

Roadblocks for Fish

ACTIVITY DESCRIPTION:

Learning the types of problems encountered by a fish moving upstream to spawn.

OBJECTIVE:

- To learn what an anadromous fish is.
- To learn about the obstacles they face while trying to reproduce.
- To exercise skills in science and language arts.

AGE GROUP:

Grades 4-5

MATERIALS:

None needed

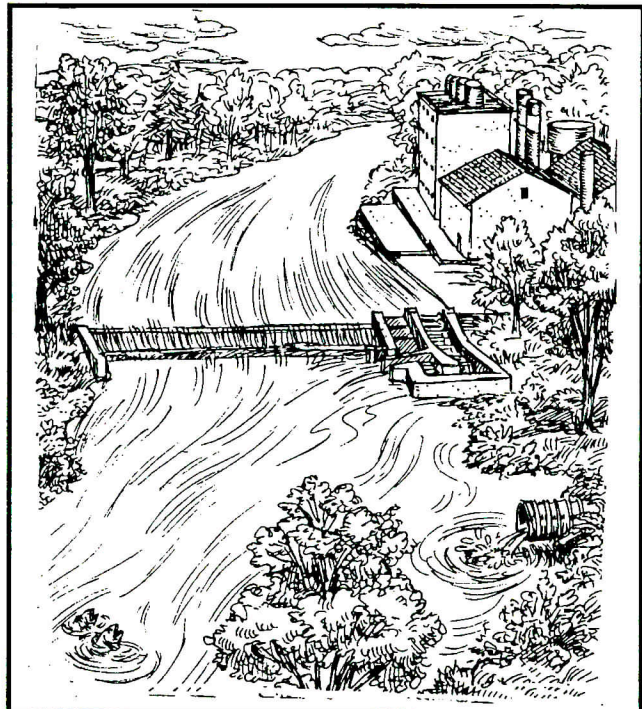
Introduction:

Fish that live in saltwater but return to freshwater to lay their eggs (spawn) are called anadromous fish. These fish are very important to the commercial and recreational fisheries in the Albemarle-Pamlico area. During their migrational travels they often face poor water quality problems and an obstacle course of stream and river blockages.

Every spring thousands of fish enter our sounds from the ocean following a natural urge to reproduce. These fish will move through the Sounds and into our rivers in an effort to reach their spawning grounds. Fish that live in the ocean but return to freshwater to spawn are called **anadromous** fish. An example you may know about is the salmon. Salmon are often shown leaping up waterfalls or being scooped up by bears during their spawning runs in the Northwestern United States. Salmon do not occur in the Albemarle-Pamlico system, but seven other types of anadromous fish occur in our rivers. They are the striped bass, Atlantic sturgeon, American shad, hickory shad, alewife, and blueback herring. The shortnose sturgeon once occurred here but is now an endangered species and believed to no longer exist in the Albemarle-Pamlico system.

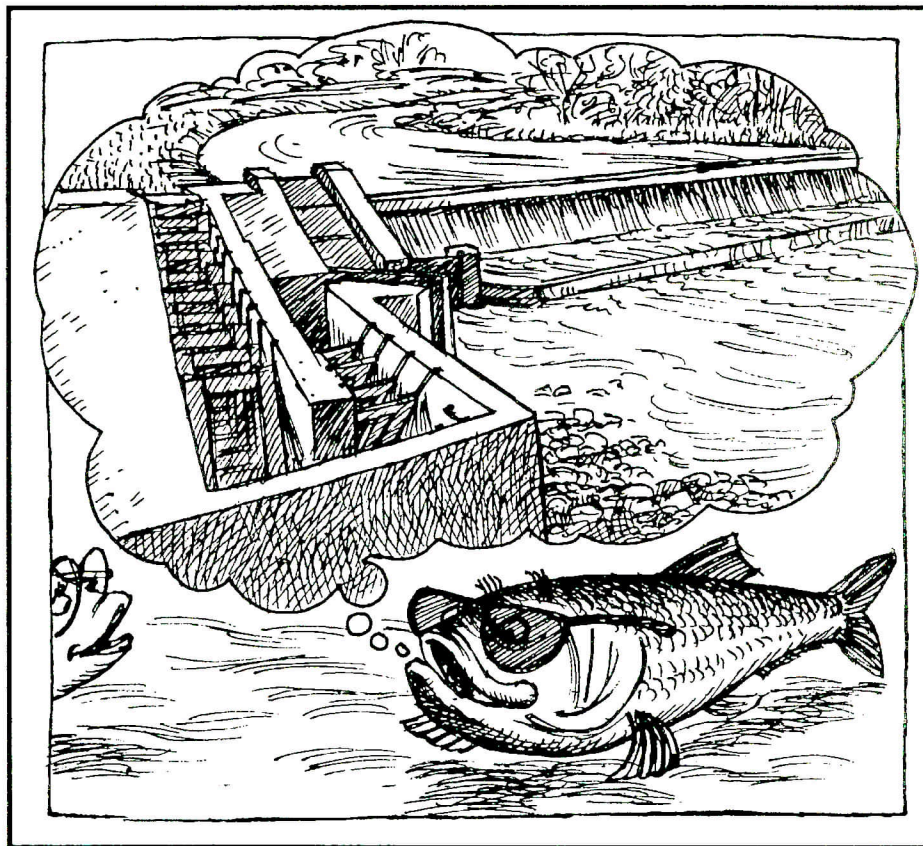
Along their routes they face many problems. As they swim through the sounds and up the rivers, the fish pass through a maze of sport and commercial fishermen. The fish that are not caught continue upstream and commonly encounter many problems with blockages. Dams on rivers are a good example; when a fish reaches a dam it cannot continue upstream. Culverts, which are pipes under roads that allow streams to pass

through, are another example of blockages. Fish do not like to swim through them. Poor water quality is another problem encountered by migrating fish. Sometimes wastes from our homes and factories, which can kill adult fish, are released into the rivers, and also harm the eggs or the fragile young fish as they drift back downstream toward the Sounds. These materials may come from industries, or can be carried by the rain from our yards, farm fields, or sewage treatment plants. We must be sure that the things we release into the rivers and streams will not harm fish.



Activity: Traveling Fish

To better understand some of the problems encountered by migrating fish, pretend you are riding in a car. You are traveling down a busy road, on the way to your wedding, until you see a traffic jam. "What's wrong?" you ask. Soon you discover a bridge is out ahead and you cannot complete your journey. This is what happens when a migrating fish encounters a dam or culvert which it cannot swim past. How can the fish move upstream to spawn? Unfortunately, in a river there are usually no detours to take to travel around an obstacle.



Now imagine you are traveling along a road in your new jeep on a warm spring day. You removed the top of the jeep and left it at home on such a beautiful day. You drive by a large factory releasing lots of smoke into the air. The air burns your eyes and causes your throat and lungs to hurt when you breathe. You cannot escape the smoke, and you wish you had the jeep's top to provide you with some shelter. This is what an anadromous fish encounters as it passes a discharge of harmful chemicals into our streams. These discharges can sometimes kill the adult fish, their eggs, or young. Not all discharges into rivers are harmful, but we must be sure we clean water properly before allowing it to enter our rivers. Have you ever been in a smoked-filled room? Did the smoke burn your eyes? If the fish cannot spawn successfully, what will happen to their population?

If you have ever been outside near a busy road, you may have noticed how a line of trees or a wall helps lessen the amount of noise you hear from passing traffic. Areas of natural plants and trees along streams work much the same way to decrease the amount of harmful additions of soil, fertilizers, pesticides, and herbicides, that wash into streams and rivers. These borders make a river more pleasant for fish to swim in and also for people to enjoy on a hot summer day.