Team including Princeton anthropologist makes groundbreaking discovery on early human burial practices

In a groundbreaking discovery, new light has been shed on the behavior of our ancient human relatives by a team from National Geographic in collaboration with Princeton anthropology professor Agustín Fuentes. Fuentes and the team have uncovered compelling evidence for deliberate burial practices by Homo naledi, an extinct species of Hominini with a brain around one-third the size of that of a modern human. The team has also discovered rock engravings, believed to be created by Homo naledi, in the Rising Star cave system in South Africa. These findings provide invaluable insights into the cultural and cognitive capabilities of Homo naledi, challenging previous assumptions about our evolutionary ancestors.

Many cultures around the world bury their dead. In fact, until now, burying the dead and other cognitive-based behaviors such as using symbols have only been linked with larger-brained Homo sapiens and Neanderthals.

“I think what we are suggesting is that we really have to take a step back. It used to be that we said, you need to have a certain brain size in order to be able to bury your dead,” said Marc Kissel, an assistant Anthropology professor at Appalachian State University and one of the authors of the study.

“We are now finding such behaviors in species that have a third of our brain size and I think this is something shocking,” he added.

Details of the findings have been described in three studies accepted for publication in the journal eLife, and preprints of the works are available on BioRxiv.

The Homo naledi remains were first discovered in the Rising Star Cave system in 2013, and the site has continued to yield notable findings. The Homo naledi have a “mosaic” morphology in the sense that some of its features, including shoulder and pelvis, are more primitive while its hands and feet are more modern in the evolutionary sense.

“The Rising Star is an amazing cave system, and it is just terrifying and beautiful and wonderful at the same time,” said Fuentes.

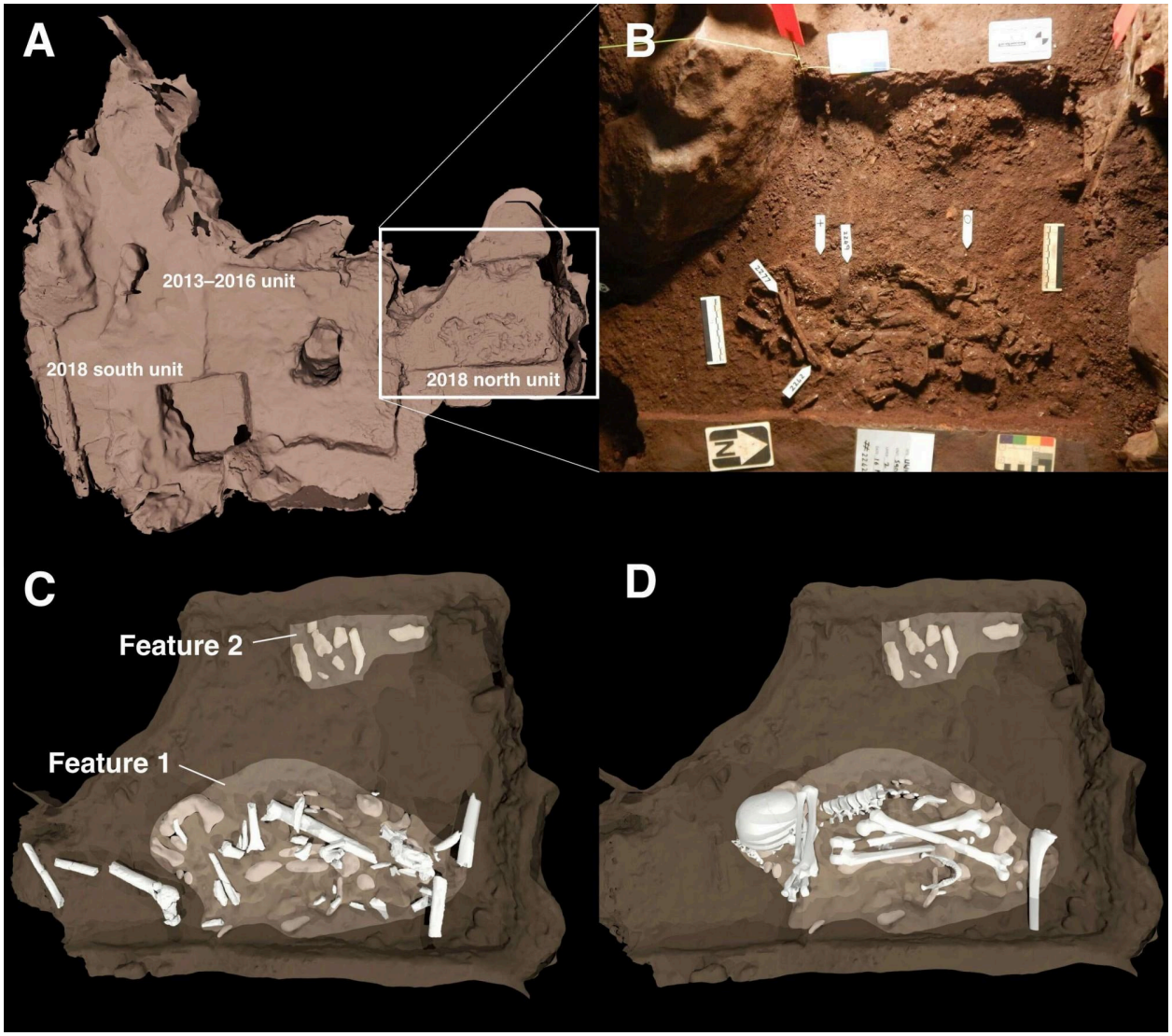
The evidence for deliberate burial practices by the Homo naledi comes from a cave chamber within The Rising Star known as the Dinaledi Chamber, where the original Homo naledi fossils were found.

Fuentes detailed the complex process of entering the cave and its greater significance as he along with the rest of the team on-site went further throughout the system.

“You suit up and climb down into the cave, angling and squeezing yourself in. And then you come out in these spaces and you look around and think, this is not just a rock, this is not just a cave. This place meant something to the Homo naledi,” Fuentes added.

Inside the chamber, researchers discovered a series of burial chambers, or “ossuaries,” containing fossilized Homo naledi remains. These burial chambers were carefully arranged and contained multiple individuals, suggesting that the bodies were intentionally placed there, rather than arriving there as the result of natural processes.

The researchers have uncovered numerous Homo naledi fossils, including those of both very young infants and elderly adults. As the team ventured further into the caves, it became evident that in fact the Homo naledi were very familiar with and actively utilizing various sections of the cave system.



In addition to the evidence of burial practices, the researchers also made an additional discovery within the Rising Star Cave system. Deep inside one of the chambers, they found rock engravings believed to have been made by the Homo naledi. These engravings, dating back approximately 241,000 to 335,000 years, depict geometric patterns such as squares, crosses and X's.

“So the Homo naledi brought their dead down into this really deep, hard-to-get-to cave space and then buried them down there. That’s really amazing for a couple of reasons,” said Fuentes.

“One is that [it requires] a lot of coordination, cooperation, foresight, compassion, and care for the dead. Also, you need light to get down there, so there might have been some kind of fire involved. And three is that on a wall in the passageway, we see these engravings, mainly lines, carved onto the wall with a stone or something similar. So we have what looks like burials, and what look like engravings right beside them, with no evidence of any other living thing except for the Homo naledi being down there. This is truly remarkable,” Fuentes continued.

The engravings represent some of the earliest evidence of symbolic behavior and artistic expression among early humans. The discovery of rock engravings by the Homo naledi suggests that these cognitive abilities were not limited to our own species but were present in other lineages as well.

The Rising Star Cave system continues to be a treasure trove of archaeological and paleoanthropological discoveries. As researchers delve deeper into its chambers, they anticipate uncovering even more clues about the rich history of our ancestors and the fascinating world they inhabited.

“We really are challenging the status quo here. As we find new data, we are publishing it in open access. It is all there for everyone to see. And a lot of people are really critiquing this approach,” said Fuentes. “And so part of the challenge of exploration, of breaking new ground in science, is being able to take the critique and being able to try to do your best to be as open and transparent as possible,” he added.

Regarding the future work that can be done to expand the findings of the study, Kissel pointed out a broad range of questions that could be addressed.

“One aspect to further explore would be trying to figure out why we are only finding the Homo naledi in this one cave system. I think this is very surprising and strange,” said Kissel. “We should also take a step back and think about why in the first place, burials were associated with larger brain sizes and how can we reconcile that with the finding that the Homo naledi buried their dead too. I think there is a lot of potential there.”

Further research and exploration are underway to unravel the mysteries hidden within the Rising Star Cave system and to unlock the secrets of our shared evolutionary past. A documentary covering the team’s findings and featuring Fuentes and his colleagues, called “Unknown: Cave of Bones,” is set to release on Netflix on July 17th.

Mahya Fazel-Zarandi is a senior News contributor for the ‘Prince.’

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