An approach to the study of prehistory settlement in the Solway Plain, Cumbria

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"You possess in the Counties of Cumberland and Westmorland... a very great number of places of burial, many of which have been at various times ignorantly destroyed, but of which enough remains to enable a very just view of the burial rites and customs of those early people to be arrived at. They exist, scattered about, especially upon the unenclosed lands, in great abundance, and we may hope, in these days of scientific archaeology, that they will receive that careful and critical examination which alone justifies their disturbance."


1. **Introduction**

Before embarking on the specific issues of the study, there are two general points to be made.

(i) This essay is an exposition on the proposed scheme of a study of settlement patterns in the Solway Plain. Although work has already begun it is only at a preliminary administrative level, collecting and collating data. The reason for presenting such an embryonic statement is in response to Colin Haselgrove's article in the first issue of this journal ("Extracting archaeology from England's industrial landscapes: a view from the North-East"). So that a view from the North-West, though the study area is not an industrial landscape, despite Workington and Whitehaven, might be presented.

(ii) To highlight some aspects of the archaeology of the region in recent years.

Until recently there has been little systematic or comprehensive archaeology in Cumbria. The last five years has seen the creation of two archaeological units for the region: one in the city of Carlisle and the other, the Cumbria and Lancashire Archaeological Unit, based in Lancaster University. The former has been involved in countless excavations in the city and is a great

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1 The Solway Plain, Cumbria is defined as the lowland north of the Caldbeck and Keswick Fells stretching to the sea north and west, and bounded to the east by the river Eden.
boon for all archaeologists in the area. The latter, more recently created, has had to concentrate more on Lancashire: though the 1982 programme may include excavations (and survey?) in Cumbria. The paucity of manpower for archaeology in the north-west in general has led to a 'pioneering' approach to work in the area, with forays being made from the various universities (Manchester and Durham especially). This is not meant as criticism, for without the work of Professor G.D.B. Jones on the western extension of Hadrian's Wall (Jones 1976), much of my data base (aerial photographs) would not have been collected, or made available to me. However unfortunate, the fact is that the solitary figure of the County Archaeologist can hardly be expected to take on the mammoth task of policing (let alone analysing) the archaeology of one of the largest counties in England. The work of the 'pioneers' (going back to the Collingwoods), of the local Society and of amateurs has shown that Cumbria is potentially a very rich county archaeologically. The work which has been done has placed most emphasis on the Roman occupation and settlement. (Hadrian's Wall has had a larger impact on researchers than the Langdale Axe Factory and other prehistoric monuments). However, the freak summers of 1975 and 1976 produced a plethora of crop-mark sites, particularly in the well drained sandy soils of the Solway Plain. Fortunately Jones and Higham (1975) photographed these marks which now form a valuable archive. As my project has developed the Cambridge Aerial Photographic Committee's archive has also proved to be a valuable source of information. Within the project the photographs are being treated much as a historian would treat an ancient manuscript: biased and partial, but yet crucial.

2. The aim of the study

The object of the study is to examine the region as a whole, from the mesolithic period up to and including the Roman period, using all the techniques that are available. To examine the total context of the archaeological record: the physical and social environments of the settlements, burials, and ritual monuments. Until now the little that has been written about the area (Higham & Jones 1975 and Higham 1979) was based on too many assumptions and thus came to unsupportable conclusions, eg. the suggestions that most of the settlement pattern and field systems, as seen on the aerial photographs,

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2. The sandy soils are in fact ridges of sand that rise above the plain, up to 50 m O.D., and are thus both favourable for crop-marks and settlement.
were of a first millennium A.D. date. Until 1981 there had been few excavations in the area which had produced prehistoric remains, but the excavation of a round barrow this summer by Professor Jones encourages the view that a bronze age population was present in the plain. Therefore a seemingly Roman landscape may in fact be a much more complicated palimpsest of prehistoric and Roman features. This emphasises the point that it is misleading to rely solely on settlement material. It is not just settlements but all evidence of prehistoric behaviour that will be taken into consideration: single finds, burials, 'ritual' sites, "black holes" (see Groube, 1981), and of course the 'settlement' evidence. However, the biases of the archaeological record can in many ways be increased by aerial photography as, in this case, the sandy ridges are sensitive both to crop-marking (more so than clayey soils) and to settlement. Yet we do not know to what extent the other areas were populated. It is therefore essential that other discovery methods should be employed in conjunction with the aerial photographs.

3. The method

In an attempt to solve these biases the project has been divided into three interdependent stages. Stages 1 and 2 are concerned with data collection and collation, Stage 3 will involve the analysis and interpretation of the data.

Stage 1  The collection and collation of the "known" evidence

The "known" evidence is that contained in the literature (national and local journals), in the County Sites and Monuments Record and on the aerial photographs; and is therefore recoverable without further fieldwork. The literature provides evidence of excavation and work in the area. The County SMR supplies data on the locations of sites as well as the single findspots of bronze axes, etc. However, the only "comprehensive" published survey is 'Archaeology in the North' by Clack and Gosling (1976); and even this is only a compilation of some of the material from the literature. There is therefore an urgent need for a gazetteer of currently "known" evidence.

In addition the information from the aerial photographs will also provide a basis for the work in Stage 2, and will help to complete the compilation of distribution maps. The comprehensive nature of the collection and
collation is essential, and although time consuming will be of benefit to
the Unit in Lancaster and the County Archaeologist in Kendal. As mentioned
earlier the fact that this has not been done before is due to lack of man-
power, resources and organisation. The data base required must be
systematic, complete, and comprehensive (as far as is possible).

Stage 2  The Fieldwork and Survey

This Stage falls into two sections; (a) Regional survey  (b) Site specific
fieldwork. For (a) the systematic survey of the region, dealing with each
of the ecological zones with equal time and manpower, will be undertaken on
foot and by air. Transects along and across the various zones will be
walked and flown, under different conditions. The main zones are coast,
plain, (sandy ridge and lower lying mosses and peats), low lying foothills
(to the south of the plain) and the summit of higher peaks above these
foothills. Transects are the only feasible way of covering the region
systematically, each transect will be chosen by a random process. The
fieldwalking will concentrate on the ploughed fields (in the plain) whereas
the aerial survey will cover the whole transect in one run. This very time
consuming work will be undertaken with the help of local volunteers (who
have already offered their services). The information gained from this
survey will add to the background evidence for the region, against which the
site specific work can be set. On (b) the site specific survey refers
primarily to those sites which were discovered through aerial photography.
Fieldwalking and visiting the farmers/owners of the land is the initial
task, at present in progress (again with the help of local volunteers from
the Carlisle Regional Group of the Cumberland and Westmorland Antiquarian
and Archaeological Society). Once the field rotation programme for the
agriculture of each field (ie. those fields that show something on the
aerial photographs) has been established, then an archaeological programme
can be devised for each field. The initial and immediate task is for sites
to be walked. In addition, depending on the crop that is to be grown, the
field may be surveyed in the summer from the air. For the majority of the
fields a summer programme of resistivity and magnetometer survey, soil
chemical analysis (phosphates), and small scale excavation will be under-
taken. Fields in pasture represent roughly 70% of all the fields in the
area, as the growing of crops is purely for cattle feed, unlike the prairie
agriculture of East Anglia. This is a mixed blessing in that fewer sites
have to be fieldwalked, but it requires a refinement of the techniques for
"seeing" what is on a site without full-scale excavation. The problem of "topsoil studies" is worth greater investigation as the results of magnetometer surveys show. Such artefacts as hearths can be identified, and thus with select excavation (across ditches and other features as well) a wealth of information about each site (date, function etc.) can be obtained. From the aerial photographs and the plot-outs a pattern of sites has emerged, with numerous variables that can be compared. Morphology and soil type being the most obvious of these variables, but there are others, which may be readily identifiable from the photographs alone. For example, area of settlement, internal orientation of the entrance. Yet this is only a glorified typology and as so often in typology we are measuring variables that may or may not be of significance. Thus by adding variables such as environmental data, and even chronological data (from pottery, flints or radiocarbon samples) we can compare the variables from different sites with a greater confidence that we are comparing truly indicative features. This part of the project will be the most time consuming as there are probably over 200 sites to be visited initially.

Stage 3 The analysis and interpretation

The previous stages will have produced a comprehensive corpus of material requiring analysis and synthesis. Until the corpus is finished it is difficult to present a precise model of explanation, as we do not yet know exactly what we are trying to explain. The overall idea is one of settlement pattern studies, but until details of specific problems are identified specific hypotheses cannot be formulated. (Wait for the 1983 issue and all will be revealed!).

The fieldwork has been designed to be as comprehensive and complete as is possible in the time allowed, without cutting corners. Thus the analysis must view the material from a total, regional contextual perspective. The individual sites did not exist in a vacuum: the physical, ecological and social environment of all sites will have to be considered. The analysis will not limit itself to the 'settlement' pattern alone but will incorporate the total evidence for man's past behaviour in the area: single findspots, burials, ritual sites, settlement sites and field systems. As said earlier this will all be viewed from a diachronic perspective.

The problems with the study of settlement patterns are that they too often stick to a rigid systemic approach (at a general level), and in Britain are
"Wessex" dominated. The systemic approach facilitates the understanding of how a society might be seen to work: it does not however, explain the working of changing of a society (or group of people). Rouse (1972) states "In the present paper it will be assumed that the archaeologist reconstructs a people's ecology, culture, and social structure, viewing each of them as a separate system." (Rouse 1972: 95). He continues on p. 97 "By a settlement pattern is meant the manner in which people's cultural activities and social institutions are distributed over the landscape. Such a pattern embodies all three kinds of systems, cultural, social and ecological and provides a record of the relationships among them." Exactly so, a record of the relationships, not an explanation of how the different systems interact. The first stage will be to identify the different and possible sets of relationships, but the real task is attempting to explain the way in which these sets affected the past society and how the archaeological record came to be formed. Thus in working from the region level to the site areas, a site catchment type analysis will provide different propositions as to why a settlement or burial is on a particular soil or hill can be examined and certain possibilities eliminated. Thus propositions of economic or social criteria, land use, distance from other sites, burials or "centres", are but a few of the range of possibilities.

The problem of Wessex-centric archaeology is one of significance both for northern archaeology in general and for this study in particular. In many ways the Wessex landscape, with Stonehenge, is atypical. That there is only one Stonehenge makes one consider what were the "Stonehenges" for the other regions? Thus in the analysis this question cannot be ignored. Indeed as Colin Haselgrove advises (1981:12) "it is necessary for us to organise our research strategies with the size of regions that can be expected to have supported cultural systems", so do we have a "cultural system" in the region? The answer must surely be yes, even if the "system" is not a unique one but part of a much larger whole.

The study of spatial analyses for archaeology and human geography lends itself to this particular study, despite the difficulties of transmitting analyses designed for post-industrial societies to prehistoric ones. The questions of why settlements are situated where they are have been uppermost throughout the planning of the project. The answers cannot be attempted until the work is complete. Indeed Stage 3 will be refined and reconsidered as the project progresses but it will not be until the corpus of data is compiled that the details will be finalised.
Throughout this short essay I have had to be tentative and inconclusive. The reason for this is the preliminary nature of the work (which is being done for a PhD). The reason for writing such an article is that it provides an opportunity to express an approach. The project aims to aid the study of aerial photographs, help those interested in "topsoil studies" (as a complementary technique to aerial photography), and in so doing attempt to understand the early settlement of a lowland region in the highland zone. A region that has been cited as "a prime example of economic retardation and cultural stagnation [in the first millennium B.C.]" (Challis and Harding, 1975:180). A statement that I hope to prove is unfounded and a product of a 'southern' oriented archaeology.

4. References