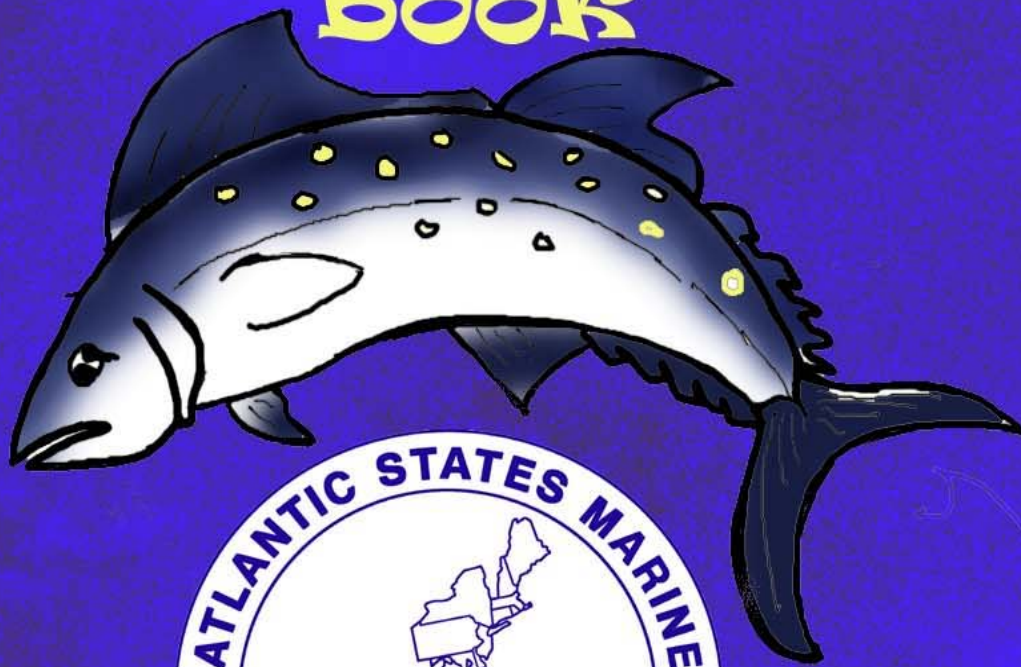
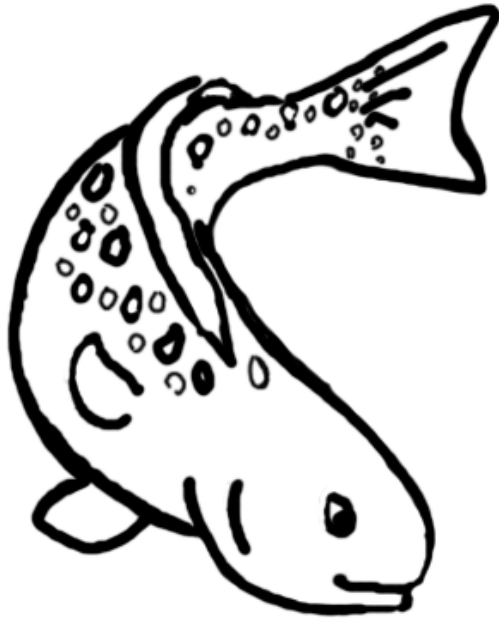


ASMFC Youth Activity Book



Written and Illustrated by:
Jennifer Lamb

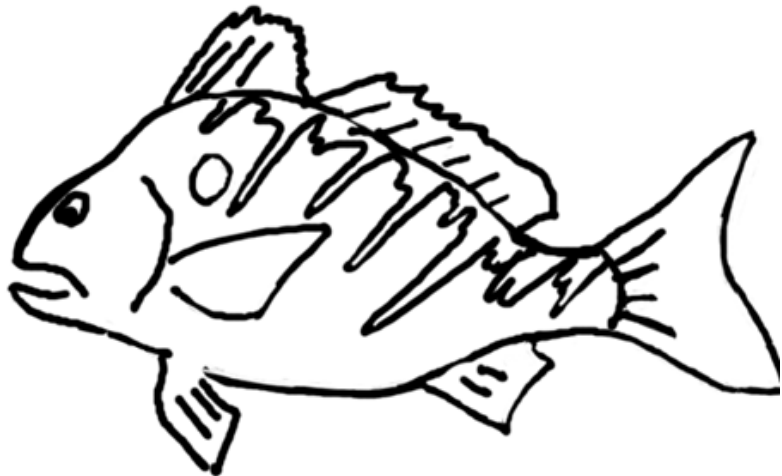


Hello, my name is Speck.

I am a **Spotted Sea Trout** and live in estuaries and in waters along the coast of the Atlantic Ocean.

Hi, my name is Spot and I am, well, a **Spot**, named for my spot just behind my gills.

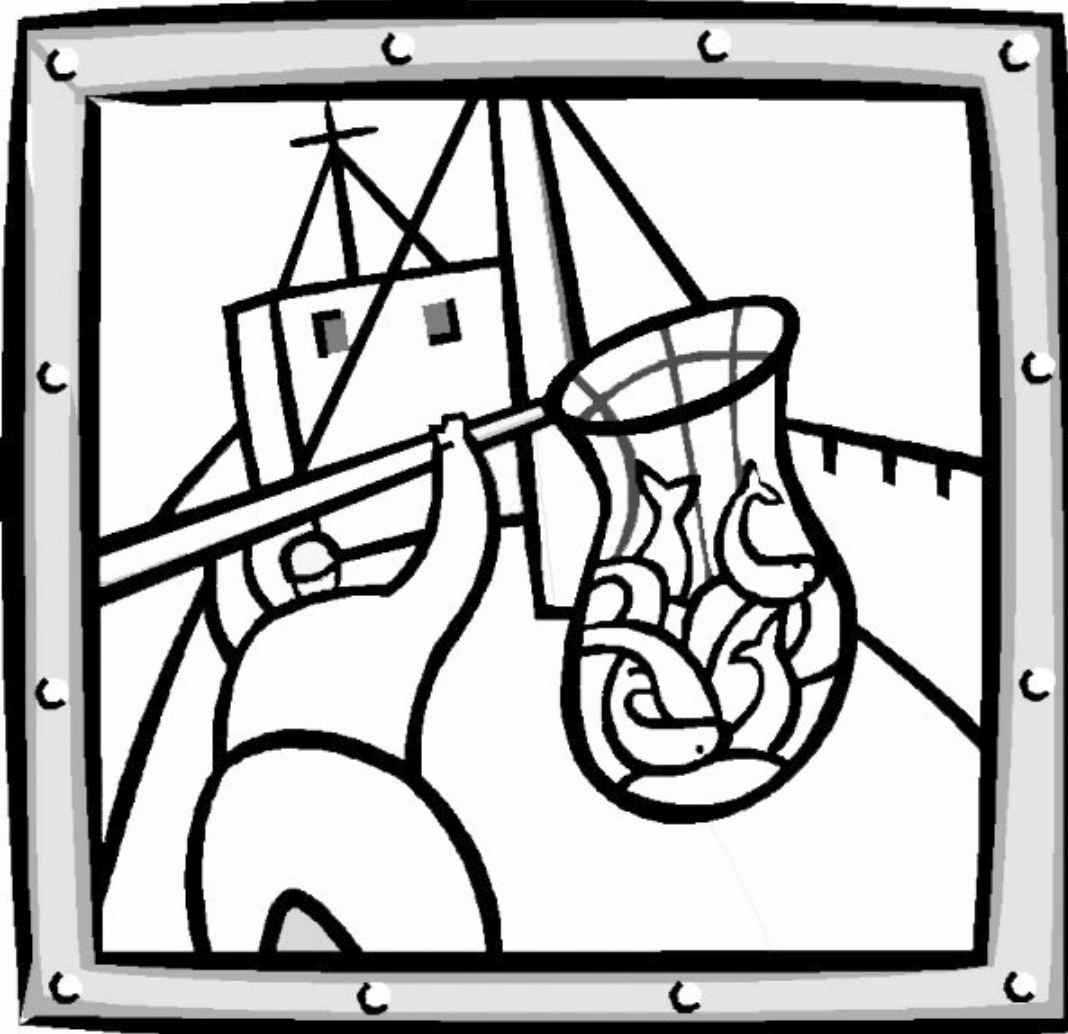
Speck and I are both fish that are managed by the Atlantic States Marine Fisheries Commission and we would like to introduce you to some of our friends that live in the Atlantic Ocean.



The fish you are about to meet are very diverse, but they have a few things in common. They are all managed by the Atlantic States Marine Fisheries Commission for the following reasons:

1. They swim between different states, so the states work together through the Commission to take care of them.
2. Each fish represents a substantial interest to either commercial or recreational fishermen. A **commercial fisherman** is someone who fishes for a living and sells the fish they catch to make a profit, while a **recreational fisherman** is anyone who enjoys just fishing for fun and for sport. If you have ever caught a fish or been crabbing, you are a recreational fisherman.

Commercial Fisherman



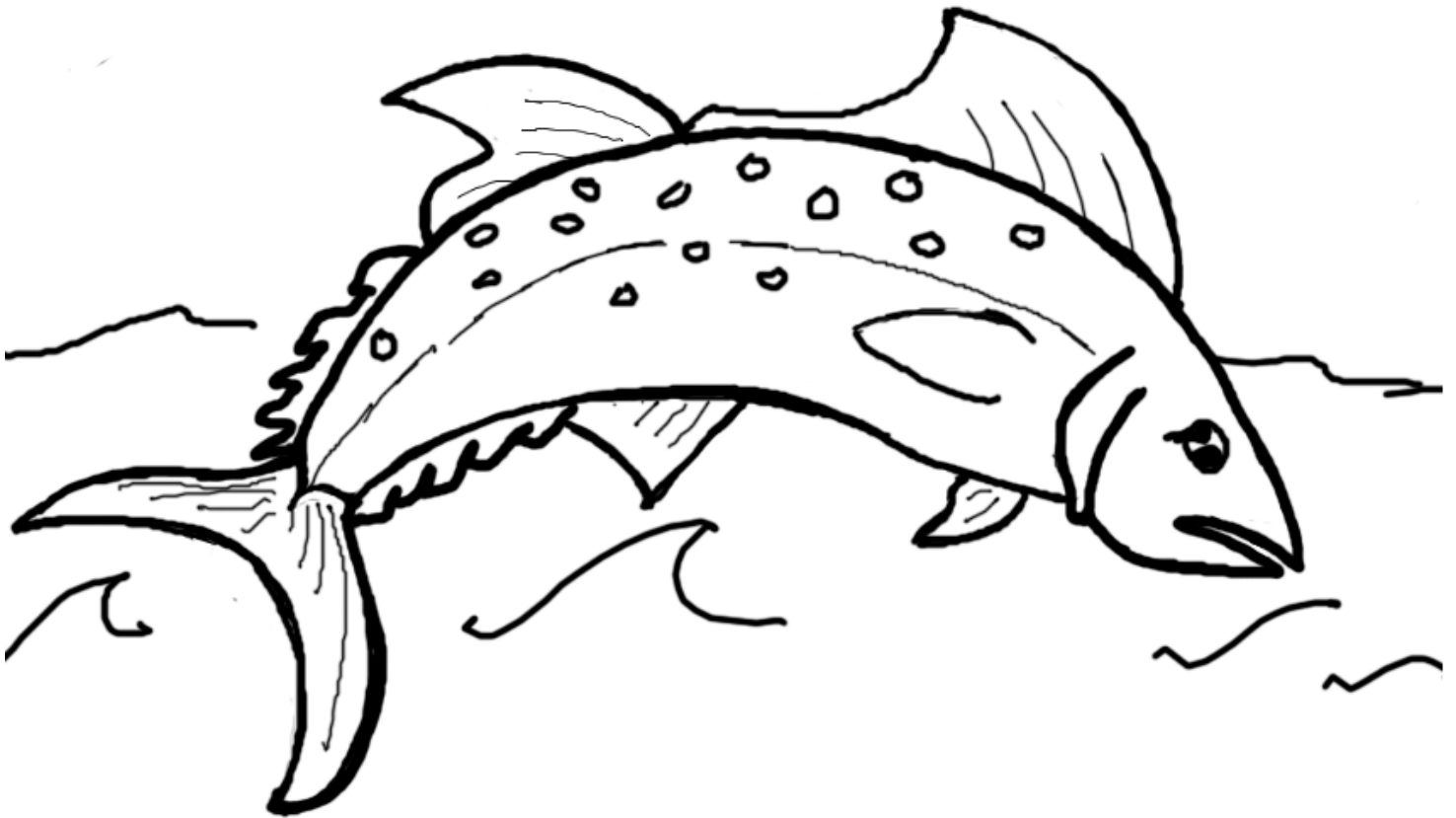
Recreational Fisherman



3. All of these fish are currently or have historically faced a major threat to their existence, whether it has been due to changes in their environment from industrial and residential development along the coast or from **overfishing**, or taking fish at a rate faster than they can reproduce.
4. All along the eastern seaboard, there are towns that depend on the income generated by their fishing industry. Threats to this, such as the decline seen in many fish populations, represent major problems for numerous individuals who live in these **fishing communities**.

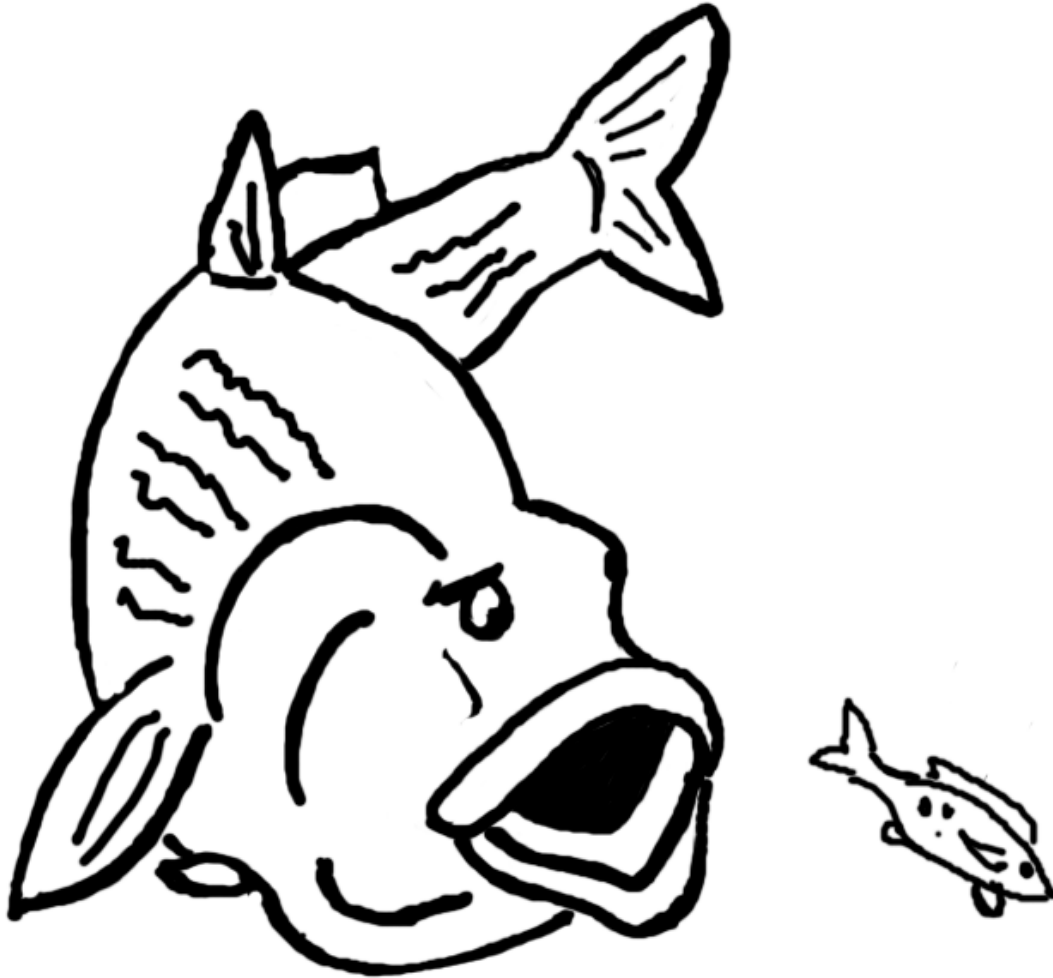


This is a **Spanish Mackerel**. Famous for their distinct coloring, Spanish mackerel have dark blue fins and yellow spots on their sides. Like many other fish, particularly those that venture closer to the surface, Spanish mackerel are dark on top and light on bottom.



Why are fish dark on top and light on bottom?

This is called **countershading**. A protective color pattern, being dark on the top and light on the bottom allows marine animals to blend more easily with their surroundings. Looking down, their dark backs are difficult to spot in the deep blue of ocean, but looking up their lighter underbelly blends with the light from above. As animals cannot be easily spotted from above or below, they can more easily sneak up on their prey and avoid predators.

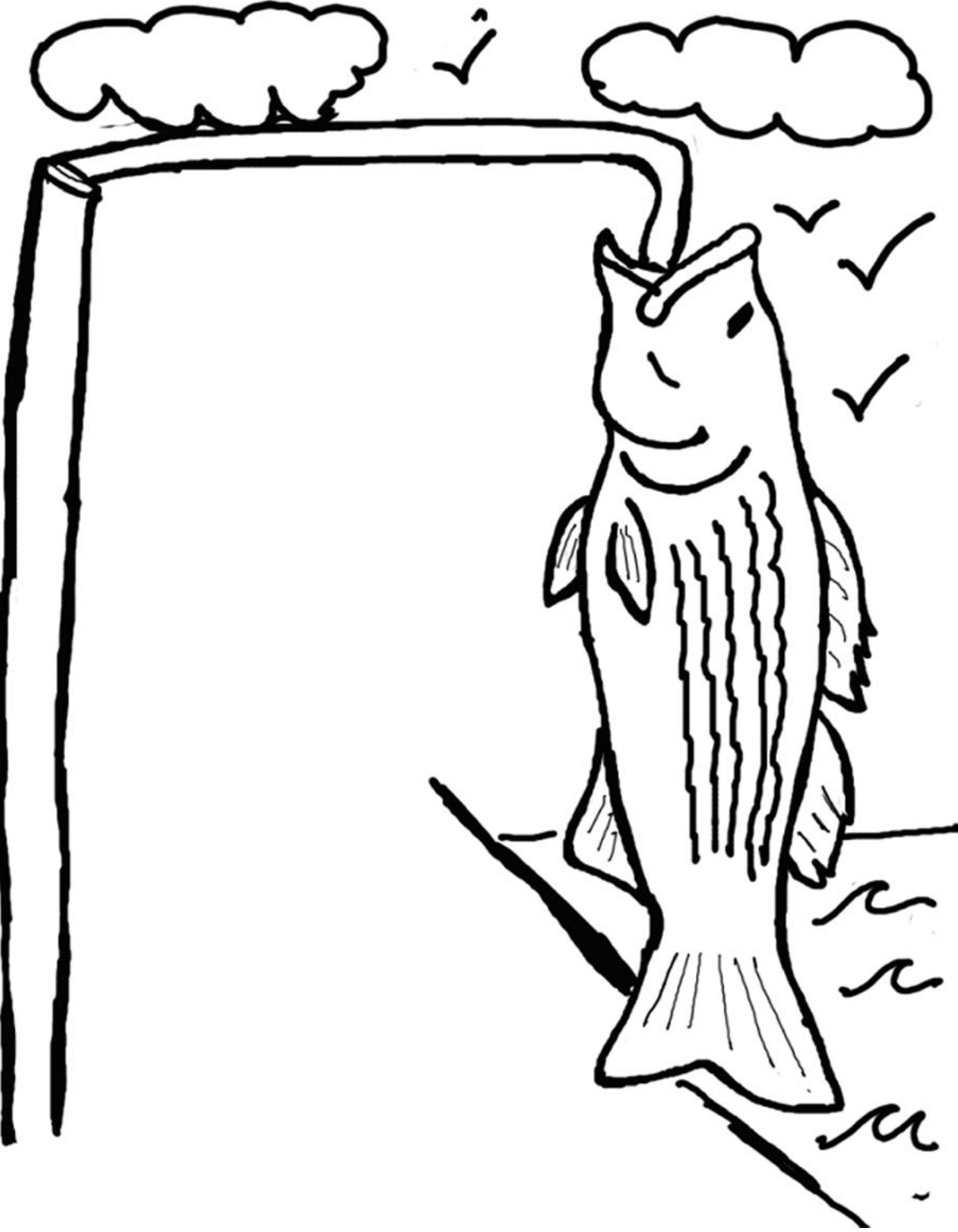


Here is a **Striped Bass**. Striped bass are one of the most sought after fish along the Atlantic coast. This is because they are strong fighters and can grow to be over 5 feet and 100 pounds!

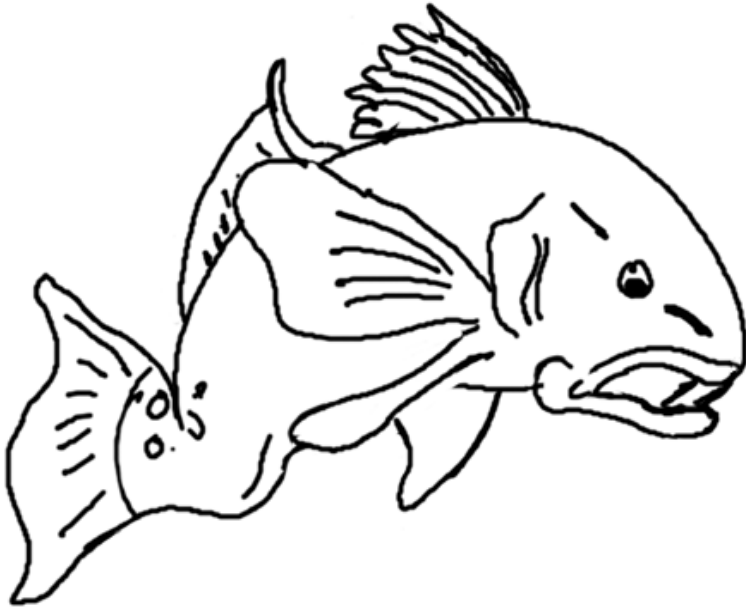
At one time, there were so many striped bass that they were used as fertilizer for farms near the coast. More recently (like 20 years ago), their popularity as a commercial and recreational fish led to severe **overfishing** and fishing was limited all along the eastern seaboard for several years.

In 1984, Congress passed the Atlantic Striped Bass Conservation Act, which gave the Atlantic States Marine Fisheries Commission the authority to rebuild striped bass populations. And it worked!

Draw yourself next to the trophy size striped bass on the next page!



Some other large fishes are the **Red Drum** and the **Bluefish**.

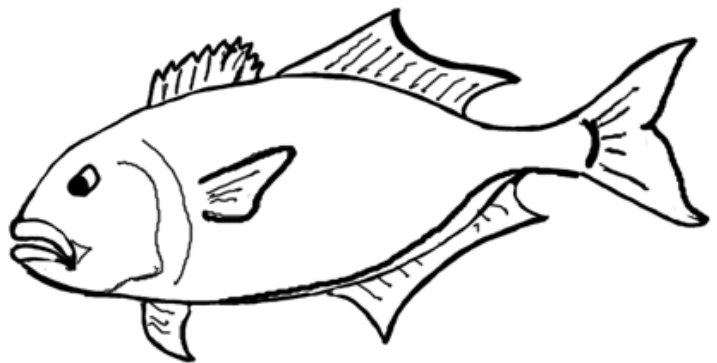


Red Drum

The name “red drum” comes from this fish’s amazing unique red bronze coloring and the drum-like sound they make by vibrating their swim bladder. The largest red drum caught was 94 pounds and is the world’s largest fish to be caught using a fishing pole.

Bluefish

Bluefish are fierce predators, eating almost anything they can catch and swallow. This allows them to grow to large sizes, often reaching 3 feet in length.

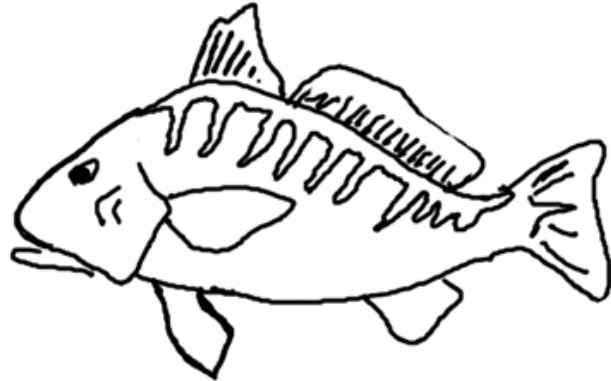


Being a fantastic fighter, they can also be a lot of fun for recreational fishermen to catch.

Some other smaller fishes include the **Atlantic Croaker**, **Scup**, **Shad**, **Atlantic Herring**, and **Tautog**.

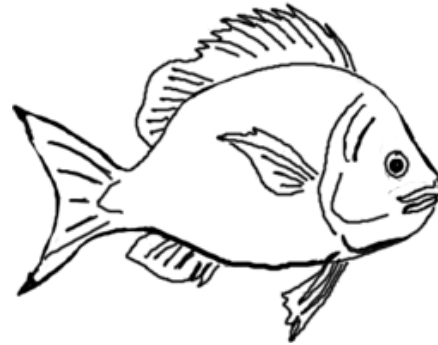
Atlantic Croaker

Related to red drum, these fish are also famous for the **croaking** noise they make during spawning season.



Scup

Commonly known as **porgy**, scup eat by grabbing food with their front teeth and can crush even the hard shells of crabs and small lobsters with their powerful molars.



Shad

Shad are **anadromous** fish, meaning that they spawn (or breed) in freshwater but live mostly in saltwater.



Anadromous fish are especially difficult to manage because they require specific habitats to survive and reproduce.

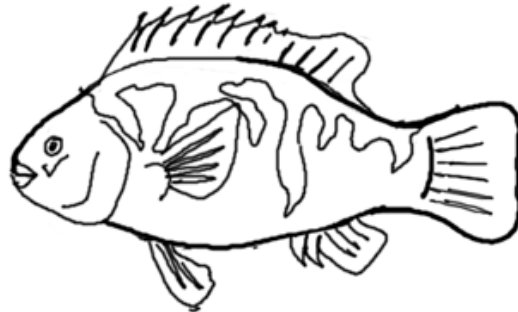
Atlantic Herring

Famous for gathering in extremely large schools, this small fish is an important food source for many larger fish and marine mammals. As the main bait used in lobster fishing, Atlantic herring are very important to the New England fishing industry.



Tautog

A popular fish with recreational fishermen, tautog live near hard bottom reefs and rocky bottoms along the Atlantic coast.



Some of the most unusual looking fish protected by the ASMFC are **Summer** and **Winter Flounder**. Summer flounder are called the “chameleons of the sea” because they can change their color to match their surroundings. Although winter flounder are less extreme in their ability to change color, but both varieties are equally desirable as delicious fish to eat.

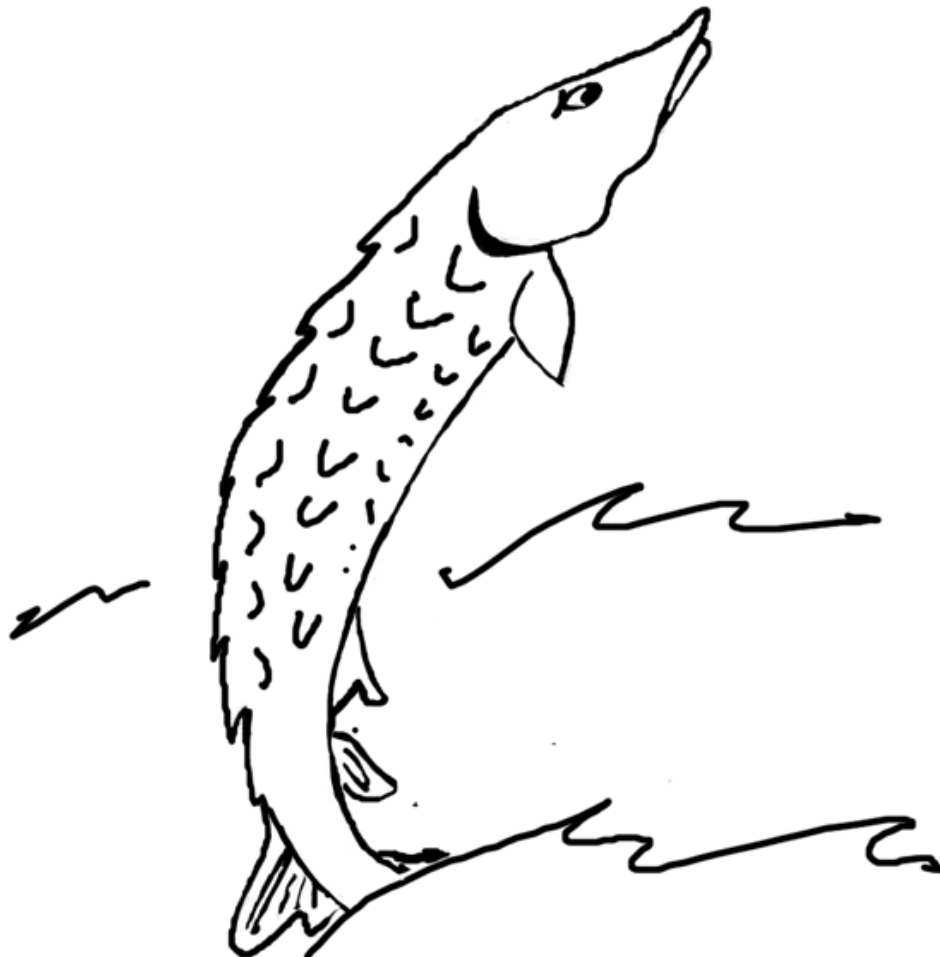
Can you spot the **Summer Flounder** in the drawing below?
Color the picture and find out!



One of the most unusual fish in the Atlantic Ocean is the **Atlantic Sturgeon**. The “grandfather of the deep”, sturgeon are an ancient species that date back over 120 million years.

Some unique features of sturgeon include:

1. They are famous for jumping high up out of the water and have occasionally accidentally landed in fishermen’s boats.
2. Sturgeon can live to over 60 years old and grow to 15 feet in length.
3. Instead of scales, sturgeons have bony plates called “scutes”

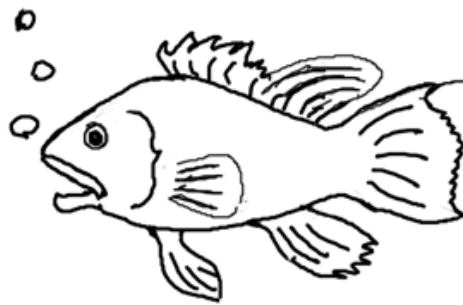


A few other fantastic fish include **Weakfish**, **Black Sea Bass**, and **American Eel**.



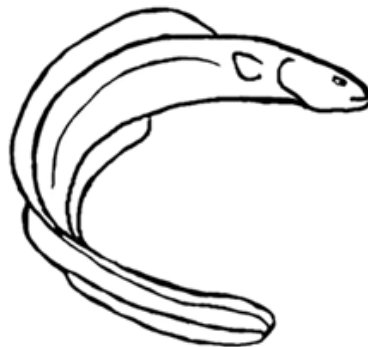
Weakfish

This fish spends much of its time in **estuaries** and shallow waters, placing it at extreme risk to human impacts such as pollution and urban development.



Black Sea Bass

The black sea bass is an unusual species because it is hermaphroditic, meaning that the fish may change sexes within its lifetime.



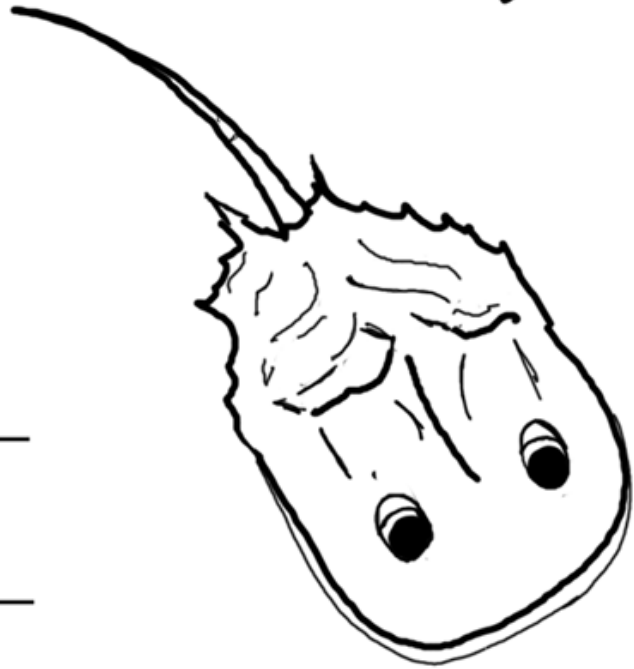
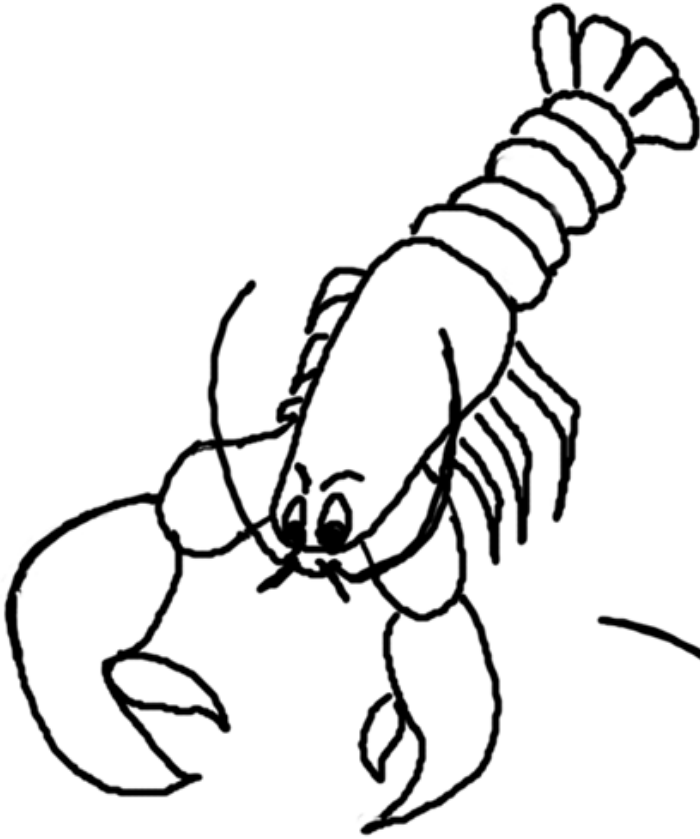
American Eel

This fish migrates and lives in a wide geographic area, but all American eel begin and end their lives in the Sargasso Sea, which is north of the Bahamas.

It is important to remember that not all of the Atlantic Ocean's important species are fish. On the next page are a **Northern Shrimp**, **American Lobster**, and **Horseshoe Crab**.

Try to match the species with its facts and label them below.

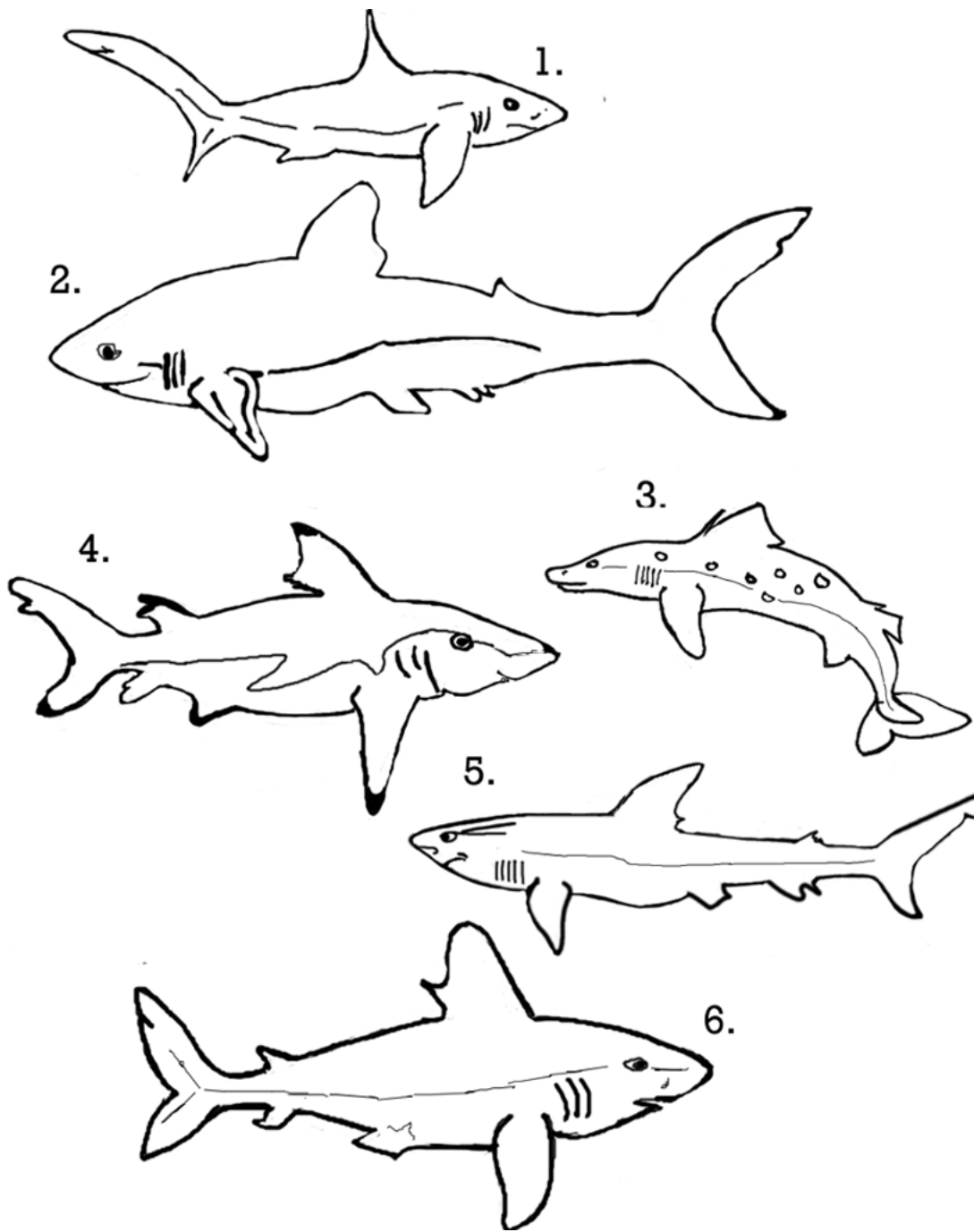
1. I grow by shedding my hard external shell and taking in more water. Sometimes I may live to be a hundred years old and over three feet long.
2. My blood is used for the detection of contaminants in patients, drugs, and medical supplies.
3. I provide a six million dollar industry to New England.



1. _____

2. _____

3. _____



Shark Classification Activity:

One of the greatest challenges to commercial and recreational fishermen is differentiating between species of fish. Using the information below, can you correctly label each shark. The species shown include a **Shortfin Mako**, **Porbeagle**, **Blacktip**, **Spiny Dogfish**, **Atlantic Sharpnose**, and **Common Thresher** shark. Good luck!

Often, it is very difficult to tell shark species apart. Along the Atlantic coast, it can be particularly difficult to tell the difference between a porbeagle and a shortfin mako. Experts will tell you to look at their teeth, but here the surest way is to look for a distinctive white spike on the back of the dorsal fin. This is a distinguishing characteristic of a porbeagle.

Blacktips are much easier to find because of the blacktips on their fins and tail, while spiny dogfish are distinguished by the presence of spines in front of their first and second dorsal fin.

The Atlantic sharpnose is a smaller shark with a pointy nose and a notched tail fin.

The common thresher has an exceptionally long upper part of their tail fin, which it uses to thrash and stun its prey. However, this makes the thresher shark a slower swimmer, whereas makos and great whites, the fastest sharks in the ocean, have almost equal length and width in their top and bottom tail fins.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

As you remember from the very first part of this activity book, all of these species are under the management of the Atlantic States Marine Fisheries Commission or the ASMFC.

So, what is the Atlantic States Marine Fisheries Commission?

In 1942, people all along the Atlantic coast realized that the states would have to work together to protect these valuable fish and the Atlantic States Marine Fisheries Commission was formed. A democratic organization with 15 member states, the Atlantic States Marine Fisheries Commission has been successfully working to manage fish populations for the past 60 years.

The Commission's goal is to make sure that there is enough fish in the ocean, not just now but in the future as well. Why? Because healthy fish stocks are important to us all, whether we like to catch them, eat them or watch them. They are a vital part of the ocean's food web, providing food for other fish, marine animals (like whales) and humans too!

The Commission manages fish stocks by determining how many fish we need to keep in the ocean and how many can be taken by fishing. Once this is figured out, the states develop fishing rules (how many fish can be caught and at what size) to make sure that the right amount of fish are taken (not too much and not too little). We also work to protect fish habitat, so that fish are provided good homes and enough food.

If you want to learn more about Atlantic coast fish and the activities of the Atlantic States Marine Fisheries Commission, please visit us at www.asmfc.org.



Can you identify all the 15 Atlantic coastal states? Label each one and see.



Find all the Fish!

B A C S S A B A E S K C A L B L M J S C U D G
 O R A T L A N T I C M E N H A D E N C S F I O
 T S L R M O N O P Q R L T V W X E U C W G E U
 R B T S P A N I S H M A C K E R E L S E S R N
 O R M R C B R O C N I V O L E B R T S A I O D
 O V R T S O B H A D S T A L M E P B A K F H E
 W I N T E D F L O U S L O H D S R U G F T A G
 B A R C E O H S E S R O H N R U T T C I S D R O
 A V L A P W M K L R F T U M R R A C S S T R O
 T U O R T B K S K S P O T E T G M H R H R E U
 L S B C T L E P A G L W I H O E E E I T I D L
 A D S R O A R A E F I S M P S F R R H U P N D
 N E T O P C E N R P R R S T O I R T Y E U E
 T T E A S H D E T F R E E S G C C I B H D O R
 I T S G P S M I O L O T M O O T A M K S B L H
 C O K E P M V S N D N S A M T E N G I I A F L
 R P S Y U U I O R E T A E S U R E F E F S R E
 O G A S C E K R L R C O A K A H E P F G S E R B
 A L H G F A M H H C R L A B T U E U B O P T B
 K E S E G B O M S S A T L A L R R D T D O N T
 E M U R D D E R I O N D E B R A K S I Y I I Y
 R C O A S H E R F L O R A T L T B T G N S W S
 B B A S T H E R E S P O E A T G A U N I O R T
 W S H O C T S T U R G E H H T K L R M P B E E
 X V O L G C R O L S P O R E T M O G O S O H V
 E N O G L E N A B C I R E M A R S E L J R L X
 T U O R T A E S D E T T O P S B O O S H A R K
 D A E R G R E A N M L O B S H H O N V K I H O
 O M R D R A T L A N T I C H E R R I N G H J F

American Eel
 Atlantic Croaker
 Atlantic Herring
 Atlantic Menhaden
 Black Sea Bass
 Bluefish
 Horseshoe Crab
 Lobster

Northern Shrimp
 Red Drum
 Scup
 Shad and River
 Shark
 Spanish Mackerel
 Spiny Dogfish
 Spot

Spotted Seatrout
 Striped Bass
 Sturgeon
 Summer Flounder
 Tautog
 Weakfish
 Winter Flounder

Answers

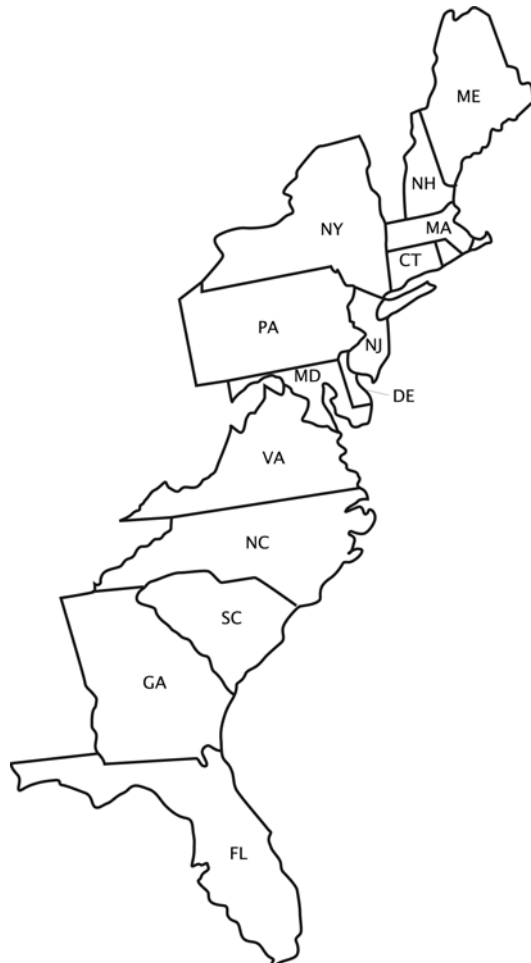
Label the Shellfish (pages 12 & 13)

1. American Lobster
2. Horseshoe Crab
3. Northern Shrimp

Shark Classification

1. Common Thresher
2. Shortfin Mako
3. Spiny Dogfish
4. Blacktip
5. Atlantic sharpnose
6. Porbeagle

Map of Atlantic Coastal States



Word Search

S S A B A E S K C A L B
 A T L A N T I C M E N H A D E N
 S P A N I S H M A C K E R E L W
 S H A D E P U A K F
 S L O H D C I S
 R O H N A M E R I C A S T R
 S P O T U S H R E D
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 R E T S G O T A N E F I H S B L
 S B O L U A T U L G O D T N I
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