

Name _____
 ANT 2230 Biological Anthropology
 Lab 7 Early Hominin Evolution

Part I

Context: *A. anamensis* is intermediate in time between *Ardipithecus ramidus* and *Australopithecus afarensis* but is morphologically distinct in several features of its cranial-dental anatomy.

	<i>Ardipithecus ramidus</i>	<i>Australopithecus anamensis</i>	<i>Australopithecus afarensis</i>
Where?	Ethiopia	Kenya	Tanzania, Kenya, Ethiopia
When?	4.5 mya	4.2-3.5 mya	3.7-3.0 mya
Paleoclimate?	Closed woodland	Gallery forest, riverine woodlands at Kanapoi, Lothagam and Allia Bay	Open grassland with scattered trees at Laetoli, woodlands and grasslands at Hadar

Part II Dental Anatomy

<i>Anatomical Feature</i>	<i>Australopithecus anamensis</i>	<i>Australopithecus afarensis</i>
Mandibular symphysis (chin)		
Height of mandibular canine		
Length of P3		
Length of M1		
P3/M1		
Relative size of molar row		

Name _____
ANT 2230 Biological Anthropology
Lab 7 Early Hominin Evolution

Part III

The post-crania are more similar for anamensis and afarensis. Compare the humerus, radius, and tibia from anamensis with humans.

<i>Anatomical Feature</i>	<i>Australopithecus anamensis</i>	<i>Homo sapiens</i>
Body size estimate	45-80 kg (100-175 lbs)	
Draw the distal humerus		
Draw the distal radius (wrist)		
Draw the proximal tibia		

Name _____

ANT 2230 Biological Anthropology

Lab 7 Early Hominin Evolution

Part III continued

What is the length of the radius in the human and in the anamensis fossil? What does this mean in terms of the length of the forearm relative to body size in these two species? What locomotor style might be associated with a long forearm?

Part IV

Context: Fill in information (at home) for the Gracile and Robust Australopithecines in East and South Africa:

<i>East African Forms</i>	<i>Australopithecus afarensis</i>	<i>Paranthropus boisei</i>
Where?	Tanzania, Kenya, Ethiopia	
When?	3.7-3.0 mya	
Paleoclimate?	Open grassland with scattered trees at Laetoli, woodlands and grasslands at Hadar	

<i>South African Forms</i>	<i>Australopithecus africanus</i>	<i>Paranthropus robustus</i>
Where?		
When?		
Paleoclimate?		

Part V Functional Anatomy of Mastication:

<i>Anatomical Feature</i>	<i>Australopithecus afarensis</i>	<i>Paranthropus boisei</i>
Sagittal Crest		
P.O. constriction		
Zygomatic arch		
Prognathism		
Canine Size/projection		
Depth of mandible		