Chapter 32-1 Echinoderms

Animals develop in one of 2 ways

As the embryo goes through the gastrula stage is has an opening to the outside called the blastopore.

draw

Protostomes- animals in which the mouth forms from or near the blastopore

Examples: Annelids, Mollusks, Arthropods, and Acoelomate animals

draw

Deuterostomes- animals where the anus forms near or from the blastopore
Examples: Echinoderms, and Chordates

draw

Echinoderms share 4 characteristics

http://www.perspective.com/nature/animalia/starfish.html

http://www.bynaturegallery.com/productpages/fossils/crinoid_holzmaden_germany.htm

http://www.baylink.org/lessons/27.html

Endoskeleton- made of ossicles
Although it appears the animals have an exoskeleton the ossicles actually have a thin layer of skin over them

http://www.perspective.com/nature/animalia/starfish.html

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Five-part radial symmetry

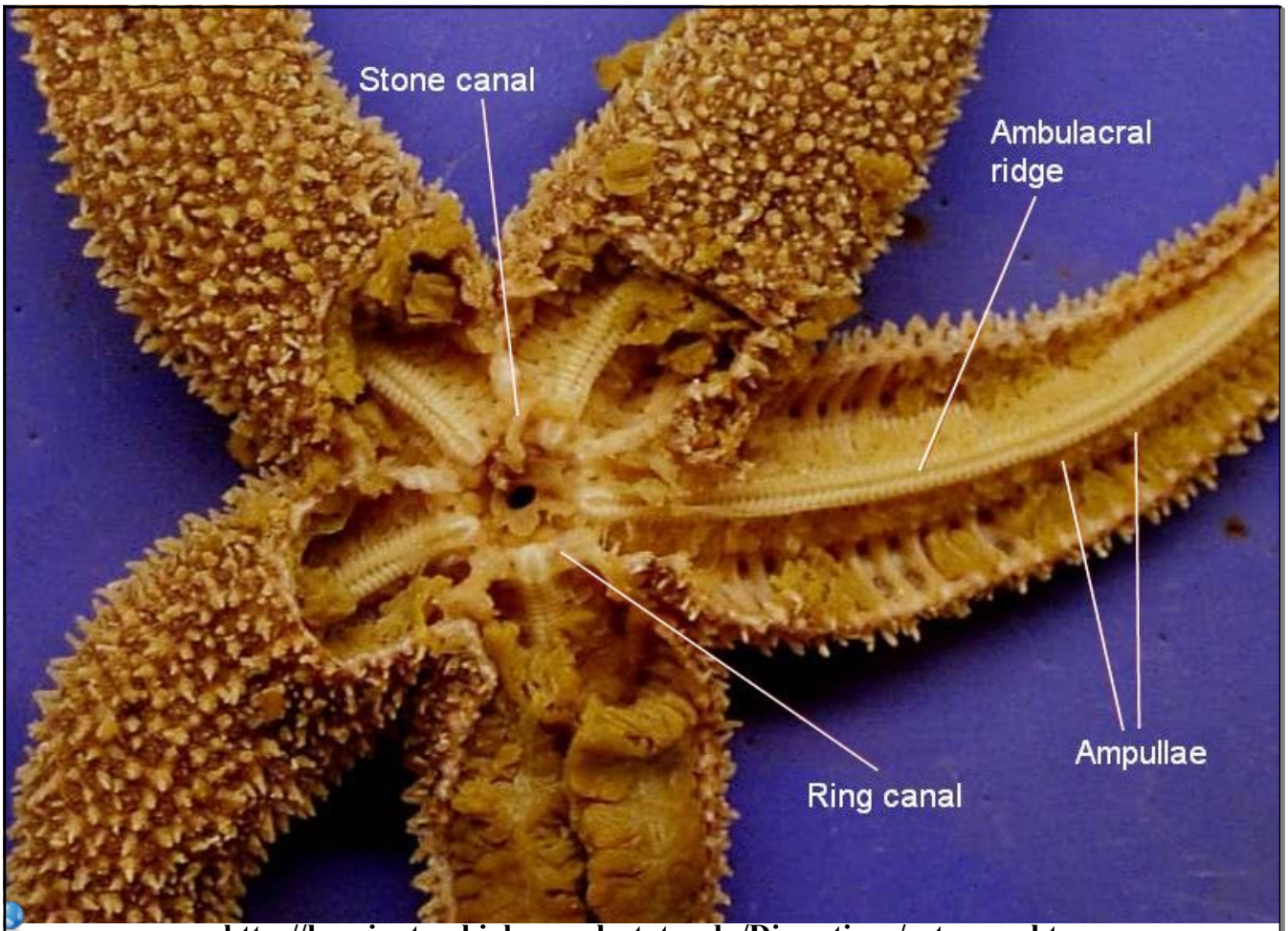
All are bilaterally symmetrical as larval.

Most adults have a 5-part body plan

http://www.perspective.com/nature/animalia/starfish.html

Water-vascular system

A water-filled interconnected series of canals and tiny hollow tube feet
Functions as a place for feeding and gas exchange
The tube feet can be used for locomotion



http://harrington.biology.colostate.edu/Dissections/asterwvs.htm

Coelomic circulation and respiration

The body cavity functions as a Simple circulatory and respiratory system

Some echinoderms have skin gills- small finger-like projections that increase the surface area for gas exchange

Chapter 32-2 Invertebrate Chordates

The 2nd major group of deuterostomes is the chordates — with cord

4 Characteristics of Chordates

Have a completely internal endoskeleton including a notochord

Muscles can attach to this rod increasing the movement an animal can accomplish

Single, hollow, dorsal nerve cord with nerves attached to it

Pharyngeal slits- the develop in the wall of the pharynx

Postanal tail- a tail that extends beyond the anus

All chordates have these characteristics at some point or stage in life

The Phylum Chordata has three subphyla.

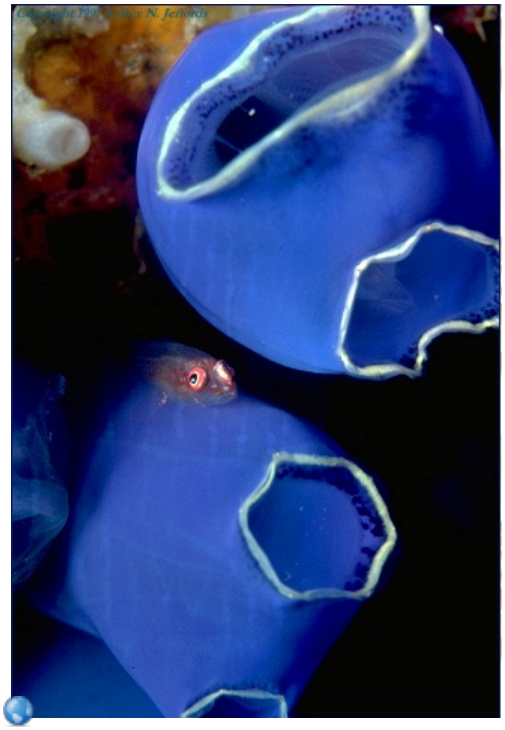
Vertebrata- is the major phylum
Urochordata
Chephalochordata

Urochordata and Chephalochordata are considered _____invertebrate

Urochordata (tunicates)

Sessile, filter feeding animals

A tough sac called a tunic surrounds the animal



http://www.divegallery.com/tunicate.htm

Chephalochordata (lancelets)
Only a few centimeters long
Spend most of their time with their tail burrowed in mud or sand

http://bioweb.uwlax.edu/zoolab/Table_of_Contents/Lab-9a/Lancelets/lancelets.htm