

- MACROSCOPIC PLANT REMAINS AND CHARCOAL

by Ruth Pelling

Assessment of the Charred Plant Remains and Charcoal

Thurnham Roman Villa (ARC THM 98) and Honeyhills Wood (ARC HHW 98)

Introduction

Samples of archaeological deposits were taken during excavation works at Thurnham Roman Villa (ARC THM 98) and Honeyhills Wood (ARC HHW 98) for the recovery of charred plant remains.

The recovery and study of the samples was undertaken in accordance with the Fieldwork Event Aims for the site, which are set out in section 2 of the main report, above. The sampling programme aimed to address general questions concerning the diet and cereal economy of the site as well as gaining specific information about the function and nature of individual features, buildings or activity areas. On a wider, regional and national level it was hoped to gain information about the Late Iron Age and Romano-British economy of Kent and to look at the development of agricultural trends through the periods particularly at the time of the Roman conquest.

Methodology

Sampling on site ensured that deposits from all major feature types and phases were represented. Where possible, samples were taken from discrete and secure contexts with the minimum of intrusive material or contamination. Multiple samples were taken from a corn-drier for detailed analysis and interpretation of the function of the feature.

All samples were processed and submitted for assessment of their potential for analysis. Samples were processed by bulk water flotation and flots were collected onto 250µm mesh sieves. Residues were retained on 1mm sieves.

Quantification and Provenance

A total of 249 samples were taken from the Thurnham Villa main site and one sample from Honeyhills Wood. The volume of material processed ranged from 3 to 40 litres. The volume of flots ranged from about 10 ml to 4 litres, but is generally in the region of 50 to 250ml. Table 10.1 shows the number of samples for each feature type. The samples are discussed by feature type. Table 10.2 indicates contexts that contained useful quantities of seeds or chaff.

Ditches

The majority of ditch samples were of Late Iron Age to early Roman date.

The best results were seen in samples from early Roman phase 3 ditches 20400 (the proto-villa boundary) and 10660 (the east side of the enclosure). Sample 10346 (context 12203; ditch 10660) produced a large flot (600ml) with in excess of 1000 items each of grain, chaff and weed seeds. Grain included both *Triticum spelta* (spelt wheat) and *Hordeum vulgare* (barley) as well as some short grained *Triticum* sp. (wheat) which may be either a free-threshing bread type wheat or a short grained spelt. The chaff includes both *T. spelta* and *T. dicoccum* glume bases and *Hordeum vulgare* rachis. Frequent *Bromus* subsect *Eubromus* (brome grass) seeds were noted amongst the weeds.

Three other samples (10380, 10381, 10383), all from ditch 20400, contained reasonable quantities of material with up to 100 grains and in two cases up to 100 items of chaff. Weeds were noted in all three samples. Cereal remains noted included *Triticum spelta* with some germinated grain and *Hordeum vulgare*. These richer flots produced moderate to well preserved remains.

Of the remaining ditch samples 33 flots produced no charred seeds or chaff and only small quantities of charcoal if any, and 30 produced a limited range of grain and chaff and very few weeds. Flots were generally small and the preservation of remains poor.

Moderate quantities of *Quercus* sp. charcoal were seen in the richer samples and occasional to moderate quantities in other samples. Possible Pomoideae charcoal was noted in one sample.

Structures

Four samples were taken from structures, but the results are poor. Samples 10063 and 10062 both produced small flots (c 10ml) with less than 10 items. A *Hordeum vulgare* grain and a *Triticum spelta* glume base were identified. No weeds were noted in either sample. *Quercus* sp. (oak) flecks were noted in both samples. Samples 10276 and 10275 produced slightly bigger flots (400 and 100ml) consisting almost entirely of charcoal. Very occasional cereal grains (less than 10) were noted but no chaff. The charcoal identified included *Quercus* sp. and Pomoideae.

Postholes

Ten posthole samples were assessed, and the flots were generally small. Two samples (10059 and 10664) produced no seeds or chaff. Charred plant remains were generally limited in the remaining samples. Samples 10272 and 10061 contained between 11 and 50 cereal grains while sample 10294 contained a similar number of chaff items. The other samples produced only 1 to 10 items of grain, chaff and/or weed seeds. The cereal species noted in the samples included *Triticum spelta* (spelt wheat) and *Triticum spelta/dicocum* (spelt/emmer wheat) and *Hordeum vulgare* (barley). *Quercus* sp. charcoal is present in small quantities and possible Pomoideae in sample 10277.

Postpipes

A total of 21 samples were assessed from postpipes. Charred seeds and chaff were noted in all samples, generally in low numbers. Four samples produced more than 11 cereal grains, one of which also produced 51-100 items of chaff and 11-50 weed seeds (sample 10038; postpipe within the aisled building). Cereals identified included *Triticum spelta* (spelt wheat), some of which had germinated, *Hordeum vulgare* (barley) and *Avena* sp. (oats). The chaff was generally dominated by *Triticum spelta* glume bases. In addition to the cereals occasional *Corylus avellana* (hazel nut) shell fragments were noted and *Prunus* sp. (sloe, plum etc.) stones were present in samples 10280 and 10038. Charcoal was noted in all samples, mostly of *Quercus* sp. (oak) but with some Pomoideae and possible *Corylus/Alnus* sp. (hazel/alder).

Gullies

Four samples were assessed from gullies. Sample 10060 produced 11 to 50 items each of grain, chaff and weeds. The remaining samples produced only low levels of remains. Sample 10052 did produce a very large flot but this consisted predominantly of *Quercus* sp. (oak) charcoal. The cereal remains noted in the samples included *Triticum spelta*, some of which had germinated and occasional *Avena* sp. (oats).

Ovens and Hearths

Six oven and 13 hearth samples were assessed. Eight samples produced no seeds or chaff and a further five contained only small quantities levels of material. Three samples, two from hearths and one from an oven, produced more useful quantities of remains each with 50 to 100 grains; the two hearth samples were from the aisled building, while the oven sample was from the late (4th century) oven within the villa building. *Hordeum vulgare* (barley), *Triticum spelta* (spelt wheat) and a short grained *Triticum* sp. (wheat) were all recorded. Chaff was infrequent but does include possible *Triticum aestivum* type rachis as well as *Triticum spelta* glume bases. Weeds were again infrequent. Occasional *Corylus avellana* (hazel nut) shell fragments were noted and a *Vicia/Pisum* sp. (vetch/bean/pea). Charcoal was present in most samples and in large amounts in three. *Quercus* sp. appears to be dominant while *Corylus/Alnus* sp., Pomoideae and *Prunus* sp. may also be present.

Inhumations

Two samples were assessed from early Roman inhumations. Both produced low levels of remains with between 10 and 50 items of grain, and chaff. *Triticum spelta* and *Triticum spelta/dicoccum* were noted and occasional *Quercus* sp. charcoal.

Pits

A total of 20 samples were assessed from pits, mostly of Late Iron Age to Early Roman date. Ten samples contain no charred remains and a further eight samples contain only very small to moderate amounts. Two samples (from contexts 10548 and 12372) produced very large amounts of charred remains; these were from context 10548 (part of feature 10570 in the extreme south-east of the site), and context 12372 (from post-row 11500 north of the main villa house). There were over 1000 chaff items in each and over 100 grains in sample 10378. Weeds were present in fairly low numbers (11 to 50).

Cereals identified include *Triticum spelta*, including germinated grain, *Hordeum vulgare*, *Avena* sp. and *Triticum* cf. *dicoccum* (possible emmer wheat) noted amongst the grain. The very large quantities of chaff were dominated by *T.spelta* glume bases. The pit samples also tended to contain moderate to large amounts of charcoal, mostly *Quercus* sp. with occasional Pomoideae (apple, hawthorn etc.) and possible *Corylus/Alnus* sp. (hazel/alder).

Corn-drier

A total of 12 samples were assessed from the corn-drier, of which six produced useful numbers of remains. The composition appears to vary between samples with different proportions of grain, chaff and weeds. *Triticum spelta* dominated the assemblages, while *Hordeum vulgare* and *Avena* sp. were also noted. Several of the *T.spelta* grains had germinated. In addition to the cereals, *Vicia/Pisum* sp. (vetch/bean/pea) and *Linum usitatissimum* (flax) seeds were also noted in sample 10019.

Well

Two samples from well deposits produced only occasional grain, chaff and weeds. *Triticum spelta*, *Triticum spelta/dicoccum* and *Chenopodium album* (fat hen) were all noted. Occasional charcoal of *Quercus* sp. and Pomoideae were also identified.

Layers

A total of 80 samples were assessed from archaeological layers. Useful quantities of material were present in 14 samples. Up to 50 grains were noted in samples 10022, 10049, 11083, 10016 and 10287 (within the Aisled Building, and in the vicinity of the corn-drier), with 50-100 items of chaff in all but sample 10049 which had in excess of 100 chaff items. Weeds were present in all 6 of these samples although in smaller numbers. Cereal species noted were *Triticum spelta*, including germinated grain, *Hordeum vulgare* and *Avena* sp. *Linum usitatissimum* (flax) was present in sample 10023.

Samples 10019 and 10452 (aisled building), 10025 (layer within ditch 10660), and 10414 (layer containing material raked out of oven 15280 in the aisled building) each contained 51-100 grains. Sample 10452 contains more than 100 items of chaff, while the remains of these samples have less than 50 items. All five produced between 11 and 50 weed seeds. Cereals identified included *Triticum spelta*, *Hordeum vulgare*, *Avena* sp., *Triticum dicoccum* and possible free-threshing *Triticum* sp. Occasional *Vicia/Pisum* sp. and *Linum usitatissimum* were also noted.

The remaining four samples (10097, 10017, 10024 and 10405), all from the area of the oven in the aisled building, were very rich indeed. Samples 10024 and 10405 contained over 1000 items each of grain and chaff. Weeds, particularly *Bromus* sp. (brome grass) were very numerous in sample 10017 and in particular in 10024. The cereal species identified include *Triticum spelta*, *Triticum dicoccum*, *Hordeum vulgare* and *Avena* sp. Germinated grain and sprouted caryoptiles were present in sample 10017. Charcoal was present in moderate quantities in most samples, generally of *Quercus* sp, with occasional *Corylus/Alnus*, *Prunus spinosa* and Pomoideae charcoal.

The remaining 32 samples had much lower concentrations of remains while seeds and chaff were entirely absent from six samples. The occasional grain and chaff noted included *Hordeum vulgare*, *Triticum spelta* and *Avena* sp. Other items noted include *Prunus spinosa* (sloe) stones, *Vicia/Pisum* sp. (vetch/bean/pea) and *Corylus avellana* (hazel) nut shell.

Other

Six samples from other features were assessed. Two contained no charred seeds or chaff while three contained only limited numbers of grain and virtually no chaff. However, sample 10040 (from a layer overlying the enclosure ditches east of the villa) contained in excess of 100 grains including *Triticum spelta* and *Hordeum vulgare*. Occasional chaff and weeds were also noted. Charcoal present in six samples and in very large quantities in three, was mostly identified as *Quercus* sp. (oak), with occasional Pomoideae (apple/pear/hawthorn etc.) and possible *Prunus spinosa* (sloe).

Honeyhills Wood

The single sample from Honeyhills Wood produced occasional Pomoideae charcoal and a recent (modern) apple core. No charred seeds or chaff were present.

Conservation

The samples are in a stable condition. If kept dry they can and should be archived for storage, until final decisions are made about further analysis.

Comparative material

There is little published botanical material from Roman villa sites in Kent. Comparable published assemblages include The Mount Villa at Maidstone (Robinson 1999), and the Roman small town at Springhead (Campbell nd). As yet unpublished material

has been analysed from a Romano-British settlement at Monkton, Mount Pleasant on the Isle of Thanet (R Pelling unpublished).

Further afield, material from a comparative site has been published from Bancroft Roman Villa in Buckinghamshire. Charred plant remains from this site were examined from the villa, mausoleum and a corn-drier (Nye and Jones 1994, 562-565; Pearson and Robinson 1984, 565-584). Several corn-driers from areas across southern Britain have now been sampled (Van der Veen 1989), including a recently excavated structure at Grately, Hampshire, which is associated with a villa and aisled hall (G Campbell pers. comm).

Within the CTRL project similar material although in low levels has been recovered from the Late Iron Age and early Romano-British deposits at South of Snarkhurst Wood, East of Station Road and Church Lane Smeeth. There spelt wheat and barley were the principal cereals represented while low levels of emmer wheat were also noted. Further material which may be contemporary has been reported from South of Beechbrook Road. In the context of the wider Landscape Zone Aims of the CTRL project, these small assemblages will be of value as indicators of the presence or absence of poorly understood crops such as emmer wheat, oats and pulses on sites of different types. Charred plant remains are present in samples taken at Northumberland Bottom, and good material of comparable date may be available here. Good charred plant remains are present from the Early Iron Age site at White Horse Stone and may provide evidence for change between the Early Iron Age and Roman periods.

Published records of Late Iron Age and Romano-British date generally tend to be dominated by spelt wheat with barley and occasionally oats. The role of emmer wheat is not yet understood although good evidence of its cultivation during the Late Iron Age is available from Wilmington in Kent (Hillman 1982) and from outside the region from Hascombe in Surrey (Murphy 1977) and Ham Hill in Somerset (Ede 1991). In the Romano-British period, evidence from sites such as Tiddington (Moffet 1986), or Barton Court Farm (Jones and Robinson 1984) suggests emmer to be a minor crop compared to spelt, possibly even present as a weed of the spelt crop. More recently much larger assemblages were recovered from a site at Mansfield College in Oxford (R Pelling, unpublished) suggesting it was, at least occasionally, deliberately cultivated as a crop.

Potential for further work

CTRL Landscape Zone Priorities and Fieldwork Event Aims

The following section discusses potential for further work in the light of the Landscape Zone Priorities and Fieldwork Event Aims.

There is great potential to address some of the original research aims of this site, particularly in understanding of the agricultural regime of a Roman Villa complex. There are good samples available from all phases of Romano-British activity, which have the potential to shed light on agricultural trends such as increasing crop diversity, or the introduction or intensification of garden crops or cash crops.

In terms of assessing the transition from the Iron Age to the Roman period, in general the Iron Age deposits offer less potential for analysis, as the samples generally provide poorer information. Material is available, however, from the Late Iron Age to Early Roman period, which must relate to pre-and post conquest activity.

In terms of assessing the decline of the villa, good samples are available from a number of late contexts, including the corn-drier, the soil layer overlying the smithy, and the late oven inside the main villa house. These samples have the potential to provide valuable information about continuing agricultural exploitation of the site despite its apparent abandonment for occupation. They will provide an interesting contrast with the earlier Roman samples and may show evidence of change in the agricultural regime.

The distribution of rich samples over the site suggests that they have good potential to contribute to analysis of the function of structures, and the existence of functional zones. The corn-drier in particular produced very rich deposits and offers good potential for further investigation of its function.

The Thurnham assemblage can be combined with the evidence from other sites mentioned above, to provide an overview of the representation of species at a variety of different rural settlements of different types. A comparison with the Early Iron Age material from White Horse Stone should also provide useful information regarding change in agricultural regimes.

New research aims and objectives for the CTRL archaeology project

On a regional and national scale there is potential to examine whether the patterns for this period in Kent are consistent with elsewhere in southern Britain or if there are any trends visible not seen outside the region. It has been noted above that there are few published studies of plant remains from this region. The Thurnham assemblage therefore has the potential to provide a valuable addition to understanding of the Roman agricultural regime in Kent.

It is recommended that richer samples are analysed in detail from each category of feature, with samples selected covering the full range of periods. All the corn-drier samples containing charred remains should be analysed.

Samples from the inhumations, the well, and the structures offer little potential for further work.

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Hockers Lane (ARC 420 62+200-63+000)

Introduction

Samples were taken during excavation works at Hockers Lane, for the recovery of charred plant remains and charcoal.

The deposits sampled were of Late Iron Age to early Romano-British date(c AD 0–70).

The sampling was undertaken in accordance with the Fieldwork Event Aims for the site, which are set out in section 2 of the main report, above. The samples were taken in order to address questions concerning the diet and cereal economy of the site and particularly to examine any difference in economy and cereal production between Hockers Lane and Thurnham Villa. All the samples examined are listed in Table 10.3.

Methodology

The sampling programme was intended to recover material from the full range of feature type and date excavated. Samples were taken from ditches, pits and layers. Twenty

samples, ranging from 3 to 40 litres in volume, were processed by bulk water flotation and the flots collected onto 250µm mesh sieves. Flots were air dried slowly before being submitted for assessment. Each flot was assessed by scanning under a binocular microscope at x10 magnification. Any seeds or chaff noted were provisionally identified and an estimate of abundance made. Random fragments of charcoal were fractured and examined in transverse section at x10 and x20 magnification.

Quantification

A total of 26 flots were assessed. Flots were small (10 to 150 ml) and contained frequent roots. Occasional molluscs were present in samples 26 and 29.

Charred plant remains were absent from seven samples, while a further five samples contain no seeds or chaff but did contain occasional charcoal. Two samples produced no cereal remains but occasional *Corylus avellana* (hazel nut) shell fragments and charcoal.

Cereal grain was present in 10 samples, while chaff was present in only two samples. Sample 11 (context 84) produced 10 to 50 items each of cereal grain, chaff and weeds, with between 50 and 100 items in total. The cereal remains included *Triticum spelta* (spelt wheat) glume bases and *Triticum spelta/dicoccum* (spelta/emmer wheat) grain. No charcoal was present in this sample. The remaining samples produced low levels of cereal remains (less than 10 items) which include the grain of *Triticum spelta*, *Triticum spelta/dicoccum* and *Hordeum vulgare* (barley).

Charcoal was present in 11 samples in generally low quantities but with frequent remains in two samples. The taxa identified were *Quercus* sp. and Pomoideae.

Provenance

Sample 11 was taken from a pit fill. The remaining samples which produced low levels of cereal remains were from pits, ditch or gully fills and an archaeological layer. Samples producing *Corylus avellana* fragments were all from ditch or gully fills.

Conservation

The flots are in a stable condition and can be archived, although it is not necessary to retain the flots for long-term storage.

Comparative Material

The range of species recorded during the assessment is well-attested for Late Iron Age and Romano-British sites in southern Britain (see Greig 1991). The small scale of cereal processing represented can be contrasted with Thurnham Villa for which very large scale cereal production is attested. The possible cash crops or oil crops at Thurnham Villa are not represented at Hockers Lane.

Potential for further work

Given the absence of good cereal assemblages and charcoal other than oak and Pomoideae the samples offer no potential for further work. The range of species, spelt wheat and hulled barley, were the cereals most commonly cultivated during the Iron Age and Romano-British period in southern Britain. The samples provide no potential for extending this species list. The remains are characteristic of low levels of redeposited remains of cereal processing activity.

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Table 10.1: Thurnham Roman Villa ARC THM 98: Number of samples from each category of feature

No. of items of seeds or chaff	Total	Feature Type										
		Layer	Pit	Ditch/ Gully	Not known	Well	Structures	Hearth/ Ovens	Inhumations/ Cremations	Corn-drier	Post-hole	Post-pipe
0	74	11	9	33	-	-	-	6	-	5	10	-
1-10	109	36	7	30	3	2	4	5	2	1	7	17
11-50	28	13	2	2	-	-	-	-	1	-	3	3
51-100	19	10	-	3	-	-	-	1	-	2	-	1
>100	14	6	1	4	1	-	-	-	-	4	-	-
>1000	6	4	1	1	-	-	-	-	-	-	-	-
Total no. samples	249	80	20	72	6	2	4	19	3	12	20	21

Table 10.2: Thurnham Roman Villa ARC THM 98: Samples containing useful quantities of seeds or chaff

Sample	Context	Feature	Sample size (l)	Flot size	Grain	Chaff	Weeds	Other	Charcoal	Comments
10040	10772		20	100	++++	++	+++	-	+	Occ roots
10016	11044	Corn-drier	40	200	++	+++	+	-	+++	
10026	11085	Corn-drier	20	50	++	+++	++	-	-	Rooty, molluscs
10015	11039	Corn-drier	40	250	+++	++	++	-	+++	Germinated spelt
10014	11026	Corn-drier	38	200	++++	+	+++	-	+	Germinated spelt, lots vic/lath
10346	12203	Ditch	20	600	1000+	1000+	++++	-	+++	Big, grain rich, roots
10380	20168	Ditch	38	50	+++	+++	++	-	+	Some spelt germinated
10381	20169	Ditch	40	50	+++	+++	++	-	++	
10383	20174	Ditch	39	150	+++	+	+	-	++	Molluscs
10336	15206	Hearth	15	100	+++	-	++	+	++	
10335	15209	Hearth	20	100	+++	+	++	++	+	
10310	15201	Layer	10	50	++	+++	+	-	-	Rooty and mossy
10287	15148	Layer	12	100	++	+++	++	-	++	
10019	11044	Layer	10	50	+++	+++	++	+	++	Germinated spelt
10025	10642	Layer	10	150	+++	+++	+++	-	++	
10049	11208	Layer	20	20	++	++++	+	-	+	
10024	10641	Layer	20	250	1000+	1000+	++++	-	+	Short grains,
10023	11083	Layer	20	100	++	+++	++	+	++	Germinated spelt
10022	11044	Layer	10	50	++	+++	++	-	++	
10018	11049	Layer	18	150	++++	+++	+++	-	+	
10017	10528	Layer	35	250	++++	++++	++++	+	+	Rooty, germinated spelt,
10314	15201	Layer	8	50	++	+++	+	-	-	Mossy
10097	20058	Layer	20	200	++++	++	+	+	++	
10452	15386	Layer	20	100	+++	++++	+++	-	+	
10405	15283	Layer	20	400	1000+	1000+	++	-	+	Grain rich -Not germinated
10414	15214	Layer	10	100	+++	+	++	+	++	Rooty
10333	15201	Layer	10	30	++	+++	++	-	-	Roots, moss
10411	15294	Layer	10	400	1000+	++++	++++	-	+++	Grain rich
10328	15201	Layer	10	20	+	+++	+	-	++	
10340	20037	Oven	18	150	+++	++	++	+	+++	Roots, molluscs
10398	12372	Pit	3	10	++	++++	+	-	+	
10375	10548	Pit	20	150	++	1000+	++	-	+	
10038	11093	Post-pipe	10	150	++	+++	++	-	+++	Charcoal rich

+ = 1-10; ++ = 11-50; +++ = 51-100; ++++ = 101-1000; 1000+ = >1000

Table 10.3: Hockers Lane ARC 420 62+200-63+000: Summary of the Charred Plant remains recorded in the Assessment

Sample	Context	Feature	Vol. flot	Flot size (ml)	Grain	Chaff	Weed seeds	Other	Id-Other	Charcoal	Comments
1	22	Ditch	37	200	+						Rooty
2	20	Ditch	40	100						+	Rooty
3	24	Ditch	40	50							Rooty
4	68	Ditch	30	100						+	Rooty
5	66	Pit	3	250						+++	
6	63	Ditch	40	100							Rooty
7	70	Pit	40	250	+	+	+			+++	Rooty
9	90	Pit	38	100							Rooty, charcoal flecks
10	92	Ditch	39	100							Rooty
11	84	Pit	34	100	++	++	++				Rooty
12	60	Layer	40	100	+						Rooty
14	155	Ditch		100						++	
15	179	Ditch	40	100	+						Rooty
16	173	Ditch	40	100				+	Corylus	+	Rooty
17	177		5	50	+					+	
18	180	Pit	40	100	+						Rooty
19	186	Ditch	40	50				+	Corylus	+	Rooty
20	187		40	100	+		+				Rooty
21	195	Ditch	6	10							Charcoal flecks
22	207	Gully	40	100	+			+	Corylus		Rooty
23	213	Ditch	40	100							Rooty
24	214	Ditch	40	200							Rooty, molluscs
25	218	Ditch	40	100				+	Corylus	+	Clinker/coal
26	223	Ditch	40	100							Rooty, molluscs
28	250	Ditch	40	100	+					+	Rooty
29	251	Ditch	40	100						+	Rooty

+ = 1-10; ++ = 11-50; +++ = 51-100; ++++ = 101-1000; 1000+ = >1000

Table 10.4: Thurnham Roman Villa ARC THM 98: Summary of the bulk samples assessed from the well

Sample	Context	Weight (g)	Total water-logged	Total charred	Id-charred	Moss	Seeds/Fruits	Wood	Char-coal	Leaf / Bud	Moll-uscs	Insects	Notes/habitat groups
10293	11982	200	+++	+	<i>T. spelta</i>	++	+++	++		++	++	++	wood/scrub, ruderal
10306	11984	200	+++	+	<i>T. spelta</i>	+++	++	+					wood/scrub, ruderal
10347	12227	200	+++				+++	++	+		++	++	flax capsule, ruderal, wet
10351	11516	200	+++			+++	+++	+			++	++	Ruderals
10352	11985	200	+++			++	+++				++	++	wood/scrub (sloe, acorn)
10377	12377	200		+++	<i>T. spelta, Hordeum</i>								
10013	10505	200											silt and charcoal flecks

+=1-10; ++= 11-50; +++= 51-100; ++++= 101-1000; 1000+= >1000

