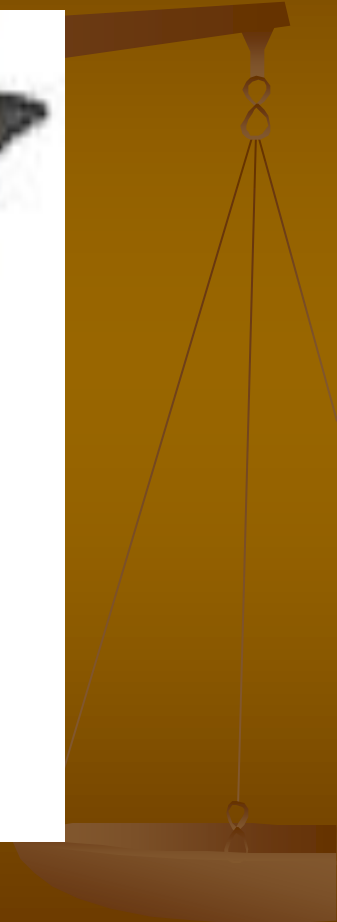
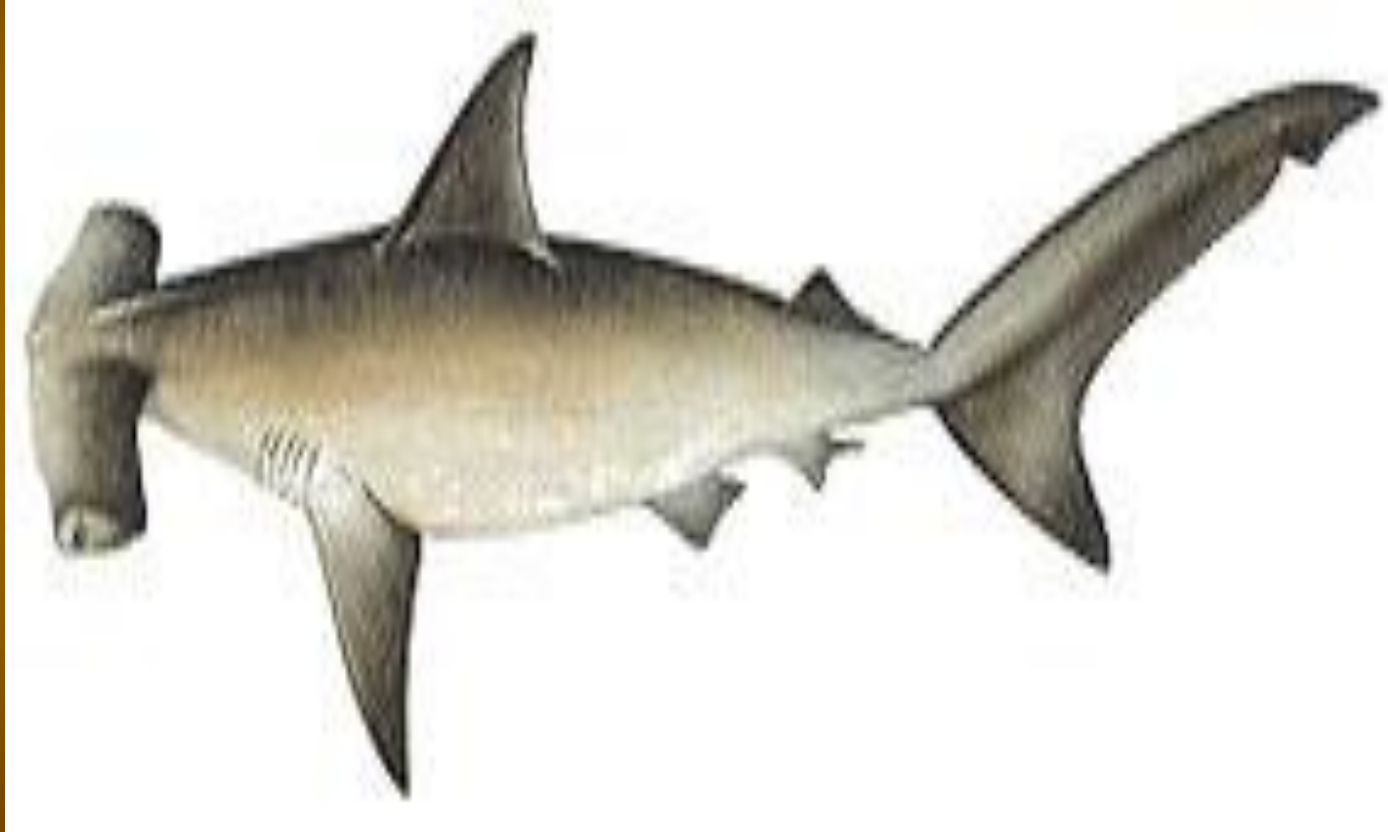


# HAND-OUT PISCES



# PISCES

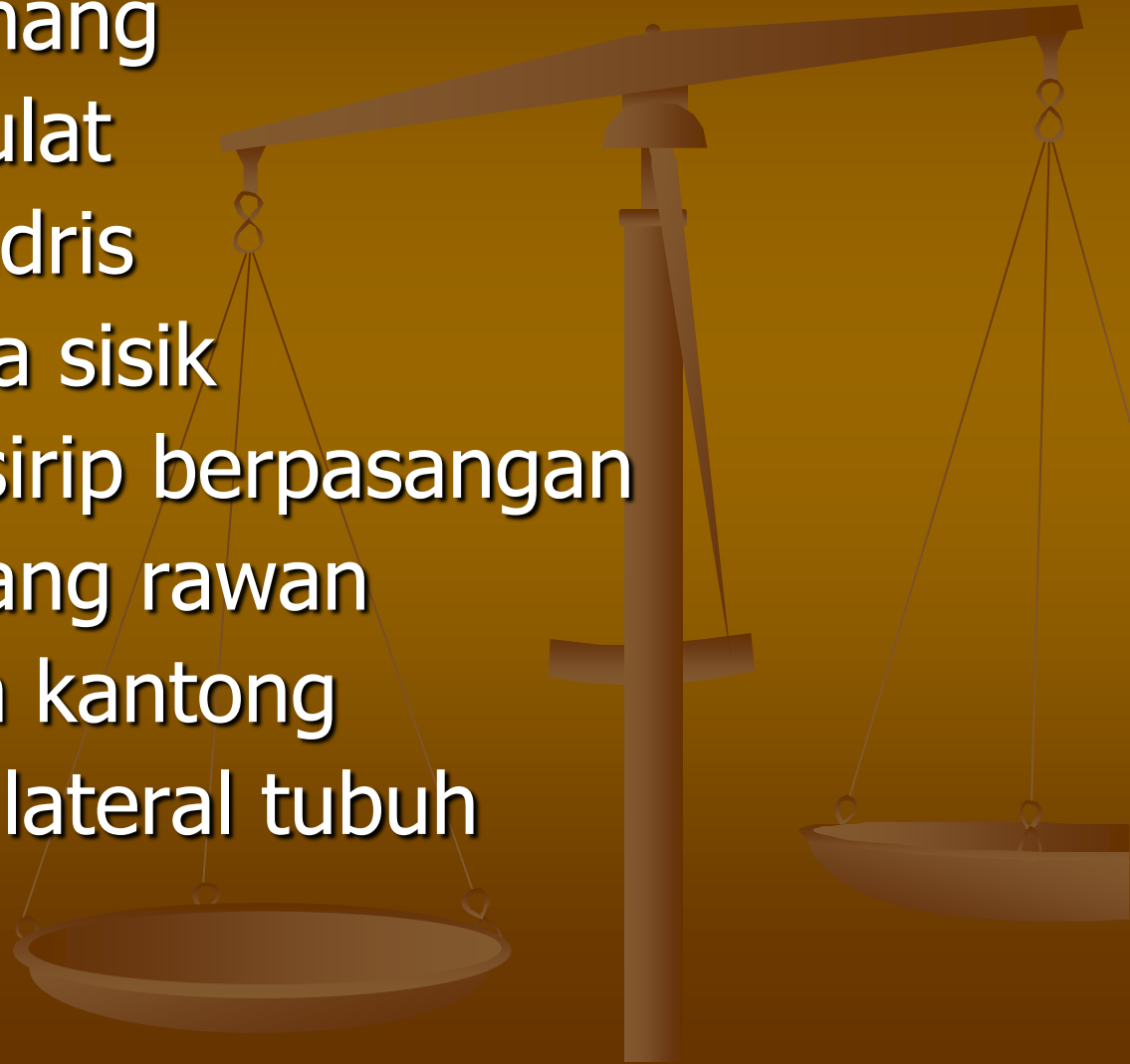
- The vertebrates can be divided into two groups; the Agnatha (which means without jaws) and the Gnathostomata\* which includes all higher vertebrates
- Ikan dapat dibedakan menjadi 2 golongan besar berdasarkan ada tidaknya rahang bawah.
  1. Golongan Agnatha (tidak berahang bawah)
  2. Golongan Gnathostomata (berahang bawah)

- Agnathans include the extinct OSTRACODERMS, and the living HAGFISHES and LAMPREYS - fishes adapted for life as scavengers or parasites.
- The jawed fishes are normally divided into three groups:
  - Placodermi - scaly-skinned fishes
  - Chondrichthyes - cartilaginous fishes
  - Osteichthyes - bony fishes. World fisheries are of vital economic
  
- Golongan Agnatha :  
Hagfish dan lamprey
- Golongan Gnathostomata
  1. Kelas chondrichthyes (ikan bertulang rawan)
  2. Kelas osteichthyes (ikan bertulang sejati)



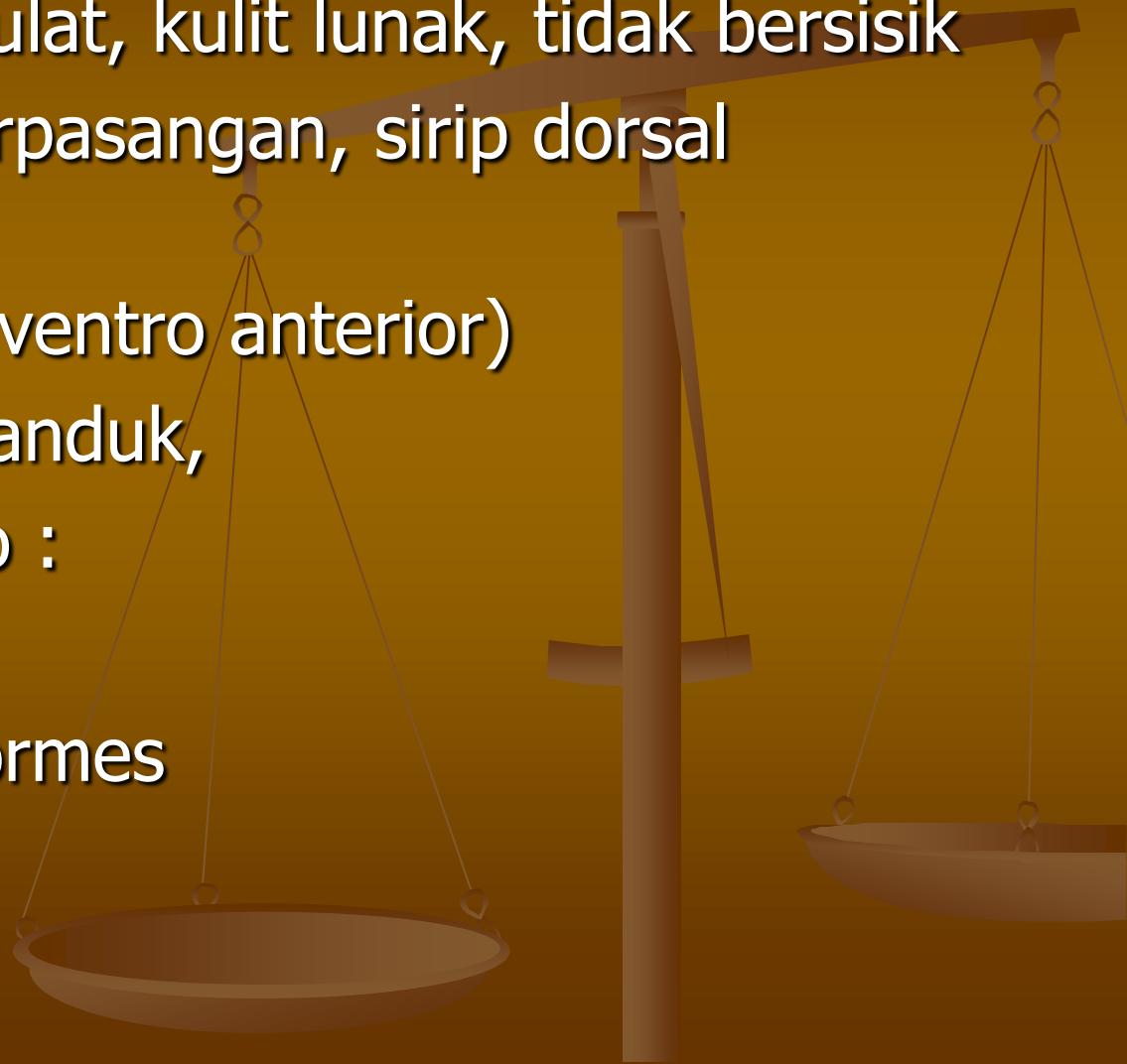
# KELAS AGNATHA

- Ikan tidak berahang
- Mulut bentuk bulat
- Tubuh gilig/silindris
- Kulit halus tanpa sisik
- Tidak memiliki sirip berpasangan
- Rangka dari tulang rawan
- Insang di dalam kantong
- Celah insang di lateral tubuh



# SUBKLAS CYCLOSTOMATA

- Badan panjang, bulat, kulit lunak, tidak bersisik
- Tidak ada sirip berpasangan, sirip dorsal disokong ti rawan
- Mulut penghisap (ventro anterior)
- Ada gigi dari zat tanduk,
- Terdiri atas 2 ordo :
  1. Myxiniformes
  2. Petromyzontiformes



# ORDO MYXINIFORMES

- **hagfish** is a marine chordate of the class **Myxini**, also known as **Hyperotreti**.
- They are long, vermiform, and exude a sticky slime (from which the typical species *Myxine glutinosa* was named).
- Tanpa sirip punggung
- Mulut dikelilingi 3-4 ps tentakel
- Celah insang 6-14 pasang
- Naked skin containing **slime glands**
- **No paired appendages**
- **No jaws**
- **Notochord** and other chordate characters **persistent**
- Ex : *Myxine glutinosa*





# *Myxin glutinosa*



# ORDO PETROMYZONTIFORMES

- A **lamprey** is a jawless fish with a toothed, funnel-like sucking mouth, with which most species bore into the flesh of other fishes to suck their blood.
- Slender eel-like body **without scales**
- **No paired appendages**
- Cartilaginous skeleton, **notochord persistent**
- **No jaws**—Sucker-like oral disc, has teeth and tongue.
- Mempunyai sirip punggung
- Mulut bentuk seperti mangkok
- Celah insang 7 ps
- Contoh : *Petromyzon marinus*

