

No scientific evidence that Homo naledi was advanced, new study argues

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The Homo naledi facial reconstruction, performed with the coherent anatomical deformation technique. Credit: Cicero Moraes (Arc-Team) et al/Wikimedia Commons, CC BY

A new study has cast doubt on claims that Homo naledi, a small-brained hominin dating to between 335,000 and 241,000 years ago, deliberately buried their dead and produced rock art in Rising Star Cave, South Africa.

Three pre-print articles published this year in <u>eLife</u> suggested the recent excavations at the Rising Star Cave system provided evidence of at least three burial features, two in the Dinaledi Chamber and a third in the Hill Antechamber cavity.

The articles claimed the features represented the earliest evidence of deliberate burial by a hominin species, and that Homo naledi lit up dark passageways using fire and intentionally carried the bodies of at least three individuals deep inside the Rising Star Cave system, dug pits, deposited corpses inside the pits, and covered the bodies with sediments.

It was also claimed that the Hill Antechamber feature contained a stone tool in close proximity to the hominin hand.

However, a group of experts with specializations in biological anthropology, archaeology, geochronology, and rock art, have now called for a deeper dig into the science behind the findings in a first, peer-reviewed critique titled "No scientific evidence that Homo naledi buried their dead and produced rock art" published in the *Journal of Human Evolution*.

Professor Michael Petraglia from Griffith University's Australian



Research Center for Human Evolution, Professor Andy Herries from La Trobe University, María Martinón-Torres from the National Research Center on Human Evolution in Spain and Diego Garate from the University of Cantabria in Spain co-authored the peer-reviewed article.

The research team conclude the evidence presented so far was not compelling enough to support the deliberate burial of the dead by Homo naledi, nor that they made the purported engravings.

"We really need substantial additional documentation and scientific analyses before we can rule out that natural agents and post-depositional processes were responsible for the accumulation of bodies/body parts and to prove the intentional excavation and filling of pits by Homo naledi," Professor Martinón-Torres said.

Moreover, Professor Petraglia added, "Unfortunately, there is a distinct possibility that the so-called stone artifact next to the hominin hand is a geofact, and not a product of stone tool flaking by Homo naledi."

Professor Herries said, "There is no evidence that Homo naledi lit fires in the <u>cave</u>, purported burning locations could just be from manganese staining and charcoal within the cave [has yet] to be dated. Charcoal from natural fires is not uncommon in caves."

"Detailed analyses are also needed to demonstrate that the so-called 'engravings' are indeed human-made marks, as marks like these can be produced as a product of natural weathering or animal claws," said Dr. Garate.

The *JHE* commentary also offers a brief insight on the state of the field regarding the importance of responsible social communication and the challenges brought by new models of scientific publication.



More information: María Martinón-Torres et al, No scientific evidence that Homo naledi buried their dead and produced rock art, *Journal of Human Evolution* (2023). <u>DOI:</u> 10.1016/j.jhevol.2023.103464

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