Seminarium 11 juni 2025

Arkeologi och antikens kultur

Slutseminarium.

An ecomorphological approach to weapon points and environment in Mesolithic Sweden

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Datum: Onsdag 11 juni 2025

Tid: 15.00 – 17.00

Plats: Rum 334 / Zoom

An ecomorphological approach to weapon points and environment in Mesolithic Sweden

This thesis aims to investigate the relationship between environmental factors and artifact morphology, by focusing on the ecomorphology of lithic and osseous weapon points, with particular attention to challenges faced by Middle and Late Mesolithic hunters in Sweden.

The thesis addresses these issues through a combination of theoretical, methodological, and archaeological studies. It includes the following papers:

1. Lundström, F., MacLeod, N., Isaksson, S. Glykou, A. 2023. *The harpoon stands yonder: Shape variation and functional constraints in Mesolithic complex weapon points from the circum-Baltic Sea area*. *Journal of Archaeological Science: Reports 51*.

   A geometric morphometric study that distinguishes functional and non-functional variables in Mesolithic harpoon points.

2. Lundström, F. 2025. Beneath the military horizon. Measuring Stone Age hunter weapon point technology at the ecological scale. Warming, R (ed.). *Violence and Warfare in Social Context*.

   A study that outlines Ecological Psychology and Dynamic Systems Theory (EP DST) as a model for addressing environmental influences on weapon point properties.

3. Lundström, F., MacLeod, N., Gummesson, S., Molin, F., Hallgren, F., Lidén, K., Isaksson, S., Glykou, A. In prep. A kaleidoscope from a lost world: Harpoon morphology in relation to chronology, environment, and fauna in Mesolithic Eastern Middle Sweden.

   A geometric morphometric study that reveals the chronological and environmental influences on Mesolithic harpoon points from Eastern Middle Sweden.

4. Lundström, F., Östlund, S., Kulachenko, A., Nordbeck, P. In prep. Remnants of Action: Integrating Ecological Psychology and Dynamic Systems Theory with Continuum Mechanics in Archaeological Projectile and Craft Experiments.

   A pilot study aimed at integrating EP DST principles into experimental archaeology, using geometric morphometrics and continuum mechanical simulations.

5. Glykou et al. In prep. The impact of the 8.2 cold event on the Mesolithic communities of central Sweden (working title).

   A paper that integrates stable isotope analysis and geometric morphometrics in order to study the impact of the 8.2 cold event on both fauna and artifacts.

Together, these studies reveal how environmental factors can be identified and analyzed through artifacts.

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