

□ **Anthropoid:** refers to the group of monkeys, great apes, and humans (basically all primates except Prosimians)

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□ **4 broad groups of primates**

- *Prosimians*
- *New World Monkeys* (Platyrrhini)
 - o Anthropoid
 - o Relatively small and arboreal (spend most time in trees)
 - o Many have prehensile tails
 - o Live mainly in tropical forests in Central and South America
 - o Many species live in large multi-male, multi-female social groups
 - o Arboreal quadrupeds (run on top of branches)
 - o EX: Woolly monkey, Spider monkey, Squirrel monkey, Howler monkey, Owl monkeys, Pygmy marmoset
- *Old World Monkeys* (Cercopithecoidea)
 - o Anthropoid
 - o A terrestrial quadruped skeleton
 - o Cercopithecines: most at least partly terrestrial, omnivorous, live in large groups
 - EX: baboons, macaques, mandrills, langurs, vervet monkey, olive baboon, mandrill, etc.
 - A terrestrial quadruped skeleton
 - The only two non-human primate species living outside the tropics
 - EX: Barbary macaque, Japanese macaque
 - o Colobines: arboreal, colorful, feed on leaves
- *Hominoids* (apes and humans)
 - o Anthropoid
 - o "great apes" (chimpanzee, bonobo, gorilla, orangutan)
 - Chimpanzee (*Pan troglodytes*)

- Found in a belt along equatorial Africa.
- Quadrupedal knuckle-walkers
- Large multi-male, multi-female groups are 'run' and defended by males that compete for status
- Chimps are highly excitable and can be ferocious
- Mother-infant bond is an important lifelong relationship in chimps
- Studied by Jane Goodall
 - Found that chimps make and use tools to crack open nuts, get termites from mound to eat, etc.
 - Found that chimps hunt and eat meat
 - Chimps can be lethal in combat
- Bonobo chimpanzees (*Pan paniscus*)
 - Slightly different morphology from common chimp:
 - More linear build
 - longer arms
 - darker faces
 - Quite different behaviorally:
 - Less aggressive in general
 - Females play a larger role in group dynamics
 - Sexuality (sex for anything, with anyone for a number of reason)
- Gorilla
 - Live in relatively small forested regions in equatorial Africa
 - Exhibit marked sexual dimorphism in body size
 - Live in one-male, multi-female social groups
 - Gorillas are almost exclusively vegetarian
- Orangutans (*Pongo pygmaeus*)
 - Only found in the rainforest of Borneo and Sumatra
 - Very large, cautious climbers that rarely touch the ground, mostly in trees

- Orangutans do not live in large social groups
 - Frugivorous: eat mostly fruits
- o “lesser apes” (gibbons and siamangs)
 - gibbons and siamangs are found in tropical SE Asia
 - pair-bonded adults and offspring form a social unit
 - most distinguishing characteristic is their mode of locomotion - brachiation
 - brachiation: swinging around in a monkey bar fashion to travel
 - have long arms and fingers, but short legs because of this
- o Hominins (humans and human ancestors)

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Primate Behavioral Ecology: Reproductive Strategies

- Behavioral ecology 101
 - o Natural selection favors the strategies that increase fitness
 - o Strategy: a set of behaviors that produces a particular course of action under certain conditions (foraging strategy, reproductive strategy)
 - o The term “strategy” does NOT imply conscious reasoning or intent by the organism
 - o There is no “perfect strategy,” every strategy has costs and benefits
- Reproductive Strategies
 - o Big targets for selection because reproduction is so closely linked with fitness
 - o Selection often favors different strategies in males and females:
 - Female success is directly related to her ability to obtain calories for herself and her offspring.
 - In mammals, maternal investment is obligatory
 - Females carry fetus internally and lactate to nourish infant after birth
 - Maternal care is costly in terms of energy and nutrients required
 - nourishment
 - o Ex: increased need of Protein, Folate, Calcium, Zinc, Iron
 - Transportation