

# Week 1 Lecture 2

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## 1 Administrative drivel

- No class monday – next class is wednesday.

## 2 Characteristics of Kingdom Anamalia Continued...

### 2.1 Vertebrata is a subgroup of Chordata

- "vertebrates"
- Humans belong to **subphylum vertebrata** (subset of Chordata)
- anything that has a backbone (vertebrae) is a vertebrate
- sea squirts might be our closest common ancestor in chordata

#### 2.1.1 Vertebrate *classes*

- Hagfish and lampreys – few left... no jaws! Primarily marine. Lampreys have invaded the great lakes, and attach to the side of other fish and suck out the insides of the fish they're parasitizing. Hagfish feed on corpses of dead marine animals.

- sharks and rays – have a backbone, but no bone skeleton (it's cartilage)
- bony fishes – fish with skeletons
- Amphibians
- reptiles
- birds
- mammals – where the humans are

- the top 3 are fish
- these are ordered by ancestral splitting, we now think that mammals preceed birds
- NOTE: birds are reptiles, but we think of them as separate, and are directly decendent from dinosaurs

- By def, birds are things with feathers, but since the discovery of dinosaurs with feathers, this line is a little more iffy.

## 2.2 Characteristics of *class* Mammalia

- Humans are here!

### 2.2.1 Main properties

- Mammary glands (milk)
- Hair

### 2.2.2 3 categories of mammals:

- early mammals are the **monotremes** – egg laying mammals. Akkidnas and duckbilled platapus. They don't have nipples, but they have mammary glands.

- **marsupials**
- **placental mammals** – humans!  
(this is the order of ancestry as well)

Phylogenetic tree:

- Branch points (called *nodes*) tell you how far back the last common ancestor occurred
- The more closely related creatures have fewer nodes between them
- more closely related groups are the *branches*

## 2.3 textitorder Primates

- Humans are here!

### 2.3.1 Main properties

- larger brains
- better stereoscopic vision (forward looking) at the expense of smell
- opposable thumbs

- Early primates appeared 65 mil ago, and looked more like the lemur

kinds:

- Lemur
- Tarsius
- Callithrix
- Saimiri

- Pithecia
- Lagothrix
- Macaca
- Columbus
- Hylobates
- Pongo
- Gorilla
- Pan
- Homo
- Broad categories: new world, old world, great apes, chimps
- we'll focus on the great apes

## 2.4 Characteristics of *family* Hominidae

- Humans are here!
- no tails :(
- Great apes: orangatang, chimp, bononbos, gorillas, humans