

PALAEOENVIRONMENTAL STUDIES AT WELLS CATHEDRAL, 1980.

By

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During the 1980 season of excavations at The Camery, wells Cathedral directed by Dr. Warwick Rodwell, two contexts offered potential for palaeoenvironmental studies and were accordingly sampled by the writer. One was an old land surface, the other a Saxo-Norman well.

The Old Land Surface

Traces of this were observed at various points below the earliest building levels. The best exposure was a small area of section 144 below the floor of the earliest Saxon building. Here the old land surface was cut into on one side by a grave (Context 1421) and on the other side by the east wall of the Saxon chancel. The following is a description of the stratigraphy of the old land surface and incorporates observations made by Dr. Helen Keeley during a field visit. Munsell colours are described moist and the terminology follows Hodgson (1974):-

Above 0 cm.	Construction debris and floor material from buildings.
0-9 cm.	Reddish brown (5 YR 4/4) silty clay loam with a few small stones; some admixture of Carboniferous Limestone chips and mortar fragments; one piece of human long bone presumably relating to disturbance during construction of the building. Drying of the section has revealed traces of medium prismatic ped structure.
	Abrupt smooth boundary.

9-15 cm. Yellowish red (2 YR 4/6) clay loam with many small and medium Old Red Sandstone pieces. Abrupt wavy boundary.

15+ cm. Reddish brown (2.5 YR 4/4) clay loam with extremely abundant rounded, small, medium and large Old Red Sandstone pieces. Some signs of clay coats on ped faces.

The Old Red Sandstone gravel on which this soil developed is part of an alluvial fan which underlies much of Wells (Green and Welch 1965, p.118) and is known to contain a Pleistocene fauna (Balch 1937, Table opp. p.180). The soil with its shallow loamy surface horizons becoming much more stony with depth appears similar to soils of the Langford Series which are mapped by the Soil Survey as occurring on this alluvial fan today (Findlay 1964, p.82). Clearly the surface has been disturbed to some degree by construction of the buildings and it is also possible that it has been truncated to some extent.

In order to obtain data about the environment immediately preceeding the ecclesiastical complex a column of six samples was taken through the old land surface for mollusc analysis. The methods used were those outlined by Evans (1972) and the results are presented in the table where the nomenclature follows Waldén (1976). The number of molluscs was very small, even at the surface, and declined with depth. As the table indicates, the numbers of molluscs correlate with the percentages of calcareous particles showing that survival relates to a more calcareous régime encountered by the limestone and mortar introduced onto the site during the construction phase. That being so there is a good chance that the surviving assemblage relates to a brief period immediately prior to, and during, construction.

Despite this, extreme caution must be exercised in interpreting such a sparse assemblage. With the exception of Cecilioides acicula (a burrowing species of little ecological significance) the most important molluscs are Vallonia excentrica; Vallonia costata; Limacidae; and Trichia hispida. The last two are fairly catholic in their ecological preferences but the Vallonias are suggestive of an open environment as is the presence of Helicella itala and Vertigo pygmaea. The latter tends to shun disturbed conditions but Pupilla muscorum is absent and there is little sign that the fauna is one of old grassland.

Associated with these species are a group generally considered to be shade-loving in their ecological preferences:- the Zonitidae; Discus rotundatus; Carychium tridentatum; the Clausiliidae and Ena obscura. This could imply that there were trees, shrubs or hedges nearby but the presence of Ena obscura suggests another possibility. It is often found on walls and in rocky places (Hervey and Cameron 1979, p.100), and might conceivably have been imported to the site along with building materials. This only serves to highlight the possible hazards involved in interpreting such a small assemblage. On balance, however, we are probably dealing with an open environment which might well have been cultivated or disturbed in some way, if only by the process of construction.

#### The Saxo-Norman well

The fill of this feature comprised contexts 1381, 1355, 1351 and was overlain by the foundations of the Lady Chapel (context 1354). The feature was interpreted by the excavator as a well which was infilled, probably during the early twelfth century when existing buildings on the site were levelled prior to construction of the Lady Chapel. A series of six samples were taken at intervals in the fill to see whether it contained biological

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remains of economic or environmental significance. A preliminary examination was made of Sample 1 from the very bottom of the feature where it showed possible signs of having been waterlogged. The sample was reddish brown (5 YR 4/3 - moist) clay with rounded pieces of limestone and Old Red Sandstone with traces of mortar in places. A 300 gm. sub-sample was taken, broken up in water and the flot collected on a 0.21 mm. sieve. The remainder of the sample was washed through a nest of sieves of 6mm, 2mm, 0.5mm and 0.21mm. Material retained on the sieves has been stored in alcohol. Some preliminary sorting has been carried out in order to assess the potential of the material. Small fragments of wood/plant material were found as well as a good number of uncarbonised seeds preserved by waterlogging and also one or two carbonised seeds. Largest and most obvious among the seeds were 10 grape pips (Vitis vinifera). These are of particular interest because of the historical evidence for small scale Saxo-Norman viticulture in this part of central Somerset (Darby and Welldon Finn 1967, p.209). The seeds from this context are strongly recommended for further study by a specialist. It would seem reasonable to concentrate such study on the basal sample where preservation is clearly good and the evidence is most likely to relate to the primary function of the feature.

#### References

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	0-3cm	3-6cm	6-9cm	9-12cm	12-15cm	15-20cm
Weight of soil	784g	800g	800g	900g	971g	1000g
% calcareous particles larger than 6mm	97	60	11	1.3	0	2
% material larger than 6mm	8	6	10	23	29	37
<u>Pomatias elegans</u> (Müller)		+				
<u>Caryonium tridentatum</u> (Risso)	2	1	1			
<u>Cochlicopa</u> sp.		+		1		
<u>Vertigo pygmaea</u> (Draparnaud)		3	2	1		
<u>Vallonia costata</u> (Müller)	6	4	5	1	3	
<u>Vallonia excentrica</u> Sterki	10	11		3		
<u>Ena obscura</u> (Müller)	2		1		1	
<u>Discus rotundatus</u> (Müller)	4	1	+	+	+	+
<u>Vitrea contracta</u> (Westerlund)					1	
<u>Nesovitrea hammonis</u> (Ström)	1		1		+	
<u>Aegopinella pura</u> (Alder)	1					
<u>Aegopinella nitidula</u> (Draparnaud)	1					
<u>Oxychilus cellarius</u> (Müller)		1				
Limacidae	8	8	7	3	4	1
<u>Ceciloides acicula</u> (Müller)	(14)	(13)	(9)	(3)	(+)	(3)
Clausiliidae	+		+			
<u>Helicella itala</u> (Linnaeus)	1					
<u>Trichia hispida</u> (Linnaeus)	4	+	2	3	2	+
<u>Cepaea</u> spp.	+	+	+			
<u>Helix aspersa</u> (Müller)	+	+	+		+	
Total (minus <u>C. acicula</u> )	48	29	20	12	11	1