

Archaeologists discover Jordan's earliest buildings

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Two Early Epipalaeolithic structures. Credit: Lisa Maher

(PhysOrg.com) -- Some of the earliest evidence of prehistoric architecture has been discovered in the Jordanian desert, providing archaeologists with a new perspective on how humans lived 20,000 years ago.

Archaeologists working in eastern Jordan have announced the discovery of 20,000-year-old hut structures, the earliest yet found in the Kingdom. The finding suggests that the area was once intensively occupied and that the origins of architecture in the region date back twenty [millennia](#), before the emergence of agriculture.

The research, published 15 February, 2012 in [PLoS One](#) by a joint British, Danish, American and Jordanian team, describes huts that hunter-gatherers used as long-term residences and suggests that many

[behaviours](#) that have been associated with later cultures and communities, such as a growing attachment to a location and a far-reaching social network, existed up to 10,000 years earlier.

Excavations at the site of Kharaneh IV are providing archaeologists with a new perspective on how humans lived 20,000 years ago. Although the area is starkly dry and barren today, during the [last Ice Age](#) the [deserts](#) of Jordan were in bloom, with rivers, [streams](#), and seasonal lakes and ponds providing a rich environment for hunter-gatherers to settle in.



The archaeological site contains intentionally pierced sea shells from as far away as the Mediterranean and Red seas.

“What we witness at the site of Kharaneh IV in the Jordanian desert is an enormous concentration of people in one place,” explained Dr. Jay Stock from the Department of Archaeology and Anthropology at the University of Cambridge and co-author of the article.

“People lived here for considerable periods of time when these huts were built. They exchanged objects with other groups in the region and even buried their dead at the site. These activities precede the settlements associated with the emergence of agriculture, which replaced hunting and gathering later on. At Kharaneh IV we have been able to document similar behaviour a full 10,000 years before agriculture appears on the scene.”

The archaeologists, who were funded by a grant from the Arts and Humanities Research Council UK, spent three seasons excavating at the large open-air site covering two hectares. They recovered hundreds of thousands of stone tools, animal bones and other finds from Kharaneh IV, which today appears as little more than a mound 3 m high rising above the desert landscape.

Based on the size and density of the site, the researchers had long suspected that Kharaneh IV was frequented by large numbers of people for long periods of time; these latest findings now confirm their theory. “It may not look very impressive to the untrained eye, but it is one of the densest and largest Palaeolithic open-air sites in the region,” said Dr. Lisa Maher, from the University of California, Berkeley, who spearheads the excavations.

“The stone tools and animal bone vastly exceed the amounts recovered from most other sites of this time period in southwest Asia.” In addition, the team also recovered rarer items, such as shell beads, bones with regularly incised lines and a fragment of limestone with geometric carved patterns.

So far, the team has fully excavated two huts; but there may be several more hidden beneath the desert’s sands. “They’re not large by any means. They measure about 2–3 m in maximum length and were dug into the ground. The walls and roof were made of brush wood, which then burnt

and collapsed leaving dark coloured marks,” described Dr. Tobias Richter from the University of Copenhagen and one of the project’s co-directors.

Radiocarbon dating suggests that the hut is between 19,300 and 18,600 years old. Although a team of [archaeologists](#) working at Ohalo II on the shore of the Sea of Galilee in 1989 found the region’s oldest hut structures, which date from 23,000 years ago, the team working at the Kharaneh IV site believe their discovery is no less significant, as Dr. Maher explained:

“Inside the huts, we found intentionally burnt piles of gazelle horn cores, clumps of red ochre pigment and a cache of hundreds of pierced marine shells. These shell beads were brought to the site from the Mediterranean and Red Sea over 250 km away, showing that people were very well linked to regional social networks and exchanged items across considerable distances.”

Provided by University of Cambridge

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