FISH310: Biology of Shellfishes

https://canvas.uw.edu/courses/965428

Today

- About the class
- Expectations
- Touch on some taxa

The course is intended to provide undergraduate students with an introduction to **aquatic invertebrates** with an emphasis on taxa with economic and cultural significance in the region. The class will expose students to the **dramatic diversity** of invertebrates and examine various mechanisms organisms employ to **adapt to environmental conditions**. Most of the content will focus on the **morphology, life history and physiology** of arthropods and molluscs.

FISH 310 A: Biology Of Shellfishes

Jump to Today

https://canvas.uw.edu/courses/965428

Instructors:

Steven Roberts
Jake Heare
Ryan Waples

Contact: https://catalyst.uw.edu/umail/form/sr320/2736
twitter: @UW_FISH310

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EXPECTATIONS

Prerequisites: 10 credits of biological science

Reading assignments: Most readings come from the required textbook (Biology of Invertebrates - Jan A. Pechenik - 6th Edition). Additional readings may be posted on the website periodically to complement the course.

Learning objectives: To develop skills and acquire knowledge to be able to understand the taxonomy, life history, physiology and ecology of selected invertebrate taxa. You will learn about the interrelationship between different species and their role in the natural environment.

Skill objectives:
• Critical thinking and problem solving
• Collaborating with other students
• Gathering, reading, and sharing on current events related to invertebrate biology
• Participation in discussions
• Implement Scientific Method to make new discoveries

General Behavior:
It is expected that student respect their peers and instructors. This includes but not limited to
• Refraining from distracting behavior in class (texting, checking Facebook).
• Respecting time and effort of all instructors.
• Refraining from entering and exiting the classrooms in a disruptive manner.

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Real Expectations

Real Expectations

your expectations

questions

- What do you hope to take away from this class?
- What have you experienced that contributed to your educational experience?
- What have you experienced in a class that did not work?

questions

- How much time should you spend on this class?
- What do you think will be the most challenging aspect of the class?

Real Expectations

our expectations

Real Expectations

Respect your
classmates
and
instructors

Communicate

we are here to help you learn

Real Expectations

Real Expectations

Instructors

- Dr. Steven Roberts
- Jake Heare
- Ryan Waples

Grading

Assignment	Percent	Grade info
Exam 1	15	short answer etc
Exam 2	15	short answer etc
Quizzes	10	Mondays via Tophat
Class Response	5	During class via Tophat
Discussion Board Participation	5	two posts / week
Final Exam	20	comprehensive
Lab Worksheets	10	due each lab
Lab Practicals	10	two in lab assessements
Lab Quarter Project	10	writing + presentation

Grading

Attendance Policy - Attendance in lecture is not directly recorded however quizzes and class repsonses are given via Tophat. Given the degree of live animals, set-up, and support services, there will be no make up labs. Please get to know your labmates as you will be responsible for material.

The two exams will consist of:

- Multiple choice
- Short answer (problems, definitions, compare-and-contrast, etc.)
- Short essay
- Sketches / drawings

The final exam will be comprehensive

Quizzes will be given each Monday via Tophat.

Class Response Activity: Tophat will be used in class for assessment.

Lab Worksheets: In each lab period you will fill out a worksheet. This worksheet must be completed by the end of lab.

Lab Practical: There will be two lab practicals using a station method which will assess your knowledge gained during lab.

Discussion Board Participation: The discussion board will be the primary means of communication. Please use it to ask question, answer questions, and share fun facts about invertebrates.

Access Course

Course SMS Response Number

Using a mobile phone? You can text your responses here:

+1 (315) 636-0905

Course URL

Using a browser? Here's the course URL:

tophat.com/e/537363

Course Code

Mobile Apps

Using a smartphone? Download a mobile app

Available on the App Store

Get it on Google play

Attendance

Take Attendance

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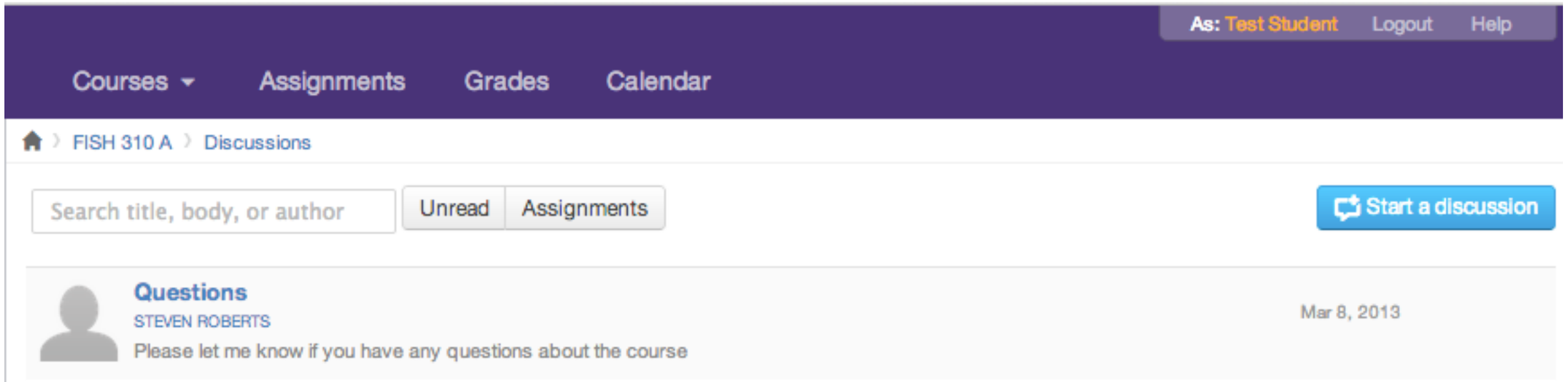
Participation



Primary Means of Communication

Real Expectations

This class will be a *cooperative* educational experience among the instructors and students

Date	Lecture	notes	lab	week
3/30	Intro		*no lab*	**one**
4/1	Environment and Physiology	Chapter 1	*no lab*	
4/3	Invertebrate Classification	Chapter 2		
4/6	Protozoa	Chapter 3 (L6)	*Lab Intro*	**two**
4/8	Porifera	Chapter 4	*Quarter Project A*	
4/10	Cnidaria - Paper Discussion	Chapter 6		
4/13	Cnidaria	Chapter 6	*Intro to Cnidaria*	**three**
4/15	Cnidaria	Chapter 6	*Quarter Project B*	
4/17	Mollusca	Chapter 12		
4/20	Mollusca	Chapter 12	*Mollusc 1: Introduction to Molluscs*	**four**
4/22	Mollusca	Chapter 12	*Mollusc 2: Bivalves*	
4/24	Mollusca	Chapter 12		
4/27	Mollusca Freshwater	Chapter 12	*Quarter Project C*	**five**
4/29	Review		*Mollusc 3: Gastropods / Cephalopods*	
5/1	Exam 1			
5/4	Arthropoda	Chapter 14	*Lab Midterm Exam*	**six**
5/6	Arthropoda	Chapter 14	*Intro to Arthropoda*	
5/8	Arthropoda	Chapter 14		
5/11	Arthropoda	Chapter 14	*Quarter Project D*	**seven**
5/13	Arthropoda	Chapter 14	*Arthropod 2: Crustacean Development, Senses and More*	
5/15	Echinoderm			
5/17	FIELD TRIP		Alki Beach	
5/18	Echinoderm		Echinoderm	**eight**
5/20	Review		*Quarter Project E*	
5/22	Exam			
5/25	*Holiday*		*no lab*	**nine**
5/27	Hemichordates		*Lab Final Exam*	
5/29	Genetics			
6/1	Conservation		Review-evals-talk practice	**ten**
6/3	Case Studies		*QP Presentations*	
6/5	Review			

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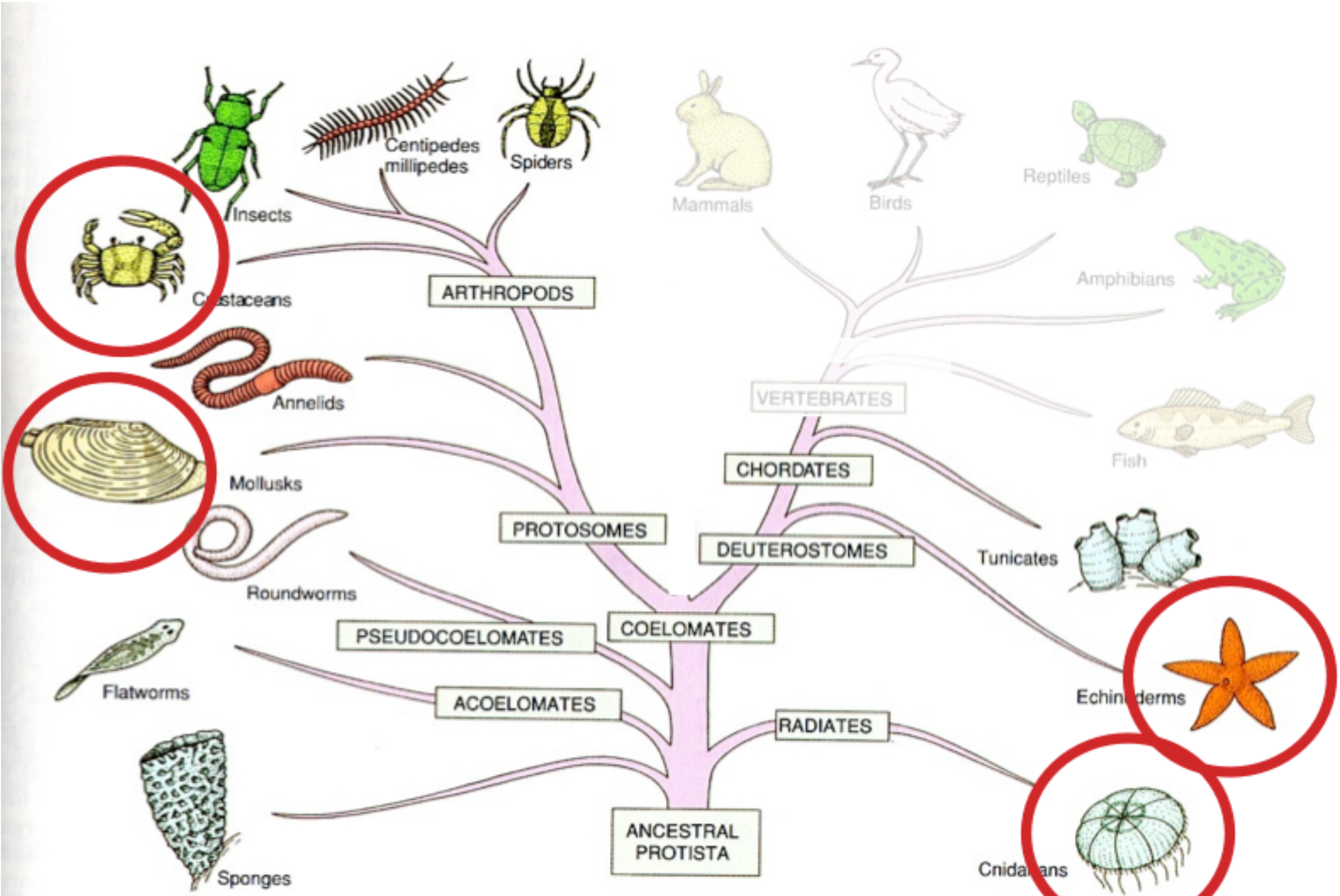
Themes

- Dramatic diversity
- Adaptation to environment
- Evolutionary forces


Insects
Centipedes
millipedes
Spiders
Crustaceans
ARTHROPODS
Annelids
Mollusks
Roundworms
PROTOSOMES
DEUTEROSTOMES
CHORDATES
Mammals
Birds
Reptiles
Amphibians
Fish
VERTEBRATES
Tunicates
Echinoderms
PSEUDOCOELOMATES
COELOMATES
Flatworms
ACOELOMATES
RADIATES
Sponges
ANCESTRAL
PROTISTA
Cnidarians

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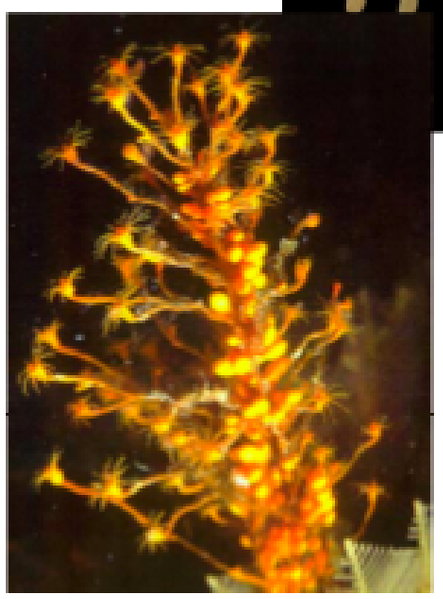
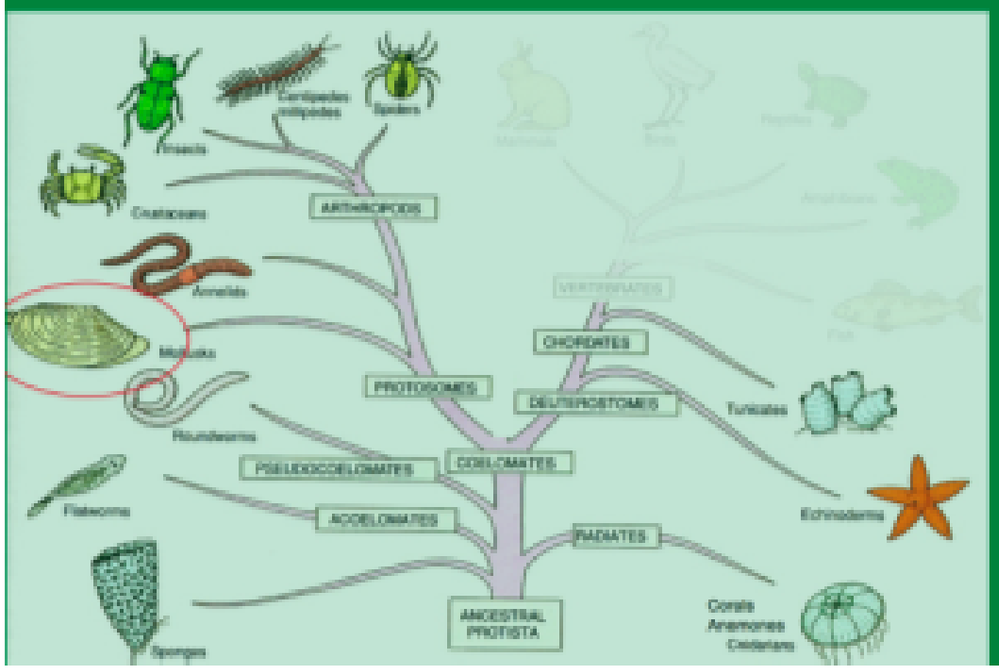
Groups

Cnidaria



- Four Classes
  - Anthozoa*
    - Subclass Zoantharia
    - Subclass Alcyonaria
  - Cubozoa
  - Hydrozoa
  - Scyphozoa

- Phylum Mollusca
  - Class Polyplacophora
  - Class Gastropoda
  - Class Bivalvia
  - Class Cephalopoda



- Class Aplacophora

- Class Monoplacophora

Arthropoda

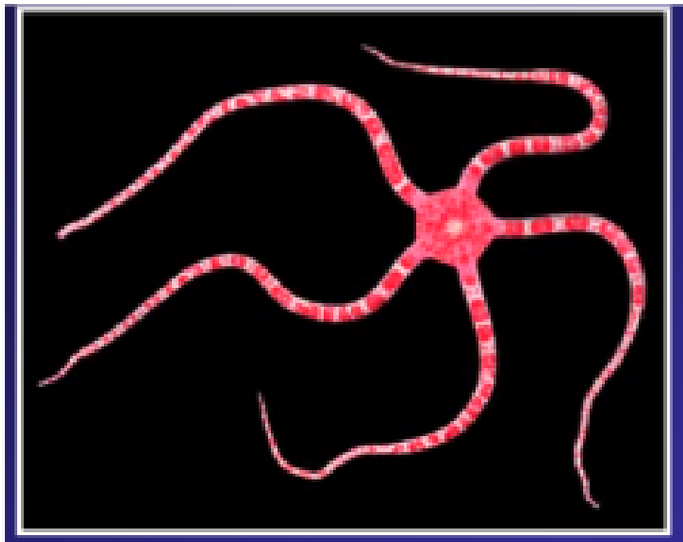
arthro=jointed, pod=foot

- >1,000,000 species of animals named
  - >75% arthropods- mostly insects
  - Estimates of as many as 50,000,000 more in tropics

Class Crustacea

Subclass Malacostraca
Subclass Branchiopoda
Subclass Ostracoda
Subclass Copepoda
Subclass Pentastomida
Subclass Cirripedia

Echinoderms



Spiny skinned
Pentamerous
Marine
Deuterostomes