

Scandinavia's most finds associated rock art sites

Abstract

This paper deals with three rock art sites that until now have yielded most finds of all investigated rock art sites in Scandinavia, namely the rock art sites at Torp in Tossene parish on the peninsula of Sotenäset. These sites have displayed numerous artifacts and features of both ritual character as well as domestic. The work and investigations carried out so far have been exceptionally rewarding in terms of new knowledge gained of the role of the rock art sites and the actions executed there. C14 analyses of the finds have demonstrated a clear chronological connection between the prehistoric activity and images on the rocks, with C14 datings that mainly range from about 1500 to 300 BC. Moreover, by trying to understand the role of the carvings, that is to say the way they were used in socio-ritual contexts, there is also a possibility of a new approach to the main issue - to gain a better insight into the significance and function of the art. The general outcome of these excavations was that comparatively small rock art sites located on higher ground have yielded a large number of prehistoric finds and features that correspond to the typological dating of the rock art images. In contrast, excavations at larger, monumental rock art sites with more communicative locations in the landscape have displayed very sparse finds and no concrete prehistoric features

The Tanumproject and the excavations by the rock art at Tossene

A number of excavations at rock art sites in northern Bohuslän, in connection with the Tanum project, have provided some interesting observations. By investigating the immediate surroundings using traditional archaeological methods, including archaeological excavation right in front of and beside the panel, we can hopefully better understand the site in its full complexity. In order to execute such a study the *University of Gothenburg and Vitlycke museum* decided to examine the immediate surroundings of a number of rock art sites in Northern Bohuslän, Sweden. Within the frame of this project - *The Tanum project* - seven different

places with rock art sites have been excavated, the investigations started 1997 (Aulin & Gustafsson 2002, Bengtsson et al 2005). The aim of the excavations has primarily been to find remains of activities but also examine the possible relationship between the established chronologies of the ships on the rock art and artefacts found on the site (see Kaul 1998, Ling 2008). Another important aim was to gather empirical knowledge about the sites and what we could expect to find around them, in the same way that archaeologists normally have an expectation of different activities. That kind of empirical knowledge was more or less lacking prior to the project.

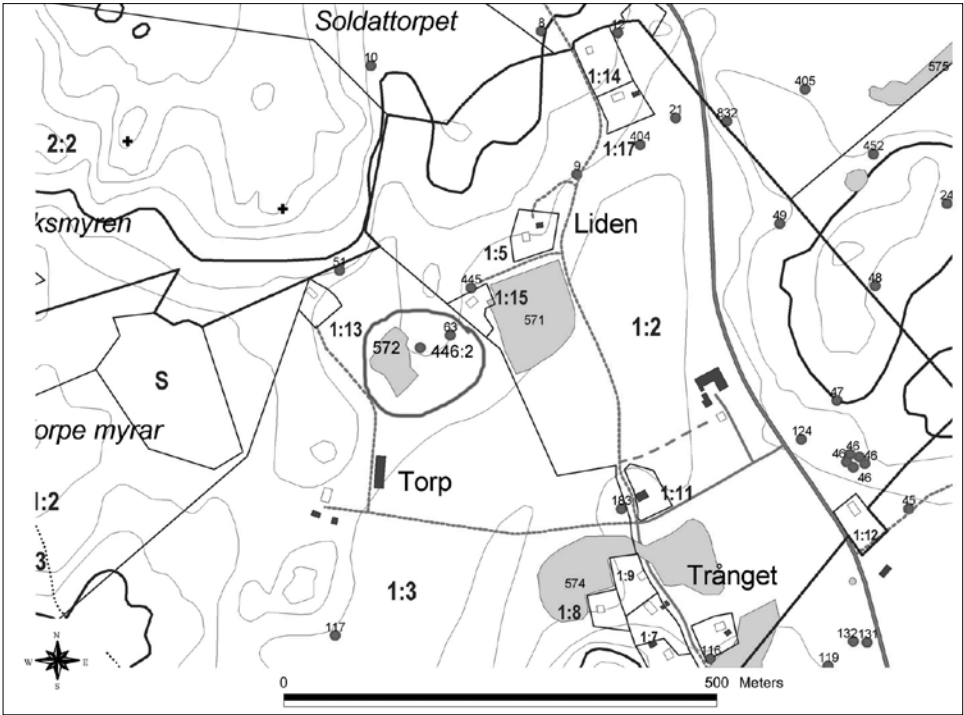


Fig. 1. Map of the prehistoric remains at the Torp area, Tossene parish, about 100 km north of Gothenburg. The investigated area with the rock art Raä 446:2 and the settlement site Raä 572 are located in the centre of the map. The dots denotes rock art and polygons denotes settlement features

Turning to the excavations at the rock art in Torp, Tossene parish these have been carried out during two phases. The area is extremely rich in prehistoric monuments, mainly rock art (Fig 1). Recent inventories of the area, using the most up-to-date methods for documentation and localization of rock art, have resulted in a doubling of the number of sites in the parish, from 192 to

Fig 2. Photo of the panel Raä 446:2



404 (Bengtsson 2004). Another interesting fact is that a majority of the rock art sites are located on higher ground close to pre-historic settlements, away from the Bronze Age sea shore.

The first excavations were carried out during the season 2002-2003, and the second during the season 2005-2006. The rock art site

Fig 3. Photo of the panel Raä 446:3





Fig 4. Photo of the stone paving in front of the panel Raä 446:2

Tossene Raä 446:2-3 was discovered in 1998 as a result of a survey and documentation project carried out by Vitlycke museum (Fig 2). Already at the time of the discovery it was noted that parts of the carving were covered by thick soil containing pottery sherds and burnt clay, so the decision to excavate the site was not difficult to make. The panels include motifs such as are, cup-marks and humans (446:2) as well as deep cup-marks and grooves (Fig 3). The dating of the sites to the Late Bronze Age and to the Early Iron Age seems to be a reasonable suggestion (e.g Kaul 1998, Bengtsson 2004, Ling 2008). The distance between the two panels is only one meter. The two sites are located on two rock-surfaces separated by a depression in the rock. The depression was filled up with stones of varying sizes and many of them were fire-cracked. Towards the bottom the depression turned into a crack. The rock is divided by several cracks of varying depths and widths. A well preserved paving was found in front of the panel (Fig 4). The paving was constructed in two layers, the lower less dense. Under the paving pottery sherds, a

rubber stone, burnt clay and flint flakes were found. Beside the carving and partly covering it was a heap of mostly fire-cracked stones, mixed with soil. Radiocarbon samples (Fig 5) reveal that the construction by the site 446:2 was used first during the Early Bronze Age and was in continuous use in approx. 2000 years; 1220-920 BC (2910 ± 50 BP), 1120-890 BC (2835 ± 45 BP), 1080-840 BC (2825 ± 45 BP), 210-30 BC (2135 ± 40 BP), 430-640 AD (1525 ± 45). The oldest dating in the construction comes from barley, *Hordeum Vulgare*, 1540-1400 BC (2630 ± 40 BP). Another grain from barley, *Hordeum Nudum*, was dated to late Bronze Age 860-760 BC (2630 ± 40 BP). A grain from oats, *Avena Sativa*, was dated to 550-200 BC (2355 ± 55 BP). It seems obvious that the construction was built in at least two phases to judge from the layers.

The area with burnt stones was 25 square meters and it was at maximum 0.5 m thick. In this area a great amount of burnt clay and pottery was found. The number of pottery vessels deposited can be estimated to approx. 50. Most of the pottery however had

Bronsåldersdateringar

M. Stuiver, A. Long and R.S. Kra eds. 1993 *RadioCarbon* 35(1); OxCal V3.9 Bronk Ramey (2003); cub r4 sd:12 prob usp (chron)

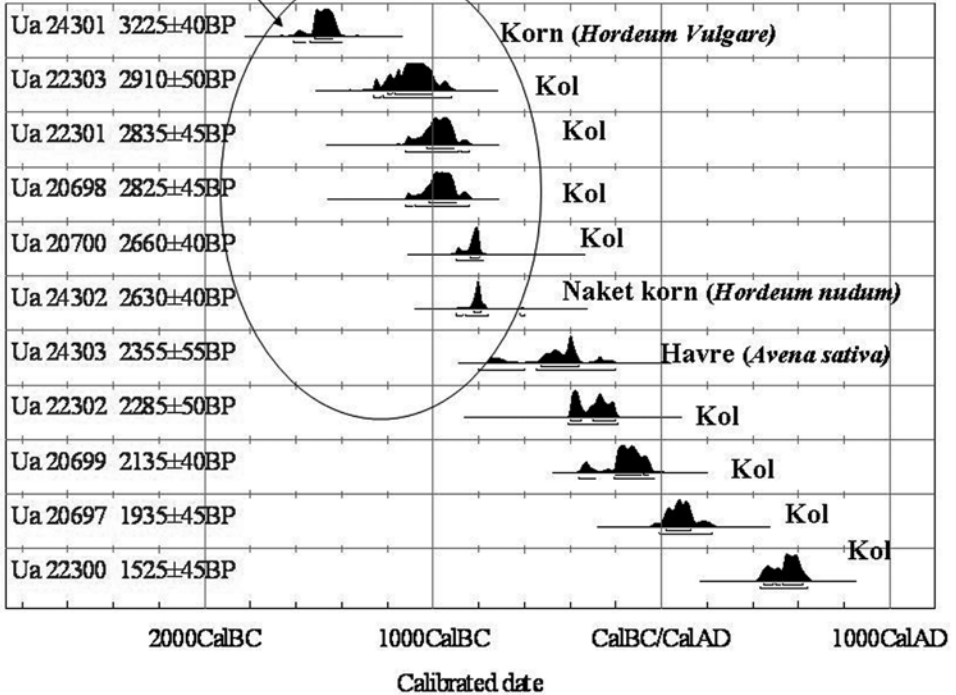


Fig 5. The radio carbon dated samples from the site Raä 446:6. Note that 6 of these dates to the Bronze Age.

probably been brought to the spot in the shape of shreds, not as whole vessels. Several hammer stones were deposited among the fire-cracked stones, and several kilos of flint flakes were found, of which many flakes were burnt, as well as great amounts of quartz and quartzite waste. A relatively large number of burnt bones originating from red deer (*Cervus Elaphus*) were also found. The most intriguing item found was a small mallet of stone, only seven centimetres in length (Fig 6). Obviously it's a miniature of the more normal sized mallets of this type that are frequently found all over Scandinavia and elsewhere. They are normally considered to be related to the megalithic tradition but are actually found also in Iron Age contexts and in connection with metallurgy (Indreko1956, Janzon 1984).

Another puzzling category of items found in the construction was c. 200 small pellets of burnt clay, only approx. 10 mm in diameter. Similar pellets have previously been found in various contexts in West Sweden. Since the pellets are found in ritual as well as domestic contexts it is difficult to have an opinion of their meaning and function (Persson 2005: 57-58).

The carved surface was framed by some cracks, up to a half meter in depth and width. The cracks were excavated as well. Three of them were filled up with fire-cracked stone mixed with soil. The cracks yielded pottery sherds, flint flakes, of which some could be refitted, quartz and quartzite waste and the usual burnt clay. Some of the flint flakes had been wedged into the narrow bottom of the

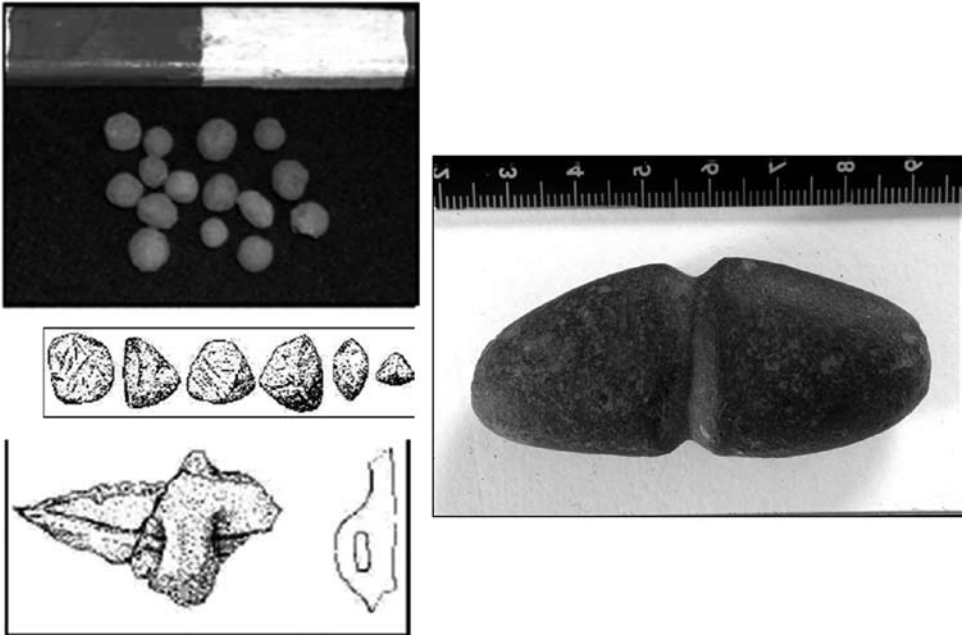


Fig 6. Some of the finds from the site Raä 446. Top left pellets of burnt clay, below this burnt clay bottom left pottery. To the right the miniature stone mallet.

cracks. In one case the layer with objects was sealed with hard clay.

The excavation showed also that a small plateau above the carvings issued a number of significant finds, among them a second mallet, somewhat larger than the first find. Evidence of constructions, probably post-holes, was found. These post-holes might be evidence of a small house, or posts serving some other function. Between two rocks a concentration of burnt bones were found. These have been analyzed and constituted of cod (*Gadus morhua*) and as well from cattle (*Bos taurus*). All the bones derived from the same feature that included a large amount of pottery and cereals (*Avena Sativa*) that was dated to 250-410 AD (1505 ±30 BP).

This construction was difficult to excavate since it contained a great number of roots left by ewe trees that once grew in this locale. Excavation of the plateau can therefore not be finalized until the year 2008. On the same plateau there is a row of largish boulders

that seems to form a kind of enclosure between the rock surface with the plateau, and the surrounding area. The bone deposit mentioned above was found between two of the boulders. The distance between the boulders varies between a few decimetres to a meter or more. At least one boulder is positioned on top of the cultural layer and was therefore not brought there by the inland-ice. One boulder is of pure quartz, a type of rock which possesses strong ritualistic connotation.

Further study will possibly prove if the row of boulders makes up a fence which can be tied to the carving site or if it has had another function. In light of the results and finds made during the course of the Tanum project it stands clear that the excavation and investigation of the carving 446 in Tossene is the most successful investigation of its kind so far and has propelled rock-art research many steps forward (e.g Johansen 1979, Bengtsson 2004 Goldhahn 2006).



Fig 7. The hearths by the panels 63:1-2. Note the spectacular warrior, in an acrobat pose, at the closest panel.

Another rock art site is located about twenty meters north-east of carving 446 and this one has identification number Tossene Raã 63:1-2 and the site consists of two different panels. An investigation of the space between two of these produced a very interesting result. Right between the two carved surfaces, two hearths were found located about one meter each from one and one and a-half meters from the other (Fig. 7). The hearth proved to be located directly on the rock surface and had caused the characteristic type of damage mentioned above. The hearth has yet to be dated but there is no doubt it is connected with the carvings. Two more hearths were located within a few meters from the first. They have also yet to be dated. Besides the hearths flint was found as well as ceramics but also completely new type of find: a piece of rippled sandstone which is fossilized beach sand, and you can clearly see the impressions

made by waves. The colour is usually red. They are also occasionally found in graves.

The settlement site

About 40 meters northeast of the area with the investigated rock art sites, a prehistoric settlement site, Raã 572, was excavated, which was uncovered during the 2005 season. A total area of about 1000 m² was then uncovered with a backhoe (Fig 7). The area displayed altogether 60 prehistoric features. Most of these, about 30, were postholes there were also 20 small settlement pits, 8 hearths, some rather large and one 3 X 1 meter "roasting pit". The overall impression of this domestic area was that it seemed to have been intensely used for different kinds of domestic activity, adjusted to the soil type and the topography. Most of the postholes were concentrated to the northern and flatter part of the area, located on a

tion but rather for more extravagant social and ritual occasions (Fors 1996). If one considers the dating of this feature to the Late Bronze Age period V, and that most of the figurative rock art on the nearby panels also derive from this period, it became tempting to assume that this feature was erected at the same time as most of the rock art. Maybe in connection to an extravagant seasonal social and ritual event or feasting, that took place at this area during the LBA.

Most of the hearths, 6 of a total number of 8, were located on the southern part of this area, on basis of ^{14}C -datings, morphology and pottery became a majority of these features related to the Roman Iron Age. For instance, one 1,4 m x 1,2 meter large rectangular hearth (1289) was carbon dated to 240- 400 BC (1725±30BP). Similar rectangular hearth features have been investigated at several locations in west Sweden (Flagmeier 2004). They are in general located close to the house structures from the Roman Iron Age and are interpreted to have been used for cooking (Flagmeier 2004).

To sum up, the so called domestic area showed activity that ranged chronologically from the Early Bronze Age - Roman Iron Age. The ^{14}C -datings that had been sampled during earlier excavations by the rock art site 446:2 pointed towards the following results. 6 of a total number of 11 samples derived from the Bronze Age and, two from the Pre Roman Iron Age the rest to the following periods. Almost the opposite results were obtained regarding the features from the domestic activity out in the field. Two carbon datings pointed towards the Bronze Age while 6 pointed towards the Roman Iron Age.

There were other clear differences between the materials found at these two areas. For instance, there were very sparse finds of quartz, burnt clay and burnt clay pellets at the "domestic site" while these features were numerous by the carvings. Moreover, the prehistoric features seemed represent different actions, the ones by the domestic sites dominated by a more " functional" character such as postholes, pits, roasting pits

and hearths for cooking. While the features by the rock art sites rather indicated that a ritual action had taken place there, with a high number of deposited pottery, burnt clay, quartz, flint, clay pellets, stone hammers and presumptive fragments of figurines.

Discussion

The first observation is that depositions, more or less extensive, have been made close to the panels, thus turning the site into an arena for sacrifices and offerings. We cannot say whether it is the art that has attracted the depositions or vice versa. In one case, Tossene 446:2, the heap of fire-cracked stones probably was constructed prior to the images since the latter most likely can be given a rather late dating. This can not, however, be said about the deep cup-marks and the grooves on 446:3 only one meter distant from 446:2. On the contrary we may suggest a very early dating of these, perhaps Neolithic, since grooving is a typical feature to be found on the capstones of the Neolithic megaliths. In most other cases radiocarbon datings or typology of the artefacts seem to correspond very well to the estimated dating of the carvings. We end up with an understanding of the importance of the place itself.

A feature of particular interest is the cracks. Several rock art excavations have revealed that cracks in the rock have been used for deposition of various items. In the case of Tossene 446 the bottom of several of the deepest cracks was utilised for this purpose. Pottery sherds, flint flakes, quartz and burnt clay were placed in the cracks and subsequently sealed with clay. The same phenomenon is observed by a rock art panel in the Tamgali Valley in Kazakhstan

Various kinds of offerings are there, such as animals, or other goods (objects, food). One intriguing feature of this worship is the squeezing of the offerings into the rock cracks, which it would be difficult to explain exclusively by the wish to prolong the life of these offerings by forcing them into the rock rather than simply laying them on the ground. Items placed into such cracks include

arrows, wooden implements for starting a fire, and sticks which may have served in the past to suspend other ritual objects (Rozwadowski 2001:65-86).

Cracks are important not only in rock art contexts but also for graves. In the Tamgali case Rozwadowski suggest that the cracks have been used by shamans as a "metaphor of trance - formation." These common rituals and ceremonies were attended by specialists, whether we call them shamans, priests or druids is just a question of how we define their role, while the domestic cult was handled on a family level. It is obvious that the cracks played an important role in the rituals and sacrifices that took place at many rock art sites, probably as way to get in contact with and mediate offerings to subterranean powers

There is yet another aspect of the rock art that needs to be addressed, namely the ritual feasting. The importance of feasting has been emphasised by several scholars (e.g. Brunaux 1988, Kristiansen 1998, Hayden 2001). Hayden has suggested a number of features that is connected to feasting and can be used to classify and detect archaeological remains of such events. Among these are "food, preparation vessels, serving vessels, food-preparation facilities, special food-disposal features, feasting facilities, special locations, paraphernalia for public rituals, pictorial and written records of feasts, food storage facilities etc." (Hayden 2001: 22). If we use site 446 at Torp in Tossene as an example, we find that most of Haydens features are represented there. The food and the special food-disposal features are represented by the grains and the red deer bones, probably the remnants of a deer sacrifice, the preparation and serving vessels as well as the food storage facilities are represented by the approx. 50 pottery vessels found on the site and by the rubber stone. Large amounts of reddish burnt clay were found on the site. The clay could have been used to paint the carvings; almost all excavated rock art sites have yielded burnt clay, but it can also be the remnants of a construction e. g. an altar or a platform for sacrifices or other ritual

purposes. Some pieces of clay seem to have had a spherical form and may be sacrificed loom weights or small figurines . If we should try to visualise the scenario on the site when it was in use, we may have sacrificed food and beverages, various wooden objects and tools, strips of fabric hanging from sticks or bushes (for the latter see Hygen & Rogozhinsky 2004), plaits of human hair and perhaps flowers. We cannot expect that these kinds of objects should be preserved, with the exception of pottery etc. but the archaeological evidence clearly points in the direction that we must regard some of the rock art sites as sanctuaries.

The high amount of datings and material from the Roman Iron Age near the rock art panels seemed in a sense puzzling. However, in general, northern Bohuslän rock art appear to have a strong spatial relation to activities from the Roman Iron Age, especially burial grounds (Bertilsson 1987:149, Ling 2008). For instance, cemeteries with barrows from the Roman Iron Age and adjacent rock art are a rather common feature. The adjacent cemetery by Tossene Church may serve as and illustrative example of this fact. It includes typical barrows from the Roman Iron Age that are bordered by rock art from the Bronze Age. The same observations have been made at Torsbo in Kville parish and at many places in Tanum parish. In fact, in the Tanum area, barrows from the Roman Iron Age have the closest spatial relation to rock art, of all archaeological features (Ling 2008: 154-155). It is, indeed, interesting speculate in what this situation reflects. Ulf Bertilsson's interpretation of this fact seems very reasonable

In our opinion, it is obvious that this relationship cannot be of spatial nature solely. It must have wider implications of a social and ideological nature. The phenomenon to place the Iron Age burials on or adjacent to the Bronze Age rock carvings could not have been accidental (Bertilsson 1987: 149)

Another interesting fact is that pollen records from all areas in northern Bohuslän demonstrate that agricultural activity seems to have

made its first general impact from about 0 BC onwards (Ling 2008:6). It is notable that the making of figurative rock art seems to have ceased at about this time. In connection with the Tanum project, for instance, when intense environmental studies were made of 35 rock art panels in Askum parish at Sotenäset, no pollen-based evidence or other indications of prehistoric agricultural activity were found adjacent to the rock art panels (Ling 2008:6). The rock art may then have reflected a more mobile and seasonal action in the landscape during the Bronze Age. During the Early Iron Age the praxis and conceptions about the landscape may have been altered towards a more fixed and organized agrarian tenure system in the landscape. It may then have been important to reconnect to already established and fixed symbolic places in the landscape such as rock art or graves. Thus, instead of making new rock art in the landscape the present sites became reused and sometimes revitalized. A similar pattern has been argued for in Norway and on the British Islands (Bradley 1997, Nordenborg–Myhre 2004).

Some final remarks

The practice of prehistoric rock art in the Bohuslän landscape had and has numerous dimensions. Only some of them have been discussed in this article. Thus, rock art's different patterns and relationships need to be distinguished and defined. For instance, in excavations at rock art sites in northern Bohuslän, comparatively small sites located on higher ground have yielded a large number of prehistoric finds and features, whereas the finds at larger, monumental sites with more communicative locations in the seascape/landscape have been very sparse. This trait holds both for the maritime rock art and for the terrestrial rock art on higher ground, while less complex localities tend to be sited closer to settlements and graves (Ling 2008).

Moreover, a trait that is evident in the rock art rich areas in northern and central Bohuslän is that localities with large human figure tend to have been made on higher

ground away from the sea, as in Tossene, while panels dominated by ship images were made close to the Bronze Age shore. Human figures on these lower panels seem to have been more or less adjusted to the size of the ships (Ling 2008 146, 229). Perhaps these representations and material traces altogether illustrate social conceptions such as collective versus more individual social spheres of action and in the landscape: the lower maritime land for collective maritime aggregations and interactions, represented by the "collective" ship depictions, and the higher ground for more individual actions and positions, represented by abnormally large depicted humans in relation to the ships and by traces of ritual action by the panels. Could this pattern reflect that smaller sites, as the current ones in Tossene, located on higher ground, close settlement were made, used and reused by smaller social units, such as households? Could then the larger rock art sites located on communicative locations in the seascape more reflect a collective norm of aggregation and communication in the seascape?

Finally, the rock art sites excavated within the Tanum project display all essential features that are needed to allow us to regard some of these sites as socio- ritual arenas. The importance of the site is reinforced by the images and by sacrifices and by the ritual action. Future research within the frames of the Tanum project will no doubt give more details of the nature of these rituals.

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