



TREASURE-HUNTING IN THE DESERT

The Sahara's rock art is astonishing – and endangered. Ferdinand Saumarez Smith went to Chad to help preserve humanity's ancient history

FERDINAND SAUMAREZ SMITH | FEBRUARY/MARCH 2017

It's dusk and I'm walking through one of the world's most surreal landscapes. Towering above me are slender 50ft-high stacks of rock that stretch into the distant desert like some kind of ancient Manhattan.

The pillars are the remains of mountains whittled away by wind over millions of years, but this landscape has more recently been subject to change that is, on a geological timescale, swift. Only a few thousand years ago, the desert was a green home to pastoral people. One of the ways we know this is through the beautiful, graphic artworks they made of their lives and their herds – the sole remaining evidence of a lost civilisation.

This is what has brought me to the Ennedi plateau in northern Chad. I'm here to record the greatest prehistoric rock-art sites in the desert, which are under threat from both man and the climate. I work for a non-profit organisation, the Factum Foundation for Digital Technology in Conservation. One of Factum's missions is to create digital recordings of cultural heritage, and to that end my colleagues and I have been working this year in Dagestan in Russia to record the Mosque of Kala Koreysh, Lebanon for the steles at Nahr el Kalb, and Nigeria for the monoliths of Cross River State. It is not a coincidence that these are all unstable places: the greater the threat to a country's heritage, the more important it is to record what's there.



Local knowledge Gus-Gus, the team's driver, sits on the wreckage of a Libyan tank

The erosion that has whittled away the mountains is only one of the dangers to the Sahara's remarkable art. Chad, embroiled in a civil war from 1965 to 1990, these days offers one of the few safe entry points into the desert. A hundred miles due north of us, in Libya, the civil war that broke out after the deposition of Colonel Qaddafi still rages. To the north and west, Algeria, Mali and Mauritania are struggling with Islamist terrorism. To the east, South Sudan has won independence from Sudan, but the two countries are still at war. It is not a peaceful neighbourhood.

When visiting the Ennedi, you want experience on your side. We're working with the Trust for African Rock Art, an NGO based in Nairobi that is supported by the US Ambassadors Fund for Cultural Preservation; our guide, Pier Paolo Rossi, is a geologist, rock climber, rock-art expert, founder of the Société des Voyages Sahariens (a tour company) and, as was revealed on one of our long evenings after the early desert sunset, a former member of an Italian hardcore punk-rock group from the Eighties called Shotgun Solution.

Rossi has enlisted the help of Ali Jimmy, an elder of the Toubou people, a local nomadic tribe. Ali Jimmy's intimate knowledge of the Ennedi was put to deadly use in the 1987 "Toyota war" with Libya, so called after the tribesmen's preferred method of transport. Armed only with guns, traversing the desert in pick-up trucks, the Toubou repulsed well-equipped Libyan forces whose wrecked tanks, preserved by the dry air, are a reminder that agility and local knowledge can triumph over military might.

Most of the party pokes around in the sand, looking for gunshells to take home as souvenirs. Ali Jimmy, who has no interest in this, focuses on pointing out our route through the roadless terrain.



History in the balance: Years of erosion have formed these precarious rock formations



Recording works of art near the Guelta of Archei

I'm on a treacherous path on a cliffside at the Guelta of Archei, a watering hole for camels, donkeys and goats, straining to see the shape that Ali Jimmy is pointing out to me beside a dark strip of water below. Slowly, my eyes pick out the leathery form of a crocodile, as still as the rocks that surround it.

It is a member of a small and improbable population of crocodiles that has been marooned for millennia in the middle of the desert. Like the art we're looking for, it is a relic of an earlier, fertile time, when water sustained not just pastoral people and their herds, but also a wide variety of animal life.

The heat on the rock side is oppressive, but Ali Jimmy promises a treat if I climb higher. Circling round the cliff edge, I hear a chorus of groans that echoes through the great canyon. Below me, hundreds of camels are quenching their thirst. The water of the Guelta is inky with shit, so human consumption is not recommended these days. But for thousands of years it was a way-station for nomads transporting goods and slaves from west Africa to the Arabian Peninsula (reportedly housed in their thousands in the largest cavern at the mouth of the canyon). I'm told that the crocodiles,

which live off the fish in the Guelta, had never attacked either a human or camel in living memory, until a French zoologist researching their diet fed them camel meat, and they acquired a taste for mammals.

Near the Guelta, rock-art sites such as the cathedral-like cave of Grande Reparo reflect the camel-borne culture that was introduced into the Sahara early in the first millennium and which lives on today. Mounted warriors are depicted in full flight with their camels' legs tapering into elegant points of vivid movement. This is the remarkable art that we're here to find and record.



Ancient and modern Camel riders in the cave of Grande Reparo



Camels taking a dip in the Guelta of Archei



Desert booty The “Big Ladies” of Niola Doa flaunt their curves

After ten days driving through the Ennedi, we cross mountains covered in jagged black stone. By the time we stop, I'm bruised and dirty, but the journey is well worth it. On a smooth rock panel that extends from an outcrop, I catch a first glimpse of the so-called Big Ladies of Niola Doa (though they more likely depict male herders). They are powerful images, their naked forms covered in a carved, zig-zag pattern; their heads look like the whorl of a thumb print or a vortex reaching through the rock into the spirit world. Such figures are the only evidence of a culture that has completely disappeared and about which we can only speculate. Of one thing, however, we can be sure: they admired extremely large bottoms.

Our main job on this trip is to record the Big Ladies. The light – or rather the shade – is right. We don't have much time, because conditions change fast, so my colleague Alex Peck and I get down to work.

Advances in technology have brought us to the brink of an entirely new way of documenting the world's treasures. In the 18th century, dilettantes such as James Stuart and Nicholas Revett journeyed to Athens to revere and record the Parthenon with pencils, measuring tapes and plaster casting moulds. In the 21st century we have different equipment.

There are various forms of digital recording. Alex and I are using photogrammetry, a process by which three-dimensional information is extracted from two-dimensional images, to record the Big Ladies. To do this, all that is needed is a good DSLR camera and tripod, preparation and local knowledge. We take multiple overlapping shots to build up the surface image and texture by calculating distances between the different points of view of the camera and points on the object. The theory is as old as trigonometry, but computers have enhanced its power and the results are improving every day.

Although one could, in theory, get a near-limitless amount of information from a surface (using a microscope lens, for example) Factum's benchmark is to record at a resolution of high-enough quality to be able to recreate an object through CNC-milling, a computer-controlled process that replicates the shape, surface and colour of the original in high-density fibreboard. We can thus make facsimiles of objects that are required for exhibition but cannot travel; and, if treasures are destroyed by man or nature, then we can at least recreate their likeness.

It takes a morning to record the Big Ladies, and then we have to move swiftly on because we are running out of water. In the desert you are always constrained by your water supplies. That explains why we know so little of the art of the Ennedi: all the known sites are in areas that can be reached by car. But we do know that there is much more to be found. Rossi and Ali Jimmy recently identified 50 new sites in just 12 days. True, some of these displayed nothing more than a few figures or some cattle, but there are bound to be undiscovered wonders on the scale of the Big Ladies. I am eager to find one.



Photographically enhanced A 3D-rendering of the Big Ladies



Animal magic: Depictions of cattle originate from a time before this once-lush region turned to desert



Warriors on horseback on the charge

The following day we pitch camp at Elikeo, a well-known site whose paintings of dancing figures were used on a French postage stamp. I cannot sleep: the stars are so bright in the unpolluted sky above me that I don't want to close my eyes.

In the morning, we set to work on recording the paintings, focusing on panoramic photography and gathering images that can be processed later using DSTRETCH, free software that has become popular among rock-art specialists because it enhances colour and thus makes faint images more visible. This is particularly useful where the imagery is confused and obscured by multiple layers of painting.

Ali Jimmy disappears for a few hours. When he reappears, with a broad grin on his face, he gestures to us to follow him. A trail of droppings of one of the elusive wild Barbary sheep leads us up the steep rocks to a cave – previously undiscovered, so far as Rossi knows – whose walls are decorated with broad-chested human figures and long-horned cattle painted in rusty red tones. In the dust below lies a rectangular slab of stone, pockmarked and indented in the middle. Was this a place for grinding grain? Or pigments? It takes a former punk musician to recognise this as an ancient rock gong, carved to produce different vibrations depending on where it was struck. Rossi picks up a rock and taps out a beat. We have found not just the art of our ancestors, but their music too.

Ferdinand Saumarez Smith works for Factum Foundation

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