

Chapter 12: Bony Fish

Bony Fish - make up 95 % of the fish on Earth.

- They are found in every aquatic environment
- Most bony fish have a protective covering of scales
- They feel slimy because they secrete a protective layer of mucus:
 - it acts as a barrier against infection
 - it reduces friction in water so the fish can move more easily

Breathing in bony Fish

- Use gills that are covered by a flap called the operculum or gill plate
- Gills are soft red feather-like organs where oxygen is extracted out of the water into a fish's blood, also carbon dioxide is released from the fish into the water.
- The operculum and mouth open and close in unison passing water over a fish's gills.

Locomotion in Fish

- Nekton - marine animals that have the ability to swim
- Fish use their fins to swim
- Fins are connected to muscles that contract and extend to create movement



- Pectoral and Pelvic fins are paired fins and their actions control direction:
left, right, forward, backward
- The single dorsal and anal fin work to stabilize the fish (prevents rolling)
- Caudal fin (tail) is used for main forward propulsion

Fastest Bony Fish

1. sword fish
2. tuna
3. dolphin fish
4. barracuda

Speed depends on:

- mainly dependant overall shape
- size and shape of caudal fin
- temperature of the fish (internal temp)

Buoyancy in Fish

- swim bladder: an internal gas filled organ. When muscles contract around it, the bladder gets smaller and the fish moves down, when the muscles relax the fish moves up

Food Getting

- parasitic
- filter feeding called straining
- bottom-dwellers have mouths adapted for sucking like a vacuum
- beaklike mouths for nibbling on algae-covered corals
- strong flat teeth for crushing shells of invertebrates
- predatory fish have sharp teeth for catching their food

Sensitivity in Fish

- good sense of hearing: fish have an inner ear connected to the lateral line organ which has tiny cilia (or hairs) that vibrate.
- excellent sense of smell: fish have nostrils and can detect tiny quantities of chemicals in the water.
- good vision: fish have eyes on either side of their head which gives that a wide field of view. The fish that live near the surface tend see colors the best, and deeper dwelling fish tend to have larger eyes.

Bony Fish



