

**Antti Lahelma**

## **EXCAVATING ART: A 'RITUAL DEPOSIT' ASSOCIATED WITH THE ROCK PAINTING OF VALKEISAARI, EASTERN FINLAND**

### ABSTRACT

The rock painting of Valkeisaari is located on a lakeshore cliff of a small island on Lake Saimaa, eastern Finland. In the 1960s, a number of finds – fragments of pottery, some flints and an 'anthropomorphic' stone – were made from a narrow, sandy terrace in front of the painting. In order to clarify the nature of this unusual discovery, excavations were carried out in 2005 at the spot of the pottery finds. Remains of a fireplace, carbonized seeds of edible plants and a strongly stained cultural layer testified to an intensive and long-standing human presence on the terrace. Finds consisted mainly of broken or whole quartz implements. The site, dated to the Early Metal Period (and possibly later), is interpreted as a ritual deposit connected to the rock painting. The rituals seem to have involved the preparation, consumption and sharing of food. A close ethnographic parallel can be found in the sacrificial meals arranged at the *sieidi* – sacred stones and cliffs worshipped by the Saami of northern Finland.

Keywords: Rock art, ritual, anthropomorphism, Finland, Saami

Antti Lahelma, University of Helsinki, Institute for Cultural Research, Department of Archaeology, P.O. Box 59, 00014 University of Helsinki, Finland  
Email: antti.lahelma@helsinki.fi

### INTRODUCTION

As recently as mid-1990s, the American archaeologist Lawrence Loendorf (1994) felt compelled to call for the use of traditional archaeological methods in the study of prehistoric rock art. According to Loendorf, trained archaeologists (especially in North America) have shown a remarkable lack of attention to rock art, leading to a situation where rock art research is dominated by amateurs and non-archaeologists. While these have certainly made considerable contributions to the study of rock art, they have not been trained in (and, at least in the Nordic countries, are not allowed to use) certain basic archaeological methods, such as excavation or soil geochemical analysis. Similar concerns were raised in North America already by Julian Steward in the 1930s (Steward 1937). There appears to be much-delayed need to develop more 'archaeological' approaches to the study of rock art (Taçon & Chippindale 1998).<sup>1</sup>

North European rock art has perhaps received more attention from trained archaeologists than its American counterpart (see e.g. Nordbladh 1995; Goldhahn 2006), but some of the problems here remain quite similar. It is surprising to find that in spite of the fact that scientific rock art research first developed in Scandinavia in the course of the 19<sup>th</sup> century (Bahn 1998), archaeological excavations at Scandinavian rock art sites have been very few and far between. Given the fact that questions of chronology and the 'meaning' of the art – two aspects of the art quite possibly reflected in material (or 'ritual') remains found at the sites – have been central issues throughout the two-century long history of research, excavations would seem to have been an obvious method to be used. Indeed, already the 'father' of rock art research, the Swede Axel Emanuel Holmberg (1848: 10) conducted excavations (of a sort) to settle questions related to rock art, and a few sporadic investigations have been carried out also by later Nordic researchers (e.g. Hallström 1960: 121;

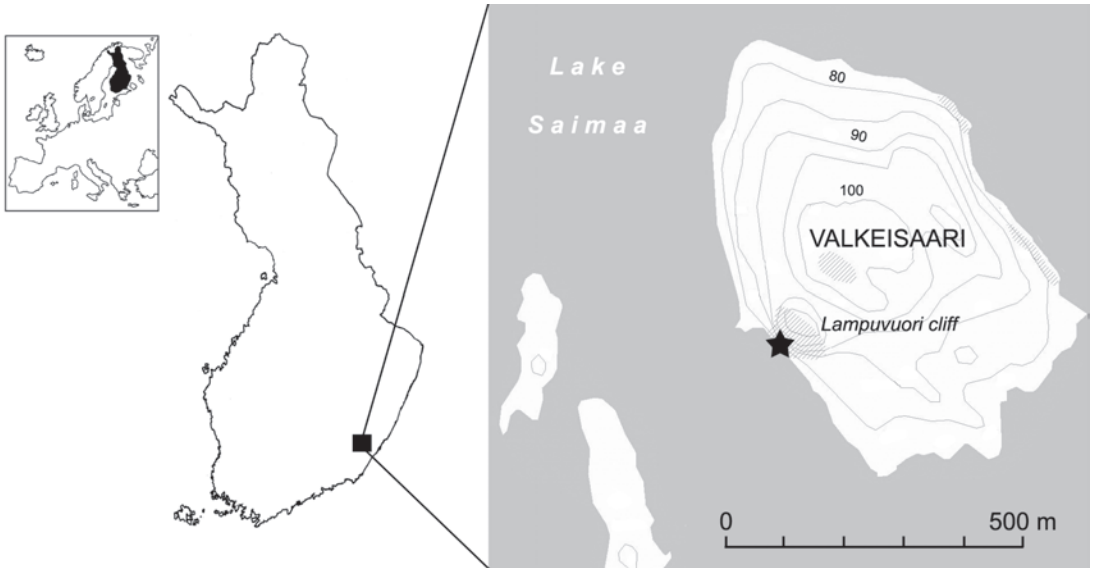


Fig. 1. The location of the island of Valkeisaari on Lake Saimaa and the painted cliff of Lampuvuori (Finnish YKJ-grid coordinates for the excavated area are p: 6782 510–514, i: 3549 228–232, z: 78.90–79.30 m a.s.l, and for the Valkeisaari A rock painting p: 3549 212, i: 6782 539, z: 86,75–87,02 m a.s.l).

Sarvas 1969: 28–9; Johansen 1979; Taavitsainen 1981: 12; Helskog 1988: 42, 51). Nonetheless, such studies have by and large remained in the footnotes and margins of Nordic rock art research. As a method of enquiry into the meaning of rock art – and especially that associated with hunter-gatherers – archaeological excavations have come to play a significant role only in the late 1990s (Bengtsson 2004a; Lindgren 2004: 46–58; Goldhahn 2006: 91–4).

Before the excavations of the rock painting site of Valkeisaari in eastern Finland – the subject of this paper – only two Finnish rock art sites had yielded any signs of prehistoric activities under excavation. At the large painting of Astuvansalmi excavations have been carried out both on dry land and under water. The former, conducted already in the late 1960s, yielded two stone arrow points: a Late Neolithic slate point and a broken fragment of an Early Metal Period quartz point. No excavation report was written of this investigation, but the finds were published together with the paintings by Sarvas (1969). More recently, four amber pendants (three of them anthropomorphic in shape), a piece of antler and a fragment of mammalian bone were found in Juhani Grönhagen’s underwater excavations in

front of the same painting (Grönhagen 1994). The second excavated site in Finland to have yielded finds probably of a prehistoric date is that of Kalamaniemi II in Luumäki, eastern Finland, where some traces of fire, a few pieces of burnt bone, flint and quartz were found (Luoto 1999). In addition to the excavated finds, a number of finds from rock art sites have seen light without proper excavations (see Table 1). The most notable of these are the unburnt bones of elks and water-birds found in an underwater test-pit made at the painting of Kotojärvi (Ojonen 1973). A fragment of a straight-based (Early Metal Period?) arrow point from the important painting of Saraakallio should also be mentioned. However, due to a lack of radiocarbon dates, only some of these finds can be securely associated with the paintings.

As mentioned above, archaeologists in Norway and Sweden have recently begun to show a new interest in excavating hunter-gatherer rock art sites. From the point of view of Finnish rock art, the most interesting results have been those made at the near-identical rock paintings of northern Sweden. For example, the 2003 excavations at the site of Flatruet in Härjedalen yielded three even-based stone arrow points (typologically dated to

*Table 1. Finds (both excavated and stray) associated with Finnish rock painting sites, stored in the collections of the Finnish National Museum (NM). The table reflects the situation in late 2006 according to the data collected by the author.*

Site	Description	Find number(s)	
Iitti Kotojärvi	Elk bones	NM 18428: 2-4, 6-7, 10	
	Bones of water-birds	NM 18428: 7-8, 10	
	Iron ore	NM 18428: 9	
Laukaa Saraakallio	A fragment of a straight-based arrow point (porphyrite?)	NM 21774	
Lemi Venäinniemi	Flint (gun- or tinderflint?)	NM 27906	
	A quartz item and flakes	NM 34514:1-2	
Luumäki Kalamaniemi 2	Quartz fragments (of uncertain provenance)	NM 35465: 1-4	
	Flint-and quartz flakes, burnt bone, charcoal	NM 31547:1-7	
Puumala Syrjäsalmi	A quartz core and flakes (uncertain)	NM 25736: 1-2	
Ristiina Astuvansalmi	Slate arrow point	NM 17636: 1	
	Straight-based quartz arrow point (fragment)	NM 17636: 2	
	Anthropomorphic amber pendant	NM 25771	
	Anthropomorphic amber pendant	NM 26331: 1	
	Anthropomorphic amber pendant	NM 26331: 2	
	Fragment of an amber object	NM 27146	
	Anthropomorphic sandstone object	NM 26331: 3	
	Fragment of deer antler (worked)	NM 26331:5	
	Mammalian bone (one fragment)	NM 26331:4	
	Taipalsaari Valkeisaari	Textile Ware pottery sherds (12 pieces, ca. 2/3 of a vessel)	NM 17040: 1
		Anthropomorphic pebble	NM 17040: 2
		Fragment of a flint object and two flakes	NM 17040: 3
The finds of the 2005 excavations (quartz items and flakes, pottery, bones)		NM 35202: 1-85	

ca. 1500 BC) which, according to the excavator, appear to have been shot at the painting (Hansson 2006). The excavations also unearthed signs of fires kept at the foot of the painting, with radiocarbon dates extending from ca. 4000 BC to 1200 AD. Fires were found associated also with the paintings of Höggerbet I and III in Ångermanland, excavated between 2001 and 2003 (Lindgren 2004: 50–3). Of these, the latter – where a fireplace was found inside a ‘cave’ formed by large boulders – is perhaps more interesting. The four radiocarbon datings made of the fireplace indicate that it had been used during at least two different periods, ca. 4000–4300 cal. BC and 1400–1000 cal. BC (Holmblad 2005).

In Norway, the first investigations of this kind were carried out at the painted cave of Solsemhula already in 1914, with finds of bone and different kinds of items dating to the Early Metal Period, possibly indicating ritual activities (Sognnes 1982). More recently, good results have been achieved at the important Mesolithic carving site of Vingen, where excavations have helped to

clarify questions of chronology, pecking technique and the ‘ideology’ behind the art (Lødøen 2003). However, more relevant from the point of view of this paper are finds associated with Norwegian rock paintings, and especially those made at the site of Ruksesbåkti in Finnmark, found in 1996 (Hebba Helberg 2004; Schanche 2004). The excavations, carried out in 2003, produced lithic material of quartz and chert and several consecutive layers of ashy soil. Samples of carbonized wood extracted from the soil were radiocarbon-dated between the 3<sup>rd</sup> millennium cal. BC and 15<sup>th</sup> century cal. AD (Hebba Helberg 2004: 6).

Russian archaeologists have arguably been more active than their Scandinavian colleagues in investigating sites associated with rock art. Excavations at the Karelian rock art sites of Lake Onega and the mouth of River Vyg include those conducted by Zemlyakov (1936), Bryusov (1940: 276-84) and Savvateyev (1977), to name but a few important studies (for a review of research history and results, see Savvateyev 1988). Of particular interest is the site of Zalavruga II at



*Fig. 2. A retouched photograph of the Valkeisaari A painting. The painting found in 1966 is generally thought to represent a boat (ca. 43 cm wide and 30 cm high) with an elk-head sculpture in the prow and a crew consisting of four 'arrow-shaped' or headless anthropomorphs. Today, the image is faint, partially covered by lichen and difficult to interpret. In this illustration, the painting has been made more distinct by adjusting the hue and saturation of red colours in the photograph. Photo and photographic manipulation: Antti Lahelma.*

River Vyg, where an enigmatic stone structure yielded spectacular finds of amber (68 items) and finely crafted arrow points (40 items), as well as Subneolithic pottery and other kinds of find material (Savvateyev 1977: 276-84). Finally, it should be mentioned that excavations at the rock painting sites of the Urals in Russia have occasionally also yielded prehistoric finds. For example, at the site of Pisanech on River Neiva bone arrow points, stone tools and bones of elk and bear were found deposited in ashy layers at the foot of the painting (Shirokov et al. 2000: 7). Although these sites lie geographically far away from Finland, their possible Finno-Ugric connection makes them relevant to the study of Finnish rock art.

In spite of the small number of excavations carried out so far, some recurring patterns are beginning to emerge from the results thus obtained. For example, the presence of signs of fire is a phenomenon found at several rock painting sites ranging from northern Norway to Sweden, Finland and as far as the Ural mountains. Similar, probably ritual use of fire has been observed also

in the case of the agrarian rock carvings of southern Scandinavia (Bengtsson 2004b; Mandt & Lødøen 2006: 202-4). Moreover, finds of arrow points – some of them broken – at rock painting sites also appears to be a phenomenon repeated at several sites over a very large area. Such commonalities in the ritual use of rock art may find parallels in the rich ethnographic literature on North Eurasian hunter-gatherers. However, in order to substantiate these patterns and to reach a more nuanced view of the phenomena associated with rock art, more excavations are urgently needed.

### *The unusual finds of Valkeisaari*

Valkeisaari is a small, rocky island (size ca. 800 x 500 m) on Lake Saimaa, located some 18 km west of the town of Lappeenranta (Fig. 1). A small rock painting consisting of a single boat figure (Fig. 2) and some fragments of painting was found on a lakeshore cliff of the island in 1966 (Luho 1968b, Kivikäs 1995: 149-51). The painting was found by a local amateur archaeologist, Keijo Koistinen, who then proceeded to investigate the surroundings of the painting, inspired by a conviction that there 'must' also be an accompanying sacrificial site. His luck had not run out: some thirty-five meters south-east of the painting he dug under a large flat slab lying on a narrow sandy terrace on the lakeshore, and found a concentration of pottery sherds, two flint flakes and a fragment of a flint item (NM 17040). All the finds were associated with a layer of dark, sooty soil. Koistinen referred to the flat slab (size 1.80 x 1.20 m, height 0.47 m) as a "sacrificial table" (Fig. 3). For convenience, the term is retained here, even though there is no evidence that the stone in fact played any role in a cult associated with rock paintings. It may have, but there is little evidence to support such an assumption.

Koistinen informed the local museum of his finds and the site was soon inspected by archaeologists – first by Matti Huurre (1966) and a year later by Ville Luho (1968a), who also proceeded to write an article of the painting and the finds associated with it (Luho 1968b). All the Valkeisaari sherds belong to a single vessel, approximately a half of which was recovered (Luho 1968b: 37). The pot has a flat base, is decorated around the neck with a pattern formed by comb-



*Fig. 3. A photograph taken by archaeologist Matti Huurre of the 'sacrificial table' and the site of the pottery finds in 1966, a short time after they had been found. The soil under the flat slab still appears to bear marks of Keijo Koistinen's 'private dig'. Photo: Matti Huurre/Finnish National Board of Antiquities.*

stamps and pits, and has according to Luho been ca. 16 cm high. The undecorated lower part is covered with a textile impression. According to Lavento (2001: 244), the vessel represents Textile Ware, even though it is not one of the most typical representatives of its kind. Luho (1968b: 38) dated the pottery finds of Valkeisaari on ty-

pological grounds to the Late Neolithic or Early Metal Period. The three finds of flint consist of a so-called eastern carbonic flint – a type of stone that isn't naturally found in Finland. One of the pieces bears clear marks of retouching and is therefore a fragment of an object. In addition to the finds of pottery and flint, a small natural rock



*Fig. 4. Excavations in progress on the Valkeisaari terrace in August 2005. Note the ‘anthropomorphic’ rock formation in the upper part of the image. Photo: Petri Halinen.*

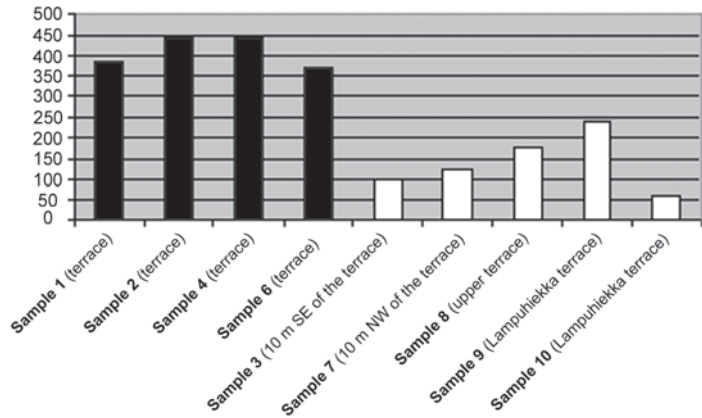
pebble vaguely reminiscent of a human face was collected in 1966. To this intriguing find I shall return below.

Strangely enough, while investigating the ‘sacrificial site’ Koistinen apparently did not notice a second painted area (Valkeisaari B) located directly above the site of the pottery finds. At any rate, it is not mentioned in the research reports of the 1960s. This painting is located at a much lower level – less than five meters above the modern level of Lake Saimaa – than the painting found by Koistinen. It appears to have been found only in the 1970s, when it is mentioned in a survey report (Miettinen 1975, site 13). The painted area is an irregular shape of red colour, ca. 2.2 m wide and 2.3 m high. No distinct images can be discerned in the painting, which has been regarded an uncertain painting (e.g. Kivikäs 1995: 151). There is, however, little reason to doubt that the coloured area is indeed a man-made painting, as

the layer of colour is thick and covers the quartz and feldspar crystals of the rock. Moreover, as Kivikäs (1995: 151) notes, two intensively red areas of paint may well be remains of a pair of hand-prints. Similar pairs of hand-prints have been found for example at the painting of Saraakallio (cf. Kivikäs 1995: 218).

The finds of Valkeisaari are unique in Finland and find only a few parallels in Northern Europe. Pottery has not been found at any other rock painting site in Finland, nor have clear traces of a cultural layer been observed at any other Finnish site, which typically fall directly into water. However, the precise nature and context of these finds has remained rather unclear. Already Ville Luho noted in his inspection report that the site of the pottery finds should be excavated in order to settle the question of its relation to the rock painting (Luho 1968a). A few years later, he mentions in passing that the archaeologist Pekka Sarvas ‘has

Fig. 5. Results of the phosphate analysis made at Valkeisaari. Black columns represent phosphate levels (P mg/kg) in soil samples taken from the excavated lower terrace (cf. fig. 6). White columns denote control samples taken e.g. from the sandy terrace of Lampuhiekka ca. 50 m WNW from the site. The result of the contaminated sample no. 5 has been omitted.



investigated the “sacrificial site” in the year 1970’ (Luho 1971: 7). Unfortunately, no research report exists concerning this investigation either, and Sarvas himself no longer remembers any details (pers. comm. 14.4.2005). However, it seems that nothing of interest was found.

Although the Valkeisaari finds are commonly associated with the painting and its possible ritual use, it has not been possible to rule out alternative explanations. As up until now the site had not been excavated, it could equally well be maintained that the finds have originated from a later dwelling site completely unrelated to the rock painting (Jussila 1999: 128). In order to clarify this question, a small-scale excavation was arranged by the author at Valkeisaari in August 2005 (Lahelma 2005a).

### THE 2005 EXCAVATIONS

In order to pinpoint possible areas of human activity on the Valkeisaari terrace, the research project of 2005 was begun with a soil geochemical analysis. Although routinely used in excavations of prehistoric dwelling sites, this investigation was the first of its kind at a Finnish rock painting site. Ten soil samples were taken from the terrace in front of the paintings and its surroundings. The results were promising: the high concentrations of phosphates in front of the painting on the lower terrace indicated intensive human activity (Kouki 2005a, see Fig. 5). By contrast, the phosphate sample taken in front of the painting on the upper terrace was no higher than the control samples and no significant variations were observed in the

level of pH in any of the samples (Kouki 2005b).

An excavation trench (size 10 m<sup>2</sup>) was laid out at the site of pottery finds and high phosphate readings, immediately below the lower rock painting (Figs. 4 & 6). The soil was excavated in 5 cm layers. A layer of brown cultural soil, stained dark by human activity, was encountered immediately below the turf almost throughout the trench. Moreover, in front of the ‘sacrificial table’, an area of black sooty soil mixed with bits of charcoal emerged. In the first excavation layer this black feature was of an irregular shape and covered an area of ca 4 m<sup>2</sup>, but as the excavation proceeded downwards it soon receded into a much smaller, roundish area. A concentration of burnt stones was found associated with the black soil. The feature can be interpreted as the remains of a fireplace (albeit not a very regularly-shaped one) kept in front of the rock painting and the ‘sacrificial table’. A flat slab found resting in the middle of the concentration of burnt stones may have acted as a foundation for the fireplace.

In front of the ‘sacrificial table’ and partly under it, a ca. 0.75 m long and 0.40 m wide area of yellowish soil, coarser and looser than in the surrounding area, probably indicated the area where Koistinen had dug in the 1960s. Four pieces of pottery clearly originating from the same vessel that Koistinen had found were found adjacent to the lens of coarse soil. As these were the only pieces of pottery found during the excavation, they confirm that the pot was indeed found under (or immediately in front of) the ‘sacrificial table’, contrary to the suspicions that have sometimes been expressed of its origin.

The layer of sooty soil extended to the fourth

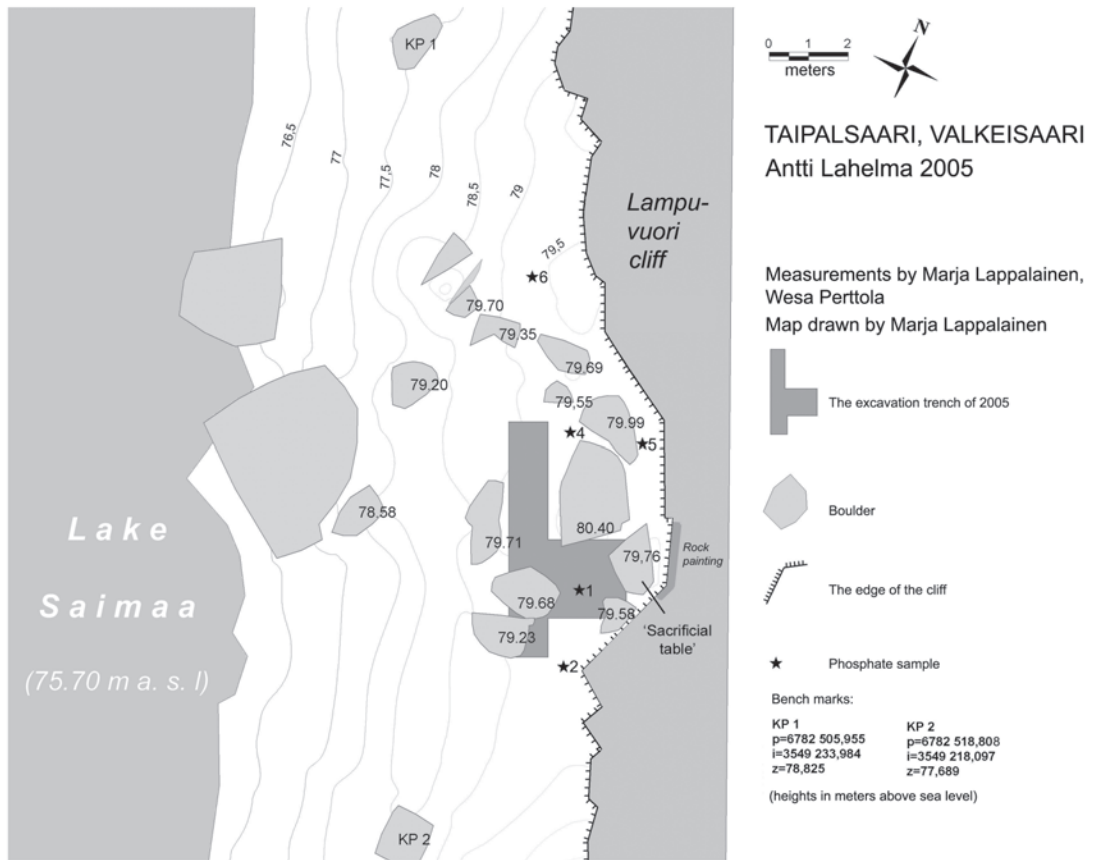


Fig. 6. An overview map of the lower terrace of Valkeisaari, with the excavation trench of 2005 shown. The figures refer to height measurements in meters above sea level. Based on a map drawn by Marja Lappalainen.

excavation layer, under which a dark brown stained soil emerged. The stained soil mostly did not exceed the sixth excavation layer (ca. 35 cm below surface). However, a clear exception to this was encountered in the northern end of the trench, where a small, distinct area of brown, stained soil extended as deep as the ninth excavation layer (ca. 50 cm below the surface). As finds of broken quartz implements were found concentrated in this soil, the feature probably represents a refuse pit dug on the terrace and intentionally filled with broken tools and other refuse.

Given the thickness of the stained, cultural layer, the number of finds in the 2005 excavations was relatively small. Altogether 47 finds clearly of a prehistoric date were collected. Of these, finds of quartz were by far the largest group.

### Lithic finds

Some forty quartz artefacts and a single flint flake were found in stratified contexts during the excavations. Given the fact that three flints were among the finds of 1966, the discovery of only one flint flake (NM 35202: 3) in 2005 is rather surprising. The flake represents a grey translucent flint – completely different from the creamy, yellowish-brown flints of 1966. Moreover, the flake was found close to the surface, in the 1<sup>st</sup> excavation layer. Judging by these observations, and from the fact that it featured several unfocused impact marks, it seems possible that it represents gun- or tinderflint of the historical period (Manninen 2005).

The quartz artefacts were found in two clear concentrations: one in the sooty soil in front of



the ‘sacrificial table’, and the other (altogether 19 artefacts) in the refuse pit excavated in the north-western end of the trench. Although the soil in the area between these concentrations was stained dark, few finds of any kind were made outside these two concentrations. According to the archaeologist Mikael Manninen, who analysed the Valkeisaari quartz finds, the find material consists to a very large degree (58 %) of complete or fragmentary implements. Most of the implements can be identified as typological scrapers, but without use-wear analysis their function cannot be identified with any certainty. Only two of the scrapers are complete items (NM 35202: 30, 69). This high share of broken or whole implements vs. flakes (some of which may upon closer inspection still turn out to be implements) is the most notable feature of the Valkeisaari quartz assemblage. In this respect, the Valkeisaari finds differ clearly from typical quartz finds at Finnish Stone Age or Early Metal Period sites: the near-total lack of residue from processing quartz indicates that the terrace is probably neither a dwelling nor a knapping site, but something quite different.

Manninen (2005) concludes that quartz evidently has not been worked at on the Valkeisaari terrace, but complete items appear to have been brought to the island and used there to process some hard material. In the course of this activity some of the items have been broken. Broken tools have not been repaired, but have been abandoned on the terrace – or, as we have seen, deposited in the refuse pit. The two complete scrapers found in front of the ‘sacrificial table’ differ from this general pattern and may have been abandoned for a different reason.

### Pottery

As already mentioned, only four small body sherds of pottery (NM 35202: 4- 5, 14- 15) were found during the 2005 investigations, all of them from a small area immediately in front of the ‘sacrificial table’. All the pieces have a scraped inner surface, possibly resulting from the use of a wooden spatula, and one piece (NM 35202: 5) features a distinct textile impression on the outer surface. Crushed stone (including feldspar and muscovite) has been used as a temper in the clay, and impressions left in the clay suggest the use also of a fibrous, organic temper. According to

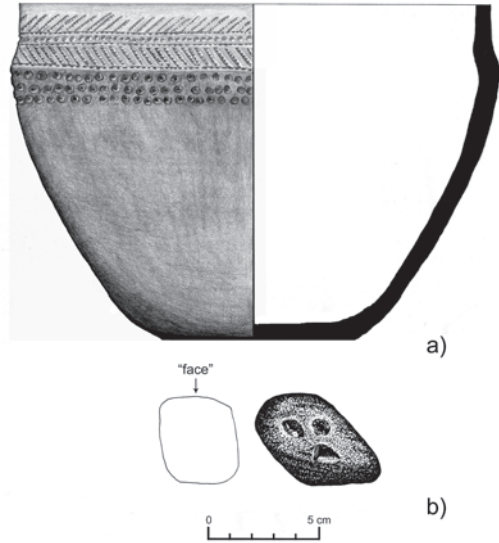


Fig. 7. A reconstruction drawing (a) of the Textile Ware pot (NM 17040: 1) found in 1966 front of the lower rock painting, based on information obtained from Luho (1968b) and Lavento (2001), and (b) of the ‘anthropomorphic pebble’ (NM 17040: 3) found among the sherds, apparently originally placed inside the pot. Drawings: Antti Lahelma.



Fig. 8. Fat hen (*Chenopodium album*). Photo: Antti Lahelma.



Fig. 9. Pieces of palygorskite (NM 35202: 29) found during the 2005 excavations of the Valkeisaari terrace. All finds of palygorskite were made from within a layer of sooty soil in front of the 'sacrificial table'. Scale: 1 cm. Photo: Antti Lahelma.

Mika Lavento (pers. comm. 1.12.2005) the sherds represent Textile Ware and – judging by the clay used, the preparation of the surface and the find spot – almost certainly derive from the same pot as the sherds found in 1966.

### Bones

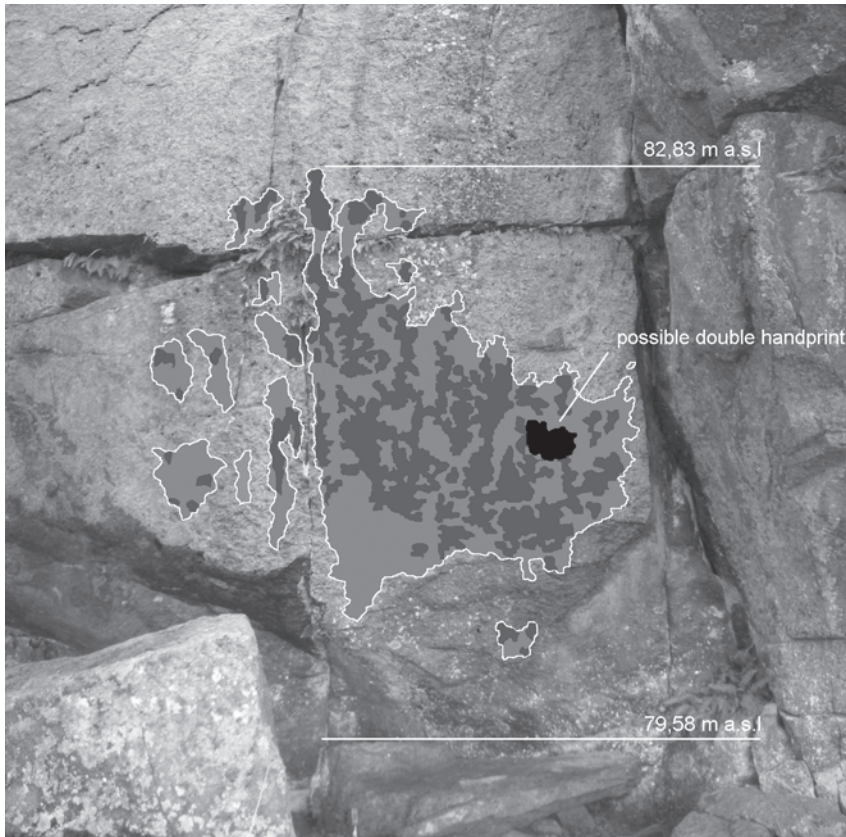
In addition to the finds of quartz and pottery, a small amount of burnt and unburnt bone fragments were found. Two of the latter were identified as belonging to a sheep or goat (*Capra hircus/Ovis aries*), which – while not impossible – seemed strange in the context of a hunter-gatherer rock painting site. It was not a great surprise, then, that these finds turned out to be recent: one of them (NM 35202: 9) was radiocarbon-dated to  $90 \pm 30$  BP (Hela-1128), or  $1805 \pm 115$  cal. AD.<sup>2</sup> In all likelihood, the other unburnt bones are of a similar date. They may relate to the use of the island for grazing sheep in the historical period, a practice reflected in the name of the painted cliff (*Lampuvuori* meaning 'Sheep Mountain'). However, four pieces of burnt and therefore more probably prehistoric bone were also found. Only one of the bones (NM 35202: 84) – a wing bone of a capercaillie (*Tetrao urogallus*) – could be identified to the species (Mannermaa 2005). Unfortunately, all attempts to make AMS datings of burnt bone failed due to the small amount of bone found.

### Macrofossil remains

Approximately 30 litres of soil were taken as macrofossil samples during the excavation, most of it from the fireplace in front of 'sacrificial table', but a number of samples were collected also from the refuse pit in the northern end of the excavation trench. A notable and interesting feature of the material analyzed is the comparatively large number of seeds of edible plants and berries (Pylkkö et al. 2006). The most common of these was bearberry (*Arctostaphylos uva-ursi*), but the samples also included carbonized seeds of wild strawberry (*Fragaria vesca*), raspberry (*Rubus iadeus*) and sorrel (*Rumex* sp.) However, perhaps the most interesting feature is the presence of numerous seeds of fat hen (*Chenopodium album*, Fig. 8) – a plant species alien to poor soils such as those found at Valkeisaari.

Fat hen is recognized as an indicator species of ancient settlement, which normally grows on fields and close to settlements and appears to have been introduced to Finland very early on (Suominen & Hämet-Ahti 1993: 14). Today the plant is usually thought of as a weed, but it is also a nutritious, edible plant – a close relative of the quinoa plant (*Chenopodium quinoa*) cultivated in the Andean highlands. The seeds of fat hen and related plants have traditionally been eaten as porridge or ground into flour used in baking, and its leaves can be eaten like cabbage – all of them uses mentioned already in 19<sup>th</sup> century Finnish botanical literature (e.g. Lönnrot 1866). As its English name implies, the plant has also been used to provide feed for domestic animals.

Because of the evidence of later disturbances, it is difficult to completely rule out the possibility that, like the sheep bones found in the topsoil of the terrace, the seeds of fat hen might similarly represent a late contamination of the site. Some of the seeds might conceivably have been deposited on the terrace in sheep dung. However, this is a rather remote possibility, because seeds of fat hen and other edible plants were found together with quartz implements in the lower layers (ca. 30–40 cm below surface) of the 'refuse pit' in the northern end of the trench. No signs of contamination were encountered in this part of the trench, and it is unlikely to have been affected by the 'digs' of Koistinen or Sarvas, which have probably taken place on the site of the pottery finds.



*Fig. 10. A retouched photo of Valkeisaari B – the painting on the lower terrace. The area of red paint, which would otherwise be faint, is here outlined in white and filled with a grey colour. In the picture, light grey refers to vaguely red areas and dark grey indicates areas of intensive red colour. The black area represents a possible double hand-print. The highest point of the painting and the upper surface of the ‘sacrificial table’ – standing on which a part of the painting may have been made – have also been marked. Photo and photographic manipulation: Antti Lahelma.*

### ***Palygorskite pieces***

During the excavations, a considerable number of finds (more than 100 small flakes) were made of a substance – at first unidentified – that resembled an unburnt, fibrous organic material (Fig. 9). As the finds were concentrated in the area of the fireplace and were confined to the layer of cultural soil, it was assumed that they might be the last remains of heavily eroded, unburnt bone or antler – a hypothesis that later proved to be mistaken. A study by the geologist Kari A. Kinnunen (2006) using X-ray diffraction and a polarization microscope showed the material to be a fibrous mineral called palygorskite (also known as

‘mountain leather’). The mineral is probably local, originating from the cracks of the cliff face. However, because the flakes were confined to the cultural layer, they may nonetheless be somehow related to human activity. Kinnunen (2006: 5–6) suggests that the rock may have been cleaned of the material before painting, but notes also that mountain leather is known to have been used as a binder in organic paints in e.g. Central America (the famous ‘Maya blue’).

### **DATING**

The dating of the Valkeisaari paintings and the finds associated with them presents several prob-

lems, not all of which could be adequately solved at the time of writing. However, it appears that making of the Valkeisaari rock paintings may have begun already in the later Subneolithic Stone Age (around 3600 BC), and that the deposit in front of them can be dated mainly to the Early Metal Period (2<sup>nd</sup> millennium BC) and perhaps later. In other words, the painting appears to have been begun before the deposition of artefacts, but its lowest parts may well be contemporary with the deposit. The two phenomena are therefore likely to be related.

Although theoretically possible (Rowe 2001), few attempts – none of them successful – have been made to obtain direct AMS datings of red ochre rock paintings in Fennoscandia. This leaves shore displacement dating as the only viable means (so far) of dating the rock paintings of Valkeisaari (on the use of shore displacement in dating rock art, see e.g. Jussila 1999; Sognnes 2003). Shore displacement dating of the Valkeisaari paintings is not a particularly forceful illustration of the method, but an attempt can nonetheless be made and it merits a brief discussion.

The painting on the upper terrace (Valkeisaari A) is located ca. 10.5 m above the modern level of Lake Saimaa and has evidently been painted by a person standing on the rock terrace. It therefore cannot be dated using shore displacement chronology (Jussila 1999: 128). However, it is possible to suggest a rough dating for the lower area of painting (Valkeisaari B), even though this dating is wrought with uncertainties, some of them inherent in the method and some caused by problems specific to the Valkeisaari site (such as the presence of large boulders on the terrace and the unclear outer edges of the painting).

Like the upper painting, Valkeisaari B may in part have been painted by a person standing on the terrace (79.20 m a.s.l) or on the ‘sacrificial table’ (79.58 m a.s.l), but its uppermost painted area (82.83 m a.s.l) seems to lie far too high up to have been painted from dry land (Fig. 10). True, a large boulder lying close to the foot of the painting could have been used for reaching a little higher up, but even standing on the boulder it would seem to be impossible to reach to the highest parts of the painting. This suggests that the painting was begun when the terrace was still well under water and, as the painted area is 2.2 m high

and extends almost to the foot of the cliff, the process of repainting may have continued for an extensive period of time. The fact that the painting is heavily blurred (even though the cliff itself mostly remains dry even during heavy rain), as well as the discovery of some quartz artefacts somewhat rounded by rolling in the sand (Manninen 2005), may similarly indicate that human activity at the site begun already before the sandy terrace was exposed from the lake.

Establishing a shore displacement dating for rock paintings is made difficult by the fact that we do not know precisely how high above water the paintings were made. But as Jussila (1999: 122–3) argues, it seems probable that rock paintings – assuming they were painted sitting in a boat or standing on the winter ice – were generally made between 0.5 and 1.5 m above the mean surface of water. Based on this assumption, the shore displacement dating of the upper part of Valkeisaari B can be calculated as falling between 3900 and 3300 BC, the median of the dating being ca. 3600 BC.<sup>3</sup> The lowermost part of the painting, on the other hand, lies so close to the root of the cliff that it was probably made standing on the terrace sometime after 2000 BC (cf. Jussila 1999: 128).

The deposit excavated in front of the painting can be dated more securely than the paintings. Shore displacement chronology gives a *terminus post quem*, indicating that the cultural layer cannot be older than ca. 2000 BC as the terrace emerged from water only then. Because of the well-known uncertainties associated with dating wood charcoal, no attempt was made to date the fireplace as such, but a radiocarbon date (Hela-1127) was acquired of the blackened interior of one of the rim sherds (NM 17040: 1). The result, 3100 ± 50 BP (or 1370 ± 60 cal. BC), confirms the Early Metal Period dating of the deposit. During this stage, the level of water would have been at ca. 78 m a.s.l, and the terrace much narrower and wetter than at present – a fact that fits well with the observation that the soot from the fireplace excavated has been washed over a large area on the terrace. Interestingly, the dating also coincides almost exactly with the beginnings of swidden agriculture (of barley) in the Taipalsaari region (Vuorela & Kankainen 1993).

The precise beginning and end of the deposition of material on the terrace is, on the other



Fig. 11. A Saami shaman (noaidi) making a sacrifice to a sieidi. Note the offers of food, drink and a knife, as well as the semicircle formed by reindeer antlers and 'strangely-shaped' small sieidi-stones surrounding the sacrificial platform. Part of a large watercolour (*Björnfesten* 1930) by the Swedish artist and ethnographer Ossian Elgström (1883–1950), illustrating the different stages of a Saami bear-feast. Although a work of art, the illustrations are considered ethnographically accurate by Manker (1971).

hand, more difficult to establish. The discovery of water-worn quartz artefacts may indicate that some sort of deposition began already when the terrace still lay under water. The thickness of the stained layer of soil, on the other hand, suggests a long-standing human presence on the terrace even after it emerged from water, possibly extending beyond the Early Metal Period. In order to clarify this question, an attempt was made to date the macrofossil remains from a sample taken deep in the 'refuse pit' (layer 5, ca. 35–40 cm below surface). Bearberry seeds were the only ones big enough for dating, and even then two seeds were required for a sufficient amount of carbon. The decision (perhaps misguided) to combine two seeds into a single dating (Hela-1177) produced a surprising result:  $740 \pm 40$  BP ( $1258 \pm 33$  cal. AD). Were this dating absolutely firm it would be

very interesting indeed, but alas the possibility (however small) that the two seeds may have been of different ages renders the result uncertain. Despite that, and given the fact that there was little evidence for modern contamination in the layer, the dating nevertheless does provide preliminary evidence suggesting that the refuse pit – and consequently the history of the site – may extend to a much younger period than that indicated by the finds of pottery and quartz.

## INTERPRETATION

### *A ritual deposit?*

Anyone who has visited the Valkeisaari terrace can easily observe that the topography of the site is simply unsuitable for a prolonged stay. The



*Fig. 12. The 'anthropomorphic' cliff of Valkeisaari. The rock formation shown here lies directly above the site of excavation and the lower rock painting (Valkeisaari B, cf. fig. 4), and has been thought to resemble a human face in frontal view. The reminiscence is best brought out by the oblique light of the rising sun, and would have been even more attention-grabbing when it was unobstructed by trees and viewed from a higher level of water, as was the case during the Early Metal Period. Photo: Antti Lahelma*

terrace is short and narrow (ca. 18 m long and max. 6 m wide, but mostly narrower) and littered with huge boulders that would make it difficult to even lie down, much less to build any kind of (even temporary) dwelling on the spot. With the level of water extending to the very edge of the terrace, as it would have during the Early Metal Period, the site would also have been uncomfortably damp. Moreover, a sandy terrace (*Lampuhiekka*) undoubtedly much better suited for dwelling can be found only ca. 50 m WNW of the site.

Yet it cannot be denied that the outwards-leaning cliff does offer some shelter from rain. The topography of the site does not rule out the possibility that the terrace was used for mundane

activities. It could, for example, have been a temporary shelter from the wind and the rain, used by fishermen or travellers. Are, then, the finds related to 'secular' or 'sacred' activities?

Several aspects of the finds suggest the latter alternative. First and foremost, it is difficult to imagine how a fleeting activity such as occasional visits in search of shelter from the rain could have resulted in such a heavily stained cultural layer, almost half a meter thick. Second, the finds of quartz, flint and pottery (a single pot) – as well as the near-total lack of burnt bone – seem anomalous and unusual, and suggest instead that the terrace was repeatedly used for a different kind of activity than camping or searching for shelter. This activity probably included the consumption of food, as the macrofossil remains found at the site indicate that food was brought here from the mainland. The food would have been prepared on the fireplace and may have been cooked in (or served from) the Textile Ware pot, probably deliberately stashed under the 'sacrificial table' for future use.

And third, we must not ignore the presence of the rock painting immediately in front of the deposit and the fireplace, which suggests that the site was considered sacred. As noted in the section on dating, parts of the rock painting may well be contemporary with the deposit, meaning that some connection between the two is likely to exist. Moreover, as mentioned in the introduction, the presence of fireplaces at rock art sites is emerging as a phenomenon with a wide geographical distribution. It therefore seems reasonable to conclude that the fireplace of Valkeisaari – and most of the finds associated with it – are of a ritual nature and related to the beliefs and practices associated with rock art. The refuse pit, located a few meters away from the epicentre of human activity and apparently filled with food remains and broken quartz implements, may represent a dump of 'sacred refuse' that was deposited ritually. The two complete quartz scrapers found in front of the painting, on the other hand, can be understood as sacrificial offerings intentionally abandoned at the site (cf. Fig 11).

When the Valkeisaari finds are here recognized as being probably of a ritual nature, this should not be taken to imply any simplistic idea of ritual remains as a category of 'non-functional' material that archaeologists find difficult to explain

otherwise (cf. Brück 1999), nor should it be understood to imply any strong dichotomy between sacred and secular activities. Ritual is not a straightforward matter (Bell 1992; Insoll 2004), and dwelling extensively upon its definition would be beside the point. As a useful point of departure, however, we may consider William Paden's (1994: 95–100) notion of ritual as *a form of display that focuses its object*, giving it undivided attention. At Valkeisaari, the main object and focus of attention is the cliff of Lampuvuori – that much seems to be indicated by the fact that it has been painted and re-painted over a long period of time. Thus the context of the finds – on the foot of a cliff probably viewed as sacred – is extraordinary, even if the finds themselves are not. Indeed, most of them represent the most typical find material (quartz tools and pottery) of the period and are evidently related to the most basic of all human activities: the preparation and consumption of food. But as we shall see, at Valkeisaari this activity appears to have had a special dimension that justifies the use of the term 'ritual deposit'.

### *Valkeisaari in the light of Saami ethnography*

As a possible ethnographic parallel to the finds of Valkeisaari, let us consider the Saami cult of the *sieidi* – sacred cliffs and rocks viewed as living, breathing 'other-than-human persons' (cf. Lahelma in press). In northern Finland, the *sieidi* were sometimes located in small islands (such as Ukonsaari, Seitasaari and Kulta-Akka in the account below) and were associated with a sacrificial cult, involving sacrificial meals and the offering of various items, as well as of food, bones and antlers (Fig. 11). In the early years of the 20<sup>th</sup> century, the linguist Frans Äimä (1903), who had studied the Saami language of the Lake Inari region, published an intriguing account concerning the worship of the *sieidi* among his informants. This account (cf. also Itkonen 1948: 312–13) is worth quoting at some length:

Some information has been preserved concerning different sacrifices in different places. Birds and wild reindeer were offered at Ukonsaari, Seitavaara and Seitasaari. Fish, on the other hand, were offered at Kulta-Akka and according to some accounts also at Ukonsaari. Reindeer

antlers have been found at Seitasaari, and at Ukonsaari heads of reindeer bulls – complete with the antlers – and also skeletons of birds (capercaillies). "Sacrificing" took place so that the meat and fish – the best quality available – were taken to a sacrificial site, where it was cooked and eaten. "The rationale was", said one informant, "that the god is also fed when the sacrificers eat". For this reason, "no matter how much people ate, they would always return hungry from the sacrificial site". By sacrificing one hoped for one's "luck" (in fishing, hunting and reindeer herding) to continue or improve. (Äimä 1903: 114–15, my translation)

The obvious parallel with Valkeisaari is the taking of food to a sacred island and cooking it there in a communal sacrificial feast. However, perhaps the most remarkable detail in Äimä's account is the notion that the *sieidi* were thought to partake in the sacrificial meal and to eat together with the sacrificers – an aspect of Saami religion that can be understood as a reflecting an animistic system of beliefs (cf. Harvey 2005). And here we must introduce a feature of the Valkeisaari cliff not yet mentioned: its allegedly anthropomorphic shape.

### *The 'stone persons' of Valkeisaari*

Immediately above the excavation trench and the lower rock painting, a natural rock formation in the cliff forms what many observers have regarded an anthropomorphic, face-like shape (Fig. 12). A photograph of the formation was first published by Jussi-Pekka Taavitsainen (1981), who believed that the shape was likely to have been a factor in choosing the cliff for painting. He further noted that Saami *sieidi* are sometimes similarly anthropomorphic in shape and that as such they resemble the Finnish rock art sites. Subsequently, it has become quite popular to identify such shapes at rock painting sites. For example, Pentikäinen and Miettinen (2003) discuss a dozen or so purportedly anthropomorphic rock painting sites in Finland, Fandén (2001) presents a number of examples from Northern Sweden and Slinning (2002) from Telemark, Norway. Taskinen (2006) even goes so far as to assert that ca. 25 % of all Finnish sites feature such shapes, listing altogether 28 sites claimed to be more or less human- or animal-shaped from certain viewpoints.

These are interesting observations, even if they are in most cases impossible to validate. The anthropologist Stewart Guthrie (1993) has argued that anthropomorphism (or the projection of human features or agency into non-human things) is a universal strategy of perception with deep evolutionary roots. His claim appears to be based on a firm foundation – a wealth of examples of anthropomorphism in the most different kinds of material, ranging from prehistoric artefacts to modern advertising and arts, theology and philosophy. If Guthrie is correct, we may safely assume that already Stone Age hunter-fishermen would have attributed anthropomorphic features to certain rocks and cliffs.

Alas, from the point of view of prehistoric archaeology anthropomorphism is a problematic phenomenon, because the identification of a rock as having ‘anthropomorphic’ features is a fundamentally subjective experience – not an empirically verifiable, scientific observation. In the absence of living informants we have very few means of knowing what specific formations attracted the attention of a prehistoric people (and what were ignored), and even fewer ways of knowing what (if any) cultural meanings were once attached to them. Consequently, most claims made by modern scholars of identifying anthropomorphic formations at rock art sites should be viewed with a sizeable grain of salt. Without wishing to entirely deny these observations their value, one must nonetheless insist for a less subjective approach to the question. Anthropomorphism becomes an archaeologically approachable phenomenon only with concrete evidence for its appreciation in the past. For example, we might be able to identify traces paintings that accentuate the ‘human shape’ of the rock (as is the case in some Palaeolithic caves, see Clottes & Lewis-Williams 1998: 86), or uncover archaeological material that suggest a preoccupation with anthropomorphic rocks (for a more detailed discussion on anthropomorphism and rock art, see Lahelma, in press). Regrettably, few rock painting sites in Finland can be said to qualify these criteria.

The site of Valkeisaari, however, is among the few sites that may just qualify. First, the shape of the cliff – resembling a human face seen in frontal view – is arguably more striking than most other candidates and it is located directly above

the painting and the ritual deposit, not merely in their vicinity. The most interesting aspect, however, is the discovery of a small (size 5.7 x 3.5 x 3.7 cm) ‘anthropomorphic’ pebble (Fig. 7b) among the pottery sherds, flints and sooty soil in 1966. The stone, which has three natural depressions giving the rough appearance of a human face, is mentioned in the find report (Huurte 1966) and it was given a catalogue number (NM 17040: 2), but ignored in the article written of the Valkeisaari find (Luho 1968b) and all subsequent publications. However, the stone is a significant find because according to the find report, it appeared to have been originally placed *inside the pot*. In other words, it seems that it was found in a closed archaeological context, and can thus be interpreted as evidence that the people who made the Valkeisaari paintings did indeed ascribe cultural meanings to unmodified, anthropomorphic rocks. This may be as close as we will ever get to actual proof that anthropomorphism really was a phenomenon of some significance for the hunter-fishermen of the Finnish interior.

At least two possible archaeological parallels to the Valkeisaari stone from can be cited in the Finnish archaeological record. An unusual piece of sandstone (size 4.2 x 3.2 x 3.9 cm) said to resemble a human head was found in underwater excavations in front of the Astuvansalmi rock painting (Grönhagen 1994). The object is mostly natural, but may have been worked around the ‘neck’. Its prehistoricity and relation to the rock painting, however, are uncertain. The second stone is a smooth, round cobblestone – not at all anthropomorphic in shape – but bears a red ochre painting of a net figure, thus showing that rock paintings could sometimes also be ‘portable’ (Väkeväinen 1982). The stone, found at the Late Comb Ware site of Nästinristi in Laitila, south-western Finland, lay buried in sand close to a group of red ochre graves. <sup>14</sup>C-datings obtained from pit hearths and graves situated near the painted stone ranged from 4910 ± 130 BP (Hel-1349) to 4460 ± 130 BP (Hel-1348), indicating that the dating of the site (and most probably also of the stone) lies between ca. 4000 and 3000 cal. BC.

To continue the analogy with Saami sieidi, it can be added that aside from large boulders and cliffs, the Saami also worshipped small, often somehow strangely-shaped sieidi-stones that



could be carried around from one seasonal camp to another, or functioned as the foci of worship at a wider sacred site (see e.g. the examples in Manker 1957: 127–9, 237–43, and cf. Fig. 11). The ‘portable rock painting’ of Nästinristi and the Valkeisaari stone can be compared to such cultic stones. Perhaps the anthropomorphic cliff (or the entire island even) formed the wider context of the sacred site, and the small anthropomorphic pebble a concentration of the supernatural power of the site: a living ‘stone person’ (cf. Harvey 2005) that acted as a focus of worship. Like the Saami sieidi, the stone may have been communicated with, asked for assistance in questions of subsistence, and fed in sacrificial meals. Perhaps the fact that the stone was placed inside a pot – probably used for cooking and serving food – finds an explanation in such an association with sacrificial meals.

Both the paintings made on the Lampuvuori cliff and the food consumed in front of it may be understood as forms of ritual communication with the sacred, physically manifested by the anthropomorphic rock cliff. If we follow Paden’s (1994: 95–100) definition of ritual, mentioned above, we may understand the consumption of food at the foot of the cliff as way of ritually focusing attention to the sacred site – the anthropomorphic rock cliff – which may have been represented in the ritual by the small anthropomorphic pebble. The pebble and the site as a whole may have been thought to act as intermediaries or gateways between humans and the supernatural world (cf. Lahelma 2005b). Furthermore, following Paden (1994: 98), the consumption of food at the foot of the cliff can also be understood as a form of ritual display or drama, which expresses the principle of sharing food so central to the hunter-gatherer ethos. If the interpretation offered here is correct, it is also a proclamation concerning the place of humans in nature (here represented by rocks): not above or superior, as we are accustomed to think, but fundamentally equal. Eating food together with rocks – strange though the practice may seem to us – may have been a way of symbolically expressing and ritually sanctioning this delicate and vulnerable state of balance with nature, on which the hunter-gatherer way of life depended.

## CONCLUDING REMARKS

The recent results from investigations such as those of Valkeisaari, Flatruet, Högberget and Ruksesbåkti have shown beyond all doubt that even small-scale excavations at rock art sites can produce much new information concerning the dating, making and ‘meaning’ of the sites. While it is true that some excavations have failed to produce any finds, and that many rock painting sites seem unpromising (at least for excavations on dry land) because they are typically associated with coarse boulder soils, the results of the recent excavations clearly should encourage more ‘archaeological’ approaches to the study of rock art.

In interpretations of rock art, excavations and other basic archaeological methods can help to decrease our dependence on iconographic interpretations or ‘phenomenological’ approaches – or, at least, to introduce some concrete material to back up such interpretations. At the same time, they emphasise the local aspects of rock art and its specific place in a local prehistoric sequence. Iconographic readings of rock art have tended to be oblivious to questions of time and space, leading to comparisons between individual rock-art motifs of faraway places (e.g. Malmer 1981). While there is little doubt that many similarities exist in the iconographies of the various hunter-gatherer rock art sites of Northern Eurasia, we also need to address the question of how – and for what purpose – this iconography was used. And here simple applications of basic archaeological methods (especially excavation) can prove to be very useful indeed.

The idea of a possible connection between Finnish rock paintings and the Saami cult of the sieidi is not new. Writing on the similarities between Saami shaman drum figures and rock art motifs, Ville Luho posed the question (albeit without attempting to answer it) already in the early 1970s:

When we recall moreover that the Saami have worshipped rock cliffs, among other things, as sieidi, and that the sieidi are commonly located on lakeshores, peninsulas and islands even, it is justifiable to ask what relation do the rock paintings have with Saami beliefs and mythology. Were the paintings perhaps made by the distant ancestors of the Saami, or do Saami beliefs perchance reflect the beliefs of those people, who were re-

sponsible for the rock paintings. (Luho 1971: 14, my translation)

For one reason or another, Luho's musings did not attract much attention, and Sarvas (1973: 27) for one dismissed them as more or less irrelevant to the interpretation of Finnish rock art. The standard interpretations of Finnish rock art came to rely on Sarvas' (1969, 1973) own application of the (now widely discredited) 'hunting magic' theory and Anna-Leena Siikala's (1981) interpretation of the art as an expression of Siberian-style shamanism and animal ceremonialism. Neither of these authors saw a relation between Finnish rock art and local ethnohistorical sources: Sarvas did not cite any ethnographic parallels to back his interpretation and Siikala, although ethnographically much better informed, chose to pick her parallels mostly among the geographically distant peoples of Siberia. But as Núñez (1995) has pointed out, evidently more relevant analogs can be found closer to home – in the ethnography and folklore of northern Fennoscandia.

Several studies on the location and iconography of North Fennoscandian hunter-gatherer rock art have claimed close parallels with Saami religion (e.g. Helskog 1987; Autio 1991; Núñez 1995; Shumkin 2000; Fandén 2001; Mulk & Bayliss-Smith 2001; Slinning 2002; Schanche 2004; Lahelma 2005b, in press). Such claims are sometimes met with resistance or even outright hostility (Schanche 2004: 102–4), perhaps in some measure because of the political dimension of Saami prehistory (Krogh 2004). But there is also the undeniable and disturbing fact that in many parts of Fennoscandia (although possibly not all: see e.g. Mulk & Bayliss-Smith 2001; Mandt & Lødøen 2006: 33–45) the two phenomena are separated by a wide chronological gap. The Finnish rock paintings, for example, clearly seem to predate the formation of distinct Saami ethnic groups, making it anachronistic to associate the paintings with either 'Saami' or 'Finns'. Are we then merely dealing with correspondences on a very general level, or is there a more 'direct' link between rock art religion and Saami religion? And if there is, how do we deal with the problem of apparent continuity in iconography and religious practice on the scale of several millennia? These are difficult questions to answer – but the evidence for some form of continuity seems to be mounting.

The results of the Valkeisaari excavations can be interpreted as supporting Luho's notion of a possible link between Saami beliefs and practices and those associated with Finnish rock art. Like the Saami of Lake Inari, the prehistoric inhabitants of Lake Saimaa region appear to have repeatedly taken food to a sacred island, cooked it there and 'shared' it with the god of the island, manifested by a rock cliff. Viewed together with the evidence from the iconography of the rock paintings, which similarly suggest a link with Saami religion (e.g. Núñez 1995; Lahelma 2005b), the parallels are too obvious to be overlooked: it is more probable that a connection exists than that it doesn't. Irrespective of the reasons or mechanisms behind this connection, which clearly require much more research, it offers a hope of some day solving the 'mystery' of the rock paintings.

## ACKNOWLEDGEMENTS

Arranging the excavations and the writing of this article were made possible by grants awarded by *Karjalaisen kulttuurin edistämissäätiö* (Foundation for Furthering Karelian Culture) and *Suomen kulttuurirahasto* (Finnish Cultural Foundation). However, without the help of an enthusiastic group of volunteers the investigation would have been much more modest in scale. I would like to offer warm thanks to the following people for participating in the fieldwork: Margit Granberg, Petri Halinen, Nina Heiska, Anu Herva, Henrik Jansson, Jari-Matti Kuusela, Katja Lange, Marja Lappalainen, Hannele Partanen, Wesa Perttola, Jenni Sahramaa, Henrik Tuominen, Jan Vihonen and Sisko Vuoriranta. I am grateful also to Kari A. Kinnunen, Paula Kouki, Martti Lehtinen, Kristiina Mannermaa, Mikael Manninen, Ilkka Pylkkö, Tanja Tenhunen and Santeri Vanhanen, who conducted the various scientific analyses involved in the Valkeisaari project. Finally, I express thanks to Knut Helskog, Vesa-Pekka Herva and Janne Ikäheimo for commenting an earlier draft of this paper.

<sup>1</sup> It has to be mentioned, however, that excavations have been standard practice in the study of Upper Palaeolithic cave art ever since its discovery and authentication (see e.g. Leroi-Gourhan 1968; Bahn & Vertut 1997).

<sup>2</sup> All <sup>14</sup>C-dates from Valkeisaari were calibrated using OxCal v3.10, with atmospheric data from Reimer et. al. (2004).

<sup>3</sup> Calculated using the *Ranta-ajoitus v1.0* program, which gives a shore displacement dating to sites located in the Lake Saimaa region. The program has been developed by Mikroliitti Ltd and is freely available at <http://www.mikroliitti.fi/rajoitus.htm> (Accessed 18.3.2006).

## REFERENCES

### Unpublished sources

- Hebba Helberg, B. 2004. *Rapport fra utgravninga i Indre Sandsvik/Ruksesbåkti, Porsanger kommune, Finnmark 2003*. Unpublished excavation report at Tromsø museum, Norway.
- Huurre, M. 1966. *Alustava kertomus tarkastusmatkasta Taipalsaaren Valkeasaaren*. Unpublished inspection report at the topographical archive of the Finnish National Board of Antiquities.
- Kinnunen, K.A. 2006. *Taipalsaaren Valkeisaaren kalliomaalauksen edustalta arkeologisessa kaivauksessa tavatun materiaalin tunnistaminen palygorskiitiksi*. M19/3142/2006/1/42. Unpublished research report at the archives of the Geological Survey of Finland. Available in the Internet at [http://arkisto.gsf.fi/m19/3142/m19\\_3142\\_2006\\_1\\_42.pdf](http://arkisto.gsf.fi/m19/3142/m19_3142_2006_1_42.pdf) (Accessed 26.9.2006)
- Kouki, P. 2005a. *Valkeisaaren fosfaattianalyysit*. Unpublished research report at the topographical archive of the Finnish National Board of Antiquities.
- Kouki, P. 2005b. *Valkeisaari, pH-analyysit*. Unpublished research report at the topographical archive of the Finnish National Board of Antiquities.
- Lahelma, A. 2005a. *Taipalsaari Valkeisaari: tutkimuskertomus esihistoriallisen kalliomaalauksen edustalla 15.–26.8.2005 suoritetusta arkeologisesta kaivauksesta*. Unpublished excavation report at the topographical archive of the Finnish National Board of Antiquities.
- Luho, V. 1968a. *Taipalsaaren Valkeasaaren kalliomaalaus*. An unpublished inspection report at the topographical archive of the Finnish National Board of Antiquities.
- Luoto, J. 1999. *Luumäki Kalamaniemi II. Kalliomaalauksen alustan koekaivaus 6.–7.9.1999*. Unpublished excavation report at the topographical archive of the Finnish National Board of Antiquities.
- Mannermaa, K. 2005. *Taipalsaari, Valkeisaari. Luuanalyysi 30.12.2005*. Unpublished research report at the topographical archive of the Finnish National Board of Antiquities.
- Manninen, M. 2005. *Taipalsaari Valkeisaari 2005: isketyn kiviaineiston analyysi*. Unpublished research report at the topographical archive of the Finnish National Board of Antiquities.

- Miettinen, T. 1975. *Taipalsaaren muinaisjäännösten perusinventointi 1975*. Unpublished survey report at the topographical archive of the Finnish National Board of Antiquities.
- Pylkkö, I., Vanhanen, A. & Tenhunen, T. 2006. *Makrofossiilitutkimus Taipalsaari Valkeisaari 2005*. Unpublished research report at the topographical archive of the Finnish National Board of Antiquities.
- Slinning, T. 2002. *Bergmalingene i Telemark. Kultstedenes tidfesting og sosiale sammenheng*. MA thesis, Department of Archaeology, University of Bergen.
- Vuorela, I. & Kankainen, T. 1993. *Luonnon- ja kulttuurimaiseman kehitys Taipalsaarissa. P34.4.107*. Unpublished research report at the archives of the Geological Survey of Finland.

### Literature

- Autio, E. 1991. The snake and zig-zag motifs in Finnish rock paintings and Saami drums. In T. Ahlbäck & J. Bergman (eds.), *The Saami Shaman Drum*: 52–79. Almqvist & Wiksell, Stockholm.
- Bahn, P. 1998. *The Cambridge Illustrated History of Prehistoric Art*. Cambridge University Press, Cambridge.
- Bahn, P. & Vertut, J. 1997. *Journey through the Ice Age*. University of California Press, Berkeley (CA).
- Bell, C. 1992. *Ritual Theory, Ritual Practice*. Oxford University Press, Oxford.
- Bengtsson, L. 2004a. *Bilder vid vatten: kring hällristningar i Askum sn, Bohuslän*. GOTARC Serie C, arkeologiska skrifter 51. Göteborgs universitet, Göteborg.
- Bengtsson, L. 2004b. Renande eld: en studie av eldskadade hällristningar i Askum socken, Bohuslän. In L. Melheim, L. Hedeager & K. Oma (eds.) *Mellom himmel og jord: foredrag fra et seminar i religionsarkeologi, Isegran 31. januar–2. februar 2002*, 378–90. Universitetet i Oslo, Oslo.
- Brück, J. 1999. Ritual and rationality: some problems of interpretation in European archaeology. *European Journal of Archaeology* 2(3), 313–44.
- Bryusov, A. Ya. 1940. See: Брюсов, А. Я.
- Clottes, J. & Lewis-Williams, J.D. 1998. *The Shamans of Prehistory: Trance and Magic in the Painted Caves*. Harry N. Abrams, New York.
- Fandén, A. 2001. Hällmålningar: en ny synvinkel på Norrlands förhistoria. In Å.V. Kroik, *Fordom då alla djur kunde tala... Samisk tro i förändring*: 89–110. Rosima, Stockholm.
- Goldhahn, J. 2006. Hällbildstudier i norra Europa: trender och tradition under det nya millenniet. *GOTARC Serie C, arkeologiska skrifter* 64. Göteborgs Universitet, Västra Frölunda.
- Grönhagen, J. 1994. Ristiinan Astuvansalmi, muinainen kulttipaikkako? *Suomen Museo* 101: 5–18.
- Guthrie, S. 1993. *Faces in the Clouds: A New Theory of Religion*. Oxford University Press, New York.
- Hallström, G. 1960. *Monumental Art of Northern Sweden from the Stone Age*. Almqvist & Wiksell, Stockholm.
- Hansson, A. 2006. Hällmålningen på Flatruet: en arkeologisk undersökning. *Jämten* 99: 88–92.

- Harvey, G. 2005. *Animism: Respecting the Living World*. Hurst & Company, London.
- Helskog, K. 1987. Selective depictions: a study of 3700 years of rock carvings and their relationship to the Saami drums. In I. Hodder (ed.), *Archaeology as Long Term History*: 17–30. Cambridge University Press, Cambridge.
- Helskog, K. 1988. *Helleristningene i Alta: spor etter ritualer og dagliv i Finnmarks forhistorie*. Alta museum, Alta.
- Holmberg, A.E. 1848. *Skandinaviens hållristningar, arkeologisk afhandling*. P.G. Berg, Stockholm.
- Holmblad, P. 2005. *Rapport över arkeologisk undersökning av Högberget III, Ramele sn, Ångermanland, 2003*. UMARK 40. Umeå Universitet, Umeå.
- Insoll, T. 2004. *Archaeology, Ritual, Religion*. Routledge, London.
- Itkonen, I.T. 1948. *Suomen lappalaiset vuoteen 1945, II*. WSOY, Porvoo.
- Johansen, Ø.K. 1979. New results of the investigation of the Bronze Age rock carvings. *Norwegian Archaeological Review* 12(2): 108–14.
- Jussila, T. 1999. Saimaan kalliomaalausten ajoitus rannansiirtymiskronologian perusteella. *Kalliomaalausraportteja 1/1999*, 113–33. Kopijyvä, Jyväskylä.
- Kivikäs, P. 1995. *Kalliomaalaukset: muinainen kuva-arkisto*. Atena, Jyväskylä.
- Krogh, M. 2004. En tributt til Audhild Schanche og Bjørnar Olsen. In M. Krogh & K. Schanche (eds.), *Samisk forhistorie: rapport fra konferanse i Lakselv 5.–6. september 2002*: 162–72. Varanger samiske museum.
- Lahelma, A. 2005b. Between the worlds: rock art, landscape and shamanism in Subneolithic Finland. *Norwegian Archaeological Review* 38(1): 29–47.
- Lahelma, A. in press. Communicating with “Stone Persons”: Anthropomorphism, Saami Religion and Finnish Rock Art. In E. Walderhaug & L. Forsberg (eds.), *Cognition and Signification in Northern Landscapes*. University of Bergen, Bergen.
- Lavento, M. 2001. *Textile Ceramics in Finland and on the Karelian Isthmus*. SMYA 109. Suomen muinaismuistoyhdistys, Helsinki.
- Leroi-Gourhan, A. 1968. *The Art of Prehistoric Man in Western Europe*. Thames and Hudson, London.
- Lindgren, B. 2004. *Hällbilder i nor: forskningsläget i Jämtlands, Västerbottens och Västernorrlands län*. UMARK 36. Umeå Universitet, Umeå.
- Loendorf, L. 1994. Traditional archaeological methods and their applications at rock art sites. In D. Whitley & L. Loendorf (eds.), *New Light on Old Art: Recent Advances in Hunter-Gatherer Rock Art Research*: 95–103. University of California, Los Angeles.
- Luhó, V. 1968b. En hållmålning i Taipalsaari. *Finskt Museum* 75: 33–9.
- Luhó, V. 1971. Suomen kalliomaalaukset ja lappalaiset. *Kalevalaseuran vuosikirja* 51: 5–17.
- Lødøen, T. 2003. Late Mesolithic rock art and expressions of ideology. In L. Larsson (ed.), *Mesolithic on the Move: Papers Presented at the Sixth International Conference on the Mesolithic in Europe*: 499–508. Oxford, Oxbow Books.
- Lönnrot, E. 1866. *Flora Fennica*. Suomalaisen Kirjallisuuden Seura, Helsinki.
- Malmer, M.P. 1981. *A Chorological Study of North European Rock Art*. Almqvist & Wiksell, Stockholm.
- Mandt, G. & Lødøen, T. 2006. *Bergkunst: helleristningar i Noreg*. Det Norske samlaget, Oslo.
- Manker, E. 1957. *Lapparnas heliga ställen*. Almqvist & Wiksell, Uppsala.
- Manker, E. 1971. *Björnfesten: en bildberättelse av Ossian Elgström i tolkning av Ernst Manker*. Norrbottens museum, Luleå.
- Mulk, I.-M. & Bayliss-Smith, T. 2001. Anthropomorphic images at the Padjelanta site, northern Sweden. *Current Swedish Archaeology* 9: 133–62.
- Nordbladh, J. 1995. The history of Scandinavian rock art research as a corpus of knowledge and practice. In K. Helskog & B. Olsen (eds.), *Perceiving Rock Art: Social and Political Perspectives*, 23–34. Novus, Oslo.
- Núñez, M. 1995. Reflections on Finnish rock art and ethnohistorical data. *Fennoscandia archaeologica* XII: 123–35.
- Ojonen, S. 1973. Hållmålningarna vid sjöarna Kotojärvi och Märkjärvi i Iitti. *Finskt Museum* 80: 35–46.
- Paden, W. 1994. *Religious World: The Comparative Study of Religion*. Beacon Press, Boston.
- Pentikäinen, J. & Miettinen, T. 2003. *Pyhän merkkejä kivessä*. Etnika, Helsinki.
- Rowe, M.W. 2001. Dating by AMS radiocarbon analysis. In D. Whitley (ed.), *Handbook of Rock Art Research*. Altamira Press, Walnut Creek.
- Sarvas, P. 1969. Die Felsmalerei von Astuvansalmi. *Suomen Museo* 76: 5–33.
- Sarvas, P. 1973. Astuvansalmen kalliomaalaus. In S. Haltsonen et al. (eds.), *Ristiinan entisyyttä ja nykypäivää*: 9–30. Helsingin Ristiina-seura r.y., Helsinki.
- Savvatejev, Y.A. 1977. See: Савватеев, Ю.А.
- Savvatejev, Y.A. 1988. Ancient Settlements Connected with Rock Art in Karelia. *Bollettino del Centro Camuno di Studi Preistorici* XXIV, 45–68.
- Schanche, K. 2004. Kan bergmalerier være samiske? Noen refleksjoner på bakgrunn av funn av bergmalerier på Ruksesbåkti i Cuoppogieddi/Indre Sandvik, Porsanger. In M. Krogh & K. Schanche (eds.), *Samisk forhistorie: rapport fra konferanse i Lakselv 5.–6. september 2002*: 102–12. Varanger samiske museum.
- Shirokov et al. 2000. See: Широков, В.Н., Чаирикин С.Е. & Чемякин Ю.П.
- Shumkin, V. 2000. The rock art, labyrinths, seids and beliefs of eastern Lapland’s ancient population. In A. Kare (ed.), *Myamndash: Rock Art in the Ancient Arctic*: 202–87. Arctic Centre Foundation, Rovaniemi.
- Siikala, A.-L., 1981. Finnish rock art, animal ceremonialism and shamanism. *Temenos* 17: 81–100.
- Sognnes, K. 1982. Prehistoric cave paintings in Norway. *Acta Archaeologica* 53: 101–18.
- Sognnes, K. 2003. On shoreline dating of rock art. *Acta Archaeologica* 74: 189–209.
- Steward, J. 1937. Petroglyphs of the United States. *Smithsonian Institute Annual Report for 1936*, 405–25. Smithsonian Institute, Washington, DC.
- Suominen, J. & Hämet-Ahti, L. 1993. *Kasvistomme muinaistulokkaat: tulkintaa ja perusteluja*. Kasvimuseo, Helsinki.

- Taavitsainen, J.-P. 1981. Löppösenluola hällmålning i Valkeala. *Finskt Museum* 86: 11–16.
- Taçon, P. & Chippindale, C. 1998. An archaeology of rock-art through informed methods and formal methods. In C. Chippindale & P.S. Taçon (eds.), *The Archaeology of Rock-Art*: 1–10. Cambridge University Press, Cambridge.
- Taskinen, H. 2006. Kalliomaalaus­kallioidemme antropomorfiset muodot. In P. Pesonen & T. Mökkönen (eds.), *Arkeologipäivät 2005*: 62–72. Suomen arkeologinen seura, Helsinki.
- Väkeväinen, L. 1982. A painted stone from the Nästinristi site in Laitila. *Suomen Museo* 88: 5–9.
- Äimä, F. 1903. Muutamia muistotietoja Inarin lappalaisten vanhoista uhrimenoista. *Virttäjä 1903*: 113–16.
- Zemlyakov, V. 1936. See: Земляков, Б.
- Брюсов, А. Я. 1940. История древней Карелии. *Труды Государственного Исторического Музея XI*.
- Земляков, Б. 1936. Неолитические стоянки восточного берега Онежского Озера. - Равдоникас, В.И. *Наскальные изображения Онежского озера и Белого моря. Часть 1*, 111-141. Издательство академий наук, Москва.
- Савватеев, Ю.А. 1977. *Залавруга: археологические памятники низовья реки Выг. Часть 2: стоянки*. Наука, Ленинград.
- Широков, В.Н., Чаирикин С.Е. & Чемякин Ю. П. 2000. *Уральские писаницы. Река Нейва*. Банк культурной информации, Екатеринбург.

### *Personal comments*

The following persons have offered their expert opinion in questions pertaining to the Valkeisaari site:  
 Prof. Mika Lavento, University of Helsinki, Dept. of Cultural Studies (Institute of Archaeology)  
 PhD (FL) Pekka Sarvas, archaeologist (retired), Helsinki