

Lab 5 - APPENDICULAR SKELETON AND ARTICULATIONS CAT SKINNING

While examining the parts of the appendicular skeleton, make note of which structures are more visible on the anterior vs. posterior surfaces of the bone.

UPPER EXTREMITY:

Shoulder Girdle (2) - scapula and clavicle, Figure 11.1 and 11.2, pgs 106-107.

- a. **Scapula**- subscapular fossa, scapular spine, infraspinous fossa, supraspinous fossa, acromion, suprascapular notch, glenoid cavity, coracoid process, inferior, lateral, and superior angles.
- b. **Clavicle** - conoid tubercle, acromial and sternal ends.

Arm (1). Fig 11.3, p. 108. **Humerus**. Head, anatomical neck, surgical neck, greater tubercle, lesser tubercle. Deltoid tuberosity (what attaches here?), medial and lateral epicondyles, trochlea (means "pulley"), capitulum, coronoid fossa, olecranon fossa.

Forearm (2). Fig. 11.4, Page 109. **Ulna** and **Radius**

- a. **Ulna** - olecranon and coronoid processes (what do these articulate with?), trochlear notch, styloid process of ulna
- b. **Radius** - head, neck, radial tuberosity (what tendon inserts here?), styloid process of radius

Wrist (8) - **Carpals**. Review Figure 11.5, pg 110. Identify each of the 8 carpal bones.

Hand - (5 **metacarpals** and 14 **phalanges**). Figure 11.5. What are the subunits of each phalanx?

LOWER EXTREMITY:

Pelvic Girdle or Os Coxae (3). Ilium, ischium, pubis - Figure 11.6, pg 111; Figure 11.6 (continued), pg 112; and Table 11.1, pg 113.

Hip bones form the bony pelvis. Locate the acetabulum, socket for the head of the femur.

Ilium - crest, anterior superior spine, posterior superior spine, greater sciatic notch, iliac fossa, inferior spines of ilium, sacroiliac joint.

Ischium and **Pubis**- ischial tuberosity, ischial spine, lesser sciatic notch, ischial ramus inferior and superior ramus of pubis, obturator foramen, symphysis pubis, pubic crest, pelvic inlet.

Thigh(1) - Figure 11.7, p. 114. **Femur**

Body, head, neck, gluteal tuberosity, greater and lesser trochanter, medial and lateral condyle, medial and lateral epicondyle, patellar surface.

Hint: a condyle is a rounded prominence- one is medial, one is lateral. Epi means above - the epicondyles are superior to the condyles.

Kneecap (1) – **Patella**, Figure 11.7.

Apex, facets, surface for patellar ligament

Lower Leg - Figure 11.8, pg 115

Tibia (1) - tibial tuberosity (what attaches here?), lateral and medial condyles, medial malleolus (locate on ankle), fibular articulations, anterior crest/ border

Fibula (1) - head, lateral malleolus (locate on ankle)

Foot - Figure 11.9, p. 116. Tarsals (7), Metatarsals (5), Phalanges (14)

Tarsals - Learn these 7 bones. On the calcaneus, note the roughened tuberosity - what is attached here?

Metatarsals and **phalanges**

Comparison of Male and Female Skeletons:

Examine the class skeleton. Using information from your lecture text and Table 11.1 in your lab book, what are good indicators of the sex of this individual? Remember, you need to look at several characters.

ARTICULATIONS

You should be able to give me one example of these joints found in the skeleton: (Exercise 13, p.119)

Classified by function: synarthroses, amphiarthroses, diarthroses

Classified by structure: suture, syndesmosis, gomphosis, synchondrosis, symphysis, synovial

Types of synovial joints - gliding, hinge, pivot, ball and socket, saddle, ellipsoid
Anatomy of Knee joint - You should be able to identify the following structures:
(Figure 13.7) – Examine the model of the knee joint.

1. Anterior cruciate ligament
2. Medial meniscus
3. Lateral meniscus
4. Medial and lateral condyles
5. Posterior cruciate ligament
6. patella
7. Tibial/ Medial collateral ligament

Anatomy of Shoulder joint- the glenohumeral joint- on the model, note:

Coracoacromial ligament, trapezoid ligament, conoid ligament, glenoid fossa, head of humerus, acromioclavicular ligament, coracoid process, acromion of scapula (see attached handout, consult lecture text).

What is a bursa?

You should also be able to explain the articulation of the skull with the vertebral column, using such terms as occipital bone, occipital condyle, atlas, and axis, and how these articulations allow the head to rock and turn. (consult lab and lecture texts).

CAT SKINNING:

Skin your cat today! Rebecca and I will give you your cat (work in pairs). This is your cat for the year! Treat it carefully and well! Try to keep your cat moist, especially for storage (use the Wardsafe solution in the lab). Taking good care of your cat will reduce growth of unwanted organisms like mold! Name your cat!

We will give a quick review of basic cat skinning technique. Your lab manual also discusses a slightly different method on page 709-711. As you know, there is always more than one way to skin a cat.

DEMOS – Review the demos on the front bench.

REVIEW EXERCISES – Practice your knowledge of the skeletal system by working through the questions in Review Exercises 9-13 (pgs 549-574 in the lab book). Answer only the questions that include the terminology listed in this lab outline.