

Authors biographies

Dr Juliet Brophy

Dr Juliet Brophy holds a B.S and B.A from the University of Michigan (2002), an M.A. from University of Tennessee, Knoxville (2004), and a Ph.D from Texas A&M University (2011). She is an Associate Professor at Louisiana State University. Her research interests include craniodental morphometric analysis, hominin evolution, zooarchaeology, and taphonomy.

She has published a number of publications in peer-reviewed journals that have explored paleoenvironments and taphonomic agents in South Africa (2008, *Journal of Human Evolution*), Pliocene faunal identification (2010, *Palaeontologia Africana*), elliptical fourier analysis of australopithecine teeth (2013, *Science*), quantitative analyses of bovid teeth (2014, *Journal of Archaeological Science*), paleoenvironmental reconstruction from Malapa bovids (2016, *Palaeontologia Electronica*), and documenting and identifying *Australopithecus sediba* (2018, *PaleoAnthropology*) and *Homo naledi* teeth (2015, 2017, *elife*). Her current projects include comparing the *H. naledi* deciduous (2020, *American Journal of Physical Anthropology; Journal of Human Evolution*) and permanent teeth (2019, *South African Journal of Science*) from South Africa to the other species in order to better understand their taxonomic designation and phylogenetic relationships. Her research also continues on bovid teeth in an effort to taxonomically classify them and use their identifications to reconstruct and investigate the paleoenvironments of southern Africa (2021, *Frontiers in Applied Mathematics and Statistics*).

Dr Marina Elliott

Dr Marina Elliott is a Canadian biological anthropologist, interested in our Human past – how, why and when “we” became who we are today. She holds a PhD in biological anthropology and archaeology and has excavated ancient human remains in Western Canada, the USA, Spain, Africa and Siberia. She has also assisted with modern forensic investigations in Canada, the USA and Switzerland and was a visiting scientist intern at the Office of the New York Medical Examiner in New York. In 2013 she became one of six “Underground Astronauts” on the Rising Star Expedition, which led to the naming of a new hominin species, *Homo naledi*. From 2014-2019 Dr Elliott led further excavations at the Rising Star cave and conducted research on *Homo naledi* and other early hominins. Returning to Canada in 2020, Dr Elliott continues to investigate our deep family history through the Department of Archaeology at Simon Fraser University. She is a Fellow of the Explorers Club and a National Geographic Explorer. (photo credit: M.Elliott)

Prof Lee Berger

Professor Lee R. Berger is Head of the Centre for Exploration of the Deep Human Journey at the University of the Witwatersrand, Johannesburg, South Africa, and an Explorer at Large for the National Geographic Society. He is a Fellow of the Royal Society of South Africa, a member of the Academy of Science of South Africa, a Fellow of the Explorers Club, of the Royal Geographical Society and Honorary National President of the Speleological Society of South Africa. Distinguished Science Advisor for the Centre for the Exploration of the Human Journey at the Perot Museum, Dallas Texas. He was the first winner of the National Geographic Chairman’s Prize for Research and Exploration in 1997 and Rolex’s Explorer of the Year in 2016.

Prof John Hawks

Professor John Hawks is the Vilas-Borghesi Distinguished Achievement Professor of Anthropology at the University of Wisconsin-Madison and Visiting Professor in the Centre for the Exploration of the Deep Human Journey at the University of the Witwatersrand. He is an expert in human evolution and genetics. He is also a leader in open science and public communication of science. He has worked with *Homo naledi* since its discovery in 2013

Dr Tebogo Makhubela

Dr Tebogo Makhubela is a senior lecturer in the Department of Geology at the University of Johannesburg. He is also a Research Associate of the Centre for the Exploration of the Deep Human Journey at the University of the Witwatersrand, Johannesburg. His research interests are mainly in Quaternary geochronology of sedimentary environments that preserve palaeoanthropological and archaeological evidence. Dr Makhubela is a specialist in U/Th and (U,Th)-He geochronology and the application of cosmogenic nuclide dating techniques.

Dr Debi Bolter

Dr Debra Bolter's role in the research was to establish if the newly recovered cranial remains – two baby teeth and four adult teeth – all represented one individual, and if so, to estimate its age and life stage. Immature remains are critical for understanding how an extinct species matured. Scientists use comparisons with the patterns seen in extinct species to reconstruct selective pressures and changes in our own species' developmental processes.

Bolter was recruited in 2014 to lead the investigation of the immature remains from the Rising Star cave, based on her research on primate life history, which focuses on early life stage of development. Co-authored works by Bolter on the new hominin species were published previously (2015, 2018 and 2020) in the open access science journal *eLife*, in *South African Journal of Science*, in *American Journal of Physical Anthropology*, and in *PLOS*. As an Honorary Research Fellow at the Centre for the Exploration of the Deep Human Journey of the University of the Witwatersrand in Johannesburg, Bolter continues to study and work on the fossil remains from South Africa.

Bolter is a faculty member at Modesto Junior College (MJC) in California, USA, part of the Yosemite Community College District. MJC is a public college of approximately 25,000 and provides general education for students pursuing two-year associate degrees and four-year baccalaureates. She also holds an affiliate faculty position at California State University Stanislaus, in Turlock, California.

Dr Darryl De Ruiter

Dr Darryl de Ruiter is a paleoanthropologist whose research focuses on the ecology and evolution of the early hominins of Africa. His particular specialty lies in the crania, jaws, and teeth of the recently named species *Australopithecus sediba* and *Homo naledi* in South Africa. Professor de Ruiter received his PhD in Anatomical Sciences from the University of the Witwatersrand in 2001, and after working as a Research Officer in the Bernard Price Institute of Palaeontological Research (now the Evolutionary Studies Institute) for two years, he joined the Department of Anthropology at Texas A&M University in 2003. He is a recipient of the Ray A. Rothrock '77 Fellowship, the Cornerstone Faculty Fellowship in Liberal Arts, and the Association of Former Students Distinguished Achievement in Research Award from Texas A&M University. He is an Associate Editor of the *Yearbook of Biological Anthropology* and has been serving as the Department Head of Anthropology at Texas A&M University since 2019.

Dr Ashley Kruger

Dr Ashley Kruger is palaeontologist and paleoanthropologist at the Naturhistoriska riksmuseet (The Swedish Royal Museum of Natural History), Stockholm, Sweden and the Centre for Palaeogenetics, Stockholm University.

He holds a BSc with Honors and an MSc in Palaeontology from the Barnard Price Institute for Palaeontological Research, University of the Witwatersrand, Johannesburg, South Africa. He received his PhD in Palaeoanthropology from the Evolutionary Studies Institute, University of the Witwatersrand, for his work on the *Homo naledi* site 'Rising Star'.

Ashley's PhD focused on understanding the site formation and spatial context of hominin sites in the Cradle of Humankind. This included high resolution 3D data in his methods, ranging from Micro CT to laser surface scanning. Ashley has been on the Rising Star team since the start of the projects in 2013, working in both the Dinaledi and Lesedi Chambers – the sites where the enigmatic *Homo naledi* was discovered. He was part of the same team receiving the prestigious NRF "Science Team Award" in 2014 and is an author on a number of published papers on *Homo naledi* appearing in many international, peer-reviewed journals.

Ashley relocated to Stockholm, Sweden in 2018 and has furthered his expertise in digital palaeontology, and more recently ancient DNA analysis. His research interests are broad, aiming to answer important questions about human evolution, and the application of digital technologies to palaeontology.

Hannah Morris

Hannah Morris received her B.A. in anthropology from the University of Georgia in 2007. After working in Alaska, New York City (with the American Museum of Natural History), western Mexico, and the south-eastern United States, she entered graduate school at the Ohio State University to specialise in paleoethnobotany. She graduated with an M.A. in anthropology in 2012. In 2013, she began working with the Rising Star Expedition in South Africa. She is currently finishing her PhD in Integrative Conservation through the Warnell School of Forestry and Natural Resources at the University of Georgia, in Athens, Georgia and is a Georgia Sea Grant Fellow.

Dr Elen Feuerriegel

Dr Elen Feuerriegel, PhD, is a part-time Lecturer in the Department of Anthropology at the University of Washington, Seattle, and Honorary Research Fellow with the Centre for the Exploration of the Deep Human Journey at the University of Witwatersrand, South Africa.

Dr Feuerriegel's research focuses on functional morphology and evolutionary biomechanics with special interest in the upper limb (shoulder and elbow) and hand. She uses kinematics and kinetics, shape analysis, and medical imaging techniques to answer questions about human movement and evolution. Dr Feuerriegel is also one of the scientists responsible for excavating and describing *Homo naledi*, a new species of fossil hominin found in the Rising Star cave system in the Cradle of Humankind, South Africa.

Outside of her research, Dr Feuerriegel is passionate about science education outreach and promoting the work of women in STEM fields. She maintains a strong program of science outreach among elementary, middle, and high schools locally and internationally. Her outreach is aimed at introducing elementary through high school students to the main "characters" of human evolution

science (both extant and extinct), fostering a deeper understanding of evolutionary principles, and addressing common misunderstandings of human origins.

Prof Steven Churchill

Professor Steven Churchill is a Professor and past chair of the Department of Evolutionary Anthropology at Duke University (United States). He also holds a secondary appointment as an Honorary Research Fellow in the Centre for the Exploration of the Deep Human Journey at the University of the Witwatersrand. Dr Churchill received a B.S. from Virginia Tech and an M.A. and Ph.D. from the University of New Mexico before joining the faculty at Duke in 1995. He is a paleontologist who studies the fossil record of human evolution, especially that of early members of our genus (*Homo*) that lived between about two million to ten thousand years ago.

Much of his work has focused on the Neandertals, an extinct species that lived in Europe and western Asia during the Ice Age, and that went extinct about thirty thousand years ago. Dr Churchill applies principles of biomechanics and functional morphology in his analyses of the bones of these early humans, in order to make inferences about their adaptive strategies, ecology, and energetics. Along these lines, he is particularly interested in the nature of the hunting methods and technology that these earlier groups employed. Dr Churchill is also a member of the team that discovered and described two new species of early human, *Australopithecus sediba*, from 1.98 million-year-old deposits at the site of Malapa, South Africa, and *Homo naledi*, from 300-200 thousand-year-old deposits at Rising Star Cave, South Africa.

Prof Eric Roberts

Professor Eric Roberts is a Professor and Head of Earth and Environmental Sciences at James Cook University in Queensland, Australia. His primary research focuses on reconstructing the geologic histories of important fossil-bearing continental deposits by coupling sedimentology, taphonomy, and geochronology. This work is aimed at testing a variety of hypotheses related to past environments and climates, uplift and drainage histories, palaeobiogeography, and extinction and evolution of vertebrate and plant communities. His primary focus over the last 10 years has been on geological characterisation and dating of vertebrate records, including hominins, from rift deposits of the East African Rift System & karst systems of South Africa (e.g. Rising Star Cave).

Mathabela Tsikoane

Mathabela Tsikoane was an awards winning Tourist Guide for Maropeng and Sterkfontein Caves in 2014 and 2015. He joined Maropeng A' Africa leisure as a Guide assistant in late 2010. His enthusiasm for the science made him popular with guests and tour groups at large. In late 2014 he guided former South African President FW De Klerk in the presence of Professor Lee Berger, after which De Klerk invited him for lunch. Here, he sat next to Professor Lee Berger who asked him what he would like to do in the future. He responded by saying that he would love to join the Rising Star "Excavating team". He joined the Wits Exploration Team in April 2016. Since joining the team, Tsikoane has done a photography course. In addition to being an integral part of the Exploration team, he has also been instrumental in documenting the team's daily operations through multimedia work.

Dirk van Rooyen

Dirk van Rooyen was born in Pretoria, South Africa in 1988. After school he completed his BTh degree at the University of Pretoria, after which he worked as a Photographer and Bicycle Technician. His passion has always been exploring the outdoors and testing his physical abilities, which led him to take up mountain-biking, trail-running, rock-climbing and caving. He started caving

with the Speleological Exploration Club in 2011 and has since done some of the longest and deepest caves in southern Africa. After the discovery of *Homo naledi* by two of the members of SEC in 2013, he was offered a position as a full-time explorer and caver for the Evolutionary Studies Institute at the University of the Witwatersrand in 2015. Today he is the leader of the Exploration Team which falls under the Centre for the Exploration of the Deep Human Journey, where he leads a small team of passionate cavers. They assist researchers with field work inside and outside of caves during excavations and data collection, or with site setup and maintenance. Dirk is also currently busy with his Honours degree in Archaeology at UNISA where he is conducting research on the lime miners who were active in the Cradle of Humankind during the end of the 19th and start of the 20th centuries.

Maropeng Ramalepa

Maropeng Ramalepa started his working career at the Maropeng a Afrika Visitors Centre as a restaurant waiter, banqueting crew member and a cashier. He then got an opportunity to become a tour guide for both at Maropeng a Afrika Visitors Centre and the nearby Sterkfontein Caves within the Cradle of Humankind World Heritage Site. He received training at the Origins Centre at Wits University. His fossil-hunting career began as a tour guide for which he won two consecutive best tourist guide awards in the West Rand region in the West Rand Tourism Awards and also took the third prize at the Gauteng Tourism Awards. He met Professor Lee Berger in 2014. Berger offered him a job at Wits University, under the Lee Berger Exploration Foundation as an excavator at the Malapa Site and later he joined the Wits University Exploration Team as a permanent member. Ramalepa has been involved in expeditions that took place at the Rising Stars Cave System and also excavating at Malapa fossil site