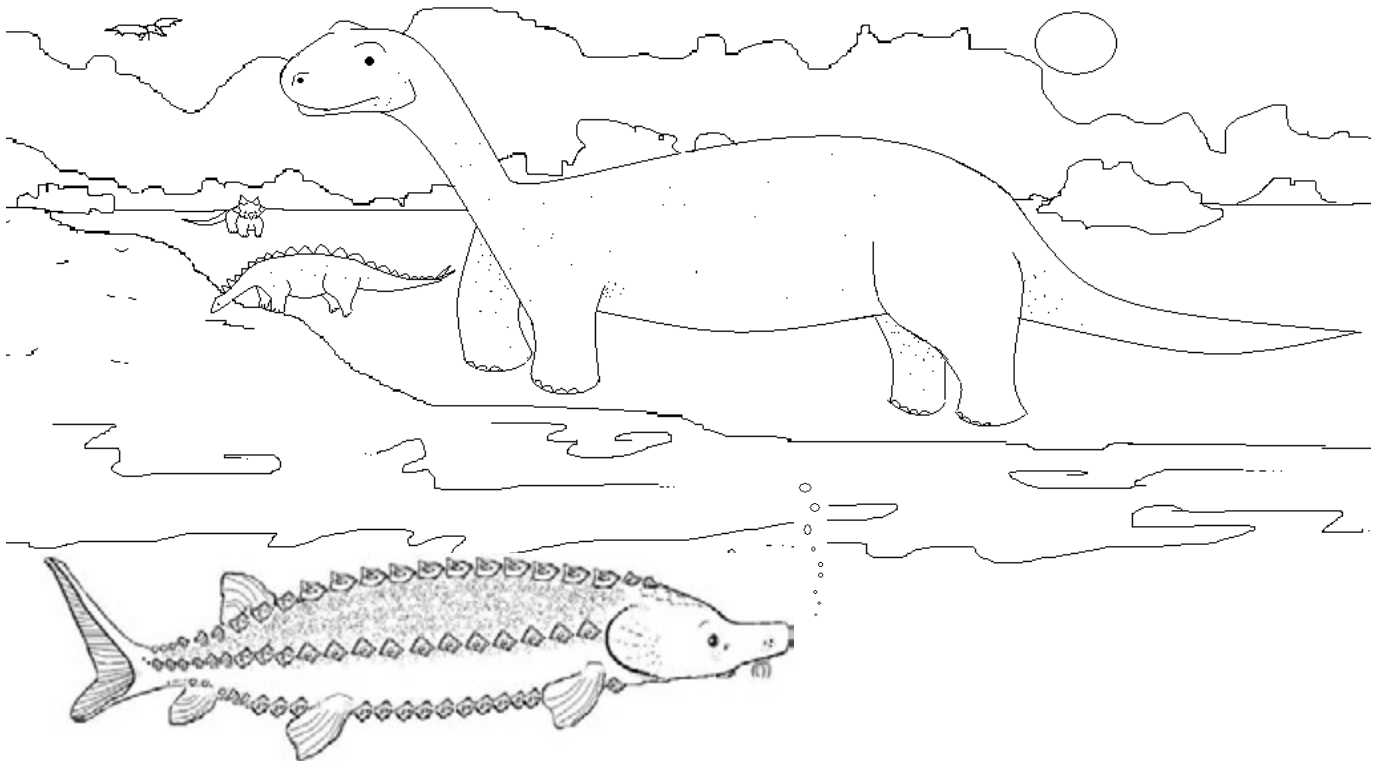


# ATLANTIC & SHORTNOSE STURGEONS

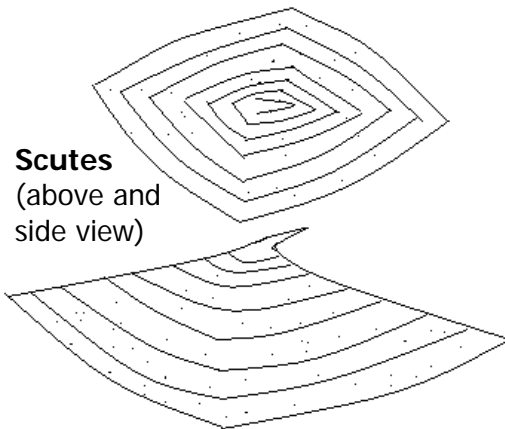
The **sturgeon** family is the most **primitive** of all bony fishes, dating back to the Cretaceous period more than 120 million years ago. It is believed that the ancestors of **sturgeon** lived with the dinosaurs. This makes the **sturgeon** that you see today almost like living fossils!



There are seventeen **species** with many more subspecies of **sturgeon** worldwide from the **genus** *Acipenser*, and they are found only in the northern hemisphere. Two **species** can be found on the East **coast** of the United States in the **Atlantic Ocean**. They are normally found in **coastal** waters, **bays**, **estuaries**, and rivers. The two **species** on the East **coast** are the Atlantic **sturgeon** (*Acipenser oxyrinchus oxyrinchus*) and the smaller shortnose **sturgeon** (*Acipenser brevirostrum*).

Atlantic and shortnose **sturgeons** are **anadromous** fish, which means that they spend part of their life cycle in salt water and part in freshwater. They are able to do this by **osmoregulating**, or leveling their body salts. They spend most of their time in **coastal** ocean waters, but **migrate** and travel through **estuaries** to rivers and freshwater for **spawning**, but shortnose sturgeon spend more time in rivers and farther upstream than Atlantic sturgeon. They are slow growing and late maturing fish. While shortnose sturgeon have been known to reach no more than 5 feet and weigh up to 50 pounds, Atlantic **sturgeon** have been recorded to reach lengths over 14 feet long, weighing almost 800 pounds! The oldest Atlantic and shortnose **sturgeons** recorded were estimated to be around 60 years old. Some shortnose sturgeon do not

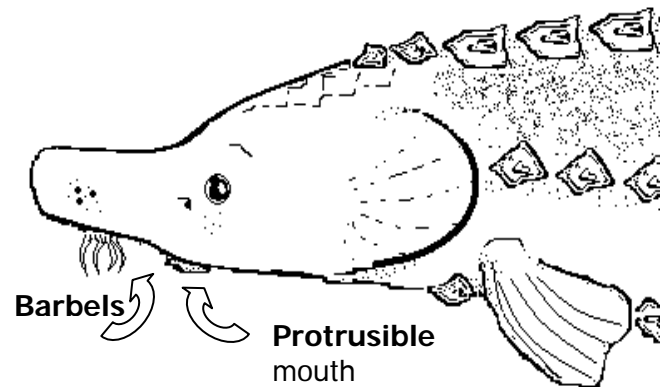
reach reproductive maturity until they are 13 years old while some Atlantic **sturgeon** do not reach maturity until they are 20 years old.



**Sturgeon** have five rows of bony **scutes** along the length of their body. **Scutes** are a modified **ganoid scale**. **Ganoid scales** are diamond shaped and found on **primitive** bony fishes like **sturgeon**. They can help serve as protection for the fish like armor, and also make **sturgeon** distinct from other fish.

Atlantic and shortnose **sturgeons** are benthic or **bottom feeders** which means that they feed and **forage** on creatures on the bottom of the rivers, **estuaries**, and **coastal** waters.

They feed primarily on **polychaetes** (worms), **mollusks** (clams), **crustaceans** (crabs), and insect **larvae**. Their mouths are located on the underside of their body making them ideal bottom feeders. Between the mouth and tip of their snout, **sturgeon** have four **barbels** that are similar to whiskers. These **barbels** are sensors which they use to locate food. **Sturgeon** mouths are **protrusible** which means that it can be pushed out toward food on the ocean floor. They suck up food off the floor like a vacuum, and after swallowing it whole, they spit out most of the pebbles, sand, and gravel that were also vacuumed up.

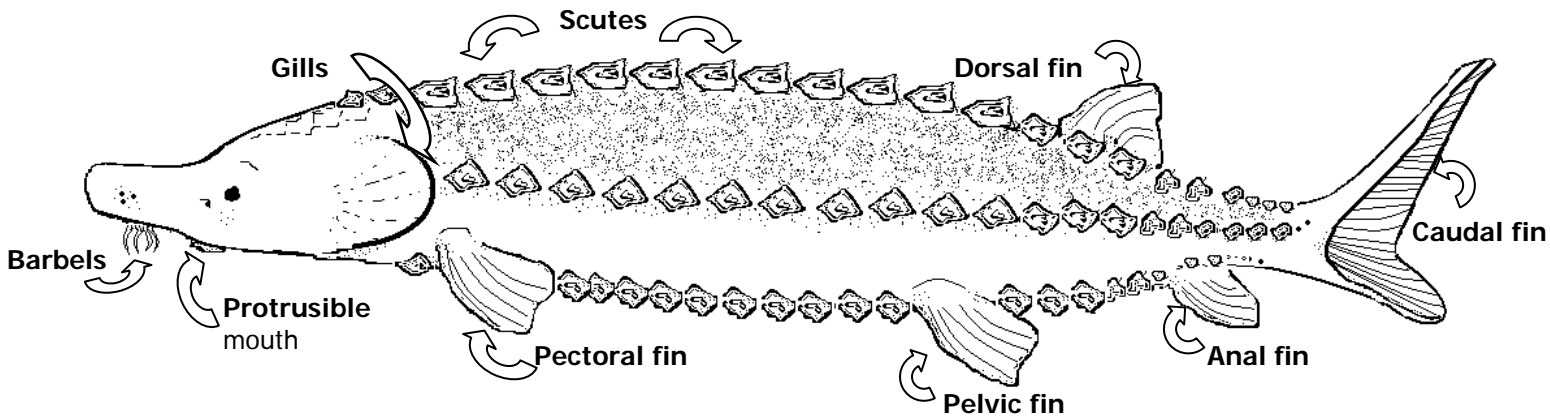


**Sturgeon** do not have teeth! When they swallow their food whole, it goes into their muscular stomach which is strong enough to crush and break up food for digestion.

## Summary of Atlantic & Shortnose Sturgeons

- The **sturgeon** family is the most **primitive** of all bony fishes, dating back 120 million years. They lived with the dinosaurs!
- Atlantic and shortnose **sturgeons** are **anadromous**, migrating between the ocean in saltwater, **estuaries** in **brackish waters**, and rivers in fresh-water, though shortnose sturgeon spend more time in freshwater than Atlantic sturgeon.
- They have 5 rows of bony **scutes** which are modified **ganoid scales**.
- Shortnose sturgeon grow up to 5 feet and weigh 50 pounds. Atlantic sturgeon can grow over 14 feet long, and weigh up to 800 pounds. They can live to be over 60 years old!
- They are **bottom feeders** that use their **barbels** to sense and locate food, and they use their **protrusible** mouths to vacuum up the food.

# Sturgeon



## Fins

**Sturgeons**, like most fish, use their fins for swimming, steering, and for balance. The **dorsal** and **anal fins** are used to stabilize the fish. **Pectoral** and **pelvic fins** are on the sides of the body, and are used for turning, stopping, and also balancing. The **caudal** or tail **fin** is like a boat propeller; it pushes them through the water by moving back and forth. The **caudal fin** on **sturgeon** is bigger on the top than the bottom which is called **heterocercal**, just like a shark's tail!

## Scutes

**Sturgeon** have five rows of bony **scutes** along the length of their body. **Scutes** are a modified scale. They can help serve as protection for the fish like armor and make **sturgeon** distinct from other fish.

## Gills

Like humans, fish need oxygen to live, but fish do not have lungs inside their body and do not breathe like humans do. Instead, fish have **gills**, which are found just behind the head and under a **gill** flap. As water flows into their mouth, it flows over their **gills** which absorb oxygen from water.

## Eating

**Sturgeon** do not have teeth! They suck up food like a vacuum with their **protrusible** mouth. After swallowing food whole, their muscular stomach crushes it into smaller pieces for digestion. **Sturgeon** eat various **prey** including **polychaetes** (worms), **mollusks**, and **crustaceans**. There are four **barbels** between the tip of their snout and their mouth which they use as sensors to locate food.