

### Difference Between Paranthropus and Australopithecus

Hominidae is a taxonomic family of primates whose members are known as great apes

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### **Key Difference - Paranthropus vs Australopithecus**

or hominids. This taxonomic group included the ancient extinct hominins such

as *Paranthropus*, *Australopithecus* and *Homo* group including modern man. The *Paranthropus* is described as a genus of extinct hominins. They were also known as "robust australopithecines". They were bipedal and found to be descended from "gracile australopithecines". And they probably had lived 2.7 million years ago. They are subdivided further into *Paranthropus aethiopicus*, *Paranthropus robustus* and *Paranthropus boisei*. *Australopithecus* is also an extinct genus of hominins which is broadly categorized into several groups like *Australopithecus Afarensis*, *Australopithecus africanus*, *Australopithecus anamensis*, *Australopithecus bahrelghazali*, *Australopithecus deyiremeda*, *Australopithecus garhi* and *Australopithecus sediba*. They lived in the region of the African continent in Pliocene and Pleistocene epochs (more accurately 5.3 to 2.6 million years ago). The **key difference** between Paranthropus and Australopithecus is, *Paranthropus* had larger braincase (cranium) than the *Australopithecus* while *Australopithecus* braincase (cranium) was smaller

## What is Paranthropus?

than Paranthropus as well as the Homo genus.

*Paranthropus* is a genus of extinct hominins. They were bipedal and had lived 2.7 million years ago. Most of the species of *Paranthropus* had a brain which was 40% in size of that of a modern man. They were well-muscled species and roughly 1.3 m in height. The genus Paranthropus is characterized by robust craniodental anatomy, gorilla-like a sagittal cranial crest, broad grinding herbivorous teeth and strong muscles of mastication. The Paranthropus were lacking the transverse cranial crests in the skulls which can be found in the modern gorillas. They were specifically tailored to a diet of grubs and plants. It had made difficult for them in adapting to the changing climate which eventually led to their extinction. According to the evolutionary biologist Richard Dawkins, their taxonomy often disputed with the genus Australopithecus. The pelvis of Paranthropus is similar to that of the A. Afarensis. But the hip joint including the femoral head and acetabulum are smaller in *Paranthropus*. The similar hip structure between A. aferensis and Paranthropus suggests that they had similar walking gait. Most probably the *Paranthropus* moved like the gracile australopiths.

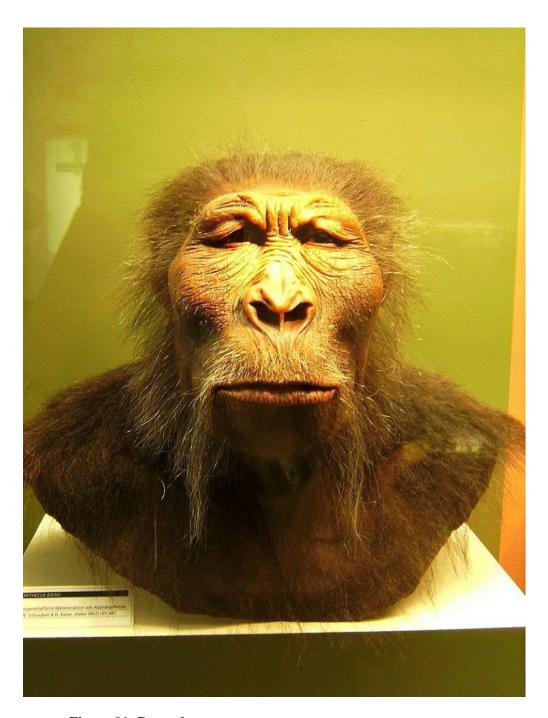


Figure 01: Paranthropus

Genus *Paranthropus* is subdivided further into *Paranthropus aethiopicus*, *Paranthropus robustus* and *Paranthropus boisei*. The remains of *Paranthropus* were found in Omo river valley in Southern Ethiopia and western shore of Lake Turkana in Northern Kenya. *Paranthropus* lived in both southern and eastern Africa was associated with stone tool making. However, they had not used a language of communication nor did they control fire. Species like *Paranthropus boisei* were considered as part-time graminivore.

## What is Australopithecus?

Australopithecus is an extinct genus of hominins. They are broadly categorized into several groups like Australopithecus aferensis, Australopithecus africanus, Australopithecus anamensis, Australopithecus bahrelghazali, Australopithecus deyiremeda, Australopithecus garhi and Australopithecus sediba. Australopithecus lived around 5.3 to 2.6 million years ago.

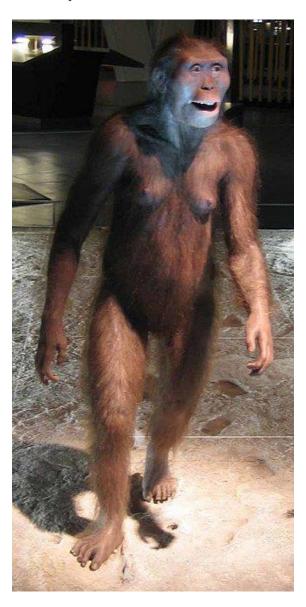


Figure 02: Australopithecus

According to the evidence of <u>fossils</u>, they bore the characters of both humans and apes. They were bipedal like humans. But they had small brains similar to apes. Their canine teeth were small like humans but the cheek teeth were large. They were prominent

frugivorous. These species traveled short distances. *Australopithecus* species were usually standing 1.2 to 1.4 m tall. An *Australopithecus* skeleton fossil named as "Lucy" was found in Ethiopia that has been dated back to 3.2 million years ago. The evolutionary scientists believe suddenly australopith species became a *Homo* genus (like *Homo habilis*) two million years ago in Africa and eventually the modern humans *Homo sapiens* came into being.

# What are the Similarities Between Paranthropus and Australopithecus?

- They were both extinct species.
- They were both belonging to hominins group.
- Paranthropus and some Australopithecus had similar walking gait.
- Both included in the disputed group of "Australopiths" in the lineage.
- Both lived 2.6 million years ago.
- Both were bipedal.

# What is the Difference Between Paranthropus and Australopithecus?

Paranthropus vs Australopithecus		
Paranthropus is an extinct genus of hominins which had larger braincase (cranium).	Australopithecus is an extinct genus of hominins which had smaller braincase (cranium).	
Temporal Fossa		
Paranthropus's temporal fossa was large.	Australopithecus's temporal fossa was small.	
Snout		
Paranthropus's snout was short.	Australopithecus's snout was long.	
Sagittal Crest		
Paranthropus males had a sagittal crest.	The sagittal crest was absent in Australopithecus.	

Location of the Face		
The face of the <i>Paranthropus</i> was located high in neurocranium.	The face of the <i>Australopithecus</i> was located below in neurocranium.	
Face		
Paranthropus had a flat face.	Australopithecus had prognathic incisors in their faces.	
Zygomatics and Mandible		
Paranthropus had robust zygomatic and mandible.	Australopithecus had not got robust zygomatic and mandible.	
Forehead		
Paranthropus had a flat forehead.	Paranthropus had a flat forehead.	
Relative Size of Incisors and Canines		
Paranthropus incisors and canines were small.	Australopithecus incisors and canines were large.	
Size of Premolars and Molars		
Paranthropus premolars and molars were large.	Australopithecus premolars and molars were small.	

# **Summary - Paranthropus vs Australopithecus**

Both Paranthropus and Australopithecus are extinct hominins. Paranthropus were robust and descended from gracile australopithecines. They were bipedal and probably lived 2.7 million years ago. It is divided broadly to three groups; Paranthropus aethiopicus, Paranthropus robustus and Paranthropus boisei. Australopithecus has subdivision like; Australopithecus aferensis, Australopithecus africanus, Australopithecus anamensis, Australopithecus bahrelghazali, Australopithecus deyiremeda, Australopithecus garhi and Australopithecus sediba. They lived in the area of Africa

during 5.3 to 2.6 million years ago. This can be described as the difference between *Paranthropus* and *Australopithecus*.

#### Reference:

1. "Paranthropus." Wikipedia, Wikimedia Foundation, 4 Dec. 2017. <u>Available here</u> 2. "Australopithecus." Wikipedia, Wikimedia Foundation, 7 Dec. 2017. <u>Available here</u>

### **Image Courtesy:**

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- 2.'A.afarensis' (Public Domain) via Commons Wikimedia

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