FINAL EXAM: Thursday, 6 May 2010, 2:00 – 4:00pm

ANTH 200: The Origins of Humanity
Dr. Roberto Delgado
Office hours: Tuesdays & Thursdays, 12:45-1:45pm OR by appointment

Review Questions for Exam #3 (the FINAL)

The FINAL exam will be mixed format and non-cumulative. You are responsible for both lecture and material from the text (see below). Also take advantage of your lab manual and online resources such as

http://www.wwnorton.com/college/anthro/evolve5/

Readings: Boyd and Silk (2006) How Humans Evolved, 5th Edition. Please focus on:

Ch. 9: 218-231, Box 9.3; Ch. 10: p246-275; Ch. 11: p282-292; Ch. 12: p305-336; Ch. 13: p342-348, p358-373; Ch. 14: ALL; Ch. 15: ALL; Ch. 16: p443-458

Annual Editions in Physical Anthropology 10/11: Articles # 18, 22-29, 31-32, 34-36, 38-42

- Why might geology and climate change have been important factors in relation to primate (and human) evolution?
- What is continental drift / plate tectonics?
- What are some examples of absolute and relative dating methodologies? What is the general basis for each of these techniques (e.g. radioactive decay, stratigraphy, faunal correlation)?
- What are plesiadipiformes? Describe some of their characteristics, as well as "when" and "where" they occur in the fossil record. Are they (or are they not) good candidates for primate ancestors?
- Where do adapiformes and omomyids fit into primate evolution (i.e. How old are they. where are they found, and what are their characteristics)?
- What is known about the evolutionary history of New World Primates? Specifically, where might they come from?
- Know the relationship between epochs and the fossil primates that are most abundant in that period (e.g. Miocene = age of apes)
- What are some human-like ("derived") and pongid-like ("ancestral") traits used for analyzing fossil specimens? (Hint: think cranial characteristics)
- What are the locations, estimated ages, and 3 diagnostic traits for Australopithecus, Paranthropus and related species (e.g. Ardipithecus, Kenyanthropus, Ororrin & Sahelanthropus)?
- Why might have bipedalism evolved? What are some hypotheses and which are supported with the available evidence? What anatomical features are associated with obligate bipedalism?
- What are the ages, locations and characteristics of fossil stone tool industries?
- What are the difficulties in identifying the most likely toolmaker (and tool-user) among fossil species?
- What are some proposed uses of Oldowan (Mode I) and Acheulean (Mode II) tools?
- What are the characteristics of the early Pleistocene hominids (Homo ergaster/erectus)?
- What are the characteristics of the middle-Pleistocene hominids (Homo heidelbergensis)?
- What are some unique Neandertal characteristics? Be sure to know age ranges and localities.

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- Where does "Flores Man" (Homo floresiensis) fit into our understanding of human evolution?
- What is the significance of Australopithecus sediba in resolving the hominin phylogeny?
- What are two hypotheses for the origins of modern humans? For each, give assumptions, predictions, dispersal scenarios, and assess the genetic and morphological evidence.
- What are some general conclusions that can be made about human evolution in terms of the last common ancestor (with chimpanzees) and both the major anatomical and behavioral transitions?
- What is the heterozygote advantage and how does that relate to certain diseases?
- What are some sources of (genetic) variation between and among populations?
- What are selection-mutation balance, balanced polymorphisms and disequilibrium? Give an example for each.
- What is Allen's rule? What is Bergman's rule?
- Contrast adaptation with acclimatization.
- Define and give examples of concordant and discordant variation.
- How are geographic variation and race related? What is a cline, and how does it relate to the concept of race?
- Understand why evolution is relevant to human behavior.
- What do we know about the origins and evolution of language? Consider the following: ape studies, comparative neuroanatomy, morphological correlates (e.g. thoracic vertebrae, hyoid, hypoglossal canal), adaptive explanations, arguments for early vs. late origin, and the FOXP2 gene.
- Be familiar with explanations for sexual aversions in modern humans; i.e. Why do humans exhibit universal inbreeding avoidance?
- How are social facilitation, observational learning, ratcheting related to social transmission and the evolution of culture?
- How do humans compare to non-human primates in their sexual characteristics and mating patterns?
- How does evolutionary biology predict human mate choice (for both men and women)? And what are some social consequences of mate preferences in humans?
- What has been the role of biological anthropology in our understanding of the origins and evolution of modern humans and our behavior?
- What is Darwinian medicine, and how can it help us better understand diseases?
- Why do we have a prolonged childhood, according to AE 32, "The Birth of Childhood"?
- Describe evidence that shifted the notions about our early tool-using ancestors from "Man the Hunter" to "Man the Scavenger."