

MORTIMER WHEELER ARCHAEOLOGICAL LECTURE

The Highland Zone: Reaction and Reality 5000 BC–2000 AD

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Introduction

IT WAS a source of very considerable pleasure and pride to be asked to give the 1990 Mortimer Wheeler Lecture within the British Academy. 1990 is, of course, the centenary of Sir Mortimer Wheeler's birth and this year must bring him very especially into our minds. Wheeler was born in Glasgow on 10 September 1890, although it has, I fear, to be said that within a year his parents had moved to Edinburgh and his own first memories were of that colder, windier and rather drier city.

It is of course customary on occasions of this kind to stress the close coincidence of interest between the topic under consideration and those of the distinguished scholar, archaeologist and human being after whom these lectures are named. It will however emerge, I hope, during the course of the lecture that the kind of archaeology which I have taken as my subject scarcely existed prior to 1960 and only today are we really beginning to recognize the enormous potential of what has come to be called upland 'landscape archaeology'. My understanding of the term is the close scrutiny of a tract of landscape to establish the nature and interrelationship of all periods of activity that have occurred there and then the deployment of a range of techniques, among them excavation, in order to create a four-dimensional picture, in space and time, of the way in which the area has attained its present appearance, and its former inhabitants lived their lives. The generation of archaeologists of which Wheeler was the leader was

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preoccupied, rightly, with furnishing my generation with the basic chronological and cultural frameworks that today's archaeologists sometimes take for granted to the extent of building wilful castles upon, without often testing the security of, that foundation.

I feel sure, however, that were he sitting here he would recognize the excitement of these new departures, and were he reincarnated as an active archaeologist, we would stand in awe as he cast the eagle-glance of his soldier's eye, and a gunner's eye at that, to encompass and explain the landscapes that I shall place before you. For the essence of the first part of what I have to say to you is that the archaeologist's gaze on the landscape must now be averted finally from the single sites, however large or small, that until the last decade or so have monopolized his attention and, like the field artilleryman, he must concern himself with space, slope, routes or access, intervisibility, land-use and focal points of human activity. Wheeler would have been in his element.

It was Wheeler's closest archaeological intimate—his 'treasured friend' Cyril Fox who, following the distinguished Oxford geographer Sir Halford Mackinder, framed our concepts of the broad outlines of British archaeology in a seminal paper delivered to the first International Congress of Pre- and Proto-historic Sciences held in London in 1932. The paper was published more or less simultaneously by the National Museum of Wales where Fox had, of course, replaced Wheeler as Director six years before. *The Personality of Britain* (so entitled to reflect the English translation published in 1928 of a similar analysis of French landscape by the eminent French geographer Paul Vidal de la Blache) echoed Mackinder (but in the archaeological context) by emphasizing the fundamental importance of the highland/hard volcanic rock/base deficient soil zone versus the lowland/sedimentary rock/resilient soil zone—a division that he held to be of economic, social and cultural validity as well as a purely geomorphological one. The publication was hailed as 'an earthquake' (in a review of the book by E. G. R. Taylor in *Antiquaries Journal*) and was, one suspects to the author's chagrin, soon being quoted as 'Fox's Law'. It is my first contention in this lecture that attitudes established half a century ago and more still pervade our broad view of British prehistory today.

But first we must look a little longer and harder at the background to *The Personality*. Wheeler's reaction to Cardiff on his arrival there in 1919 was far from favourable, although he paid handsome tribute to the hospitality and generosity of the Welsh. If this reaction leapt from one born in Glasgow and brought up in Bradford, how much more must it have struck the less robust Fox born and brought up in Essex who arrived in the city six years later in the terrible year of 1926. Your lecturer can easily imagine the deep culture-shock undergone by the 44-year-old Fox on his

translation to what he was later to call 'The Highland Zone'. In the black years of the 1920s it was perhaps all too easy to adopt the historically determinist approach to the uplands that is the inseparable component of his thesis. Furthermore Fox was writing at the very zenith of the phenomenon, misnamed and wrongly diagnosed, in my view, by Professor Graham Clark (1963) as a neurosis or obsession, whereby the subjection of British archaeological methodology to continental inspiration and the constant requirement to establish chronology for our all too individual insular cultural development led to an overweening desire to trace continental antecedents for British cultural developments. An invasion hypothesis became an almost inevitable response (not a neurosis)—one which only the hindsight furnished by independent physical dating techniques has rendered inapposite and unnecessary.

Thus the converging stresses were established which fuelled Fox's 'Earthquake'. The idea of a culturally backward upland zone perhaps suggested by personal reaction and confirmed by an anglocentric view of the early historical period—wherein refugee elements and sub-stratified languages became confined to the necessarily 'poorer' uplands was reinforced by a notion of the 'historical' exposure of the lowland area to invasion from the continent of Europe. To quote Fox 'It is the tragedy of British prehistory and history and the key thereto, that the most habitable and most easily conquerable areas are adjacent to shores whence invaders are most likely to come . . . tragedy . . . because a fresh invasion from the east not only paralyses the older culture by destroying it where it is most flourishing but tends to cut off the survivors of that culture in the west from the stimulus of contact with Europe . . .'

The Personality of Britain saw five editions—the last in 1947. Slowly, since its initial exposure, all the supporting apparatus of its foundation has fallen away. The view of the early historic period, upon which it is substantially founded, has changed radically, with the concept of refugee groups flowing into a 'backward west' no longer tenable, if it ever was. The invasion model of British prehistory has been very largely abandoned or at least recognized as raising questions that are not amenable to archaeological answers. Furthermore increased archaeological investigation in the northern and western extremities of these islands has indicated that in terms, at least, of the isolated monument, developments are as early, as advanced, as complex and as 'European' as anywhere. The notion, even, that material culture is 'weaker' in north and west does not bear any weight given a proper regard for the conditions of preservation, taphonomy and investigation that apply there.

Nearer chronologically than these developments however lies a less ethnocentric view, and a more firmly based knowledge, of the ancient

environment in the uplands. In the broadest outline it has come to be appreciated that our view of the poverty of upland landscapes is a contemporary one based upon centuries of deterioration brought about by both climatic factors and by human activity of various kinds, combined in an uncertain balance involving over-grazing and -cropping, the indiscriminate use of ground for mineral exploitation (from the earliest times), deforestation often associated with both grazing and mineral working which has in turn altered precipitation, drainage and vegetation patterns in a manner that has created a landscape of the last millennium that would not have been recognizable to those exploiting it three to five millennia ago. The ultimate decline of upland landscape in S. Scotland may not have taken place until the 13th or 14th centuries of our present era—and indeed may have been a determinant factor in creating the appalling history of brigandage and terrorism that characterized the borders of Scotland and England after that date—until with the union of the Crowns (and the relaxation of the ‘Little Ice Age’?) an end was put to it. As a very young Professor Graham Clark stated in his review of ‘The Personality’ in *Antiquity* in 1932—‘The point I wish to make is that, in so far as archaeological distributions are determined by geographical factors, they re determined *by contemporary and not by the present* geographical environment’ (Clark’s italics).

The Upland Archaeological Environment

We have also come to examine with more insight the kind of environment which would favour the development of early farming communities in Britain—those that functioned here prior to the historic period upon which Fox so heavily relied. The lighter more fragile soils; the natural forest cover of birch, pine, willow, alder and rowan—so much more easily cleared and providing timber more easily assimilated as fuel and structure; the ready availability of rich fishing (whether riverine or marine); and the extensive upper limits of a forest margin that fostered the native ungulate beasts of chase that could all facilitate the precarious change from stressed hunting economy to the inevitably stressed nature of early farming development.

This is an ideal environment for early farmers, indeed for all populations dwelling here until late in the Bronze Age (until c. 1000 BC) and by that time societies have been established that, however indirectly, lead to our own.

The notion of an impoverished upland zone lying isolated behind a naturally rich lowland area more subject to European influence is in

prehistoric terms, if not in more recent contexts, now unacceptable. I have to say however that in the archaeological context, despite the stripping away long since of much of its supporting apparatus, 'Fox's Law' still runs—quite clearly, if only sometimes subliminally—in the published record of our subject. 'Fox's Law' (which was the creation of his constituency rather than himself) requires formal funereal rites and I have chosen this occasion to accomplish this; not only because Fox was a distinguished fellow of this Academy but because I suspect vestiges of his creation (which I am sure he would now reject) survive with even greater strength in other disciplines than in archaeology itself, which has shown them to be so misconceived. Furthermore the survival of these misconceptions, based upon this environmentally deterministic viewpoint, robs us of the emancipated stance that places the onus of land-use history fairly and squarely on our own shoulders. If we continue to abuse the more resilient landscape of our familiar cretaceous and fenland settings, will the desertification of our islands not become complete? Knowledge of the past cannot offer us lessons. It can, however, offer us options, but only if our view of the past is sufficiently uncluttered by our own preconceptions.

Why has it taken so long for archaeology as a discipline to tackle this fundamental problem posed for the first time in 1932? The detailed recording of lowland landscapes was under way by the time of William Stukely in the earlier part of the eighteenth century. Why did it take so long to understand the complexity of upland landscapes? The reasons are mundane but essential to any comprehension to the problem.

1 Basic Ordnance Survey policy during the last 150 years saw, for understandable reasons of economy, the basic scale of coverage for areas with less than three dwellings per km as 1:10560 (1:10000)—a scale too small for a workable recording of early settlement detail.

2 To this must be added the consistent lack on the ground in upland areas of detail of a reliable character. Whereas in lowland context one may have only to stretch a hand to obtain two firm reference points, in the uplands one may have to 'leg in' data for several km to record a site—involving very considerable expenditure of time, effort and expertise.

3 That detail which does exist—fences/walls and rivers—exhibits an enormous variability over time with little to indicate or gauge such variability.

4 Prevailing conditions. Weather conditions effectively now prevent work in upland areas from November to February while the luxuriant growth of broom, heather and bracken may well effectively inhibit work from June–September thus leaving an 'open season' of only 4–5 months a year.

5 Access is often difficult and therefore massively inefficient offering as little as two days a week on site to carry out the work of survey.

6 Largely due to the above but also due to the social structure of isolated and now relatively poor (or sometimes transitorily rich) communities, it has been difficult for an amateur presence to be established to commence the efficient initial recording of sites and monuments.

7 The *relative* lack of success in the upland zone of aerial photography as a technique. This must exclude obviously propitious interludes such as periods of light snow or frost in low undergrowth seasons. Nevertheless, in the uplands, this technique can be of restricted value.

8 The very complexity of field remains, frequently of multiphase and much altered constructions and sites, in isolated locations which were frequently beyond the surveying capacity of even relatively well-equipped and trained archaeologists. This situation has, I believe, been altogether revolutionized by the availability of EDM (Electronic Distance Measuring) equipment permitting a degree of accuracy over long distances hitherto simply unavailable.

Such are the empirical difficulties that confront the upland archaeologist.

To these considerations have to be added those that have stimulated interest in the uplands.

1 The move towards processual rather than chronological preoccupations (see above) has rendered the rich landscape-picture of agricultural and industrial development and processes that survives in our marginal zones of especial interest.

2 The move towards a social and ethno-archaeology that concerns itself with the way that communities function and interact. This has rendered the existence of intact or near intact landscapes the only high octane fuel available to us to power this debate.

3 The marginality of these landscapes has led to their high responsiveness to relatively slight climatic change. Use/disuse patterns emerge quickly and consequently visible stratigraphical *cum* chronological relationships become evident as well as advance/retreat models, in terms of altitude, which in its 'tide-line' effect has enabled chronological data to be established.

Such chronological data can, at present, best be explored through the analyses of micro-vegetational phenomena and radio-carbon dating. By happy good fortune the peat deposits and fluvial and lacustrine sediments that form two of the best sources of such information are often freely available here.

4 Not only are the uplands a most sensitive cultural indicator environmentally but also demographically. At moments of demographic crisis (for

example ‘the Black Death’) the crisis hits both good land and marginal land. The good land loses half its population and some of the loss, at least, is made good by the removal of surviving tenants from marginal areas to work more profitable farms in the good land. In the marginal land the loss is thereby doubly magnified.

5 Subtending all of this, however, is the character of the archaeological record of the uplands. The stone building tradition is prevalent, although by no means exclusively so, in these regions. It is indeed likely that the earlier we run in our search that the less will this be the case. Timber was more freely available throughout the upland zone up to c. 1000 BC and was always *available* throughout prehistory, and indeed up till relatively modern times. At any rate we must not underestimate the vital and very substantial timber-built component integral in almost any stone-built construction.

In the ‘stone-built’ landscape, there are, however, major snags awaiting the archaeologist. Stone is usually fine building material which has its own negative value scattered within a farming landscape. There is positive value to the farmer in freeing the soil he tills or grazes of stone, and in centralizing it in a location either where he does not wish to, or cannot, till. Often this is his settlement area, the position of which in the upland is closely confined, frequently, by a whole range of factors. Water-location, availability of fertile land, access to grazing and to communications are requirements common to almost all landscapes but in the uplands other factors spring sharply into focus—local liability to wind-gusting, snow-drifting, flash-flooding—the precise length (and angle) of sun-strike on a particular location—slope angle, etc., etc.

The consequence is the tendency for occupation of all periods to focus into a relatively few hospitable niches within the landscape. At this location, almost certainly ruined structures will already exist from an earlier phase of occupation offering either the core for reconstruction or a quarry for more radical re-building.

For the archaeologist this offers both good and bad news. The good news is that stratigraphy and its consequent benefits of relative and absolute chronology will be a frequent occurrence. The bad news lies in the fact that ‘quarrying’ will frequently lead to mutual eradication of earlier phases in the construction of the new, making for difficulties of practice and interpretation for both the field-surveyor and the excavator.

But the great virtue of stone, for the archaeologist and indeed for us all, is its durability. Stone-clearance and stone construction (in conjunction with the wooden components now gone and too easily forgotten) fossilize for us the whole landscape strategy of former communities, offering

unsurpassed opportunities for interpretation and study as well as, of course, fine material for explanation to the public at large.

We shall see however that stone building is not the only phenomenon that leads to the clarity of landscape remains in the uplands. In Scotland's southern uplands so intensively has the turf been grazed by fussy and nimble-footed Cheviot sheep that it has preserved, in many instances, every wrinkle of the archaeological surfaces that lie beneath.

Upland Landscape Development

The innate attraction of upland landscapes to early populations has now to be accepted as a result of mounting evidence for interventionist management there from the earliest times. In the south, Mellars (1976) has summarized the evidence for the intensive exploitation by mesolithic hunting populations of land up to 600m OD in Wales and the Pennine areas. This exploitation of forest margins, both upper and lower, seems to have been intensified during the later mesolithic by well-defined episodes of deliberate woodland clearance by burning—such episodes witnessed by perturbations in the pollen record mirrored by increases in the quantity of charcoal occurring in local peats, or sediments and by the local occurrence of scatters of flint implements. The upper forest margin would have been an optimum location with its relatively open tree-canopy and therefore luxuriant under-storey or ground vegetation available for wild ungulates. In Scotland the work of Edwards & Ansell (1983) in SW Scotland has tended to undermine the long-accepted 'coastal' distribution of mesolithic populations. Now we see a broadly riverine distribution up to 300m OD in the upper valleys of the eastward running rivers from the Tweed (Mulholland, 1970) north to the Dee (Edwards, 1985). On the island of Arran, David Robinson (1983) has pointed to the evidence for local woodland burning dated 6715 ± 155 bc which may relate to mesolithic activity now dated at Auchareoch 6110 ± 90 bc and 5350 ± 90 bc, while in SW Scotland by the Cooran Lane (300m OD, a headwater of the Blackwater of Dee), Birks (1975) detected major peaks of charcoal deposition. Similar peaks have been observed in Atlantic pollen zone contexts by my colleague Dr Richard Tipping as a result of my own landscape survey project conducted on behalf of *Historic Scotland* in the Bowmont Valley, Roxboroughshire, which taken in conjunction with a regional pollen analytical project point to major landscape vegetational alteration in the 6th millennium bc (Tipping, forthcoming). Similar results accompany pollen analyses undertaken in support of a landscape survey project in Kirkpatrick Fleming, 12 miles N of Carlisle, while Dr David

Robinson has recorded forty episodes of burning (lenses of charcoal) within peat near Keiss N of Wick, Caithness in levels dated prior to 3000 bc (Robinson, forthcoming).

We must, of course, accept Edwards's caution in questioning the anthropogenesis of all burning episodes—today in Scotland lightning strike is an important cause of fires in coniferous plantations. Nevertheless one wonders how important it would have been in more open, mixed and deciduous circumstances prevalent at this period. Whichever the case the evidence is ubiquitous, and rapidly increasing, for the fairly radical alteration of natural vegetational cover in upland landscapes, before farming had even commenced, with the destruction of tree cover and exposure of the vulnerable woodland floor to erosion and leaching on the steep slopes.

The next question we have to address is 'When did that happen?' Edwards & Ralston's (1984) paper indicated an impressive number of instances where cereal pollens (grasses over 40 μ in size) occur in what are currently regarded as early contexts. Naturally the majority of these contexts occur in the upland zone, largely due to the hospitality shown in these areas via their waterlogged contexts. Nevertheless the observation is, however, surely permissible that on the basis of available evidence the introduction of agriculture to the British Islands is as early in Scotland and Ireland as anywhere else. Dates extrapolated and immediate, range between 4000 and 3300 bc. Indeed the upland edge would have formed as hospitable a haven for farming as anywhere in NW Europe for precisely the same reasons that it remains the only viable haven of crofting to this day. The bountiful juxtaposition of salt and freshwater fishing, crustaceans, shellfish, wild mammals, freely available fuel and pockets of excellent farming land, either based on river outwashes or upon calcareous sands, combined with abundant supplies of fresh water, and (at that time) patchy and relatively open woodland cover, must have rendered these coastlands in every way more hospitable to early farmers than, say, Salisbury Plain, with its perennial problems with water-supply and lack of the entire alternative marine array of protein sources.

The evidence for settlement is widely spread with dated sites in the west and north (right to the far north in Shetland) from 2800 bc onwards. At Scord of Brouster near Scalloway in Shetland (Whittle, 1986) a settlement of houses with fields is set within an intact landscape partly obscured by peat growth. The houses are of ovoid form with some internal subdivision associated with a complex system of 'fields' defined by cairns of accumulated stone cleared from the surface to improve both arable quality and its capacity to grow grass. Cultivation is amply witnessed by the stone ard-shares recovered and the settlement appears to have developed over a period in excess of a thousand years from 2500–1500 bc.

Recent work conducted by John Barber of *Historic Scotland* in the Kildonan valley, Sutherland (personal communication), and by myself with my colleague Dr Tipping in the Bowmont Valley in Roxboroughshire, seems to indicate that the success of neolithic farming may have generated its own crisis in terms of the hospitable but fragile soils of these localities. Over-grazing and over-cultivation may have led to the undue exposure of bare unvegetated hill-slopes to drying and then heavy rainfall. Erosion in these circumstances can be, and apparently was, catastrophic with enormous quantities of debris being laterally transported into rivers. The period would have almost certainly seen dynamic and irreversible landscape changes precipitating the communities dependent upon that landscape into economic and social crisis. The kind of suffering associated with these bland words finds the archaeological record dumb but is sadly available to us in the potent images of contemporary subsistence farming communities in sub-Saharan Africa coming under very broadly similar destructive forces.

Precisely how widespread such adverse effects may have been is not known to us as yet, and will probably take a very long time to assess accurately. Certainly in the Cheviots they appear to lead to a period of contraction prior to a period of real expansion of farming into upland areas c. 1500–1300 bc.

This should come as no surprise to us as evidence is widespread over Britain for major agricultural (and one must therefore postulate major population) expansion at this time—almost certainly linked with a prolonged period of climatic amelioration between 1500 and 1000 bc. During this period all over Britain we observe the extension of settlement into the uplands, often to heights in excess of 500m OD. Farms, fields, cultivation traces and fortified centres are observed at heights henceforward used only as rough grazings. For this very reason they remain to us as a remarkable vestige of farming landscape unique in the international sense and of which Britain has a unique custodianship. Whether it be on Bodmin or Dartmoor, in the Pennines, in the Scottish Borders or the uplands of Sutherland and Caithness, areas of hillside are covered in traces of the endeavours of people who created a living from now barren hillside. It is seductive for us to regard these landscapes as typical, as wonderfully apposite documents informing us, obligingly, of the broader nature of farming in Britain at this early period. It would be foolish to be so seduced. They were then, as with us now, marginal and ultimately unsuccessful; they cannot be typical but nevertheless they are a remarkable survival.

By c. 1000 bc the consensus of view is that climate began to change again with greater precipitation as a notable feature. This alone may have

rendered these upland arable areas untenable with crops unable to ripen and fragile soils having the goodness washed out of and off them.

Yet a return is made at some point around the middle of the 1st millennium bc, once again in an atmosphere of slowly improving climate. This sees the establishment, particularly in the borders of Scotland, of a thriving farming economy at altitudes, never as high as the earlier maxima but up to 450m. Furthermore lessons seem to have been learnt. The lateral conservation of soil now becomes a preoccupation, certainly in the Cheviots. Terracing is carried out on an extraordinarily wide scale in the Bowmont Valley and settlements built suggesting a very substantial population for the valley—far larger than that which applies today. Thousands of hectares must have been under cultivation (however productive) in the valley by the time of the appearance of hostile regimented soldiers (an entirely new phenomenon) bearing the trappings of the Roman Empire in the region c. 80 AD. The ability of this intrusive military machine to construct massive frontier defences may well have depended, to some extent at least, upon the taxable surplus of these successful farming communities. Further to the north and, generally speaking, over the whole W littoral of Britain, the years after c. 500 bc see the emergence of what appears to be powerful local hierarchies building increasingly complex and centralized farmsteads controlling, presumably, wider areas of ground as an attempt to pit efficiency against declining environmental circumstances.

It is at this time that the ability of the upland zone to rebound from under the consequence of repeated preceding abuse appears to decline. As hitherto stated the very high altitude settlements of the 2nd millennium bc are not reoccupied. The widespread growth of peat on hitherto viable ground occurs from c. 1000 bc onwards and with this the contraction of upland wodland. In the extraordinary landscapes of the Cheviots peat formation begins, as well as the occurrence of areas where wind blown trees have left a pock-marked landscape reminiscent of lunar surroundings in miniature. There is a general contraction of agricultural development with the end of the Roman occupation of Britain which is reflected widely, but by about 1100 AD we observe a very positive recovery with a broad expansion of medieval farming in the Scottish Borders, on Dartmoor and elsewhere that is not to be reversed until the 15th century AD. This time, in terms of our own experience, the trend is not reversed. The 'Little Ice Age' that brought frozen surfaces to the Thames and Dickensian Christmas Cards to us all, meant that, for us, a final eclipse overcame our upland farms. In areas like the Scottish Borders, where political circumstances were appropriate, quite extraordinary developments took place, referred to above, that were engendered (and ended) by political developments

but for which the ultimate stimulus was almost certainly increasing hardship for upland farmers. So that, by the 18th century AD, an atmosphere of desolation had been created in a third of our island that was to lead inexorably towards the Clearance of poor remnant farmers in the face of sheep-running and an industrial economy. Then we observe the reoccupation of isolated parts of this mineraliferous area in the name of advancing industry and finally the creation and recognition of a landscape, whose powerful symbolism was nodal to the Romantic imagination which still exercises so powerful, if again subliminal, an influence over our own perceptions, if not our ideas, today. This landscape is known to us all.

Conclusion

It is this perception that brings us back to the 'Personality of Britain' and prompts me now to draw matters to a close. It has been both a pleasure and a privilege to put such a wide range of material before you. I can only hope that I have not been the cause of either chronological or geographical indigestion in my audience. But the subject in its depth and breadth and in its potential and demanding nature, is possibly worthy of the occasion and the man whose memory it celebrates.

I wish to summarize very briefly by making three points.

Fox's rather over-used and abused view of the Highland/Lowland zones as a cultural divide in British prehistory ought now to be given honourable burial with full academic honours. It has done sterling service for over half a century. In the first instance it is no longer supported by the wealth of evidence that we have available, and it is indeed directly controverted by the vast bulk of it.

In the second instance the extent to which the highland zone can be seen as an area of relative cultural environmental and economic poverty is an artefact of the past millennium and no more. It is a wholly invalid model to be transferred to the early historic and especially to the prehistoric period.

In addition to these two points, however, we must begin to look to our own current patterns of thought and perception. The 'Personality of Britain' now stands in the way of an appropriate reassessment of the important, unique and fertile cultural traditions of the northern and western limits of our island. It militates against the vital role that archaeology can and must now play in the environmental debate that faces us all. Man has rendered, by over-exploitation in league with changing climate, large tracts of one half of our island a wilderness. How long is it before ungoverned economic activity linked with changing climate does the same for the other half?

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Figures 1–7

For Figs 1–7, see pp. 142–150.

Fig. 1. A landscape in the Southern Uplands of Scotland. Attonburn in the Bowmont Valley — where prehistoric hillslope terracing can be seen to follow the contours (50m) and is curtailed and cut by the sinuous rig and furrow of the medieval cultivation associated with the settlement of Attonburn ('Auld Toun Burn'), remnants of the structure of which is visible just to the north of the present day farm. The frame of this plan is 1 km wide giving some idea of the scale of early cultivation traces in the area. The stippled area is a recent forested shelter-belt. *Copyright Author.*

Fig. 2. A rather different landscape 2 kms south of and 100–200m higher than Fig. 1. At this height medieval and later agriculture hardly figures at all other than a few traces around the farmstead of Kelsocleuch. Ubiquitously dispersed over the whole area is the terracing running along the contours up to 400m OD which appears to accompany the small enclosed settlements with circular houses (for example that SE of Kelsocleuch, equidistant between this farm and Hayhope Knowe and that set by the Kelsocleuch burn nearly a kilometre to the S of the farm) as well as to surround the hilltop enclosures on Camp Tops, Hayhope Knowe and Elm Knowe. The enclosure at Hayhope Knowe has an early stage with timber houses set along a central and axial 'street-line' surrounded by a wooden palisade. The foundation of this palisade appears to cut across the earliest physical trace of agriculture in the valley — closely spaced narrow (or cord)-rig running *across* the contour SE–NW and visible on this plan at Hayhope Knowe and at Camp Tops. This cord-rig is thus very early in the sequence in the valley and survives only at the highest levels. It is cut and curtailed by the later terracing and underlies the early settlement (probably *c.* 600 BC) at Hayhope Knowe. Interestingly one patch of cord-rig seems to overlie traces at an early cross-Cheviot sunken trackway just to the NE at Hayhope Knowe. Palaeo-environmental investigations, however, demonstrate to us that this earliest physical evidence cannot be the earliest agriculture in the valley which extends back to the beginning of the second millennium bc. *Copyright Author.*

Fig. 3. This segment of landscape on SW Dartmoor also exhibits extraordinary multi-period complexity. The earliest feature is probably the 'spinal' wall of the field system (540) which is likely to be, at least in its earliest manifestation a 'reave' or upland land division of the late second millennium bc. At what date the field system walls were first attached to is not known but they were certainly still ploughed by oxen in the early 19th century from the farm complex (910) at the bottom left of the plan. This farmstead is very ancient with several stages of medieval and more recent development visible but also traces of a curvilinear enclosure (911) beneath it which may well suggest an ultimately prehistoric predecessor. Other such prehistoric small enclosed settlements exist top centre of the plan (952, 964) with, where later cultivation has not obtruded, a whole suite of unenclosed hut-circles of unknown but almost certainly prehistoric date. This prehistoric 'landscape' seems to be cut and curtailed by the traces of tin-extraction industry in the immediate vicinity of the River Plym. The 'medieval and later landscape' is also cut across by the building of a water-carrying leat (520) from the head of Shavercombe Brook past the farm (910), where sluice remnants tell us there must have been a small mill, to serve tin-workings further down the Plym Valley. We know that this leat was constructed in 1832, but its course may have been used by an undocumented predecessor which served the farm. *Copyright Author.*

Fig. 4. Another landscape segment 800 × 1100m, about 100m below that in Fig. 3, around Trowlesworthy Warren House in the Plym Valley on SW Dartmoor. Bewildering multiphase complexity is to be observed here. With enclosed and unenclosed hut-circle settlements of prehistoric date, incorporated within a later field system, set to the NW of the modern farm. This system of small irregular fields is earlier than the more regular (but now largely abandoned) field system set to the E and SE of the house. The development of the farm over

hundreds, if not thousands, of years is there to be seen. With the abandonment of farming the house, as its name would imply, became the focus of a major component of the local rabbit warrens that flourished here from the late 17th century to the middle 19th. The lentoid plans of the burrow-mounds thrown up to foster the rabbits can be seen overlying the earlier agricultural landscape and some earlier tin-working activity beside the River Plym. North of the river the burrow-mounds can be seen to be built over the complex prehistoric settlement (224–227) while in their turn (217) they are cut by the construction of a water-bearing leat to reinforce the flow of water into Legis Lake to facilitate the later extraction of tin-bearing gravel. *Copyright Author.*

Fig. 5. Fieldwork by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) in north-eastern Perthshire has located several remarkably intact pre-Improvement farming landscapes, which illustrate the diversity and cumulative extent of man's imprint upon the landscape in the Highland zone. In the valley of the Shee Water, disposed over the lower slopes on both sides of the valley, from Spittal of Glenshee (the site of the medieval parish church), to Dalmunzie some 2km to the NW (the site of a 17th-century laird's house), there are extensive settlement and cultivation remains, including farmsteads, fermtouns, mills, drying-kilns and a number of shieling-huts. Whilst many of these remains are probably of late 18th century date, there is also evidence that this is a landscape of some chronological depth, and the fermtoun immediately to the NW of the parish church, with its attendant swathes of lynchets, may well be medieval in origin. A series of head-dykes, which mark the divide between the townships' lands and the rough grazings beyond, were probably the first features to be fixed in the medieval landscape. A standing stone and burial cairn testify to the presence of prehistoric activity in the valley. *Crown Copyright.*

Fig. 6. RCAHMS work in north-eastern Perthshire is here represented by a landscape segment approximately 1 × 1.5 km on the north side of Pitcarmick Loch representing altogether early patterns of agriculture and neatly bridging the chronological gap between the late landscapes seen in Fig. 5 and those seen in Figs 1 and 2. Farmstead complexes of round houses are seen at B, C and D on the plan. Their date is unknown but the likelihood is that they pertain to a period of farming expansion in the first half (1000–500) of the 1st millennium bc. More startling archaeologically are the long sausage-shaped houses evenly spaced along the lower slopes (J–P) which may relate to early medieval occupation (late 1st millennium AD). The houses of both periods are set amongst the stone clearance-heaps and wall that facilitated the generation of good grazing and the conduct of arable farming. *Crown Copyright.*

Fig. 7. Shows at enhanced scale one prehistoric farmstead with its associated field system (Drumturn Burn, Perth) with traces of cultivation within the field pattern which almost certainly do not pertain to the period of occupation of the circular houses. *Crown Copyright.*



Fig. 1.

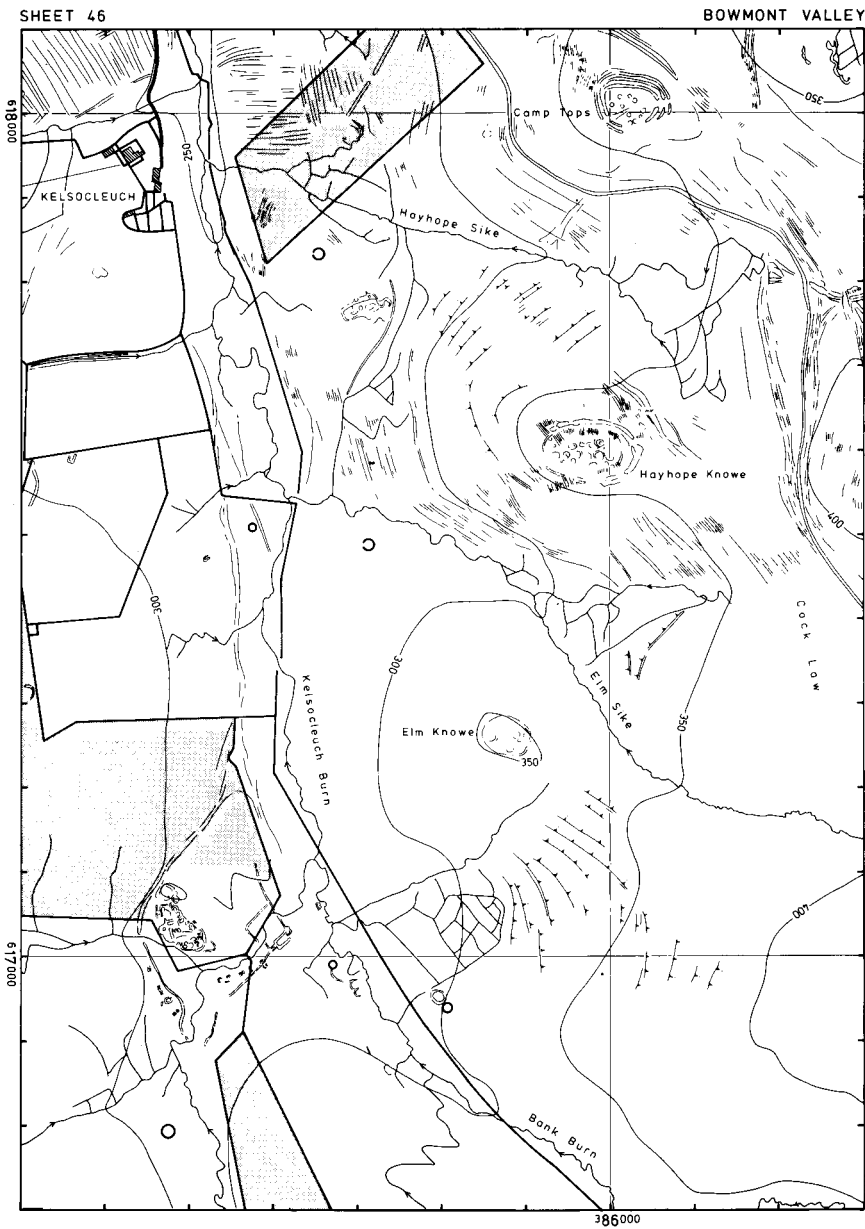


Fig. 2.

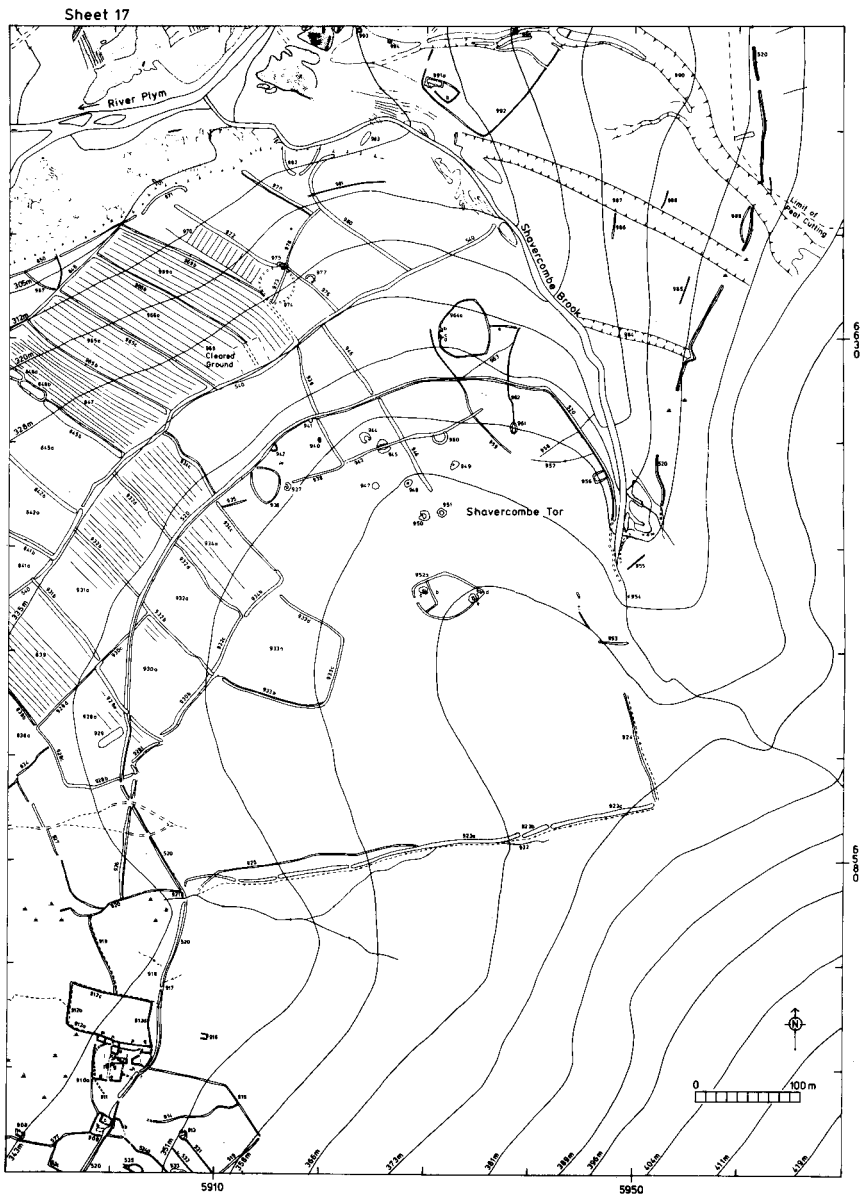


Fig. 3.

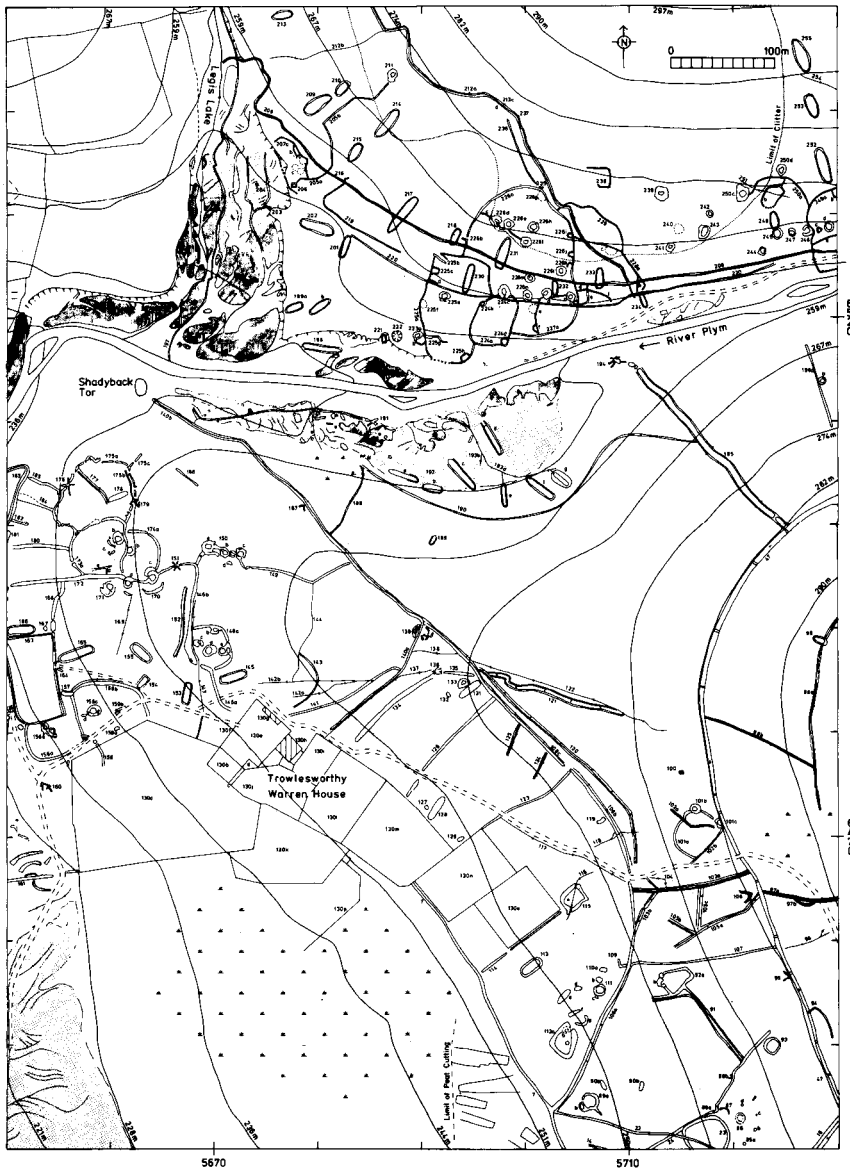


Fig. 4.

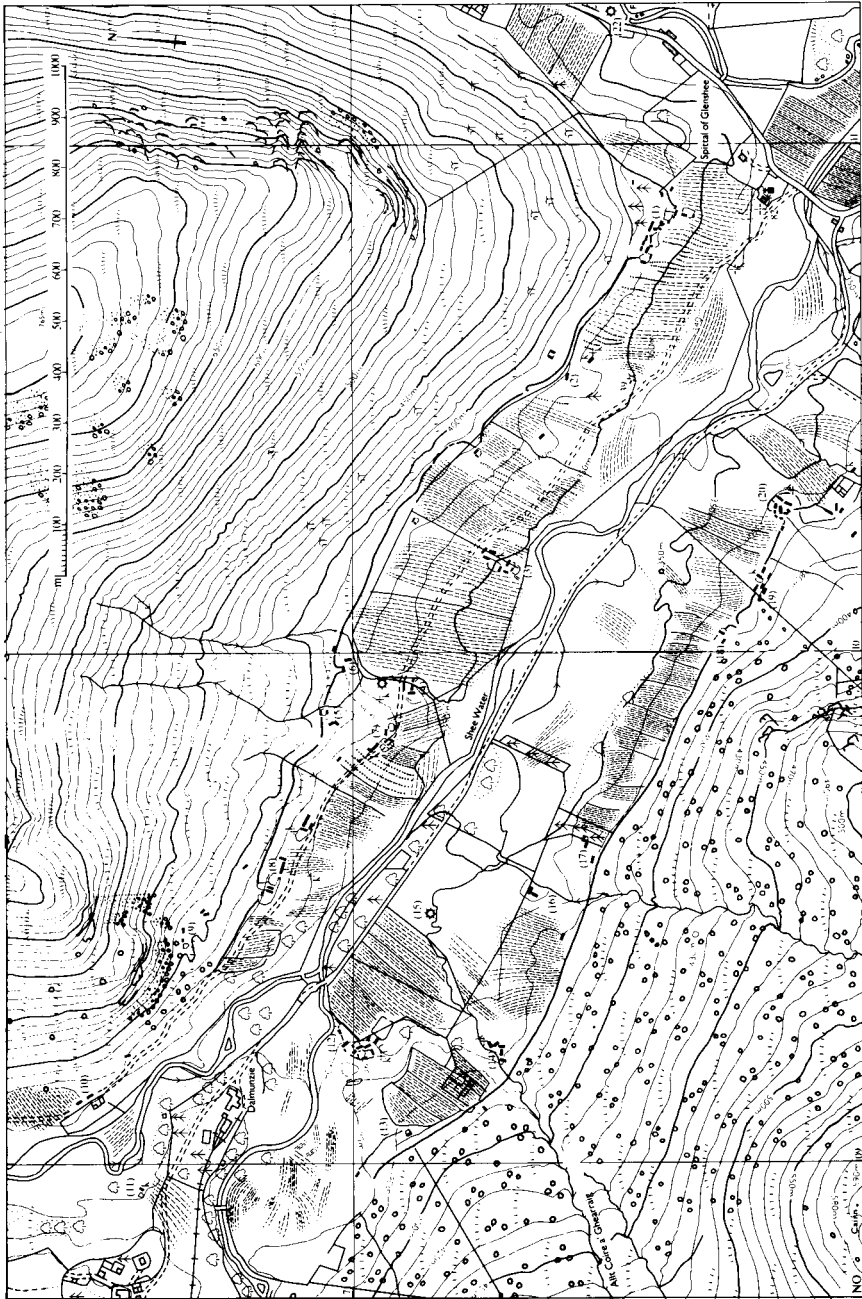


Fig. 5.

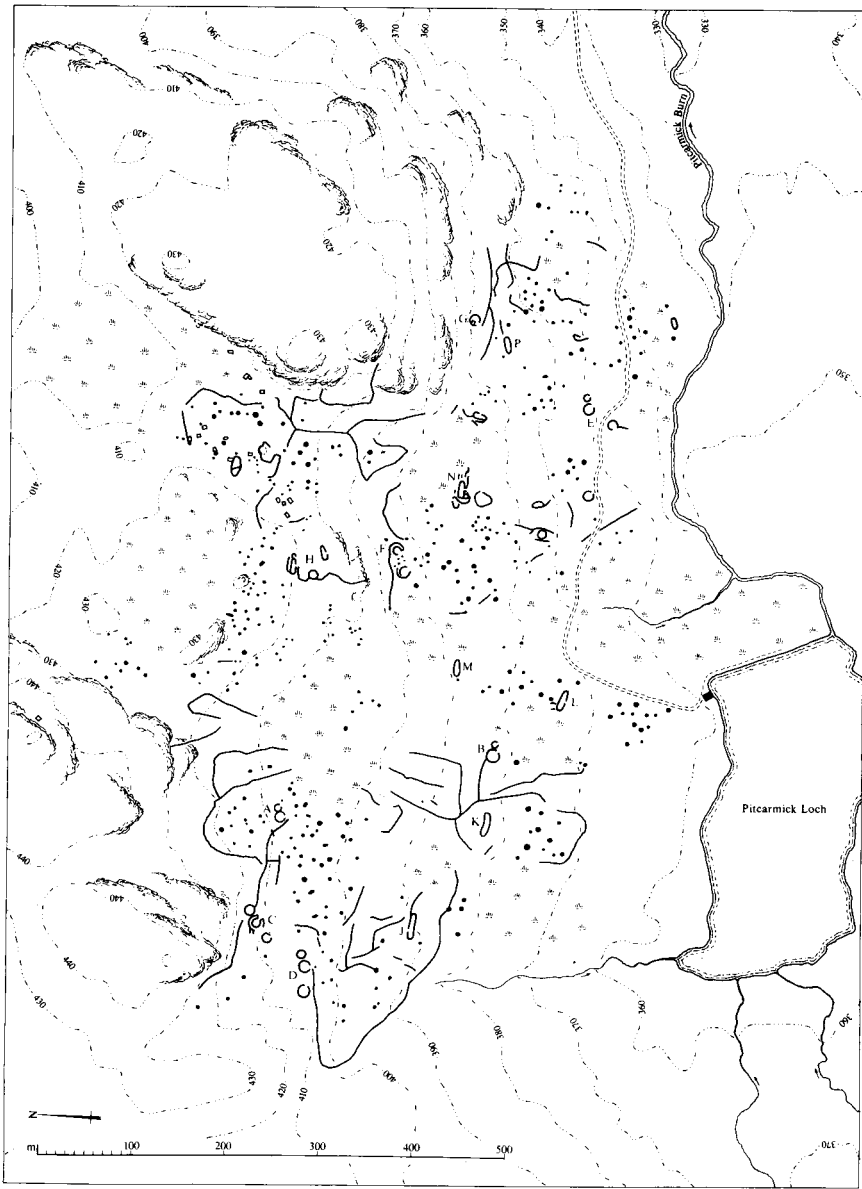


Fig. 6.

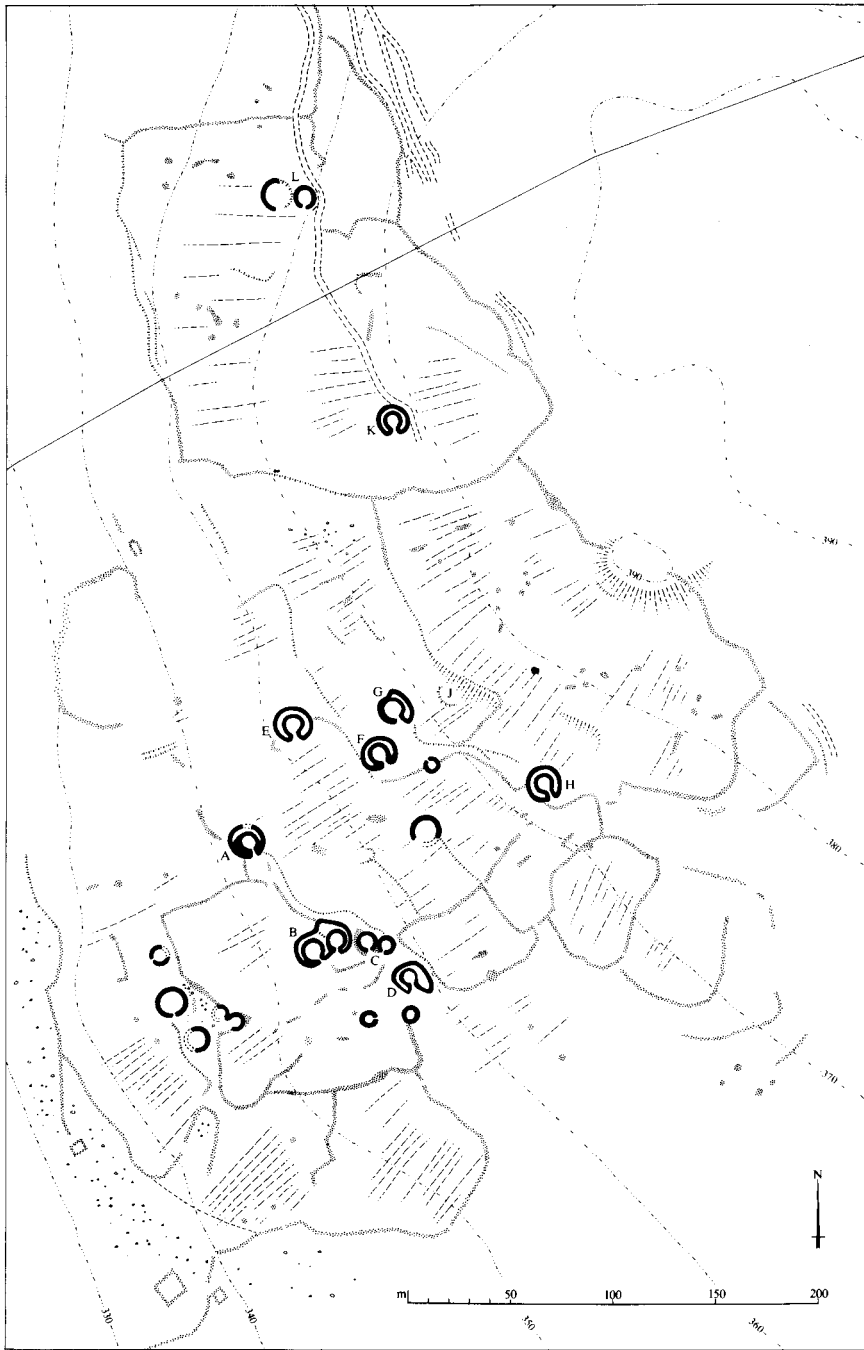


Fig. 7