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The Missing Link

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Professor Lee Berger with the *Australopithecus sediba* fossils.

http://www.maropeng.co.za/index.php/news/entry/presenting_australopithecus_sediba/

The Missing Link

Kavita Nadendla

According to papers released in the latest issue of *Science* magazine, remains recently discovered in a South African cave appear to be a new member of the human family tree. As a candidate transitional species between our ape-like ancestors and modern human beings, the fossils may yield new insights into the evolution of the human lineage.

Thanks to his then nine-year-old son, Matthew, Lee R. Berger of the University of Witwatersrand found the bones of *Australopithecus sediba* in the fossil-rich cave region of Malapa, near Johannesburg, in 2008. Matthew found the first bone, which was identified as belonging to a male child. Two weeks later, Berger uncovered the remains of an adult female. Scientists have long considered the *Australopithecus* family, which includes the famous specimen Lucy, as a candidate for a human ancestor. Interestingly, the new fossils show a novel combination of features resembling both pre-human creatures and the genus, *Homo*.

Reports of the findings detailed the brain, pelvis, hand, and feet of *A. sediba*. Scientifically dated as almost two million years old, the brain is small like that of a chimpanzee but with an expansion behind and above the eyes, suggesting a more human configuration. Like other *Australopithecus*, the

pelvis of *A. sediba* had already evolved for walking upright. However, prior to the discovery of *A. sediba*, it was thought that certain features of the modern human pelvis evolved to adapt to an increased brain size at birth. However, the presence of those adaptations in *A. sediba*, who lack increased brain size, invalidates that hypothesis.

Further mixing of traits between *Australopithecus* and *Homo* were seen in the hands and feet of *A. sediba*. The fingers of *A. sediba* were curved like those of a creature that climbed trees, but they were also long and slim with the potential to use tools like *Homo* did. The heel and shin of *A. sediba* remain fairly ape-like, while its ankle and foot arch are similar to modern humans and could allow for walking on the ground. Additionally, there is a large attachment site for an Achilles tendon.

So does all this mean that *A. sediba* is the “missing link?” According to scientists, who prefer the term “transition form,” it is a good candidate to represent the evolution of humans. However, the earliest definitive example of *Homo* is actually 150,000 to 200,000 years younger. But the fact that *A. sediba* clearly indicates a mixture of *Australopithecus* and *Homo* is a confirmation of Charles Darwin’s evolutionary theory.