

Analysis of charred plant remains from Lyminge

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In the winter of 2017, as part of the Feeding Anglo-Saxon England project (FeedSax; ERC AdG741751), the author visited the Lyminge Archaeological Project archive at the University of Reading to view the environmental samples retrieved during excavations at Lyminge (Kent) between 2008 and 2014. The samples had previously been subject to assessments by Gill Campbell, Rachel Ballantyne and the present author (Campbell 2012; Ballantyne 2014; McKerracher 2015), as well as limited quantitative analysis by the present author (McKerracher 2013). The purpose of the FeedSax review was to establish whether the charred plant remains in these samples were of sufficient abundance and preservation-quality as to support (1) fully quantitative analysis, (2) stable isotope analysis, and (3) radiocarbon analysis. The environmental archive of the Lyminge Archaeological Project is too large to be reviewed in its entirety for this purpose, so a specific subset of samples was pre-selected, using the information available in the earlier assessment reports to choose those samples most likely to have relatively abundant and well-preserved charred plant remains. Once the pre-selected samples had been located within the archive, they were brought back to the University of Oxford's Institute of Archaeology for further study. This commenced with a fully quantitative study of the charred plant remains; it is this stage of analysis which is reported on here.

Some samples from the 2008 excavation campaign had already undergone quantitative analysis, as part of the author's earlier doctoral research; the results of that study are not reproduced here, but can be found in the author's thesis (McKerracher 2014). A renewed examination of the environmental archive revealed, however, that this previous analysis included a mistaken assumption: for sample <30>, no subsample bag was labelled '3/4' but two were labelled '4/4 (1)' and '4/4 (2)' respectively, and the first of those was therefore treated as the missing '3/4'. The missing subsample '3/4' has now been located, and was analysed by Tina Roushannafas for the FeedSax project; these new data for this subsample are included in the present report's data set.

Methods

The samples were received in a cleaned, processed condition in plastic bags. The environmental remains had undergone only very limited sieving and sorting, and no quantification. The basic method adopted here was therefore to sieve the material into size fractions (>2.0mm, 1.0-2.0mm, 0.3-1.0mm, <0.3mm), to sort the resultant fractions – prioritising the extraction of charred plant remains from the fractions >1.0mm – and then to identify the latter as closely as possible in taxonomic and anatomical terms, to quantify those items according to standardized criteria, and finally to re-package them by category within sample bags. Items were examined with a CETI binocular microscope, at 8-65x magnification. Taxonomic identifications were made using published keys (Jacomet 2006; Cappers & Bekker 2013; Berggren 1981) and modern reference material at the Institute of Archaeology, University of Oxford. Nomenclature follows Stace (2010) for wild species, Jacomet (2006) for cultivars. Identified material was then counted, labelled and repackaged in separate vials for different taxa and plant parts.

Results

The quantitative data produced by this analysis are provided in Digital Archive Document B06. No further analysis or interpretation is presented in this report, because (i) the sub-assembly studied here is only part of that produced by the Lyminge excavations, and therefore most meaningful when combined with data from other parts of the assemblage; and (ii) Lyminge is one of the FeedSax case study sites, so detailed analyses are presented in project publications (such as Bogaard *et al.* 2022 and Hamerow *et al.* in prep.).

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