## 18<sup>TH</sup> CONFERENCE OF THE INTERNATIONAL WORKGROUP FOR PALAEOETHNOBOTANY

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Analysis of the archaeobotanical macro-remains show the presence of local agrosystems. Remains include cereals, mostly barley (*Hordeum vulgare*) and wheat (*Triticum turgidum* subsp. *dicoccon*), pulses (mainly lentil, *Lens culinaris*), and a rich corpus of grape (*Vitis vinifera*) pips and grape by-products confirming a specialisation in viticulture at Plinthine.

Geometric morphometric analysis carried out on grape pips from Saito-Persian (7th-mid 5th c. BC) and Ptolemaic (4th-1st c. BC) periods revealed a wide morphological diversity throughout time, and a difference between Saito-Persian and Ptolemaic Periods. Additionally, the pips, whate-ver the period, correspond to morphotypes close to wild grapes, perhaps related to cultivars that have undergone a low selective pressure and/or grapes that have been grown from seedlings.

Seed and fruit study, geometric morphometric analysis of grape pips as well as charcoal analysis will be used to explore agricultural land and viticulture in the Nile Delta, especially between the New Kingdom and Early Roman period. A special focus point will be looking at the switch between the Saito-Persian Periods to the Ptolemaic Period.

*Key-words: Egypt, Viticulture, Macroremains, Geometric Morphometry* 

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# UKRAINE AS THE CROSSROAD FOR AGRICULTURAL DISPERSAL IN EURASIA

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With remarkable progress of archaeobotany in decades, we should reconsider the dispersal of agriculture in Eurasia as multi tiered, multi directional, and long term movements. The territories to the north of the Black Sea, mainly the present Ukraine, are one of the key area to discuss the East-West movements. There are comparatively many archaeobotanical dataset derived from impressions in pottery, and have been quoted often. In particular, exceptionally early start of agriculture compared to the neighbouring region has been predicted based on the early cereals prior to 6000BC. In addition, there are many reports of Panicum miliaceum dating back to Neolithic in Ukraine. However, from today's perspective, many archaeobotanists are warning of the identification and dating from pottery impressions. Uncertain evidence seems to complicate the problem more than the absence of evidence. Therefore, re-evaluation is high- priority issue to reconstruct the dispersal of agriculture. To make clear the timing and the route of dispersal of crops in Ukraine, the authors analyzed pottery with impressions again, and re-identified using refining impression method with scanning electron microscopy. As a result, none of more than 12,500 observed Neolithic potsherds, including ones already published as having cereal impressions, contains clearly defined impressions of cultivated plants at present. Abrupt appearance of numerous Panicum miliaceum was recognized only from the Late Bronze Age.

Key-words: The dispersal of agriculture, Ukraine, Food globalization, Panicum miliaceum, impression in pottery