Molluscs from the 1979 excavation at Catsgore, Somerset, and a preliminary examination of a sediment sample from the Roman well.

By

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During 1979 Peter Ellis of C.R.A.A.G.S. excavated part of the largely Romano-British rural settlement at Catsgore. Numerous soil samples were collected by the excavator but analytical work has been concentrated on those from three contexts: (i) Colluvial sediments overlying a Roman road, (ii) a Bronze Age pit, (iii) Romano-British well.

(i) Colluvial sediments overlying Roman road

The purpose of taking these samples was to obtain data regarding the post-Roman environment and specifically to test the hypothesis that the line of the road may have been perpetuated since the Roman period as a hedge line which borders the site. At the point where it was sampled 60 cm. of colluvium overlay the road. Throughout its depth the deposit contained numerous limestone pieces but there was a particular concentration between 20 and 40 cm. Samples for mollusc analysis were taken at 10 cm. intervals and the results are presented in Figure I and Table 1.

The number of apices recorded in each sample was never more than 172 and this, together with the species composition, hints at an environment which was not all that favourable for molluscan life. In fact five species predominate in every sample, Trichia hispida, Vallonia costata, Vallonia excentrica, Helicella itala and the Limacidae and there is no suggestion of any clear ecological change during the period when the sediments were accumulating. This rather restricted range of predominant species is typical of colluvial assemblages from lynchets and dry valley fills which almost certainly derive from arable land (Bell 1981). Two other open country species, Vertigo pygmaea

and Pupilla muscorum, are present in small numbers but there is no hint of peaks such as one might expect if arable conditions had been interrupted by episodes of grassland.

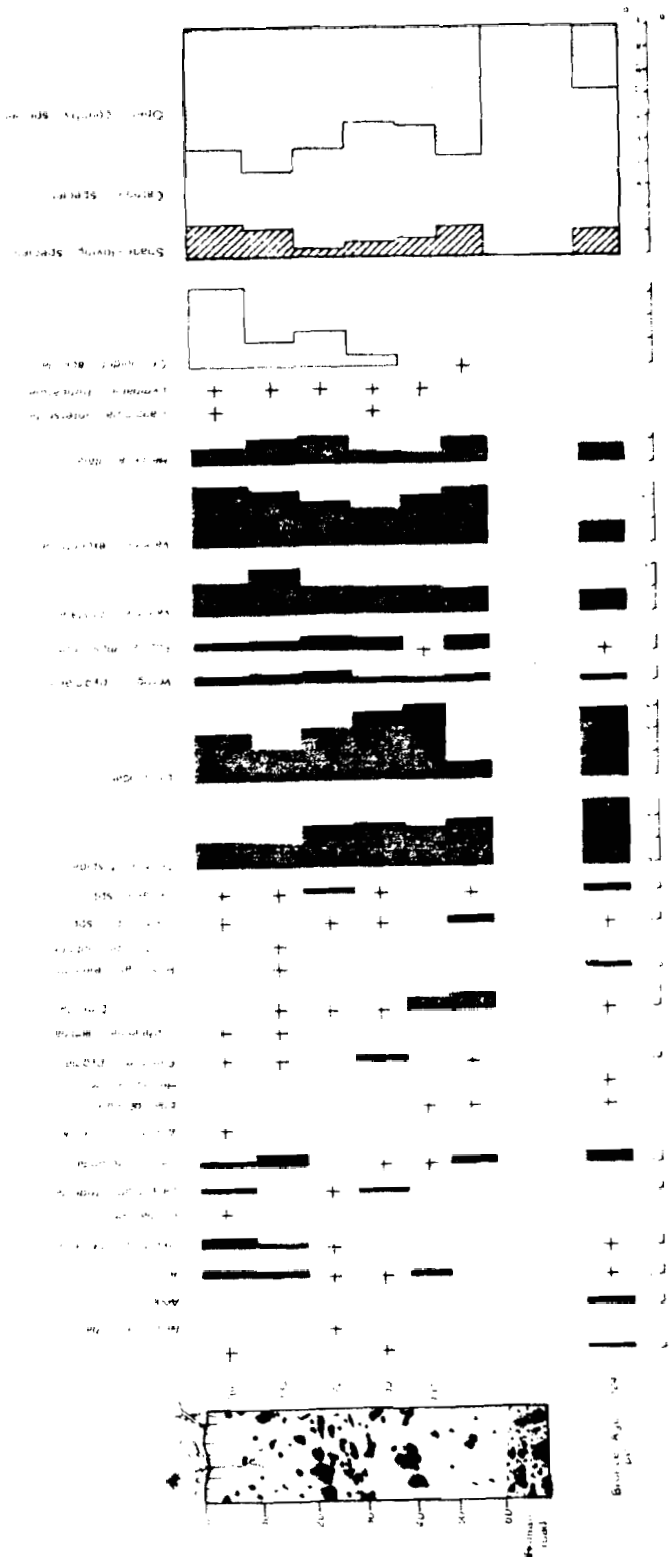
Considering the predominantly open country character of the assemblage there is a surprising range of species which are normally associated with shady conditions (all those to the left of Pomatias elegans in Fig.I). Each of these species is, however, present in very low numbers and their occurrence is remarkably patchy. Such a pattern might result from the occasional spread of species from a hedge line a little distance away but there is no evidence of shady conditions, or a hedge line, in the immediate vicinity of the sampling column. All the evidence suggests that soon after the road went out of use it became gradually covered by colluvial soil from arable land upslope and that as a result cultivation extended over the line of the road.

This picture is broadly comparable to the results of earlier mollusc analyses at Catsgore by Evans and Jones (1973) who examined three samples of late and post Roman date from the previous excavations of Dr.Roger Leech. They report largely open country assemblages, quite different from the rock-rubble faunas which they found on many other limestone sites. The present work has confirmed this in showing that even in sediments containing limestone rubble, evidence of general environmental conditions can be obtained provided the sediments are matrix supported as opposed to skeleton supported sediments which may contain voids with their own troglophile mollusc fauna.

An unusual feature of the mollusc assemblage is the occurrence of individual examples of Lymnaea truncatula in all samples between the present surface and 50 cm. This species is amphibious and can live out of water in temporary ponds and ditches. We can suggest that some such feature existed at no great distance,more or less throughout the time when the colluvium was accumulating.

(ii) Bronze Age feature

A single sample was examined from feature 1041 and produced an assemblage very similar to that from the post Roman sediments. Feature fills are by no means ideal for mollusc analysis but this does hint that the Bronze Age landscape may have been open and not dissimilar to that of the post Roman period.



Catsgore

	0-10	10-20	20-30	30-40	40-50	50-60		1041	Well
gms. of soil	2871	2822	3974	3800	3187	2946		1018	800
Aegopinella elegans (Müller)		1						2	
Carychium tridentatum (Risso)	3		1	2					
Oxyloma pfeifferi (Rossmässler)									1
Cochlicopa lubricella (Porro)		1							
Cochlicopa spp.	2		1	2		2		+	
Vertigo pygmaea (Draparnaud)	4	5	8	3	3	2		2	
Pupilla muscorum (Linnaeus)	5	4	9	7	1	4		1	3
Vallonia costata (Müller)	22	27	21	17	16	8		11	
Vallonia excentrica sterki	42	32	34	24	29	18		11	
Acanthinula aculeata (Müller)	1								
Ena obscura (Müller)					1	1		1	
Punctum pygmaeum (Draparnaud)	1	1		3		1			1
Discus rotundatus (Müller)	3	7		+	1	2		6	1
Vitrina pellucida (Müller)		1							1
Vitrea contracta (Westerlund)	1			1				2	
Nesovitrea hammonis (Ström)			1						
Aegopinella pura (Alder)								3	
Aegopinella nitidula (Draparnaud)	5	4	2	1	3			1	3
Oxychilus cellarius (Müller)	7	2	1					1	
Limacidae	32	17	38	41	42	5		37	4
Cecilioides acicula (Müller)	(11)	(16)	(31)	(7)		(1)			
Cochlodina laminata (Montagu)	1	+							
Clausilia bidentata (Ström)		1	1	1	6	5		+	
Candidula intersecta (Poiret)	1			1					
Helicella itala (Linnaeus)	11	15	20	7	6	8		9	
Trichia hispida (Linnaeus)	17	13	31	26	22	14		34	1
Helicigona lapicida (Linnaeus)								+	
Cepaea spp	1	1	3	2		1		3	+
Lymnaea truncatula (Müller)	1	1	1	1	1				
Mytilus edulis (Linnaeus)									+
Ostrea edulis (Linnaeus)									+
Total (minus C. acicula) =	160	133	172	139	131	71		124	15

(iii) Romano-British well

Excavation of the well ceased at 4.6m where the deposits were waterlogged but the bottom had not yet been reached. A preliminary examination of the lowest sample from between 4.4 and 4.6m was carried out with the object of establishing what biological evidence was present. The well fill at this level was clearly not a dumped deposit but consisted of fine to medium sand in an easily dissaggregated silty deposit. These characteristics, together with the wealth of biological evidence which it contained, suggest that it accumulated over a lengthy period in water at the bottom of the well. It is also possible that this includes a component of material washed in from the walls of the well or from some neighbouring source since the sediment has a close superficial similarity to sandy rainwash observed on tracks and paths.

800 grams of the sediment were placed in water and the flot was decanted onto a 300 µm sieve. The remaining material was then washed on a nest of sieves, the smallest of which was 300 µm. Material retained on the sieves was then sorted wet under the binocular microscope; it was found to be exceptionally rich in biological evidence and this was sorted into categories for submission to specialists. A large number of seeds have been submitted to Miss Pam Paradine for identification. Beetles were also abundant and as an additional check for these the already sorted sediment was used for paraffin flotation according to the procedure described by Kenward et al. (1980). These beetles have been submitted to Dr. Maureen Girling for identification. Small quantities of fish bone, fish scales, small mammal and amphibian bone and fragments of mammal bones were also recovered and are being examined by Dr. Bob Everton as part of his animal bone report. There were nine species of land mollusc present but each was represented by just a few apices and the numbers are insufficient for interpretation. Also present was the marshland species Oxyloma pfeifferi and fragments of the marine species Mytilus edulis (mussel) and Ostrea edulis (oyster). The remainder of the biological evidence consisted of small fragments of wood and moss. A much fuller picture of the sites environment and economy at the time of the wells use should emerge when specialist reports are available on the various categories of biological evidence.

(iv) Plant macrofossils from the well

Miss Pam Paradine has identified 275 plant macrofossils from the well sample and these represent 37 species (Table II). All have been preserved by waterlogging except for the carbonized seeds of Medicago arabica and two carbonized rachis segments of Triticum spelta. A notable feature of the assemblage is that the latter is the only major crop domesticate present; previously it has been reported, in much larger quantities, among samples from earlier excavations at Catsgore (Hillman 1982). The remainder of the species are wild plants which, judging by the nature of the sediments (discussed above) and the species in question, are most unlikely to represent dumped material and much more likely to have been brought to the well by faunal agencies or been washed or blown into the water over a longish period. If this interpretation is correct then they will largely reflect vegetation in the surrounding area. The vast majority of the species are ruderals generally associated with waste ground and cultivated areas, e.g. Chenopodium album; Convolvulus arvensis; Sonchus asper; Stellaria media; Arctium lappa; Capsella bursa-pastoris; Cironopus squamatus; Lamiaceae; Polygonum aviculare; Rumex crispus and Taraxacum officinale. Urticaceae (nettles) in particular are likely to reflect nitrogen-rich conditions associated with the settlement. Certain of the species present are normally associated with grassy pastoral areas, e.g. Anagallis arvensis; Leontodon hispidus; Medicago arabica; Polygonum hydropiper; Ranunculus bulbosus and Stellaria graminea, although several of these may also be found on disturbed sites on hedgebanks and on damper sites. Some species certainly derive from wet or damp areas, e.g. Polygonum hydropiper, Scirpus sp. (if club or spike rush) and the fen species Cladium mariscus. Some of these may point to the existence of a nearby wet area, possibly a spring-fed pond which is also suggested by the presence of a few Mollusca of wet and marshy places. The Cladium, however, seems most likely to have been brought to the site by man, perhaps as a roofing material (Dimbleby 1967, p.45). Also presumably brought to the site, in this case from some distance, is Scirpus cespitosus which is generally met with on upland acid sites. There was also a little evidence of woody species, possibly a hedge, in the area: a number of wood fragments were found in the sample with nuts of Corylus (hazel), seeds of Sambucus nigra and Rubus. In general, however, the plant macrofossils suggest a largely disturbed agricultural landscape.

Acknowledgements

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Table II : Plant macrofossils from 4.4 to 4.6m in the Catsgore well, identified by Miss Pam Paradine.

Anagallis arvensis L.	Scarlet pimpernel	1 seed
Arctium lappa L.	Great burdock	1 achene
?Brassica nigra (L) Koch	Black mustard	Fragments of testa
Capsella bursa-pastoris (L) Medic.	Shepherd's purse	2 seeds
Chenopodium album L.egg.	Fat hen	3 seeds
Cirsium sp.	Thistle	2 achenes
Cladium mariscus (L) R.Br.	Great fen sedge	23 nuts
Convolvulus arvensis L.	Lesser bindweed	Half seed
Coronopus squamatus (Fork) Asch.	Swinewort	39 fruits
Corylus avellana L.	Hazel nut	Broken shells
Galeopsis sp.	Hempnettle	1 nutlet
Hyoscyamus niger L.	Henbane	19 seeds
Lamiaceae sp.	? Dead nettle	1 nutlet
Leontodon hispidus L.	Rough hawkbit	1 achene
Medicago arabica (L) Huds.	Spotted medick	3 seeds (carbonized)
Polygonum aviculare L.	Knotgrass	20 achenes
P. hydropiper L.	Water-pepper	10 achenes
P. lapathifolium L.	Pale persicaria	2 achenes
Potentilla sp.	Tormentil	6 achenes
Prunella vulgaris L.	Self-heal	2 nutlets
Ranunculus bulbosus L.	Bulbous buttercup	2 achenes
? R. ficaria L.	Celandine	2 achenes
Rubus sp.	Blackberry	5 seeds
Rumex crispus L.	Curled dock	2 achenes
R. sp.	Dock or sorrel	1 achene
Sambucus nigra L.	elderberry	10 seeds
Scirpus cespitosus L.	Deer grass	6 nuts
S. sp.	? Club or spike rush	3 nuts
Solanum nigrum L.	Black nightshade	1 seed
Sonchus asper (L) Hill.	Sow-thistle	3 achenes
Stellaria graminea L.	Lesser stitchwort	1 seed
S. media (L) Vill.	Chickweed	14 seeds
Taraxacum officinale Web.	Dandelion	1 achene
Triticum spelta L.	Spelt wheat	2 rachis segments (carbonized)

Table II Cont/.....

Urtica dioica L.	Stinging nettle	91 achenes
U.urens L.	Annual stinging nettle	60 achenes
Verbena officinalis L.	Vervain	2 fruits

Dis eminules not identified were too damaged to assess at a specific level.