

# 1 The Genus *Homo*. Part I, Early *Homo*

Anth 1013 Lecture  
15 November 2004

## 2 Characteristics of *Homo*

- n Bipedality
  - q Habitual, full-time
- n Cranial capacity increase
- n General reduction in:
  - q Tooth size (all teeth)
  - q Thickness of enamel
- n **Acquisition of culture**

## 3 *H. rudolphensis*

- n Discovered in 1972; Koobi Fora, Kenya
- n ~ 2.4-1.6 mya
- n Australopithecine or *Homo*?
  - q Lacks crests and muscle markings exhibited by *Paranthropus*
  - q Lacks large supraorbital torus of *H. erectus*
  - q Differences with *H. habilis*
    - n Longer face, squared upper jaw and short, shallow palate
    - n Cranial capacity of 750 cc
- n Classified as *H. rudolphensis* by Valerii Alexeev

## 4 *H. habilis*

- n Koobi Fora, Kenya
- n 2.4-1.6 mya
  - q Contemporaneous with *H. rudolphensis*
- n Characteristics
  - q Small face and small teeth
  - q Larger cranial capacity than australopithecines: ~ 600 cc
  - q Precision grip

## 5 *H. habilis*

## 6 Material Culture of *H. habilis*

- n Crude stone tools
  - q Called the "Oldowan" culture
  - q Found with fossilized animal and hominin bones
    - n Osteodontokeratic culture
    - q Primary or secondary context?

## 7 *H. erectus*

- n First found on Java in 1891 by DuBois
- n Intermediate form in b/t *H. habilis* and *H. sapiens*
- n 1.85-0.3 mya
  - q Longest time span of any hominin
  - q Earliest forms seen in eastern Africa
    - n 1.85 mya
  - q Latest forms in China
    - n 0.35 mya

## 8 *H. erectus*' Migration

- n First hominin to migrate out of Africa
  - q By 1.8-1.7 mya

9  ***H. erectus***

- n Characteristics
  - q Reduction in premolar and molar size
  - q Cranial:
    - n Increase in cranial capacity (contrasting with *H. habilis*)
    - n Large supraorbital torus; receding forehead
    - n "Keeling" of cranial vault
    - n Widest at base
    - n Occipital (nuchal) torus

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11  **African vs. Asian *H. erectus***

- n Some suggest African forms should be called *H. ergaster*
  - q African forms generally have:
    - n Thinner cranial vault bones
    - n Higher cranial vaults
    - n Less prominent supraorbital tori
    - n Slightly larger posterior dentition

12  **Cultural Remains of *H. erectus***

- n Acheulian lithic tradition
  - q More complex than the Oldowan tools associated with *H. habilis*
- n Fire (?)
  - q Previous evidence of fire usage likely due to natural causes

13  **Multiple Groups of *Homo***

- n "Archaic" *H. sapiens*
  - q In Africa around 0.4 mya; in Europe around 0.3 mya
  - q *H. sapiens neanderthalensis* (Neanderthals)
    - n In Europe and Near East around 0.13-0.035 mya
- n Anatomically modern *H. sapiens*
  - q In Africa around 0.18-0.16 mya
- n *H. floresiensis*
  - q On Flores about 0.095-0.013 mya!!

14  **From *H. erectus*, We Get...**

- n Looking at how *H. sapiens* originated and dispersed
  - q Regional continuity model
    - n Populations of *H. erectus* evolved separately into *H. sapiens* (i.e., **parallel evolution**)
      - q Requires some amount of gene flow b/t populations of *H. erectus*
  - q Out of Africa model
    - n Modern humans evolved from archaic populations in Africa around 0.18-0.16 mya, then migrated out
      - q These groups then replaced other archaic populations—either outright or partially by gene flow