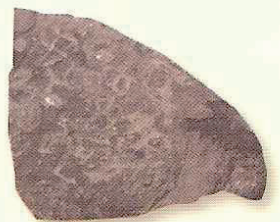
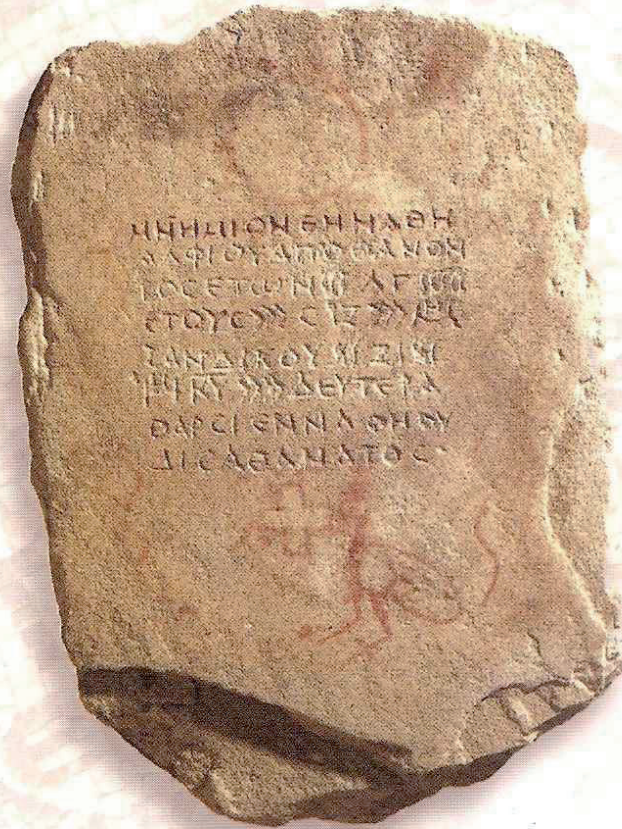


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Petroglyphs and Sepulchral Contexts

Preliminary Note on Late Chalcolithic/ Early Bronze Age Findings at Qulban Beni Murra, Wadi as-Sahab al-Abyad

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The Site and the Culture

The megalithic burial grounds of Qulban Beni Murra (also called Biyar Beni Murra; first reported by Kirkbride and Harding 1944; *cf.* also Stekelis 1945) are located *c.* 130 km east of al-Jafr, along the Wadi as-Sahab al-Abyad, and north of Jabal Tubayk on the Jordanian side of the border (**Fig. 1**). Excavations and surveys of the site were undertaken (**Fig. 2**) by the *Eastern Jafr Joint Archaeological Project* of Mu'tah University and the Berlin Free University (Gebel and Mahasneh 2008, n.d.; Mahasneh and Gebel 2009) and directed by both authors.

Qulban Beni Murra comprises concentrations (Areas A-F, **Fig. 2**) of various types of cairns with ashlar rows and trilith groups (*e.g.* **Figs. 7-8**), chamber graves, and circular structures (**Figs. 3-5**) of standing stones. Further, all flanks of the wadis in the area feature sepulchral occupations, allowing us to speak of a sepulchral landscape. The present-day landscape is a typical *ard as-suwwan* belonging to the al-Howaitat tribe; the *hamad* is drained by NNE - SSW running wadi systems of which Wadis as-Sahab al-Abyad and al-Aswad are the major outlets draining into one of the basins (770 m a.s.l.) between the northernmost outcrops of Jabal at-Tubayk.

Qulban Beni Murra attests the presence of a potentially complex shepherd society which occupied the area with its aquifers and lacustrine habitats during the moister phases of the Mid-Holocene. A similar site might be located at Rajajil (Zarins 1979), and possibly at Rizqeh (Kirkbride 1960, 1969; Underbjerg 2003). We have to expect that the Arabian Peninsula in this period was characterised by extensive steppes with lakes and waterholes (Gebel *et al.* 1989, *cf.* also Noblet-Ducoudré *et al.* 2000 or Claussen and Gayler 1997 for the Sahara), and featured comparatively

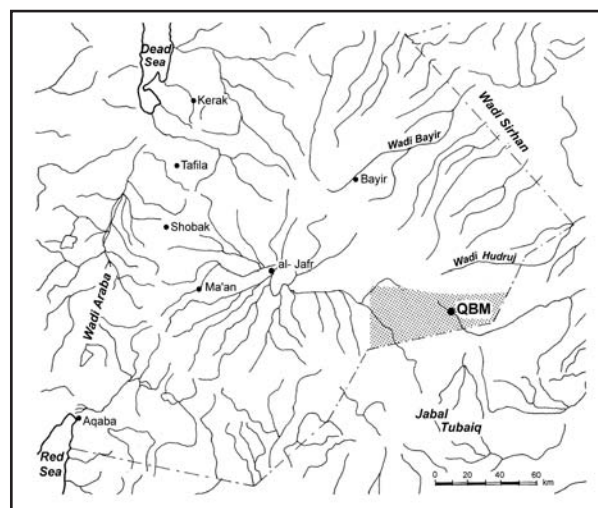


Fig. 1. Location of Qulban Beni Murra and the survey area of the *Eastern Jafr Joint Archaeological Project*. (drawing, Eastern Jafr J.A.P., H.G.K. Gebel).

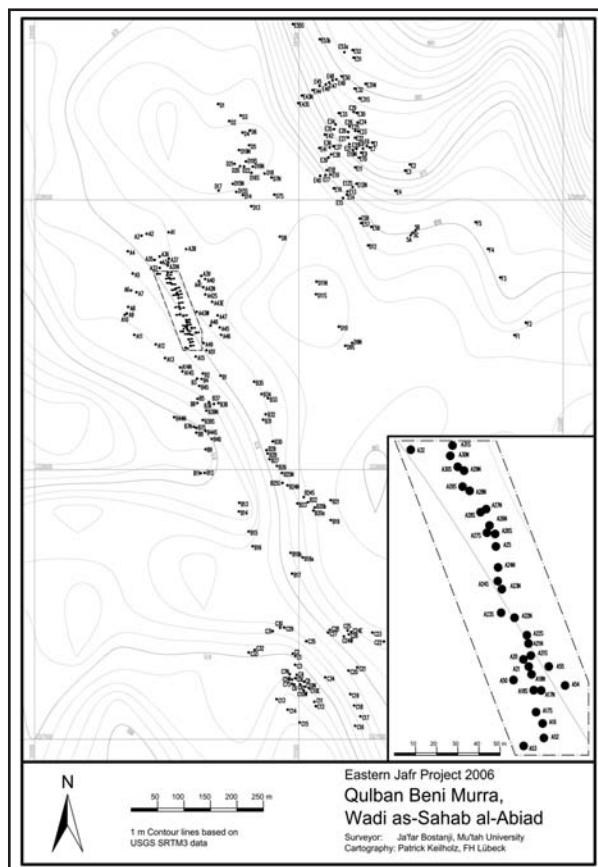


Fig. 2. Qulban Beni Murra. Topographical map and distribution of structures in Areas A-F. Based on USGS SRTM3 data.

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high water tables. These environments hosted large groups of mobile pastoralists who dug wells into the wadi floors and in the proximity of lake shores, fed their flocks at (purposely built) watering places, constructed pens and human shelters, and gathered at burial grounds to perform their funeral practices.

The surprising discovery of unknown and possibly complex shepherd cultures dating into either the Late Chalcolithic or to the transition from the Late Chalcolithic to the Early Bronze Age (*cf.* also the recent findings of G.O. Rollefson and A. Wasse in northeastern Jordan) immediately leads to a discussion of the origins of the Arabian oasis cultures at around the mid-4th millennium BC, if not earlier. It is the hypothesis of one of the authors (H.G.K.G.) that the origin of Arabian oasis economy was not triggered by the aforementioned Mid-Holocene climatic optima, but was in fact quite the opposite: The oasis economy with its shadow horticulture – enabled by the microclimate created by the “roof” of the newly domesticated date palm and the channel irrigation – rather represents the forced adaptation of local shepherd populations to this new sedentary life-mode, following the loss of pasture land due

to increased aridity. Thus, according to Gebel’s hypothesis, the shepherd cultures, together with their well-building technology, are the origin of oasis cultures. It was these communities that first contracted and settled down in hydrologically favourable locations and became sedentary farmers at these locations. The fortified well may have been the central element of the Arabian Peninsula’s first oasis living quarters in the Early Bronze Age (*e.g.* Hili 8, al-Ain/ Buraimi Oasis, Abu Dhabi Emirate; Cleuziou and Constantini 1980, Cleuziou 1989). In a way, the introduction of the oasis economy completed the sedentary life trajectory in the Arabian Peninsula which had its roots in the Near Eastern Neolithic. Be this as it may, this hypothesis, which sees the transition from pastoral well cultures of the early 4th millennium BC to the oasis cultures at the beginning of the Early Bronze Age (recently linked to the so-called 5.200 calBP drought event, *cf.* Staubwasser and Weiss 2006) must be substantiated by our future research.

The petroglyphs discussed here, however, represent with some certainty depictions of the Late Chalcolithic/ EB shepherds’ green desert well culture (Gebel and Mahasneh n.d.).



Fig. 3. Qulban Beni Murra, Area A, Structures A15-31: line of megalithic circular room clusters of unknown function, from SSE. photo: Eastern Jafr J.A.P, M. Bshesh.



Fig. 4. Qulban Beni Murra, Area A, Structure A27 (looted): megalithic circular room cluster with animal petroglyphs, from SW. (photo: Eastern Jafr J.A.P, M. Bshesh).



Fig. 5. Qulban Beni Murra, Area A, Structure A27 (looted): ashlar with animal petroglyphs. (photo: Eastern Jafr J.A.P, H.G.K. Gebel).



Fig. 6. Qulban Beni Murra, Area A, Structure A27 (looted): broken/ fallen ashlar with animal and other? petroglyphs. (photo: Eastern Jafr J.A.P, H.G.K. Gebel).

The Date

Two main problems are related to the dating of the petroglyphs discussed here. The first is the common difficulty encountered when dating petroglyphs that could have been applied at any time to an exposed rock surface or ashlar/ standing stone. The other is our lack of dating evidence for Qulban Beni Murra other than its fan scrapers (Quintero *et al.* 2002) which are time markers for the Late Chalcolithic/ Early Bronze Age. These fan scrapers can be found in large numbers near pens in the region, but are comparatively rare in Qulban Beni Murra, although clearly attested in its deflated surfaces. Fan scrapers were most probably tools for cutting wool/ hair and for working hides.

Our conviction that the ibex/ animal petroglyphs discussed below represent a Late Chalcolithic/ Early Bronze Age feature derives from a number of considerations:

1. The depictions on a central ashlar of Cairn B39 (**Figs. 8-9**) and on the ashlars of the Round Structure Cluster A27 and other Area A circular structures (**Figs. 3-6**) show an identical style resembling Hecht's Fig. 4e (Hecht 2009). They must have been applied in around the same period.

2. The depictions are not randomly distributed like the *wasms* (sub-recent – recent tribal tags in the area) and occur in confined structural contexts; they are also related to basic functional elements of the structures (B39: central ashlar of the cairn; A27 and others: ashlar wall of circular structure). This indicates that they must be contemporary with the use of the cairn and the circular structures.
3. Techniques and patination differ clearly from those of the *wasms* (Mahasneh and Gebel, in prep.) that are found on many of the standing and fallen ashlars at the site.
4. The depicted wild animalscape of Qulban Beni Murra's ashlars has a good analogue in the well-dated mural decorations found in Tall Hujayrat al-Ghuzlan (first half of the 4th millennium BC), a site situated upon the alluvial fan of Wadi al-Yutum that enters Wadi 'Araba to the north of 'Aqaba (Schmidt 2009).

Therefore, on the basis of the above evidence, we conclude that the petroglyphs discussed here are related to the function of the structures and date to the Late Chalcolithic / Early Bronze Age, around 4000 BC or slightly later.

The Contexts

Petroglyphic art is rare in Qulban Beni Murra and is confined to specific buildings. Two major discoveries from Structures A27 and B39 are presented here. However, isolated depictions are also found upon other structures (especially on ashlar of the circular structures in Area A), but these are sometimes difficult to identify due to their poor state of preservation. Quite numerous, on the other hand, are the later tribal tags, or *wasm*, which can be expected on any of the Late Chalcolithic/ EB structures. One tag found in Area E was applied by the Royal Air Force, presumably in the 1940s.

The first of the two evidences to be presented

here is related to a broken but still standing ashlar belonging to the central row of 4-5 standing stones of Cairn B39 (**Figs. 7-9**); the depictions were applied to the eastward facing side of the ashlar/ structure. B39 is the largest of the cairns at Qulban Beni Murra; it feature a successive occupation, a central row of standing ashlars, peripheral terrace pavements, and groups of three standing stones (triliths) in its SE part.

The second occurrence of petroglyphs is associated with the 130 m long chain of circular structures in Area A (**Fig. 3**); each of these circular structures has an interior diameter of between 3 and 5 metres and features interior stone pavements and chipping floors. While B39 clearly represents a burial mound, the circular structures in Area A may not have been graves. Our current interpretation follows the idea that these structures were related to the accommodation of the mourners and/ or the practice of funeral rites at the site. Circular

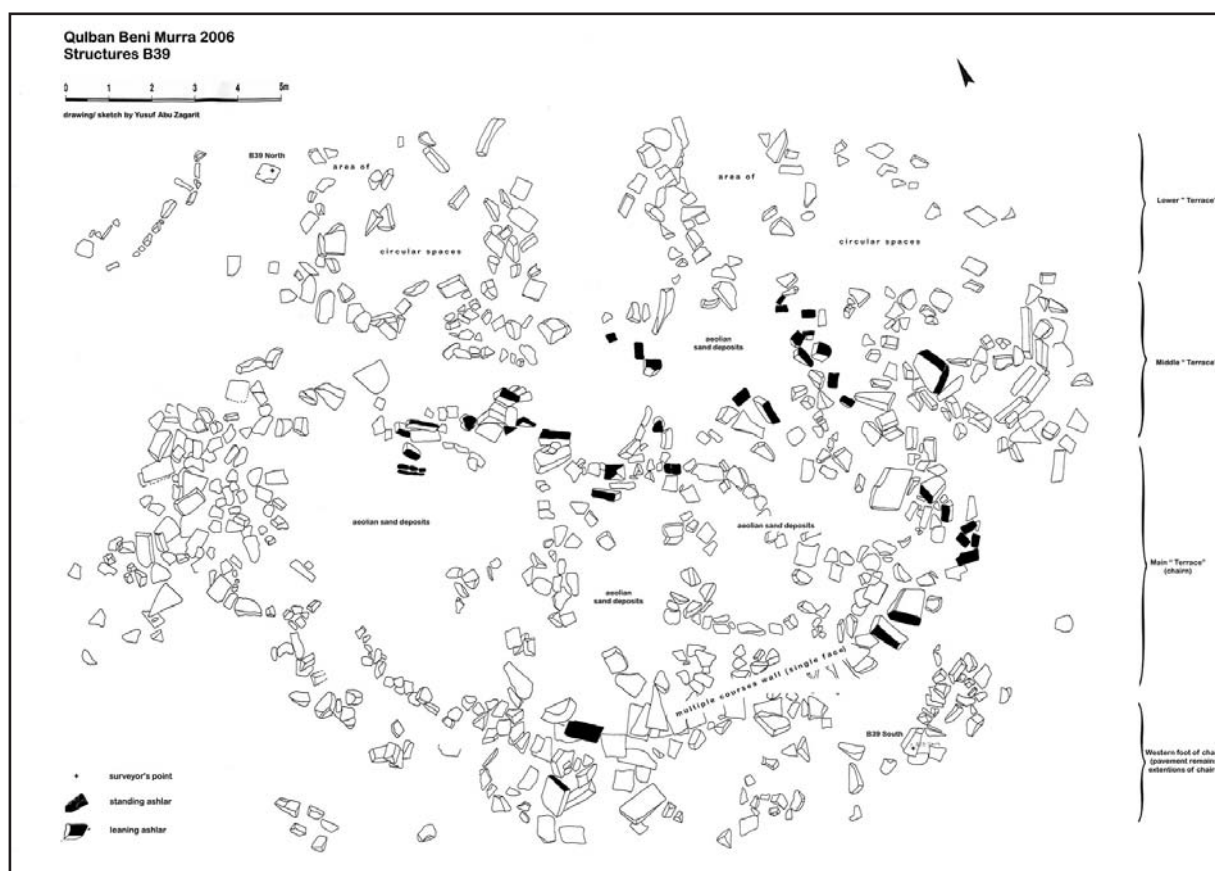


Fig. 7. Qulban Beni Murra, Area B, Structure B39: successively used cairn with a central row of standing ashlars, peripheral terrace pavements, and standing ashlar clusters to the E. (drawing: Eastern Jafr J.A.P., Y. Abu Zagrit).

Structure A27 displays ibex/ animal depictions on two standing ashlars (**Fig. 5**) as well as upon the fragment of a fallen ashlar (**Fig. 6**); their depictions face inwards, i.e. towards the interior of the structure. Isolated animal petroglyphs have also survived on standing and fallen ashlars from other circular structures in Area A.

The Petroglyphic Imagery

Unfortunately, the overall preservation of the imagery at Qulban Beni Murra is relatively poor. This poor preservation is particularly due to the state of the exposed upper layers of the local tabular sandstone bedrock (after Bender 1975: Ks1, “white sandstone/ silicified sandstone/ brown coarse-grained sandstone” of the Lower Cretaceous/ Santonian) that tends to erode in layers; the raw materials used for the ashlars was taken from the banked bedrock exposed on the flanks of the wadi. The other major negative impact to preservation are heat cracks affecting the ashlars (**Fig. 9**); **Fig. 10** shows the current *in situ* destruction as a result of both the aforementioned factors.

No scenic or group motifs were found in Qulban Beni Murra; rather the individual depictions are unrelated and populate more or less densely the surfaces of the ashlars (**Figs. 5 and 9**). Apart from the well-identifiable ibex (*Capra ibex nubiana*, Bennecke 2009: 351), all other animals are difficult to identify. In many cases, it is only evident that they represent four-legged creatures shown in a “squatted style”. However, some depictions are very close to Schmidt’s “predators” (Schmidt 2009). In addition to the animals, unknown signs were also applied to the surfaces. No hand motifs or “worshippers” (*cf.* below, Hujayrat al-Ghuzlan) are attested. It has to remain speculation as to whether other ungulates, *e.g.* gazelles, are among the unidentifiable four-legged animals.

Technically, the petroglyphs were made by extensive picking and engraving.



Fig. 8. Qulban Beni Murra, Area B, Structure B39: successively used cairn with a central row of standing ashlars, peripheral terrace pavements, and standing ashlar clusters to the E, from SE. (photo: Eastern Jafr J.A.P., H.G.K. Gebel).



Fig. 9. Qulban Beni Murra, Area B, Structure B39: ashlar with animal petroglyphs standing in the cairn’s central row of ashlars, facing E. (photo: Eastern Jafr J.A.P., H.G.K. Gebel; black scale is 50 cm).

Hecht's stylistic overview on ibex depictions from the 'Aqaba area serves as a very useful formal tool to address style, although the question is to what extent style is influenced by the bedrock type/ quality upon which it is used: indeed, our ibexes from Qulban Beni Murra come close to his Style Fig. 4e. They differ clearly from the slender animals of Wadi as-Sahab al-Abyad 38 of the area ("Ibex Rock"; Mahasneh and Gebel 2009: Figs. 3-4) which we date to the Neolithic (*cf.* also Rhotert 1938); the ibex findings of Qulban Beni Murra do not show an over-sizing of the horns' diameters as is the tendency in the Neolithic.

The Commonsensical Ibexscape

Qulban Beni Murra lies at the junction of the *badiya* (*e.g.* Betts 1968), the northwestern Arabian, and the Wadi 'Araba/ Sinai/ Negev rock art regions (*e.g.* Rhotenberg 1972; Anati 1999; Otto 2002; Avner 2002; Pinkett and Mithen 2007; Hecht 2009). In all these regions, a prevailing ibex symbolism is attested, also for the Late Chalcolithic/ Early Bronze Age. From these findings – and more recent discoveries from the settlement of Hujayrat al-Ghuzlan (Schmidt 2009) – one may conclude that an ibex iconography was common in this period not only to shepherd cultures but also to sedentary communities (Schmidt 2009).

In his recent thorough study, Klaus Schmidt (2009) has presented well-dated evidence (first half of the fourth millennium BC) of ibex/ predator/ "worshipper"/ hand palm wall decorations from a spacious building in Tall Hujayrat al-Ghuzlan north of Aqaba; they are the first of their kind ever to have been found. These murals were applied using a simple technique: simple or parallel lines were impressed into the still wet mud plaster using the tips of the fingers; a second simple "technique" of decoration is the impression of the palms of the adult hand. Five groups of depictions have so far been identified, normally observed in the upper parts of the walls. Ibexes and a predator (leopard?) are also represented; whereas the former measure between 29 and 52 cm in height and are between 31 and 42 cm long, the latter are some 20 cm in height and 67 cm long. Human beings with

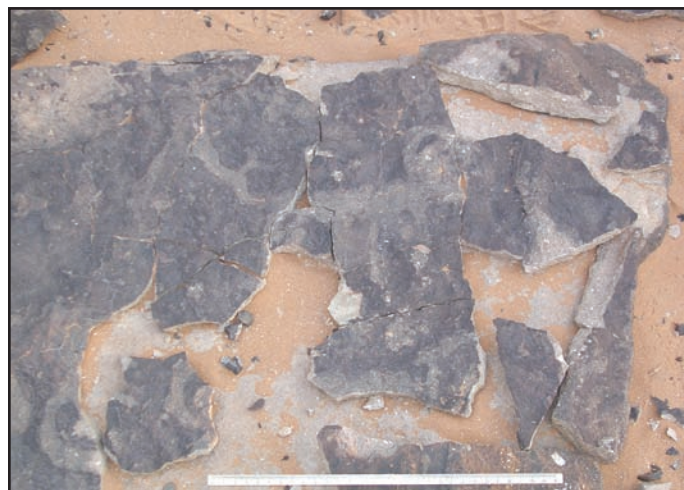


Fig. 10. Qulban Beni Murra, Area A, Structure A21: example of petroglyphic art eroding *in situ* by heat fracture. (photo: Eastern Jafr J.A.P., H.G.K. Gebel; scale is 30 cm).

upraised arms ("worshippers", heights 26-31 cm) also occur. A potential scenic character of the depictions is not clear: the depictive elements have no obvious relationship to each other, although Schmidt (2009: 100) assumes such a relationship with regard to the combination of the elements. In terms of archaeozoology, the ibex plays no role in the wild animal diet of Hujayrat al-Ghuzlan, as is also the case with gazelles and any other types of game (Bennecke 2009). Schmidt affirms that the ibexes of Tall Hujayrat al-Ghuzlan appear in a sacred milieu, concentrating in a building complex which he names, albeit with slight hesitation, "temple". In his article, Schmidt opens the discussion by presenting a "dance of ibexes" hypothesis (Schmidt 2009: 110), supported by the idea that humans with the upraised hands might be dancers (original idea from Y. Garfinkel).

The ibex depictions of Qulban Beni Murra should not – at least – reflect an element of the actual animalscape of the former site's steppic environment, particularly since these animals are inhabitants of mountainous areas such as Jabal at-Tubayk to the south; predators, however, would do. Thus, the ibex rather represents a motif of the mindscape of the people using the area. Since the animal petroglyphs are attested in primary (B39) or secondary (A27) sepulchral contexts, the question has to be approached whether these depictions reflect an association with funeral behaviour. Furthermore, the question also arises

as to whether we are dealing with popular motifs representing a general veneration of these wild animals, i.e. whether they had a specific magical meaning, and/ or whether they were part of the ritual/ belief system of the Qulban Beni Murra shepherds.

A specific sepulchral background of the Qulban Beni Murra ibex/ animal depictions should be excluded since these motifs also occur in many other Late Chalcolithic/ EB contexts. As such, they must rather reflect a common but restricted animal symbolism that was confined to the ibex and (a) four-legged animal(s), but not to a specific ritual context. This means that such depictions can simply also appear in burial contexts. This leads to the careful interpretation of the Qulban Beni Murra petroglyphs as reflecting a dominant commonsensical symbolism which can show up in, among other areas, burial contexts, but which – for unknown reasons – was used/ survived in only two/ a few specific locations at the site. The use of the imagery in the Late Chalcolithic/ EB may already have lost its connection to the original (Kilwa, Rhotert 1938) and transformed Late Neolithic meanings and magic or ritual contexts, representing a more unspecific commonsensical decorative iconography of veneration.

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