

ANTH 200Lg: The Origins of Humanity

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Office Hours: 12:00-1:30pm, Tuesdays and Thursdays, OR by appointment

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Review Questions for Exam #2 – THU, 11 MAR 2010

The second exam will be mixed-format questions (e.g. fill-in, matching, multiple choice, short answer, true-false). You are responsible for both lecture and material from the text (Chapters 5-8), as well as those AE readings discussed specifically in lab sections (i.e. AE 8-9, 12-14, & 16-17).

- Define and give an example of the following:

reasoning by analogy / homology

heterodontism / dental formula

contest / scramble competition

mating vs. social systems

sexual selection / kin selection

altruistic / selfish behavior

- Give two reasons why anthropologists study non-human primates.
- The Arboreal, Visual-Predation and Angiosperm Co-evolution hypotheses have been proposed to explain the adaptive radiation of the Order Primates. What are arguments for each?
- Primate taxonomy: for each of the following five taxa, know at least three distinguishing features of behavior or anatomy that would distinguish it from the other groups. Your choices are nonprimate, strepsirhine, platyrrhine, cercopithecoid, and hominoid.
 - Example: This animal has a dental formula of 2.1.3.3 on the mandible, forelimbs and hindlimbs of equal length, broad nostrils. _____
- What are the three main proximate threats endangering primates?
- What is the relationship between conservation and research?
- Describe the different types of habitats where primates reside.
- What are the niche concept and the competitive exclusion principle?
- Describe the two types of competition and explain under what conditions you would expect to find each.
- In socioecological terms, what are Risks and Resources? How do they influence social structure and behavior?
- What determines an individual's energetic requirements?
- How do most primates acquire a full complement of nutrients?
- Distinguish the dietary adaptations associated with the following dietary types: (i.e. what are the gut and tooth morphologies for each type of diet): frugivorous, folivorous, insectivorous, gummivorous. Give an example of a taxon that has each type of dietary adaptation.

- Describe the relationship between body size and diet in primates [Think “quality vs. quantity”].
- Why are some primates territorial and others not? List at least 2 costs and 2 benefits to defending a territory.
- What factors (i.e. benefits) encourage living in groups and what factors limit group size (i.e. costs).
- What factor constrains fitness among females? Among males?
- What (reproductive) advantages are there to being dominant, or high-ranking?
- Why are male mammals more likely not to be involved in the caring of offspring (relative to female investment in offspring)?
- What criteria need to be met to demonstrate that such a behavior might result in a higher reproductive success for infanticidal males?
- Under which mating system would you expect a male to participate the greatest amount in parental care? Explain.
- What are the 2 main components of sexual selection?
- What are some quantitative measures that indicate the relative intensity of male-male competition among male primates?
- Describe traits that might be favored by females during mate choice. What is meant by direct vs. indirect benefits? Give an example.
- What are 2 female counterstrategies to infanticide by males?
- Compare and contrast group selection and kin selection.
- What is Hamilton’s Rule? Define inclusive fitness.
- Explain reciprocal altruism. What conditions should be met for reciprocity to be favored?
- How do the ecological complexity and social intelligence models explain the evolution of primate cognition?
- What is extractive foraging?
- If neocortex size (or ratio) is associated with primate cognition, then what are the expected relationships with degree of frugivory, extent of extractive foraging, home range area and group size? What hypothesis would each prediction support?
- How are coalition participation and deception in primates related to an understanding of third-party relationships?
- What is theory of mind?