

Lectures #26 & #27 – Mammalia II

- I. Evolutionary Diversity of Placentalia
 - A. Xenarthra (=Edentata)
 - 1. Anteaters, armadillos, and sloths
 - 2. Edentata: toothless to simple peglike teeth
 - B. Carnivora
 - 1. Dogs, cats, bears, weasels, raccoons, seals, sea lions, walruses
 - 2. Mostly carnivorous with teeth adapted for shearing flesh
 - a. Pinnipeds have peg-like teeth and forelimb flippers
 - 3. Social or Solitary
 - 4. Absent from Australia
 - C. Chiroptera
 - 1. Bats
 - 2. Flying Mammals
 - a. Forelimbs modified into wings for powered flight
 - 3. Herbivorous & Carnivorous
 - a. Echolocation
 - D. Insectivora
 - 1. Shrews, hedge-hogs, and moles
 - 2. Small with pointed nose
 - 3. Carnivorous
 - a. Insectivorous
 - E. Rodentia
 - 1. Rats, mice, squirrels, beavers
 - 2. Upper and lower incisors enlarged
 - a. gnawing
 - 3. Herbivorous
 - F. Lagomorpha
 - 1. Rabbits, hares, and pikas
 - a. Closely related to rodents
 - 2. Some with enlarged ears
 - a. Hearing
 - b. Thermoregulation
 - 3. Herbivorous
 - a. Double set of upper incisors
 - G. Artiodactylia
 - 1. Pigs, deer, antelopes, hippopotamuses, cattle, sheep, and goats
 - 2. Even-toed hoofs, usually with two toes
 - a. Hippos with 4 toes
 - 3. Cattle, sheep, antelopes with horns
 - a. Permanent
 - 4. Deer and relatives with antlers
 - a. Shed annually
 - 5. Mostly herbivorous
 - a. Ruminants
 - H. Cetacea
 - 1. Dolphins, porpoises, whales
 - 2. Aquatic lifestyle
 - a. Forelimbs and tail modified into flippers
 - b. Hindlimbs absent
 - c. Nostrils located dorsally
 - 3. Odontocetes & Mysticetes
 - a. Toothed whales
 - b. Baleen whales - filter feeders
 - 4. Carnivorous
 - a. Echolocation
 - I. Perissodactylia
 - 1. Horses, zebras, asses, tapirs, and rhinoceroses
 - 2. Odd-toed hoofed animals
 - 3. Herbivorous
 - 4. Teeth adapted for chewing

- J. Hyracoidea
 - 1. Hyracs
 - 2. Small rodent-like animals
 - a. Closely related to elephants and perissodactyls
 - 3. Omnivorous
- K. Proboscidea
 - 1. Elephants
 - 2. Upper two incisors modified into tusks
 - 3. Large ears
 - a. Hearing
 - b. Thermoregulation
 - 4. Trunk
 - 5. Herbivorous
- L Sirenia
 - 1. Manatees, sirens, dugongs
 - 2. Aquatic, slow-moving
 - a. Lack hindlimbs
 - b. Forelimbs are flippers
 - 3. Herbivorous
- M. Primates
 - 1. Lemurs, monkeys, gibbons, and apes
 - 2. Lack hooves, horns, antlers, claws, and scales
 - 3. Brain becomes progressively larger
 - a. Complex social interaction
 - b. Use vocalization to communicate
 - c. Humans

Reading: Chapter 20 - pages 390-414.

Questions: Page 413 – 1, 2, 3, 4, 5, 7, 8, 10, 12, 15, and 17.