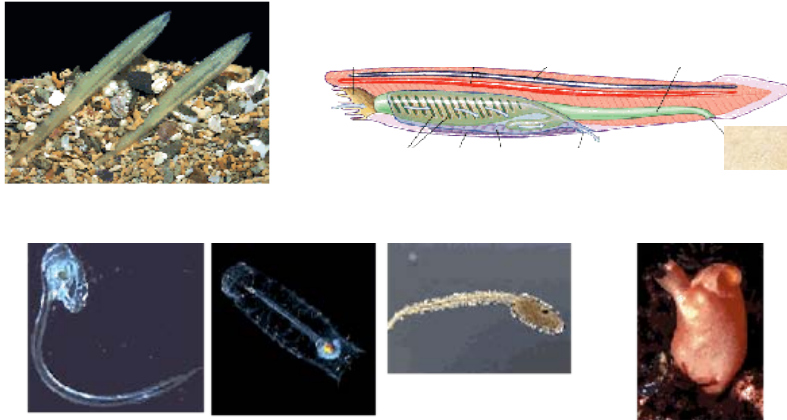
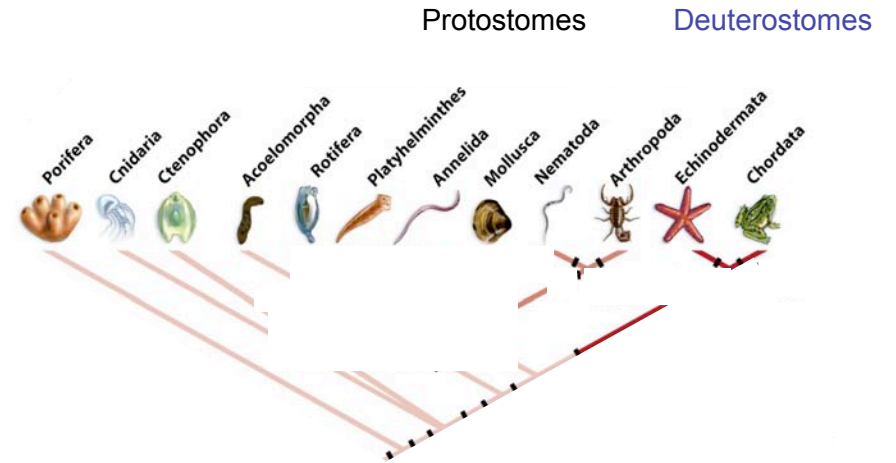


Lab 7 Chordata

Chapters 15, 16, & 17

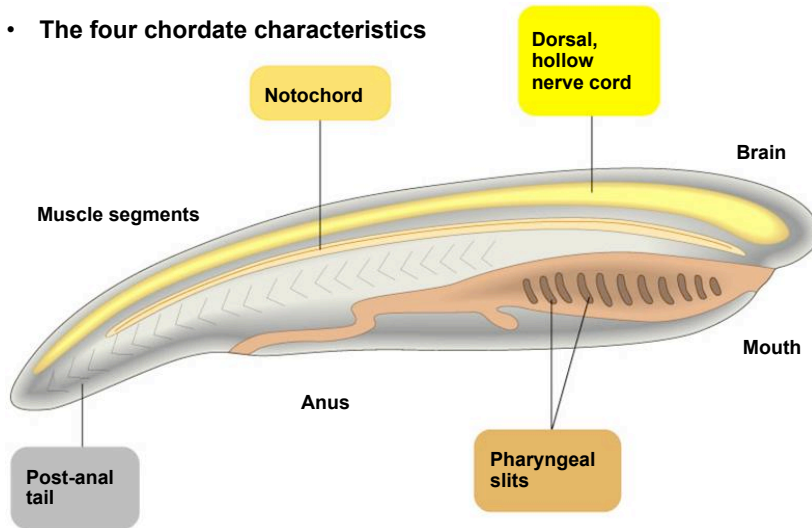


Animal Phylogeny



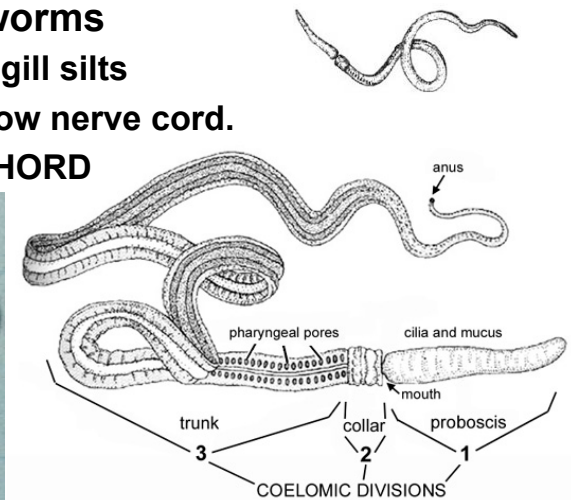
Phylum Chordata

- The four chordate characteristics



Phylum Hemichordata – acorn worms

- Pharyngeal gill slits
- Dorsal, hollow nerve cord.
- NO NOTOCHORD



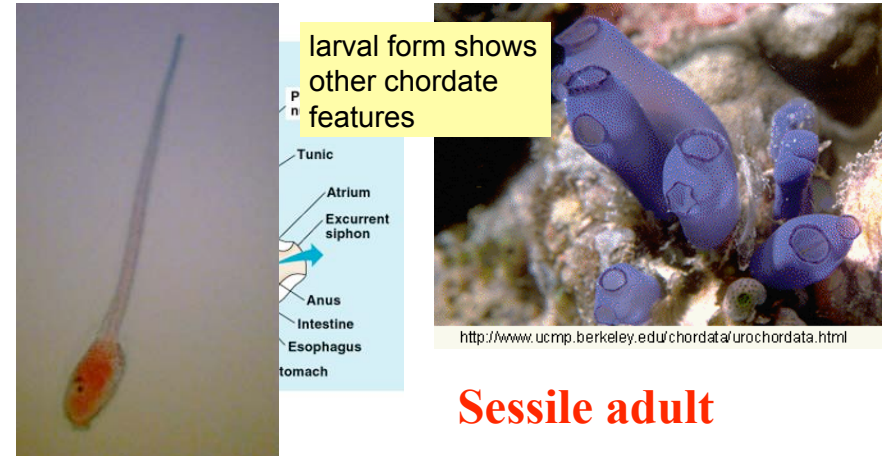
Taxonomy of phylum Chordata

- Subphylum Urochordata – tunicates
- Subphylum Cephalochordata - lancelets
- Subphylum Vertebrata
 - Superclass Pisces
 - Class Agnatha
 - Class Chondrichthyes
 - Class Osteichthyes

The non-vertebrate Chordates

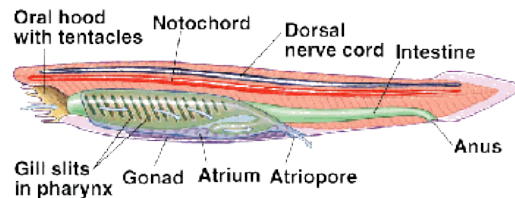
Subphylum Urochordata (Sea squirts/Tunicates)

- Adult is filter-feeder with degraded nervous system; Lacks a notochord



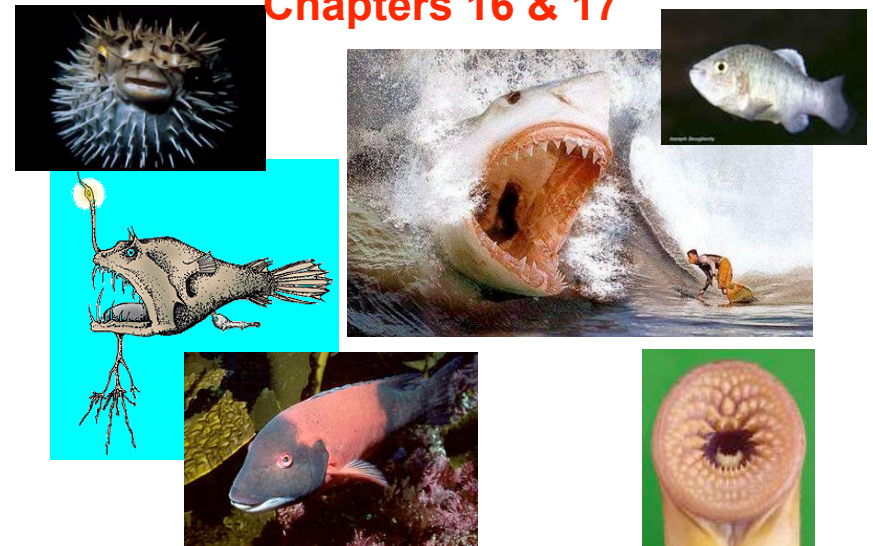
The non-vertebrate Chordates

- Subphylum Cephalochordata
 - Sea lancelet (Amphioxus)**
- No vertebrae; Notochord remains into adulthood
- More Pharyngeal slits (gills) than in fish
- Considered closest relative of vertebrates (Fishes)



Superclass Pisces (Fishes)

Chapters 16 & 17



Subphylum –Vertebrata

backbone, skull, brain, kidneys

Superclass - Pisces

Class Agnatha

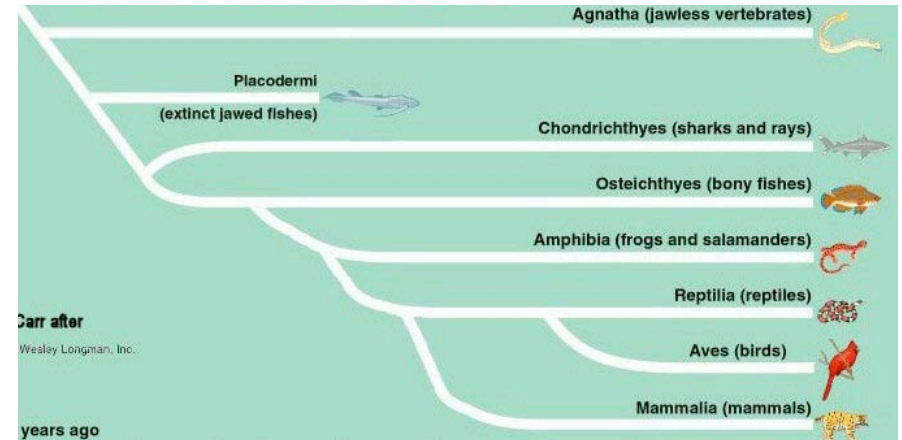
Jawless fishes

Class Chondrichthyes

Cartilaginous fishes

Class Osteichthyes

Bony fishes

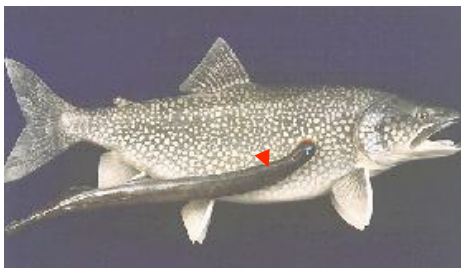
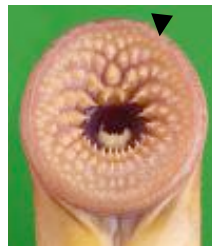


Fishes

1) CLASS Agnatha

- **Jawless fishes** (lamprey)

Buccal Funnel



Fishes

2) CLASS Chondrichthyes

- **Cartilaginous fishes** (sharks, skates, and rays)

Chapter 16



Chapter 17 Fishes

3) CLASS - Osteichthyes

- Bony fishes



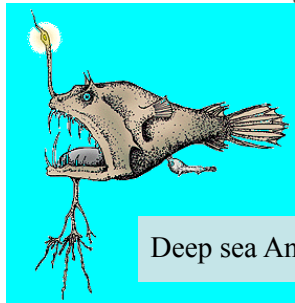
Desert Pupfish



Sheephead wrasse



female

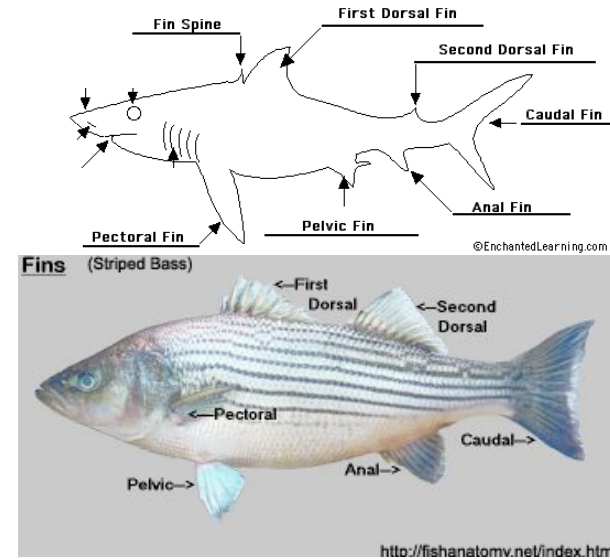


Deep sea Angler Fish



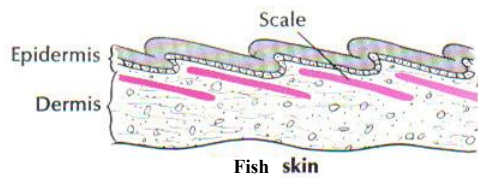
Puffer Fish

Fish fins

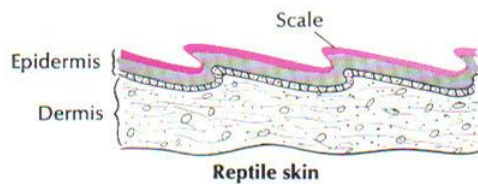


Fish scales

- Dermal in origin

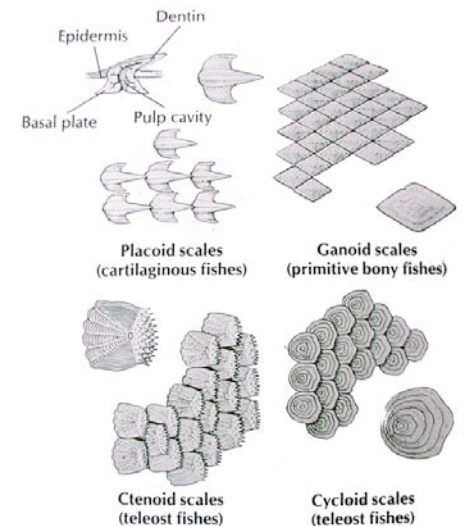
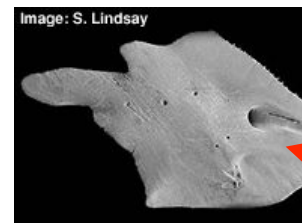


Fish skin



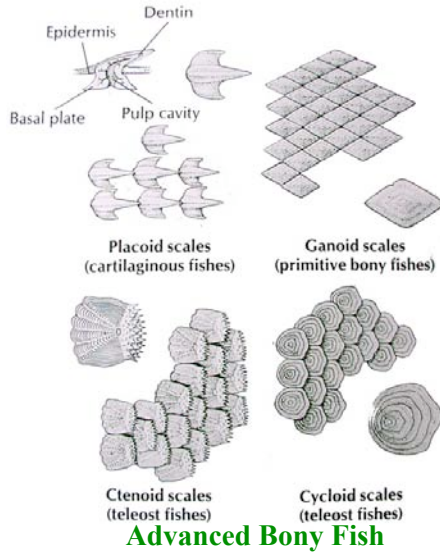
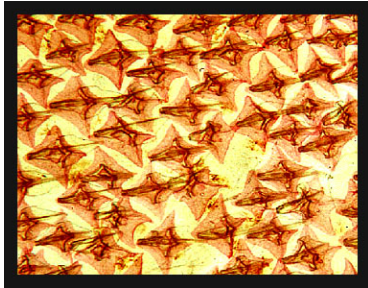
Reptile skin

Fish scales

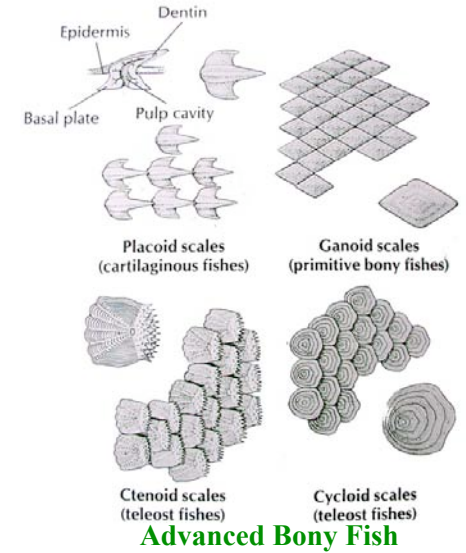
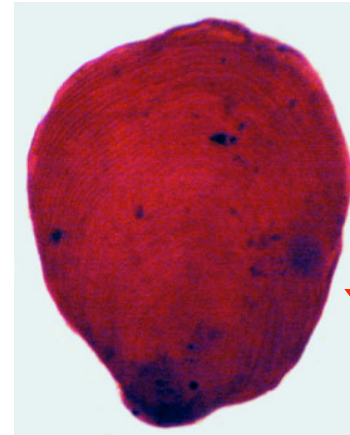


Advanced Bony Fish

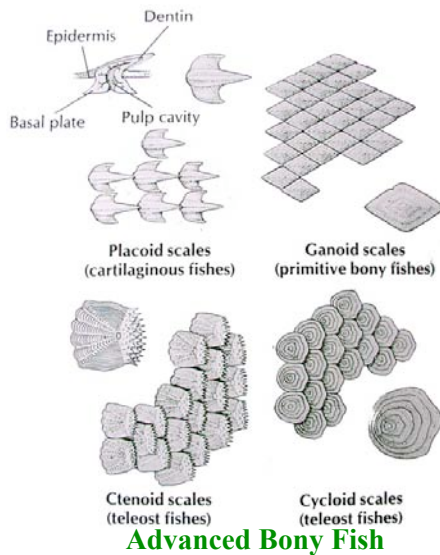
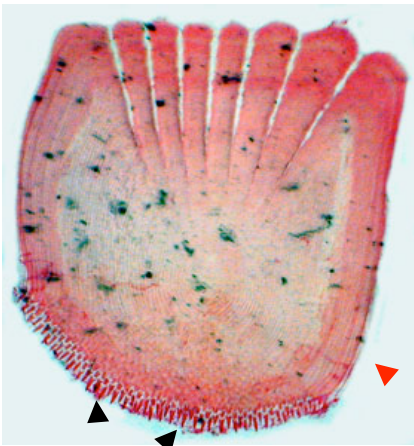
Fish scales



Fish scales



Fish scales



646 lb giant catfish caught in Thailand