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Finding Bosworth Battlefield: a multiproxy palaeoenvironmental investigation of lowland sediments from Dadlington, Leicestershire, England

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ABSTRACT

This paper presents the results of palaeoenvironmental investigations in an area proposed to contain the site of Bosworth Battlefield, near Dadlington, Leicestershire. Polydore Vergil's sixteenth century account is the only source, albeit secondary, that is referenced in histories and logistical interpretations of the battle. Antiquarians and historians repeatedly reference this account, citing its description of a 'marsh' which is believed to have been the central site of the mêlée. Two sites in the floodplain of the former River Tweed have been identified as containing organic deposits characteristic of wetland environments. High-resolution lithostratigraphic and palaeoenvironmental data from each site are used to critically evaluate if the deposits represent the marsh and thus define the battlefield as described by Vergil. These new multiproxy data consolidate the local chronology of vegetation, hydrology, and sedimentological dynamics at the site from the Neolithic to the Medieval period. Whilst a precise interpretation of ground conditions at the time of the battle in 1485 cannot be made, due to truncation of the record as a result of modern ploughing and floodplain processes, the results provide a wider landscape context and illustrate the presence of local wetlands in this area that existed into the Medieval period.

1. Introduction

The death of Richard III at Bosworth Field in August 1485 marked a crucial turning point in English history as the last of the Plantagenet kings was succeeded by the founder of the Tudor dynasty – Henry VII. In the absence of primary documentary source material, histories of the battle rely on Polydore Vergil's sixteenth century account reproduced in *The Anglica Historia* (reproduced in Ellis, 1844). This biased account provides the only testimony to the strategy and the eventual outcome of the battle, albeit written some thirty years after the event by an author who was both absent from the battlefield, and patronised by Henry Tudor (Hay, 1950). *The Anglica Historia* has also influenced strategic hypotheses and theories pertinent to the chronology and logistics of the battle, although detail of the battlefield location, in the absence of any bona fide primary documentary evidence or concentrations of battlefield finds and/or human remains, remains speculative. One specific natural landscape feature which Vergil describes as a 'marishe' (marsh) is believed to have provided a defensive right flank to protect the army of Henry Tudor, creating ground conditions between the two armies that strategically disadvantaged and impeded the advance of the Yorkist forces, thus contributing to the Lancastrian victory (Brooke, 1857; Foss, 1990; Hutton, 1788; Potter, 1983; Rees, 1985; Rowse, 1968; Royle, 2009).

The semantic of the sixteenth century term 'marishe' has not been questioned by historians in respect of the environmental context of Vergil's description of the local environment. Interpretations of this reference follow standard etymological derivations from Old French ('mareis' and 'maresche') and Medieval Latin ('mariscus') meaning 'a marsh' or being 'marshy' (Fisher, 1997; Kirkpatrick, 1989; Latham, 1999; Partridge, 1990). Whilst this environmental description is generic, it would appear that the use of this term may be an appropriate reference to the adverse ground conditions which influenced the strategy and eventual outcome of the battle. If pinpointed, the 'marsh' has the potential to preserve organic deposits which may provide information regarding the landscape and the hydrology of the local terrain in the medieval period, and identify the location of this important battlefield. In this paper new lithostratigraphic and palaeoenvironmental data are presented from the former floodplain of the original course of the River Tweed to the west of Dadlington; to i) investigate if deposits representing former wetlands exist in this locale, ii) to determine the character of these wetlands to assess if they are representative of the marsh described by Vergil, and iii) to define the area most likely to be the site of the battlefield.

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2. Background

The site of Bosworth Battlefield is believed to be situated to the west of the villages of Dadlington and Stoke Golding some 3.5 km south of Market Bosworth, Leicestershire (Fig. 1). The extent of the overall battlefield area including encampments (approximately 4.5 km^2) has been calculated based on the limited scatter of archaeological artefacts with a military and fifteenth century provenance (Glenn Foard (The Battlefields Trust) and Richard Mackinder (Bosworth Battlefield Heritage Centre & Country Park) pers. comm. 2008), and logistical and strategic hypotheses proposed by various authors (Brooke, 1857; Foss, 1990; Hutton, 1788; Potter, 1983: Rees, 1985; Rowse, 1968; Royle, 2009).

3. Methodology

3.1. Fieldwork

Two major concentrations of auger surveys were undertaken by The Battlefields Trust and Bosworth Battlefield Heritage Centre between 1976 and 2008 (currently unpublished). These preliminary surveys identified two specific locations to the southwest of Ambion Hill (SK403003) (which had until recently been thought to be the site of the battle) (Gearey et al., 2008; Hill et al., 2006): Fen Hole (central grid reference SP381985) and Fen Meadow (central grid reference SP397982) to the immediate east. Both sites were potential locations for the marsh described by Vergil in *The Anglica Historia*. Where organic deposits had been located at Fen Meadow exploratory trenches were established to extract monolith samples (Gearey et al., 2008). Cross-cutting transects were then set up at Fen Hole and Fen Meadow where the organic deposits had been identified previously (Wheeler and Swindles, 2009). A lithostratigraphic survey was carried out at both sites using an Eijelkamp silt shoe auger. Where suitable records for further analyses were found, a Russian chamber corer was used to extract continuous core sequences with minimum contamination (Jowsey, 1966). Each auger and core point was levelled to ordnance datum (m OD) and the sediments logged in the field using the Troels-Smith (1955) scheme. Representative cores were wrapped in Clingfilm and aluminium foil to minimise contamination. On return to the laboratory the cores were refrigerated at 4 °C until removed for sub-sampling.

3.2. Laboratory analyses

The cores were sub-sampled at a resolution of 4 cm and prepared for pollen analysis using non-acid extraction (after Hunt, 1985; Wheeler, 2007). A pollen sum of 500 total land pollen grains (TLP) was counted, excluding spores, to assess the representation of sub-fossil pollen at each site. Rare pollen types are quantified at ≤2%. Spores (including the *Lycopodium* 'spike' (cf. Stockmarr, 1971) which are an indicator of pollen concentration), and microscopic charcoal in fractions of <21 μm, 21–50 μm, and >50 μm, were counted in addition to TLP but not included in the total pollen sum. These data-sets are expressed as percentages of 500. Pollen was identified in accordance with keys in Moore et al. (1999), Beug (2004), supported by Reille (1999) and a modern pollen type-slide reference collection. Nomenclature follows Stace (2001). Non pollen palynomorphs (NPPs) (cf.van Geel et al., 1982/1983, 2003; cf. van Hoeve and Hendrikse, 1998) and testate amoebae (cf. Charman et al., 2000) were also identified and recorded to provide additional environmental information. Data are presented as pollen diagrams in Tilia 2.0.2 format (Grimm, 2004). Following initial pollen sub-sampling selected samples were extracted from the cores and submitted to the ^{14}Chrono Laboratory (Queen's University Belfast) for AMS radiocarbon dating. Samples submitted for radiocarbon dating were prepared using a standard acid-alkali-acid pre-treatment at 60 °C followed by rinsing in deionised water until neutral,

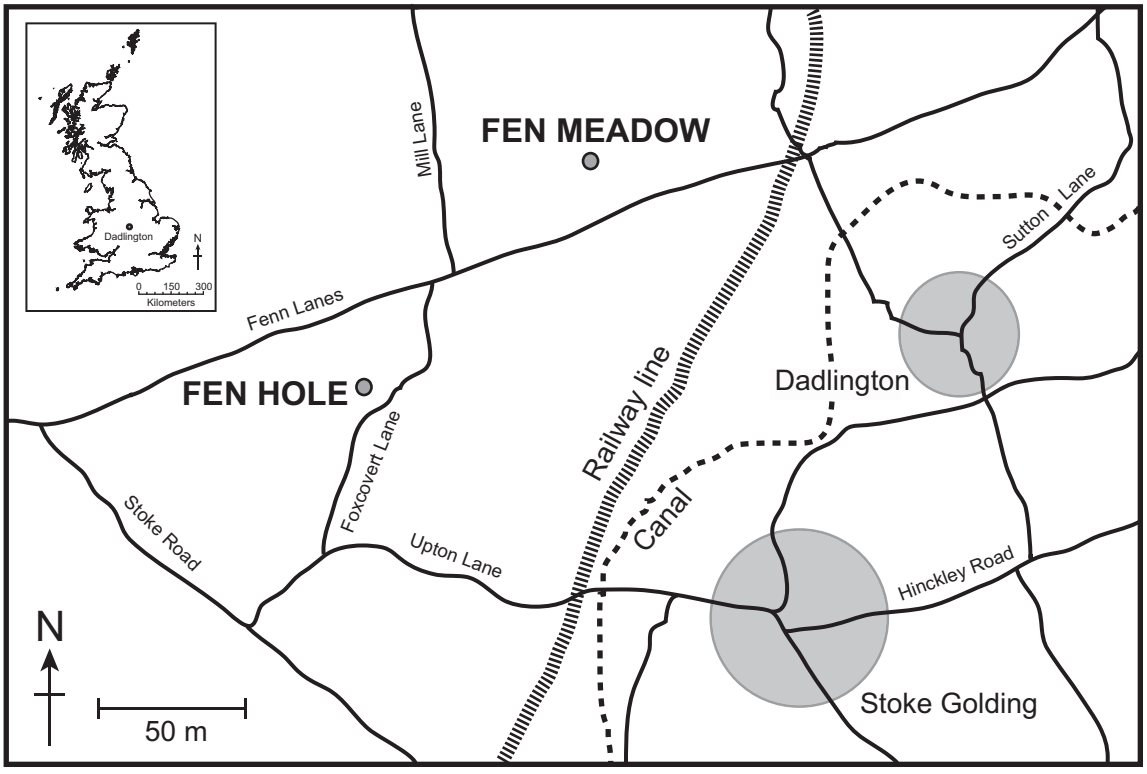

Fig. 1. Map showing the location of Fen Hole and Fen Meadow, near Dadlington, Leicestershire, England.