

Plant Weaving Materials in the Eurasian Upper Palaeolithic: Developing methodologies towards their archaeobotanical identification.

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Venus figurine from Kostenki (Hermitage cat. No. 2928/12) with bangles, cord belts and possibly a woven hat. (Photo Lila Janik).

Background

Plants were an important resource in past times as a source of food and also as cultural raw materials. However, most of the activities related to non-subsistence plant exploitation involve more fragile parts of the plant like the stem and leaf which often leave little trace in the archaeological record. Nowhere is it more important to understand these technologies, particularly weaving, than in the behavioural 'revolution' of the Eurasian Upper Palaeolithic (ca.28,000 to 20,000 years ago). Evidence for weaving can be seen in tools and on figurines, but direct evidence of the plants utilised remains elusive. Understanding this is key to understanding how Upper Palaeolithic humans interacted with and adapted to their environment, such as their seasonal round and the technological 'know-how' required to process different plant and plant parts.

Methodologies

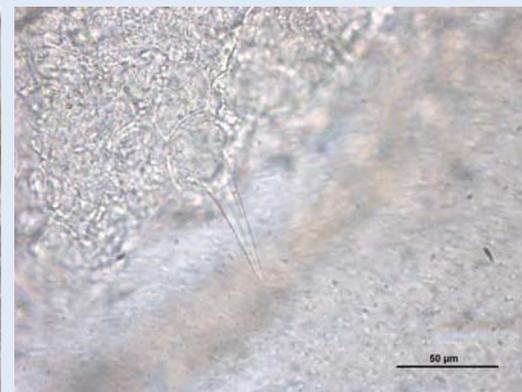
Phytoliths are durable and provide evidence of non-seed parts of the plant, but analysis has tended to focus on subsistence species. The first step for this project is to create a phytolith reference collection. 17 species were identified from ethnographic work as being utilised in weaving and suitable to the colder Eurasian Upper Palaeolithic environment and analysed to create a focused reference collection.



Juncus effusus L., the soft rush.
(http://commons.wikimedia.org/wiki/File:Juncus_effusus_near_Smrkovice,_part_of_Pisek_in_2011_%285%29.JPG)

Preliminary results

Although not all species produced taxonomically specific phytoliths, several showed morphotypes that could allow for genus or species identification. Some, such as *Juncus effusus* L. culm and *Urtica dioica* L. leaf and culm presented very distinctive cells. Morphometric analysis is ongoing. Future work includes looking at processing methods and then analysing archaeological samples.



Left & Centre: Stellate cells from epidermis of *Juncus effusus* L.; Right: long prickles from *Urtica dioica* L. These could be diagnostic to species and further morphometric work is needed. (Copyright N. Garcia-Tuset and C. Lancelotti).

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