

Swedish Rock Art Research Archives



The Purpose of the Swedish Rock Art Research Archives is:

- To make contemporary and historic rock art documentation available for research and the general public by
- creating an infrastructure with an IT system for research databases and to make these accessible through a digital research archive as well as a public archive for original documentation,
- resulting from a thorough surveying and registering of rock art documentation in more than 80 official and private archives
- To scan, digitize, and adjust for the web, the documents and images of these archives
- To promote and further academic research
- To introduce and implement digital documentation techniques

Scandinavian Bronze Age rock art (1700-500 BC) is world famous, and has stimulated research for almost 200 years. The rock art shows information about Bronze Age ideol-

ogy, religion, society, long distance connections, means of transportation, warfare, and hunting by depictions of boats, wagons, weapons, humans, animals and various

ritual features. Current research on these images is highly relevant to concerns about society today, providing some of the best evidence for the emergence of social complexity, organized conflict, rituals, and social inequality. The reports in the series *Documentation and Registration of Rock Art in Tanum*, produced by Tanums Hällristnings Museum Underslös (THU) have been central sources for rock art research. The last 20 years have seen an explosive increase in the number of articles dealing with Scandi-

navian rock art. A large number of national and international doctoral dissertations and monographs on Bronze Age rock art have also been published.

The Swedish Rock Art Research Archives (SHFA) played a crucial role in increasing the momentum of this new wave of academic work and public interest in the rock art. Before the SHFA was founded in 2007, research was long hampered by a lack of access to original documentation. Today

Scanned photographs and images, documents and rock art documentation made with the frottage method, are all saved as original TIF-files.

The method of work is as follows:

Rock art documentation made with the frottage method, on sheets of paper in original size (70 x 100 cm), having been scanned, are scaled down to 1:10. All images from one rock art site are subsequently put together into a montage covering the entire rock art surface, and are saved as TIFs. The montage is edited and then compressed into JPEGs, saved for web and registered in the SHFA Image database. (© EM)

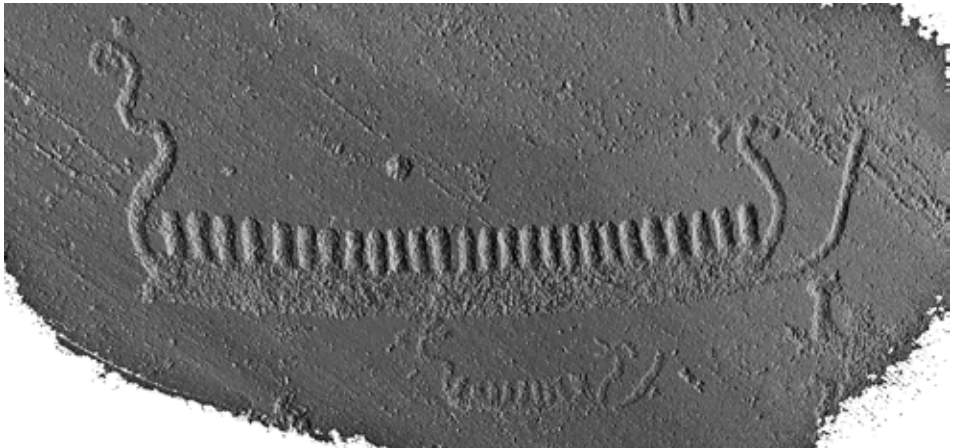




Structure from Motion is a method to create three dimensional models from photographs. The name of the technique basically explains its principle: to photograph a fixed object (structure) through movement (motion). The tools needed are a digital SLR camera, a computer and a program to process the photographs. The method employs overlapping images acquired from multiple positions. (© EM)

Laser Triangulation 3D scanning

With the progress of laser technology, it is now possible to use the technique out in the field relatively easily.





Practical documentation exercises in digital photography, laser scanning and frottage led by Catarina Bertilsson, Ellen Meijer and Gerhard Miltstreu. (© EM)

Courses on different levels and Advance Master level course in documentation and interpretation of rock art led by Prof. Johan Ling. (© GM)





To see rock carvings with artificial light is an experience out of the ordinary! Images which are hardly visible during the day, suddenly reveal their beauty and magic. (© GM)

this has changed, because the SHFA provides documentation regardless of size and material easily accessible online through its web-portal, with over 1,6 million visitors (www.SHFA.se). SHFA has digitised more than 120 000 files with images and documents from all over Sweden. Moreover, the SHFA is significant for the wider community interested in European rock art by providing material from other countries including Denmark, Norway, Italy and soon Spain and Portugal. Since its inception, the SHFA has gained a position as national and worldwide leading provider of high-quality rock art documentation and archival information

for scientific publications, doctoral theses, outreach, and presentations. SHFA has led the initiative to establish 3D documentation (photogrammetry and laser scanning) and new methods of classification such as artificial intelligence (AI) and machine learning. These novel methods have resulted in new detailed observations that in turn have advanced aspects regarding dating, classifying and interpreting of rock art.

Over the years, THU has been a significant collaborative partner for SHFA, both in terms of maintenance and development. Interaction and communication have been intensive and highly productive, including documentation and know-how about documentation, staff, localities, education, publications and much more. The most central points of interaction have recently been made up of; (i) the idea to transform the localities at THU into a pan Scandinavian platform for rock art research, hosted by SHFA, (ii) the plaster castings of Herman Wirth donated by Thu to SHFA, (iii) new university courses held by SHFA at the localities at THU. Finally, the reports in the series *Documentation and Registration of Rock Art in Tanum*, produced by THU over the years have been central sources of rock art documentation for SHFA. It is therefore very gratifying to see yet another forthcoming publication in this report series.

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