

## A Visit to Olduvai Gorge and the Ngorongoro Crater: Cradle of Humankind

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My wife Song and I spent two weeks traveling through Tanzania, East Africa in mid-January, 2011. Our primary goal was to visit the Ngorongoro Crater and Serengeti National Park, and to observe and photograph the migration of hundreds of thousands of wildebeest, zebra and various other hoofed mammals that occurs at that time of the year. The migration is one of the world's great remaining natural phenomena and something that, as a biologist, I had long dreamed of experiencing firsthand. We weren't disappointed. During the trip, we were able to observe vast herds moving into the southern and central Serengeti. In addition, we recorded nearly 30 species of mammals, including 50 lions, 15 cheetah (including an opportunity to observe two cheetah kills) and 8 leopards, and more than 80 species of birds. However, one additional benefit of the trip was a chance to visit Olduvai Gorge, one of the world's best known paleontological sites.

Olduvai is a 30 mile long, 295 foot deep rocky gorge located southeast of the Serengeti Plains. It is part of the huge Ngorongoro Conservation Area, a vast landscape of mixed savannah and woodlands in which the local Masai people (who call the area "Oldupai") graze their cattle, donkeys and goats, alongside some of the greatest concentrations of wildlife remaining on the continent. The site's deposits, which were once situated on the edge of a large lake, contain a rich diversity of Plio-Pleistocene fossils, including the remains of early hominids, ancient giraffe, elephants, hippos, antelope and a wide variety of other animals. The rock formations there represent fine-grained clays and mudstones deposited at the bottom of the lake, and these formations are intermingled with lava and alluvial fan deposits due to fluctuations in the depth of the lake. Several sedimentary beds have been exposed by stream action and erosion representing a span from 5.3 million to 15,000 years ago. The lake formed during the developmental history of Bed I and continued until Bed IV was formed, at which time it completely dried up.

Evidence of hominid habitation is present from Bed I through recent times. Hominid fossils found in Bed I (1.7-2.1 mya) and Bed II (1.15-1.7 mya) include *Australopithecus* (formerly *Zinjanthropus*) *boisei*, *Homo habilis* and *Homo erectus*. Some of the earliest stone tools have also been found there, representing the Oldowan and Acheulian industries. Also discovered was a circle of lava rocks, probably one of the earliest examples of a crude shelter. The discovery of the 1.9 million year-old *Homo habilis* in 1960 confirmed that *Australopithecus* was likely not in the direct line of human ancestry, but rather that human evolution was more complex than previously thought, with perhaps several parallel lineages. Immortalized by the work of paleoanthropologists Louis and Mary Leakey, this site was often featured in the pages of *National Geographic* in the 1960s. Reading these stories stimulated my early interest in paleontology and anthropology, and that alone made our brief visit to the site very special. Paleontological and archaeological work at the site continues to this day.



A small museum has been built on the site and recounts the history and significance of the many discoveries made there. There are displays of fossil mammals, homonids and stone tools, as well as detailed descriptions of the Leaky family's and other scientists' work over many decades. Visitors are also treated to lectures by local experts, who discuss the history and significance of the site and answer any questions that people might have. While I was itching to do some collecting myself, this is a highly protected site of great scientific significance, and that simply was not possible. Instead, I had to console myself with the knowledge that I had visited one of the world's most famous paleontological sites and walked in the footsteps of the Leaky family. Having personally visited Olduvai, I certainly better appreciate their important contributions to our understanding of human evolution. Though still denied by many, the discovery of fossil homonids is clear and concrete evidence of our humble origins.

(Photo of the Ngorongoro Crater by Michael Hutchins)