

Review questions from August 28

Today in lecture we were introduced to the 12 major groups of vertebrates which we will be discussing throughout the progression of the course. You should become comfortable with both their common and scientific names. These are (in no particular order):

- Chondrichthyes (cartilaginous fish: sharks, rays, skates, chimaera)
- Amphibians (frogs, salamanders, caecilians)
- Testudinia (turtles)
- Aves (birds)
- Mammalia
- Crocodylia (alligators and crocodiles)
- Actinopterygii (ray-finned fishes)
- Petromyzontoides (lampreys)
- Myxinoidea (hagfish)
- Lepidosauria (snakes, lizards, and tuatara)
- Actinistia (coelacanth)
- Dipnoi (lungfish)

Which of these groups are among the most diverse (in terms of the number of species)? Which are among the least? Why do you suppose...? Do certain groups tend to inhabit certain types of environments?

We discussed the traditional view versus the new (molecular) hypothesis of Deuterostome relationships. In both cases which group is sister group to the Vertebrates? Are Chordates monophyletic under the new hypothesis?

We took a closer look at 2 of the 3 Chordate groups, the Cephalochordates and Urochordates, and discussed key attributes of their morphology and life history. What are these? How are these two groups similar on these counts? How do they differ?

What are the 5 traits that are shared by all 3 of the chordate phyla?

Disclaimer: these review questions are not necessarily comprehensive, nor are they meant to be. They are meant to supplement your lecture notes as you review them, and alert you to the ways in which you should be thinking about the material, and formulate questions to test yourself. Exams will not be limited to the material highlighted in these review questions, so your lecture notes should be your primary reference.