

Assessment of invertebrate remains from Stamford Bridge, East Yorkshire (Site code: STB98)

by

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Summary

*The residue from a site-sieved sample from an early fourth century ditch deposit at Stamford Bridge was submitted to the EAU for an assessment of its invertebrate remains. A moderate-sized insect assemblage was recovered, giving limited ecological information but broadly supporting the archaeological evidence for field cultivation in this locality. It is suggested that the sample would have yielded a substantially larger insect assemblage, with the potential for detailed ecological reconstruction, if it had been processed entirely to 300 μ m by the methods of Kenward *et al.* (1980; 1986). In view of the recovery method further work on the existing material is not considered justifiable.*

KEYWORDS: STAMFORD BRIDGE; EAST YORKSHIRE; FOURTH CENTURY; ASSESSMENT; DITCH; FIELD SYSTEMS; INVERTEBRATE REMAINS; INSECTS; LANDSCAPE RECONSTRUCTION

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15 November 1999

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Introduction

An archaeological excavation was carried out by Field Archaeology Specialists Ltd at Stamford Bridge, East Yorkshire, during 1998. A single sediment sample, of approximately 10 litres, was processed on site using 500µm mesh for the residue and 300µm mesh for the flot. The resultant residue and flot were submitted first to Headland Archaeology for assessment of the plant remains and then to the EAU for assessment of the invertebrate remains. The sample was taken from the primary deposit of a ditch associated with an early fourth century settlement. The ditch was situated near a trackway lying between field systems.

Methods

The residue and flot were recombined at the EAU and submitted to paraffination and flotation as described by Kenward *et al.* (1980; 1986).

The invertebrate macrofossils were recorded semi-quantitatively using the scale described by Kenward *et al.* (1986) and Kenward (1992). Records were made on a paper *pro forma* for later transferal to a computer database (using Paradox software) for analysis and long-term storage.

Results and Discussion

Context 1200, Sample 135/T

0.3 kg

A large flot (approximately 30 ml) was produced from two paraffinations. A brief

examination of approximately one third of the residue revealed only three fragments of insect cuticle that had not floated, but several larval cases of caddis (Trichoptera) were also noted. Most of the material was plant debris and seeds, but a moderate-sized insect assemblage was also recovered. The insect remains consisted chiefly of fragments of beetles greater than 1 mm in size, notably the larger weevils, ground beetles and scarabaeids (dung beetles). The size of the fragments, some whole sclerites and the excellent state of preservation indicate that any smaller remains (which would undoubtedly have been present) were lost during the initial processing of the raw sediment.

Supportive evidence for the cultivation of land is provided by the presence of elaterids (the larvae of which are found in short grassland), *Harpalus rufipes* (Degeer), *Pristonychus terricola* (Herbst), several earthworm capsules and many cysts of a soil-dwelling nematode (*Heterodera* sp.). The many seeds were from weeds (*Stellaria media* (L.), *Polygonum persicaria* L., *Polygonum hydropiper* L. and *Atriplex* sp.) also typically found on nutrient-enriched, slightly damp, cultivated land.

The weevils (*Apion* sp., *Sitona* sp., *Otiorhynchus* sp. and *Trophiphorus* sp.), chrysomelids and several individuals each of *Calathus fuscipes* (Goeze) and *Amara* sp. could all have originated from grassy, open wasteland. It is possible that some grazing of livestock was also practised nearby and would account for the presence of several individuals of *Aphodius* spp. and at least one *Geotrupes* sp.

The presence of many *Daphnia* (water flea) resting eggs and the relative rarity of water beetles perhaps indicate that water was only present in the ditch on a temporary basis.

Statement of potential

Further work on the invertebrate remains recovered from this sample would give only limited additional ecological information. It is unfortunate that no more raw sediment from this feature exists, as it is almost certain that a large subsample (approximately 5 kg) taken for general biological analysis ('GBA' *sensu* Dobney *et al.* 1992) and processed to 300 µm would have yielded a substantial insect assemblage with the potential for detailed ecological interpretation. While this loss may seem rather a small one, the information that further work would have yielded could have had greater value as part of a wider project on landscape reconstruction for eastern Yorkshire. This should certainly be borne in mind when undertaking future work on material from similar sites or features.

Recommendations

For the reasons outlined above further work on existing material cannot be justified *per se*. Any future excavation in this area should make provision for the recovery of, and appropriate post-excavation work on, any similar material.

Retention and disposal

The residue and flots should be retained for the present.

Archive

All of the biological material, and paper and electronic records pertaining to the work described here, are currently stored in the Environmental Archaeology Unit, University of York.

It is recommended by the EH-funded staff of the EAU that long-term storage of bioarchaeological remains should be in the local receiving museum.

Acknowledgements

The author is grateful to Headland Archaeology for providing the material for this assessment, to Annette Rowe of Field Archaeology Specialists Ltd for archaeological information and to Allan Hall for identification of the seeds.

References

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