

GENERAL BIOLOGY Lecture 26 - Human Evolution

- I. Some other special characteristics of mammals
 - A. Dentition - type, number, and size of teeth
 - 1. Upper and lower teeth fit together to enable cutting and crushing of food
 - B. Infant dependency and learning
 - 1. Flexibility to responses
- II. Classification of man (a review)
 - A. KPCOFGS: Animalia, Chordata, Mammalia, Primates, Hominidae, Homo, H. sapiens
- III. Primate classification
 - A. The order Primates includes lemurs, tarsiers, monkeys, apes, and man
 - B. Further classifications
 - 1. Prosimians ("before ape"): lemurs and tarsiers
 - 2. Anthropoids (monkeys, apes, and humans): gibbons, orangutans, gorillas, chimpanzees, and man
 - a) New World and Old World monkeys
 - b) Lesser apes - gibbons and siamangs
 - c) Great apes - orangutans, gorillas, and chimpanzees
 - d) Family hominidae - man and extinct relatives
 - 1) Special characteristics of the hominids
 - a) Bipedalism
 - b) Omnivorous feeding behavior
 - c) Brain expansion and reorganization
 - 2) Genus Homo: early "Homo:" concept of a home (?)
 - a) Homo erectus: larger brain, migrated to new regions
 - b) Homo sapiens: rounder skull, smaller teeth
- IV. Trends in primate evolution
 - A. Change in skeletal structure
 - B. From quadrupedalism to bipedalism
 - C. Increased manipulative skills - hand movement
 - D. Less reliance on smell and more reliance on sight
 - E. From specialized to omnivorous feeding behavior
 - F. Brain expansion and reorganization
 - G. Behavioral evolution
- V. Early Homo
 - A. Development of tools
 - 1. Cracking open bones to get at the bone marrow (to eat)
 - B. Making of shelters - a "home"
 - 1. Hominids may have gathered in shelters to eat
 - C. Travel for a purpose - to get rocks (quartz, lava) for tools
 - D. Adaptation to environment
 - 1. Earth's big climatic changes (Ice Ages)
 - 2. Travel and migration from Africa to Asia, China, and Europe
 - a) Making of fire
 - E. Further modification
 - 1. More sophisticated tools, etc.