Australopithecus Sediba could be direct ancestor of Homo

April 20 2011, by Deborah Braconnier

The cranium of Malapa Hominid 1, Holotype of Australopithecus sediba from South Africa. Photo by Brett Eloff, courtesy Lee Berger and the University of the Witwatersrand. Image: Profberger, Brett Eloff, University of the Witwatersrand

(PhysOrg.com) -- Last year Lee Berger from the University of the Witwatersrand and his team discovered the skeletal remains of two specimens they determined to be a new species of human called *Australopithecus sediba*. The skeletons had characteristics of previous species of Australopithecus, but also of Homo, leading the researchers to believe they may have found an evolutionary connection between the two. This became a very controversial idea, with many believing there was no connection to Homo and that what they had discovered was really an ancestor of later Homo species.

At the annual meeting of the Paleoanthropology Society on April 12 and again on April 16 at the annual meeting of the American Association of Physical Anthropologists, Berger and his team presented new findings on their most recent bone analysis.

Kristian J. Carlson discussed the size and shape of *A. sediba's* brain, showing that by synchrotron scanning of the interior brain case, they were able to determine the estimated capacity to be around 420 cubic centimeters. This led to a very small brain size and is the reason researchers first determined these new skeletal findings to be in the Australopithecus genus. However, they also discovered that the frontal lobe of this small brain contained organization more similar to that of humans, showing that contrary to what was previously thought, organization and brain size with human characteristics may not have been a simultaneous change.

The pelvis of the *A. sediba* is what researchers believe show the strongest link toward the beginning of an evolutionary change to the Homo. Researchers have always linked the larger brain size of the Homo to the evolutionary change in the pelvic structure between the two. However, even with the small brain size and cranial structure of *A. sediba*, the pelvic structure has changed from previous Australopithecus to much closer to that of Homo.

More information: en.wikipedia.org/wiki/Australopithecus_sediba

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