Check for updates

Simon Mokobane's contributions to scientific research at Drimolen and beyond

AUTHORS:
Stephanie E. Baker[1]
Matthew V. Caruana[1]
Andrew Phaswana[2]

AFFILIATIONS:
[1]Palaeo-Research Institute, University of Johannesburg, Johannesburg, South Africa
[2]School of Geography, Archaeology and Environmental Studies, University of the Witwatersrand, Johannesburg, South Africa

CORRESPONDENCE TO:
Stephanie Baker

EMAIL:
stephanieb@uj.ac.za

HOW TO CITE:
Baker SE, Caruana MV, Phaswana A. Simon Mokobane's contributions to scientific research at Drimolen and beyond. S Afr J Sci. 2026;122(9/10), Art. #26857. https://doi.org/10.17159/sajs.2026/26857

ARTICLE INCLUDES:
☐ Peer review
☐ Supplementary material

KEYWORDS:
hidden contributions, Drimolen, Cradle of Humankind, human evolution, South Africa

PUBLISHED:
29 September 2026

Significance:

Field technicians and preparators, who often do not hold academic degrees, make significant contributions towards research in the palaeosciences. Typically, these individuals come from local, marginalised communities, and, as a means of employment, began working on projects in labour positions. Over the period of their employment, they have garnered unparalleled skills in excavation, fossil recovery and preparation, curation, and on-site identification of skeletal remains and archaeology. Here, we remember one such individual, Mr Simon Mokobane, whose contributions to the Drimolen fossil hominin project have left a lasting legacy on the academic research in the Cradle of Humankind.

The hidden contribution of excavators and preparators at palaeoanthropological sites in the UNESCO Fossil Hominid Sites of South Africa (locally referred to as the 'Cradle of Humankind'), represents an important issue which all academic researchers working in the landscape should bring to light. Historically, the impact of these 'tracking scientists' (replacing the term 'citizen scientist', as per Liebenberg et al.[1]) has been broadly overlooked or taken for granted. These highly skilled individuals, who often hold no formal academic degrees, are integral to the ongoing research at most sites in the Cradle. Over the years, their contributions have been recognised as vital to furthering science and outreach.[2] The Drimolen fossil site is no exception, and it is in this spirit that we recognise Mr Simon Mokobane and his contribution to the history of palaeoanthropological research at this site. Further, we recognise his legacy as one that continues to generate research excellence at sites such as the Sterkfontein Caves.

In 1992, Mokobane accompanied Prof. André Keyser for the initial survey of the Drimolen fossil site. Excavations began shortly thereafter, which led to the seminal announcement of DNH 7, a near-complete female *Paranthropus robustus* skull.[3,4] Mokobane's role at this time was to aid in the extraction and preparation of fossils encased in hard, brecciated sediments. During these early years, Mokobane developed a specialised skillset for using an air scribe to release fossils from breccia blocks. This produced an extensive assemblage of faunal materials, including some of the best-preserved early *Homo* and *P. robustus* fossils in the Cradle.[5,6]

Towards the end of the 1990s, Mokobane (then employed by Keyser) was provided workspace at the Sterkfontein Caves for a short time, some 5 km from Drimolen. It was here that he met and trained Mr Andrew Phaswana, passing on his experiential knowledge in excavation techniques, fossil preparation, bone identification and microfaunal sorting. Phaswana is now employed at Sterkfontein as a senior excavator and preparator at the site, where he trains his younger colleagues. Thus, a tradition of technical knowledge and skills transfer that began with Mokobane has continued with the next generations of excavation and preparation staff members.

Mokobane sadly died of cancer in 2018, after having spent nearly three decades living and working in the Cradle as the lead technician at Drimolen. During his time at the site, he played an integral role in training early career scientists who visited the site as part of an international, collaborative field school that attracted students from South Africa and across the globe. Mokobane played a pivotal role in the excavation experience that students were afforded, and his knowledge of the site – and fossil identification, in particular – is a key memory for those who



Photo: Stephanie Baker

Simon Mokobane at the Drimolen Main Quarry, ca. 2016.

© 2026. The Author(s). Published under a Creative Commons Attribution Licence.

attended. Many students recall repeatedly asking Mokobane whether the objects they found in the sieves were fossils, and almost always receiving the soft-spoken response, "It's a rock".

Moreover, Mokobane made significant contributions towards major discoveries from Drimolen. In 2015, during a field school with University of Johannesburg and La Trobe University (Australia) students, a cluster of bone fragments emerged from the lower western corner of the deposit. Mokobane was responsible for sieving sediments from this area to ensure that any smaller fossil fragments that had been overlooked during excavation were recovered. Reconstruction of this cluster led eventually to the discovery of DNH 134, a juvenile skull cap, which represents the earliest known evidence of *Homo erectus* sensu lato, globally.[5] The recovery of these smaller pieces was critical for reassembling the skull cap, which is composed of over 150 individual fragments. Mokobane's contribution to this research was acknowledged by his co-authorship on the announcement publication of this fossil in *Science* in 2020. Mokobane was known for his work ethic, friendliness and humour. We acknowledge his life and career as integral to our understanding of human evolution in South Africa.

Declarations

We have no competing interests to declare. We have no AI or LLM use to declare. All authors read and approved the final manuscript.

References

1. Liebenberg L, Lombard M, Shermer M, Xhukwe U, Biesele M, Carruthers P, et al. Tracking science: An alternative for those excluded by citizen science. Citizen Sci Theory Pract. 2021;6(1):6. https://doi.org/10.5334/cstp.284
2. Clarke RJ, Kuman K, Pickering TR, Heaton J, Caruana MV, Beaudet A, et al. Tribute to Abel Molepolle and the central role of the Sterkfontein Caves technicians in international palaeoanthropological research. S Afr J Sci. 2026;122(3/4), Art. #25052. https://doi.org/10.17159/sajs.2026/25052
3. Keyser AW. The Drimolen skull: The most complete australopithecine cranium and mandible to date. S Afr J Sci. 2000;96(4):189–193.
4. Keyser AW, Menter CG, Moggi-Cecchi J, Rayne Pickering P, Berger LR. Drimolen: A new hominid-bearing site in Gauteng, South Africa. S Afr J Sci. 2000;96(4):193–197.
5. Herries AI, Martin JM, Leece AB, Adams JW, Boschian G, Joannes-Boyau R, et al. Contemporaneity of *Aaustralopithecus*, *Pparanthropus*, and early *Homo erectus* in South Africa. Science. 2020;368(6486), eaaw7293. https://doi.org/10.1126/science.aaw7293
6. Martin JM, Leece AB, Neubauer S, Baker SE, Mongle CS, Boschian G, et al. Drimolen cranium DNH 155 documents microevolution in an early hominin species. Nat Ecol Evol. 2021;5(1):38–45. https://doi.org/10.1038/s41559-020-01319-6