1039

Ancient Monuments Laboratory
Report 10/93

LAND MOLLUSCA FROM WEST HILL, ULEY A RITUAL COMPLEX, GLOUCESTERSHIRE: EXCAVTATED IN 1977-9

B Meddens

Ancient Monuments Laboratory
Report 10/93

LAND MOLLUSCA FROM WEST HILL, ULEY, A RITUAL COMPLEX, GLOUCESTERSHIRE: EXCAVATED IN 1977-9

Beverley Meddens

SUMMARY:

During the 1978 excavations, 158 samples were taken for mollusc analysis. The nature/reliability of the sample is discussed, and within that constraint, an interpretation offered that the enclosure ditches of the preBelgic and Belgic Iron Ages transformed the woodland environment relatively quickly to open countryside. This process continued throughout the Roman period. Following the removal of the Roman palisade, however, and during the second and third centuries AD, there may have been some regeneration of large plant and shrub cover which continued during the construction of the Roman Temple and courtyard. Following the demolition of the temple (?date known), open woodland gives way to arable farming.

Author's Address:

Beverley Meddens
34 Neuchatel Road
London
SE6 4EQ

WEST HILL ULEY: SNAIL REPORT by Beverley Meddens

During the excavations at Uley in 1978, 158 samples were taken for mollusc analysis. Methods described by Evans 1972 were used for extraction and identification. Each sample was on average 750gms of air dried soil, which is a smaller sample than the author would have liked but in many cases it was possible to treat two adjacent samples as one. Despite excellent preservation of the shells the numbers extracted were disappointingly low. The samples were taken from stratified deposits which span the whole occupation of the site from Pre-Roman Iron Age to the post-Roman phases. It was hoped that the results would reflect any changes in the immediate environment that may have occurred in and around the site during these periods. Unfortunately palaeosoils were not generally present on the site and therefore the samples were taken mostly from ditches. The major disadvantage of samples from ditches is that the fauna recovered may reflect the microenvironment of the ditch rather than the surrounding areas. However, as large numbers of samples were taken, it was hoped that if results were consistent across the site within each phase, the possibilities for interesting results would be greater despite the nature of the deposits. Due to pressure of time, alternate samples only were analysed throughout most of the columns, thus providing an interrupted sequence. So although 158 samples were taken only 98 samples were analysed. In some cases two adjacent samples were treated as one, the result being that 71 samples/faunas are presented in the results below.

RESULTS

The numbers and species of the recovered molluscs are shown in tables 1-10. The nomenclature and systematic ordering is according to Walden 1978. Figures 1-3 show the positions of the samples and columns and the analyses are presented in a series of abundance diagrams figures 4-5.

Ditch F816

Section 99 (fig. 1, table 1), cut through the shallow flat bottomed enclosure ditch F816. The primary fill (849), of Iron Age date contained a woodland fauna with typical components such as Discus rotundatus and Acicula fusca. The later fill (803), representing probably the 1st century A.D. shows an increase in Vallonia costata and Vallonia excentrica, combined with a decrease in shade loving species (fig. 4). This could indicate a response by an 'open country' species to a newly created more open habitat around the enclosure. A hand picked sample of snails was taken from the area around section 99 (table 2.) because large shells were noticed by the excavator. Interestingly large numbers of shells of species poorly represented in the section were recovered. The predominance of Cepaea nemoralis over C.hortensis could be due to the site being high up, while C. hortensis prefers valley bottoms (Evans 1972).

From section 13 two columns of samples were taken (fig. 1, table 3). Column I goes through the palisade ditch F845. The primary fill (844), sample 192, contained very few mollusca. The presence here of Helicella itala, an obligatory heliophile conflicts with the overall shade-loving fauna. The upper palisade ditch fill (846), samples 194 and 196 show a substantial increase in

Vallonia species. Again this could represent the response of the molluscs to clearance and therefore newly created open spaces. The primary fill in column II (849), sample 198, although low in numbers, does contain a woodland fauna similar to that in section 99, as does the primary fill of the palisade ditch F852 (853), sample 199. These samples could be interpreted as indicating a woodland environment in the area around the time these enclosure ditches were built. The upper fill within the palisade ditch, sample 201, again shows an increase in open country species. The continued presence of Discus rotundatus could suggest that shady woodland habitats were close by during this period.

Section 96 (fig. 1, table 4), poses a small problem because there is a possibility that context 849 is contaminated in this section. However if the primary fill (849), samples 203/4, of this section is contemporary with those of sections 99 and 13 then the similarities are poor. The fauna in the primary fill represent an open country fauna. There is a gradual reduction in the open country species and an increase in Carychium tridentatum. This species is small though and its small size enables it to live in relatively open areas. The changes through this section do not exactly represent regeneration of open woodland but the reduction of the proportion of Pupilla muscorum from 17% to 5% might imply a change from short to long grass or shrub cover (fig. 5).

It should perhaps be stressed at this moment that where the population of snails recovered are small, there is reasonable chance that they are not representative of the surrounding environment. This fact combined with the fact that nearly all the samples are from ditch fills, means that all conclusions should be considered tentatively.

Two columns of samples were taken from Section 40 (table 5, figs.1). Column I samples the early ditch representing the 1st century A.D. The numbers of individuals recovered from these samples were larger. The primary fill (1002), samples 235/6, of this ditch F1024 contains an open woodland fauna, there is a majority of shade loving species but the few open country species imply a degree of openness to the environment. The following two samples, samples 239/40 show a progressive reduction in shade loving species and noticeable increases in Helicella itala, Vallonia costata and Pupilla muscorum (fig. 5). This suggests that the environment was becoming more open and these results correspond well with those of section 13 and 99. Section 40 col II (fig. 5) represents a much later date after the destruction of the Roman temple. The snail faunas from these samples are mixed as with those from section 96.

Ditch F5 - 1st century A.D. enclosure ditch.

A long column of samples was taken from section 73 (fig. 2, table 6). These samples represent the time period from the 1st century A.D. to the present day plough soil. The primary fill (581) of the palisade ditch F485, samples 162 and 164, contained only a few snail shells, but the few that were present suggest an open environment. The shade loving species that are present could well have found a suitable habitat in the ditch itself. The main fill of the enclosure ditch (580) contained greater numbers of snails. These samples, samples 166 and 168, show an increase in shade loving species. The later deposits are so poor in fauna that very little can be commented on. The problems of interpreting small

numbers of shells can be demonstrated by the two individuals of Vallonia found in the modern plough soil, a species which is supposed to avoid arable land.

The two columns taken from section 43 (fig. 2, table 7), also sample the 1st century enclosure ditch. Column I was taken through the palisade ditch fill (581), and column II was taken as far across the enclosure ditch, away from the palisade ditch, as possible. It was hoped that differences in the faunas recovered would illustrate any differences in the environment in these separate phases of the enclosure ditch. Unfortunately the results were not conclusive. The deposits themselves could be deliberate fill, and the faunas recovered are mixed, but it should be remembered that the 'woodland' species present such as Vitrea contracta have the ability to live in wall debris and therefore may not here be representing a woodland environment but the conditions in the ditch itself.

Ditch Segment F264

Section 54 crosses the enormous feature 264 of the 1st century B.C. and A.D. (fig. 3, table 8). Three columns were taken through the fills in this feature. Column I and IV sampled the same layers except for the top layer. They should therefore be considered together. In both columns it seems as though the interface between contexts 733 and 758 might be interesting. Both sample 59 (col I, context 733/758?) and samples 123/4 (col IV, context 758) contained a dry grassland fauna (fig. 4). Although the numbers are small in the later samples both columns show an overall decrease in open country species. However this generalisation should be considered lightly.

Interestingly column III (fig. 3, table 9), through the Roman palisade ditch fill contained an open woodland fauna (fig. 4). These samples contained many more shade loving species and more catholic species than those in columns I and IV, and fewer open country species, perhaps suggesting a little more vegetation cover.

Late Roman and Post-Roman Soils

Section 106 (fig. 3, table 10) covers the latest phases (5-8) of the site. The lowest layers (late Roman), sample 225 (686) and sample 227 (1011) contain few open country species (fig.4). The presence of Discus rotundatus could imply more vegetation cover. This soon gives way to open country again in the post Roman period, followed by the modern day plough soil.

CONCLUSIONS

At this point it is probably better to stress the problems that have arisen and then go on to summarise the results. The numbers of snails recovered were generally low, this made interpretation difficult because it is all the more possible that the population is not representative of the surrounding environment. The nature of the deposits in many cases is suspect because it was difficult to determine if these deposits were likely to have supported a live snail population or whether they were dumped material. If the latter case is true then it is unlikely that the faunas extracted from such deposits are indicative of anything. A third factor which is important is that many of the recovered faunas were of a mixed nature. Environments which have patchy cover will provide habitats for animals across

a broad spectrum. With only a few individuals to provide indications of environmental conditions, dramatic errors can be made.

However it is possible to make some statements with a little caution. Initially when the preBelgic Iron Age enclosure ditch (F816) was dug the environment was one of woodland, as shown in the primary fills of sections 99, and 13. Relatively quickly the proportion of species of open country habitats increases, and throughout the Belgic Iron Age and the building of more palisades the environment becomes more open as the woodland is cleared to make the enclosure. By the mid 1st century A.D. when the large feature 264 was partly filled the immediate environment of the site is quite open (if samples 59 and 123/4 are representative). This would correspond quite well with the new activity of the Romans, as with increased activity one might expect more clearance. Unfortunately, considering the significance of the F264, the results from it were extremely disappointing. After the Roman palisade in F264 (col III) was removed and during the 2nd and 3rd centuries A.D., it might be suggested cautiously that there was some regeneration of large plant and shrub cover. This continues during the construction of the Roman temple and courtyard and is hinted at by the mixed faunas from section 43,73,and 96. Finally the 'open woodland' of the post Roman period, after the demolition of the temple, gives way to arable farming. Even today it would be easy to find woodland faunas near to the open country of the ploughed fields, as the hedgerows are densely overgrown, and this could be a similar situation as represented by the snail analysis. Once the initial forest clearance had been finished plant growth around the edges of the site increased and hence mixed faunas in the enclosure ditches.

TABLE 1: Ditch F816 - section 99

	cm...28-40	0-18
sample	222/223	219/220
context	803	849
Pomatias elegans (Muller)	-	1
Acicula fusca (Montagu)	-	3
Carychium tridentatum (Risso)	7+	22
Cochlicopa lubrica (Muller)	3	-
Pupilla muscorum (Linnaeus)	2	1
Vallonia costata (Muller)	15	-
Vallonia pulchella (Muller)	2	2
Vallonia excentrica Sterki	4	-
Vallonia spp.	4	-
Punctum pygmaeum (Draparnaud)	4	2
Discus rotundatus (Muller)	11+	25+
Vitrea contracta (Westerlund)	6	16+
Nesovitrea hammonis (Strom)	2	-
Aegopinella pura (Alder)	2	1
Aegopinella nitidula (Draparnaud)	2	2
Oxychilus cellarius (Muller)	7	10
Ceciliodes acicula (Muller)	55+	17+
Cochlodina laminata (Montagu)	-	1
Clausilia bidentata (Strom)	-	1+
Cepaea spp.	-	3+

TABLE 2: Hand picked sample from near to section 99

Pomatias elegans (Muller)	6
Discus (Discus) rotundatus (Muller)	6
Oxychilus cellarius (Muller)	11
Helicella itala (Linnaeus)	7
Trichia hispida (Linnaeus)	1
Arianta arbustorum (Linnaeus)	1
Helocigona lapicida (Linnaeus)	6
Cepaea nemoralis (Linnaeus)	31+
Cepaea hortensis (Muller)	13+
Cepaea spp.	12

TABLE 3: Ditch F816 (and palisade trenches F845 and F852) - section 13 columns I and II

	col I (F845)				col II (F852)		
cm...	34-44	14-24	7-14	0-7	29-39	9-19	0-9
sample	196	194	193	192	201	199	198
context	846	846	844	844	853	853	849
Acicula fusca (Montagu)	-	-	-	-	-	-	1
Carychium tridentatum (Risso)	2	2	3	1	3	-	1
Cochlicopa lubrica (Muller)	2	-	-	-	-	-	-
Cochlicopa lubricella (Porro)	-	1	-	-	-	-	-
Vertigo pygmaea (Draparnaud)	2	-	1	-	2+	-	-
Vertigo aplestris Alder	-	-	-	-	-	1	-
Pupilla muscorum (Linnaeus)	5	4	5	-	4+	-	-
Vallonia costata (Muller)	15	8	6	-	2	2	1
Vallonia pulchella (Muller)	3	-	-	-	-	-	-
Vallonia excentrica Sterki	6	4	3	-	2	-	-
Vallonia spp.	17	13	6	1	1	-	2
Acanthinula aculeata (Muller)	-	-	-	1	-	1	-
Punctum pygmaeum (Draparnaud)	3	-	2	-	-	-	-
Discus rotundatus (Muller)	2	1	1	3+	2	3+	3+
Vitrina spp.	-	-	-	7	-	-	-
Vitrea contracta (Westerlund)	-	1	2	-	-	3	2
Nesovitrea hammonis (Strom)	1	-	-	-	-	-	-
Aegopinella pura (Alder)	-	-	-	-	-	1	-
Oxychilus cellarius (Muller)	3	7	3	-	3	7	8
Oxychilus alliarius (Miller)	1	-	-	-	-	-	-
Zonitidae	-	4	-	-	-	-	-
Ceciliodes acicula (Muller)	18	15	4	-	10+	7	7
Clausilia bidentata (Strom)	1	-	-	-	-	-	-
Helicella itala (Linnaeus)	5	3+	3	2	3	1	+
Trichia hispida (Linnaeus)	24	1	2	1	-	1	1

TABLE 4: Ditch F816 - section 96

cm...	60-72	52-60	36-44	20-28	0-10
sample	217/8	215/6	211/2	207/8	203/4
context	803	858	858	858	849
Pomatias elegans (Muller)	-	-	1	-	-
Acicula fusca (Montagu)	-	-	-	-	1
Carychium tridentatum (Risso)	12	8	5	4	1
Cochlicopa lubrica (Muller)	-	3	-	-	-
Cochlicopa spp.	-	-	3	2	-
Vertigo pygmaea (Draparnaud)	1	-	2	1	1
Vertigo aplestris Alder	-	-	-	-	1
Vertigo spp.	2	-	-	-	-
Pupilla muscorum (Linnaeus)	3+	4	1	7+	20+
Vallonia costata (Muller)	7	9	4	14	23
Vallonia pulchella (Muller)	1	2	-	4	15
Vallonia excentrica Sterki	4	2	3	5	9
Vallonia spp.	6	7	10	27	14
Acanthinula aculeata (Muller)	-	-	-	-	1
Ena obscura (Muller)	-	-	-	2	-
Punctum pygmaeum (Draparnaud)	-	-	-	-	3
Discus rotundatus (Muller)	1	-	-	3	5
Vitrea crystallina (Muller)	1	-	-	-	-
Vitrea contracta (Westerlund)	2	-	-	1	3
Nesovitrea hammonis (Strom)	-	-	-	-	2
Aegopinella pura (Alder)	2	-	1	1	-
Aegopinella nitidula (Draparnaud)	-	1	-	-	-
Oxychilus cellarius (Muller)	3	1	1	1	3
Zonitidae	-	-	-	3	1
Ceciliodes acicula (Muller)	36	51	35	33	11
Clausilia bidentata (Strom)	2	-	1	-	-
Candidula intersecta (Poiret)	-	-	-	-	1
Helicella itala (Linnaeus)	5	6	6	4	7
Trichia striolata (C. Pfeiffer)	7	4	3	-	-
Trichia hispida (Linnaeus)	8	5	3	8	8
Cepaea spp.	1	-	-	2	-
Helicidae	-	-	-	5	-

TABLE 5: Ditch F816 – section 40 columns I and II

	col I			col II			
cm...	30–40	20–30	0–10	47–50	39–47	18–28	0–10
sample	241/2	239/40	235/6	253	251/2	247/8	243/4
context	884	1002	1002	687	672	895	895
Acicula fusca (Montagu)	–	2	6	–	–	–	–
Carychium tridentatum (Risso)	11+	30	11+	4	10	1	2
Cochlicopa lubrica (Muller)	–	1	3	1	1	–	–
Cochlicopa lubricella (Porro)	5	1	–	–	–	–	3
Cochlicopa spp.	3	5	1	–	–	1	–
Vertigo pygmaea (Draparnaud)	4	–	1	–	–	1	2
Vertigo lilljeborgi (Westerlund)	–	–	–	–	2	–	–
Vertigo spp.	4	2	–	1	–	1	–
Pupilla muscorum (Linnaeus)	27+	21	6	2	4+	2	7
Vallonia costata (Muller)	38	36	11	–	8	2	17
Vallonia pulchella (Muller)	11	1	–	1	–	5	14
Vallonia excentrica Sterki	15	6	–	1	3	4	11
Vallonia spp.	52	17	2	5	5	13	24
Acanthinula aculeata (Muller)	1	–	–	–	–	–	–
Ena obscura (Muller)	1	–	3	–	–	–	–
Punctum pygmaeum (Draparnaud)	6	5	3	–	1	2	3
Discus rotundatus (Muller)	2	9	17+	–	–	–	–
Vitrina spp.	2	1	1	–	–	–	–
Vitrea crystallina (Muller)	–	3	–	–	1	–	–
Vitrea contracta (Westerlund)	4	13	29	2	1	2	1
Nesovitrea hammonis (Strom)	1	–	–	–	–	–	–
Aegopinella pura (Alder)	1	1	2	–	1	1	–
Aegopinella nitidula (Draparnaud)	6	5	4	–	–	1	4
Oxychilus cellarius (Muller)	8	8	18	1	2	4	3
Zonitidae	–	–	2	1	–	–	–
Limacidae	–	–	–	1	–	–	–
Ceciliodes acicula (Muller)	35	88	26+	26	60	83	28
Cochlodina laminata (Montagu)	–	1	–	–	–	–	–
Clausilia bidentata (Strom)	1	–	–	–	1	–	–
Candidula intersecta (Poiret)	–	–	–	1	1	–	–
Candidula gigaxii (L. Pfeiffer)	–	1	–	–	–	–	–
Helicella itala (Linnaeus)	13	3	2	4	5	1	2
Trichia striolata (C. Pfeiffer)	13	4	–	3	–	1	1
Trichia hispida (Linnaeus)	20	7	5	2	13	3	8
Cepaea spp.	–	–	–	1	–	–	–
Helicidae	–	2	–	1	6	–	–
Planorbidae	1	–	–	–	–	–	–

TABLE 6: Ditch F5 – section 73

cm...	114–135	100–104	90–100	72–80	55–62	35–45	20–25	0–10
sample	175	173	172	170	168	166	164	162
context	topsoil	565	570	579	580	580	581	581
Carychium tridentatum (Risso)	–	–	–	1	–	1	–	2
Cochlicopa lubrica (Muller)	–	1+	–	–	–	–	–	–
Cochlicopa spp.	–	–	–	1	5	2	–	1
Vertigo pygmaea (Draparnaud)	–	–	–	–	–	–	1	–
Pupilla muscorum (Linnaeus)	–	–	–	–	+	6+	1+	+
Vallonia costata (Muller)	1	1	–	–	5	9	1	–
Vallonia pulchella (Muller)	1	–	–	–	–	3	1	2
Vallonia excentrica Sterki	–	–	–	–	2	4	8	2
Vallonia spp.	–	–	–	–	6	6	3	5
Acanthinula aculeata (Muller)	–	–	–	–	–	1	–	–
Punctum pygmaeum (Draparnaud)	–	–	–	–	–	–	2	1
Discus rotundatus (Muller)	–	–	–	1	8	4	–	–
Vitrina spp.	–	–	–	–	–	2	–	–
Vitrea crystallina (Muller)	–	–	–	–	2	–	–	–
Vitrea contracta (Westerlund)	–	1	2	1	2	1	1	1
Aegopinella nitidula (Draparnaud)	–	–	–	–	2	–	–	–
Oxychilus cellarius (Muller)	–	–	–	–	2	8	2	–
Zonitidae	–	–	–	–	–	3	–	–
Ceciliodes acicula (Muller)	1	149	49	9	15	1	–	2
Cochlodina laminata (Montagu)	–	–	–	–	–	–	–	1
Helicella itala (Linnaeus)	–	–	1	–	14	2	3	–
Trichia hispida (Linnaeus)	–	–	12	1	8	36	1	–
Cepaea hortensis (Muller)	–	–	–	–	–	1	–	–

TABLE 7: Ditch F584 - section 43 columns I and II

	col I					col II			
cm...	82-90	60-70	40-50	20-32	0-10	58-66	38-48	20-30	0-10
sample	153	151	149	147	145	161	159	157	155
context	579	580	580	580	581	579	579	580	580
Carychium tridentatum (Risso)	-	1	-	-	-	-	1	1	-
Cochlicopa lubrica (Muller)	+	4	1	-	-	-	3	-	-
Cochlicopa lubricella (Porro)	-	1	-	1	-	-	2	-	-
Cochlicopa spp.	5	2	-	-	1	-	4	-	-
Vertigo pygmaea (Draparnaud)	1	2	4	1	-	-	-	-	-
Pupilla muscorum (Linnaeus)	1	8	2	3	-	1	1	1	+
Vallonia costata (Muller)	16	20	17	2	1	-	8	11	2
Vallonia pulchella (Muller)	7	-	8	1	-	-	3	-	1
Vallonia excentrica Sterki	3	1	-	4	1	-	-	3	-
Vallonia spp.	19	3	21	5	-	-	4	7	2
Acanthinula aculeata (Muller)	-	-	-	-	-	-	-	-	1
Ena obscura (Muller)	2+	-	-	-	-	-	-	-	-
Punctum pygmaeum (Draparnaud)	-	2	3	-	-	-	-	-	-
Discus rotundatus (Muller)	9	8	1	-	-	1	6	2	-
Vitrina spp.	-	2	1	-	1	-	1	-	-
Vitrea contracta (Westerlund)	1	-	3	5	2	-	2	-	2
Aegopinella pura (Alder)	-	-	-	-	-	-	1	-	-
Aegopinella nitidula (Draparnaud)	1	1	4	2	-	-	-	-	-
Oxychilus cellarius (Muller)	2	7	2	4	1+	-	5	-	4
Limacidae	-	-	-	-	1	-	-	-	-
Ceciliodes acicula (Muller)	3	9+	14	3	-	2	64	6	23
Helicella itala (Linnaeus)	4	3	2	-	-	-	3	2	-
Helicella spp.	-	-	2	-	-	-	-	-	-
Trichia striolata (C. Pfeiffer)	1	-	6	-	-	-	5	-	-
Trichia hispida (Linnaeus)	29	24+	7	-	-	3	11	3	1
Trichia spp.	5	-	-	1	-	-	-	-	-
Cepaea spp.	1	-	-	-	-	-	-	-	-

TABLE 8: Ditch Segment F264 - section 54 column I

cm...	105-110	100-105	90-95	86-90	76-81	66-71	56-61	46-51	36-41	24-30	20-24	10-15	0-5
sample	69	68	66	65	63	61	59	57	55	53	52	50	48
context	719 (266)	726	726	726/733	733	733	733/758?	758	758	912	767	767	767
Carychium tridentatum (Risso)	-	-	-	2	-	-	1	-	1	-	1	-	-
Cochlicopa lubrica (Muller)	-	-	-	-	-	-	3	-	-	-	-	-	-
Cochlicopa spp.	-	-	-	-	-	-	-	-	-	-	1	-	-
Vertigo pygmaea (Draparnaud)	-	-	-	-	-	1	1	2	1	-	-	1	-
Vertigo spp.	-	-	-	-	-	-	3	-	-	-	-	-	-
Pupilla muscorum (Linnaeus)	1	3	1	2	1	2	20	9	2	-	-	1	-
Vallonia costata (Muller)	-	1	1	5	-	3	35	14	10	-	-	-	-
Vallonia pulchella (Muller)	-	1	-	1	-	-	11	-	-	-	-	-	-
Vallonia excentrica Sterki	2	-	2	-	2	-	17	5	-	-	-	2	-
Vallonia spp.	3	3	2	3	1	6	47	11	-	-	2	-	1
Acanthinula aculeata (Muller)	-	-	-	-	-	-	-	-	-	-	-	1	-
Ena obscura (Muller)	-	-	-	-	-	-	3	-	1	-	-	-	-
Punctum pygmaeum (Draparnaud)	2	1	-	-	-	-	2	1	1	-	-	-	-
Discus rotundatus (Muller)	-	1	1	-	-	-	-	-	-	-	1	1	-
Vitrina spp.	-	-	-	1	1	-	-	-	-	-	-	-	1
Vitrea contracta (Westerlund)	1	-	-	-	-	-	-	1	-	-	-	-	-
Nesovitrea hammonis (Strom)	-	-	-	-	-	-	-	-	-	-	-	1	-
Aegopinella nitidula (Draparnaud)	1	-	-	-	-	1	-	-	-	-	-	-	-
Oxychilus cellarius (Muller)	-	-	-	-	2	1	-	1	1	-	-	6	-
Limacidae	-	5	1	-	-	-	-	-	-	-	-	-	-
Helicella itala (Linnaeus)	2	1	-	1	-	1	3	2	3	-	1	-	1
Trichia striolata (C. Pfeiffer)	1	4	-	-	-	-	3	-	-	-	-	-	-
Trichia hispida (Linnaeus)	1	-	6	8	-	-	12	2	1	2	1	-	-

TABLE 9a : Ditch Segment F264 (F756; context 718) Section 54 column III

	col III				
cm...	65-75	55-65	40-50	20-30	0-10
sample	109/10	107/8	104/5	100/1	96/7
context	718	755	755	755	755
Carychium tridentatum (Risso)	1	-	-	1	-
Cochlicopa lubrica (Muller)	-	-	-	1	5
Cochlicopa lubricella (Porro)	-	-	4	-	3
Cochlicopa spp.	1	2	3	3	-
Vertigo pygmaea (Draparnaud)	-	2	4	3	-
Vertigo geyeri Lindholm	-	-	-	-	2
Vertigo spp.	-	-	-	1	-
Pupilla muscorum (Linnaeus)	1	3	4	2	3
Leiostyla anglica (Wood)	-	-	-	-	-
Vallonia costata (Muller)	1	-	2	6	2
Vallonia pulchella (Muller)	3	4	1	1	1
Vallonia excentrica Sterki	-	-	1	1	5
Vallonia spp.	-	-	8	10	9
Ena montana (Draparnaud)	-	-	-	-	-
Ena obscura (Muller)	-	-	-	-	-
Punctum pygmaeum (Draparnaud)	-	-	-	-	-
Discus rotundatus (Muller)	2	-	3	7	3
Vitrina spp.	-	-	-	1	2
Vitrea contracta (Westerlund)	-	2	4	3	1
Nesovitrea hammonis (Strom)	-	-	-	-	2
Aegopinella pura (Alder)	-	-	1	-	-
Aegopinella nitidula (Draparnaud)	-	-	-	1	2
Oxychilus cellarius (Muller)	-	-	1	1	1
Euconulus fulvus (Muller)	-	-	-	-	1
Cochlodina laminata (Montagu)	-	2	-	-	-
Clausilia bidentata (Strom)	-	-	-	-	-
Helicella itala (Linnaeus)	-	-	6	1	-
Trichia striolata (C. Pfeiffer)	2	5	3	-	3
Trichia hispida (Linnaeus)	1	4	14	10	39
Cepaea spp.	-	-	1	-	3
Lymnea truncatulata (Muller)	-	-	-	1	-

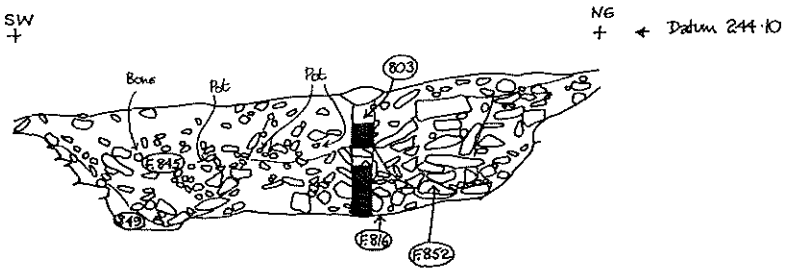
TABLE 9b : Ditch Segment F264 Section 54 column IV

	col IV								
cm...	126-141	116-126	96-10	85-96	70-80	60-70	40-50	20-30	0-10
sample	136/8	134/5	130/1	128/9	125/6	123/4	119/20	115/6	111/2
context	787	726	726	733	733	758	758	767	767
Carychium tridentatum (Risso)	-	-	-	-	-	-	-	-	-
Cochlicopa lubrica (Muller)	1	-	-	-	2	1+	-	1	1
Cochlicopa lubricella (Porro)	-	-	-	-	-	-	-	-	1+
Cochlicopa spp.	-	+	-	1	-	-	-	-	-
Vertigo pygmaea (Draparnaud)	2	-	-	-	4	-	-	-	1
Vertigo geyeri Lindholm	-	-	-	-	-	-	-	-	-
Vertigo spp.	-	-	-	-	-	2	-	-	-
Pupilla muscorum (Linnaeus)	1	-	5	1	8	10	-	1	5
Leiostyla anglica (Wood)	1	-	-	-	-	-	-	-	-
Vallonia costata (Muller)	11	1	6	2	11	42	-	-	6
Vallonia pulchella (Muller)	1	-	-	-	4	7	-	2	2
Vallonia excentrica Sterki	-	-	1	5	5	5	-	-	1
Vallonia spp.	3	1	6	6	19	28	-	3	3
Ena montana (Draparnaud)	-	-	-	-	-	1	-	-	-
Ena obscura (Muller)	-	-	1	-	-	-	-	-	-
Punctum pygmaeum (Draparnaud)	1	-	-	-	1	3	-	-	1
Discus rotundatus (Muller)	-	1	-	2	-	-	-	-	2
Vitrina spp.	-	-	-	-	-	2	-	-	-
Vitrea contracta (Westerlund)	2	1	-	-	1	5	-	1	-
Nesovitrea hammonis (Strom)	-	-	-	-	1	4	-	-	-
Aegopinella pura (Alder)	-	-	-	-	-	-	-	-	-
Aegopinella nitidula (Draparnaud)	-	-	-	-	-	-	-	2	-
Oxychilus cellarius (Muller)	7	1	-	-	1	4	-	3	1
Euconulus fulvus (Muller)	-	-	-	-	-	-	-	-	-
Cochlodina laminata (Montagu)	1	-	-	-	-	-	-	-	-
Clausilia bidentata (Strom)	1	1	-	1	-	1+	-	1	1
Helicella itala (Linnaeus)	6	-	2	3	3	4	1	7	-
Trichia striolata (C. Pfeiffer)	-	-	-	-	-	-	-	-	-
Trichia hispida (Linnaeus)	10+	8	-	-	6	15	-	1	-
Cepaea spp.	-	-	-	-	-	-	-	-	-
Lymnea truncatulata (Muller)	-	-	-	-	-	-	-	-	-

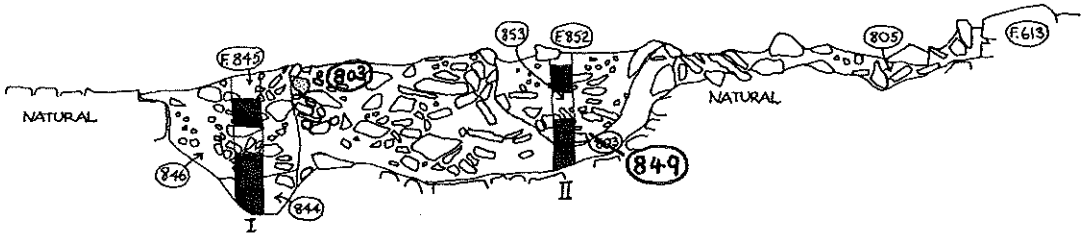
TABLE 10: Late Roman and Post-Roman Soils - section 106

cm...	47-52	40-47	34-40	23-28	12-18	0-6
sample	233	232	231	229	227	225
context	Topsoil	Topsoil	600	602	1011	686
Carychium tridentatum (Risso)	-	-	-	-	4	3
Cochlicopa lubrica (Muller)	-	-	-	-	-	1
Cochlicopa spp.	-	-	-	-	3	-
Vertigo pygmaea (Draparnaud)	-	-	1	-	-	-
Vertigo spp.	-	-	-	1	-	-
Pupilla muscorum (Linnaeus)	-	-	-	-	1	2
Vallonia costata (Muller)	-	-	5	5	-	-
Vallonia pulchella (Muller)	-	-	1	1	-	4
Vallonia excentrica Sterki	-	-	3	3	1	-
Vallonia spp.	4	1	6	3	1	-
Discus rotundatus (Muller)	-	-	1	-	1	1
Vitrea crystallina (Muller)	-	-	-	1	1	2
Vitrea contracta (Westerlund)	-	-	-	1	2	1
Nesovitrea hammonis (Strom)	-	-	-	1	2	-
Aegopinella nitidula (Draparnaud)	-	-	-	+	1	2
Oxychilus cellarius (Muller)	-	-	1	-	-	-
Zonitidae	-	-	-	4	4	2
Limacidae	-	-	1	-	1	-
Ceciliodes acicula (Muller)	-	-	14	14	20	72
Clausilia bidentata (Strom)	-	-	-	1	2	1
Candidula intersecta (Poiret)	1	1	-	-	-	-
Candidula gigaxii (L. Pfeiffer)	1	1	-	-	-	-
Helicella itala (Linnaeus)	3	5	7+	2	1	3
Trichia striolata (C. Pfeiffer)	-	-	1	8	19	4
Trichia hispida (Linnaeus)	2	2	2	-	1	1
Cepaea spp.	-	-	-	1	2	-

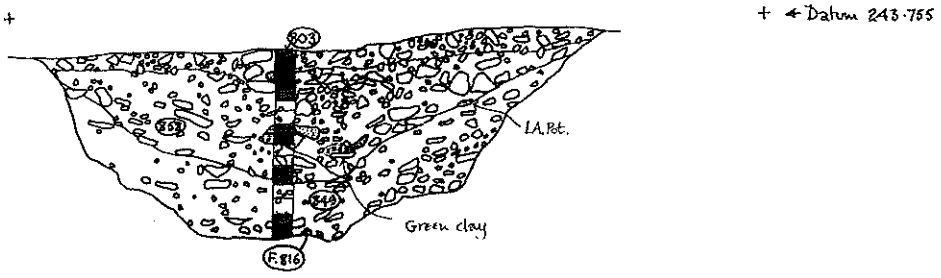
SECTION 99 Scale 1:20 SOIL SAMPLES 219 - 224



TRENCH 4 SECTION 13 EXTENSION SOIL SAMPLES 192-197 (COLUMN I) 198-202 (COLUMN II)



SECTION 96 SOIL SAMPLES 203 - 218



TRENCH 6 SECTION 40 SOIL SAMPLES 235 - 242 (COLUMN I) 243 - 253 (COLUMN II)

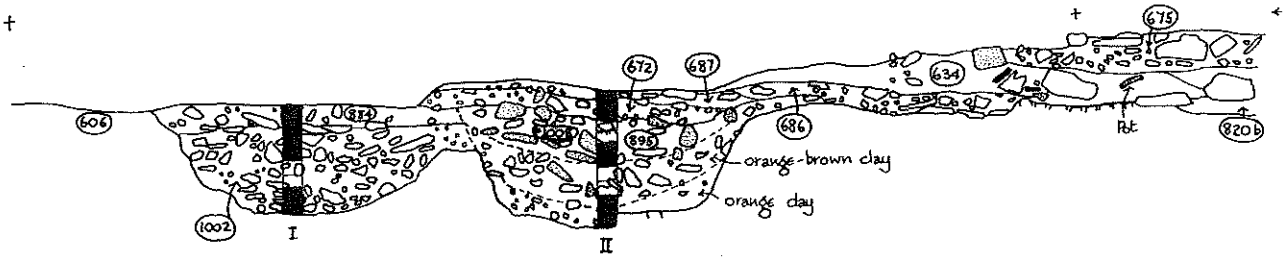
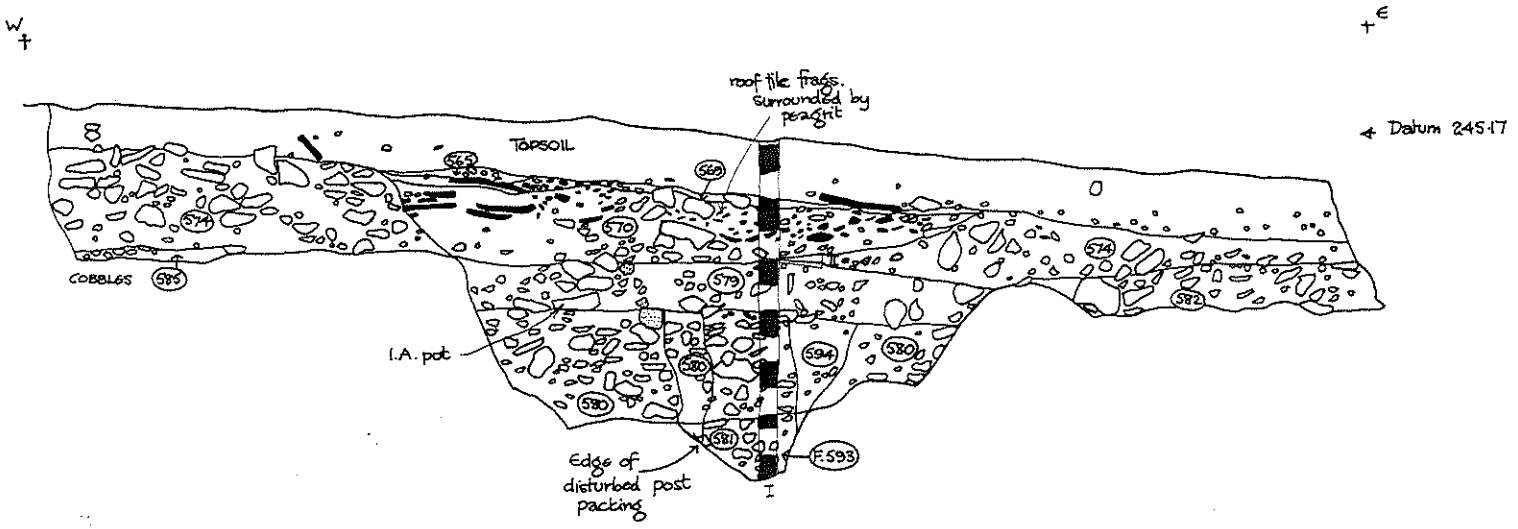


FIGURE 1

SECTION 73 SCALE 1:20 SOIL SAMPLES 62-176 (COLUMN I) 177 (COLUMN II)



SECTION 43 SOIL SAMPLES 148-154 (COLUMN I) 155-161 (COLUMN II)

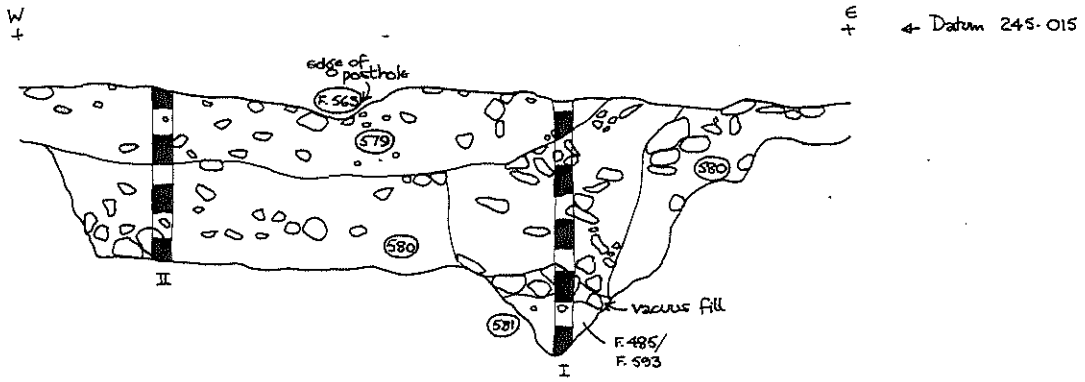
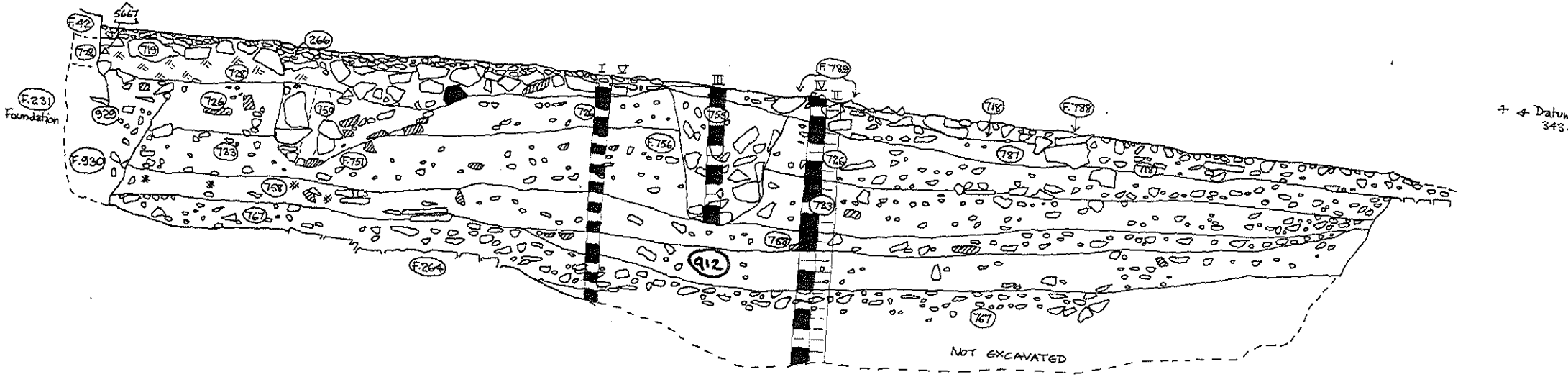


FIGURE 2

SECTION 54

Scale 1:20

SOIL SAMPLES 48-70 (COLUMN I) 70-95 (COLUMN II) 96 - 110 (COLUMN III)
111 - 138 (COLUMN IV) 139 (COLUMN V)



SECTION 106 : EAST SIDE OF EXCAVATION TRENCH Scale 1:20

SOIL SAMPLES 225 - 233 (COLUMN I) 234 (COLUMN II)

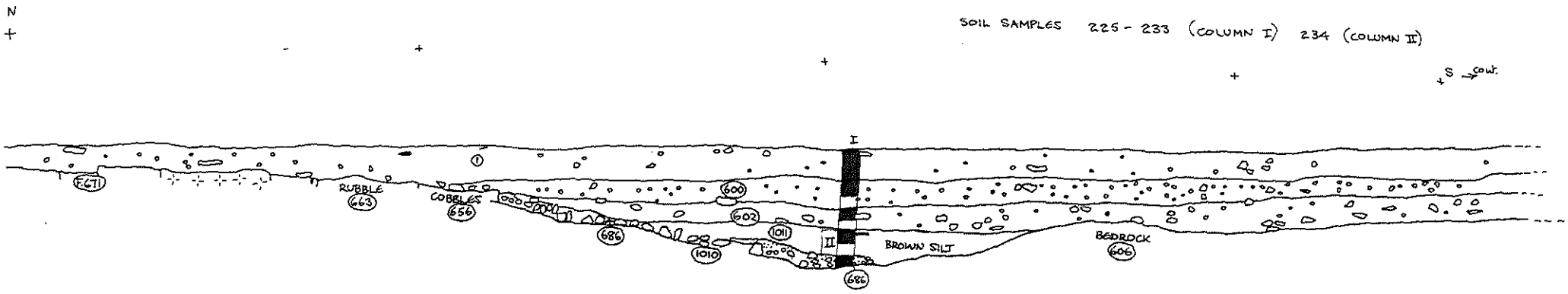
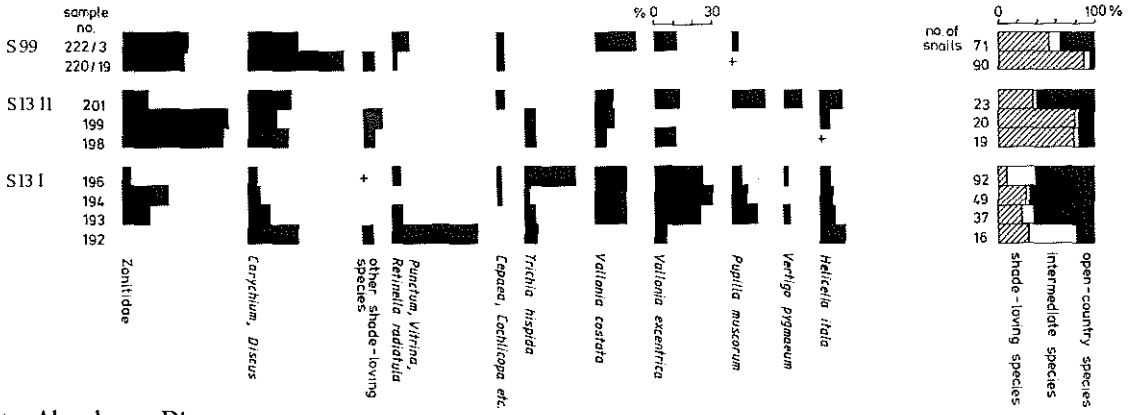


FIGURE 3

Relative Abundance Diagrams

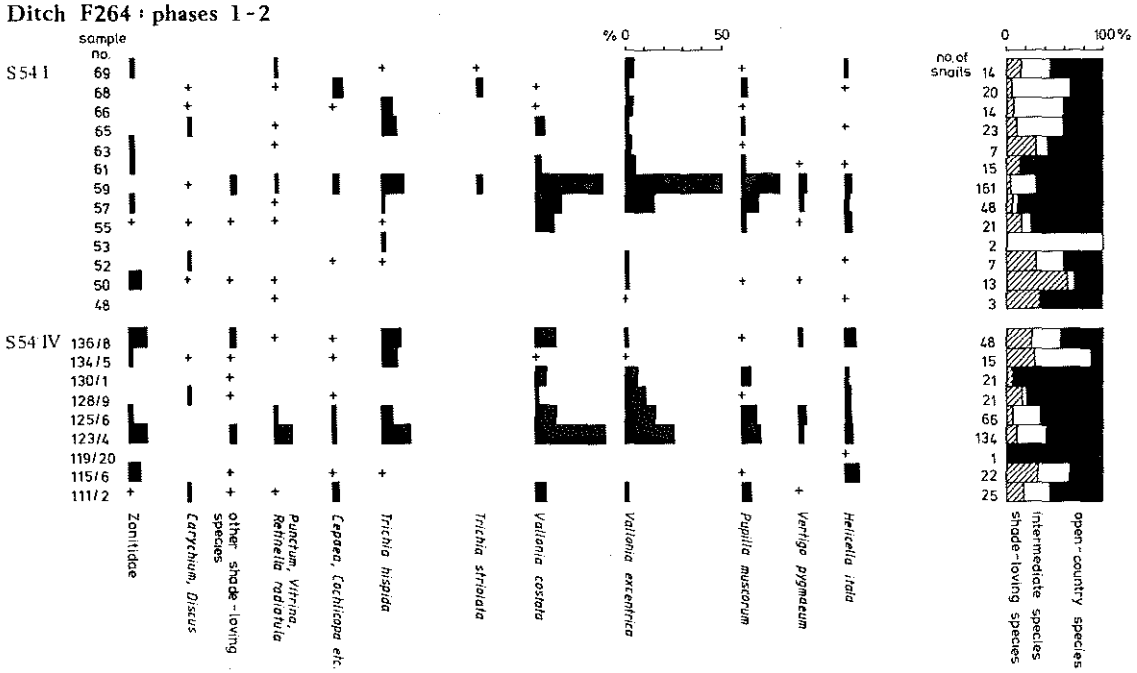
Ditch F816 : phases 2-3



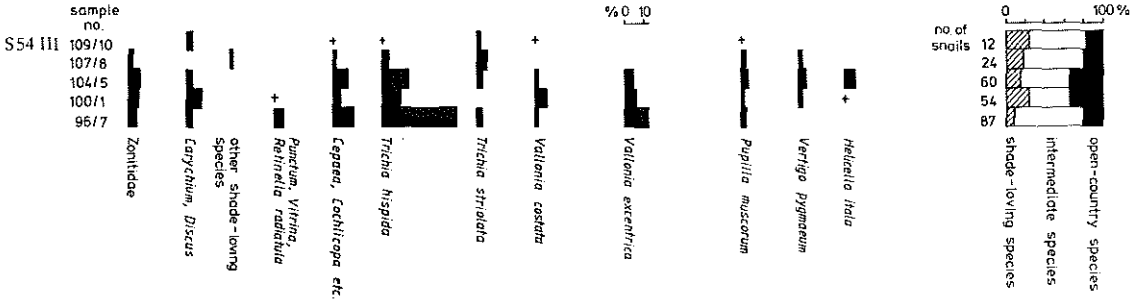
Absolute Abundance Diagrams

+ = 1% or less

Ditch F264 : phases 1-2



Ditch F264 : phases 3-4



Structure XIX bank and ploughsoil : phases 5-8

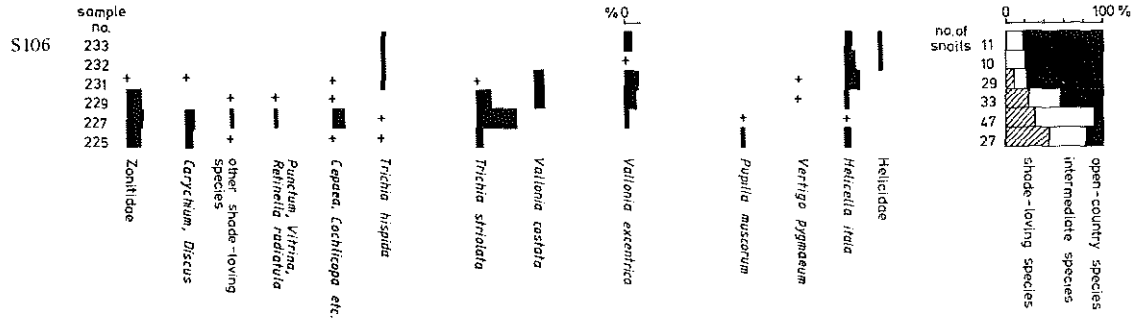
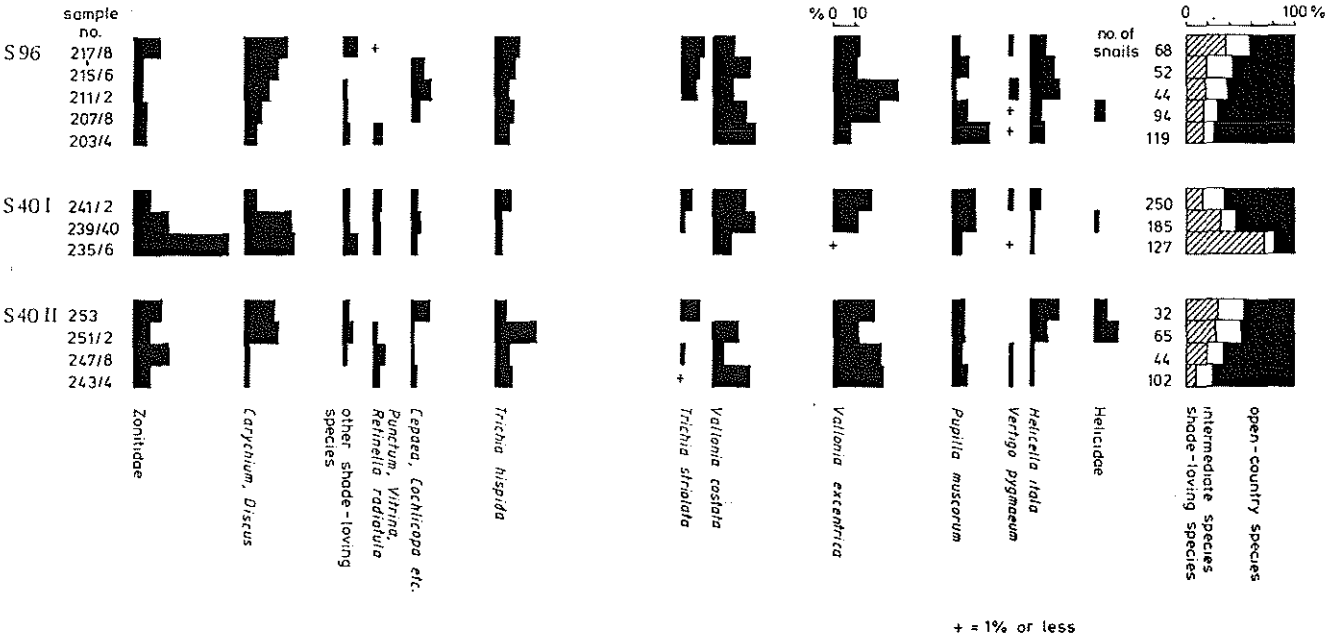


FIGURE 4

Relative Abundance Diagrams

Ditch F816



Ditch F584

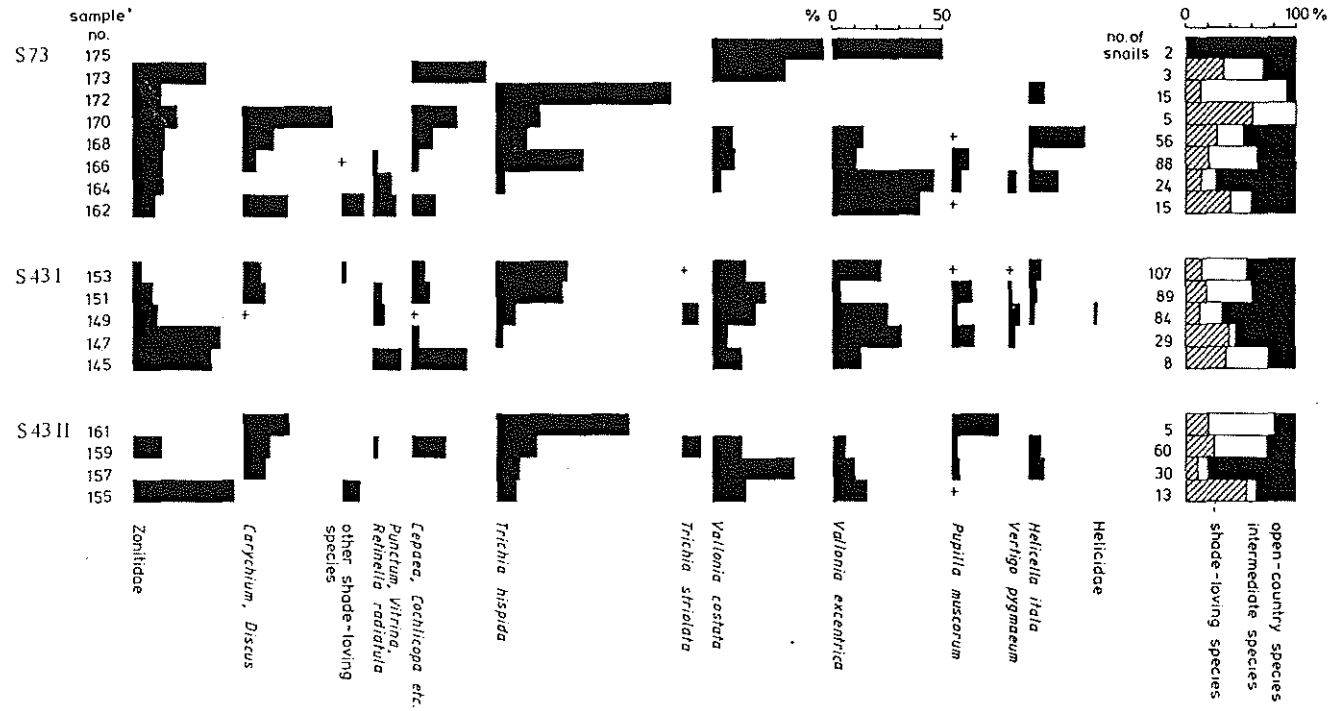


FIGURE 5