Reconstructing adhesives : an experimental approach to organic palaeolithic technology

Kozowyk, P.R.B.

Propositions for "Reconstructing Adhesives: An Experimental Approach to Organic Palaeolithic Technology" by Paul Kozowyk

1. Birch bark tar technology can develop from simple, low-yield methods, to more complex processes with higher yields through a number of discreet changes, involving already existing Neandertal technology.
2. Small changes to ingredient ratios have pronounced effects on adhesive shear strength. To make an optimal compound adhesive, Middle Stone Age humans needed to carefully balance the ingredient ratios of their mixtures, suggesting they had a clear understanding of the materials and their properties.
3. When considering multiple adhesive qualities, including workability, re-usability, and cohesive strength over a range of temperatures, birch bark tar out-performs resin-based alternatives. This explains why tar was used during the Palaeolithic.
4. Preservation qualities of different natural adhesives can lead to biases in the archaeological record. This may result in a disproportionately high number of birch bark tar and compound resin adhesive finds.
5. Not all archaeological experiments can be conducted under laboratory conditions. Field experiments and hands-on experience can provide valuable insight into ancient technologies and in some cases is the only way to test a hypothesis.
6. Reproducibility, control, and the ability to easily compare results regardless of researcher or institution are vital. Standardized test methods developed for modern materials and industry can be successfully employed for experimental archaeology, without the need to reinvent experiment protocols.
7. Considering propositions 5 and 6, the best way to approach experimental archaeology is with a combination of field and preservation experiments.
8. Surviving adhesive residues provide a glimpse of the organic material remains of the past. As awareness continues to increase, many more natural adhesive materials are likely to be discovered. It is therefore important to understand what to look for, and how to treat any potential residues once discovered.
9. The study of ancient adhesives is a multifarious topic, and fruitful collaboration between archaeologists, engineers, chemists, and many others is required to fully understand it.
10. Despite over a hundred years of study, people's attention is easily glued to new Neandertal discoveries. Adhesive finds have proven to be a particularly sticky subject. As their significance begins to take hold within Palaeolithic archaeology, creating many interdisciplinary bonds, more people are pitching in whether they adhere to the same ideas or not. This has resulted in many years of fruitful research and discussion; with many more still to come.