



# SERRA DA CAPIVARA


## America's oldest art?

High within the secluded rock shelters of northeastern Brazil exists some of the world's most intriguing ancient art. It has the potential to redraft the very story of modern humans, as rock-art specialist **George Nash** explains.

PHOTOS: G Nash

**S**et within treacherously steep cliffs, and hidden away in the secluded valleys of northeast Brazil, is some of South America's most significant and spectacular rock-art. Most known art comes from the archaeologically-important National Park of the Serra da Capivara in the state of

**ABOVE** View of the side section of the painted ceiling at the Toca da Entrada do Pajaú rock-shelter.

Piauí, and it is causing quite a controversy. The reason for the uproar? The art is being dated to around 25,000 years ago, while a small number of eminent rock-art specialists are proposing an even earlier date – perhaps as far back as 36,000 years ago. If correct, this is set to challenge the widely held view that the Americas were 



## EXPLORING THE NATIONAL PARK



The National Park of the Serra da Capivara in the state of Piauí, northeast Brazil, became a UNESCO World Heritage site in 1991. It covers 129,140 hectares, and has at least 1,300 archaeological sites within its bounds, in addition to its diverse wildlife and outstanding geology.

The peripheral areas of the National Park comprise a flat, partially cultivated brushwood plateau known as Sertão. This semi-arid landscape surrounds a dramatic upland massif of exposed and weathered Silurian sandstone, worn smooth first by water then by wind over geological time. Within the hinterlands between the sandstone massif and the plateau is scrub forest, known as *caatinga*. In geological terms, the sandstone massif was formed some 430 million years ago when it was a warm sea; the sediments within the sandstone formed the seabed and the extensive pebble conglomerate deposit above it, representing a later overlying ancient beach. Hidden at the base of this giant massif is a series of rock shelters and overhangs. It is within these natural cathedral-like places that the rock-art sites have been found.

The nearby town of Sao Raimundo Nonato is home to the scientific research centre and museum, The Fundação Museu do Homem Americano (The Museum of American Man Foundation), founded in 1986 by French and Brazilian scientists. This is where much of the recording and dating work has been undertaken and coordinated.

**ABOVE** The dramatic sandstone landscape that surrounds the Toca do Boqueirao da Pedra Furada rock-shelter.

first colonised from the north, via the Bering Straits at around 10,000 BC, only moving down into Central and South America in the millennia thereafter (a model known as the *Clovis First Theory*, after the ‘Clovis-tradition’ stone tools used by these settlers). So what is this contentious art and why is it being given such an ancient date?

### A remarkable assemblage

Prior to the area’s designation as a National Park, the rock-art sites were difficult, and often dangerous to enter. In ancient times, this inaccessibility must have heightened the importance of the sites, and indeed those who painted on the rocks. This ‘perilous’ art tends to be painted in various shades of red using ochre (haematite), which naturally bleeds from the surrounding exposed rock outcropping; though occasionally yellow (limonite) and grey pigments were also used. Each panel (or



**ABOVE** The central panel at the Toca do Boqueirao da Pedra Furada rock-shelter.

**LEFT** Map of northeast Brazil, showing the location of the Serra da Capivara National Park (in pink).



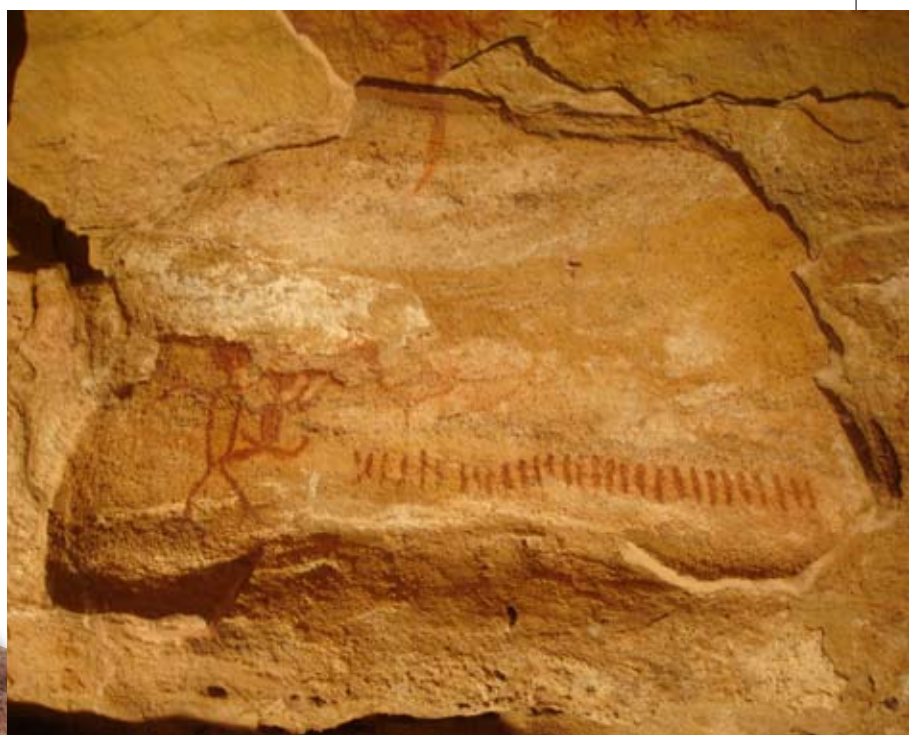
**BELOW LEFT** A fragmented painted panel section at the Toca do Paraguaio rock-shelter.

**BELOW RIGHT** A procession of stylised human figures and a sex scene (left) at the Toca do Boqueirao da Pedra Furada rock-shelter.

Wild animals and human figures dominate the art, and are incorporated into often-complex scenes involving hunting, supernatural beings, sexual activity (including bestial scenes), skirmishing and dancing. The artists depicted the animals that roamed the local ancient brush-wood forest: red deer, armadillo, capivara (a large rodent), jaguar, lizard, tapir, and the giant rhea (a type of ostrich, now extinct), among others. Of these, red deer is the most common. Sometimes the animal is simply painted in outline, other times it is totally infilled, or internally decorated with geometric patterns or rows of dots. The large mammals are usually painted in groups and tend to be shown in a running stance, as though trying to escape from hunting parties.

Processions – lines of human and animal figures – also appear of great importance to these ancient artists. Might such lines represent family units or groups of warriors? On a number of panels, rows of stylistic figures, some numbering up to 30 individual figures, were painted using the natural undulating contours of the rock surface, so evoking the contours of the surrounding landscape. In many examples, the now extinct giant rhea appears in groups of three and four, again suggesting some form of procession. Other interesting, but very rare, occurrences are scenes that show small human figures holding on to and dancing around a tree, possibly involved in some form of a

canvas) usually takes the form of a long linear block of images, arranged about 0.5m to 2m above the original floor, and extending some tens of metres long. Occasionally, the panel fills the whole length of the naturally formed rock-shelter or overhang. Most images appear to be strategically placed, usually within natural depressions, either cutting into the rock surface or in eroded hollows.





**ABOVE** A lizard painted on the Toca da Entrada do Pajaú rock-shelter.

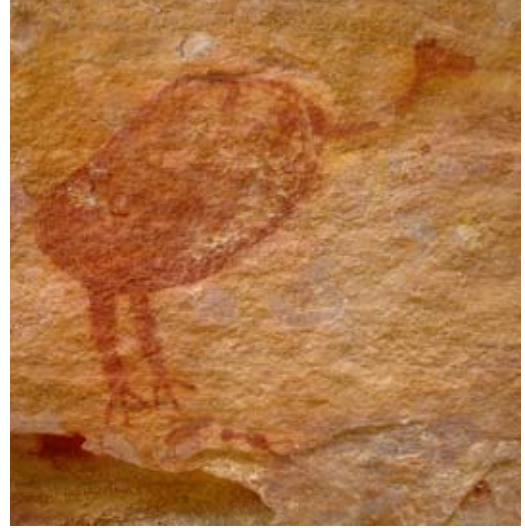
**LEFT** Dancing human figure from the Toca do Paraguaio rock-shelter.

**ABOVE RIGHT** A possible vulture painted on the Toca da Entrada do Pajaú rock-shelter.

**BELOW** Dancing animal figures, including red deer and a fox, at the Toca da Entrada do Pajaú rock-shelter.



**BELOW** Dancing male human figures over a faded red deer at the Toca do Paraguaio rock-shelter.



## Digging and dating

Of course, dating the art is extremely difficult given the total absence of organic pigmentation that might be C-14 dated. However, there are a small number of sites that are giving-up their secrets through good systematic excavation. Thus, at Toca do Boqueirao da Pedra Furada, rock-art researcher and founder of FUMDHAM (the Park's allied museum, see Box on p.42) Niéde Guidon, managed to obtain a number of dates. In a deep area of excavation, she located fallen painted rock fragments, which she contextually dates to at least 36,000 years ago. Along with the painted fragments, crude stone tools were found made from locally formed quartz pebble conglomerates. Also surviving the harsh acidic soils were coprolites (fossilised human faeces). When analysed, these only revealed dates of between 6,500 and 5,000 BC.

Nonetheless, this is not the only site to provide early dating evidence of the likelihood that the people were in Brazil far earlier than previously thought: other sites such as Toca da Entrada do Pajaú and Toca do Paraguaio, both in the Serra da Capivara National Park; Cueva de las Manos (Cave of Hands) in Patagonia, Argentina; and the hearths near the Monte Verde sites

ritual dance – rather similar to the way children traditionally dance around a maypole.

Due to the favourable climatic conditions, the imagery on many panels is in a remarkable state of preservation. Despite this, however, there are serious conservation issues that affect their long-term survival. The chemical and mineral qualities of the rock on which the imagery is painted is fragile and on several panels it is unstable. As well as the secretion of sodium carbonate on the rock surface, complete panel sections have, over the ancient and recent past, broken away from the main rock surface. These have then become buried and sealed into sometimes-ancient floor deposits.

Perversely, this form of natural erosion and subsequent deposition has assisted archaeologists in dating several major rock-art sites including the rock shelters at Toca do Boqueirao da Pedra Furada and at Toca da Bastianna.



in Los Lagos in Chile, have all yielded ancient datable deposits that greatly predate 10,000 BC – the assumed date that people first moved into North America.

At Toca do Boqueirao da Pedra Furada, in 1973, Níede Guidon revealed a remarkable set of images painted in a variety of colour pigments. The rock-art is located underneath a cathedral-like 150m cliff. A series of excavations between 1978 and 1987 and extending some 5m below the surrounding floor level obtained over 60 dates from mainly undisturbed archaeological horizons; several of these datable deposits actually covered rock-art, abutting the rock-shelter wall. Among the finds were around 7,000 lithic artefacts, 600 of which were made from quartz and were relatively dated to the Pleistocene era.

Also discovered were a series of datable hearths, the earliest dated to 46,000 BC, arguably the oldest dates for human habitation in the Americas.

However, these conclusions are not without controversy. Critics, mainly from North America, have suggested that the hearths may in fact be a natural phenomenon, the result of seasonal brushwood fires. Several North American researchers have gone further and suggested that the rock-art from this site is no earlier than 3730±90 years BP (before present), based on the results of limited radiocarbon dating.

Equally compelling are several dates that have been obtained from calcite formations, which have covered the rock-art from the Toca da Bastiana rock shelter. The sampling of this deposit using thermoluminescence (TL dating) revealed an astonishing date of 34,000 years BC. It is more than likely that these painted fragments are much earlier, thereby further reinforcing the possibility of a pre-Clovis (pre-c.10,000 BC) tradition in South America.

Adding further fuel to the debate is the fact that the artists tended not to draw over old motifs (as often occurs with rock-art), which makes it hard to work out the relative chronology of the images or styles. However, the diversity of imagery and the narrative the paintings create from each of the many sites within the National Park suggests




**ABOVE** Northern view of the narrow valley that houses the Toca do Boqueirao rock-shelter.

different artists were probably making their art at different times, and potentially using each site, over many thousands of years.

## Repainting the past

With fierce debates raging over the dating, where these artists originate from is also still very much open to speculation. The traditional view (namely the *Clovis First Theory*) is that pioneering settlers, crossed the Bering Straits from Siberia to Alaska at around 10,000 BC and spread southwards into Central and South America. But this rather simplistic explanation ignores all the aforementioned early dating evidence from the South American rock-art sites.

In a revised scenario, some palaeo-anthropologists are now suggesting that modern humans may have migrated from Africa using the strong currents of the Atlantic Ocean some 60,000 years or more ago, while others suggest a more improbable colonisation coming from the Pacific Ocean. 



**ABOVE** The large red deer partly superimposed by acrobats at the Toca da Entrada do Pajau rock-shelter.

**BELOW** The inner section of the painted ceiling at the Toca da Entrada do Pajau rock-shelter.






**SOURCE**  
**Dr George Nash** is a part-time lecturer at the University of Bristol, England, and researcher at the Museum of Prehistoric Art (Quaternary and Prehistory GeoSciences Centre), Mação, Portugal.

**LEFT** Human figures dancing around a tree-branch (similar to the maypole dance?) at the Toca da Entrada do Pajaú rock-shelter.

**BELOW** View of the western section of the Toca do Boqueirao da Pedra Furada rock-shelter.



Yet, while either hypothesis is plausible, we have still not found any supporting archaeological evidence between the South American coastline and the interior. Rather, based on the evidence from Brazil, it seems possible that there were a number of waves of human colonisation of the Americas occurring possibly over, say, a 60,000-100,000 year period, roughly commencing sometime after modern humans started to colonise the earth; again probably using the Bering Straits as a land-bridge to cross into the Americas. Despite the compelling evidence from South America, it stands alone: the earliest secure human evidence yet found in North America only dates to 12,300 years BC (namely from the recent excavations at Paisley Caves in southern Oregon that have uncovered lithics and coprolites of that date).

So this is a fierce debate that is likely to go on for many more years. However, the splendid rock-art and its allied archaeology of northeast Brazil, described here, is playing a huge and significant role in the discussion. This art – from the ochre-red deer to the ‘children around the maypole’ – is tantalisingly poised to redraw the very picture of our human story. 

**SEEING THE ART**

To visit the rock-art of the Serra da Capivara from the UK involves up to four flights, three of which are internal (with Brazil’s national airline TAM). For those seeking a little ‘adventure’, the final leg of the journey, from Terasina to Sao Raimundo Nonato can be made by a nine-hour bus ride. Taxis and special excursions to the Serra da Capivara are relatively good value and worth the visit. Many of the more notable sites have wheelchair access. See the state and government agencies websites [www.fundham.org.br](http://www.fundham.org.br) and [www.iphan.gov.br](http://www.iphan.gov.br) for more information.

