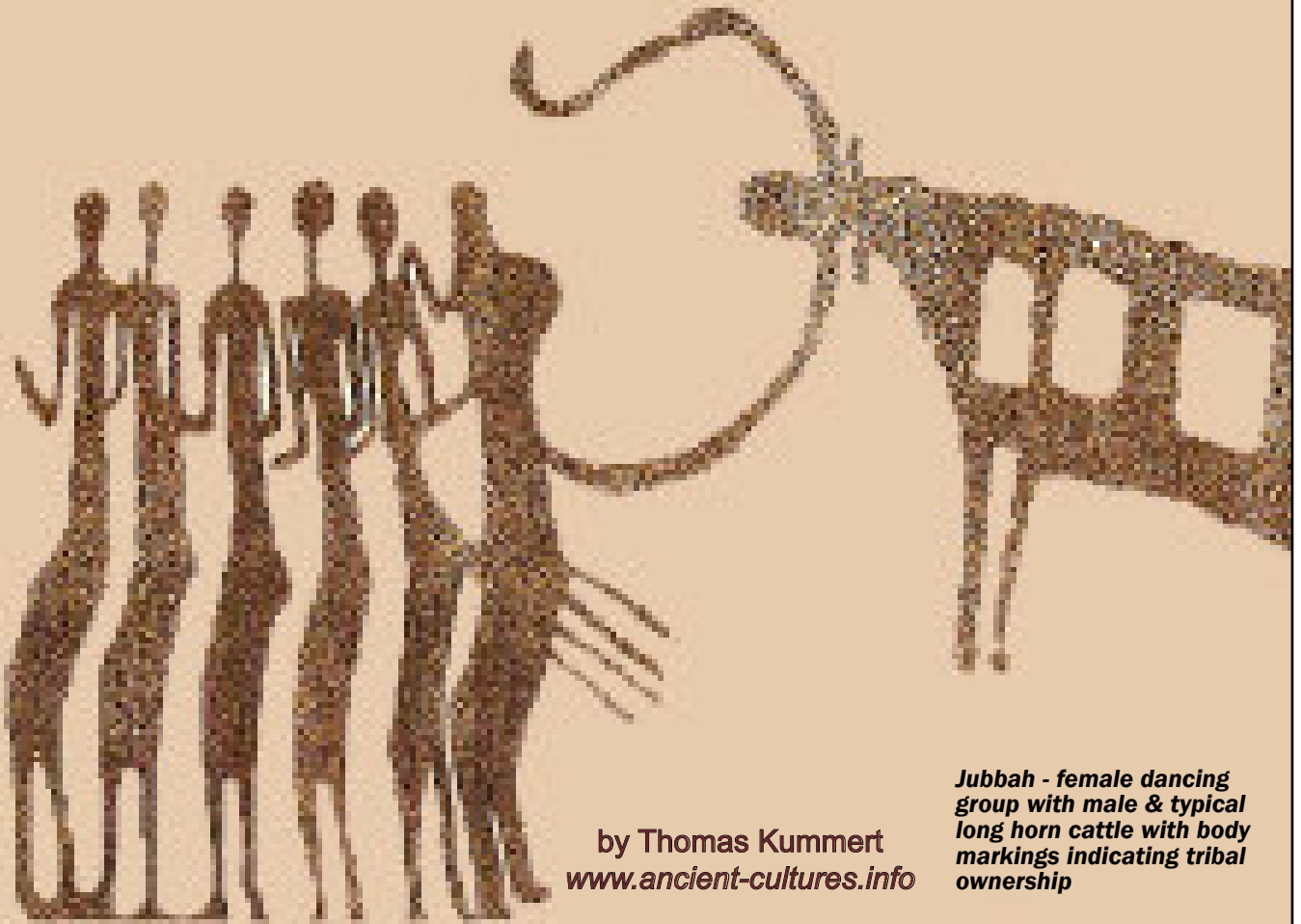


Introduction to Saudi Arabia Rock Art & Petroglyphs



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Jubbah - female dancing group with male & typical long horn cattle with body markings indicating tribal ownership

Until ten years ago Saudi Arabia did not even figure on the Oxford University World Rock Art Atlas, a global registrar for antique petroglyphs. Today the Kingdom counts as one of the top four petroglyph sites in the world together with Australia, India and South Africa.

And it might not end in a forth place as experts have only started documenting all local rock art sites and each time they go out they find more new areas covered with multiple rock art and petroglyphs.

So far the Saudi count stands at over 1,500 pre-historic rock art sites. It was believed that the highest concentration of rock art is situated in the Kingdom's south around Najran, but recent research found that more sites are actually in the country's northern areas around Jubbah northwest of Hail.

Petroglyph Age

Ancient Saudi rock art is wide spread across the Kingdom and on average can be dated between 9,000-8,000BP. Recently the oldest Saudi petroglyph site was discovered and dated to approximately 13,500-10,500BP falling into the Ice Age and Final Pleistocene period.

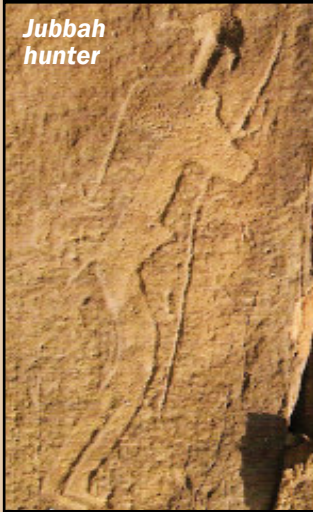
Several hundred Palaeolithic and Neolithic sites are situated in Saudi Arabia. These include Bir Hima north of Najran, which is an Early Lower Palaeolithic or Oldowan site with added discoveries of chopper or pebble tools used for carving.

Close to Riyadh we have some Lower Palaeolithic or Acheulean sites with bifacial tools and finally the new famed Jubbah area, which is a Middle Palaeolithic or Mousterian site having used crude carving tools.

All the carving tools were produced out of three different stones, quartzite, andesite and flint. But most interestingly, no Upper Palaeolithic tools and sites were found in the Arabian Peninsula so far. It is not reasonable to assume that during this period there was no human activity on the Arabian Peninsula, but it might be that those sites have not been discovered yet as they might be covered by sand.

For comparison, if we look at other types of tools, Middle Holocene arrowheads that have been discovered can be dated to 10,000BP.

Let's look now at an interesting question: what is a normal rock art life span? Petroglyphs carved on softer sandstone surfaces have a taphonomic threshold average age of 8,000 years, but if they were carved on hard granite their life span increases up to



Jubbah hunter

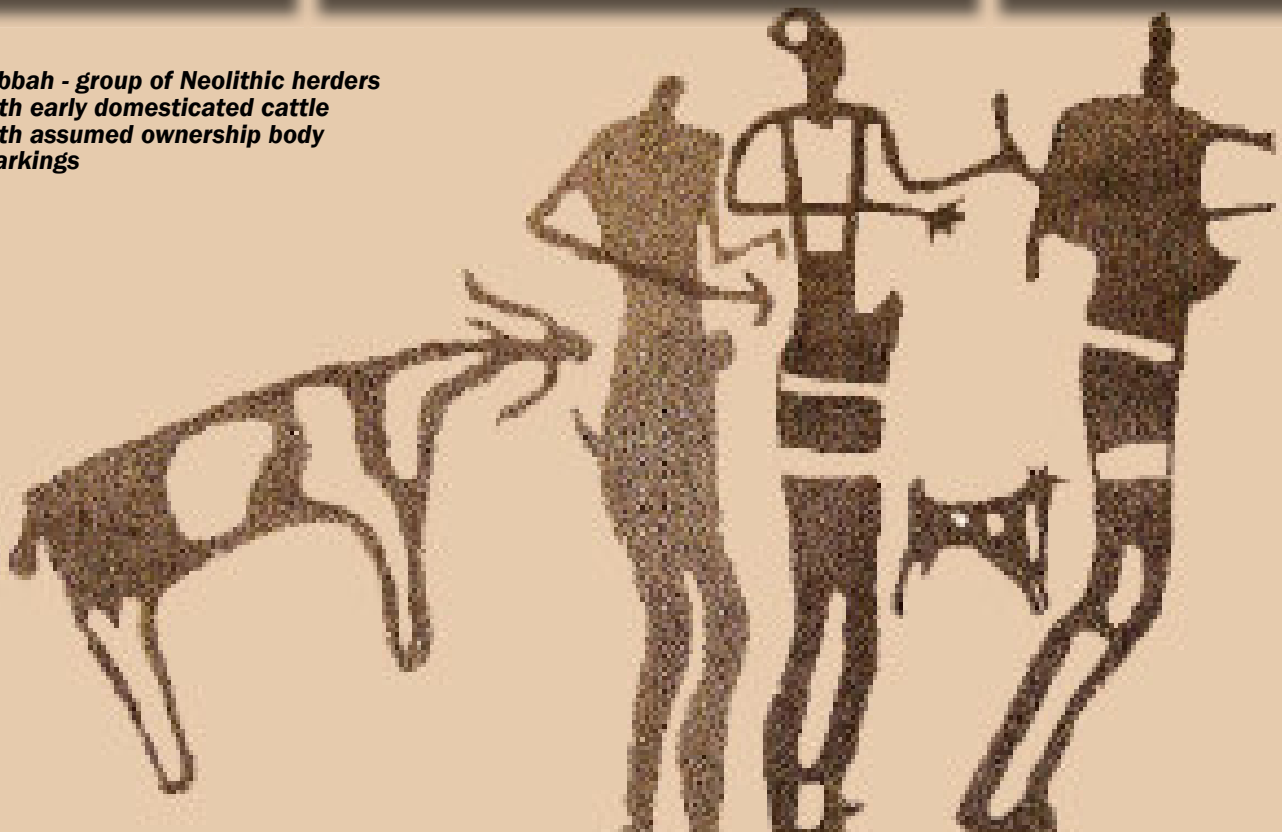


Jubbah hunter with ibex



Jubbah Malik

Jubbah - group of Neolithic herders with early domesticated cattle with assumed ownership body markings



50,000 years. For comparison I have looked at some rock art in Kazakhstan and the results are interesting.

The stone surfaces are much harder and all have multiple cracks, produced by much colder temperatures and ice. The petroglyphs there are much younger than our Saudi rock art, but look older due to their weathering.

Saudi petroglyphs are mainly carved in softer sand stone and due to arid weather condition are much better preserved and often look like produced just a hundred years ago. The only give away is the desert varnish with which our Saudi rock art is often covered.

Desert Varnish

Those of you who have visited the Graffiti Rock I or II day trip sites near Riyadh will remember the blackish rock surface coverage called desert varnish. It is produced over a long period of time of up to 60,000 years by iron and manganese oxide particles present in the rock reacting with wind transported clay dust and some organic matter normally on the wind-opposite side of rock surfaces.

This biochemical reaction needs high desert temperatures plus some morning condensed water dew. A big unanswered question for experts still is the 50 to 60 times higher concentration

of manganese in desert varnish compared to the much lower average concentration of 0.12 % in the rock itself.

What we do know is that lots of bacteria use manganese for growth and they also play a part in the production process of desert varnish. Dark, dull desert varnish colors indicate a dominant bacteria growth whilst light, shiny surfaces are proof of dominant clay accumulation.

Black surfaces are created by manganese domination and reddish desert varnish shows higher concentration of iron particles. Ancient humans loved desert varnish surfaces as rock art working platforms, as it was very easy to simply scratch figures



Bir Hima unknown sign



Bir Hima unknown sign



Bir Hima unknown sign



Bir Hima male

and signs with any type of stone scraper tool exposing the lighter colored stone surface beneath.

Rock Art Motifs

Compared to other countries Saudi petroglyphs offer possibly the widest variety found on earth.

Imagine a first study which indicates that humans are depicted in 72 different poses or forms. Some even show dancers with masks and shoes, both female and male depictions.

Hunting scenes are another important motif, but surprisingly animals are never shown wounded or pierced by arrows. Possibly these scenes are more of a religious nature showing the dance or ritual before the hunt.

Different to European sites, hand prints are rare in the Arabian Peninsula and found in

an area northwest of Tabuk. Foot prints were first discovered at Shuwaymis close to Jubbah and were dated 11,000–9,000BP.

During our desert travels, we often heard the term “wusum”, when Bedouins point to rock faces with few carved signs looking like ancient script. These are actually tribal signs to mark desert areas as well as free roaming clan animals belonging to a specific tribe.

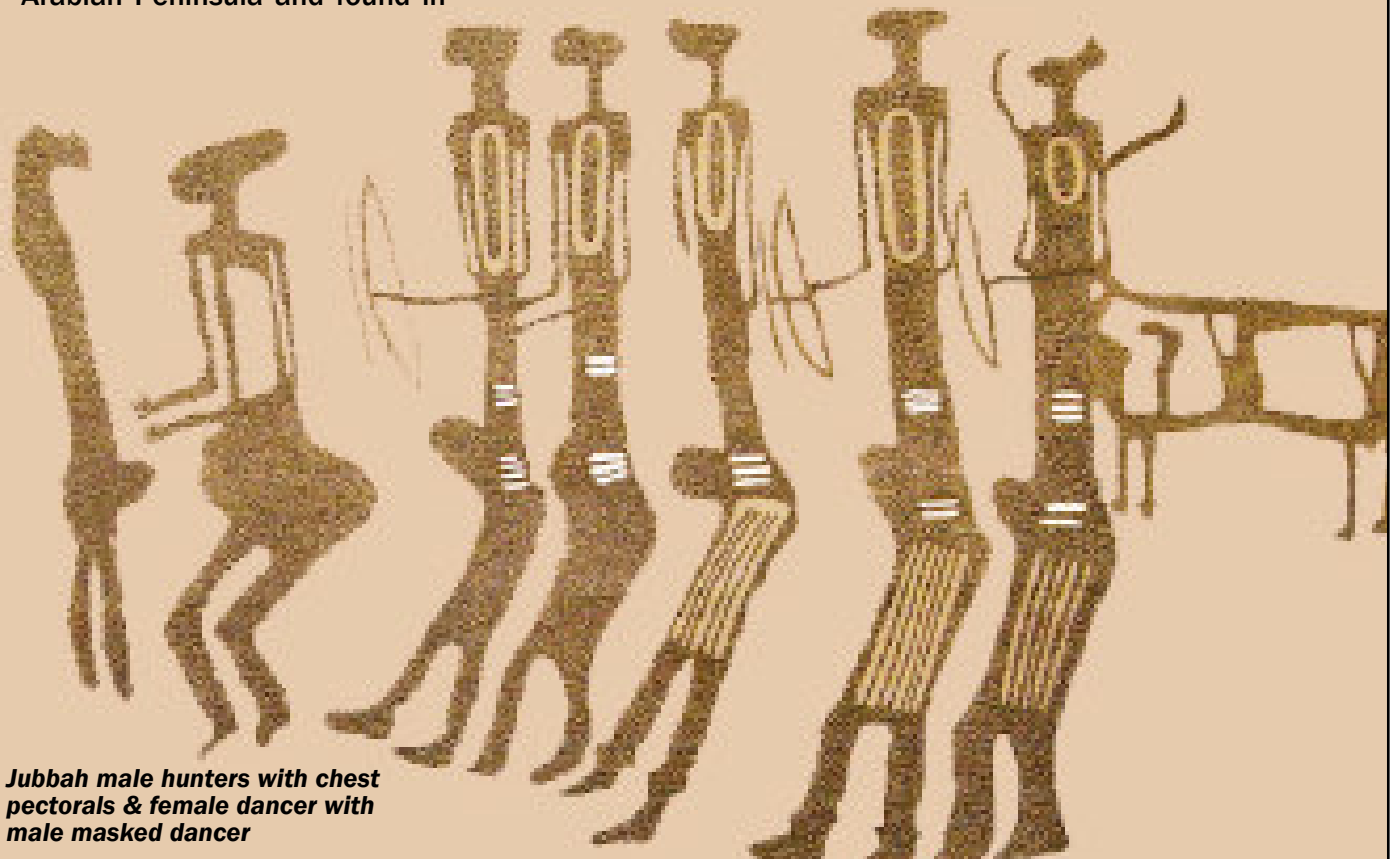
Human Immigration

Now let's take a step back and look at the human immigration of the Arabian Peninsula. The important question which experts try to answer taking new discoveries into account is the following: did homo sapiens migrate onto the Arabian Peninsula only via Sinai or also

by crossing the Red Sea at its southern tip from Ethiopia via Bab al Mandab to Yemen?

Today we know that the first human made knapped stone tools found outside Africa in the Levant corridor at Ubaydiya are dated around 1.5 million years ago. But the first proven maritime crossing was done only about 60,000 years ago from New Guinea to Australia.

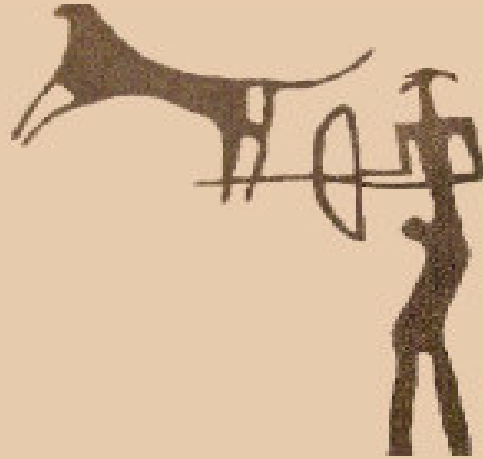
The first archaic Lithic industries on the Arabian Peninsula were discovered at Shuwayhitiyah with 16 sites of choppers, polyhedrons, flakes which could be dated 1.3 million years ago. Other sites with similar tools are situated at Wadi Fatima, Dawadmi and Bir Hima. Again similar surface finds were recorded at Bir Hima northwest of Najran, Bab al Mandab and Hadramaut, both in Yemen.



Jubbah male hunters with chest pectorals & female dancer with male masked dancer



Jubba hunters encircling a cheetah, two using bow & arrow, plus one a boomerang type throughing club



But the first untouched Palaeolithic site on the Arabian Peninsula was found only in 2006 in the Tihama area in Yemen, which is called Shi'bat Dihya and dates 80,000-70,000BP featuring so-called Levallois debitage industries.

Similar Palaeolithic sites were discovered in the Saudi Arabian Tihama on the Red Sea coast, as well as on the Farasan islands. They surfaced various bifacial and crude tools, end and side scrapers, denticulates all from the Middle Palaeolithic period comparable to certain Jubba items found.

But we have an unsolved mystery - no evidence of any Upper Palaeolithic sites between 40,000-10,000BP has yet been found on the Arabian Peninsula.

Cultural Development

The last warming period with ample monsoon rains over the Arabian Peninsula took place around 12,000BP, which lead to

a spread of population, the first domestication of animals, plants as well as the first settlements parallel to the Neolithic hunter gatherer societies.

From 6,000BP, the first domestication of cattle, sheep, donkeys and goats introduced from the East took place. Tool making was done by with two basic techniques, using a hammer stone and pressure flaking. Our ancestors also used obsidian tools from the lava fields on both sides of the Red Sea and knapped cutting edges by percussion.

Coastal fishing was developed already about 9,000-8,000BP including the important preservation of fish. New results show that the Arabian Peninsula was inhabited by 12,000BP by various developed diverse and dynamic cultures with long distance trade ties to the Levant area, Mesopotamia and even Africa.

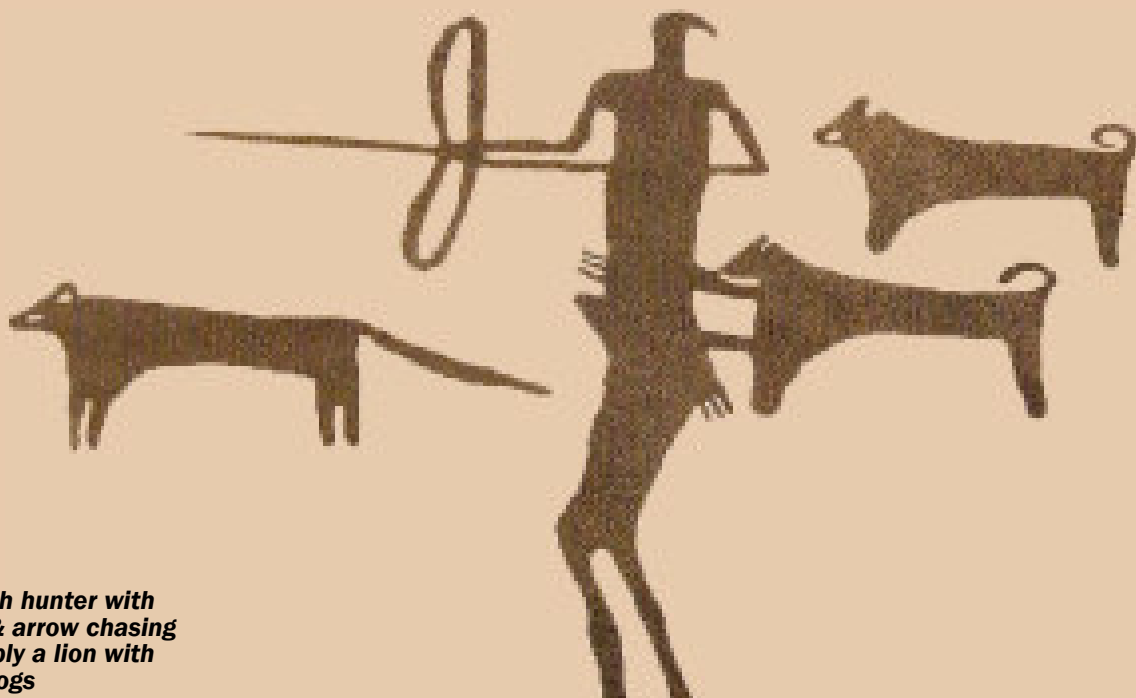
Riyadh Sites

Umm Asba' site lies 85 kilometers west of Riyadh and three kilometers from Umm Asba' village. It features a six meter high mushroom shaped column which is well visible on a hill. It is covered with wusums and pre-Islamic inscriptions but not very old with a dating of 500BC.

Al Usayla, or our well known Graffiti Rock I site, is situated 115 kilometers southwest of Riyadh and four kilometers north of the Makkah highway. The site offers a 4m high and 7m wide rock panel surface covered with a thin patchy typical black desert varnish coating.

There are approximately over 200 morphs and anthropomorphs carvings and early written characters plus wusums as tribal propriety signs. It is assumed that all figures were carved over a short period of 250 years and between 5,000-3,000 years old.

The Arwa site is located 270



Jubba hunter with bow & arrow chasing possibly a lion with two dogs

kilometers west of Riyadh on the Taif road in the Dhulay small mountain range at Bin Nasr, 11 kilometers west of Arwa. It consists of three rock art sites and Kufic or first Islamic inscriptions. The first site offers human and animal depictions of camels and deer which are dated to 1,000 to 500BC. The second site shows humans, mainly female, possible goddesses. These female figures are often found in the Najran area and dated about 500 BC. The third site only has some wusum signs.

Closer to Riyadh, we have the sites of Wadi Maleeh close to the Malham village and Wadi Hanifa, south of Dirriyah.

Greater Jubbah Area

The new Saudi treasure area close to Jubbah consists of over 150 sites in total including Jabal al Manjour and Shuwaymis. This area includes a range of hills with huge numbers of human and animal rock art. This area was inhabited during Early to Mid Holocene and also

includes some interesting burial sites with related stone structures dated from 2,000–1,000BC.

But no Neolithic permanent housing structures or foundations were found compared to discoveries in Jordan. Petroglyphs here are carved in low relief about five to ten millimeters deep. The enormous amounts of petroglyphs suggest that these sites have been in use for over 2,000 years or more. Just imagine that in total over 4,000 pieces of human and animal rock art is recorded to date including over 600 human figures, 1,300 camels and close to 2,000 other animal depictions.

Wusum tribal signs and over 350 Thamudic inscriptions must be added to these numbers.

In summery Jubbah is the largest and oldest rock art site in Saudi Arabia. The carvings demonstrate highly advanced skilled works of art with unique large sized human

figures carved into rock using low and bas relief techniques.

Oxen are always depicted together with humans and sometimes also with dogs. Camel depictions make up one third and ox about 20% and human figures around 15%. These rock art is dated between 9,500–8,500BP in the Early Neolithic period. A panel with fifteen large cupules is the oldest rock art carving and dated to the Early Holocene period.

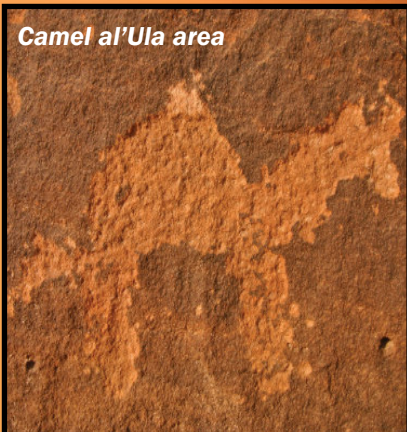
Animals Depictions

Animal depictions include many camels, ibex, ostrich, bulls, cows, goats, gazelle, deer and even the African giraffe. Dogs were domesticated early and used for long distance casing and hunting.

Horse carvings are not that old and were done since 3,000 to 2,000 years ago. Donkeys were used for transport before camels were domesticated about 3,000 years ago. Lions as another African animal seemed to have been wide roaming across the Arabian Peninsula and



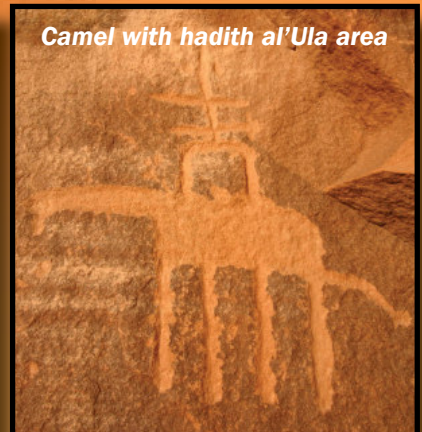
Dedan script al'Ula area



Camel al'Ula area



Female camel al'Ula area



Camel with hadith al'Ula area

were used as representations for kings and as god symbols.

Snakes were a typical guardian and protection symbol more used in cities for houses, temples and graves, but seldom depicted on desert rock faces.

Shuwaymis Sites

Jabal al Manjour has many rock art sites free of any recent inscriptions or graffiti. It offers numerous man-sized animal and human depictions with cows, bulls, ibex, gazelle, deer and dogs, but no camels and ostrich.

Dogs found at Jubbah and Shuwaymis were the most important domesticated animal in Neolithic times dating 7,500 - 6,500BC in the Early Neolithic period.

Shuwaymis is special because only here cheetah and leopards are depicted and human figures outnumber those of animals. Here you will find also the famous human male and female dancing scenes. Special again in that females are never depicted alone but always in company with men.

These interesting rock art scenes are dated to the same period as Jabal al Manjour - the Early Neolithic period around 7,500-6,500BC.

The Shuwaymis main site is a remote area far to the west of Shuwaymis and today seen as the number one petroglyph site in Saudi Arabia. The area is covered by Pleistocene lake beds and widely spaced eroding cliffs and also contains numerous megalithic burial sites.

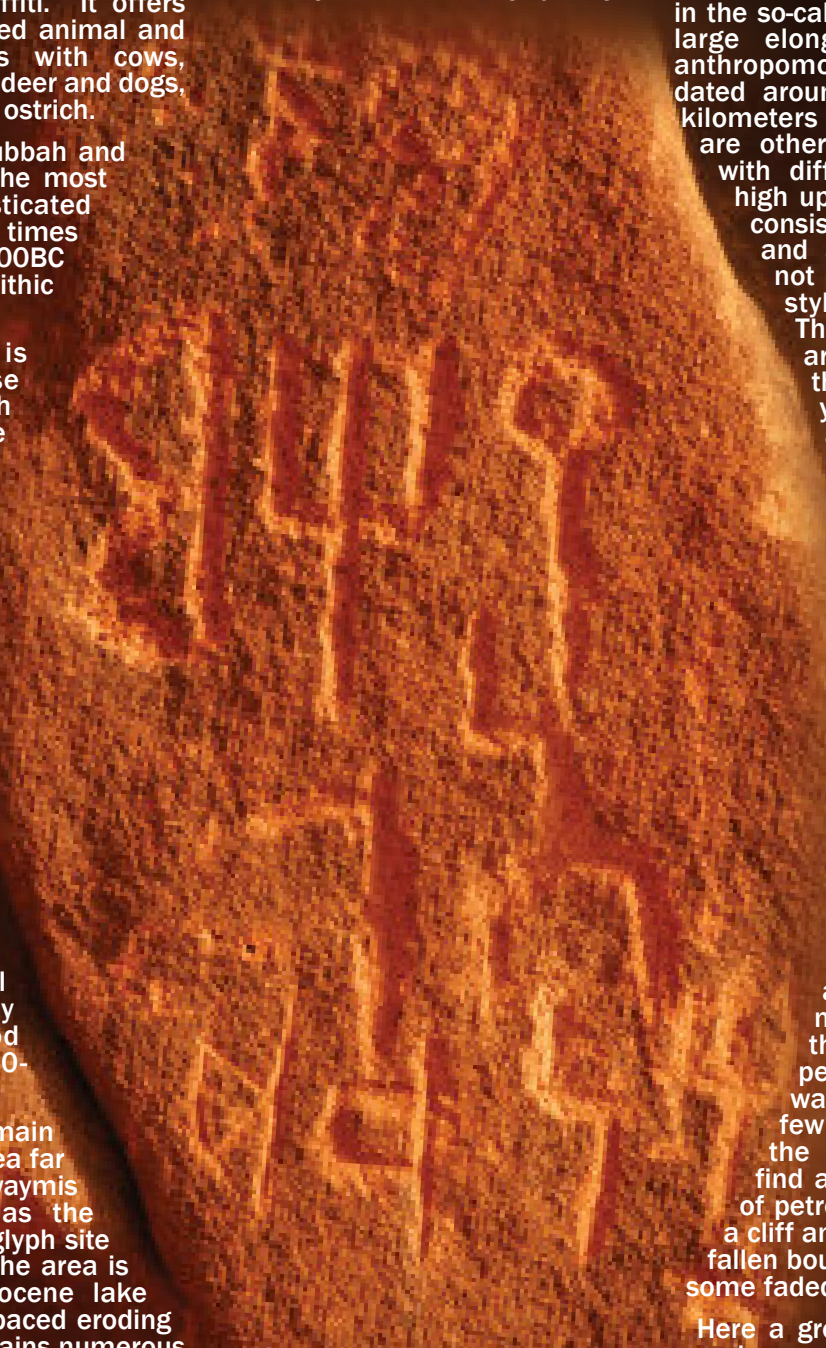
On the slopes there are many rock boulders covered with thousands of rock art motifs. Some are well orchestrated compositions and scenes with detailed well carved human and animal figures.

These boulders were engraved over a very long period of time

possibly 2,000 years, so when they rolled down hill new petroglyphs were added when the older work ended up on the bottom surface.

Here you find the before mentioned oldest petroglyphs from Late Pleistocene period depicting fifteen cupules plus some archaic circles and rare hoof prints.

The other



Dedan script al'Ula area

petroglyphs are dated around 7,000-5,000BP with no additions being created after 3,000BP. Therefore there are no camel and date palm motifs here, which became common only after 3,000BP, which was around the time camels were domesticated.

Umm Samman Sites

The Umm Samman main rock art complex near Jubbah is extending along the foot of a 4.5km long escarpment and is today fenced with a caretaker guard and well managed to avoid any new graffiti carvings being added. Archeologists also found some Neolithic stone tools.

The sites petroglyphs are carved in the so-called Jubbah style with large elongated and detailed anthropomorph human figures dated around 4,000BC. A few kilometers to the north there are other petroglyph clusters with different motifs carved high up on the cliffs. These consist of over 200 morphs and anthropomorphs, but not of the large Jubbah style figures. Some Thamudic inscriptions are also found here and the site is 2,000 years younger and dated around 2,000BC.

Other Hail Area Sites

The Janin Cave is one of the few caves with rock art and situated 30km east of Hail and north of the Buraydah highway. It is the only north Saudi cave art site and fenced for protection including a caretaker guard.

The light colored sandstone cave is about 200m high, but only 10m wide and 100m deep and narrowing towards the end. Numerous petroglyphs plaster the walls on both sides. A few kilometers east of the Janin Cave you will find a major concentration of petroglyphs at the foot of a cliff and also covering many fallen boulders. There are also some faded red pictograms.

Here a group of a dozen large cupules are worked out on upper side of boulders, they are fully patinated and much older compared to other rock art in the area. A panel measuring three by two meters contains over 50 interesting patinated petroglyphs.

Yatib is situated about 20km east of Hail and is another spectacular petroglyph site with over 1,000 motifs. A 6m high

hill is covered with rock art and petroglyphs on cliffs and boulders over a length of one kilometer. This important site is fenced and guarded today. The rock in this area is very hard and therefore 20% of the work was first done using metal tools.

Qal'at al Hisan is located 225km southwest of Hail just outside of the Hayeed township. It is a volcanic area and only has minor petroglyphs and inscriptions done on volcanic tuff stone.

Jabal al Bargh south of Shuwaymis is another minor petroglyph site with two meter high date palm motifs including some cattle and ibex animal depictions dated approximately 4,000BP.

Najran Sites

Next to Hail with the main

rock art area around Jubbah, Najran with Bir Hima is the other petroglyph treasure area in Saudi Arabia. In total over 100 sites are recorded, including those at Tathlith, Al Fau, Namas highlands, Wadi Nagha, Shasa in the Qara area, the Umm Rigaibah mountains and Shagar in Al Kaukab area.

Other sites close to water sources offer next to rock art also many petroglyphs, which are found at Galatata Shiab, Al Waheed and Sawadha. Animal depictions include camels, cattle, deer, ostrich, gazelle, lion, horses and dogs.

In addition the country's south rock art offers many female figures, which are rare in northern part of Saudi Arabia. The female figures are shown normally with their arms upraised, male depictions are shown holding

spears and shields instead.

For the first time we can see hunting scenes with spears and arrows piercing animal bodies, which in the northern part of the country are absent. Ritual dancing and fighting scenes are found at Jebel al Kaukab and Jebel al Qara area northeast of Najran.

Both sites are the richest rock art sites in the Najran area. In total the Najran area offers over 6,400 human and animal depictions including over 1,800 camels and 1,300 human representations.

This article is only a first introduction into Saudi Arabia's pre-historic rock art and petroglyph treasures. The last ten years have yielded an enormous amount of new archeological information and be assured that more sites will be discovered and

Bir Hima group with female & male human figures



Graffiti Rock I. near Riyadh



Shuwaymis camels

documented over the years to come, as Saudi Arabia is just discovering it's pre-historic past.

In addition the Arabian Peninsula's arid climatic conditions help to preserve those petroglyphs, which are an important part of our world heritage. And we are lucky that these treasures were created by man kind in antiquity when the Arabian Peninsula was populated by humans during a wet period with many animals to hunt and wild plants to add to the hunter gatherer diet, before the start of domestication of animals and first farming settlements in the Neolithic period.

The author has published further articles on petroglyphs and ancient scripts including one about the interesting Nabataean script as well as one about a dozen ancient Arab scripts and

languages. These will include Dedanic and Hagaric two old Arab scripts specific to Saudi Arabia and used in the ancient capitals of the Dedan, Lihyan and Gerrha kingdoms. Qatabanic and Hadramitic were only used in these Yemeni kingdoms.

The most wide spread script in the Arabian Peninsula was Sabaic. Minaic was also used in Yemen and today's Saudi Arabia. A lesser wide spread script was Safaitic used in al Safa hills area in Syria and parts of northern Saudi Arabia.

Have you ever heard about Hismaic used in Hisma area in Jordan? But certainly you have read about Taymaic used around Tayma in Saudi Arabia or Thamudic used by Thamud tribe

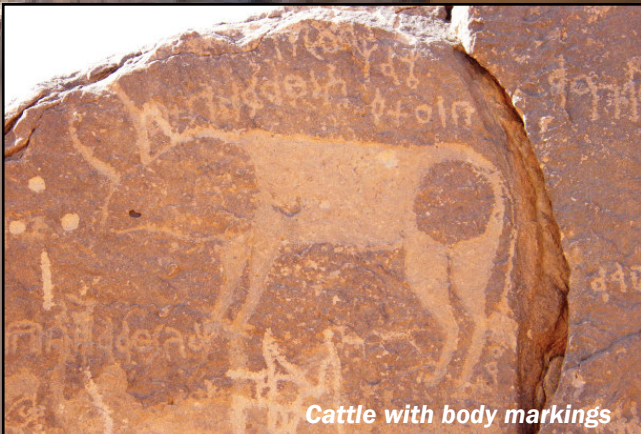
and many Bedouins throughout the Arabian Peninsula. The last important script in this region is Aramaic of which two versions were spread the Imperial Aramaic and the Nabataean script which were the first to write letters together and became the basis of the Arabian script.

Summary

This is of particular interest as these ancient scripts were used by pre-historic tribes and caravan leaders to leave messages on many rock panels and boulders across the Arabian Peninsula. So far we were able to decipher most of them, but as they only use consonants and no vowels it is not that easy to get the correct meaning.



Bir Hima rock panel with 2 warriors with swords



Cattle with body markings



Camel & hunter with gazelle being chased by a dog