Digitally Reconstructing an Iron Production Landscape: The Spatiality and Chronology of Iron Production Sites within Northern Sweden

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Abstract

I aim to present the preliminary results of my MA thesis within archaeology, which analyses the spatial- and chronological distribution of bloomery iron production sites within Northern Sweden through GIS and statistical software. Given the notion that interdisciplinarity within research has been highlighted as important during recent years, an archaeological perspective of how natural resources have been utilized to produce iron in the past could be a fruitful way of broadening the discussion within a geological context. The thesis operates on a landscape scale where watersheds of major rivers have been applied to discern study areas for analysis. Iron production has been discussed on a landscape scale within previous research (e.g. Magnusson 1986; Svensson 1998). There is however a lack of applied GIS- and statistical analyses within previous archaeological iron production research, to which my thesis can contribute. The material that is being analysed consists of the spatial position of all known bloomery iron production sites registered in the Swedish National Register of ancient features, as well as a database of radiocarbon dates that has been developed for the thesis, which consists of over 1200 dates, and represent all the available radiocarbon dates of iron production sites within Sweden. By applying the latest methods of statistical modelling in analysing the radiocarbon dates, the thesis offers a refined and more nuanced understanding of chronological changes in iron production within different geographic areas of Northern Sweden, during the past. The analysis aims to answer research questions concerning regional and chronological differences in the spatial distribution of bloomery iron production sites and to discuss what these patterns can say about the organization and importance of iron production within past societies. Furthermore, the thesis also aims at developing a method to identify hot spots in the landscape of iron production, through the application of predictive modelling. One major research problem within archaeological outland research today is the lack of knowledge of where in the landscape outland sites, such as iron production sites are located (Hennius 2021: 51). The application of predictive modelling is therefore potentially a fruitful approach to narrowing down the areas of search within archaeological surveys, and in that way contribute to more future knowledge being gained within iron production research.

References

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