

The architect, Craig McClenaghan, took on the challenge, which was his first solo project after leaving Mashabane Rose Associates to embark on a path of his own.

THE CAVE OF MIRACLES

The cave, as the name suggests, is a place of wonder. It is the source of archaeological findings unlocking secret passages to millions of years of human ancestry. According to Dr David Morris, co-author of the book *Pathways through the Interior* and the head of archaeology at the McGregor Museum in Kimberley, the cave's 'miracle' lies not only in the revelation of its hidden treasures, but in the 'quite miraculous' discovery that one site could produce evidence of continuous human activity spanning two million years.

The greatest moment of humankind's development was unlocking the power of fire. The Wonderwerk Cave is historically placed at the exact moment of this discovery, as charcoal and charred animal bones dating back some 800 000 years suggest. This find lifted the cloak on the origin of controlled fire, establishing Wonderwerk as the global location of the first one known to humankind.

PREHISTORIC SIGNS OF HUMAN PROGRESS

In excavating the secrets held by sites like Wonderwerk Cave, archaeologists unveil the earth according to a system of grids. Plotting discoveries on a horizontal grid allows them to be linked across the site, forming an axis of the specific relationships between objects, much like those plotted on an architectural plan. This plan is then extruded vertically to create a three-dimensional coordinate system. The vertical axis cuts through layers of strata as an axis of time. Excavating deeper means a journey further back in time.

Morris explains how deconstructing the journey through the earth's layers produces a timeline of human development that plots both smaller shifts in habits and behaviour, and dramatic climatic and environmental changes.

The strata contain, for example, two-million-year-old evidence of human culinary habits. The earliest strata show that humans ate hare, tortoise and big game. Expanding this menu required an expanded set of tools and weapons, which is precisely what's revealed in analysing the unearthed discoveries. Moving through layers of earth and time reveals the growing sophistication of tools and, with it, the implied improvement in the hominid's cognitive skills. Plotting from the early Stone Age to the present shows the early use of cleavers, refined into axes and blades, and further into small, sharp arrowheads.

The layers of earth also contain the signs of more significant environmental and ecosystem changes. Animal remains mark dramatic changes, such as the extinction of species, and signal other shifts, such as dietary changes, when compared with the stratified remains of the same species over time. These findings reveal the patterns of climate change and allow archaeologists to plot cyclical ice ages and other extreme shifts.

Art on the internal walls of the cave provides a different perspective on the humans who inhabited it. It shows the growth from early engraved geometric patterns to finger paintings in the likeness of animals.

MORE RECENT CAVE-DWELLERS

The most recent, and last, inhabitants of the cave lived there as recently as 1911. From 1909, the cave was inhabited by a farmer named PE Bosman. He was accompanied by his wife and their 11 sons and three daughters, who used the cave as a temporary home while building their farmhouse. Later, Bosman used the cave as a storeroom for his wagons and oxen. This is perhaps why the cave had been described as 'being big enough to turn an oxwagon in'.

Even more ignominious, however, for a cave later described in terms of miracle and wonder, was the period during the 1940s, when the cave was the site for the mining of bat guano and ash to sell as fertiliser. Sadly, this process destroyed many artefacts. But when some exceptional objects were found on the site, it prompted an archaeological investigation that has continued for 70 years.

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The McGregor Museum is the current servitude-holder for the site. Professor Michael Chazan (University of Toronto), Dr Liora Kolska Horwitz (Hebrew University of Jerusalem) and Dr Francesco Berna (Simon Fraser University, Burnaby) are the current codirectors of current research there.

THE ARCHITECT

Before going solo, Craig McClenaghan worked for Mashabane Rose Architects (MRA) for 14 years. After joining the firm as a graduate, he became not only the trusted right-hand man to the late Jeremy Rose, but also one of South Africa's leading architects. McClenaghan's >



1 The 140m-long pathway. 2 The entrance to the Wonderwerk Cave, between Danielskuil and Kuruman in the Northern Cape desert.