

# Paint it red – Investigating the impact of painting rock art in Sweden through thermal imaging

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Swedish rock art dating to the Nordic Bronze Age (1700-500 BC) consists of engravings on bedrock surfaces which bear witness to the religion and practices of past societies that did not leave a written record. As such, they are an invaluable source of information for studying contemporary societies. Intriguingly, these images were intentionally self-reflecting, providing us with a glimpse into what people in the past thought about their lives.

UNESCO recognized the outstanding value of the rock art by inscribing Tanum (Bohuslän, Sweden), an area with the densest distribution of such images, onto the world heritage list. Even before this, Tanum and other rock art locales in Sweden attracted tourists, and to facilitate this the images of the most famous sites are painted red to make them more visible.

We here present an initial study using thermal imaging of the paint to investigate how it may be affecting the rock, and therefore the rock art. We have determined that the paint creates high temperature differentials when it is heated up by the sun and then cools at night. We discuss the potentially detrimental effect of these thermal differences, especially given that the changes are so spatially close.