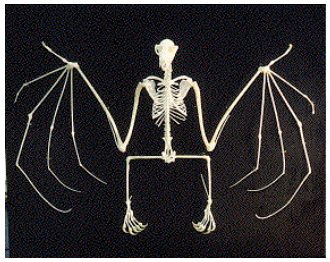
Lab #10 Tetrapoda: skeletons

1. Composition and function of bone
2. Bones of the body
3. Adaptations of bones
4. Comparison of tetrapods



Compact bone

Draw and Label

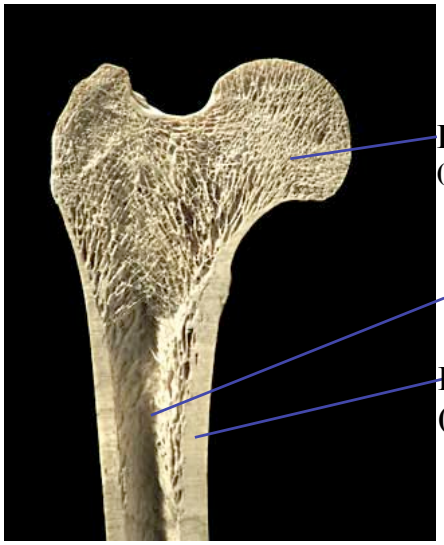


Image from http://www.casebook.org/forum/messages/4921/5608.html

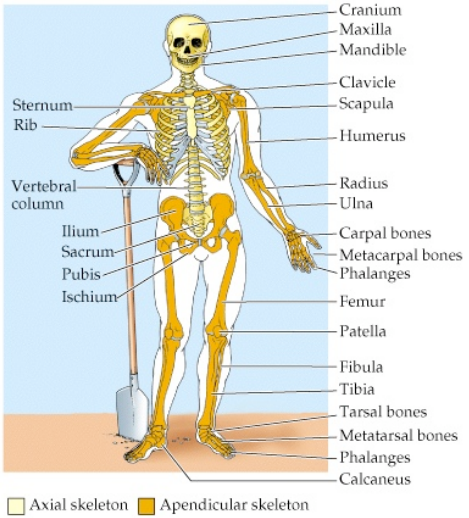
Bone Functions

- Protection
- Body support
- Movement
- Blood synthesis
- Biological compound storage

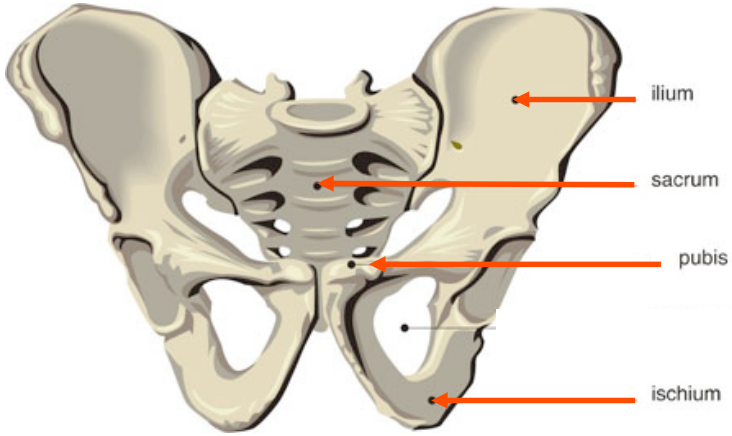
The bones of the skeletal system

- Each bone is an organ
- Important contrast:
  - **Axial** –skull, vertebral column, sternum, and ribs

    vs.
  - **Appendicular** – limbs pectoral and pelvic girdles

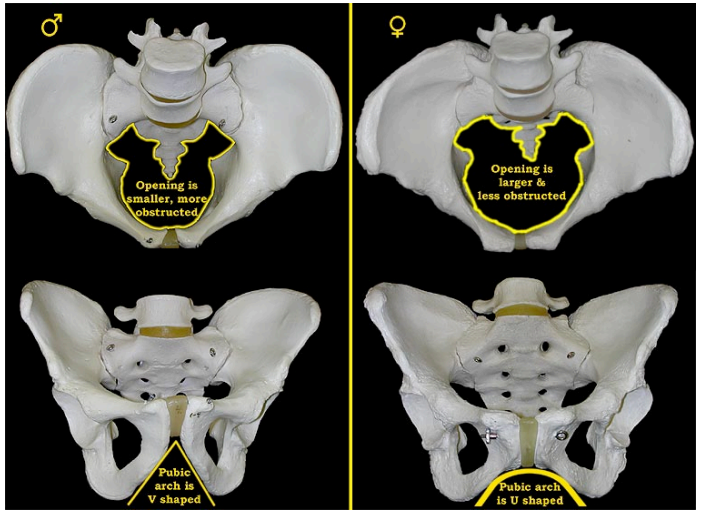


Human Pelvis

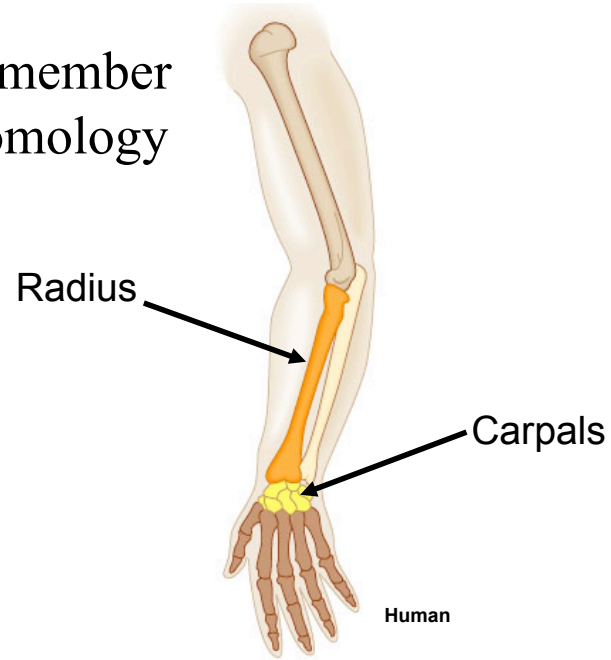


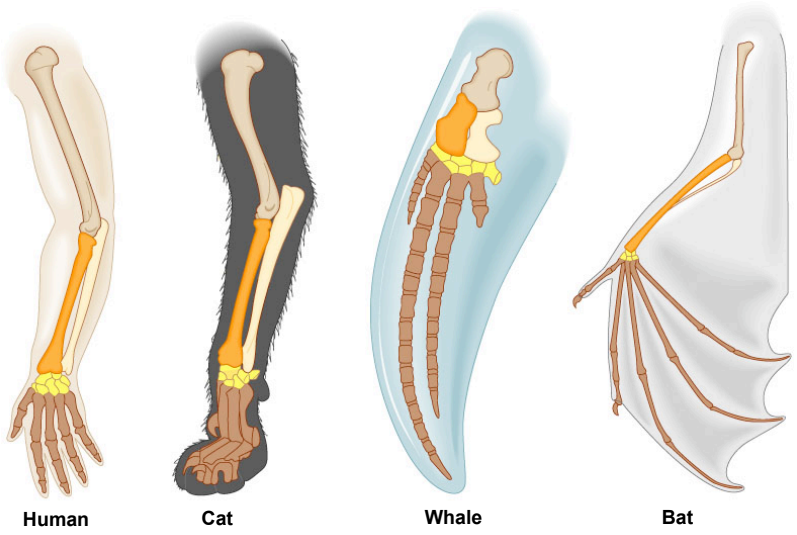
Male vs. Female Pelvis

- Why are they different?

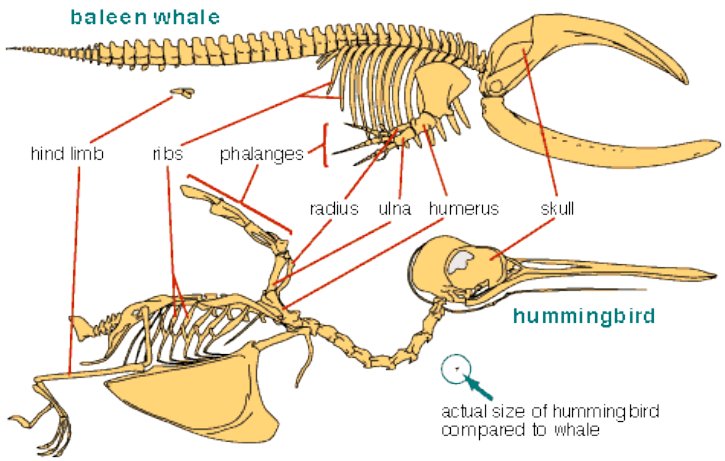


Remember Homology

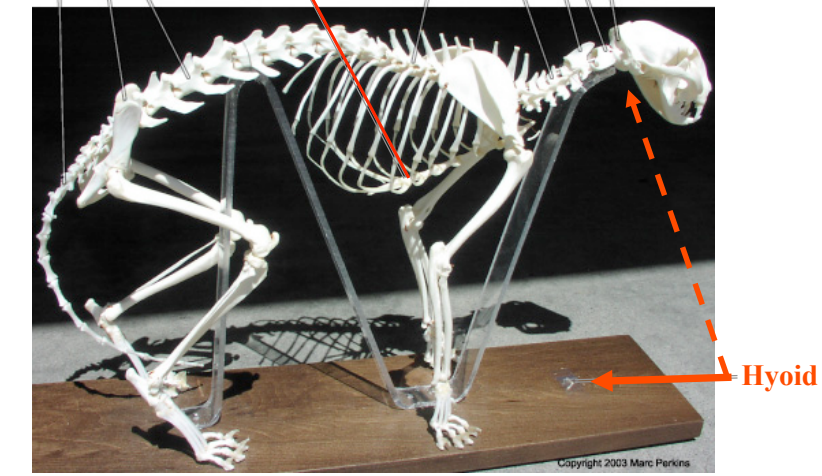




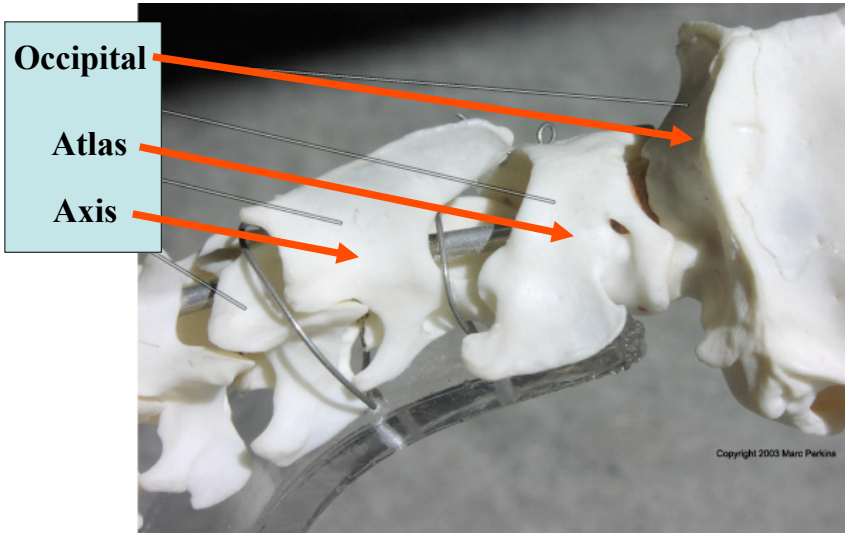
Modification of the tetrapod skeleton



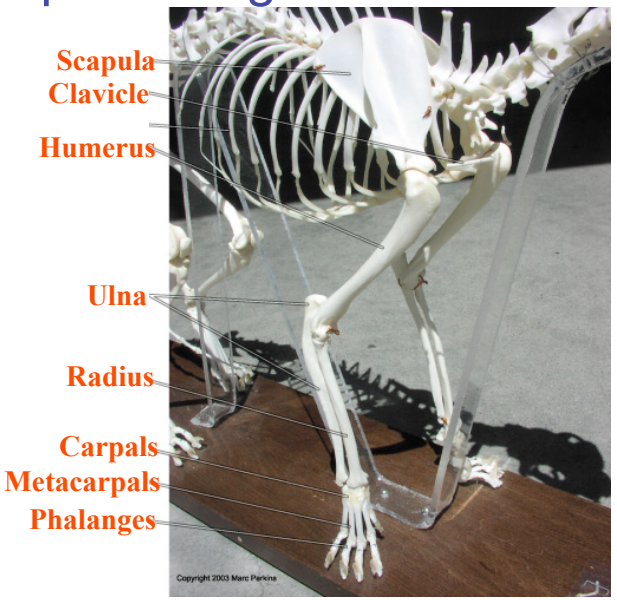
Cat skeleton - axial



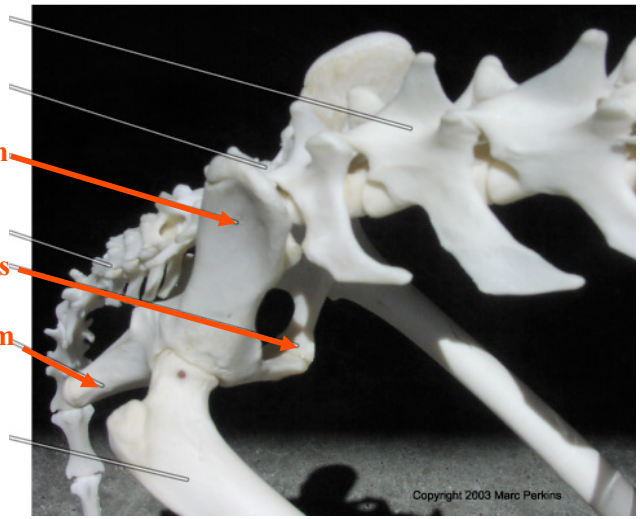
Cat – atlas and axis



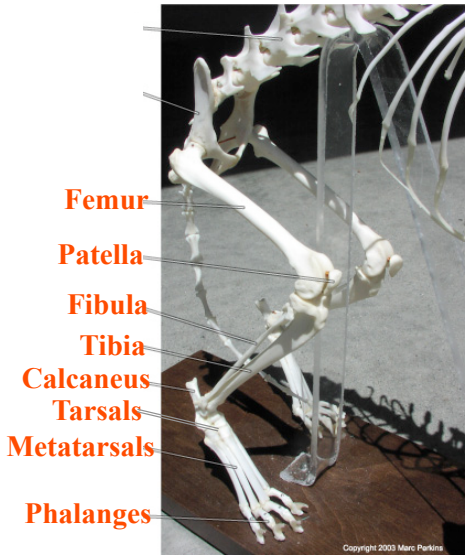
Cat – pectoral girdle and forelimb



Cat – pelvic girdle
the innominate bone



Cat – hindlimb



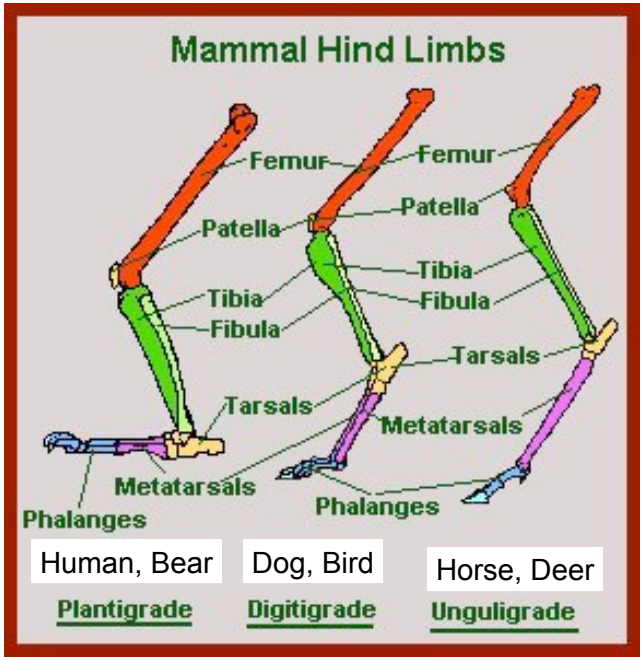
Forelimb Diagram
(draw and Label)

- **Plantigrade locomotion**
  Example – Human, Bear

- **Digitigrade locomotion**
  Example – Dog, Bird

- **Unguligrade locomotion**
  Example – Horse, Deer

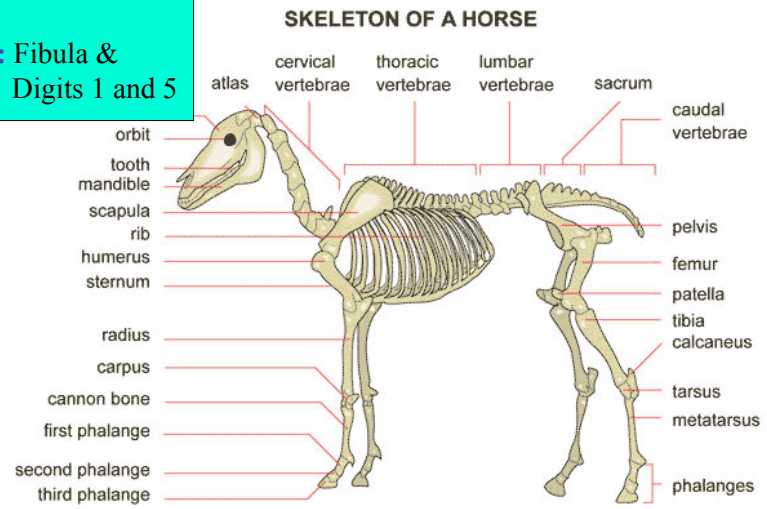
Hindlimb Diagram

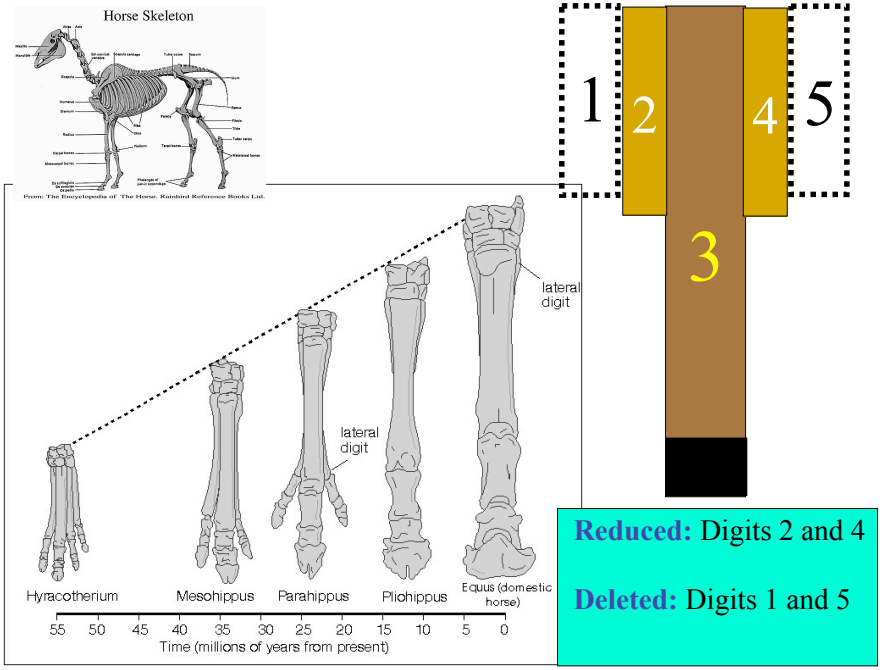


Fusion: Ulna/radius

Reduced: Humerus & Digits 2 and 4

Deleted: Fibula & Digits 1 and 5

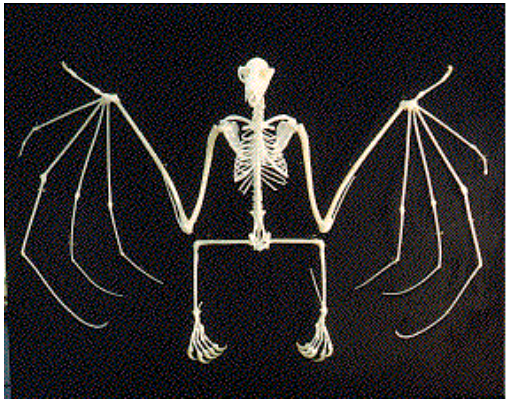




Reduced: Digits 2 and 4

Deleted: Digits 1 and 5

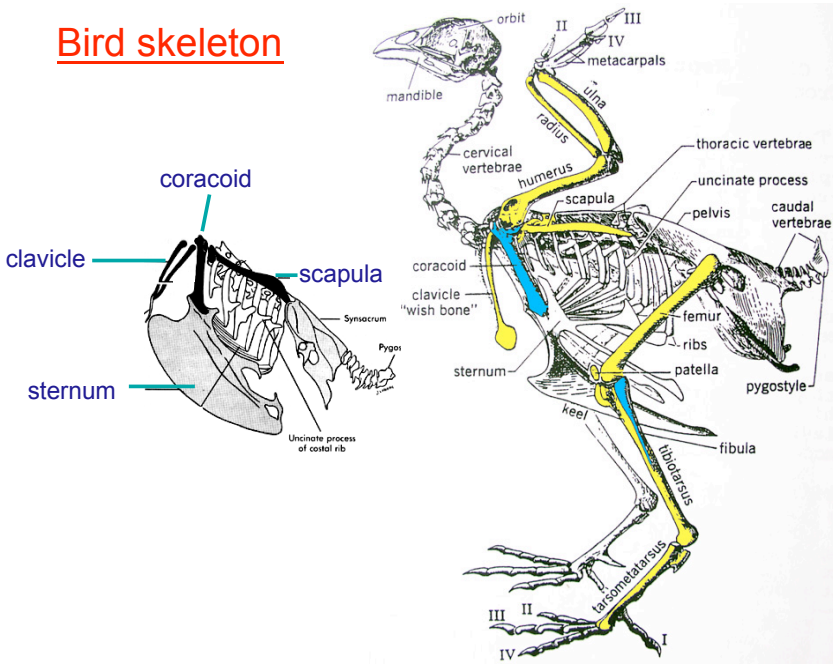
Bat Skeleton

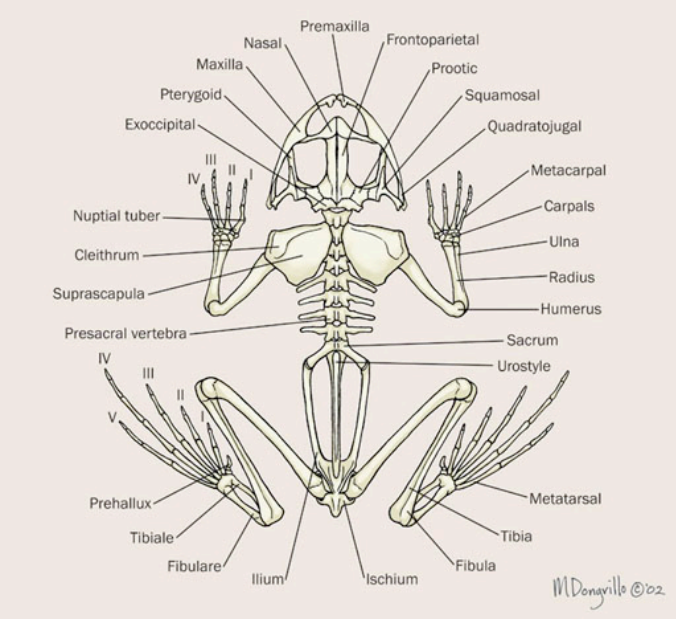


Reduced: Ulna

Elongated: Metacarpals

Bird skeleton





SKELETON OF A TURTLE