Ulf Bertilsson

Old images – new fashions

During the last decades, there has been a rapid rise in rock art research and management in the Nordic countries. It is the author's belief that these developments will have far-reaching consequences in terms of technological developments in documentation and database registration and providing new tools for the management of rock art throughout the world, but also providing a considerably widened basis for research into the interpretation and meaning of rock art. This will hopefully also result in an enhanced integration between these two fields.

Retrospect and flashbacks

Rock art studies have a long tradition in Scandinavia. Jarl Nordbladh (1995) has presented this early research history. His work also covers the 20th century up to the early 1990s. Most of his conclusions (1995:30) are still valid although a vigorous development has continued into the latest decade. Recently a comprehensive report on the development since the late 1990s has been published (Goldhahn 2006). It shows among many interesting things that there is still much focus on the search for new sites. This search is still successful and new sites may still be found in already dense areas such as Østfold, Bohuslän and Uppland. Some new areas like Kronoberg County in Småland in Sweden have been added with interesting new sites thanks to intensified surveys. On Bornholm in Denmark, a large number of new sites have been discovered too. Regardless of the eventual fame and glory of these discoveries they have traits in common; they add to, but do not considerably change, the already established distribution picture of rock art. In general, they are the result of organized, systematic surveys performed by professional archaeologists or professional private researchers. The dividing line between these two groups is obviously getting thinner. This is a good testimony of the importance of shared and applied knowledge and education. And yet there are also some drawbacks of the heavy focus on new discoveries; some might argue that it distracts the interest from the less glorious but sometimes rather difficult and tiresome tasks to protect and interpret the rock art. I am fully aware that this might be judged as an example of personal opinion. Some of the trendy postmodernist archaeologists seem to argue in favour of a relativistic approach to rock art research and management (Karlsson 2004:201 pp). Karlsson's standpoint seems to be that the idea to make efforts to protect and conserve the rock art in Bohuslän and elsewhere in the world stems from misdirected idealism and/or admiration of technocracy. Instead, according to his opinion, it is better to let time take its toll and accept various use of the rock art. This standpoint may be considered pragmatic and also politically correct in some circles,

and this is what makes it so thought provoking. It is easy to imagine how many rock art sites that would have been lost if no one had worked to preserve and protect them. If so they could not have been visited by anyone. One significant example is actually Lascaux that would have been more badly harmed if it had not been for technical data presented by the conservationists ridiculed by Karlsson, which showed drastic changes to the atmosphere and humidity caused by the first million visitors. This was actually the cause for constructing the replica that is now open to visits to everyone.

Advocating a relativistic attitude like Karlsson does, could for instance mean that the purpose of the Wirth-expedition to Norway and Sweden on the initiative of the Nazi leaders in the late 1930s with orders to make casts of the most prominent rock art sites should be considered a positive event. This is because it was an important activity and political expression of that time and as such, it had a value of its own, adding to the authenticity of the rock art and above all becoming a narrative contemporary product. What a dreadful perspective!

Anyway, it seems that there is a strong common acceptance of the importance to protect and preserve the rock art for the benefit of researchers, visitors, school children, and the great public of today and in the future. In fact there is a strong political and democratic incitement in the strategy of long-term preservation and conservation of rock art; the goal to make it last for many forthcoming generations and not to be enjoyed and consumed only by the present one. There is also an enhanced focus on attitudes and ethics in connection with the rock art management and research (Bertilsson & Lødøen 2006).

There may also be some disadvantage connected to the systematic search for and recording of panels that have been covered and protected underground in relatively stable conditions for a long time. This matter has been brought to the fore by John Coles in connection with the ongoing systematic documentation of the panels of certain areas in Northern Bohuslän (Coles 2004 with references). It would of course not be possible to pose a ban on new discoveries and documentation projects. However, as Coles suggests, it could be wise to think carefully before one clears the panels for vegetation that may have been there for a long time creating relatively stable conditions for the rock surfaces. Another aspect is that in some instances the rocks might have been covered by soil since prehistoric times and if so for a couple of thousand years. Such cases also raise the question of when an uncovering of a panel should be classified as an excavation. Although I still think that most panels have been open since prehistoric time (cf. Bertilsson 2005), there must certainly be some exceptions. The "natural" covering of many panels that we find today is certainly the result of the organized planting of spruce trees that started in the 1870s and still continues. Regarding the possible problems emanating from the frequent new discoveries, a plausible solution could be to agree on a 3-year moratorium on such enterprises and instead put all efforts and resources together into finalizing the survey and documentation of all hitherto known sites. This would also to some extent serve to close the artificial gaps between the different steps of the process of documentation and research.

Regardless of that we are now in a situation where more sites and panels are documented, managed and visited by more tourists than ever before. And simultaneously, more reports, papers, theses and books on rock art have been written and published than ever before. To a great extent, this development reflects an extraordinary rise in funding and other resources within these fields. One obvious consequence is that rock art management and research have enlarged their arena and attracted a public interest of a hitherto unknown size. To a certain

extent, this mirrors the general development of an expanding interest in archaeology and history. But the main reason seems to be the fact that the rock images, painted or engraved, attract an interest far bigger than that trend. One may speculate why it is like that; an obvious reason to me is that rock art can be considered as just art and art seems to attract a wider audience than archaeology itself. A reason for that is that while archaeology requires a rather specialized knowledge to become intelligible, rock art has the capacity to make an instant impact regardless of the viewer's previous knowledge. This fact seems to annoy some archaeologists; "Rock art research must contribute directly to archaeology if it is to achieve anything of value…" (Bradley 1997:8 after Goldhahn 2006:131). Actually, rock art research has already achieved a lot on its own and it has actually certain strong values that are not derived from or dependent on its relation to archaeology. One such value is that it seems to trigger the sometimes rather vivid imagination of the viewer and in a manner that actually seems to have inspired much of today's archaeological research outside rock art. In saying that, it might also be appropriate to state that I am not in anyway against a deepened relationship between archaeology and rock art. I just want to clarify the picture somewhat since it seems to have become rather blurred.

The effects of intensified teaching

It is hard to pin-point the causes creating the present situation. I have suggested in a recent work (Bertilsson 2004 with references) that one might be the fact that several influential university teachers took an active interest in rock art in the Nordic countries in the 1980s and 90s. Rock art has developed almost into a discipline of its own at some of the main archaeology institutions in Scandinavia. Although, the approaches differ, one common factor was that students were brought out to study rock art direct on location. This gave rise to a strong interest that made many students dedicate their academic studies to rock art, encompassing not only the images but also the landscape and other contexts that were important for the understanding and interpretation of rock art. These qualities reached far outside the traditional realms of archaeology. Rock art in this way became a bridge to other scientific subjects and disciplines, such as semiotics and psychology.

In the early 1990s, some archaeologists started to read more into the rock images than the traditional history of religion researchers and archaeologists would ever have dreamt of. This became the poststructuralist and postmodernist archaeology where many scholars work intensely to find new interpretations and explanations for old and/or new finds and complexes. These efforts have been revitalizing and resulted in many new and intriguing studies. A good overview can be gained from a recently published report of trends and traditions in the new millennium (Goldhahn 2006). The report is still only in Swedish but a second part in English is being planned. This is important since much of the recent development in rock art research that Goldhahn reports on and summarizes in an excellent way seems to take place in Scandinavia. The picture sketched by his study is that rock art research seems to have become more widespread and engages more individuals. At the same time, one may fear that the relativism that is one of the characteristics of many academic studies of today may lead to a situation where scientific results may be questioned and challenged by less scrupulous individuals and institutions, since the border between a public and a populist approach is hard to define in advance. My conclusion is that it seems fair to say that the positive qualities of rock art may also attract much negative interest. However, the intensified academic teaching

of rock art in the last 20 years has made it more attractive in university circles. That has also resulted in a relatively large number of new student papers and theses in recent years (Bertilsson 2004; Goldhahn 2006).

One example based on field documentation work in Bohuslän and Östergötland is Åsa Fredell's thesis: *Bridging Images- Pictorial Communication of Ideology and Cosmology in the Southern Scandinavian Bronze Age and Pre-Roman Iron Age* (2003). Fredell's work was partly compiled within the Rock Care project; it is an attempt to demonstrate a contextual connection between rock art images, bronze artifacts and mythology, which traditionally have been separate fields of research. A positive feature of this study is that it makes use of personally conducted modern documentation of the rock art panels considering them as a natural element in the research process.

This renewal of focusing on the rock art images and documents of such stands in contrast to much of the research of the last decade where rock art panels and other prehistoric monuments sometimes seem to have become less interesting. The interest has instead focused on the landscape as such and as an arena for prehistoric man acting almost as a prehistoric landscape architect shaping and constructing completely conscious structures and topographic forms. It is undisputable that these studies have widened the perspective of the context of the rock art to become also physical and not only metaphysical. Against that background, the time might be right for making a U-turn back to the rock art panels and images. In fact, this may be the right prescription to find new ways of research leading forward to a deeper and more thorough understanding of rock art – the world's most widespread prehistoric phenomenon. That such a renewed interest exists is witnessed by a seminar arranged by Tanum's Rock Art Museum at Underslös with the title «Prehistoric Pictures as Archaeological Source» in 2002 (Milstreu & Pröhl 2004). The aim of this symposium was to promote a change of research focuses towards a situation were the rock art pictures are equally important as artifacts in archaeological research. This standpoint seems to be influenced by both structuralism and semiotics, two directions that dominated much of the research in the 1970s and 80s.

Research versus management or…?

Until the mid-1990s, rock art field projects were based on initiatives by individual researchers. However, one such project originally run by Gro Mandt at the University of Bergen also became a pioneer project on the national level, namely the Norwegian «Bergkunstprosjektet» that started more than 20 years ago (Mandt 2000 for a complete history of the project). This means that the concepts and methods of the project were applied on a national level although the focus for a long time was on the rock art of the Bergen region and the sites of Ausevik and Vingen. As well as other results, the most important achievement of this project was that it provided a tool for bridging an otherwise expanding gap between university and heritage administration – research and management. The emergence of this alliance is one of the factors that have led to the situation of today in the Nordic countries where much of the funding, the National Heritage Boards and the European Union being the most common financiers, has fallen on rock art projects of a similar kind. An illustrating example is the «Air Pollution project» of Riksantikvarieämbetet in Sweden that was carried out in the years of 1988–1995 (Bertilsson & Löfvendahl 1992; Löfvendahl & Bertilsson 1996). This project originally focused on research on environmental damage to monumental stone

buildings but also came to encompass prehistoric rock art. The Ministry of Environment provided the funding of the project. As the projects name indicates the focus was on the impact of environmental pollution on the rock art panels. But as a consequence much time was designated to study the rock art images and their state of conservation. One important outcome was the creation of registration forms for basic classification and field documentation that could be digitized and used for comparative analyses then and in the future. This means that collection of information on rock art has been performed in a similarly structured and organized way for almost 20 years and might be used for future comparisons. The manifold activities of this project led to an increased knowledge about the state of conservation of the rock art panels and an insight that much of the erosion and other damage seems to have appeared and/or accelerated since the 1930s. The excerption of and research for all possible information on rock art in the national archive ATA of Riksantikvarieämbetet served as an important interface with the past history of conservation and documentation.

It has been argued (Karlsson 2004:223 pp) that the work and studies of this project and the subsequent "Rock Carvings in the Borderland" project seems to have been performed only for the benefit of the natural scientists and archaeologists involved. Further, that they have served to deliberately widen the gap between professional researchers and the general public and furthermore to keep people away from the rock art. This is a profound misinterpretation of the aims. The research programs, like Raphael/Culture 2000 to which the applications have been made, are the results of political decisions by democratically elected politicians in co-operation with scientific specialists. The applications are subject to very strict evaluation and the results to similarly strict auditing. There are specific demands to be met with, concerning the connection to the non-expert community outside research and on the willingness to disseminate information and results to the public, schools and other target groups. As for the interregional projects, much attention is also focused on their effect on and implementation in regional and local development. It could in fact be argued that much of the rules and demands of the EU-programs might be very useful when applied to more ordinary university based research projects since they may result in an enhanced transparency and stricter quality control, as well as secure the feedback of results into the society outside the traditional arena of academic research.

Images of images

This focus on field documentation and database recording was further emphasized in the subsequent RockCare project within the framework of the Raphael and Culture 2000 programs of the European Commission (Bertilsson & Fredell 2003).

The main seminar activities of the project was bringing together experts, research students, rock art parks and museum staff, teachers, pupils, politicians and journalists and others from some of the major European research and management bodies at several different occasions and locations like Tanum, Valcamonica, Astuvansalmi, Mont Bego and Foz Côa. One of the major achievements was the possibility to evaluate the results of the application of various documentation methods like rubbing, tracing, laser scanning and digital photogrammetry on different rock types. An ideal recording procedure turned out to be to start with rubbing, followed by tracing and digital photography. The application of the paper rubbing requires the use of a standard format high quality graphic printing paper that subsequently can be scanned

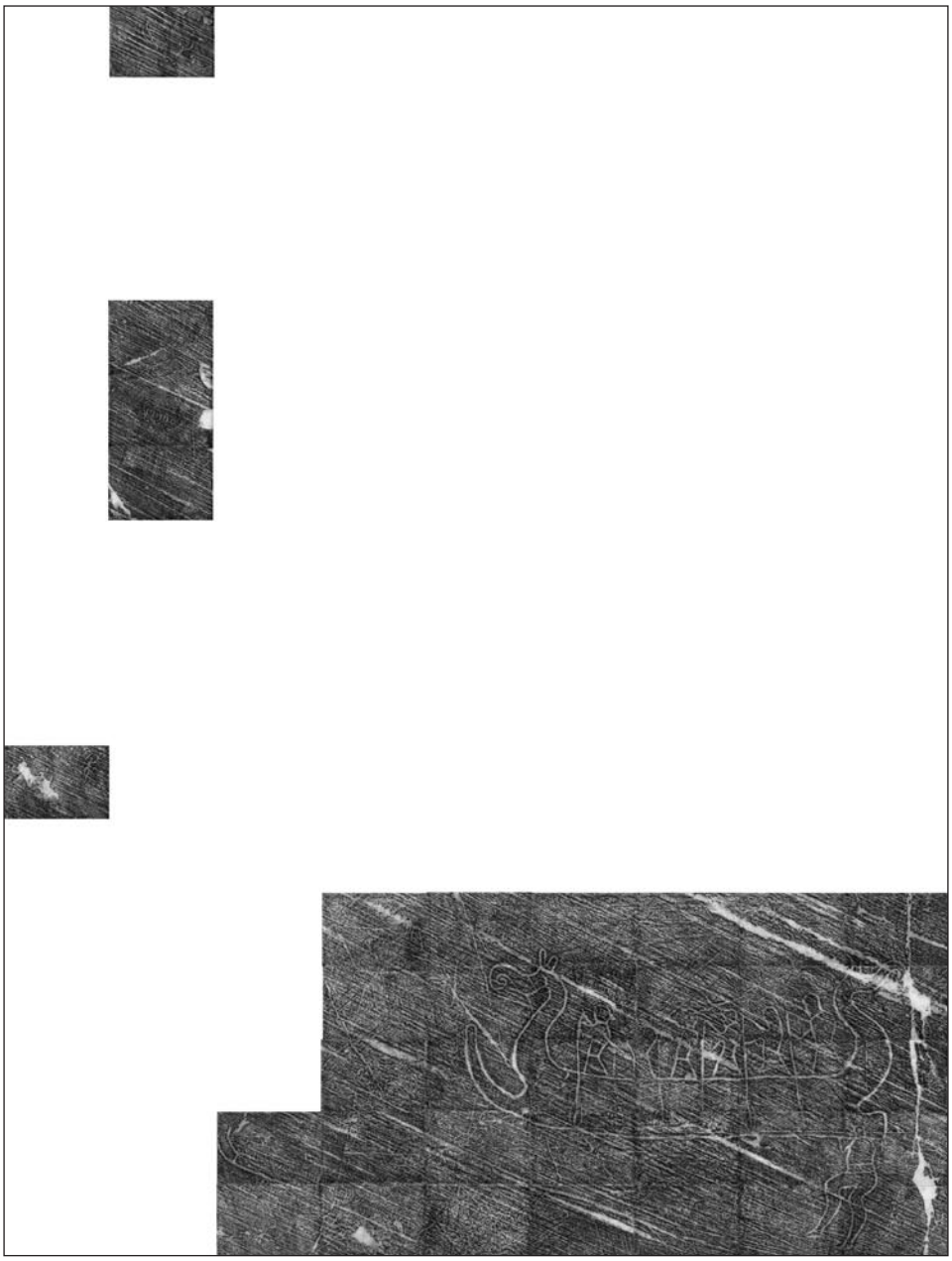

Figure 1. *Central part of the Brandskog ship engraving at Boglösa at Enköping, Sweden. The actual length of the ship is 4,2 metres. The engraving displays many unique features such as the personalized crew with paddles, the carrier at its right end, the ram and the elegantly shaped horse-heads at the stem and stern. The depiction is built up by scanned and digitized rubbings of paper sheets of 70 x 100 cm size. Rubbing by Catarina Bertilsson, Riksantikvarieämbetet and Gerhard Milstreu, Tanums Hällristningsmuseum, Underslös. Scanning by Karl-Magnus Drake, HB Solparken/Riksarkivet.*

and digitized. The tracing on plastic can be performed in two different ways; where the rock images are well preserved and the peck marks still are visible, it should be done according to the standards of the so called «Dot technique» on high quality transparent plastic.

At any circumstance, it is of vital importance to use rubbing and tracing methods in combination since they are not oppositional but complementary. The rubbings give a more comprehensive depiction of the rock art images and may capture more information and the original artistic qualities and details while the different tracing methods gives its executor a better chance to interpret the peck marks and lines on the rocks. None of these methods are of course entirely objective. Both methods have proved to be useful for recording damage to the panel's surfaces. Cracks, exfoliations and the state of erosion of the rock surface are automatically recorded through rubbings. This data can then be further treated and analyzed on the digital records resulting from the scanning of the rubbings. The plastic tracings have another advantage in that they are transparent and allow the recorder to interpret and add information also about the state of conservation of a panel during the process of documentation.

Within the RockCare project different digital recording techniques were tested, ranging from the production of 3D photo maps based on traditional analogue cameras, over the use of a high resolution laser scanner to the use of high tech digital photogrammetry (Johansson & Magnusson 2004). All these high tech methods have proved to be useful for recording at the very highest level of accuracy. A major drawback is the high cost which is still between 10 and 20 times higher than the use of traditional methods of rubbing and tracing. This clearly indicates that the use of traditional methods will dominate for a long time. In fact, they may have another advantage that technical developments do not have; they require a natural and close examination of the rock and its images by the recorder. This normally leads to a deeper knowledge and understanding of the study object that is almost impossible to reach when using only high tech methods. Still, the digital photogrammetry has proved to be a very useful method recording heavily damaged panels like at Kåfjord in Alta where recently a huge area of a steep and heavily damaged engraving of several hundred square meters has been recorded. Due to the extremely bad preservation of this site, this was judged a good way to avoid damaging the fragile panels. However, in normal conditions rubbings and tracings would have presented a satisfactory result too. And the costs would have been considerably lower, probably even when the additional time needed is taken into account.

One of the achievements of the RockCare project was testing methods of scanning rubbings in order to make them more easily storable and accessible. Initially, the rubbings were digitized on a roller scanner and afterwards manipulated and fitted together with the help of PhotoShop. Although the results were rather promising there were also some problems connected to the large size of the documents and a need for reduction without loosing too much information. This led to contacts with the National Archive and it was decided to try to develop a basic and low cost system of scanning and storing the result on DVD. In that way a number of positive results would be achieved; once scanned the original rubbings can be stored in a safe place, since the digitized information was burnt on DVDs it would be easily stored and in addition the information would be more easily accessible. So then it was decided to apply this method to a number of big panels in Sweden that was recorded in the course of the Interreg project – RANE. As a result more than 50 panels were documented and the rubbings were scanned shortly afterwards. Among the panels are Brandskog in Uppland, and Kalleby in Tanum (Figs. 1, 2 and 3). A large portion of the rubbings in the archive of

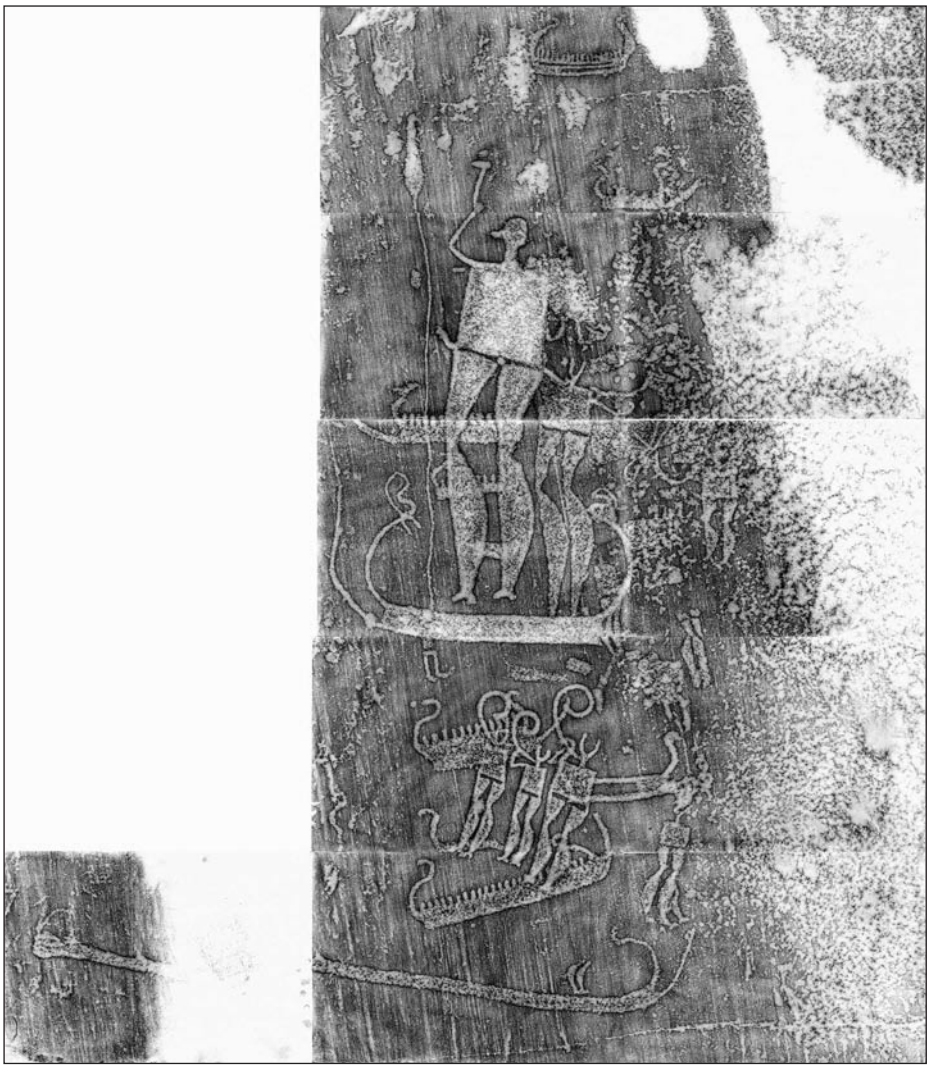

Figure 2. *Rock engraving at Kalleby in Tanum, Bohuslän, Sweden. The tallest human figure is approx. 1,5 metres. The engraved images are manufactured in skilful technique and artistic manner. There are numerous unique features like the two tall humans standing in the ship with the elegantly curved and contoured horse-heads, the archer and the trio blowing lures below. There are also a number of obvious superimpositions, and the right part of the engraving is severely damaged by erosion. Rubbing by Catarina Bertilsson, Riksantikvarieämbetet and Gerhard Milstreu, Tanums Hällristningsmuseum, Underslös. Scanning by Karl-Magnus Drake, HB Solparken/Riksarkivet.*

Underslös Museum in Tanum was also scanned. In total more than 200 panels and 3000 rubbing sheets measuring 70 x 100 cm were recorded and the information stored on DVDs. The task was performed as a joint venture between the National Heritage Board and the National Archive. A consultant company performed the actual scanning. The cost per sheet was 70 SEK or approx. 8,5 EURO. The method of recording rock art panels by using paper sheets attached to a grid system was the initial reason for developing this method. The sheets

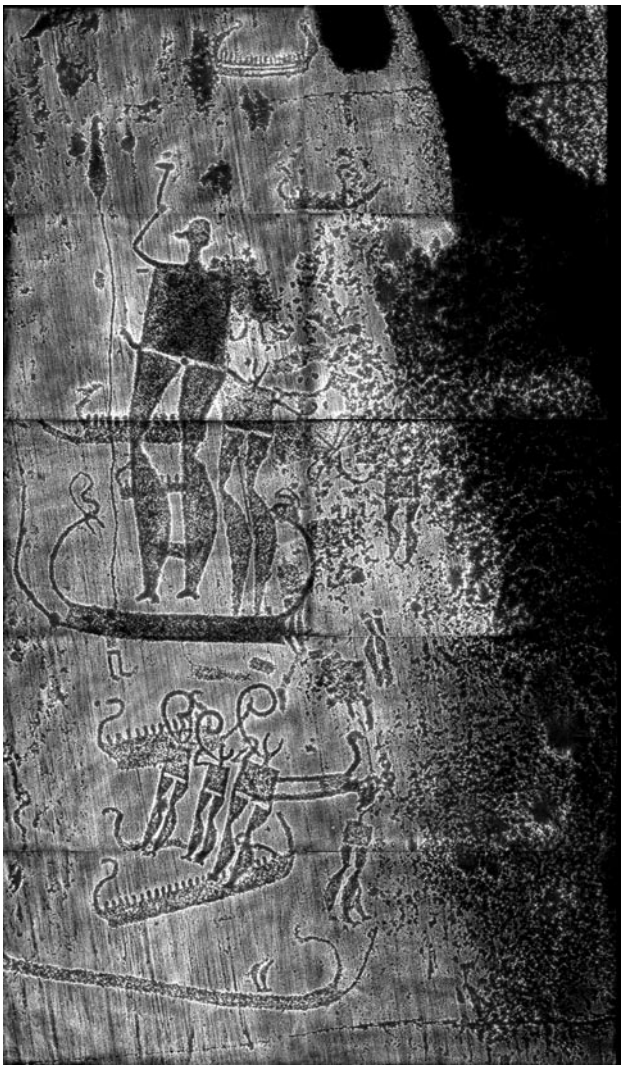

Figure 3. *The same rock engraving as in figure 2 with the grey-scale being inverted. Many details become more evident when using this technique displaying the scanned rubbings.*

are very suitable for a roller scanner due to their form and size. In order to avoid heavy friction and scratching of the scanner the sheets were put into protective transparent plastic envelopes. It is of course fully possible to scan other rubbings, for instance the vast material compiled in Tanum and kept by Vitlycke museum. Since these rubbings are made on long paper rolls that have been kept rolled up in the archive for many years, they require further development of the scanning method and more financial resources since they will be more time-consuming and consequently more expensive to deal with. To accomplish that task a big national project is being planned in Sweden. This project aims to include all rock art documentation material that has been accomplished in Sweden since the 1990s.

Summary

During the last decades, there has been a rapid rise in rock art research and management in the Nordic countries. It is the author's belief that these developments will have far-reaching consequences in technological developments in documentation and database registration, providing new tools for the management of rock art throughout the world but also providing a considerably widened basis for research into the interpretation and meaning of rock art. Since more academic teachers and students than ever before are engaged in rock art it is a highly important task to make the documentation of rock art more easily accessible. This will hopefully also result in an enhanced integration between these two fields. In the paper some examples of rock art depictions in the form of rubbings that have been scanned and stored by a method developed by the National Heritage Board of Sweden in co-operation with the National Archive, are presented.

Acknowledgements

Reidun Laura Andreassen, Lasse Bengtsson, Catarina Bertilsson, Karl-Magnus Drake, Joakim Goldhahn, Heidi Johansen, Trond Klungseth Lødøen, Gerhard Milstreu och Karin Tansem.

Litteratur

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