

Black History Month

Africa: The Cradle of Humankind

Uncovering The Missing Link

By EMILY CAUCH

Hank Wesselman, an anthropologist and a team of international scientists were looking for the "Missing Link" — a branching off that demonstrated a break from the ape's ancestral line to a line that appeared to be distinctly human.

"This proves that Charles Darwin was right," said anthropologist Hank Wesselman.

About 140 years ago Darwin predicted that the "Missing Link" in the history of man would be found in Africa, according to Wesselman.

Discovered in the fossil hotbed of Ethiopia's Rift Valley were 95 fossil bones of an individual of long age.

The team, including Wesselman and led by University of California at Berkeley anthropologist Tim White, discovered the oldest found remains of the genus *Australopithecus*. White named the species *ramidus* which means "root" in the local Afar villagers' tongue.

"This really is the missing link," said Wesselman, whose specialty is searching for the fossils of small mammals.

This creature, *Australopithecus ramidus*, is clearly a separate species from the Lucy form and it's very clearly an intermediate between something which is human and something which is ape," said Wesselman.

"Lucy" was a discovery made by anthropologist Don Johanson and a team about 20 years ago. Lucy or *Australopithecus afarensis* was thought to be the oldest human-like creature found.

Wesselman can be found hunching on the ground looking for the fossil bones of rats, mice and bats.

By dating these small-mammal fossils, he is able to reconstruct the environment in which the 4.5 million-year-old human-like species *A. ramidus* lived.

He imagined *A. ramidus* living in a flat and wooded land.

"In my paleo-fantasy this is a landscape of very little relief," said Wesselman.

He envisions a possible rise in a river, which flooded everything in its path. He said the ancient fossils may have been so well preserved because they were quickly buried by fine sediments during a massive flood.

Wesselman and two members of the micro-mammal team discovered about 400 micro-mammal fossils, more than he had ever found. Wesselman described the Afar region, where the discoveries were made, as the "oldest and most prolific" micro-mammal site.

White and his team discovered 17 *A.*

"This find is really the Holy Grail of Anthropology."

ramidus fossils.

In Ethiopia, before heading out to the site, Wesselman, with an Ethiopian colleague, shopped in the village Shoarobi for potatoes, onions, bananas, oranges and 15 containers of gasoline. Afar villagers, armed with AK-47s, escorted Wesselman and his colleague to the excavation site.

The Afar villagers are involved in a fierce Ethiopian civil war and only allow outsiders into their area with their permission. The balabat, or chief, of the group blessed the anthropologists and pledged to defend them if necessary. The villagers were often seen in the distance tending to their livestock, occasionally stopping to intently study the work of the anthropologist team.

Wesselman joined 25-30 team members and began his work in the fine sediments that held answers to humanity's past.

In those same sediments, in a dry river bed, anthropologists came across a lower leg bone of *A. ramidus*, the first of many discoveries. The team covered the area with a makeshift tent and started planning the excavation of the area.

"My micro-mammal team, of course, was immediately pressed into service and we became excavators at the site because of the magnitude of this discovery," said Wesselman.

"Dr. White and his colleagues, including myself, began to uncover bone after bone after bone of a single individual... nobody could believe it," said Wesselman.

The team did not bring enough packaging material, not anticipating such a find.

The team, lying on their stomachs while picking away at dirt, found more fossils of the owner of the leg bone.

Each fossil, surrounded by its original sediments was to be preserved in white casting. The team resorted to using aluminum foil and other materials to wrap the fossils.

"It's very ape-like in its teeth and the size of the canines and the thickness of the enamel, but its very human-like in its post-cranial skeleton (hands and legs)," said Wesselman.

"The feet and the legs reveal features which are characteristic of bipedalism," he said.

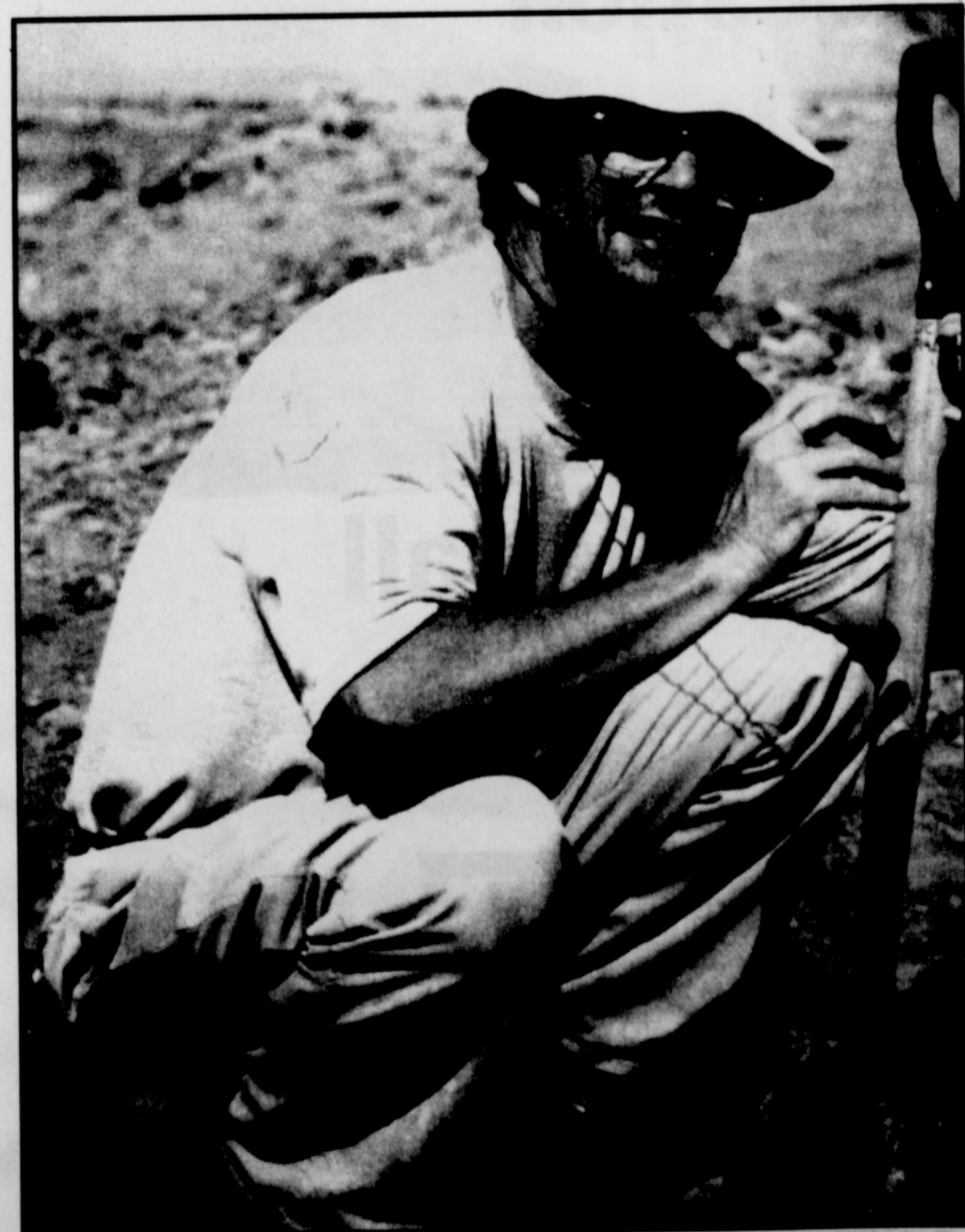
Bi-pedalism, unique hominid feature, is the ability to walk upright with two legs.

White will return to Africa to remove the sediment and restore and curate the fossils, which still need to be studied and cleaned.

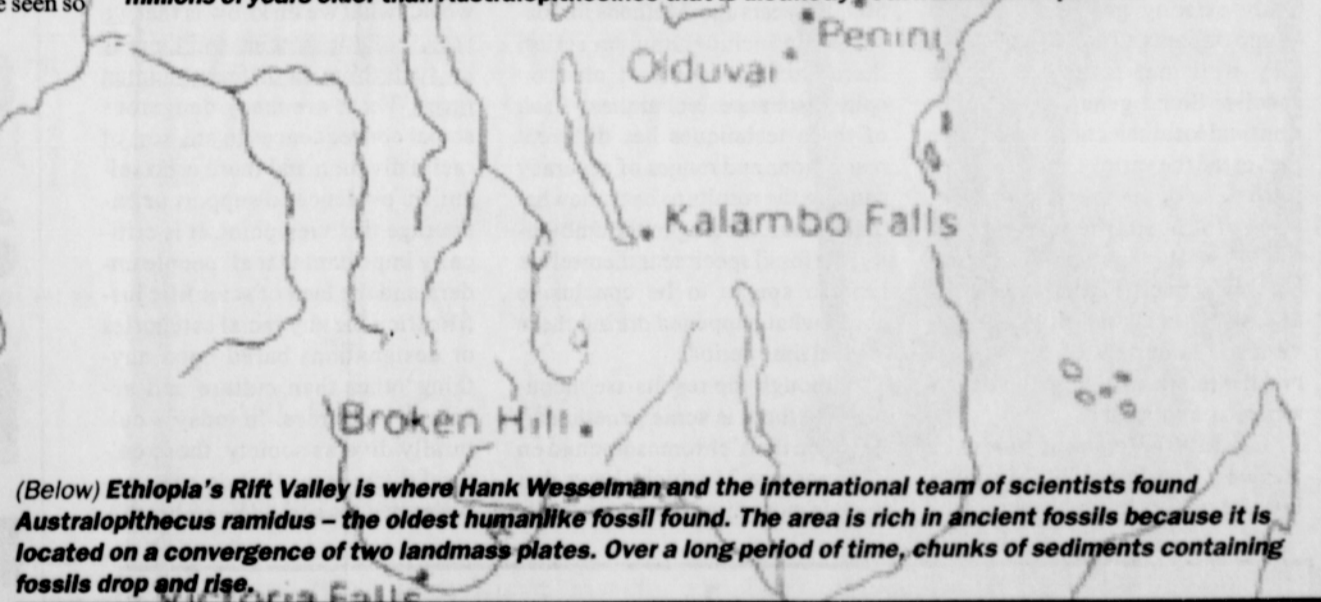
"From the work that's already been done we're very, very excited because of the features that are revealed," said Wesselman. "A mosaic of features that are ape-like and human-like have been revealed by what we've seen so far."



Raymond Dart, an anatomist in South Africa originally discovered the Australopithecines. He believed that these species had been extraordinary predators, hunting many animals and bringing their carcasses back to the limestone caves. "Man's predecessors... seized living quarries by violence, battered them to death, tore apart their broken bones, dismembered them limb from limb, slaking their ravenous thirst with the hot blood of victims and greedily devouring living writhing flesh," explained Dart. The new species discovered recently in the Rift Valley of Ethiopia by Hank Wesselman and colleagues is millions of years older than Australopithecines that is distinctly both human and ape-like.



(Above) Hank Wesselman looks for the "Missing Link" and micromammals in Ethiopia. The scientific findings by him and his colleagues will be formally presented to the world next summer.



(Below) Ethiopia's Rift Valley is where Hank Wesselman and the international team of scientists found *Australopithecus ramidus* — the oldest humanlike fossil found. The area is rich in ancient fossils because it is located on a convergence of two landmass plates. Over a long period of time, chunks of sediments containing fossils drop and rise.

