

Classification of Chondrichthyes :-

The class Chondrichthyes includes sharks, rays, skates and chimaeras. According to Storer and Usinger, the class chondrichthyes are classified ~~as~~ into following subclasses and orders.

Subclass 1. Selachi (Gr. selechos, a shark) :-

- (1) This group of sharks and rays have elongated and fusiform body.
- (2) Paired fins are without a median axis.
- (3) Base of pectoral fin is constricted.
- (4) Tail is mostly heterocercal.
- (5) Males with claspers.

(6) Skull is either amphistylic or holostylic.

Superorder - I Pleurotremata (Gr. Pleuro - a rib or side + trema = opening) Or Selachoides (Gr. Selachos - sharks) :-

- (1) Body spindle shaped.
- (2) Tail heterocercal
- (3) 5-7 lateral gill opening.
- (4) Anterior margin of pectoral fins free from the body.
- (5) Right and left halves of pectoral girdle dorsally separated, not attached with the vertebral column.

Order - 1 Hexanchiformes :-

- (1) A single spineless dorsal fin.
 - (2) caudal fin with a long dorsal and short ventral lobe
 - (3) Six to seven pairs of lateral gill slits.
 - (4) Anal fin present.
- Eg :- Hexanchus, Sharpnose seven-gilled shark (Heptranchios perlo)

Order - 2 Lamniformes (Gr. Lamni - a voracious fish) :-

- (1) Two dorsal fins without spines.
 - (2) Five pairs of gills ^{are} slits present on each side of head.
 - (3) Head conical to cylindrical and not laterally expanded.
 - (4) Anal fin present.
- Ex - Scoliodon (Dog fish), Stegostoma (Tiger shark)

Sphyrna (Hammer headed shark), Scyllium (Bamboo shark), Stagostoma (Tiger shark), Rhinodon (Whale shark), ~~Basking~~ Cetorhinus (Basking shark), Carcharodon (Great white shark - Largest shark) etc.

Order - 3, Squaliformes :-

- (1) Cylindrical or compressed body.
- (2) Five gill slits.
- (3) Two dorsal fins.
- (4) No anal fins.

Eg - Squalus (Dog-fish shark), Squatina (Angel shark) etc.

Superorder - II, Hypotremata (Gr. Hypo - below + tremata = opening) Or Batoidae (Skates & rays) :-

- (1) Depressed body.
- (2) Gill-slits are ventrally placed.
- (3) Anterior margin of pectoral fin fused with sides of body or head.
- (4) Dorsal fins, if present, placed far behind.
- (5) No anal fin.
- (6) They spend much time on the bottom and are mollusc-eating.
- (7) Presence of a large spiracle behind the eyes.
- (8) Two halves of pectoral girdle united either to each other or to the vertebral column.

Order - 1, Rajiformes :-

- (1) No electric organs between head & pectoral fins.
- (2) Pre-orbital cartilages not elongated.

Eg - Rhinobatus (Huitar fish), Trygon (Sting-ray)
Myliobatis (Eagle-ray), Pristis (Saw-fish)
Raja or Raia (Skates) etc.

Order - 2. Torpediniformes (Electric rays):-

- (1) Electric organs present between the head and pectoral fin on each side of the head.
- (2) Preorbital cartilages greatly enlarged

Eg - Torpedo (Electric rays).
- Hypnos (Coffin rays)
Narke (Sleeper rays) etc.

Subclass - 2. Holocephali (Gr. holos - entire, Kephale - head)

- (1) Single gill opening on either side covered by a fleshy operculum.
- (2) No spiracles, cloaca and scales.
- (3) Jaws with tooth plates.
- (4) Single nasal opening.
- (5) Lateral line system with open groove.

Ex - Rat fishes or Chimaeras. About 25 species
Hydrolagus (= Chimaera).