

Human ancestors more primitive than once thought

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The fossils, dated to 1.8 million years old, show some modern aspects of lower limb morphology, such as long legs and an arched foot, but retain some primitive aspects of morphology in the shoulder and foot. The species had a small stature and brain size more similar to earlier species found in Africa.

"Thus, the earliest known hominins to have lived outside Africa in temperate zones of Eurasia did not yet display the full set of derived skeletal features," the researchers conclude.

The findings, published Sept. 20 in the journal *Nature*, are a marked step in learning more about the first human ancestors to migrate from Africa.

The lead author of the paper is David Lordkipanidze, director of the National Museum of Georgia. Collaborators on the study include Pontzer and researchers from Georgia, Switzerland, Italy and Spain.

The new evidence shows how this species had the anatomical and behavioral capacity to be successful across a range of environments and expand out of Africa, said Pontzer, who studies how the musculoskeletal anatomy of an animal reflect its performance, ecological niche and evolutionary history.

"This research tells us that the limb proportions and behavioral flexibility which allowed this species to expand out of Africa were there at least 1.8 million years ago," Pontzer said.

Dmanisi is the site of a medieval village located about 53 miles southwest of Tbilisi, Georgia on a promontory at the confluence of the Mashavera and Phinezauri rivers. Archaeological exploration of the ruins began in the 1930s, but systematic excavations were not undertaken until the 1980s. Pontzer has been studying the site for more than six years.

Source: WUSTL

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