

EARLY SPECIES OF HOMO

2.5 MILLION YEARS AGO: *HOMO HABILIS*

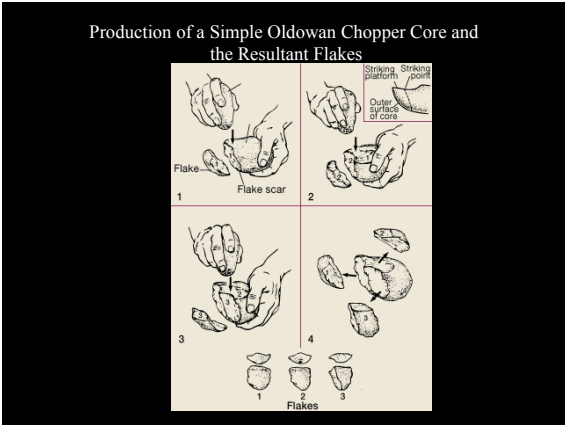
- **TOOL TRADITIONS**
 - PERCUSSION FLAKING IN WHICH ONE STONE WAS USED TO STRIKE ANOTHER FORMED EARLY TOOLS
 - **KINDS:**
 - CHOPPERS AND SCRAPPERS
 - UNIFACIAL TOOL - FACETS REMOVED FROM ONLY ONE SIDE
 - BIFACIAL TOOL - FACETS REMOVED FROM BOTH SIDES OF THE STONE
- **LIFE-STYLES**
 - 2 MILLION YEARS AGO, HOMINIDS WERE USING TOOLS TO CUT UP MEAT
 - SCAVAGING, NOT HUNTING, WAS PRIMARY MEAT-GETTING ACTIVITY
 - GROUPS MOVED AROUND DURING THE YEAR
 - HOMINIDS ATE A WIDE VARIETY OF ANIMALS

Olduvai Gorge

- ♦ Where much information concerning early hominid cultural and biological evolution has been found.
- ♦ Oldest tools found there date to the Lower Pleistocene (about 1.6 MYA)
- ♦ The tool assemblages is called Oldowan

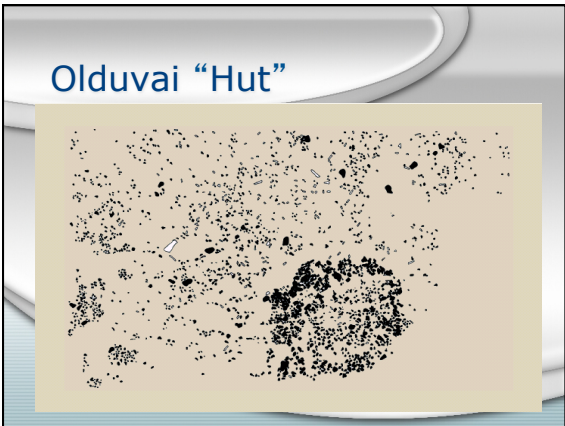
Stone Tools and Culture

- Patterned stone tools indicate that early hominids had culture
- There are many processes that make up culture, including
 - Culture is *learned*
 - Culture is *shared*
 - Culture is *adaptive*
 - Culture is *always changing*



One Model to the Evolution of Culture

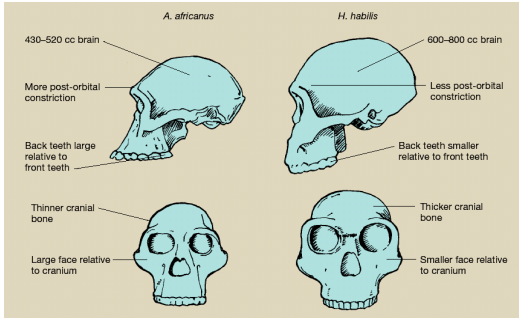
- ◆ Home bases would have provided
 - ❖ A camp for females with infants and children
 - ❖ Males and females without offspring would have been able to travel longer distances in order to find animals, scavenge, or hunt
 - ❖ Food sharing between relatives



Trends in Hominid Evolution

- Expansion of the Brain
- Reduction of the face, teeth, and jaws
- Other evolved traits

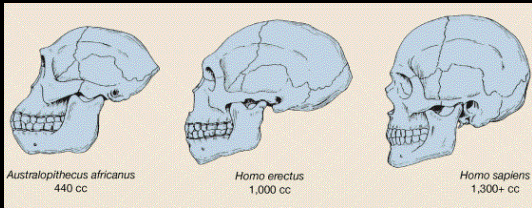
Comparison of *A. africanus* and *H. habilis*



Expansion of the Brain

- *The hominid brain has doubled in relative size in the past 2 million years.*
- *What factors favored the brain increase?*
 - *Stone tool making, warfare?, hunting, longer life, language*
- *Anatomical changes that occurred in conjunction with the increased in brain size include:*
 - *Changes to the female pelvis (childbirth)*
 - *Infants being born at an early stage in development*

Comparison of Cranial Capacities



Reduction of the Face, Teeth, and Jaws

- The chewing apparatus and face of hominids began to get smaller after 2 million years.
- Cause of change could have been
 - A change in diet
 - Fire


Early Homo

- First appeared about 2.3 million years ago
- There are two species
 - *Homo habilis*
 - Appeared first
 - Had characteristics that differed from and were similar to the australopithecines.
 - *Homo rudolfensis*
 - Appeared later
 - Compared to *H. habilis*, had larger teeth with thicker enamel, a flatter face, and more modern limb proportions.

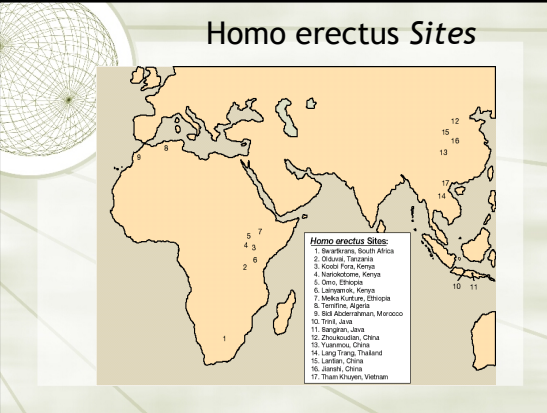
HANDSOME FELLA!

HOMO ERECTUS

- **HOMO ERECTUS WAS THE FIRST HOMINID TO BE DISTRIBUTED THROUGHOUT THE OLD WORLD, PERHAPS EVEN TO EUROPE, ITSELF.**
 - 1 MILLION YEARS AGO HOMO ERECTUS LIVED IN ASIA
 - 1.8 MILLION YEARS AGO IN JAVA
- **DISCOVERY OF *HOMO ERECTUS***
 - First found in Java in 1891
 - Skull and thigh bone
 - D. Black (followed by Weidenreich) excavated at the site of Zhoukoudian, China
 - *H. erectus* has also been found in Africa



Homo erectus Sites

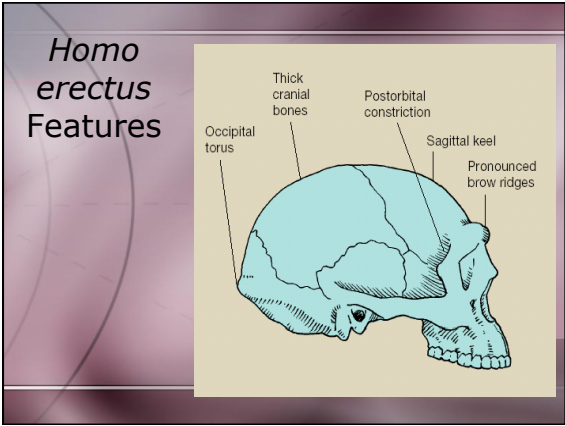


Homo erectus Sites:

1. Swartkrans, South Africa
2. Oldoway, Tanzania
3. Koobi Fora, Kenya
4. Nariadipome, Kenya
5. Omo, Ethiopia
6. Lanxian, Kenya
7. Meikaikulture, Ethiopia
8. Termitina, Algeria
9. Sid Aboumerwan, Morocco
10. Trinil, Java
11. Sangiran, Java
12. Zhoukoudian, China
13. Yuanmou, China
14. Langdon, Thailand
15. Lantian, China
16. Jianshi, China
17. Tham Khuyen, Vietnam

Physical Characteristics of *Homo erectus*

- Skull was long, low, and thick walled with a flat frontal area and prominent brow ridge.
- Nose projected and from the neck down, indistinguishable from *Homo sapiens*.
- Height and weight resembled that of modern Humans
- Sagittal keel
- Occipital torus
- Smaller third molars than early *Homo*
- Brain size between 895-1040 cc
- Sexual dimorphism was similar to that seen in modern humans.



HOMO ERECTUS CULTURES

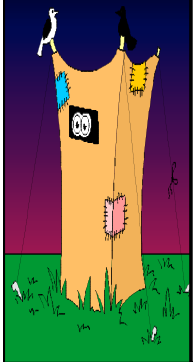
HOW DO YOU THINK I GOT THESE GREAT THREADS?

- **THE ACHEULIAN TOOL TRADITION**
 - LARGE TOOLS; THE TEARDROP HANDAXE PROBABLY USED FOR BUTCHERING ANIMALS
 - TOOLS FOUND WIDELY IN EUROPE AND AFRICA, WITH MOST AXES FOUND IN WESTERN ASIA
- **BIG-GAME EATING**
 - THEORY: FIRE USED TO FRIGHTEN ELEPHANTS INTO A MUDDY BOG WHERE THEY COULDN'T ESCAPE
 - SOME BELIEVE THAT SUCH ANIMALS DIED FROM NATURAL DEATHS AND THEN WERE SCAVANGED BY HOMO ERECTUS

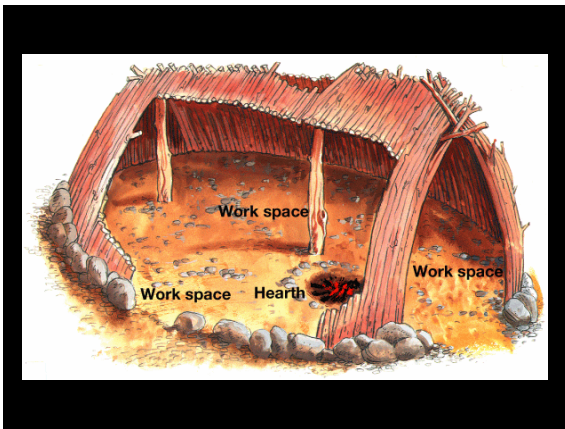
FIRE

- WHETHER OR NOT HOMO ERECTUS CONTROLLED FIRE IS DEBATEABLE
- EVIDENCE OF CONTROLLED FIRE USEAGE IS OVER 1.4 MILLION YEARS OLD
- BETTER EVIDENCE IS 500,000 YEARS OLD AND FOUND IN A CAVE IN CHINA
- THERE IS ALSO EVIDENCE OF CONTROLLING FIRE IN EUROPE BY HOMO ERECTUS
- NO DIRECT LINK HAS EVER BEEN ESTABLISHED WITH HOMO ERECTUS, EVEN THOUGH THEY ARE KNOWN TO HAVE LIVED IN COLD CLIMATES

CAMPING OUT



- SITES WERE ALWAYS LOCATED NEAR WATER, LUSH VEGETATION, AND LARGE STOCKS OF ANIMALS
- OTHER SITES WERE FOUND IN CAVES IN OPEN AREAS WITH WINDBREAKS AROUND THEM
- ROCKS WERE COMMONLY FOUND AT THESE SITES, PROBABLY FOR DEFENSIVE REASONS
- HUT BUILDING TOOK PLACE IN FRANCE ALONG THE AREA KNOWN AS THE RIVIERA, NEAR NICE
- HOMINIDS CULTURE IS NORMALLY CONSIDERED LOWER PALEOLITHIC



	FOOD COLLECTORS		FOOD PRODUCERS	
	<i>Foragers</i>	<i>Horticulturalists</i>	<i>Pastoralists</i>	<i>Intensive Agriculturalists</i>
Population Density	Lowest	Low—moderate	Low	Highest
Maximum community size	Small	Small—moderate	Small	Large (towns & cities)
Nomadism/permanence of settlements	Generally nomadic or seminomadic	More sedentary; communities may after several years	Generally nomadic or seminomadic	Permanent communities
Food Shortages	Infrequent	Infrequent	Frequent	Frequent
Trade	Minimal	Minimal	Very important	Very important
Full-time craft specialists	None	None or few	Some	Many (high degree of craft specialization)
Individual differences in wealth	Generally None	Generally minimal	Moderate	Considerable
Political leadership	Informal	Some part-time political officials	Part-time & full-time political officials	Many full-time political officials

