Homo erectus behavior

• What behavioral changes are found in Homo erectus?

• What is the adaptive pattern?

• What sorts of tools are found with Homo erectus?
Archaic Homo

- What are “archaic Homo sapiens”?
- Why do we call them archaic?
- What features do they show?
- How are they distinguished from Homo erectus?
- What “species” are archaic Homo sometimes divided into?
H. erectus

archaic Homo
More on archaics

• What other species names are they known by?
• Why would they be put into other species?
• What does it mean to say that they are mosaic?
Evolutionary Models

- Models of human evolution from *Homo habilis* to *Homo sapiens* can usually be divided into two paradigms - what are these?

- In each model, where do the various “species” of archaic *Homo* fall?

- What are the differences between the paradigms?

- What is the role of gene flow in these models?
  - How much gene flow is necessary to keep two populations from speciating?

- What are anagenesis and cladogenesis?
Jinnuishan
Maba
Neandertal facts

• Special case of Archaic *Homo*

• First discovered 1830

• Europe and the Near and Middle East

• Date between 150,000 and 27,000 years ago

• Hundreds of individuals known

• Show robust, cold-adapted anatomy
Background: Neandertal Reconstructions

1. Field Museum, Chicago
2. Ueberer
3. Mike Anderson
4. Mangallin Bulle, 1909
5. Vito Cannella, G.J. Sawyer
6. Schaaffhausen, 1888
Modern reconstructions
Neandertal features

- Mean cranial capacity of 1400 cc - up to 1600
- Large projecting midfaces
- Retromolar gap
- Supraorbital torus, double arched
- Receding frontal bone
- Occipital bun
**Figure 14.14** The Neandertal skull and teeth. Neandertals have taurodont molars.
Neandertal features

- Barrel shaped chest, stockier than modern humans
- Short limbs, short stature
- Heavy musculature
- Very high traumatic fracture rate
Neanderthal and modern human skeletons
La Ferrassie
60,000 ya
Neandertal vs. other archaic
Neandertal vs. other archaic
Neandertal vs. other archaic
Neanderthal
Krapina
130 kya
Saccopastore
120,000 ya
La Ferrassie
60,000 ya
La Chapelle aux Saints
50,000
Monte Circeo
60,000 ya
Gibraltar
30 kya ?
Amud
Kebara
60 kya
Shanidar
Teshik Tash
Who were the Neandertals?

- Their own species or something different?
- A regional subpopulation adapted to the cold?
- *Homo neanderthalensis* or *Homo sapiens neanderthalensis*?
- Just another form of archaic?