

In the Valley of Life, oil is deathtothe artofalost civilisation

Hammers threaten rock carvings that show a corner of the Sahara was not always a desert. By John Bohannon

t is hard to imagine how dry the desert is until you have gone for a stroll in the Sahara. After a couple of hours' walk across this lunar landscape, tracking along the steep escarpment of the Messak Settafet plateau, a paste of salt, sand, and sweat forms on every square inch of ex-

Halfway up the slope, picking his way through a giant's playpen of boulders, Hassan Ahmed Breki stops, unwraps his long, white headscarf, and runs a finger along lines carved into a rock surface. Here, out in the open for all to see, is one of Libya's national treasures: rock engravings, some possibly dating back 9,000 years or more, created by a mysterious, prehistoric culture.

The graceful forms that emerge beneath Hassan's hand – humans among elephants, crocodiles, giraffes and hippopotamuses — reveal what scientists have now confirmed: rather than barren and dessicated, it was once lush and green here at Wadi al-Hayat (the Valley of Life, also known as Wadi al-Ajal) in the Fezzan region of south-west Libva.

Scattered along the slope, taking photographs, measurements, and recording the global coordinates of each piece of rock art by GPS, is a team of British researchers led by Tertia Barnett, an archaeologist working for English Heritage. Along with Hassan,

an archaeologist from the Libyan Department of Antiquities in Tripoli, the team are working through their holiday with an urgency that might seem unusual considering the ancient subject matter. But the search for Libya's more lucrative treasure, petroleum, could spell doom for the rock art. Criss-crossing the desert are seismic survey lines where enormous hammers have been used to ping the underlying rock layers in search of oil de-These boulder-shattering blows and the construction of roads and pipelines are expected to increase exponentially now that international sanctions have been lifted from the

As if this weren't enough pressure, other obstacles keep appearing. The entire trip was jeopardised when their 26kg laser, used to take 3D pictures of engravings, was held up in Libyan cus-

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toms for several days due to embargoera red tape. One of the laser experts, Kate Devlin from the University of Bristol, was completely incapacitated by what later turned out to be an infection of parasitic cryptosporidiosis protozoa. And in one hair-raising episode, the team's truck was stuck deep in the Sea of Sand. But it is all worth it, says Barnett, who is working against the clock to document and study engravings that could be lost within a few years.

Seen from the plateau, the evershifting dunes loom to the north, and in between lies the flat expanse of a long-extinct lake. One thing unifies the millennia of human history that have taken place here, savs team member Nick Brooks, a climatologist at the Tynof East Anglia. "It's all about water."

Before the last Ice Age, the Sahara was even larger and more inhospitable than it is today. Then, some 10,000 years ago, a shift in climate brought rainfall. In the ensuing years of plenty. a pastoral way of life thrived. The desert came back with a vengeance about 3,000 years ago and, as the remaining surface water supplies dwindled, the inhabitants were forced to dig for it below the ground.

ple adapted to these drastic environmental changes is more than academic, says Brooks, It has profound relevance to our own future, with climate changes forecast for the coming centuries and the developing world particularly hard hit. "In many ways our options will be more limited than those of the early Saharans," he says. They relied on mass migration and an adaptable diet to cope with the

changes. "Mass migration is less possible today due to large populations and national borders"

Perhaps the best insight we have into the culture of the prehistoric Saharans is the rock art they left behind. But this is a field in its infancy, says Barnett, So far, dating the engravings is "extremely difficult" and determining what these images actually meant to the people who inscribed them will

require many years of study, if we can ever know. But how much time remains for

Libya's rock art? "Oil exploration is indeed a problem," says Sa'ad Abdul Aziz, director of the nearby Germa Museum who coordinates archaeological research for the Department of Antiquities. Aziz admits there are very few Libyan archaeologists and none who specialise in prehistory.

'The situation is rather bleak," says Professor David Mattingly, an archaeologist at the University of Leicester with 25 years' experience in Libya. A plan for a system of national parks that would protect the most vulnerable areas has been on the table for years, he says, but with little progress. "The major problem is that the Department of Antiquities is under-resourced." The lifting of the embargo could in principle provide the funds needed to preserve and protect the country's prehistoric relics.

One way forward is for Libva to make the rock art a source of pride, as Britain has done with Stonehenge. "It would be a shame if this sustainable resource were sacrificed for the sake of short-term development," says Brooks After all, with 10,000 years already weathered, "archaeology and heritagebased tourism will outlast the oil".

dall Centre for Climate Change Research and cofounder of the Saharan studies programme at the University A better understanding of how peo-



Rock carvings (above) in the Tadrart **Acacus mountains near Ghat reflect** an ancient pastoral landscape, rather than the parched desert of today (left). British researchers (be low) are under pressure to record engravings in the Messak Settafet plateau and Wadi al-Hayat before they are destroyed by oil prospectors Photographs: Bridget Coaker/ Troika and libvarockart.com

John Bohannon is a contributor to Science magazine