

# Discussion of the article about the australopithecus

[History](#)



**ASSIGN  
BUSTER**

Responses to 5 questions What does the term Australopithecus mean? What three areas of Africa have australopithecines been found and when and for how long did australopithecines persist in the fossil record of Africa?

Australopithecine is a general term for members of the Australopithecus genus, and other humanlike primate inhabitants of Africa, that existed between 6 and 1.8 mya (million years ago), as evidenced by their presence in the fossil record. Their remains have been found at a number of sites in eastern, central, and southern Africa. Their stance suggests 'hands free', for carrying items over short distances. They still relied on trees for security from predators, feeding, and sleeping.

2. Which of the australopithecines described in the article do you think is the most likely ancestor to the genus of Homo? Why? Please use specific evidence in your response. Australopithecus africanus seems to be the closest ancestor or relative to the Homo genus. It had unique features that were less primitive than A. afarensis. It had a flat face, evidence of stronger chewing force, a bigger jaw, and great sexual dimorphism, which meant the males and females looked very different and had different sizes and weights. Their skeletal architecture suggests shifts related to environmental and dietary forces. (McHenry 2009)

3. In what ways is Paranthropus anatomically different from australopithecines? What are the three species associated with Paranthropus, where are they found, and how old are they?

The main differences between the anatomy of Australopithecines and Paranthropus were their jaws and chewing apparatus. Their diet meant they needed stronger jaws and bigger chewing and grinding teeth, which affected

their cranial size and shape. They had cheekbones that jutted forward. They also had a relatively smaller body. *Paranthropus robustus*, found at the South African cave site of Kromdraai, in Swartkrans, and also the limestone cave of Drimolen, in South Africa is about 1.8 - 1.5 mya; *Paranthropus Boisei*, excavated at the Olduvai Gorge, Tanzania and thought to be 2. - 1.3 mya; and *Paranthropus aethiopicus*, discovered in the Omo River valley in southern Ethiopia, and on the western shore of Lake Turkana in northern Kenya, estimated to be about 2.5 mya. (*Paranthropus* means “along the side of humans”.)

4. What two species of australopiths are not found in East or South Africa? What are the implications of these discoveries? *Sahelanthropus tchadensis* is one of these two species. There is also a jaw fragment from Baḥr el-Ghazāl in Chad, and a *Homo erectus* specimen called ‘Turkana Boy’ which was found in Nariokotome, Kenya. Discovery of widespread presence suggests that other hominins did live in the tropical and subtropical regions of Africa, leaving remains that have still not been discovered or excavated. Habitats that could support hominin life fluctuated with harsh alterations in tropical climates occurring in the Pliocene and Pleistocene times throughout the African continent. More species are likely to be found, since the environment and climate must have forced many evolutionary shifts. This could make a difference to what is presently understood to have taken place. (McHenry 2009)

5. What are the two major structural shifts in the evolution of the human body that occurred with Australopiths? Describe these shifts and the fossil evidence that demonstrates that they occurred.

The short answer is that brains grew and teeth shrank. After 2 mya, body proportions and hip construction, together with large toe orientation, seemed to become more humanlike with *H. rudolfensis* and *H. habilis*, both 2.5 and 1.5 million years old, two transitional species. Although they were very different in size - *H. rudolfensis* is large and *H. habilis* is small - the teeth of both show evidence of getting smaller. Skeletal remains of *H. habilis* show the most marked increase in brain size, and by the time *H. erectus* appeared nearly 1.8 mya, the proportion between the larger brain was not so dramatic because the body was also bigger, so proportion was more compatible to comparisons with modern humans. The longer thigh bone and more humanlike pelvis that came about by 1.9 mya in *Homo* mark the start of significant shifts.

Sources cited

McHenry, Henry. (2009) *Science and Technology: Australopithecus*

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