

ANIMAL BIOLOGY LABORATORY

Lab 11: Phylum Chordata – Subphylum Vertebrata – Class Mammalia

Read page 239 in your lab manual before coming to lab next week.

Objectives:

- Recognize the basic structure and organization of mammals.
- Recognize some common mammals found in Oklahoma
- Recognize representatives of the Ornithodelphia, Metatheria, and Eutheria

Class Mammalia

- Mammary glands
- Endothermic
- 4-chambered heart
- Internal fertilization (via penis)
- 3 middle ear bones
- Enucleated red blood cells
- Typically heterodont teeth
- Dentary bone articulates with squamosal bone
- All have hair at some stage in their life

Infraclass Ornithodelphia (duck-billed platypus and spiny anteater)

- Oviparous (egg-laying mammals)
- Lack nipples

Infraclass Metatheria [*“other beasts”*] (opossums, kangaroos, koalas)

- Abdominal pouch (marsupium)
- Nipples inside marsupium

Infraclass Eutheria [*“true beasts”*] (whales, bats, elephants, felids, canids, humans, and all native mammals in North America except the opossum)

- Placental
- Viviparous
- Nipples present
- Developing young attached to mother by a placenta

Exercise 20: Mammalian Anatomy

Exercise 20A: Cat skeleton

(see instructions: Lab Manual pp.239-244; Figs. 20.1-20.5)

Identify the following skeletal structures:

- Mandible
- Cranium
- Atlas
- Axis
- Vertebrae
- Humerus
- Radius
- Ulna
- Ribs
- Femur
- Tibia
- Fibula
- Scapula

Review Questions

All questions pp. 240-243.

Exercise 20C & 20D Fetal Pig dissection

(see instructions: Lab Manual pp. 253-262; Figs. 20.11-20.18)

Identify the following structures:

- Heart
- Esophagus
- Trachea
- Diaphragm
- Vagina
- Liver
- Lungs
- Kidneys
- Ovary
- Testes
- Stomach
- Small intestine
- Descending colon
- Pancreas
- Spleen

Review Questions

All questions pp. 256-262.