

Abstract #: 2006

CHRONOLOGICAL MODELLING OF THE DISPERSAL OF BROOMCORN MILLET CULTIVATION IN BRONZE AGE EUROPE

John Meadows^{1,2}, Dragana Filipović³, Wiebke Kirleis³

¹ *Centre for Baltic and Scandinavian Archaeology (ZBSA)*

² *Christian-Albrechts-University Kiel, Leibniz Laboratory for AMS Dating and Stable Isotope Research*

³ *Institute for Pre- and Protohistory, Kiel University, Germany*

Broomcorn millet (*Panicum miliaceum*) is native to East Asia, but has been widely reported in European archaeobotanical assemblages from the Neolithic onwards. Direct AMS 14C dating of some of these apparently early specimens showed them to be intrusive, however, and instead suggested that millet cultivation only reached Europe during the Bronze Age (Motuzaite-Matuzeviciute et al. 2013). Now, thanks to a systematic programme of direct dating by CRC 1266, Kiel University, Germany (DFG grant 2901391021), in collaboration with archaeobotanists from 13 countries, we have c.130 pre-Roman AMS dates on single charred grains, or fused clusters of grains of broomcorn millet, from over 60 sites. Using these results, we have developed a simple spatial-temporal model, by dividing central and south-eastern Europe into smaller regions, and using Bayesian chronological modelling to estimate when millet cultivation arrived in each region (Filipović et al. in prep.). The results appear to show steady dispersal across central and southern Europe between c.1550 and 1350 cal BC, then a 100-200 year delay before millet spread rapidly across the north German lowlands around 1200 cal BC. This presentation will focus on the robustness of these patterns, and on necessary compromises in the modelling process between spatial and temporal precision, which are issues that should be addressed whenever diffusion processes are mapped.

Motuzaite-Matuzeviciute G, Staff RA, Hunt HV, Liu X, Jones MK. 2013. The early chronology of broomcorn millet (*Panicum miliaceum*) in Europe. *Antiquity* 87(338):1073-85.

Keywords

radiocarbon, spatial-temporal model, millet, Bronze Age

Note/comment

form does not allow me to update my telephone number, which is now 0049 431 880 7385