

Lectures #26 – Mammalia II

I. Evolutionary Diversity of Placentalia (=Eutheria)

A. Xenarthra (includes Cingulata p. 419)

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. Lipotyphla (includes Soricomorpha p. 418)

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. Primata
 - 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 399-422.

Questions: Page 421 – 1, 2, 3, 4, 5, 7, 8, 10, 11, 12, and 15.

*Not included in Animal Diversity, 5th edition