

Towards an Understanding of the Environmental History of Merseyside

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The changes that have occurred in the landscape and environment of Merseyside since the last glaciation have provided a wide range of opportunities for, and constraints to, its successive generations of inhabitants. This paper describes a programme of research being undertaken within the Archaeological Survey of Merseyside to investigate those changes, and so attempt to understand where and how past communities may have lived.

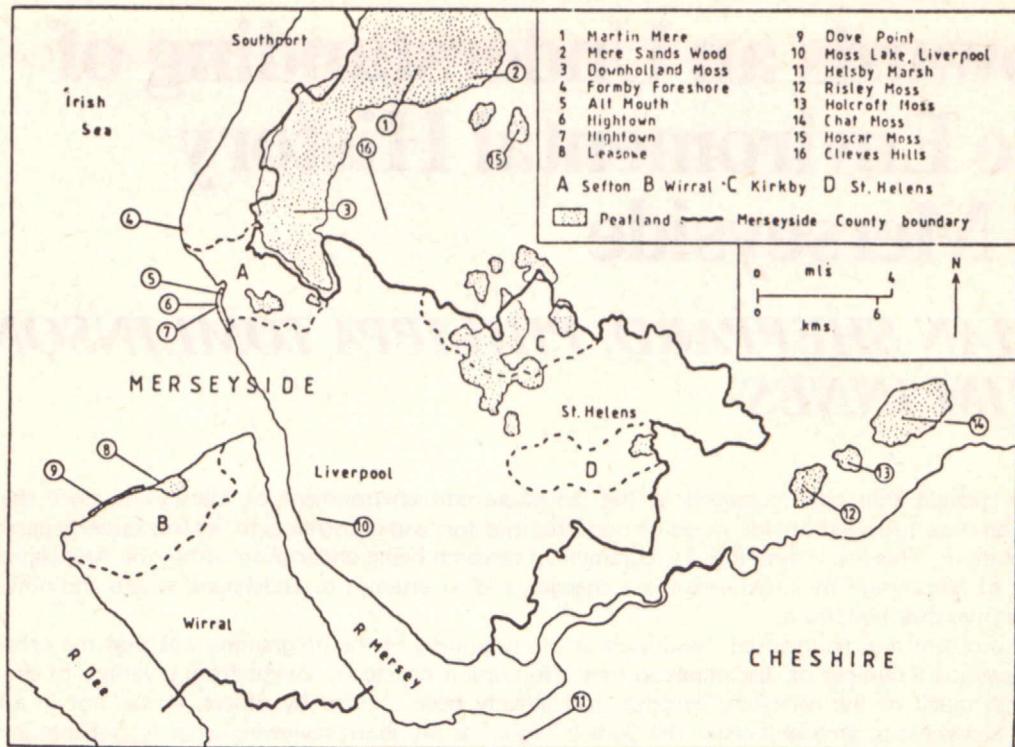
The problem that confronted the Survey at the beginning of the programme was that the proposed work spanned a number of disciplines so that information had to be sought from a variety of sources. Although much of the necessary evidence had already been studied by others, it was not in a form readily accessible to archaeologists. The Survey Team has set about reviewing what is available in both published and unpublished sources, and has contacted and consulted those who are, or have been, engaged in research into the subjects involved.

Much information has come from deductive archival research, especially of maps and plans from the local record offices, and this is of particular use for the later periods. From detailed work on a number of townships, selected from different topographical and geological regions in the county, evidence collected on agriculture, woodland management, and field and drainage systems, will indicate land use patterns in the different areas.

Merseyside had until recently many poorly drained areas of mossland and carr, which were of little use for arable agriculture but would have provided an abundant source of food for hunter gatherers and, in later times, as winter pasture for cattle. Reclamation of these wetlands was mostly done in an *ad hoc* manner, so there was little contemporary documentation to accompany it. The best documented reclamation is probably that of the wetlands of the river Alt, carried out under the terms of a George III Act of Parliament (1779). A comprehensive survey of the 'damaged lands' and proposals for their drainage has survived and provides a wealth of information on the previous landscape of that area (Lancs RO DB 1424/26). On Wirral, another drainage scheme with surviving records is that of Newton Carr, Grange. The only indication today of its earlier form is the road name Carr Lane in Hoylake, but an estate map of 1742 (Ches RO DDX 470/1) shows the undrained carr, and an enclosure map of 1823 (Ches RO QDE 1/26) shows the layout of fields on the reclaimed land. The carr had probably resulted from insufficient natural drainage to release the sea water that flooded it at high tides. Today's field pattern is almost identical to that shown on the enclosure map, and its hedges are mostly of a single species – an indicator that would be expected of hedges planted only 100 years ago. Field techniques such as hedgerow survey can help to complement the archival research, and it is useful to be able to relate the work to present day landscapes. The method of dating hedges by counting the number of species in a 30 metre length, which was developed in the south of England (Pollard *et al* 1974), has been used with success in south west Lancashire (Withersby and Coney, unpublished) and should therefore merit consideration.

Much useful information can be obtained from the drift geological maps, which show the areas of boulder clay, blown sand, alluvial and organic deposits. From these, and from contour and more detailed soil maps, the natural patterns of vegetation can be deduced. Also of value are early references to features of the landscape, which may provide useful insights into environmental changes in historical times. One of the earliest descriptions of the local soils (Holt 1795) indicates a knowledge of the buried surfaces around Formby: '... near the shore there is soil about two feet below the sand. There are the strongest reasons for believing this soil originally formed the ground surface and was gradually buried by sand from the neighbouring (sand) hills'. Such buried land surfaces may be a potential source of archaeological material.

The land beneath the modern surface is most effectively studied from boreholes, and many thousands sunk for construction engineering projects, are known to exist. They provide valuable stratigraphical information which can help with the interpretation of development of coastline, drainage patterns, and the extent of various organic deposits. A recent investigation at the site of an extension to the Head Post Office in Whitechapel, Liverpool provided an opportunity to find more evidence on the extent of the old 'Pool' of Liverpool. The boreholes contained no organic layers suitable for palaeobotanical analysis but



Map of Merseyside showing sites of previous work 1-16 and areas of proposed survey work A-D.
(Reproduced from *Amateur Geologist*, Vol. 8, pt. ii, 1979).

did, nevertheless, indicate that the site was probably just outside the edge of the Pool. The sheer abundance of evidence so contained will be impossible to study exhaustively during this programme, but it is hoped that by selective study a valuable contribution to a better understanding will be achieved.

Palaeobotanical evidence, especially from ancient pollens in peat, has been extensively studied both for dating the formations of peat and, in conjunction with other techniques, for deducing changes in sea level and coastline. These techniques have been used on the Lancashire/Merseyside coast (Tooley 1978) and on the north coast of Wirral (Kenna, in this journal). The contribution to the understanding of patterns of past vegetation communities is of particular interest, and varies with the type of deposit examined. Buried soils from archaeological sites may contain evidence of quite local vegetation whilst peat bogs can contain a more regional representation of vegetation change. The decline in numbers of certain species, and the appearance of others within the pollen record indicate changing methods of land use. Thus, by examining the proportions of pollens contained within the deposit, it is possible to identify both the long term natural changes and the activities of man, such as forest clearance for timber, animal husbandry, or crop cultivation. The extensive peat formations that have made up the 'mosslands' of Merseyside have, therefore, been a central part of this study. Locations for sampling peat for laboratory analysis (see map) have been restricted by the availability of peat formations that have not oxidised after land drainage and reclamation, and that have not already been analysed.

It is believed that this short programme will begin to provide an environmental context for archaeological research in the County, whilst also providing a foundation for future research in the fields of study from which evidence has been taken. The Survey Team would welcome contact and discussion with anyone having an interest in, or information on the environmental history of this region. Enquiries should be addressed to:

The Archaeological Survey of Merseyside,
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