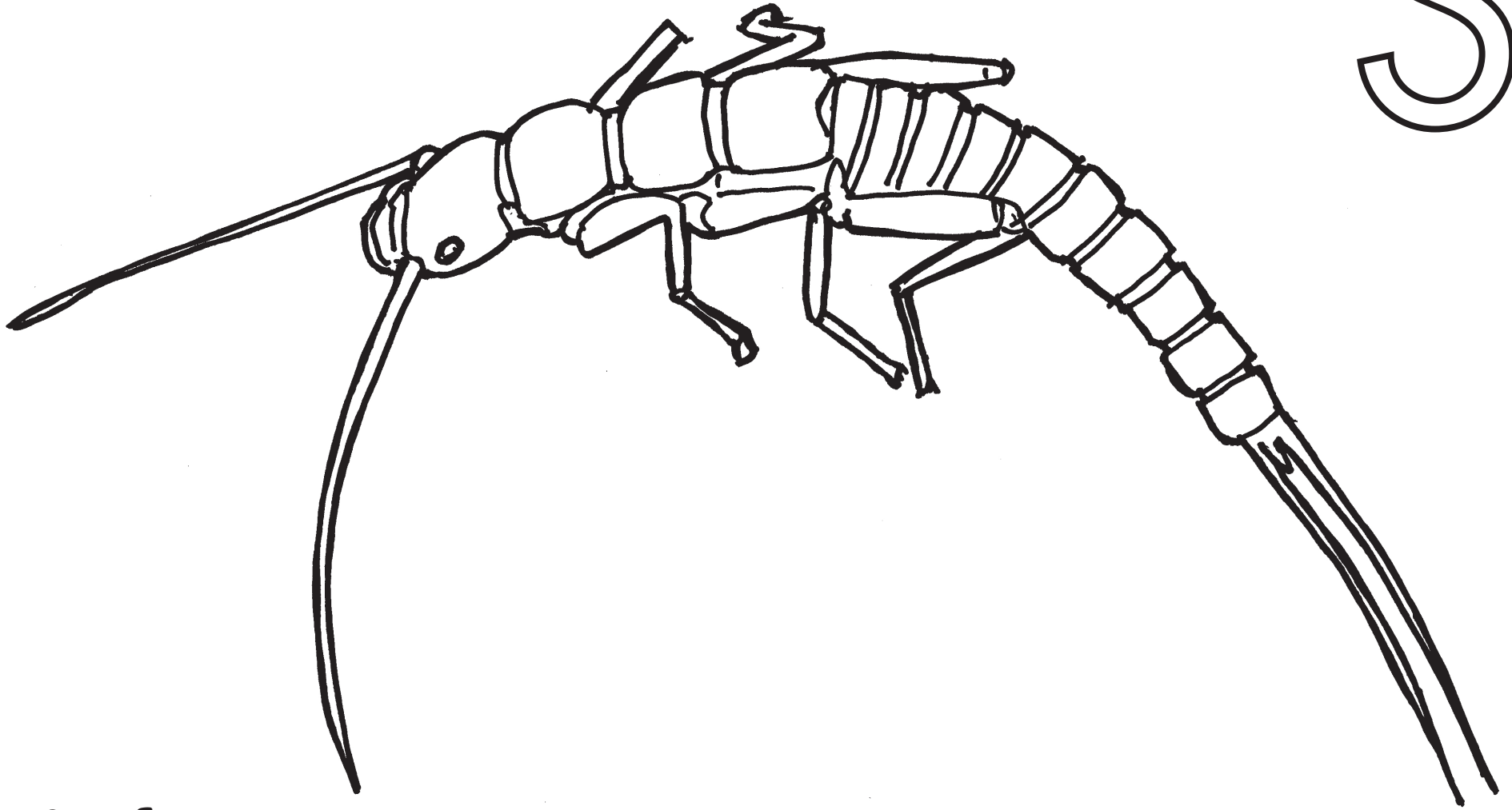
R



Robust Redhorse

This fish was first described by a scientist in 1870, but went unnoticed for more than 100 years! In recent years, biologists have been working to better understand the life history of this lost fish by protecting their habitat. Hatcheries have also raised robust redhorse to stock back into their native habitat. They live in large, rocky-bottom rivers in the Piedmont region. They are considered bottom feeders and like to eat clams, insects and algae.

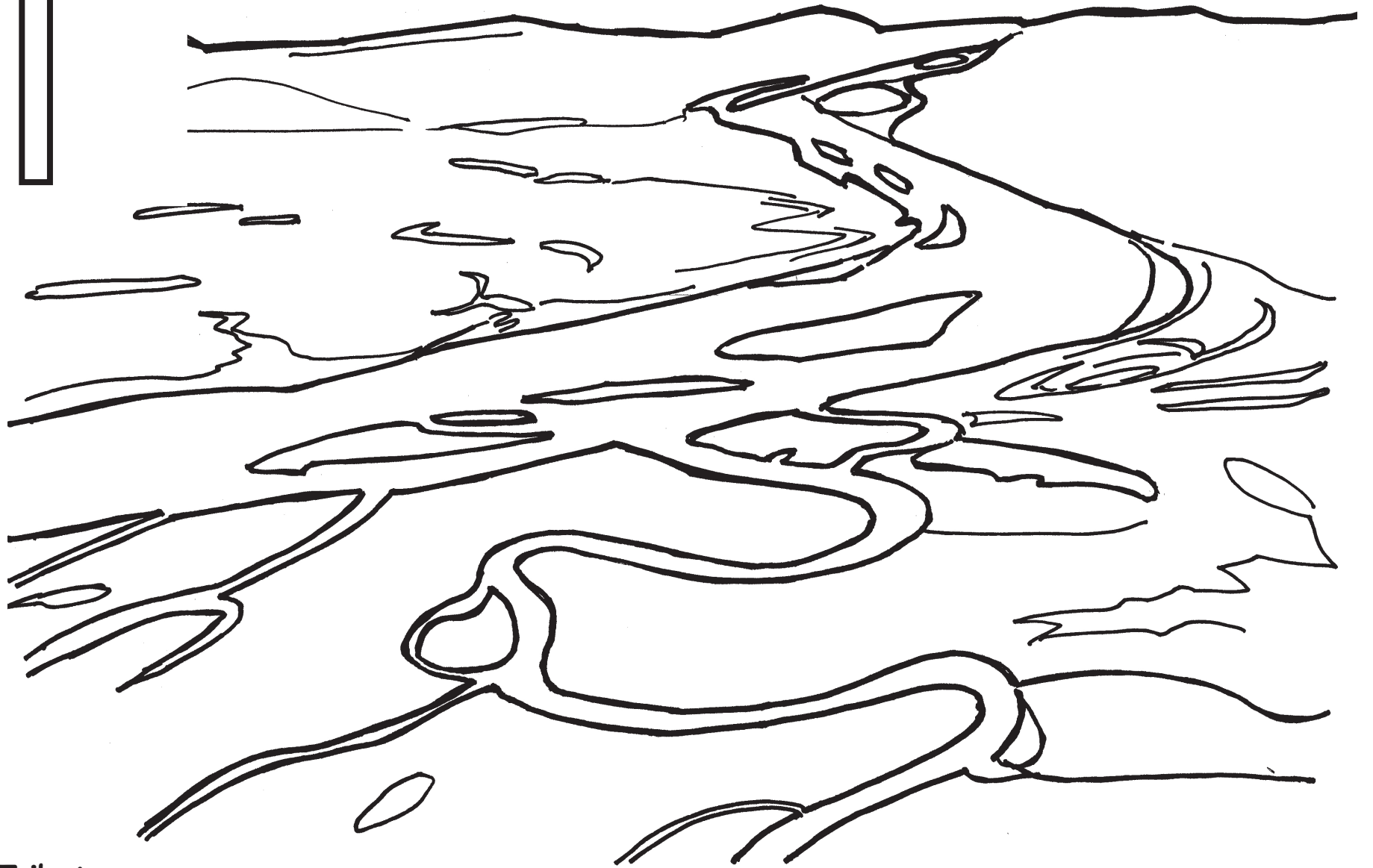
S



Stonefly

The stonefly is an insect that spends the first part of its life in the water, and the second part of its life in the air and on land. Stoneflies lay their eggs in water and the larvae undergo incomplete metamorphosis, making them look more like an adult each time they shed their skin. Stoneflies are sensitive to pollution, so large quantities indicate good water quality.

T



Tributary

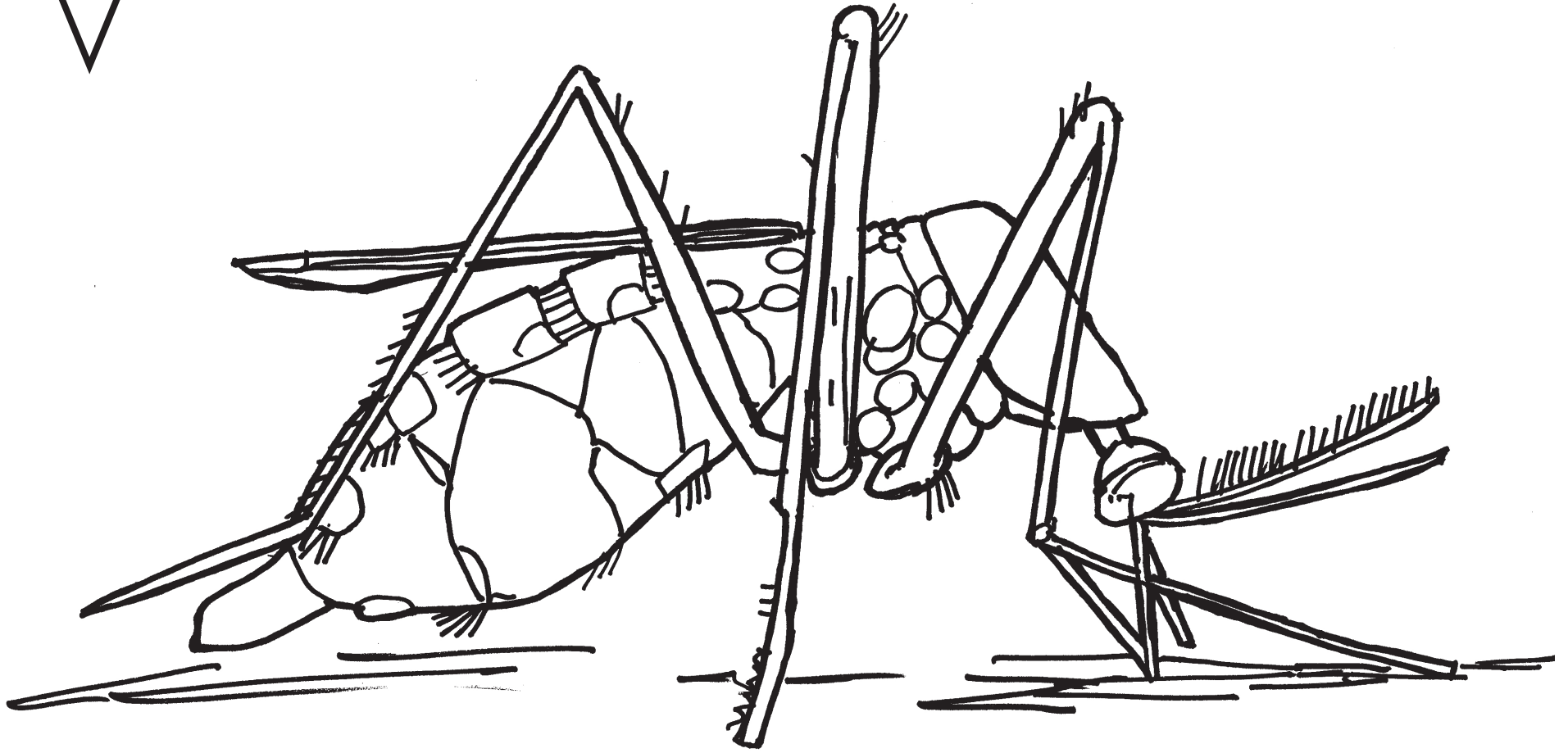
Tributaries occur where rivers or streams flow into larger rivers or lakes. Many species of trout spawn in these areas where the water is fast-moving. In addition, migratory species, like shad, striped bass and sturgeon, return to the same tributary where they were hatched in order to spawn. Other semi-aquatic species, such as river otters, also call tributary areas their home.



Urbanization

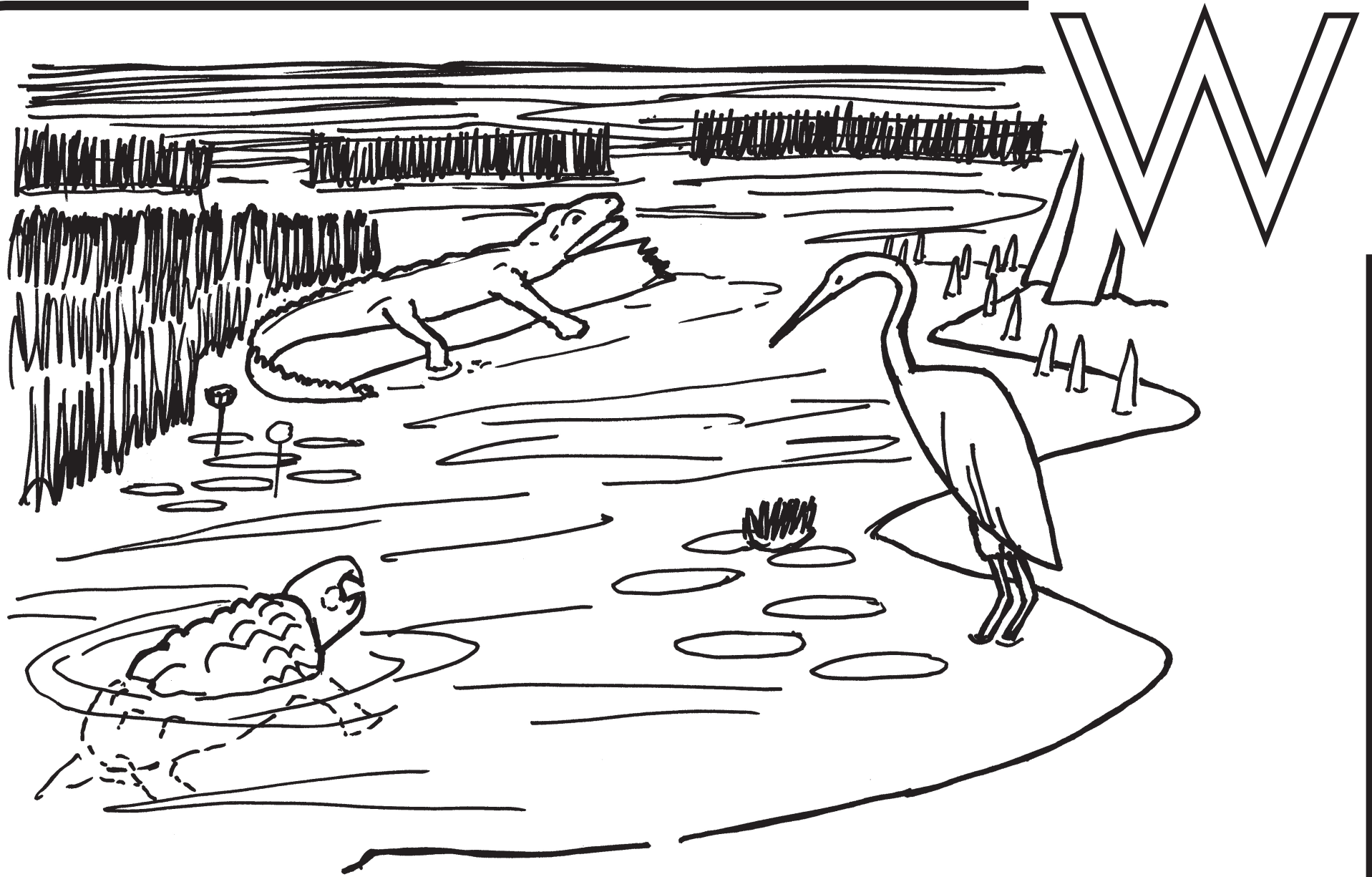
An urban area is used to describe characteristics of towns or cities. The process of making an area more like cities is described as urbanization. When populations grow, more space is needed for roads, homes, buildings, schools and stores. Natural areas are sacrificed to support urban growth. There are many surfaces in cities that are hard for water to soak through, like cement. This is referred to as an impervious surface which leads to more water traveling down storm drains to rivers instead of soaking in through the soil. We can help prevent this by using gravel instead of pavement and planting more rain gardens which can slow down water and soak up run-off.

V



Vectors

Vectors are animals or organisms that can transmit diseases between hosts. The mosquito is an example of a vector. Although mosquitos may cause sickness in humans, they are an important part of nature's food chain. Many fish, frogs and salamanders rely on mosquito eggs and larvae as a main part of their diet.



Wetland

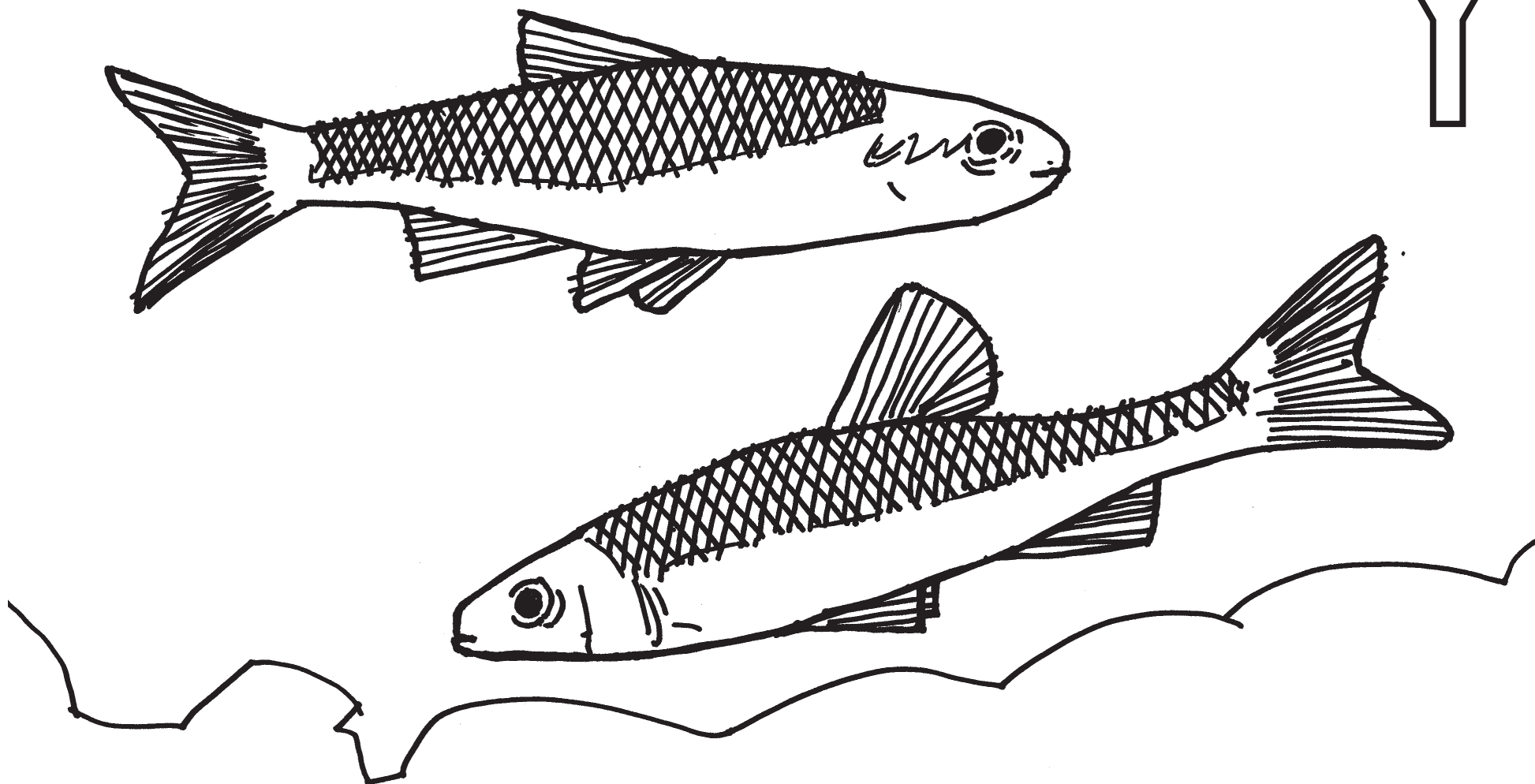
Wetlands are areas where the water covers the soil all year or varying times during the year. Wetlands offer diverse habitats for land and water animals. They provide nurseries for juvenile animals, floodwater storage and help improve water quality. A wetland is nature's natural filter for water returning to the groundwater or soil.

X

Extinction

Extinction is when a species no longer exists. Plants and animals can't be brought back after extinction. The species is gone forever.

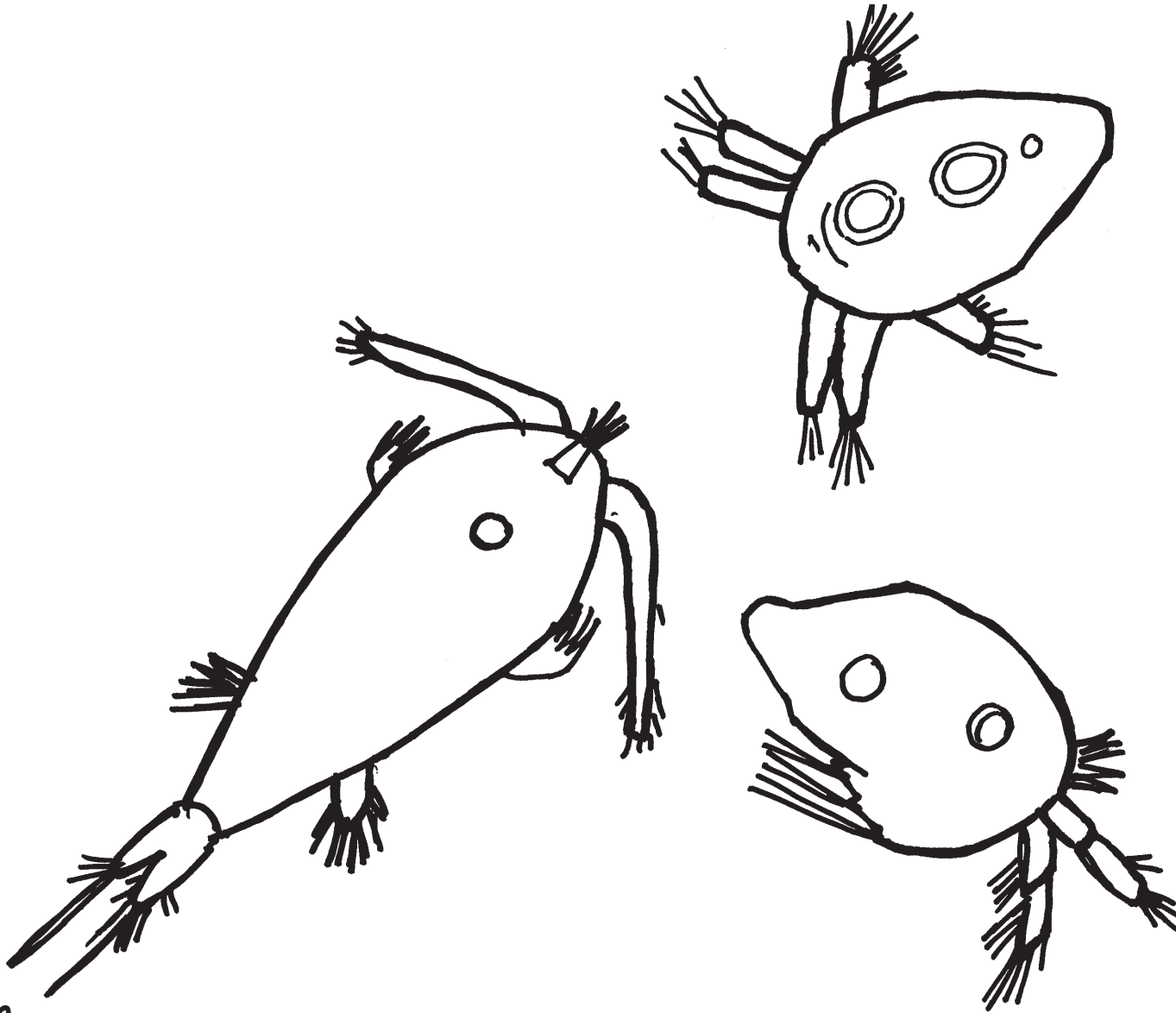
Y



Yellowfin shiner

Yellowfin shiner is a species of ray-finned fish native to the southeastern U.S. They can be identified by a black stripe that extends down the side of its body and fins that range from red to yellow coloring. Shiners are typically found in smaller waterways with rocky bottoms.

Z



Zooplankton

Zooplankton are microscopic animals that float along with the current in the top water of the ocean, or the surface water column. They are unable to produce their own food, and are responsible for eating algae that otherwise would grow out of control. Zooplankton are a key component of the marine system food chain — these small animals are a main food source for many other organisms known as “filter-feeders.”

The Aquatic Education Section of the SCDNR offers FREE education programs on recreational fishing techniques, opportunities to fish and angler ethics. Here are some of the unique, fun fishing and learning opportunities available.

Family Fishing Clinics

Family Fishing Clinics are an introductory class to fishing. Families with kids ages 4 and up learn how to tie fishing knots, rig a rod and reel, cast and try their hand at fishing. The classes offer hands-on learning opportunities for all anglers, regardless of age and skill level! Clinics can also be scheduled for your scout, school or church group. The family fishing clinics are led by certified fishing instructors trained by SCDNR staff. If you have a passion for fishing and teaching others, consider signing up for the training.

Youth Bass Fishing Clubs

SCDNR, The Bass Federation of S.C. and B.A.S.S. have teamed up to help bring youth bass fishing clubs to schools around the state. Students can establish school bass fishing clubs to compete for prizes, scholarships and more on a club, state and national level. SCDNR hosts a state bass fishing championship for middle and high school teams during the weekend of the Palmetto Sportsmen's Classic at the South Carolina State Fairgrounds in Columbia.

Fishing Tackle Loaner Program

The tackle loaner program has sites all around the state in various state and county parks as well as all of SCDNR's regional offices that allow adults, kids and families to try their hand at fishing. Whether you are visiting the state or just want to try fishing, checking out a rod, reel and tackle is free. Bring your own bait, purchase a license for those 16 years and older and the fishing fun is free (some parks may have an entry fee).

Fishing Rodeos

Fun for the kids and the whole family! Rodeos are offered throughout the state as an opportunity to land a fish and take it home for dinner. Sign up online, bring your gear and a cooler.

Trout in the Classroom

From egg to fingerling, schools in select counties are eligible to apply for the program and raise rainbow trout in the classroom. The tank is utilized as a teaching tool to introduce concepts such as statistics, engineering, life cycles, biology, chemistry, environmental impact, recreational angling and resource management.

To learn more about these education programs,
visit www.dnr.sc.gov/aquaticed for more information
or email aquaticed@dnr.sc.gov





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