

# BONY FISH



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- 95% of all fish are classified as bony fish and are in every marine environment
- Differ from sharks in that they have skeletons (sharks have cartilage)



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Types of Bony Fish



Blow Fish



Tuna Fish



Sword Fish



# BONY FISH

- Characteristics:
  - Fish have scales to protect their soft bodies
  - The scales are coated with mucus for two purposes:
    - Acts as a barrier against infection
    - Reduces of friction (drag) allowing the fish to swim more efficiently through the water

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- Breathing:
  - Fish use gills to strain dissolved oxygen from the water and carbon dioxide diffuses in the opposite direction
  - Operculum - flap of tissue covering the gills
  - Under this flap are red over-lapping membranes called gills

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- Breathing: (continued)
  - The gill arches are filled with blood that absorbs the oxygen
  - Attached to the gill arches are the gill rakes that channel incoming food particles to the esophagus





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- Locomotion:
  - Nekton - marine mammals that can swim
  - Most fins are paired
  - Dorsal fins act as stabilizers preventing the fish from rolling from side to side



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- Locomotion: (continued)
  - Fastest fish are the pelagic fish (deep ocean)
    - Include: Tuna, Sword Fish, and Barracuda
  - Fusiform Shape - is tapered at both ends
    - This produces a streamlined shape that reduces drag



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- Locomotion: (continued)
  - Faster fish also tend to be ectothermic (warm blooded) and they have a higher metabolism which allows for full use of their muscles



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- Buoyancy:
  - Fish rest periodically by using an internal gas filled organ called a swim bladder
  - Muscles around the bladder contract to expel gas so the fish can sink and enlarges allowing the fish to rise



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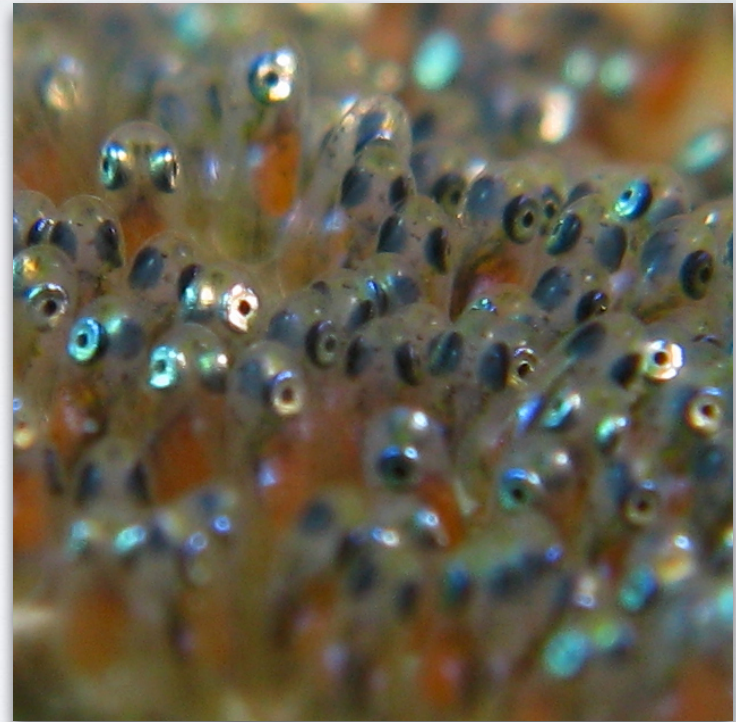
- Feeding:
  - Bony fish feed by parasitic, straining, sucking, nibbling and catching





# BONY FISH

- Reproduction:
  - Fertilization can be both internal and external
  - External involves spawning where mass quantities of eggs are released to ensure survival



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- Reproduction: (continued)
  - 5 Major Stages of Development
    - Egg Stage
    - Larval Stage
    - Post-larval (pre-juvenile)
    - Juvenile
    - Adult

