

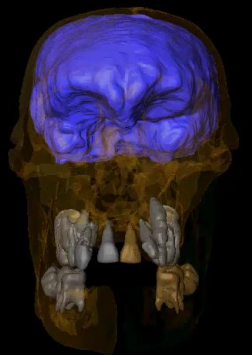
Bones of Contention: Shifting Paradigms in Human Evolution with the Skeletons of *Australopithecus sediba*



Inaugural lecture of Prof. Lee R. Berger

26th September 2013

University of the Witwatersrand







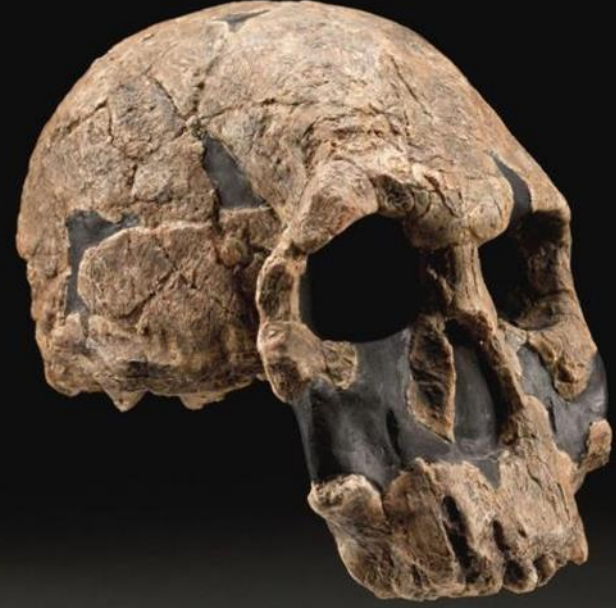


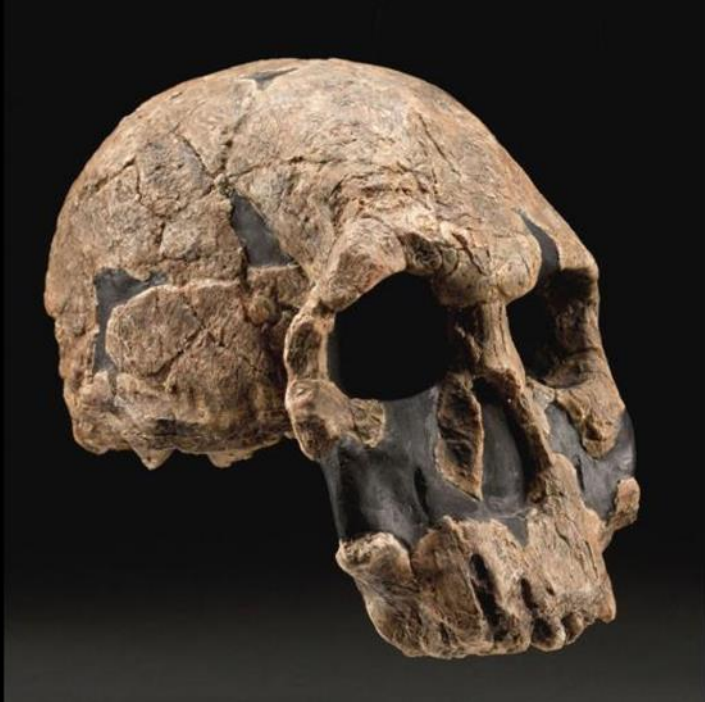












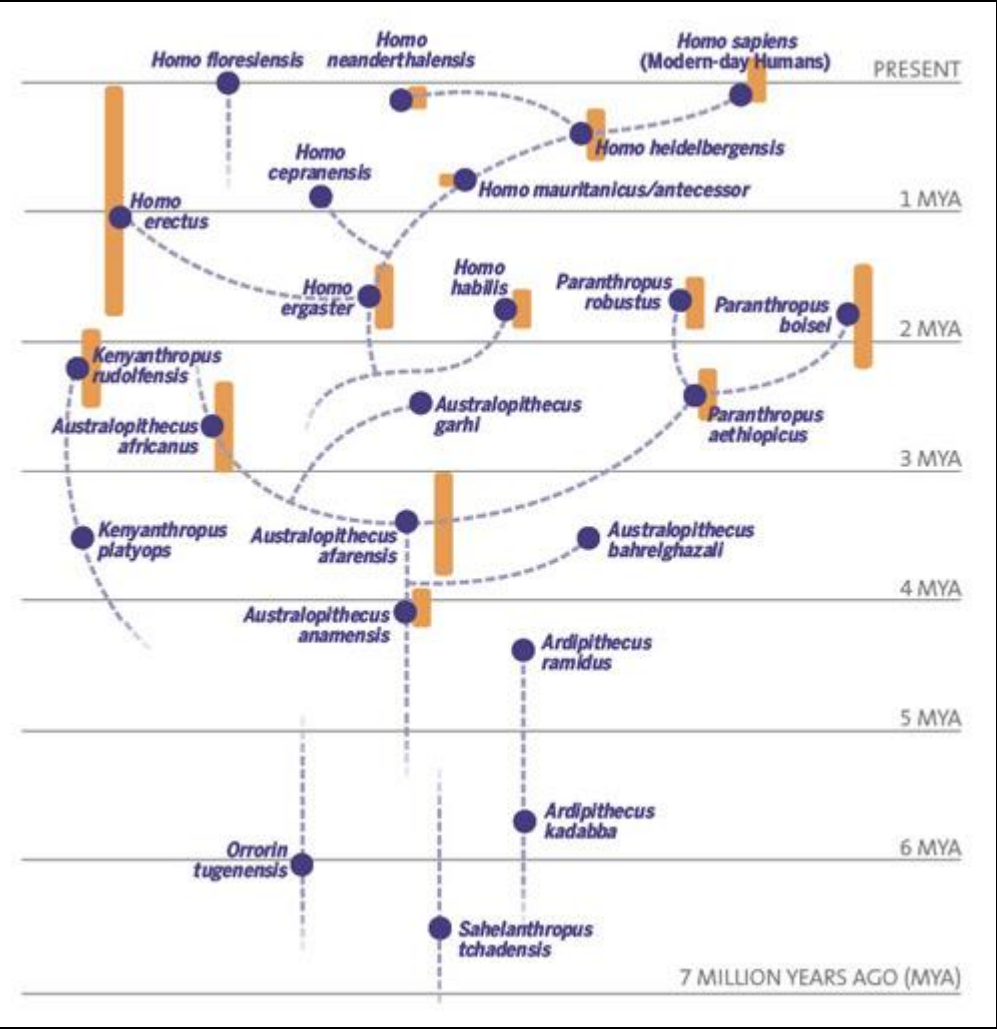


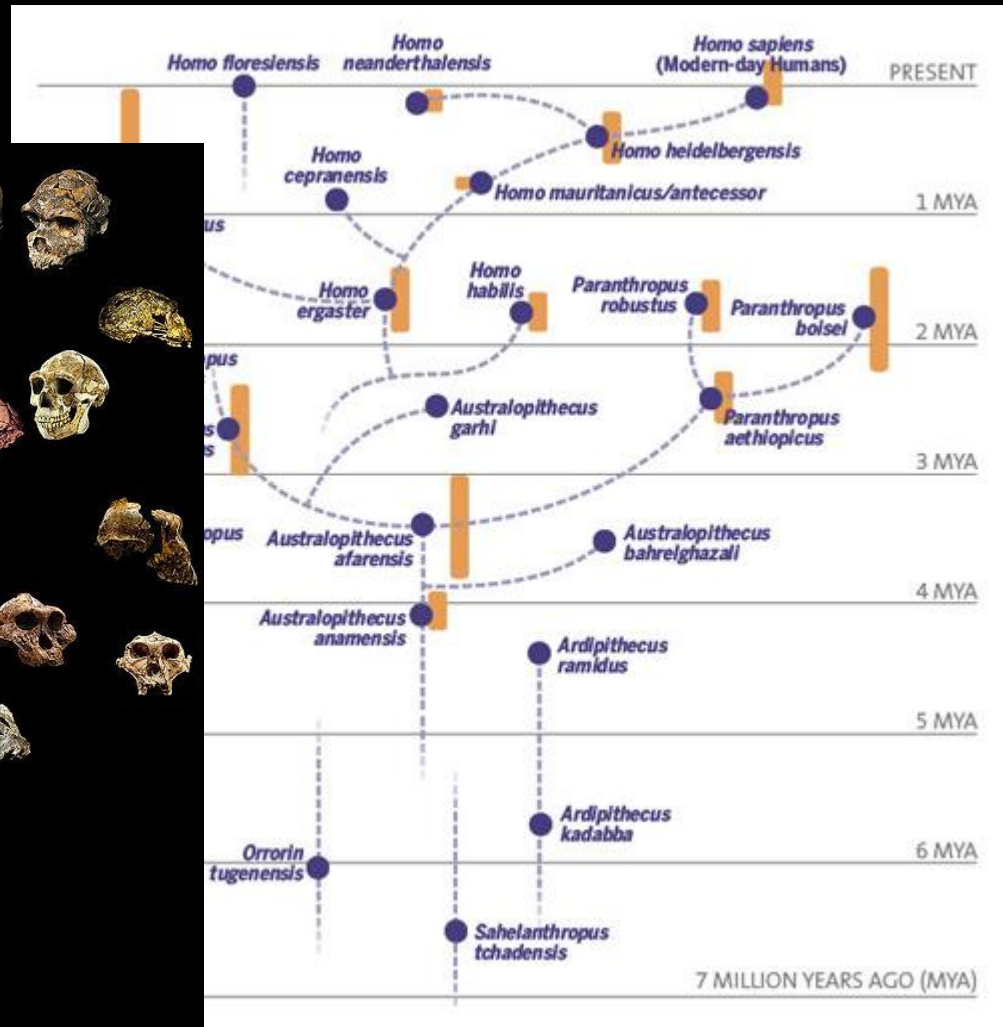
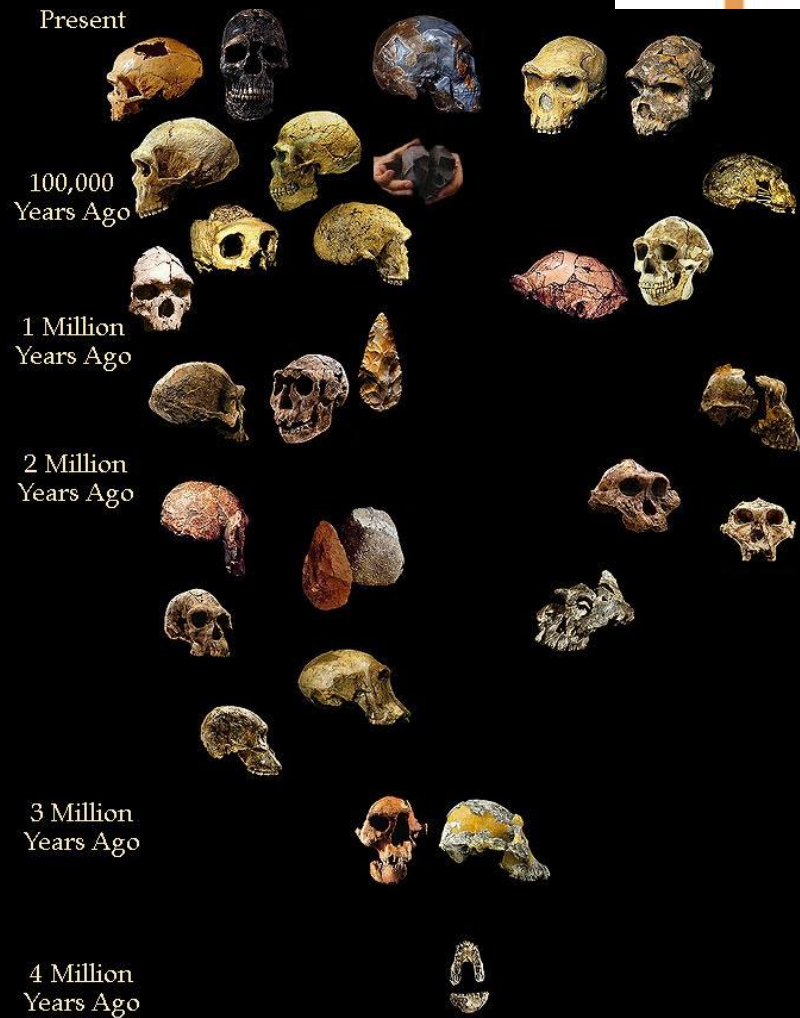


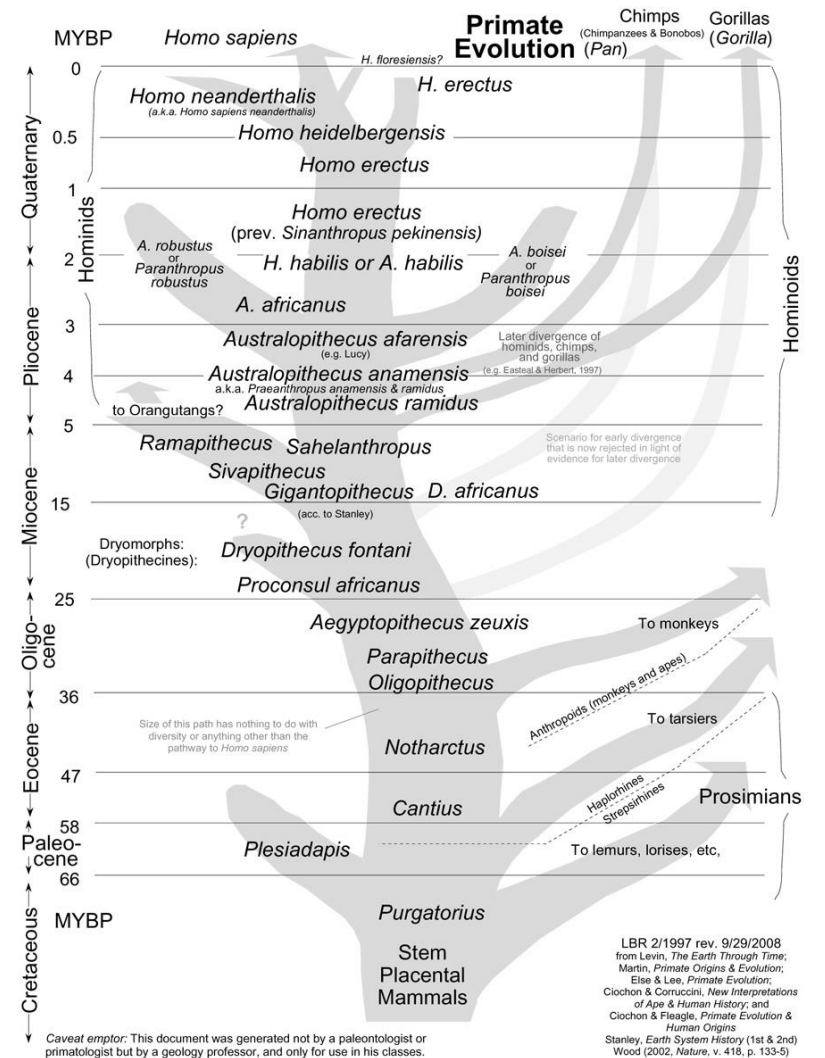
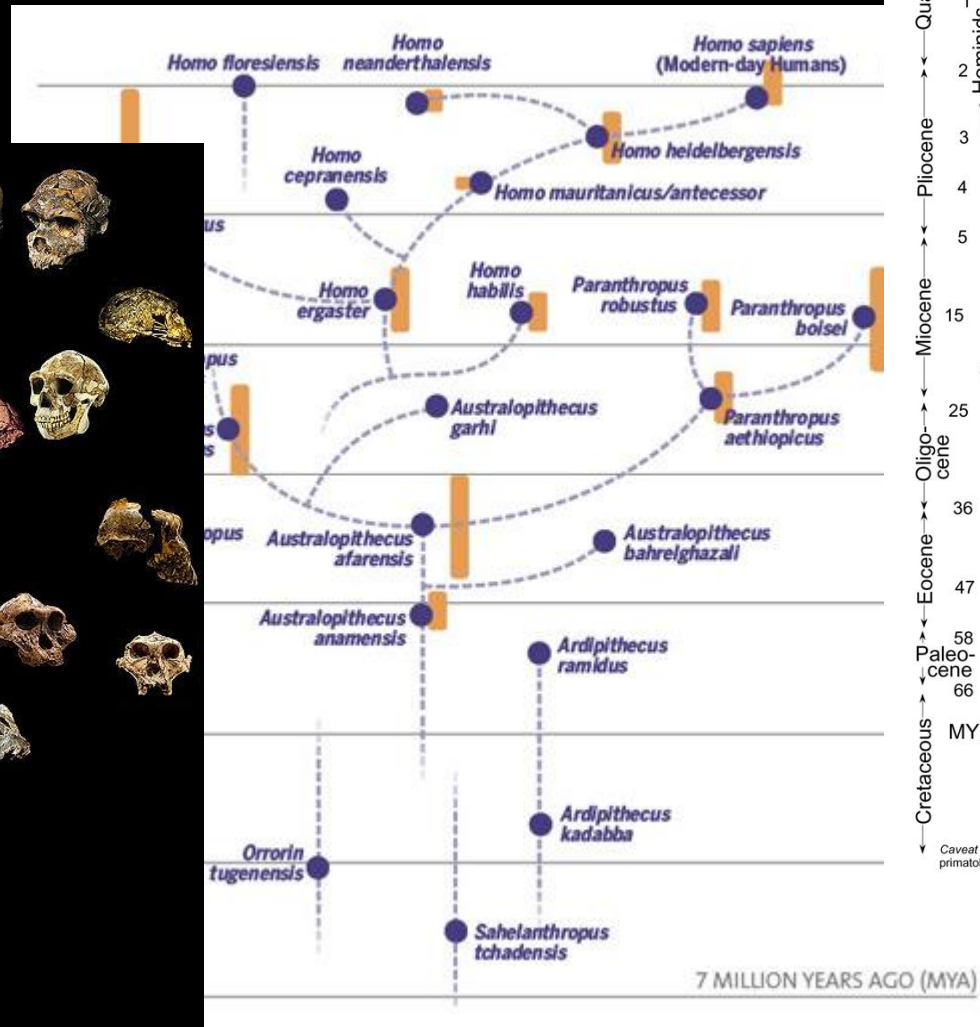
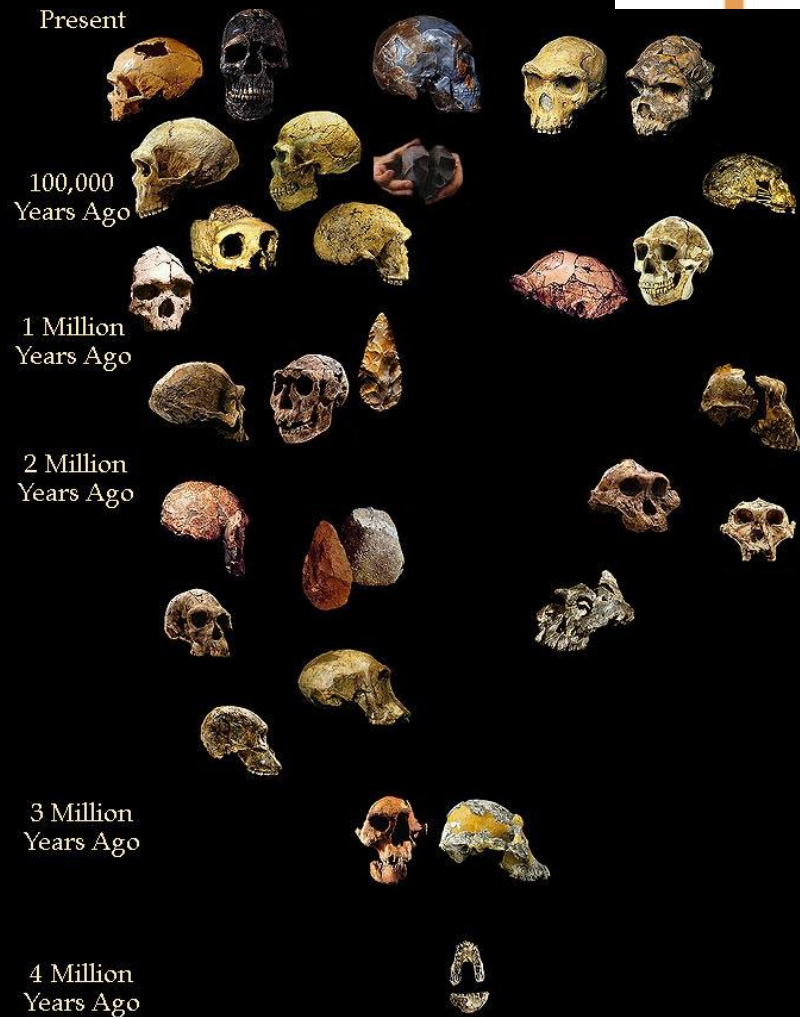


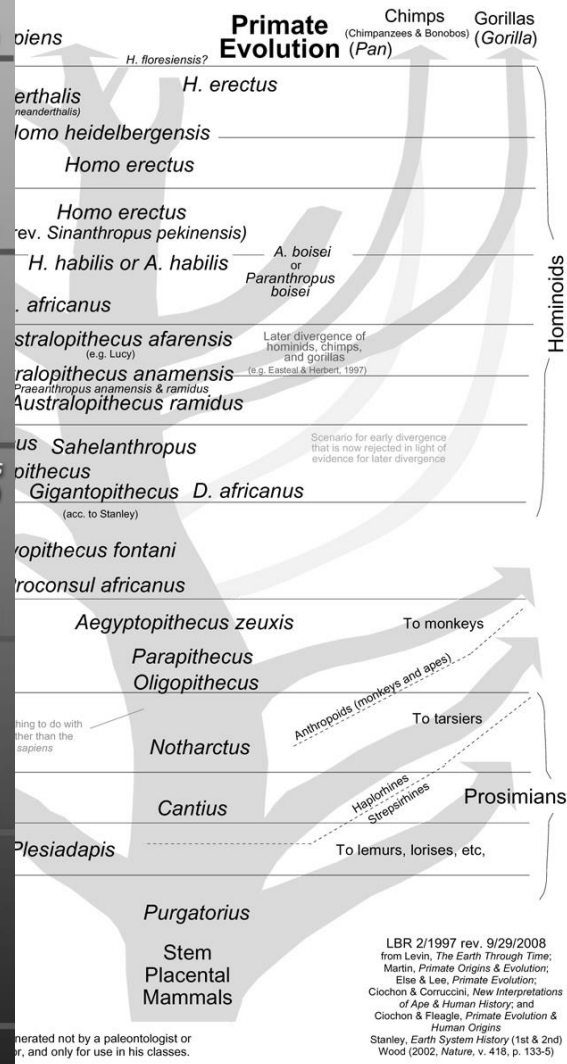
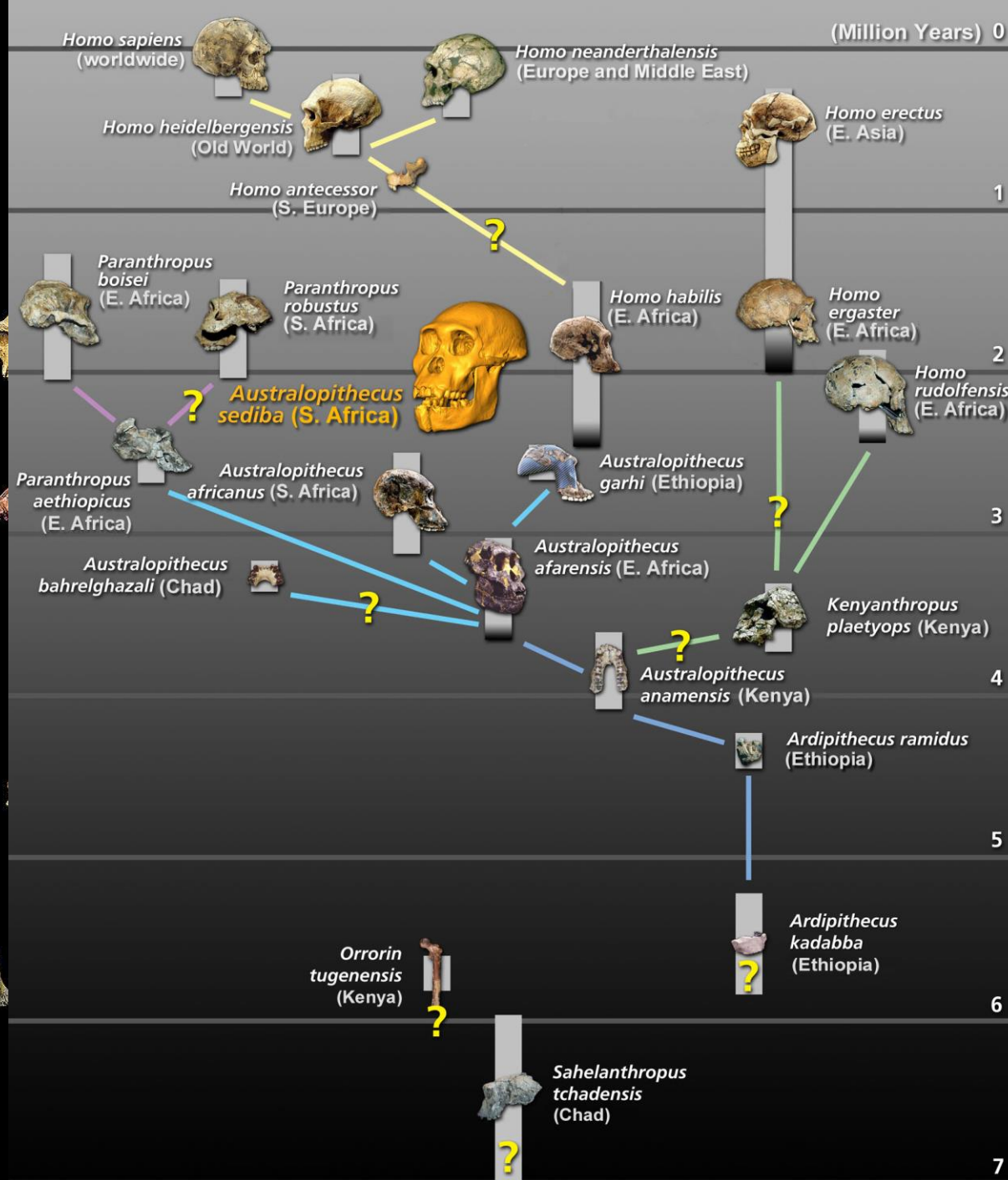
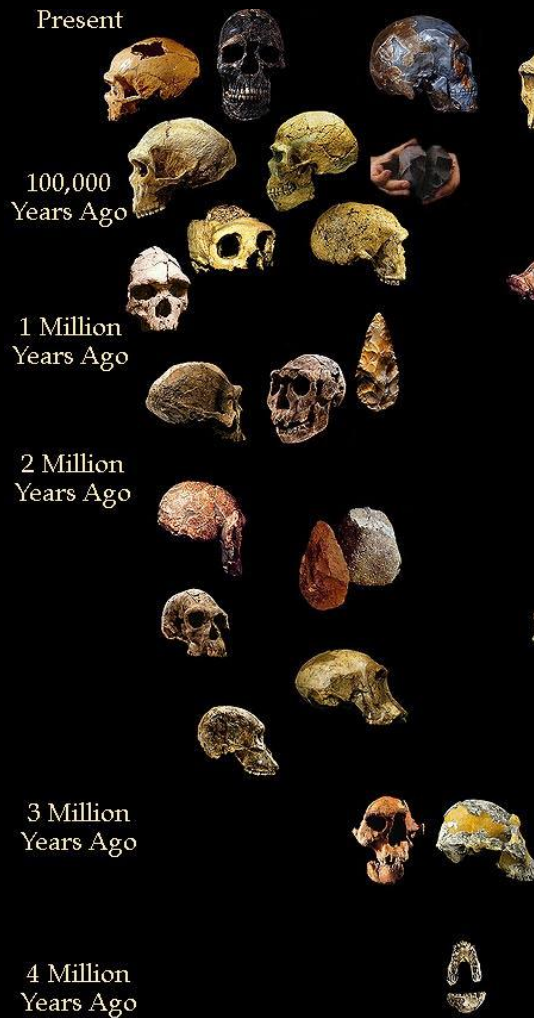






















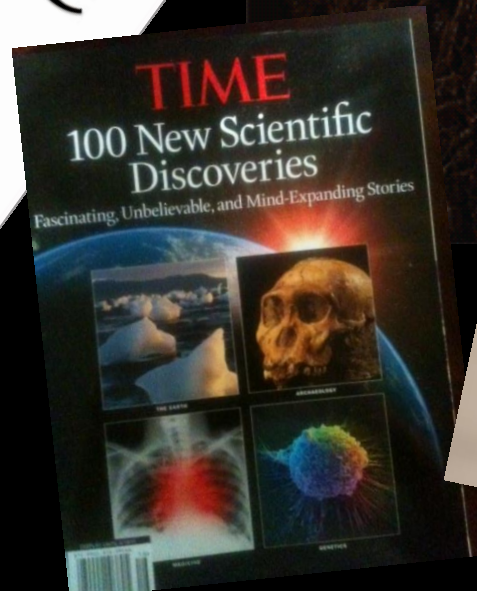
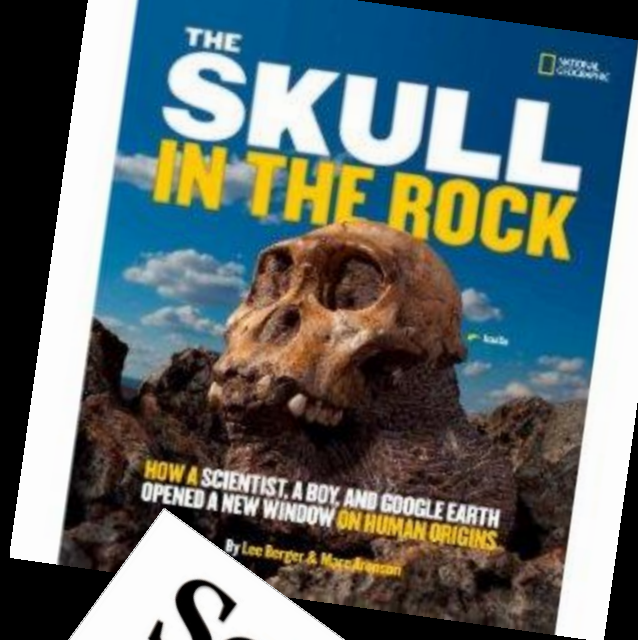


Science

9 April 2010 | \$10



AAAS





Human

HUMANLIKE FEATURES

Skull

- Small front teeth
- Round brain case
- Narrow face

Lower ribs/pelvis

Hands

- Capable of gripping and manipulating objects

Lower legs/ feet

- Walked upright



A. sediba

CHIMPLIKE FEATURES

Arms

- Long for tree climbing

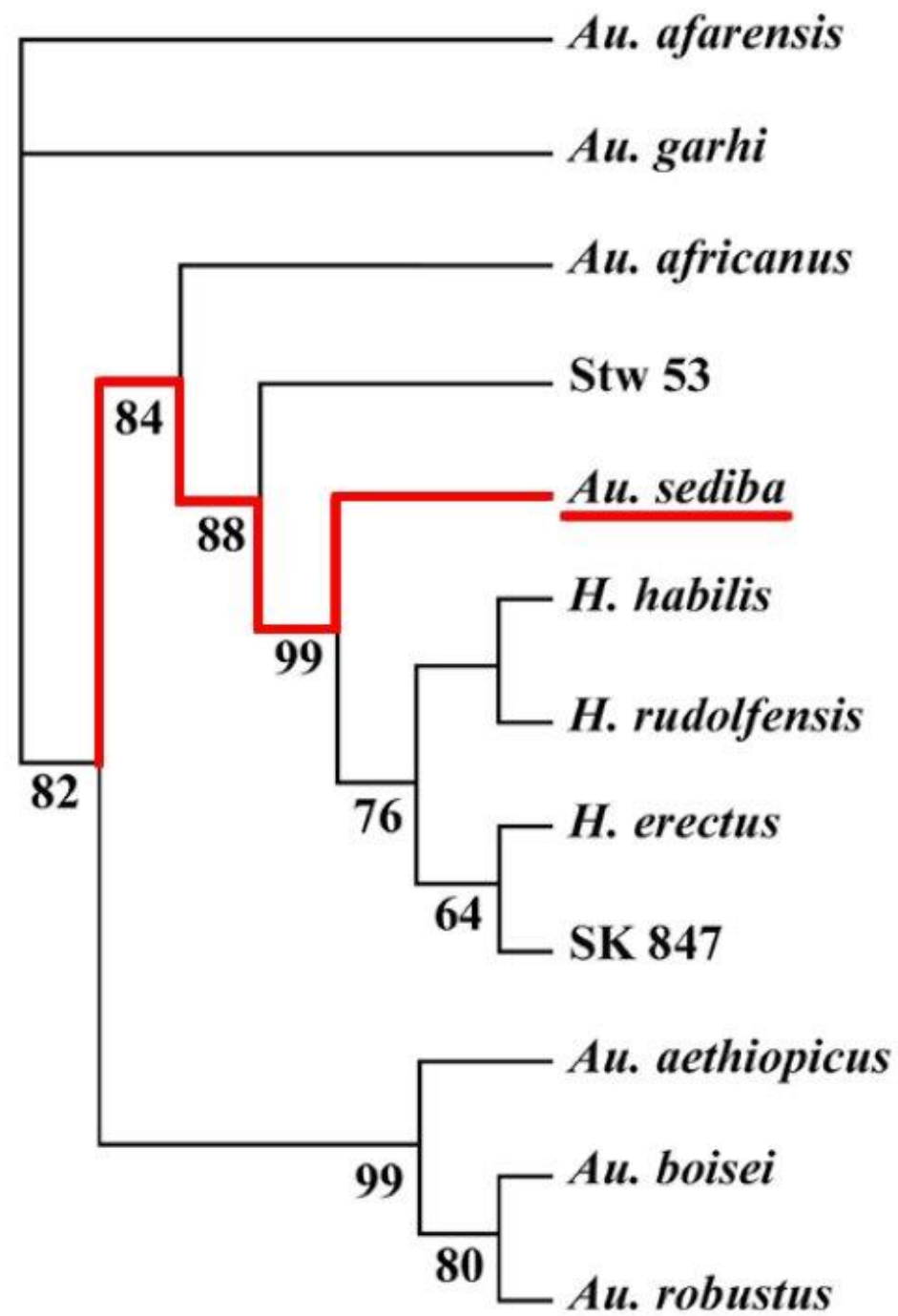
Chest

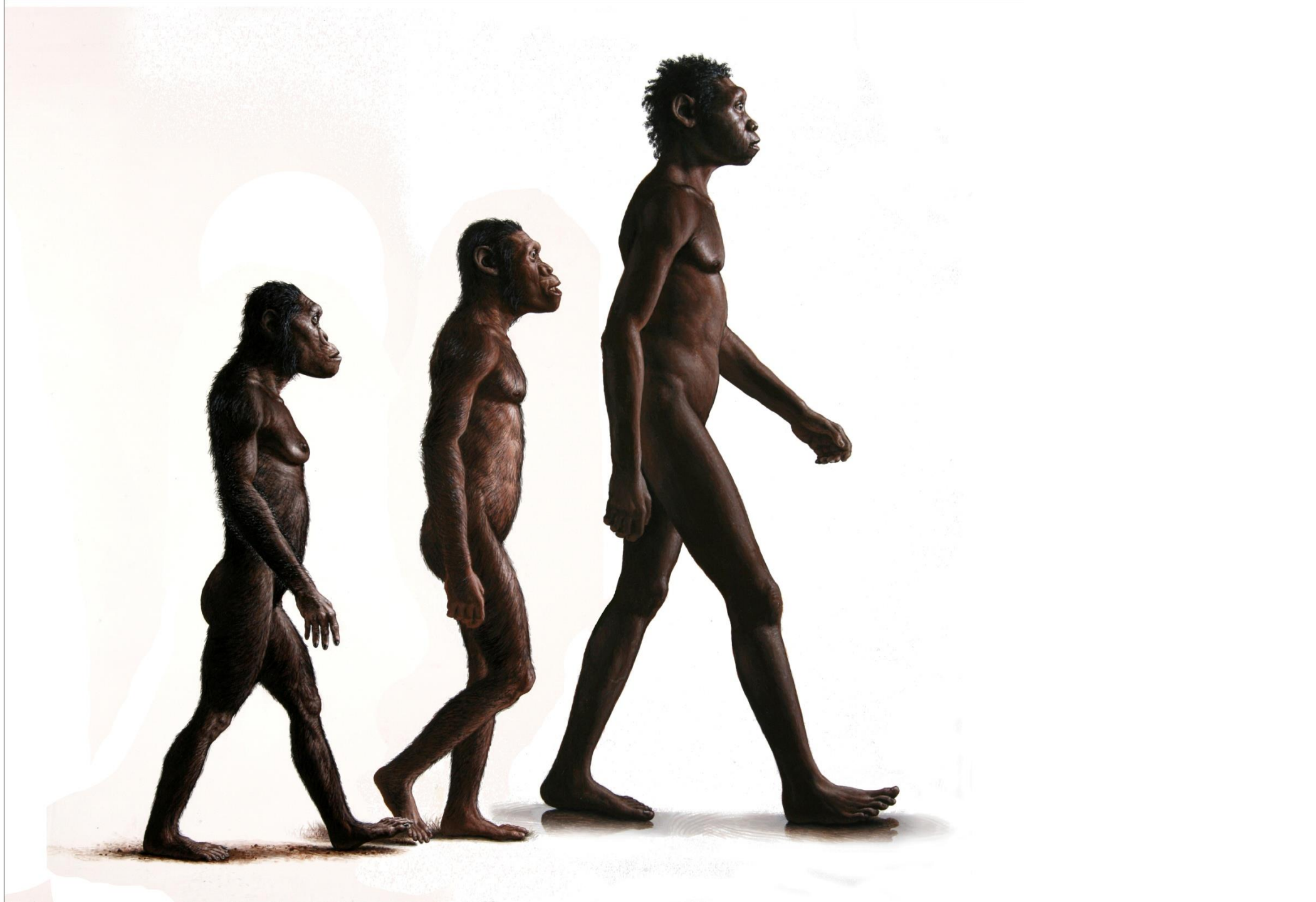
- Inverted funnel shape to support tree scaling



Chimp



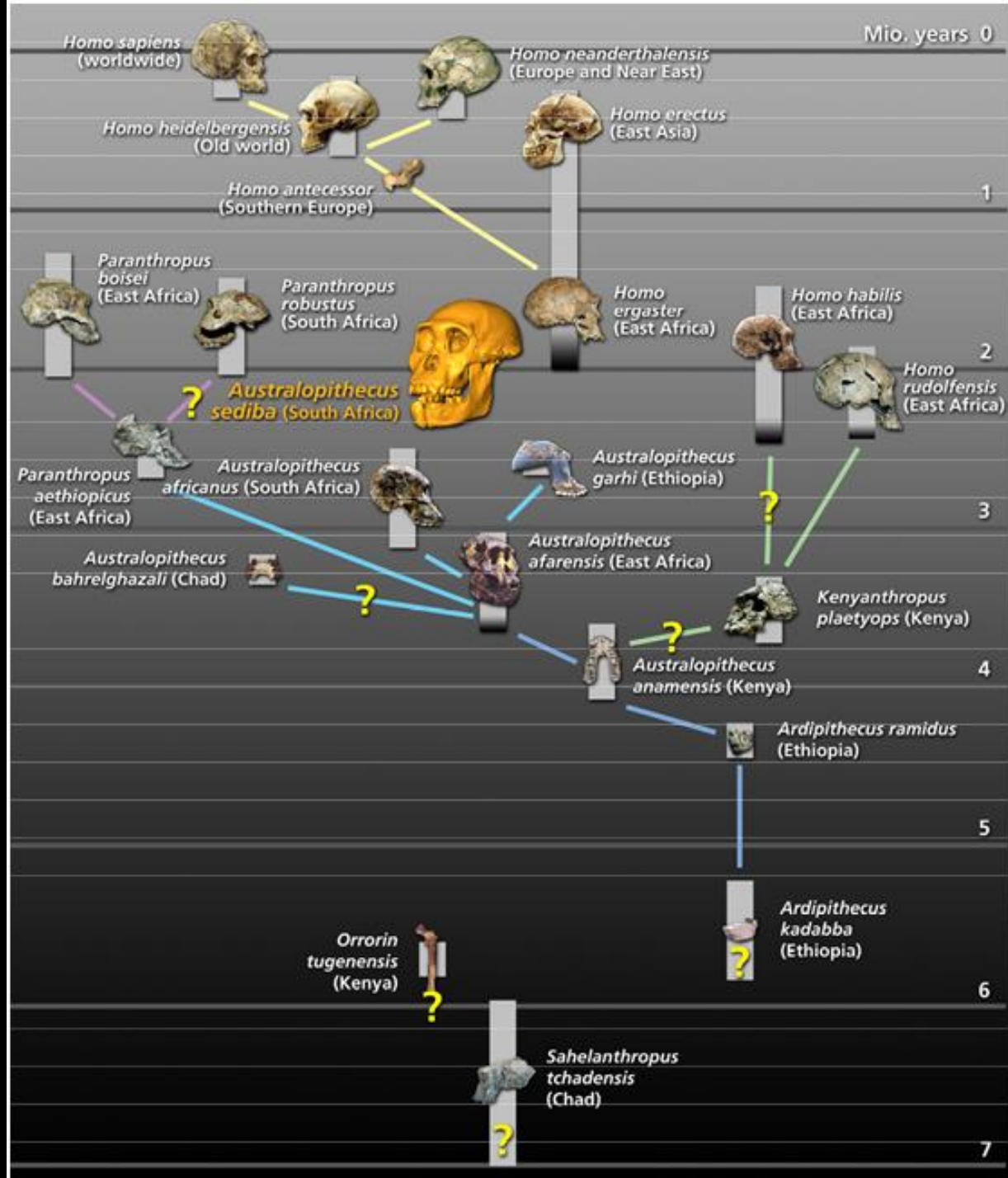


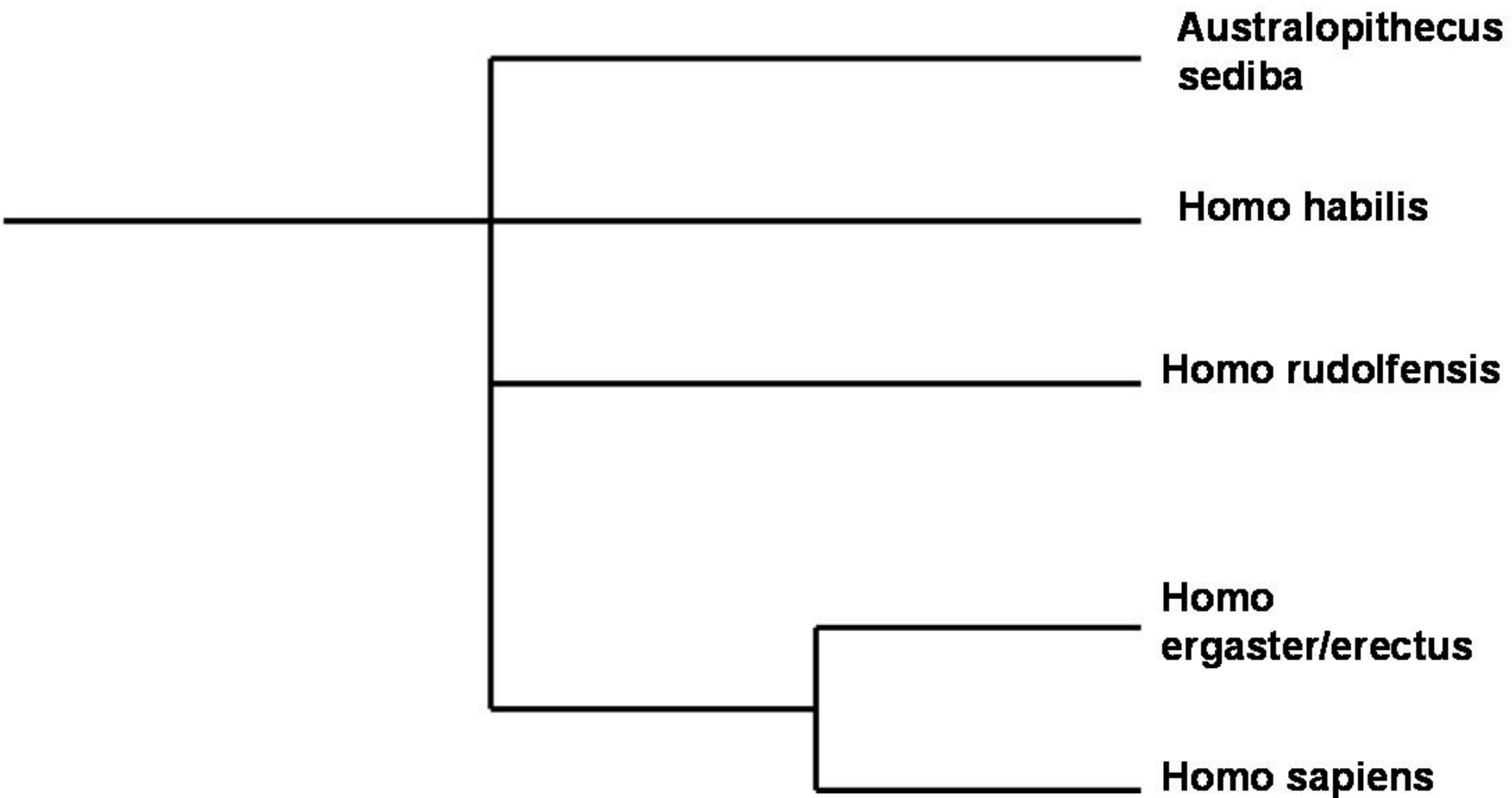












Sahelanthropus



Orrorin



Ardipithecus



K. platyops



A. anamensis



A. afarensis



P. aethiopicus



P. boisei



P. robustus



Homo

?



A. sediba



A. garhi



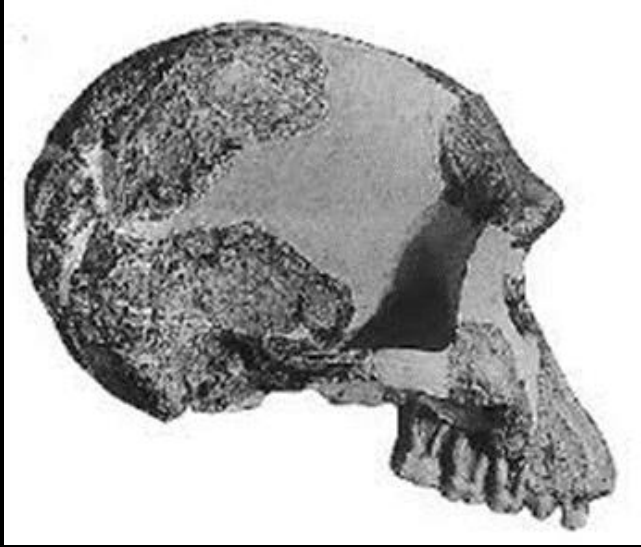
A. africanus

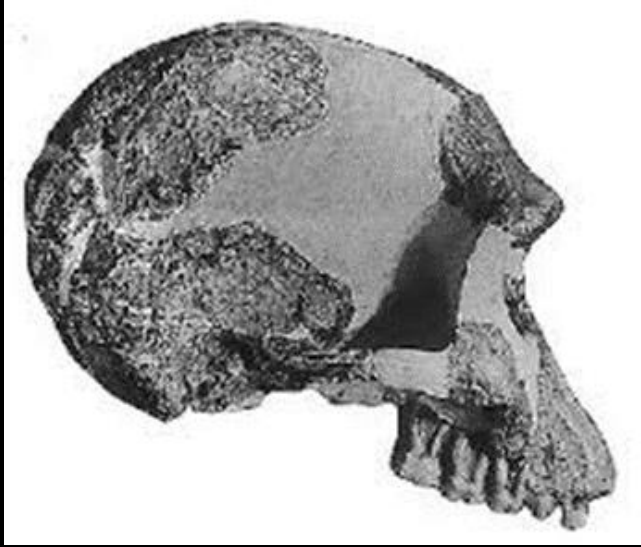


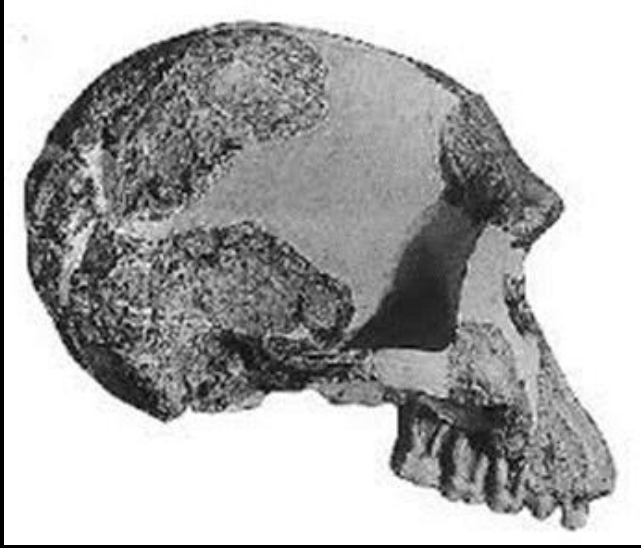




?









>2.0



c2.3



c2.4

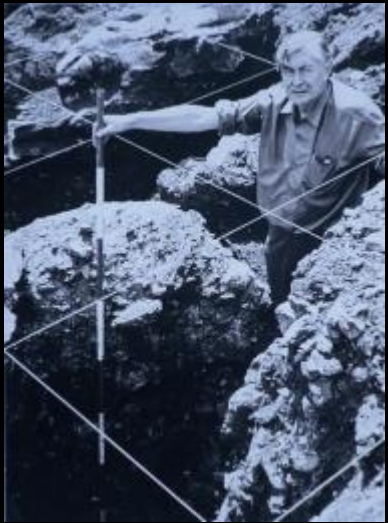
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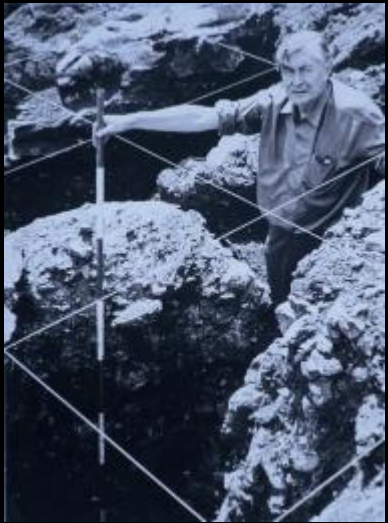






1.78-1.43 million years ago

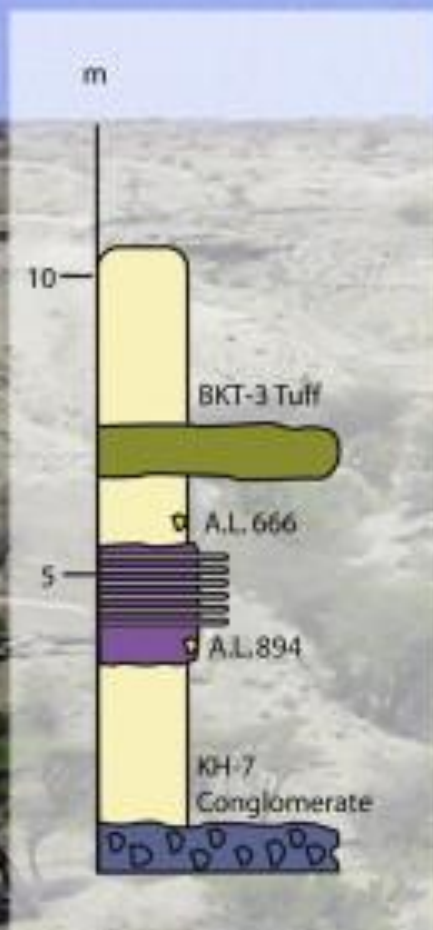










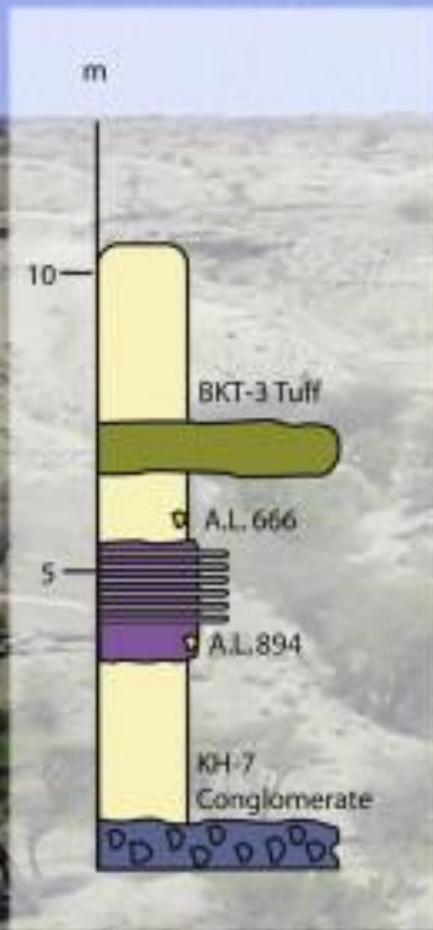


A.L. 894

A.L. 666

KH-7b

KH-7a



A.L. 894

A.L. 666

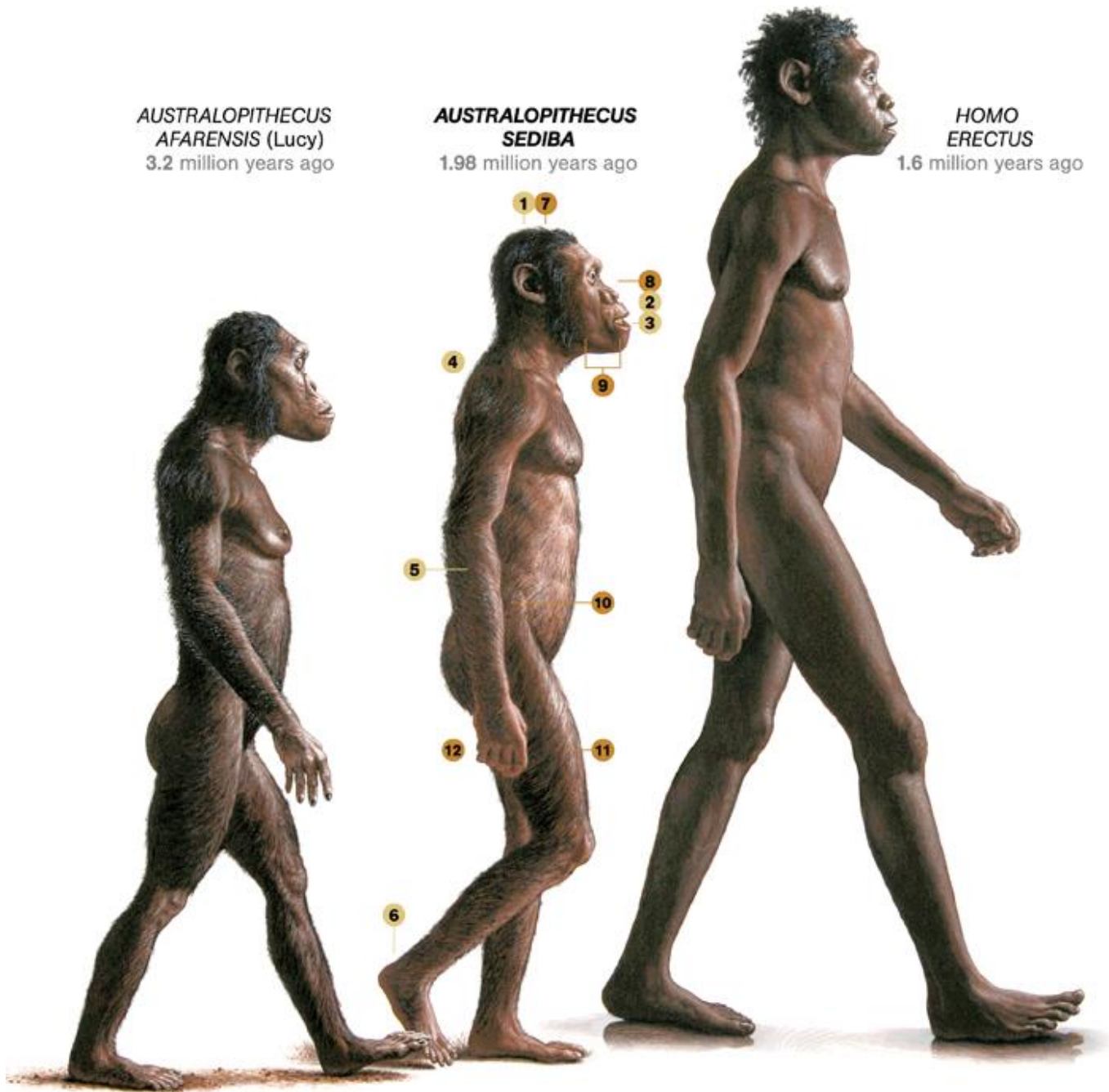
KH-7b



**AUSTRALOPITHECUS
AFARENSIS (Lucy)**
3.2 million years ago

**AUSTRALOPITHECUS
SEDIBA**
1.98 million years ago

**HOMO
ERECTUS**
1.6 million years ago



SIMILARITIES WITH AUSTRALOPITHS

- 1 Small brain size
- 2 Long, high cheekbones
- 3 Primitive molar cusps
- 4 Small body size
- 5 Long upper limbs
- 6 Primitive heel bone

SIMILARITIES WITH HOMO

- 7 Front of brain reorganized
- 8 Projecting nose
- 9 Smaller teeth and chewing muscles
- 10 Hips less flared, similar to humans
- 11 Longer legs
- 12 Hand with precision grip



Human

HUMANLIKE FEATURES

Skull

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- Round brain case
- Narrow face

Lower ribs/pelvis

Hands

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A. sediba

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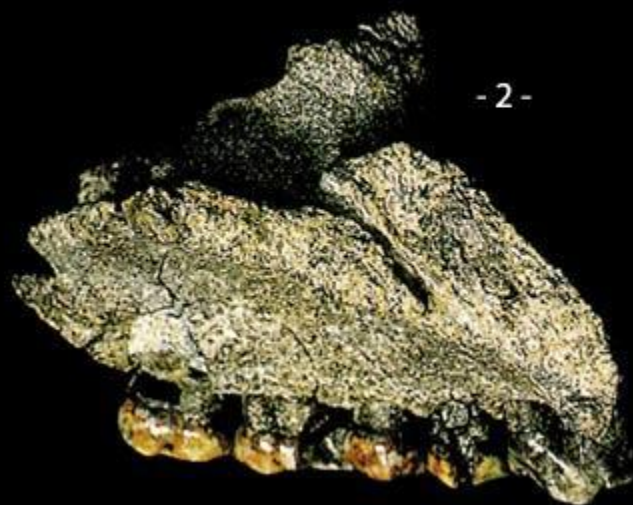
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Chimp

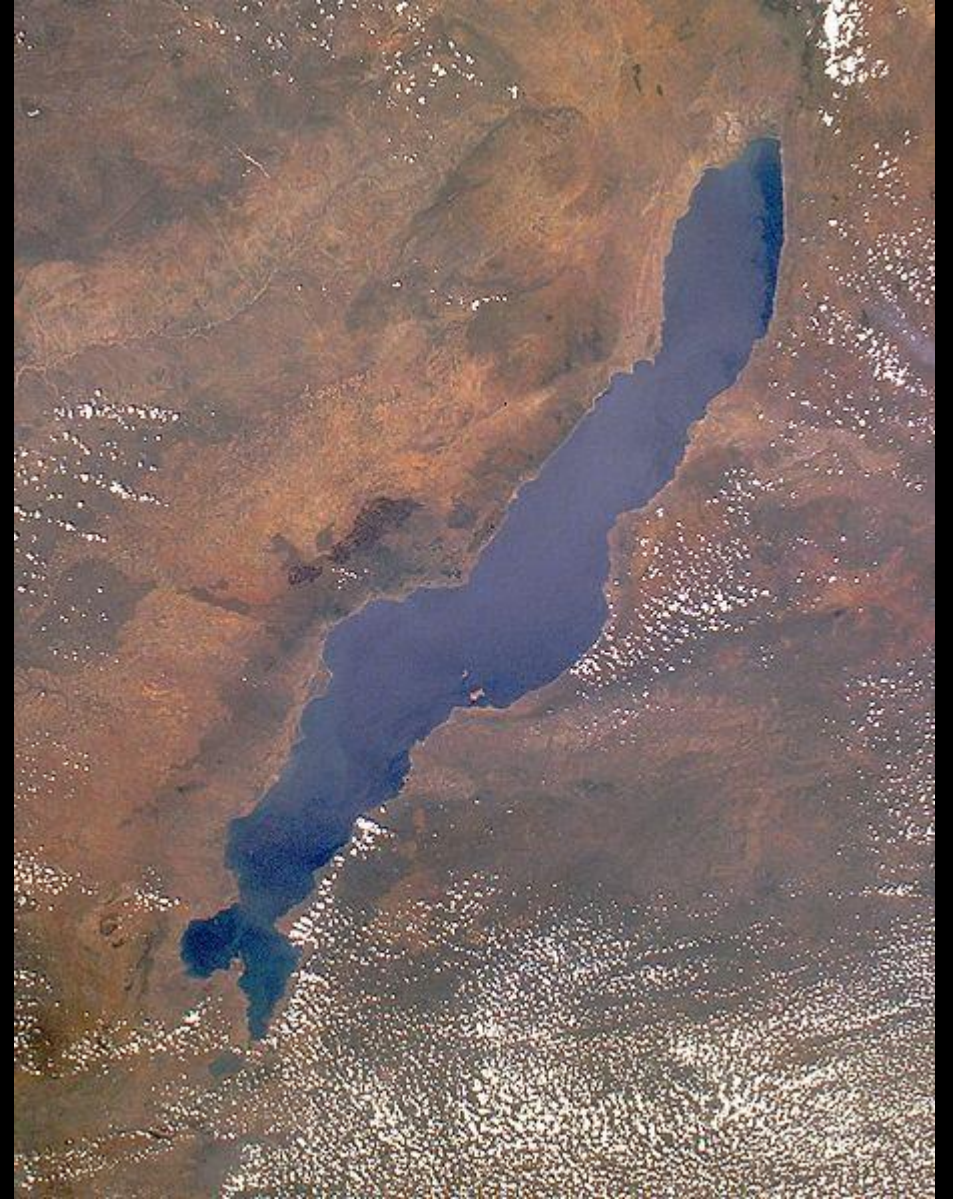


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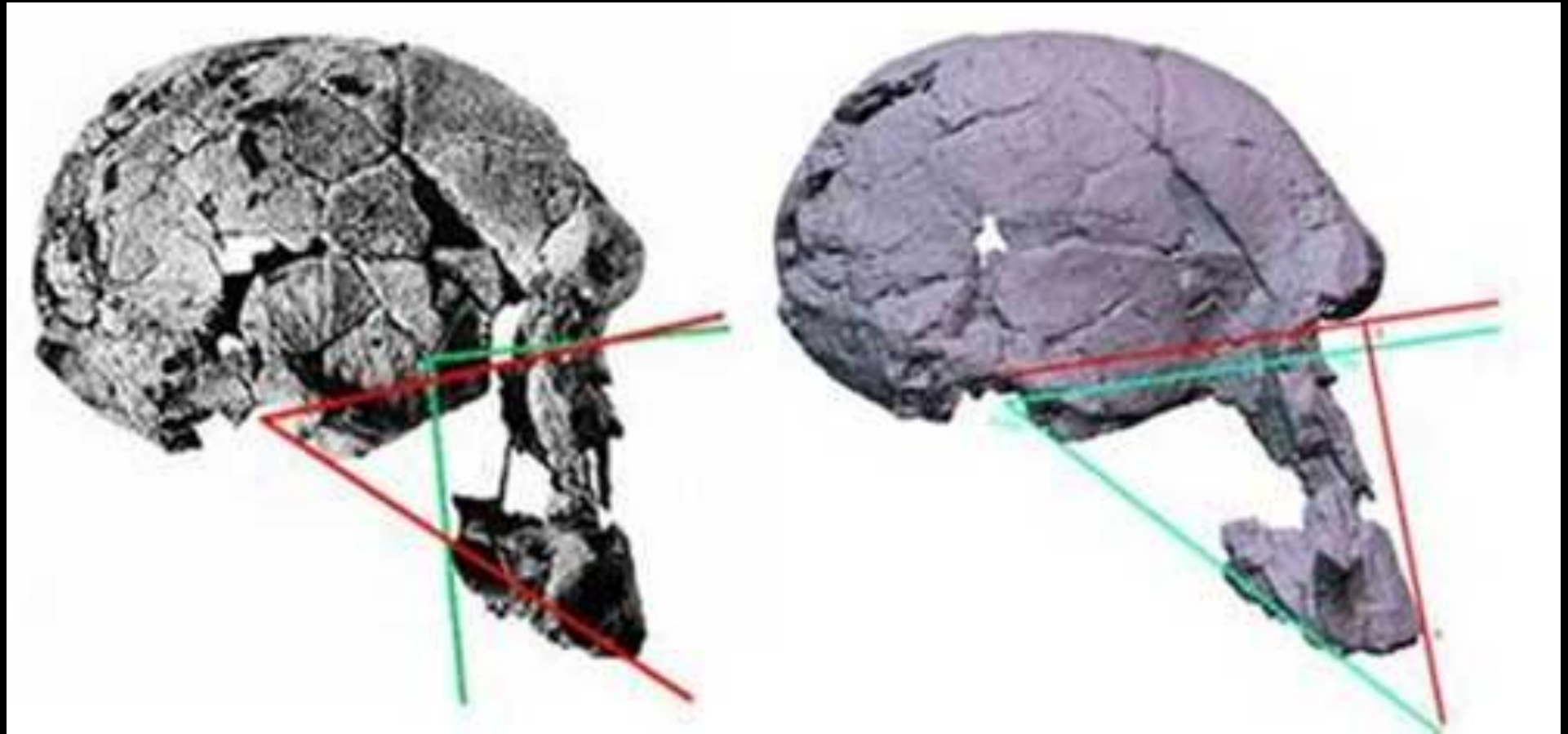
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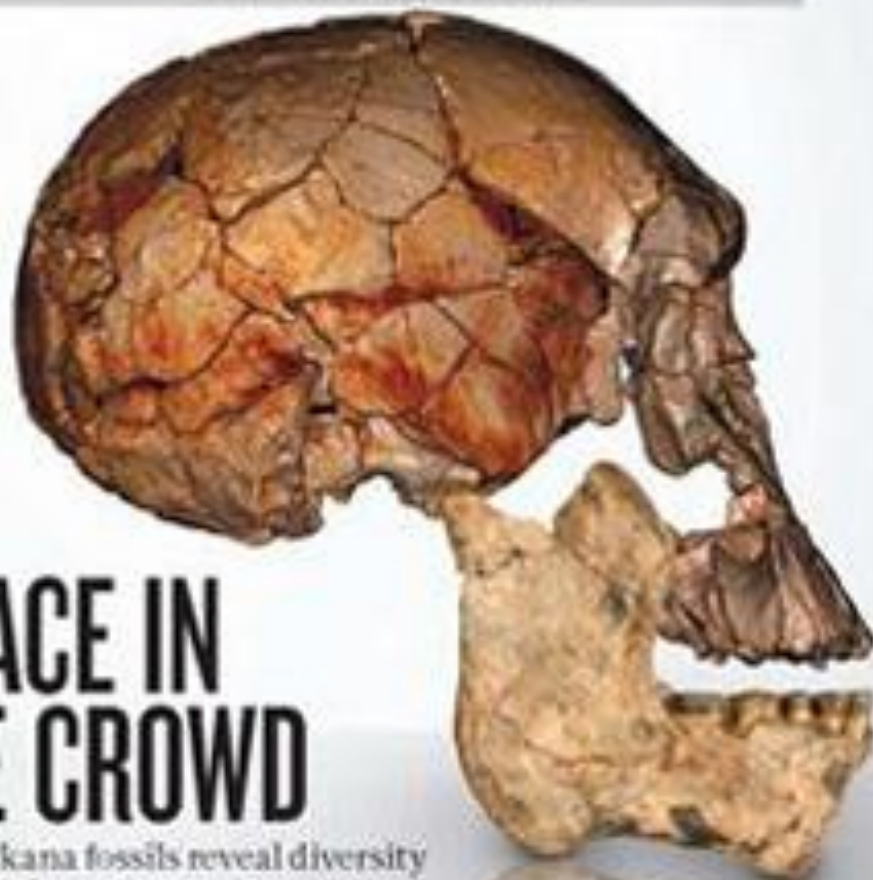






nature

THE INTERNATIONAL WEEKLY JOURNAL OF SCIENCE

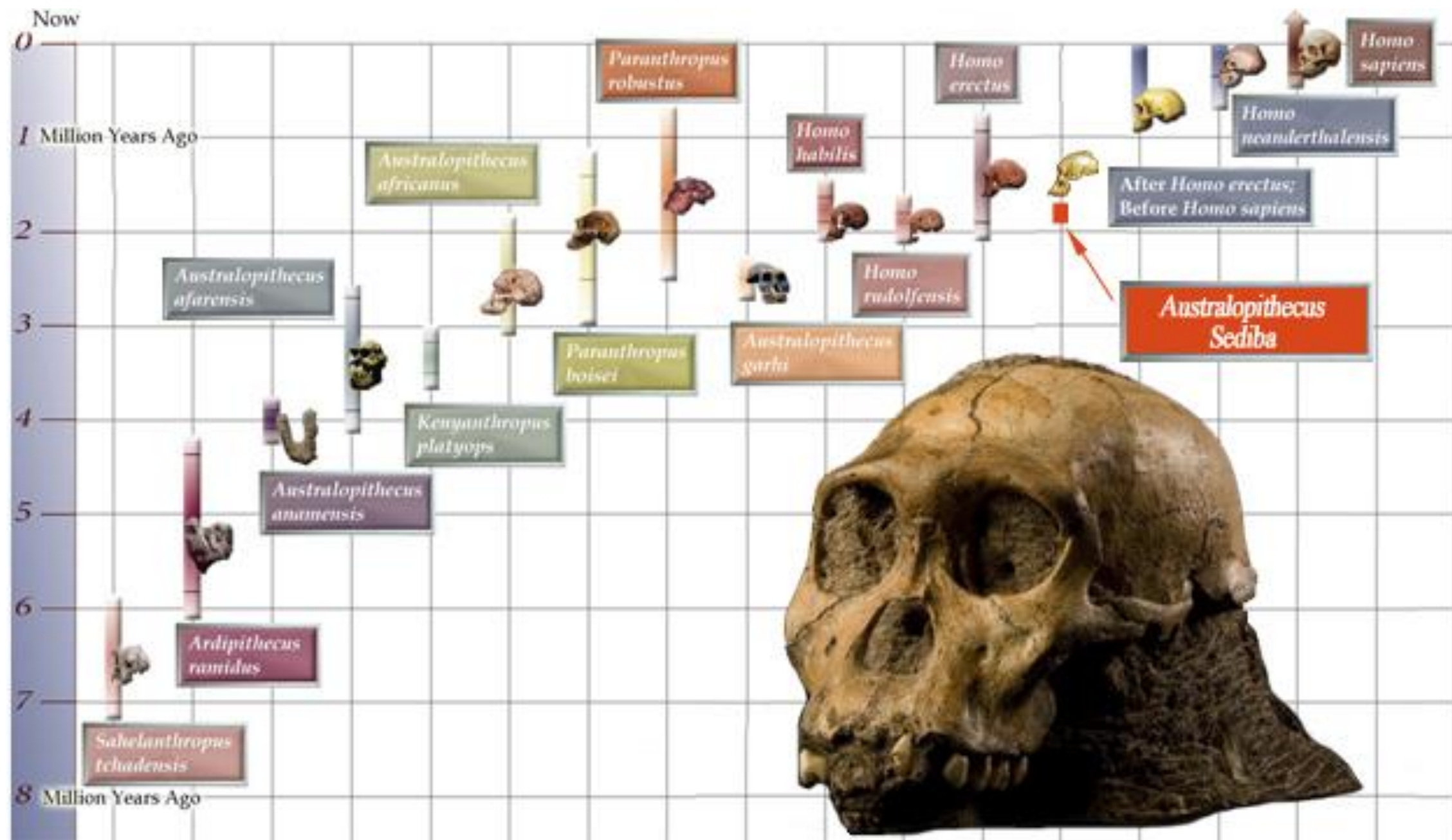


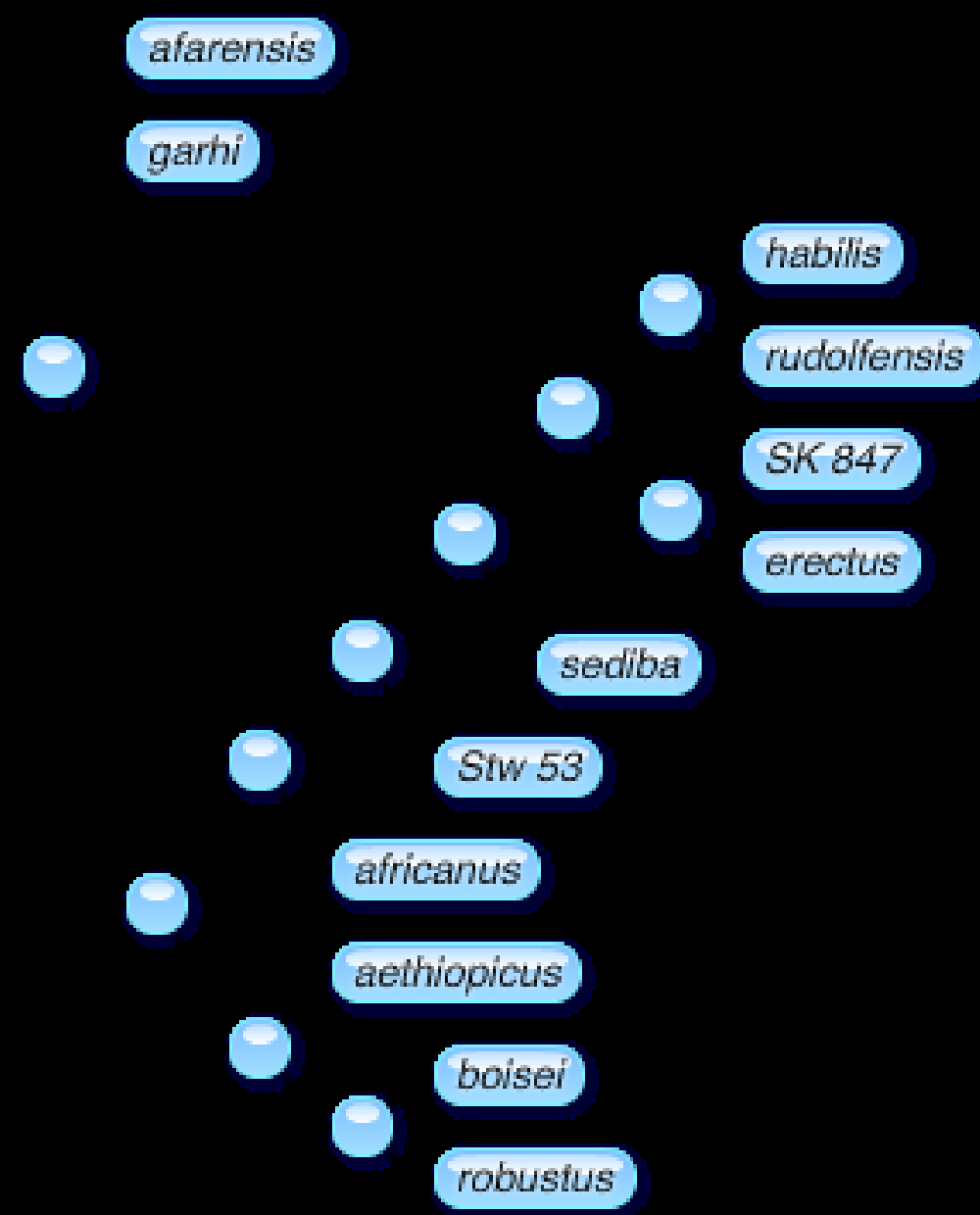
A FACE IN THE CROWD

Lake Turkana fossils reveal diversity
among early *Homo* species **PAGE 102 & 108**

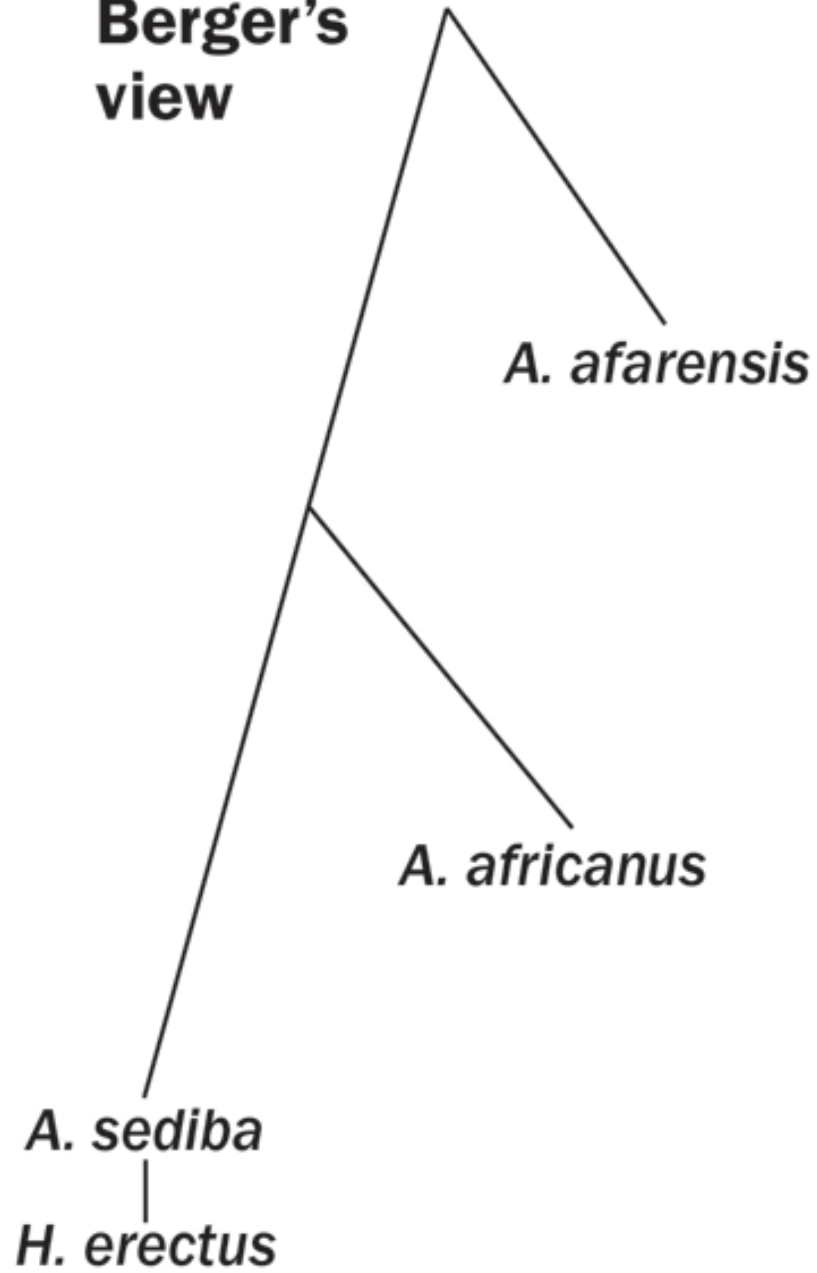








Berger's view



MILLIONS OF YEARS AGO

2

3

4

Traditional view

