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**Assessment of macrofossil plant remains and peat matrix in samples from
excavations at Star Carr, N. Yorkshire, in 2007**

by

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Summary

The assessment of plant remains and their sedimentary matrix, together with some identifications of waterlogged and charcoal, was undertaken on samples from a block of peat (lifted for the purpose of detailed excavation in the laboratory) and from two series of column samples from nearby sections. The material largely represents woody and herbaceous vegetation formed in water but presumably close to the lake edge (where aspen/birch trees predominated). Some aspects of the preservation of the material and its current ongoing degradation are considered.

Keywords:

MACROFOSSIL PLANT REMAINS; STAR CARR; NORTH YORKSHIRE; EARLY MESOLITHIC; PEAT; WATERLOGGED DEPOSITS

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Introduction

Plant macrofossil remains and the nature of the peat matrix were assessed for three series of samples from Trench SC24 (Columns 2 and 4, and Block 2) and a single sample from Trench SC23. The nature of the macrofossil plant remains present was investigated with the aim of providing evidence for past depositional environments, habitat change and human activity, and the macrofossils and their matrix were also examined in respect of the survival of organics in deposits likely to be threatened with decay through dewatering.

Materials and methods

Material was submitted in the form of a dry residue from bulk-sieving of the sample from SC23, and as wet residues from disaggregation of the samples from Trench 24 (with a series of 'flots' from paraffin flotation for the Column 2 and 4 samples also being checked). Methods broadly followed those described by Kenward *et al.* (1980). Disaggregation of the wet samples was generally far from complete: students engaged on this task were encouraged not to be too rigorous in breaking samples down manually (in any case, the peats proved rather intractable!). This resulted in both reduced damage to the sometimes very soft wood fragments (some of which may bear evidence for 'working' by some agent) and the recovery of clasts of undisaggregated detritus peat up to 10 mm or more which were then available for examination during recording of plant remains (see further, below).

For the assessment of the wet residues, the bagged residues were gently resieved to 0.3 mm and a subsample of about 100 cm³ selected randomly from the material in the sieve using a spoon and a graduated beaker. These subsamples were then resieved to 4, 2, 1 and 0.3 mm and all of each fraction (apart from the finest) checked under the low-power binocular microscope. Notes on the nature of the material present and a list of plant taxa and other components were recorded directly to a database on a personal computer. Time constraints meant that a detailed assessment of preservation of the plant remains, along the lines of that recently suggested by Jones *et al.* (2007), could not be attempted, and this methodology is not, in any case, concerned with recording the nature of the matrix, merely contained plant macrofossils and pollen as proxies for overall preservation.

Results and discussion

Results of the assessment of these samples are presented in a series of tables appended to this report. Table 1 presents a complete list of taxa for all the various samples taken together.

Trench SC24

Block 2 (Tables 2-3)

In general, identifiable plant macrofossils (primarily fruits and seeds) were rather sparse in these deposits, both in terms of numbers of taxa and numbers of fossils, though with something of a trend of

decreasing diversity upwards through the sequence, as shown by a linear regression applied to a plot of the values for 'number of identifiable taxa' (as recorded in Table 2, and shown as a plot in Fig. 1). In fact the values for this vary greatly from sample to sample and this may well reflect the proportions of bulky material (wood and twigs) and/or the somewhat variable degree to which the peat was disaggregated. Preservation was almost entirely by anoxic waterlogging, though there were some small amounts of wood charcoal (particularly through the middle part of the sequence, which was where the bulk of the records for other charred remains – culm, other herbaceous fragments, and fruits and seeds – tended to fall). A few angular concretions, which seemed to consist of pyritised amorphous organic material, were noted, again mainly in the middle levels.

Overall quality of preservation of waterlogged remains was rather variable and showed no particular pattern (other than perhaps in being poorest in the uppermost levels). This may partly reflect either reworking of material as the deposits formed or inwash of specimens which had already undergone some decay before joining much 'fresher' ones derived more locally. The presence of silt in some of the samples from the lower half of the sequence perhaps helps to mark these periods of inwash. Also noteworthy was the marked orange coloration of the polyethylene bags (and sometimes plastic labels) used to store residues between processing and examination by the author. This phenomenon was most strikingly seen in samples from the bottom-most part of the block, with a few cases of slight coloration higher up (see last row of Table 2). There does not seem to be any correlation between this staining and the occurrence of what is thought to be pyritised material, though an origin in iron salts seems the most likely explanation for the colour. In one case, some of the orange liquid seeping from the inner into the outer of the two bags used to store residues was tested for pH and found to be distinctly acidic.

With regard to the evidence for vegetational and therefore habitat change in the catchment represented by these detritus peats, the most striking patterns are the decline in birch beyond the lowest third or so of the samples (it is almost absent above BL40), though aspen (and we can probably be sure that it *was* this tree – see notes in taxa, below) remains a constant throughout. 'Woodiness', as a combination of records for identifiable tree parts (fruits, scales) and wood, bark and charcoal, shows an overall downward trend upwards through the sequence (Fig. 2) but this is probably just reflecting the overall decline in diversity of taxa upwards. Plants of open water – here only water-lily and pondweeds – tended to be more frequent in the lower half of the sequence, their rarity higher up perhaps reflecting natural succession in which trees and other tall vegetation became more dominant in this lake-edge habitat and shaded out the aquatics. This is described by Walker and Godwin (1954, 37), in terms of a classic hydrosere succession, on the basis of transects of borings in this area – though the absence of detailed analyses of plant macrofossils in their study means that a close comparison with the results here cannot be made. It is thus difficult to assess how far the abundance of remains of trees and shrubs in the fossil record of the detritus mud/peat at an early stage as seen in the Block (and other) samples from these trenches reflects proximity to the shore (if Walker and Godwin concentrated on deposits rather further from the lake edge where open water presumably remained predominant for much longer) and how far the lack of evidence for macroscopic remains of trees in muds reported in 1954 is down to lack of adequate analyses. In particular, the absence of a pollen record for *Populus* (it is notoriously difficult to recognise and may not have been recorded by pollen analysts at this early date) means that the importance of this tree in the sequences currently being investigated cannot be compared in any way to Walker and Godwin's analyses. (The record of 'cf. *Populus* sp.' in Walker and Godwin's list of macrofossils (p. 59) does not specify the part recovered but it seems unlikely it could be anything other than bud-scale material.) On the other hand, Dark's (1998) analyses of lake-edge deposits give useful comparanda and her sequences (cf. her Figs. 11.4, 11.9, 11.14 and 11.19) sometimes clearly show a record for aspen catkin scales and *Populus* bud-scales continuing to be quite well-represented after birch has disappeared from the record. It has to be remembered, though, that the samples examined by Dark were from tiny amounts of peat (5-10 ml., *ibid.*, p. 125) and that there is a x10 exaggeration in her histograms (although the distinct decline in numbers of both taxa and remains see in Block 2 – and Column 2, see below – is clear from the upper two-thirds of all the diagrams). A particular problem is that, whilst the small macrofossils of birch and aspen may well, as she suggests, have floated, the failure of her sampling methodology to

allow for the presence of twigs and fragments of root or stem wood means that the prevalence of these at many levels in Block 2 cannot be matched in her histograms (though wood is mentioned in the sediment descriptions she provides as being present in some parts of the stratigraphy).

The aquatic-marginal and fen/reedswamp taxa show no particularly readily interpretable pattern for individual taxa, their records being scattered through the sequence, but with a distinct peak in numbers of taxa through BL14 to 18 (Fig. 3), and contrary to the decline in diversity overall upwards through the sequence (Fig. 1). These are three of the levels at which charred reed remains were recorded and it may be that some opening of the canopy through fire damage resulted in a short-term renewed growth of fen and waterside plants.

Column 2 (Table 4-5)

The sequence of plant remains seen in the samples from this column, not far from the location of Block 2, is essentially similar, as might be expected, both in terms of taxa recorded and their distribution through the column. Thus true aquatics are restricted to the lowermost few samples (all in Context 93, and supported by the presence of some aquatic invertebrates), with birch remains also largely confined to this part of the sequence and aspen extending rather further upwards. A larger proportion of this sequence is evidently from the less well-preserved (or at any rate less productive) upper peats than was the case with the block samples (which concentrated on exploring the lower parts). Indications of inwash of mineral material are again recorded (perhaps in Context 84 and definitely in 93) and orange staining in the lower parts is seen for samples from 84 (some) and 93 (throughout). Some sclerotia (resting-bodies) of the widespread soil fungus *Cenococcum* in Context 81 may also point to inwash (although other explanations are possible, see under Trench 23, below), but the charred sclerotia of this fungus present in moderate amounts in Sample 85 from Context 83 are perhaps even better evidence for this (though it would be worth checking that they *are* charred; these remains are dark in colour and their mode of preservation is often difficult to determine when working through material quickly). Other charred material was sparser than in the Block samples, but none of it as low in the sequence as Context 93.

Column 4 (Tables 6-7)

The three samples examined were extremely unproductive of identifiable plant remains, but mirror the depauperate assemblages seen in samples from the same contexts in Column 2.

Trench SC23 (Table 8)

Though sampled with the expectation that there would be charred plant material in this context, the dark colour seems to reflect only degraded peat. No identifiable remains were noted apart from traces of *Populus* bud-scales and sclerotia of *Cenococcum*, perhaps an indicator of inwashed soil, downward transport by rainwater or soil fauna from soil above (cf. comments by Mellars 1998, 71, regarding the possibility of movement of clasts along reed root holes), or *in situ* growth of the fungus in a deposit close enough to the surface to be aerated.

Notes on identifications

Salix: the bud-scales of this genus observed in these samples varied widely in size; quite often being rather large or extremely small. Given the large number of species (and hybrids) in the British flora, the significance of this cannot be assessed, other than to suggest that more than one species was present.

Populus: although the greatest number of *Populus* remains were isolated buds or bud-scales – which could not be identified to species – it seemed likely that the material was from aspen, *P. tremula*, on grounds of likely habitat in the vicinity of the site. In the event, some catkin scales (and immature catkin buds) were noted which were definitely aspen, marked by their deeply lacinate morphology.

Betula: fruits of birch were often common in the samples but very variable in preservation (though tending to lacking most or all of the characteristic lateral ‘wings’). It is not thought that any dwarf birch (*Betula nana* L.) was present, all the material presumably originating in tree-birches.

Rumex: all the nutlets observed were large enough to be water dock, *R. hydrolapathum*, though in only a very few cases were the remains of the perianth sufficiently well preserved to suggest that this species was definitely present. Nevertheless, it was felt justifiable to include ‘*Rumex* sp(p).’ with the aquatic-marginal and fen taxa for the tables presented below. A tentative identification of this plant was made by Walker and Godwin (1954, 58).

Galeopsis and *Stachys*: some species of both these genera are recorded in fen and waterside habitats so that, although not identified to species, here, they have been included in the waterside/fen habitat grouping in the relevant tables. (*Urtica dioica*, though much more familiar today as a denizen of waste and neglected places, is a typical member of a fen woodland community and has also been placed in this group, though it might also have been included with the trees and shrubs. Walker and Godwin (1954, 58) included it with ‘open community’ plants but there are really no other taxa to make a group like this in the assemblages under discussion here. *Stachys sylvatica* was recorded by Walker and Godwin (1954, 59), but they give no indication as to whether *S. palustris* was considered when making this determination.)

Fontinalis: leafless but quite robust moss stems were quite frequently encountered, though rarely in lengths of more than about 5 mm. In one sample, enough of the leaves survived to suggest, from the very lax-walled cells and lack of nerve, that this was the genus represented. It seems very likely that all the leafless stems were *Fontinalis*.

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Appendix

Table 1. Complete list of plant taxa recorded from samples from the 2007 excavations at Star Carr

Nomenclature and taxonomic order follow Tutin et al. (1964-80); *—see text for comment on identification.

Taxon	Parts recorded
* <i>Salix</i> sp(p). [willow]	bud(s), fruit(s), twig fragment(s), wood fragment(s)
* <i>Populus tremula</i> L. [aspen]	catkin scale(s), bud(s) and/or bud-scale(s), immature catkin fragments or catkin buds
* <i>Betula</i> sp(p). [birch]	bud(s) and/or bud-scale(s), female catkin scale(s), fruit(s), male catkin fragment(s), wood fragment(s)
<i>Corylus avellana</i> L. [hazel]	nut(s) and/or nutshell fragment(s)
<i>Urtica dioica</i> L. [stinging nettle]	achene(s)
<i>Rumex</i> cf. <i>hydrolapathum</i> Hudson [?water dock]	fruit(s)
* <i>Rumex</i> sp(p). [docks]	fruit(s)
<i>Nymphaea alba</i> L. [white water-lily]	seed(s)
<i>Ranunculus</i> Section <i>Ranunculus</i> [meadow/creeping/bulbous buttercup]	achene(s)
<i>R. flammula</i> L. [lesser spearwort]	achene(s)
<i>R. cf. lingua</i> L. [?greater spearwort]	achene(s)
<i>Ranunculus</i> sp(p). [buttercups, etc.]	achene(s)
<i>Thalictrum flavum</i> L. [common meadow rue]	achene(s)
<i>Rubus fruticosus</i> agg. [blackberry/bramble]	seed(s)
<i>Potentilla palustris</i> (L.) Scop. [marsh cinquefoil]	achene(s)
<i>Prunus padus</i> L. [bird cherry]	fruitstone(s)
cf. <i>Cornus sanguinea</i> L. [?dogwood]	fruitstone(s)
<i>Berula erecta</i> (Hudson) Coville [narrow-leaved water-parsnip]	mericarp(s)
<i>Menyanthes trifoliata</i> L. [bogbean]	seed(s)
* <i>Galeopsis</i> sp(p). [hemp-nettles]	nutlet(s)
* <i>Stachys</i> sp(p). [woundworts]	nutlet(s)
<i>Lycopus europaeus</i> L. [gipsywort]	nutlet(s)
<i>Mentha</i> sp(p). [mints]	nutlet(s)
<i>Solanum dulcamara</i> L. [woody nightshade]	seed(s)
<i>Eupatorium cannabinum</i> L. [hemp agrimony]	achene(s)
<i>Carduus/Cirsium</i> sp(p). [thistles]	achene(s)
<i>Potamogeton</i> sp(p). [pondweeds]	pyrene(s)
Gramineae [grasses]	waterlogged caryopsis/es
cf. <i>Phragmites australis</i> (Cav.) Trin. ex Steudel [?common reed]	culm fragment(s), charred culm fragment(s), rhizome fragment(s)
<i>Sparganium</i> sp(p). [bur-reeds]	fruit(s)
<i>Scirpus lacustris</i> sl [bulrush]	nutlet(s)
<i>Cladium mariscus</i> (L.) Pohl [great sedge/saw-sedge]	nutlet(s), charred nutlet(s)
cf. <i>C. mariscus</i>	charred leaf fragment(s)
<i>Carex paniculata</i> L. [greater tussock sedge]	nutlet(s) with utricle
<i>Carex</i> sp(p). [sedges]	nutlet(s), charred nutlet(s)
* <i>Fontinalis</i> sp(p).	leaf/leaves and/or shoot fragment(s)
Characeae	oogonium/ia

Table 2. Plant remains and other components of samples from Block 2.

Figures are semi-quantitative abundance scores from 1 (present, rare) to 4 (abundant or a major component of the sample). For a full list of taxa with authorities for Latin names and presented in taxonomic order, see Table 1. Taxa are grouped by broad habitat categories, but within those groups are alphabetical. Unless otherwise indicated, remains were fruits or seeds and unless indicated all remains were preserved by anoxic waterlogging. Key to abbreviations: *b*—buds; *b/bs*—buds and/or bud-scales; *cat*—catkin; *ch*—charred; *fcs*—female cone scales; *fgts*—fragments; *fr*—fruits; *imm*—immature; *lf*—leaf; *lfless*—leafless; *mc*—male catkin; *rh*—rhizome; *tw*—twig; () indicates samples where taxa identified securely elsewhere were only tentatively identified

Sample BL	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	
No. identifiable plant taxa	3	3	2	7	9	5	14	10	11	7	9	11	6	10	5	11	4	11	9	10	12	14	13	8	8	11	
Trees and shrubs																											
<i>Betula</i> sp(p).	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	1	-	2	3	3	3	3	3	3	3
<i>Betula</i> sp(p). (b/bs)	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
<i>Betula</i> sp(p). (fcs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	
<i>Betula</i> sp(p). (mc fgts)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
<i>Populus tremula</i> (cs)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	
<i>P. tremula</i> (imm cat)	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	1	-	-	-	-	-	-	-	-	
<i>Populus</i> sp(p). (b/bs)	2	2	2	2	2	2	2	3	2	3	3	2	2	1	2	1	1	1	1	2	1	1	2	2	2	2	
<i>Salix</i> sp(p). (b)	-	1	-	-	1	-	1	-	-	-	1	1	-	1	-	1	-	-	1	1	1	1	-	2	1	2	
<i>Salix</i> sp(p). (fr)	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Salix</i> sp(p). (tw fgts)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	(1)	-	
bark fgts	-	-	-	1	2	-	-	-	-	1	-	1	-	-	1	2	1	1	-	1	1	1	-	-	1	1	
bark fgts (ch)	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
charcoal	1	1	-	-	-	-	-	-	1	1	1	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	
twig fgts	-	1	1	-	-	1	-	1	-	-	1	3	-	2	1	1	1	1	2	3	2	3	2	2	3	3	
wood fgts	1	1	2	1	2	1	1	1	1	1	1	2	1	2	3	2	2	1	3	1	2	-	2	1	1	1	
woody root fgts	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
?worked wood fgts	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
?worked twig fgts	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	
Aquatics																											
<i>Nymphaea alba</i>	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	-	1	1	1	1	1	1	1	-	
<i>Potamogeton</i> sp(p).	1	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	1	1	2	1	2	1	2	3	2	2	

Sample BL	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52
Aquatic-marginal and fen taxa																										
<i>Berula erecta</i>	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex paniculata</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp(p).	-	-	-	1	1	-	1	1	1	1	1	-	1	1	-	-	-	1	2	1	2	2	2	3	2	3
<i>Carex</i> sp(p). (ch)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
<i>Cladium mariscus</i>	-	-	-	-	2	1	2	1	1	1	1	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-
<i>Cladium mariscus</i> (ch)	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cf. <i>C. mariscus</i> (ch lf fgts)	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Galeopsis</i> sp(p).	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Lycopus europaeus</i>	-	-	-	1	1	-	-	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-
<i>Menyanthes trifoliata</i>	1	1	1	1	1	-	1	1	2	2	1	1	1	-	-	1	1	2	1	1	1	-	1	1	1	1
cf. <i>Phragmites australis</i> (ch culm fgts)	-	-	-	-	-	-	1	1	2	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-
cf. <i>P. australis</i> (culm fgts)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	1	1	1	-	-	-	-
cf. <i>P. australis</i> (rh fgts)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	1	1	1	1	-	-	1
<i>Potentilla palustris</i>	-	-	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ranunculus flammula</i>	-	-	-	-	-	1	1	-	-	-	-	-	2	-	1	1	-	1	1	-	-	-	-	-	-	-
<i>R. cf. lingua</i>	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Rumex cf. hydrolapathum</i>	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Rumex</i> sp(p).	-	-	-	-	1	1	2	1	1	1	1	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-
<i>Scirpus lacustris</i> sl	-	-	-	-	1	-	1	1	-	-	1	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-
<i>Solanum dulcamara</i>	-	-	-	1	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sparganium</i> sp(p).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	1	1	1
<i>Stachys</i> sp(p).	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
<i>Thalictrum cf. flavum</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<i>Urtica dioica</i>	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant taxa not assigned to one of the above categories																										
<i>Carduus/Cirsium</i> sp(p).	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-
Gramineae	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
<i>Ranunculus</i> Section <i>Ranunculus</i>	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ranunculus</i> sp(p).	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
<i>Rubus fruticosus</i> agg.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

Sample BL	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52
Other remains/components																										
charred herbaceous detritus	-	-	-	-	1	1	-	-	-	1	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-
dicot lf skeletons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
fine plant detritus	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	3	2	2	2	2
herbaceous detritus	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
moss (lfless stems)	-	1	-	-	-	-	1	-	-	-	-	1	-	2	1	-	-	1	-	1	2	1	2	1	1	1
peat fgts	2	2	2	2	3	2	3	2	3	2	3	3	2	2	2	2	3	3	2	2	2	2	2	2	2	2
?pteridophyte root fgts	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	1	-	-	-	-	-	-	-	-	-
<i>Cenococcum</i> (sclerotia)	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
caddis larva cases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
beetles	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1
fly puparia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-
flint gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
grit	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
silt/clay (seen in peat clasts)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	+	+	-	+	+	-
pyritised concretions	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	-	+	-	-	-	-	-	-	-	-
pyritisation of macrofossils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
orange staining of residue bag	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	+	-	-	-	++	++	++	+++	+++

Table 3. Results of examination of sample from Trench SC24, Block Sample 2 (alternate samples from the sequence): notes on preservation and nature of sediment

Sample	Notes on sediment and preservation
2	small residue of rather granular slightly woody peat, brown in colour, the wood very decayed; <i>Populus</i> bud-scales mostly reduced to scale without combs; some fine woody roots, and some small clasts of darker ?reworked desiccated humic soil; <i>Menyanthes</i> seeds rather decayed
4	small residue with a little very decayed wood and some undisaggregated peat; plenty of worn <i>Populus</i> bud-scales; rare clasts of darker brown, slightly sandy material that are presumably inwash
6	rather small residue with rather twiggy woody debris and some undisaggregated peat - quite dark en masse, but much more brown under microscope; wood rather decayed; <i>Populus</i> bud-scales usually without 'combs'; some reworked darker slightly sandy somewhat indurated peat clasts
8	small residue, a very little decayed wood; rather brown and humified peat fragments; bud-scales mostly rather thinned; perhaps even some evidence of drying and rewetting from a couple of floating seeds
10	moderately large residue with rather granular woody detritus and a lot of undisaggregated peat - quite dark en masse but rather more brown under microscope; wood rather decayed; <i>Populus</i> bud-scales usually sans combs; charred culm fragments of some sort, but fragments not larger than 5mm
12	moderately large residue with rather granular woody detritus and a lot of undisaggregated peat - quite dark en masse but rather more brown under microscope; wood rather decayed; <i>Populus</i> bud-scales usually sans combs; charred culm of some sort, but fragments not larger than 5mm
14	small residue of rather granular woody detritus - most of it undisaggregated peat; wood rather degraded; <i>Populus</i> bud-scales mostly sans combs; trace of charred culm, probably reed, but also some charred ?bark; propagules mostly somewhat degraded – though some much better preserved than others
16	rather small residue with rather granular woody detritus and a lot of undisaggregated peat - quite dark en masse and peat rather greyer and darker under microscope than above 14; wood moderately well preserved (compared with levels above); <i>Populus</i> bud-scales usually sans combs; charred culm (including ?reed), but fragments never larger than 5mm
18	moderate-sized residue of peat with a few rather large fragments of wood, including what may be worked wood (previously separated by P. Hadley); <i>Populus</i> bud-scales usually somewhat eroded; two unusually large (to 10 mm) fragments of charcoal both with characteristic Y-shape and pointed ends; one fragment of ribbed charred leaf which may well be <i>Cladium</i> ; some small clasts of somewhat paler and browner or greyer more or less - but only just - cohering very humified peat which look almost like material that has been disaggregated then reformed and mixed back into sample (reworked or an artefact of preparation?); at least one <i>Rumex</i> with a very large tubercle on the perianth as in <i>R. hydrolapathum</i> , though not a very well preserved specimen otherwise
20	moderately large residue of woody peat, wood a little soft and eroded; <i>Populus</i> bud-scales very variable, from whole buds to thin single scales without combs; trace of

Sample	Notes on sediment and preservation
	charcoal and charred herbaceous detritus; quite a lot of well-preserved but mostly fragmentary beetles
22	moderately large residue of granular undisaggregated peat and some wood; some darker (firmer) and lighter (looser) clasts of peat - in fact, peat very varicoloured in 2-5 mm size clasts - on the whole rather degraded/mixed; and rather a poor flora; <i>Populus</i> bud-scales vary from thinned scales to whole buds; traces of what appear to be pyritized organic concretions
24	moderately large residue of twiggy woody peat - very woody, but also plenty of undisaggregated rather firm brown detritus peat; at least one fragment of charcoal almost like worked chip; one unidentified 'large' woody seed (closest to <i>Cratageus monogyna</i> but almost certainly not this); fragments of densely imbricated catkin scales clearly <i>Populus tremula</i> ; some very well-preserved whole <i>Populus</i> buds; charred <i>Cladium</i> fruits, as well as uncharred ones; some darker, more indurated peat fragments, perhaps slightly sandy
26	large residue of slightly woody detritus peat - dark colour, though wood quite pale when examined closely; preservation generally good, <i>Populus</i> bud-scales often very good (even a whole fresh-looking bud), though sometimes worn; some quite coarse charcoal – all very fresh-looking; some well-preserved beetle fragments
28	moderately large residue of woody detritus peat including some quite large fragments of small branches to about 25 mm in diameter; preservation appears good, though wood rather pale and soft; some pale grey, brittle, ?pyritised concreted organic material looks as though it formed around plant debris that have then rotted (fragments to 5mm).
30	moderately large residue of very woody detritus peat; some clasts of dark, indurated humic peat/soil with a ?slight mineral component, and some soft peat clasts with grey silty detritus evident; perhaps a little degraded throughout with traces of pyrites on some specimens; <i>Populus</i> bud-scales very variable in preservation
32	moderately large residue of woody peat, dark and quite well preserved, wood perhaps a little eroded; <i>Populus</i> bud-scales very variable – some whole buds, some scales thinned and minus combs; rather a lot of <2mm fraction with few identifiable remains in it; traces of pyritised ?organic material
34	moderately large residue of somewhat woody detritus peat, dark in bag, brown under microscope; some clasts with silty content and with grey colour, some darker and indurated; wood rather soft and sometimes a little worn; overall small content of identifiable remains
36	moderately large residue of slightly woody detritus peat: rather grey and slightly silty; traces of concreted grey ?pyritized material; not very rich in identifiable remains and unusually sparse in bud-scales
38	moderately large residue of very woody detritus peat – dark in colour, the wood generally well preserved; rather a lot of undisaggregated peat; preservation of propagules generally quite good; most of wood is probably larger twig than trunk/branch 'wood'
40	moderately large residue of woody detritus peat – peat rather grey and slightly silty; wood mostly quite firm, well-preserved, almost all 'twiggy'

Sample	Notes on sediment and preservation
42	<p>(considerable orange staining of bag and orange seepage (which was found to be acidic) from inner bag)</p> <p>large residue of somewhat granular twiggy woody rather silty (more than other levels?) detritus peat, dark and well-preserved, though wood fragments often very soft; the only sample in this sequence to contain (traces of very decayed) tree leaf skeletons; more herbaceous detritus (?mostly reed) than other samples; seeds rather variable in pres (inwash?)</p>
44	<p>moderately large residue of twiggy detritus peat – dark and well-preserved; some <i>Potamogeton</i> fruits well preserved, though lacking ‘coats’; <i>Populus</i> bud-scales mostly fair to good; quite a lot of well-preserved beetles, though very fragmentary</p>
46	<p>(considerable orange staining of bag and orange seepage from inner bag)</p> <p>large residue of somewhat flaky-granular twiggy, slightly silty detritus peat, dark and well-preserved, seeds and fruits usually in a good condition, though birch fruits often worn</p>
48	<p>(strong orange staining of bag)</p> <p>moderately large, slightly sandy, very woody peat, dark (although pale with a silty cast when seen under microscope) and with a lot of coarse twigs (some irregular, might be roots?); plenty of well-preserved <i>Potamogeton</i> fruits (2-3 spp.) – indeed, most taxa well-preserved but some worn <i>Menyanthes</i> and <i>Populus</i> bud-scales</p>
50	<p>(orange staining of bag)</p> <p>moderately large twiggy, slightly sandy detritus peat - dark, mostly well-preserved, wood and twigs firm, some <i>Populus</i> bud-scales a little eroded; fragments of charred ?reed culm present; examples of <i>Menyanthes</i> from pristine to what looks like chemically corroded; some well-preserved beetle fragments</p>
52	<p>(orange staining of bag)</p> <p>moderately large twiggy, slightly sandy detritus peat - dark and well-preserved; a little sand and flint gravel; wood quite pale but mostly reasonably firm; some mostly well-preserved bud-scales and propagules (though some scales, by contrast, ‘holed’ and degraded); beetles look well-preserved but perhaps rather fragmented; a little pyritised amorphous ?organic material</p>

Table 4. Plant remains and other components of samples from Column 2.

For explanation and abbreviations see caption to Table 2.

Context	80	80	81	81	82	83	83	83	84	84	84	84	93	93	93	98
Sample	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
No. identifiable plant taxa	1	4	2	0	4	3	2	2	6	13	11	11	13	10	9	10
Trees and shrubs																
<i>Betula</i> sp(p).	-	-	-	-	-	-	-	-	-	2	-	1	2	2	2	2
<i>Betula</i> sp(p). (fcs)	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
<i>Betula</i> sp(p). (wood)	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
cf. <i>Cornus sanguinea</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
<i>Corylus avellana</i>	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Populus</i> sp(p). (b/bs)	-	-	-	-	-	1	1	-	2	2	1	2	2	2	2	1
<i>Prunus padus</i>	-	-	-	-	-	-	-	-	(1)	-	-	-	1	-	-	-
<i>Salix</i> sp(p). (b)	-	-	-	-	-	-	-	1	-	2	1	2	1	1	-	2
<i>Salix</i> sp(p). (fr)	-	-	-	-	-	-	-	-	-	1	-	1	2	-	-	1
<i>Salix</i> sp(p). (tw fgts)	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
<i>Salix</i> sp(p). (wood)	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
bark fgts	2	-	1	1	-	1	1	1	1	1	1	1	1	-	-	-
charcoal	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
dicot lf fgts	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
dicot lf skeletons	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
twig fgts	-	-	-	1	1	-	-	1	1	-	1	1	1	1	1	2
wood fgts	1	1	1	1	2	1	1	2	3	2	2	1	3	1	1	1
woody root fgts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Aquatics																
Characeae	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2
<i>Fontinalis</i> sp(p).	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
<i>Nymphaea alba</i>	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1
<i>Potamogeton</i> sp(p).	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
Aquatic-marginal and fen taxa																
<i>Carex</i> sp(p).	-	-	-	-	-	-	-	-	1	2	2	2	1	1	1	2
<i>Cladium mariscus</i>	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
<i>Eupatorium cannabinum</i>	-	2	1	-	1	1	-	-	-	-	-	-	-	-	-	-
<i>Galeopsis</i> sp(p).	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
<i>Lycopus europaeus</i>	-	-	-	-	-	-	-	-	1	1	1	1	-	-	1	-
<i>Mentha</i> sp(p).	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-
<i>Menyanthes trifoliata</i>	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1	1
cf. <i>Phragmites australis</i> (ch culm fgts)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
cf. <i>P. australis</i> (culm fgts)	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
cf. <i>P. australis</i> (rh fgts)	-	-	-	-	1	-	-	-	-	1	2	1	1	1	2	1
<i>Ranunculus</i> cf. <i>flammula</i>	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Rumex</i> sp(p).	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
<i>Scirpus lacustris</i> sl	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1
<i>Sparganium</i> sp(p).	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
<i>Stachys</i> sp(p).	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-
<i>Thalictrum flavum</i>	-	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-
<i>Urtica dioica</i>	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Other remains/components																
charred herbaceous detritus	-	-	1	-	-	1	-	-	-	-	1	-	-	-	-	-
fine plant detritus	1	4	3	3	3	2	2	3	3	3	3	3	3	4	4	2
herbaceous detritus	1	1	1	-	-	1	1	1	1	1	1	1	-	1	2	1

Context	80	80	81	81	82	83	83	83	84	84	84	84	93	93	93	98
Sample	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
moss (lfless stems)	-	-	-	-	-	1	-	-	-	-	-	1	2	1	-	-
peat fgts	4	4	4	4	3	3	3	4	3	3	4	4	3	3	4	2
root/rhizome fgts (?modern)	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
root/rootlet fgts	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Cenococcum</i> (sclerotia)	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Cenococcum</i> (ch sclerotia)	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
beetles	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	2
<i>Daphnia</i> (ephippia)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
earthworm egg caps	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
fly puparia	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-
<i>Lophopus crystallinus</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
mites	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
flint gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
gravel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
silt/clay (seen in peat clasts)	-	-	-	-	-	-	-	-	?	-	-	?	+	+	+	+
pyritised concretions	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+
orange staining of residue bag	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	+

Table 5. Results of examination of sample from Trench SC24, Column 2: notes on preservation and nature of sediment. All subsamples were 1 kg in weight.

Context	Sample	Notes on sediment and preservation
80	80	small residue of very decayed undisaggregated decayed peat and some flaky wood/bark fragments: flaky wood very pale and worn – perhaps actually nearly all bark; a little wood extremely pale and soft; all the clasts really rounded, presumably an artefact of processing such soft material; peat clasts actually quite variable in colour from light-mid brown to blackish brown; flot mainly rootlets
80	81	moderately large residue of about 900 cm ³ , mostly undisaggregated peat – seemed well-humified (difficult to wash clean); rather pale and soft, though fine herbaceous detritus still present and not hugely different from layers below in general fabric; very little and very decayed wood; all of the four taxa recorded as propagules present only in the flot
81	82	rather small-sized residue of about 600 cm ³ of brownish undisaggregated peat, with a very little very decayed wood; a few small rather worn hazel nutshell fragments; traces of charred herbaceous detritus, probably monocot culm-node; flot mainly fine rootlets
81	83	modest-sized residue of about 700 cm ³ of undisaggregated peat and a little wood; peat rather orange in colour, rather strongly humified; some small clasts of greyish-brown slightly silty/sandy ?mud – amorphous, fine-grained and presumably something reworked into this layer, perhaps reflected by presence of <i>Cenococcum</i> ; quite a lot of the fine plant detritus in <1mm fraction perhaps wood rather than herbaceous detritus; flot with many fine rootlets
82	84	small residue (for this series) of about 250 cm ³ (the whole sample briefly checked in this case): some quite coarse, flattened stem/root wood with bark (some from birch stems); some undisaggregated fine detritus peat with very fine rootlets; preservation moderate to good, though peat quite strongly humified; plenty of fine material in <1 mm fraction, probably mainly rootlets; the only identifiable propagules were in flot
83	85	moderate-sized residue (for this series) of about 550 cm ³ of undisaggregated peat: rather humified detritus peat with some fine herbaceous detritus and a little woody material, the woody debris all rather rounded (?effect of sieving); <i>Cenococcum</i> sclerotia (which seem to be charred) and earthworm egg capsules presumably evidence of inwash (though no very distinct mineral component); fine plant detritus perhaps largely tiny rootlets; no whole fruits/seeds
83	86	moderate-sized residue of about 650 cm ³ of rather strongly brown granular woody peat, quite well humified – as perhaps indicated by a paler colour than seen in some other samples; traces of <i>Populus</i> bud-scales and ?reed culm the only identified remains
83	87	large residue of about 1250 cm ³ of undisaggregated woody peat; no recognisable propagules in residue but traces of willow bud-scales and <i>Lycopus</i> nutlets present in flot
84	88	rather largeish residue (for this series) of about 1050 cm ³ of very woody peat with some orange staining of bag interior and label; large component of rather

Context	Sample	Notes on sediment and preservation
		angular wood fragments, but plenty of undisaggregated detritus peat; some peat rather orange in colour (though not worse preserved than darker clasts), other parts with greyish 'powdery' (?silt) component; wood reasonably firm for the most part; flot mainly yielding bud-scales but also a few propagules
84	89	large residue of about 1100 cm ³ , much of it undisaggregated peat, though with some woody debris, including some willow twig fragments with bark; peat mostly dark in colour, much fine plant detritus and rootlets; rather a lot of beetles not extracted by paraffin flotation; <i>Cladium</i> nutlets here, as elsewhere in sequence, seem rather small and poorly formed (maybe just immature?) but they are certainly this taxon; peat looks somewhat 'distressed' but not clearly recently decayed; flot quite productive if propagules
84	90	large residue (for this series) of about 1300 cm ³ (though very inadequately sieved, so volume compared with other samples might really be very much smaller) of very woody peat with some orange staining of bag interior and label; mainly fine-grained detritus peat in clasts to about 10mm; wood and bark probably quite frequent but often still attached to unwashed peat; some ?reed rhizome fragments (passed to P. Crofts, along with some seeds, to check for the presence of starch); fine fraction with some charred herbaceous detritus; preservation of propagules and scales mostly quite good; modest range of identifiable taxa
84	91	moderately large residue of undisaggregated woody detritus peat of about 1000 cm ³ ; some orange staining of bag; nearly all undisaggregated peat with a little wood; rather dark greyish in colour and with fine ?silt/clay homogeneously mixed through peat
93	92	moderately large residue of about 1000 cm ³ of poorly washed somewhat fibrous (with moss stems) woody detritus peat; orange staining of the bag; wood firm and well-preserved, matrix somewhat grey with silt; some leafless moss stems and tree leaf-vein skeletons and leaf fragments (preservation overall the best for this group so far, working from top of sequence); mosses seem to be <i>Fontinalis</i>
93	93	modest-sized residue of about 700 cm ³ of black, rather fibrous-looking peat, granular and well-disaggregated and with only a little woody debris; some orange staining of bag and label; leafless moss shoots (? <i>Fontinalis</i>) as in sample above; peat clasts rather grey under microscope; one fragment of ?reed or similar culm formed as a 'mould' in a metallic grey ?pyritic mineral material; a little silting
93	94	rather large residue of about 1150 cm ³ , some orange staining of bag; largely unwashed peat with whitish speckling (moulds?) as well as greyish ?silt component; some beetle fragments, but usually small scraps; well-preserved <i>Nymphaea</i> seeds and the occasional 'worn' <i>Potamogeton</i> fruit
98	95	moderate-sized residue of about 600 cm ³ of dark peat (though under microscope seen as pale with silt, so a better description is silty detritus); mostly small lumps, but plenty still passing sieve; orange coloration of bag; rather woody, but with some gravel and sand; <i>Potamogeton</i> fruits bearing 'coats', so preservation pretty good; some pyritic mineral aggegrations

Table 6. Plant remains and other components of samples from Column 4.

For explanation and abbreviations see caption to Table 2.

Context	81	82	83
Sample	106	107	108
No. identifiable plant taxa	1	1	4
Trees and shrubs			
<i>Corylus avellana</i>	-	-	1
<i>Populus</i> sp(p). (b/bs)	-	1	1
bark fgts	-	1	1
charcoal	-	1	1
twig fgts	-	-	1
wood fgts	2	2	1
woody root fgts	1	1	1
Aquatic-marginal and fen taxa			
<i>Cladium mariscus</i>	-	-	1
<i>Eupatorium cannabinum</i>	1	-	-
<i>Stachys</i> sp(p).	-	-	1
Other remains/components			
fine plant detritus	-	-	2
herbaceous detritus	-	-	1
peat fgts	4	3	3
root moulds (min)	-	-	1
root/rootlet fgts	2	2	2
flint	-	-	1
grit	1	-	-
sand	1	1	1

Table 7. Results of examination of sample from Trench SC24, Column 4: notes on preservation and nature of sediment

Context	Sample	Notes on sediment and preservation
81	106	rather large residue of somewhat sulphurous blackish (but really brown under microscope) poorly disaggregated peat, about 900 cm ³ ; peat actually very well humified, slightly silty and sandy, some clasts much greyer than others; very large flots mainly of small rootlets and some slightly larger woody root fragments with a little wood and bark
82	107	smallish residue of about 550 cm ³ of slightly sandy woody undisaggregated peat – very well humified, greyish, the wood very decayed, with a trace of fine charcoal; rather large flots of fine rootlets and some woody root fragments and with charcoal to 5mm
83	108	small residue of about 350 cm ³ of slightly sandy silty, very well humified slightly woody peat, with some eroded hazel nutshell fragments; trace of grey sandy root ‘moulds’; small flots of rootlets, including woody ones, and a few propagules

Table 8. Results of examination of sample from Trench SC23

Context 52

Sample 52/BS: residue of angular gravel and small pellets of blackish dried (indurated) organics (very decayed peat to humic 'soil') to about 1750 cm³; a few *Populus* bud-scales picked out by B. Greene; no charred material; perhaps about equal proportions of mineral and organic material.

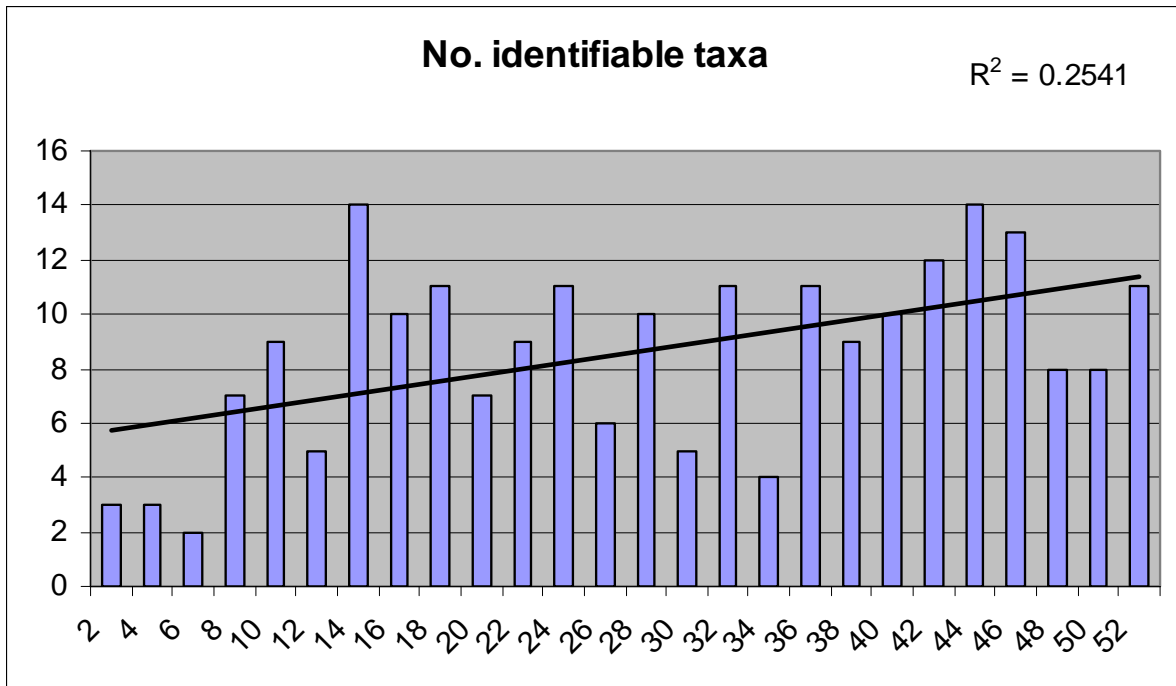


Figure 1. Block 2: numbers of identifiable taxa. Y-axis: numbers of taxa; X-axis: sample numbers

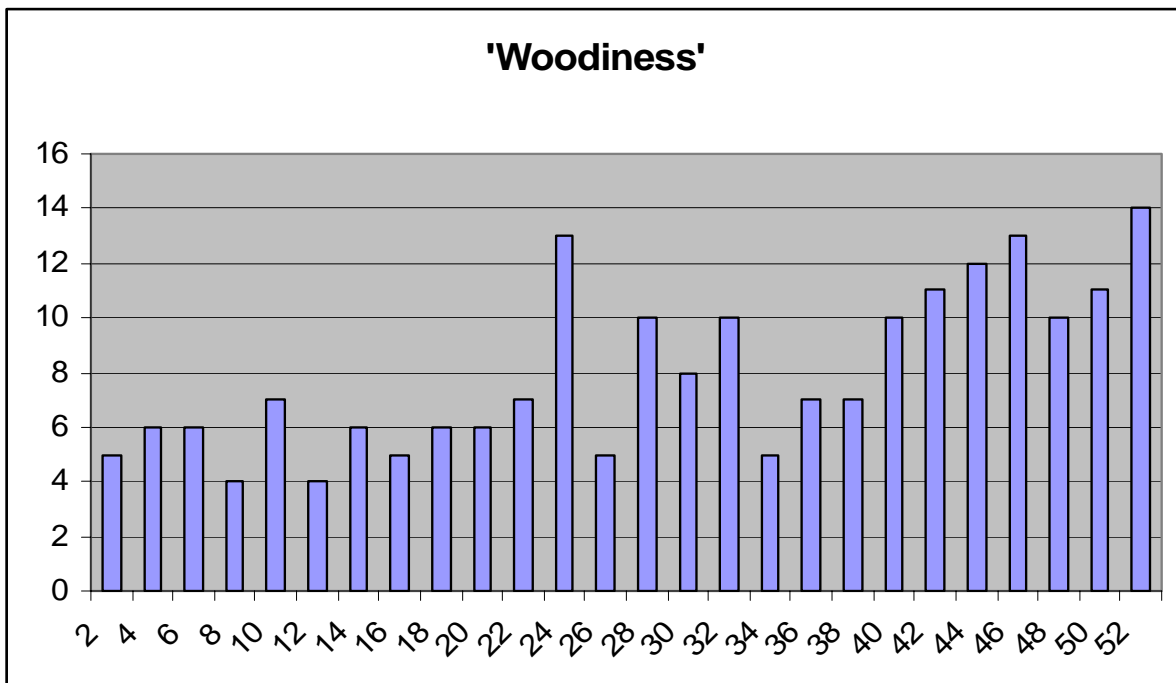


Figure 2. Block 2: sums of abundance scores for identifiable taxa and other components (wood, bark) representing trees and shrubs. Y-axis: sums; X-axis: sample numbers

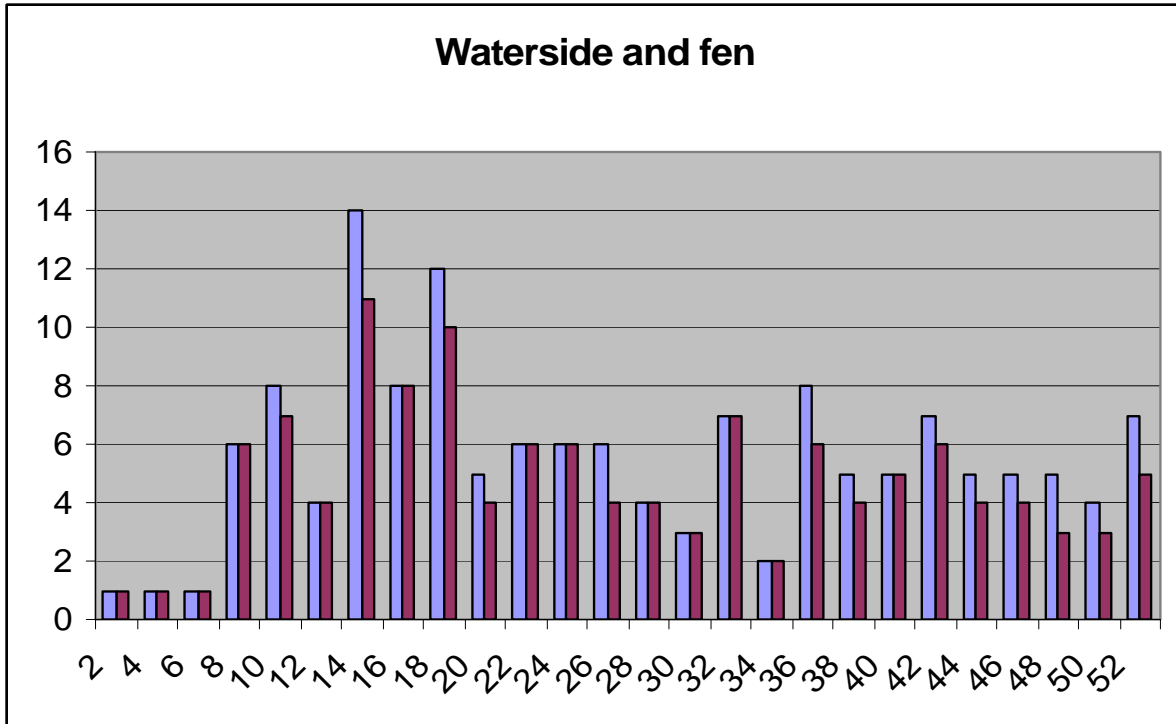


Figure 3. Block 2: sums of abundance scores (left-hand columns) and counts of taxa for plants representing waterside and fen vegetation (cf. Table 2). Y-axis: sums/counts; X-axis: sample numbers