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RED DEER CAVE PEOPLE

By Andy Cowan

For years, evolutionary biologists have predicted that new human species would start popping up in Asia as they begin to look closely at fossilised bones found there.

A distinctive skull was unearthed in the Longlin cave, Guangxi Province, in 1979 by a geologist prospecting for oil in the area. Researchers removed only the lower jaw and a few fragments of rib and limb bones from the cave wall. The rest of the skeleton was left in a block of rock which sat in the basement of the Yunnan Institute of Cultural Relics and Archaeology in Kunming, Yunnan for 30 years. The fossils were rediscovered in 2009 by Ji Xueping, a researcher at the institute, who then teamed up with Darren Cunroe, a professor at the University of New South Wales, Australia.

In 1989, at least three fossil specimens were uncovered by miners quarrying limestone at Maludong, near the city of Mengzi, Southern Yunnan Province, Southwest China. They remained unstudied until 2008. The scientists are calling them the “Red Deer Cave People” because there is evidence that the people cooked large red deer, which are now extinct, since a large collection of deer bones were located inside the cave.

Radiocarbon dating of ashes found alongside the fossils revealed that they are between 11,500 and 14,300 years old. The Red Deer Cave People lived in China at the end of the ice age. They survived the final (and one of the worst) cold episodes our planet has witnessed, known as the Last Glacial Maximum, which was at its peak around 20,000 years ago.

The period around 15,000 to 11,000 years ago when these people thrived in southwest China is known as the Pleistocene-Holocene transition. It saw a shift to climates and ecological communities the same as those of today. It also saw the demise of the mega fauna in most places, including a giant deer that was exploited by the Red Deer Cave People.

The Red Deer Cave People are the most recent human remains found anywhere in the world that do not closely resemble modern humans. They are the youngest population to be found anywhere in the world whose anatomy does not comfortably fit within the range of modern humans, whether they be modern humans from 150 or 150,000 years ago.

Their primitive features are to be seen in our ancestors of hundreds of thousands of years ago. They differ from modern Homosapiens in that they have prominent brow ridges, thick skull bones, flat upper faces with a broad nose and eye sockets and jutting jaws that lack a humanlike chin. They have large molar teeth and have very flat cheeks that flare widely to the sides to make space for large chewing muscles. Their brains are moderate in size by ice-age human standards and they have primitively short parietal lobes -brain lobes at the top of the head associated with sensory data.

These archaic features could indicate the dispersal of a poorly known and more primitive form of modern human that left Africa before the main exodus about 60,000 years ago. This dispersal could have reached as far as China, surviving there for many millennia, before disappearing in the last 12,000 years.

Alternatively, they might represent a very early, and previously unknown, migration of modern humans out of Africa, a population who may not have contributed genetically to the living people of today.

The charcoal also showed they knew how to use fire. Stone artifacts found at the Maludong site also suggest they were toolmakers. Lumps of charcoal uncovered alongside the Longlin fossils were carbon dated to 11,500 years, a time when modern humans in southern China began to make pottery for food storage and to gather wild rice in some of the first steps towards full-scale farming. That means they would have shared the landscape with modern humans when China's earliest farmers were first appearing. However, there is no way of knowing if either group interacted or whether they competed for resources.

Although modern-day Asia contains more than half of the world's population, researchers still know little about humans there even though our ancestors settled Eurasia about 70,000 years ago. No human fossils less than 100,000 years old had been found in mainland East Asia that resembled anything other than anatomically modern humans until now. These new findings are fossil evidence that this region may not have been devoid of our evolutionary cousins.

The discovery of the Red Deer Cave people shows just how complicated and interesting human evolutionary history was in Asia right at the end of the ice age. We had multiple populations living in the area, probably representing different evolutionary lines: the Red Deer Cave people on the East Asian continent, Homo floresiensis, or the 'Hobbit', on the island of Flores in Indonesia, and modern humans widely dispersed from northeast Asia to Australia

Exactly where the Red Deer Cave people belong in our family tree is unclear. They could be related to some of the earliest members of our species (Homo sapiens), which evolved in Africa around 200,000 years ago and then spread across Asia to reach China. Professor Cunroe prefers the idea that they represent a new evolutionary line that evolved in East Asia in parallel with our species, just as Neanderthals did – primarily because they look very different to early African members of our species.

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