

ANTHROPOLOGY 215

Earliest Hominids



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Taxonomy

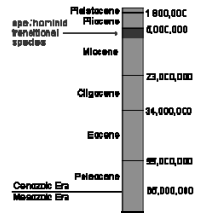
- Australopithecines (Genus: *Australopithecus*)
- Family Hominidae (hominids)/Pongidae
- Subfamily: Homininae (humans, chimp, gorilla)
- Ponginae (orangutans)
- Tribe: Hominini (hominins)
- Tribes: Panini (chimps) and Gorillini (gorillas)
- Subtribe: Australopithecina (australopiths)

Early Transitional Hominids

- *Sahelanthropus* (Chad ca 7-6 mya)
- *Orrorin* (Kenya; ca: 6 mya)
- *Ardipithecus* (Ethiopia ca 4.4- 5.8 mya)

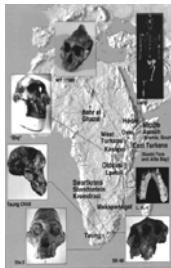


Sahelanthropus tchadensis



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Australopithecus



By 2.5 mya: 2 evolutionary lines

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2 Evolutionary lines: 2.5 mya



Lake margin grassland



Mixed grassland/woodland

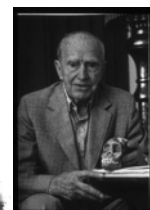
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History of Discovery

- Charles Darwin, 1871
- Raymond Dart, 1924
- Taung
- *Australopithecus africanus* ("southern ape from Africa")



R...

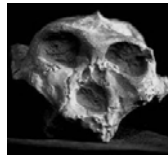


R. Dart

Taung child

Robert Broom 1936 -- 1940's

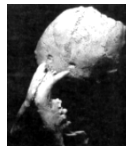
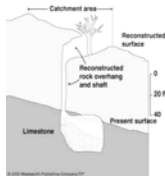
- Sterkfontein: *Australopithecus africanus*
- Kromdraai: *Paranthropus robustus*/*Australopithecus robustus*
- Sagittal crests





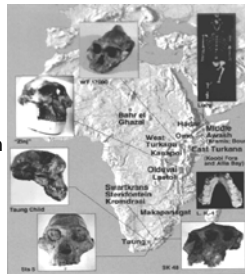
Swartkrans

- *Australopithecus robustus* (*Paranthropus robustus*)
- C. K. Brain



South African Sites Dating

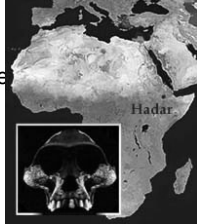
- Makapansgat & Sterkfontein: 3-2 mya
- Swartkrans & Kromdraai: 1.5-2 mya
- Taung .8 mya
- None of the South African sites are habitation sites



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Hadar, Afar Triangle, Ethiopia

- Donald Johanson, 1974
- Lucy 40% complete female skeleton
- 3.2 –3.18 MYA
- *Australopithecus afarensis*



Laetoli, N.Tanzania

- Leakeys
- Tim White, 1978
- 3. 7-3. 5 million years ago
- Footprints
- *Australopithecus afarensis*



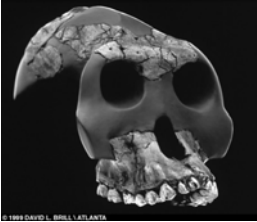
Lake Turkana, N. Kenya

- Richard Leakey
- Alan Walker, 1985
- "Black skull"
Australopithecus aethiopicus



Australopithecus garhi

- Ethiopia 2.5 MYA



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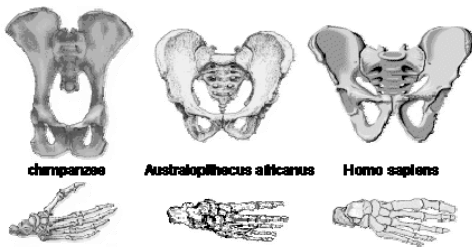
Sterkfontein, South Africa

- Ron Clarke (1998)
 - University of Witerwatersrand
 - *A. africanus* skeleton
 - ca 3.5 or 3.6 mya
 - breccia rock



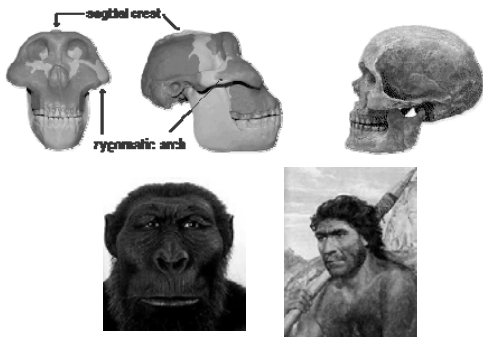
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Comparison of Pelvis & Foot Bones



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A. boisei and Modern Human



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Early Hominids and Their Immediate Ancestors

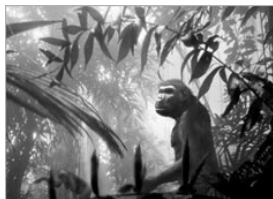
	SPECIES	TIME RANGE (millions of years ago)
pre-hominid apes or ape-hominid transitional species	Sahelanthropus tchadensis	7 - 6.7
	Orrorin tugenensis	6.0
	Ardipithecus ramidus	5.8 - 4.4
early hominids	Australopithecus anamensis	4.2 - 3.9
	Australopithecus afarensis	4.0 - 2.9
	Kenyanthropus platyops	3.5 - 3.2
	Australopithecus bahrelghazali	3.4 - 3.0
	Australopithecus africanus	3.3 - 2.3
	Australopithecus garhi	2.5
	Australopithecus aethiopicus	2.5
	Australopithecus robustus	2.0 - 1.5
	Australopithecus boisei	2.0 - 1.2

The species listed above in red are controversial because of relatively limited discoveries of their fossils and disagreement as to their classification. Those listed in black have been found at many sites and now are widely accepted. Some researchers refer to the robust australopithecines as paranthropoids (genus Paranthropus).

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Early Australopithecine Species

- *Australopithecus anamensis*
- 4.2- 3.9 MYA, East Africa

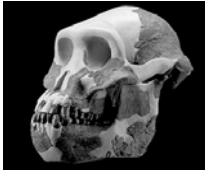


Australopithecus anamensis

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Australopithecus afarensis

- 4.0 – 2.9 MYA
- East Africa
- Hadar, Ethiopia
- Laetoli, Tanzania
- "Lucy"



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Australopithecus africanus

- 3.3 – 2.3 MYA
- East & South Africa

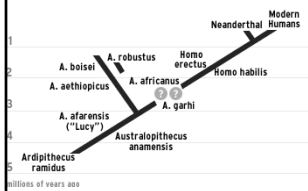


Australopithecus africanus

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Australopithecus gahri

- 2.5 MYA
- East & South Africa



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Late Australopithecines

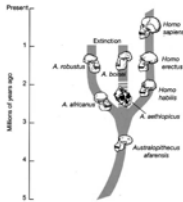
- Gracile
- Robust



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Australopithecus aethiopicus

- 2.5 MYA
- East Africa



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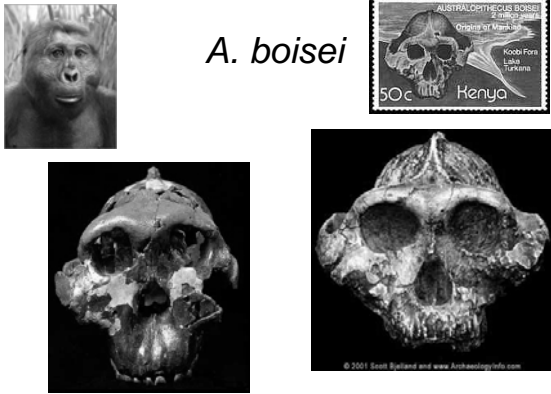
A. robustus

- South Africa
- 2.0 – 1.5 MYA



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A. boisei

50c Kenya

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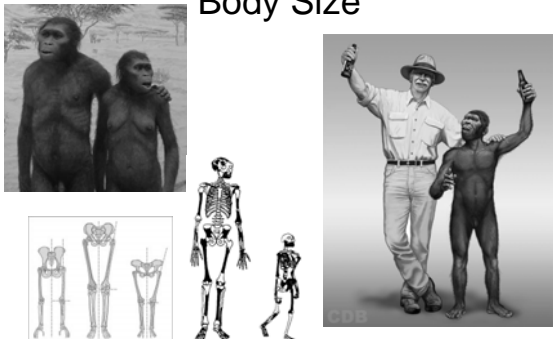
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John Robinson's Dietary Hypothesis

Gracile	Robust
4 - 4.5 ft. (60 lbs)	4.5 - 5 feet (100 lbs)
smaller c.c. 442 cc	larger c.c. 530 cc
more rounded braincase w/ more vertical forehead	flatter vault and flattened forehead
dish-shaped lightly built faces	sagittal crest (larger temporalis)
comparatively larger front teeth	larger back teeth (extreme crowding of ant. teeth rel. to front teeth)
smaller jaws	larger jaws

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Body Size



Australopithecus afarensis (right); chimpanzee (left); modern human (center).

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