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The Miniliths of Exmoor

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This paper presents the results of a programme of research on an unusual group of prehistoric stone settings located on Exmoor, south-west England. Taking a variety of semi-geometric and apparently random forms, a total of 59 settings have been identified, with new discoveries taking place on a regular basis. These stone settings are remarkable for their diminutive size, with component stones often standing to heights of 100 mm or less, a factor which has led to their being termed 'minilithic'. Through reference to the results of a programme of geophysical survey and small-scale excavation targeted upon a particularly rich cluster of settings around the upper reaches of Badgworthy Water, issues of morphology, dating, relationships, and the implications of the Exmoor miniliths for developing understandings monumentality are discussed.

> 'Whereas many Dartmoor rows are romantically megalithic those on Exmoor are minilithic, dwarfed in grassy tussocks and weeds, tiny and fragile shafts of slate that can be overlooked from even a few yards away, sunken in peat and unalluring'(Burl 1993, 88)

INTRODUCTION

Among the earliest archaeological monuments to be identified on Exmoor are settings of local sandstone and slate, arranged in circles, rows, solitary/paired stones, and geometric and semi-geometric patterns (Riley & Wilson-North 2001, 23–31; fig. 2.11). The latter, of which 59 examples are currently known, appear unique to Exmoor. They take a variety of forms, from rectangular settings and quincunxes, to apparently random scatters of stones. Many are concentrated around the headwaters of valleys, in areas of moorland which lie beyond the limits of medieval and later cultivation (*ibid*., 24). Two features of these settings are worthy of note: their diminutive size, with individual stones rarely exceeding 0.5 m; and the lack of basic archaeological knowledge beyond suggested morphology and general distribution. The settings were noted as early as the 17th century but, prior to the work described here, only one had witnessed any modern excavation – the lowland setting at Westermill Farm, Exford (Burrow & McDonnell 1982) – and there had been no geophysical survey at any of the recorded stone settings. Even their late Neolithic/early Bronze Age date is only assumed, based on loose analogy (ie, that they are comparable to features such as stone circles and rows) and their physical proximity to round barrows and cairns (Chanter & Worth 1906, 549; Grinsell 1970, 38–51; Riley & Wilson-North 2001, 31).

Poorly dated and without immediate parallel, it is unsurprising that their function and context remain obscure. We know very little about the contemporary landscape of the settings, either in terms of the character of the immediate physical environment when they were constructed – whether in open, closed, or mosaic vegetation – or the degree to which they might be temporally associated with other prehistoric features such as areas of field system and cairns. Such a poor state of knowledge is wholly the product of a dearth of investigative research beyond basic field survey. As if size could be correlated with value and significance, the diminutive scale of the settings may have engendered a lack of intellectual appeal; yet, with increasing attention being paid to

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regional sequences in British prehistory (eg, Brophy & Barclay 2009), the need to understand these remarkable monuments in the context of both Exmoor and wider traditions of prehistoric monumental activity has become more pressing.

We begin with a description of the settings and a review of the history of their investigation, followed by a report on a programme of survey and excavation undertaken in 2005–2008, focused upon the cluster of settings at Lanacombe, near Simonsbath, Somerset. In the final part of the paper the implications of the miniliths for broader studies of monuments and monumentality are sketched.

THE MINILITHS – HISTORY OF INVESTIGATION

> 'The moor is a prehistoric mystery. Although only thirty miles (48 km) from Dartmoor it has, until recently, been almost an archaeological *terra incognita*' (Burl 1993, 88)

Whilst prehistoric monuments composed of very small stones are far from unique in the archaeological record – take for example some of the stone rows present on Dartmoor and Bodmin Moor (Burl 1993, 82; Herring 2008) – the configurations found on Exmoor have few parallels (Fig. 1). There are at present 59 known stone settings on Exmoor, with new examples being discovered on a routine basis (Riley & Wilson-North 2001, 27; Jamieson 2002, 21). The first explicit, albeit brief, mention of the stone settings was in the 1607 edition of Camden's *Britannia* where the existence of stones set in triangles and circles was noted. In 1630 the elusive nature of the minilithic settings was confirmed by Thomas Westcote who, after paraphrasing Camden's short description, commented 'But let us leave the cause and find those stones, which I could never as yet, neither can they that I have purposely employed in quest of them' (Westcote 1630, cited in Chanter & Worth 1905, 378).

Survey and inventory

The first detailed investigation of the 'triangular' arrangements of stones alluded to by Camden came in 1905 with the publication of Chanter and Worth's seminal survey (1905). This work revealed a variety of geometrical settings, adding *quadrilaterals* (quincunxial arrangements like the five dots on the side of a dice) and *parallelograms* (nine stones arranged in three parallel lines of three) to the list of known forms. That their initial scheme was perhaps a little *too* tidy is clear from the decision one year later to extend the parallelogram archetype to include settings of six stones in two parallel lines of three, and to recognise the existence of composite settings such as *quadrilateral-triangles* and *parallelogram-triangles* (1906). The possibility of a fourth type of setting (*L-shaped*) was entertained whilst others seemed to defiantly resist any attempt to fit them to a pre-determined geometrical category (1905, 395–6). In the end settings that diverged from the rigid requirements of 'parallelism' were described as stone rows (1905, pl. vii; 1906, 544) and other, more random settings given the rather unhelpful designation *unclassed* (*ibid*., 546).

As well as providing detailed ground plans of the known settings the small size of the component uprights was emphasised; stones being typically 0.36 m wide, 0.15 m thick, and 0.56 m high (though often much smaller). The common use of deliberate packing stones (termed 'triggers') wedged in against each face was also noted, the presence of the latter often indicating the positions of former stones now lost. In their two campaigns of survey Chanter and Worth planned and recorded one example of a triangular setting, three quadrilaterals, and three parallelograms. The relative frailty of the stones was a clear concern with the action of sheep, pragmatic re-use, and larger scale clearance all taking their toll on the settings (eg, 1905, 392–3; 1906, 539–40). The extent of the damage sustained is evident from the number of component stones indicated on their plans as broken, fallen, or indicated by triggers only.

With the exception of Harold St George Gray's survey of the setting on Almsworthy (1931), a study notable for the way in which Gray's assumption that an underlying geometrical rationale must be present led him to force this random setting into a series of concentric ovals, little further work took place until the surveys of Whybrow and Grinsell. Whybrow noted 'a score or more' of what he termed 'miscellaneous formations' (1970, 13), whilst in his survey of 1970 Grinsell listed 16 stone settings, noting the academic silence that had followed the publications of Chanter and Worth and stressing the enigmatic nature of these structures. Flagging the settings as an 'uncharted' component of the regional

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Fig. 1.
A typical minilithic setting (looking eastwards along the East Pinford setting; photograph taken November 2004)

record he recommended them for further investigation 'using the most modern techniques' (1970, 47). Two settings were discussed and depicted, East Pinford and Little Tom's Hill, both examples of Chanter and Worth's second class of parallelogram (two rows of three stones). Interestingly, both Whybrow and Grinsell elected to class these archetypal settings as stone rows, highlighting a classificatory conundrum – when does a rectangular setting become a short stretch of double stone row, and vice versa – that has vexed subsequent researchers (for a detailed discussion see Burl 1993, 90)[1].

More detailed survey of the settings began with the work of Eardley-Wilmot who recorded and mapped some 25 examples of what she termed 'Exmoor's special puzzle', also speculating as to their original form, function, and the factors behind their landscape placement (1983, 34–9). It continued in Somerset with the work of Fowler (1988), whose inventory listed a total of 20 stone settings, reaching its zenith with the important programme of plan record and condition survey carried out by the Royal Commission on the Historic Monuments of England (RCHME) between 1988 and 1992 (Quinnell & Dunn 1992). In the latter survey detailed ground plans and descriptions were furnished for 49 stone settings, with the complete destruction of three previously recorded sites noted and a further three unable to be relocated (*ibid*., 70–79). This larger corpus enabled the first critical evaluation of the rigidly geometrical archetypes proposed by Chanter and Worth to be carried out, and it is interesting to note that, whilst the authors acknowledged a tendency to form crude geometrical patterns, following Eardley-Wilmot

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(1983) the more generic descriptor 'stone setting' was preferred. Even so, the difficulty of any attempt to classify the structures was acknowledged, particularly in distinguishing settings comprising parallel rows of stones from double or multiple stone rows. In common with Chanter and Worth some 77 years earlier, the fragile state of many of the settings recorded was of clear concern; at the time of recording 10% of known settings had been destroyed and a further quarter of those remaining had witnessed some form of damage (*ibid*., 4). Finally, and stemming from further work undertaken by the RCHME, mention should be made of the excellent synthesis of Exmoor's stone monuments produced by Riley and Wilson-North (2001, 23–31), which represented the first serious attempt since that of Eardley-Wilmot to place the settings in a landscape context.

Previous excavation

Exmoor's stone settings have largely evaded excavation. At the Porlock Stone Circle, Harold St George Gray dug a series of trenches around the perimeter of this monument in order to determine the presence (or otherwise) of fallen (or recumbent) stones thought to be lying buried beneath the surface (Gray 1928). Although published, the report is schematic and detail is frustratingly lacking. Despite this the exercise did reveal the deployment of packing stones (*ibid*.: 76 Stone No. 3) and large slabs which appeared to have been set deliberately around the base of one upright (Stone No. 6). In each case it is important to stress that the standing stone involved was small, projecting less than 0.05 m above the surface of the soil and only extending 0.12–0.22 m into the subsoil. A trench of unknown dimensions (described by Gray as a 'little excavation') in the geometric centre of the circle revealed 'about a dozen slabs of stone, averaging about 1.5 ft. in length … but no 'relics' were found nor any charcoal' (Gray 1928, 75).

The only excavation of a stone setting (as opposed to a circle) was carried out at the lowland site of Westermill Farm by Burrow and McDonnell in September 1981 (Burrow & McDonnell 1982). The aims of the exercise were to shed light upon the date/function of the setting, recover (if possible) environmental evidence, and re-erect fallen stones. In practice an area of 48 m^2 was excavated that incorporated two standing stones, one fallen stone, and a possible stone-hole. Whilst the stone-hole for the fallen minilith was located, no other structures, features, or artefacts were encountered and soil samples taken during the excavation were found to contain no environmental material (Richard McDonnell, pers. comm.).

THE CURRENT PROGRAMME OF FIELDWORK

As we have shown, despite their frequency and unusual form, research on Exmoor's stone settings has been sporadic and focused almost entirely upon cataloguing, defining overall distribution, and classification/morphology. An exception has been the work of Eardley-Wilmot and, more fully, Riley and Wilson-North, which made a number of important observations about landscape setting and relationships. They drew attention to the distinct concentration of stone settings around the headwaters of valleys, the frequency with which individual settings occupied positions on the lips of spurs overlooking minor streams, and a recurrent association with small cairns; an early Bronze Age date for the settings was also postulated (Eardley-Wilmot 1983, 35; Riley & Wilson-North 2001, 24, 31). The new work described here, which involved the first geophysical surveys and excavations on Exmoor's upland stone settings, draws heavily upon those observations. It has been focused on a particularly dense complex of stone settings located around the upper reaches of Badgworthy Water, described in outline detail by Riley and Wilson-North (*ibid*., 31). Here a complex of 14 stone settings has been identified alongside solitary stones, cairns, possible prehistoric enclosures, field systems, a hut-circle, and several stretches of bank (Fig. 2).

Settings of geometrical form?: Tom's Hill[2] *(SS80174328; Somerset HER No. 33858)*

The site of Little Tom's Hill was originally identified as a parallelogram by Chanter and Worth and, subsequently, as a stone row by Whybrow and Grinsell. When originally recorded the setting comprised six stones forming an irregular rectangle 17.5 m long and 7.5 m wide at its broadest, situated on the gentle south-west slope of Tom's Hill (370 m OD) (Fig. 3). By the time of the Eardley-Wilmot and RCHME surveys one of the stones had fallen and

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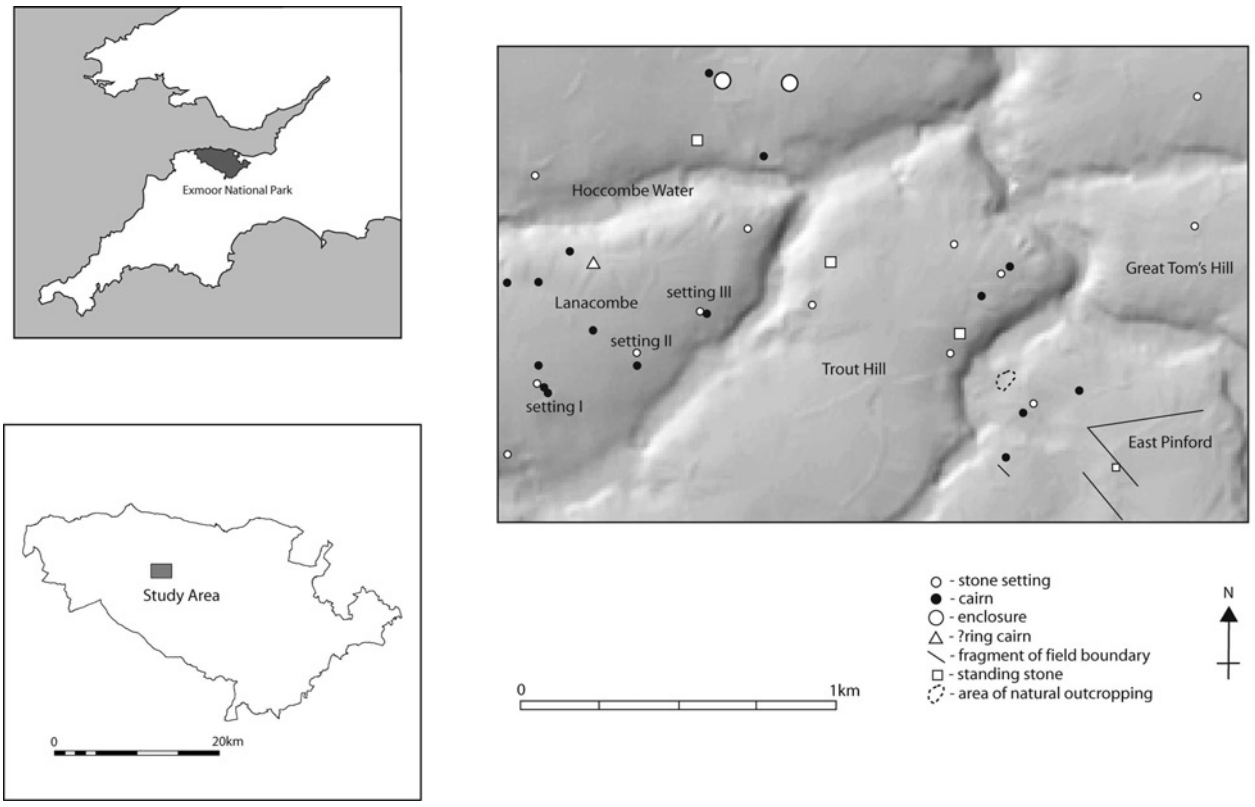

Fig. 2.
Location plan of the stone settings discussed in the text. Incorporates data (© Crown Copyright/database right 2007. An Ordnance Survey (EDINA) supplied service)

substantial erosion hollows – caused principally by sheep rubbing – surrounded this and three of the other remaining stones. The latter survey also located the broken stump of a further stone and, combining this with the existence of erosion hollows, the possibility of a third line of three stones immediately to the west was postulated (Quinnell & Dunn 1992, 57).

The recognition that erosion hollows might serve as useful proxies for standing stones now lost was an important result of the RCHME survey. However, in the case of Tom's Hill, the straightforward reading of hollows as former stone positions was greatly complicated by the military use of this part of the hillside for mortar practice. As is shown in Figure 4, the area of the surviving settings is peppered with overgrown impact craters which are indistinguishable from erosion hollows. In an attempt to shed light upon the morphology of the setting, a soil resistance survey was carried out across the area of the settings (Fig. 5). When the results of the resistance survey are integrated the picture becomes clearer as the mortar craters have a unique geophysical signature – the blast clearing topsoil down close to bedrock (giving a high resistance core to the anomaly) surrounded by a halo of upcast (lower resistance).

If we compare the results of the resistivity survey with the RCHME plot (Figs 3 & 5) it is immediately clear that hollows 'J' and 'K' on the latter are, in fact, impact craters. In contrast, the hollows marked at 'L' and 'H' lack the characteristic crater signature and may well preserve the position of former standing stones.

Of the remaining hollows (prefixed 'M'), while M1 has the signature of an impact crater, the location of M2 and M3 within an area of higher background resistance make it difficult to argue conclusively either

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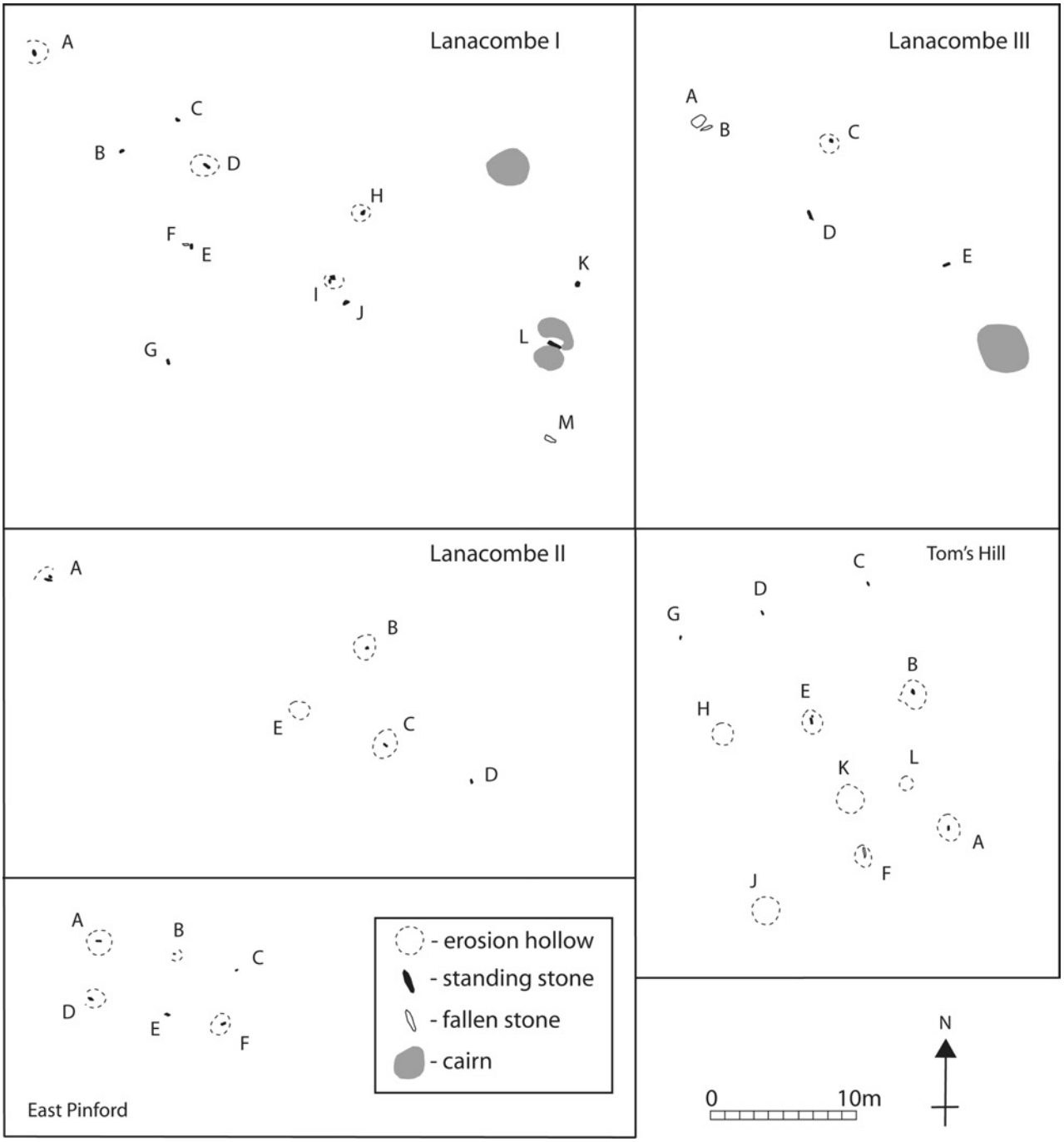

Fig. 3.
The RCHME survey plans of the stone settings (after Quinnell & Dunn 1992)

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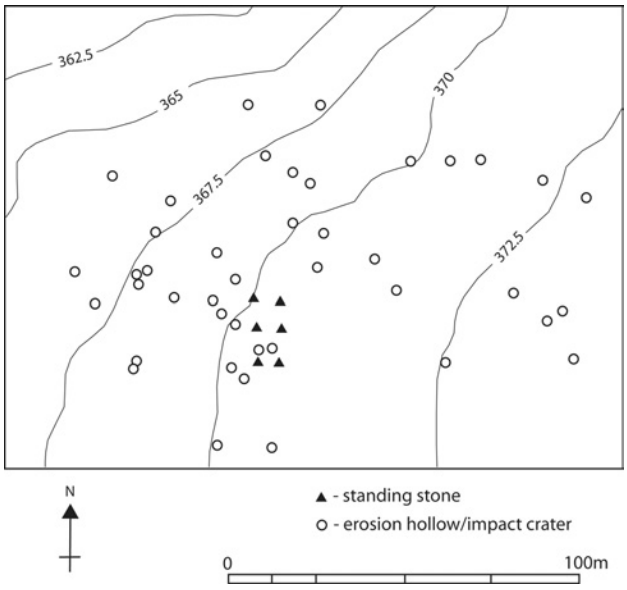

Fig. 4.
The density of impact craters and erosion hollows surrounding the Tom's Hill setting (surveyed March 2005)

way. M4 clearly lacks any crater signature and must be considered a legitimate erosion hollow. If M4, 'L' and 'H' do mark the positions of former stone settings then this suggests a much more random placement of stones than the surviving uprights (and records) indicate. Looking more broadly at the resistance results, there is a general band of high resistance running north-west to south-east across the survey area, which probably reflects the presence of a shallow band of subsurface geology. The setting appears to be aligned along this band; this relationship between rock and setting location is a theme that we will return to repeatedly. In terms of other features, a high resistance linear anomaly can be seen crossing the south-western corner of the survey area that could correspond to a buried stone feature. Likewise, two rather indistinct low resistance linear features cross the survey area. These could be geological but, given the results from Lanacombe II (see below), they may correspond to earlier boundaries; only a larger area survey will be able to resolve this. The results of the fluxgate magnetometer survey added little to the overall picture, the whole area being covered by fragments of ferrous material no doubt corresponding to shrapnel from the repeated mortar blasts.

Hybrid monuments?: East Pinford (SS79664273; Somerset HER No. 33041)

As with the Tom's Hill setting, this was recorded by Chanter and Worth as a parallelogram, by Whybrow and Grinsell as a stone row, and later by Eardley-Wilmot as a squat double-square. The RCHME survey revealed a rectangle of six stones, 9.6 m long and 4.2 m wide (Fig. 3). Located at an elevation of 350 m OD, this setting is aligned perpendicular to the gently sloping western side of East Pinford Hill. The stones range in height 0.37–0.70 m, with the smallest forming the central pair (B & E). As originally noted by Chanter and Worth, the stones of the easternmost pair (C & F) are set at an angle to the main axis of the monument. While notable erosion hollows exist around four of the settings all of the stones are upright and intact. Small cairns are visible 50 m to the south-west and 130 m to the east of the setting.

What is immediately noticeable upon visiting the site is that the setting is contained within a distinctive band of outcropping stone and clitter running down the hillside. What is also evident is that, along with the recognised setting-stones, there are a number of upright broken stones in amongst the outcropping, running from the centre of the monument to a point *c.* 15 m to the east and slightly off the main axis. All comprise 'stumps' set vertically within the clitter and seem to describe an additional four stone pairs. Without excavation it is impossible to say whether these represent artificial settings or fortuitously angled elements of natural clitter, but the configuration is suggestive.

The close relationship between the placement and orientation of the setting and the band of outcropping is clear in the results of the resistance survey and echoes that seen at Tom's Hill (Fig. 6). As with Tom's Hill, the results of the fluxgate magnetometer survey were dominated by shrapnel, in this case a single large lump of shell casing to the immediate west of the setting along with a spattering of other smaller ferrous chunks.

In contrast to Tom's Hill, the East Pinford setting is located in close proximity to two prominent outcrops of rock situated on the break of slope above the valley bottom, 121 m to the north-west. From the location of the monument the ground slopes gently down towards the outcrop, with the two clusters of stone forming a clear and prominent landmark, echoing the paired upright stones of the setting. Upon closer

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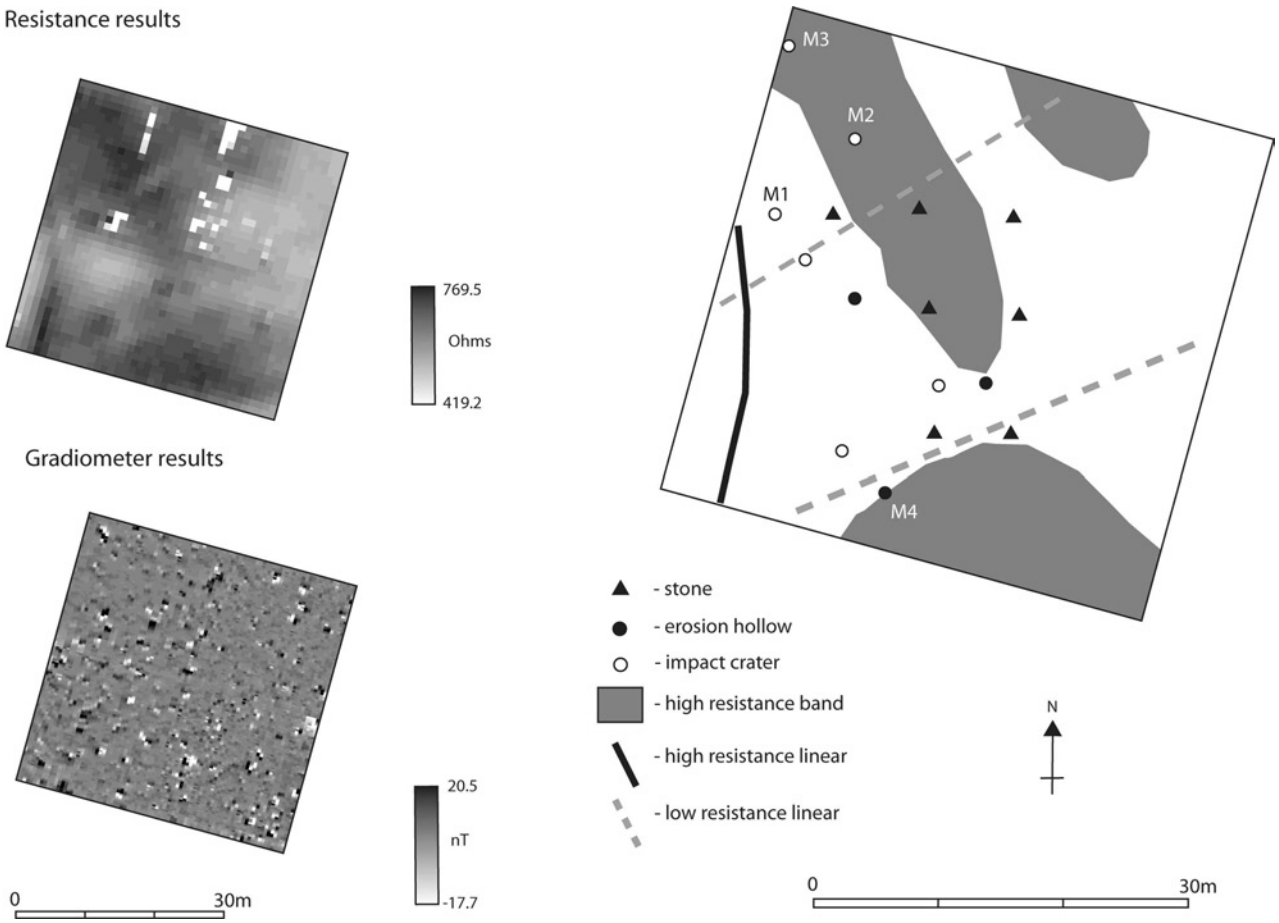

Fig. 5.
The Tom's Hill survey results. The high levels of noise in the plots reflect the difficulties encountered in surveying through dense clumps of soft rush (surveyed March 2005)

investigation, adjacent to the larger, southernmost outcrop, was a flat panel of rock with a distinctive pattern of weathering hollows that bore a striking similarity to cupmarks. This is a distinctive feature and the difficulties we encountered in deciding whether the depressions were weathering features or weathered carvings (or a combination of the two) may have been the same in prehistory. That the artificial settings of the monument referenced, in visual and material terms, the natural outcrop is suggested by identical depressions on the side of one of the stone uprights implying a source at this location if not the panel itself.

Cairns and stones: the Lanacombe settings

The focus of the discussion so far has been on individual settings. Although the relationship between East Pinford and natural outcrops has been mentioned, there has been no consideration of any relationships between the settings and other structures on the moor (Fig. 2). One feature of the group of settings located in the upper reaches of Badgworthy water is the close relationship that exists between the locations of the settings and small cairns (Riley & Wilson-North 2001, 31). To investigate this and other possible relationships survey was carried out upon a

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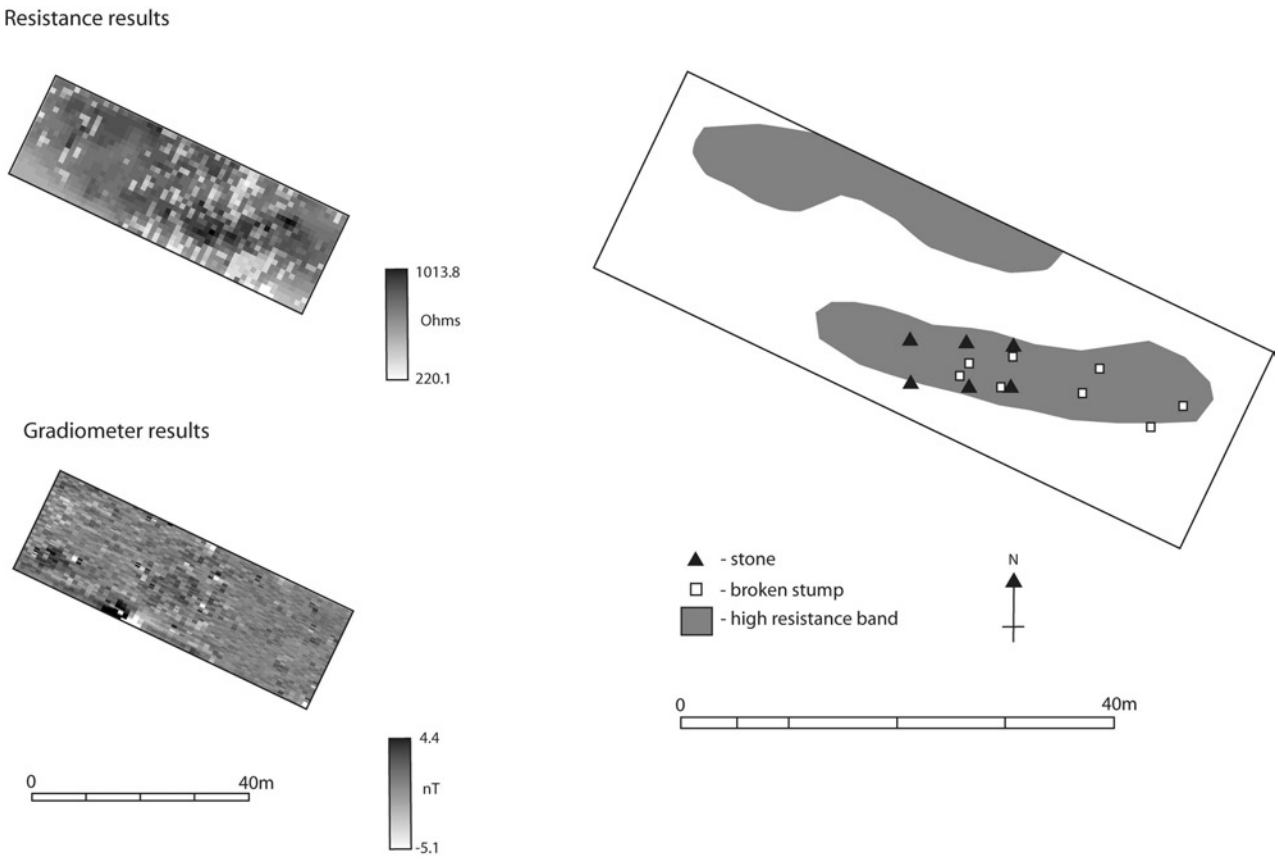

Fig. 6.
The East Pinford survey results. The high levels of noise in the plots reflect the difficulty encountered in surveying through dense clumps of soft rush (surveyed March 2005)

group of three irregular stone settings running perpendicular to the sloping south-eastern edge of Lanacombe Hill: Lanacombe I, II, and III. In each case the setting had originally been recorded in 1905 by St George Gray and then lost until 1989 when rediscovered during the survey carried out by the RCHME (Quinnell & Dunn 1992).

They are currently situated in open moorland overlooking a tributary stream of Badgworthy water and, beyond it, the flank of Trout Hill. Vegetation on Lanacombe is dominated by swathes of purple moor grass (*Molinia caerulea*) punctuated by dense bands of soft rush (*Juncus effusus*) (Sinclair 1970; McDonnell, pers. comm.). Within this the areas occupied by the settings are notable for a marked vegetation change, the otherwise ubiquitous and dense purple moor grass giving way to bands of much finer, closely grazed grass (including the *Festuca*, *Agrostis*, and *Deschampsia* families) with isolated clumps of soft rush.

Lanacombe I (SS78124276; Somerset HER No. 33112)

The setting comprises 13 stones. Of these, two had fallen by the time the 1989 survey was carried out (Stones F & M) whilst the toppling of Stone H was more recent (Fig. 3). The individual stones are all small sub-angular slabs standing to a maximum

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height of 0.65 m. In plan they form a rather irregular linear arrangement that runs on a north-west to south-east alignment for a distance of 43 m directly across the contour. Some of the stones had suffered from basal erosion caused, presumably, by the rubbing of sheep and cattle. In the most extreme cases (eg, Stones A, D, & I) this had served to completely truncate the surrounding land surface leaving the stones standing in isolated tufts of soft rush and moor grass.

The results of the resistance survey show clearly that the setting is located upon a distinctive high resistance band most likely corresponding to a rise in the level of the underlying bedrock (Fig. 7). This accounts for the surface outcropping visible within the area of the setting. Precisely the same phenomenon was noted at East Pinford. The adjacent cairn is clearly visible as an isolated block of high-resistance readings in the otherwise lower resistance area directly to the north-east of the setting. The principal feature of note in the magnetometer survey is the curving linear band running along the north-east edge of the survey area, seemingly marking the edge of the zone of shallower bedrock.

Lanacombe II (SS78414288; Somerset HER No. 33113)

Located 330 m to the nort-east of Lanacombe I, this setting was recorded by the RCHME as comprising four well-set stones (varying in dimension 0.30–0.45 m high, 0.20–0.53 m wide, and 0.10–0.15 m thick) three of which were located in marked erosion hollows (Fig. 3). The possible position of a fifth, now lost, stone was marked by an erosion hollow (*ibid*., 44). A further, previously unrecorded, component of the setting was recorded during the survey of 2008, a fallen and partly buried stone (at least 0.50 m long, 0.23 m wide, and 0.11 m thick) 8.8 m to the north-west of stone A. As with Lanacombe I, the stones form a rather irregular linear arrangement that runs on a north-west to south-east alignment for a distance of 40.5 m perpendicular to the contour.

Approximately 60 m to the west of the setting is a linear spread of cairned stones, provisionally interpreted as a fragment of prehistoric field system (Wilson-North, pers. comm.), with two low stone cairns lying between it and the setting. In order to explore these features more fully and determine their relationship, if any, to the setting, a 120 x 40 m survey block was established. The results of the resistance survey confirmed the previously observed relationship between setting location and underlying geology, the line of stones marking the western edge of a clear high resistance band running down the slope (Fig. 8). Less expected were the linear high resistance features to the west of the setting running along and perpendicular to the contour. Some are continuous, implying some form of linear stone features, while others are more interrupted. That these are not geological is indicated by the results of the magnetometer survey, which served to highlight the dominant trending direction of the underlying geology which deviates markedly from that of the linear anomalies. The location of the known cairns directly adjacent to the features is also persuasive.

The suggestion is of a fragment of rectilinear field system, the intermittent character of the bulk of the linear anomalies suggesting that they are cairn-defined rather than continuous stone features. Looking to the results of the resistance survey, even the claimed fragment of linear field boundary mentioned earlier might be better thought of as a dispersed cairn. The presence of cairn-defined boundaries has parallels with the Bronze Age field systems recorded at Codsend Moor site 4 (Patterson & Sainsbury 1989, 87), where a series of irregular fields was demarcated by groups of cairns. Although there is no evidence at Lanacombe for the stone banks and lynchets evident at Codsend, the 30 m interval between the boundaries also accords well with the 30–35 m recorded at Codsend site 3 (*ibid*., 85).

Other features take the form of a group of 'teardrop' shaped anomalies running along the contour to the immediate east of the setting. Defined by extremely low resistance readings these are puzzling. They could be geological, or, conceivably, mark the locations of former stone quarries.

Lanacombe III (SS78614301; Somerset HER No. 33114)

A further 232 m along the edge of Lanacombe is the third of the settings examined, recorded by the RCHME as a group of four stones and an associated cairn (Fig. 3). The setting is much smaller than Lanacombe I and II, with the component stones extending for a distance of 20 m perpendicular to the contour. A further 7 m to the south-east is a small cairn. Although only five stones were recorded by Quinnell and Dunn a further fallen stone was visible in the core area of the setting at the time of survey.

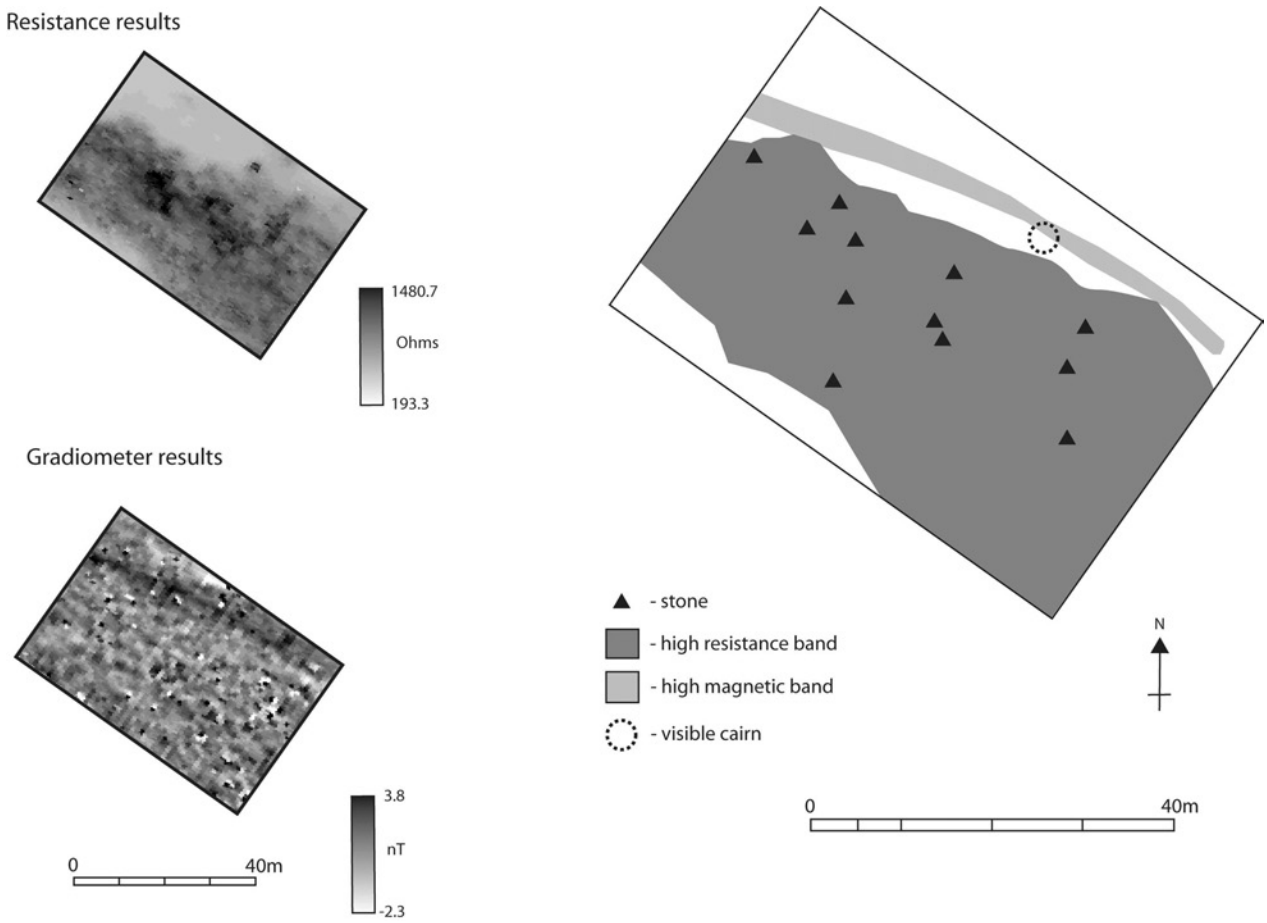

Fig. 7.
The Lanacombe I survey results (surveyed April 2007)

This appears to have been partly covered by turf and only recently exposed. As well as the core stones of the setting a further three stones were recorded in 1993 to the immediate west (noted in the Somerset HER record for the site). Of these, only two could be located amongst the thick covering of rushes at the time of survey. Of the core group of stones recorded by Quinnell and Dunn, C, D, and E were standing in 1991 with C leaning at an angle of 30° to the SSW. It has now fallen.

In plan the main group of stones comprise an irregular linear spread. With the exception of the recently toppled stone C, the miniliths take the form of small flat slabs of which three are currently lying recumbent. Of the surviving upright stones, D stands to a height of 0.35m with E reaching a modest 0.2 m. The toppled stone C is unusual in that it has a rectangular section (a shape referred to in the HER as 'post type' – presumably on the basis of its resemblance to a modern gatepost).

Once again there appears to be a strong relationship between background resistance trends and the location of the settings. Although more diffuse than at Lanacombe I, there is a band of higher resistance trending north-west to south-east, with the main group of settings concentrated along its north-eastern edge (Fig. 9). Of particular interest are the western group of stones recorded in 1993 which are situated upon a much more coherent band of high resistance directly above a semicircular high resistance

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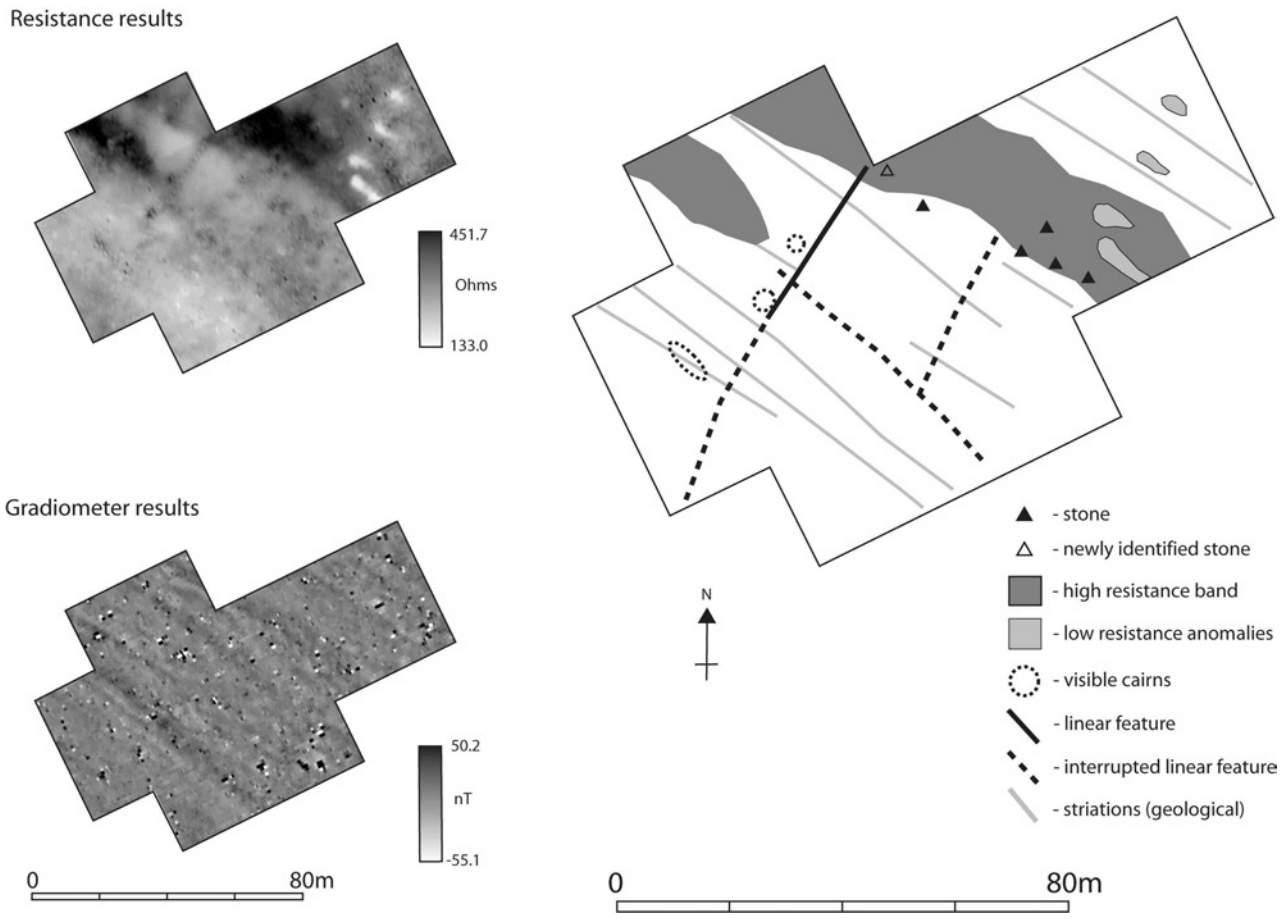

Fig. 8.
The Lanacombe II survey results (surveyed July 2008)

feature. The latter was wholly unexpected – there is no earthwork or spread of stone visible – and its magnitude and circular shape argue against a geological origin. The external diameter of 10 m certainly falls comfortably within the 4–12 m diameter range recorded for hut circles on Exmoor and, if the apparent break in the circuit corresponds to an entrance, its orientation accords with those recorded for hut circles at Great Hill and Porlock Allotment (Riley & Wilson-North 2001, 44–7). Another possibility is that we are looking at the remains of a ring cairn, a number of which have recently been identified on Exmoor (Quinnell 1997). The density of stone implied by the thickness of the anomaly certainly supports such an interpretation. Located on a distinctive band of shallower bedrock in close proximity to this structure, the status of the western group of stones identified in 1993 remains unclear. Are they a component of Lanacombe III or a separate setting?

EXCAVATIONS AT LANACOMBE I AND III

In the case of Lanacombe I and III damage to the settings had taken place subsequent to the 1989 survey. That this was recent is clear from a condition survey carried out by the National Park in 2001. At

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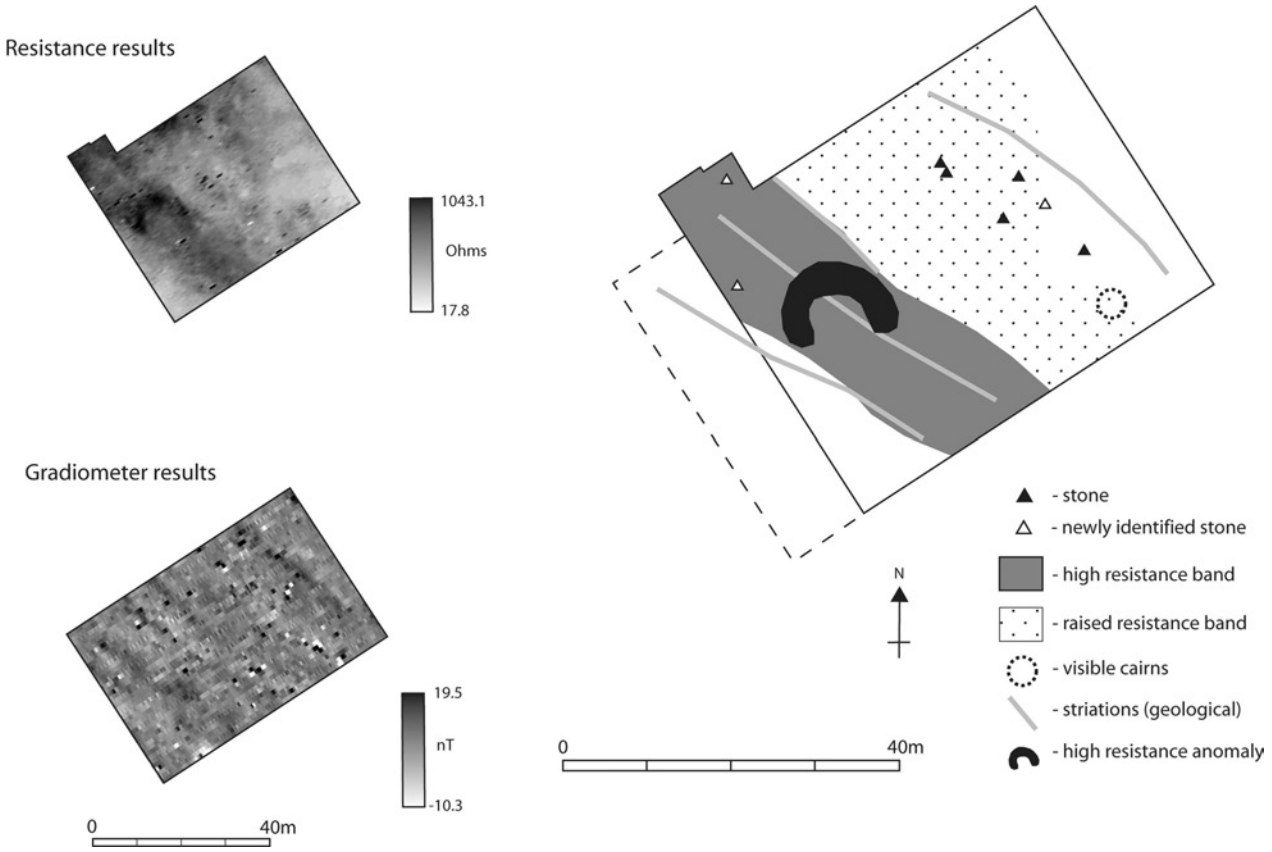

Fig. 9.
The Lanacombe III survey results (surveyed July 2008)

this time the Lanacombe I setting was recorded as relatively stable with stone H standing, whilst at Lanacombe III, the toppled stone (C) was upright and the overall condition of the site deemed stable (Blackmore 2002).

Planned restoration and consolidation of the recently toppled stones (Lanacombe I stone H and Lanacombe III stone C) provided an opportunity to carry out excavation at two of the upland settings. As discussed earlier, although little detail has been published regarding earlier excavations on the moor, they have raised a number of interesting questions. The first concerns Gray's suggestion of the use of packing stones to support the miniliths of the Porlock Circle and the presence of distinct structural elements (paving) around the bases of stones. Coupled with the frequent record of 'triggers' (ie, secondary subsidiary/supporting stones: eg, Chanter & Worth 1905, 389), this raises the possibility of there being a distinctive architecture to the individual standing stones, despite their diminutive size. In addition, the work of Burrow and McDonnell on the lowland setting of Westermill had suggested that stone-holes were carefully tailored to mirror the basal shapes of the stones they were destined to receive.

The excavation of Lanacombe I: stone H

The toppled stone was lying adjacent to its stone-hole. The process of removal appears to have been relatively clean, insofar as there was no visible damage to the edges of the stone-hole as might be expected if

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the stone were pushed repeatedly from side-to-side. The stone was sub-rectangular in shape; and in profile the base forms a regular wedge (Fig. 10). The letters 'TD' are inscribed into the east-facing side of the stone close to the top, a feature shared with stone L of this setting (Quinnell & Dunn 1992, 44). Presumably post-17th century in date, the role played by these inscriptions is unclear. They may have acted as way-markers or guide stones (in much the same way as similarly inscribed stones on the North York Moors (Hayes 1988)) or, more probably, served the equally prosaic function of marking land ownership. It is clear that only selected stones were marked and that the placement of the carvings at Lanacombe I was consistent (high up and facing to the east-north-east).

Following guidance from the National Parks Archaeologist, excavation was restricted to an area of 2 x 2 m centred upon the exposed stone-hole (Fig. 10). The stone-hole appears to have been fashioned by the expedient removal of weathered outcropping rock, creating a north-east to south-west aligned oval pit, 0.37 x 0.28 m in extent, reaching a depth of 0.18 m below the current surface. At the bottom of the hole was a thin layer of relatively clean brown soil upon which had been placed a group of flat stones [015] in order to provide a level base. The stone was placed hard against the northern edge of outcropping rock and the resultant void to the south was filled with a further deposit of brown soil [012], above which was a layer of weathered rock [011] with a distinctive gravelly, pea-grit texture. The presence of vertical and sloping stones in the fill, directly against the southernmost face of the upright, indicates the use of small packing stones. Deposit [012] was sampled for plant macrofossils but no organic material was recovered.

The upper part of [011] extended 0.10–0.15 m beyond the limits of the stone-hole to fill a shallow depression within which the stone had been set. To the south-west, [011] was overlain by a general spread of weathered stone [004]. The latter included a line of four, notably larger, flat stones aligned on the stone-hole. These were conspicuous in terms of size and the linearity of their alignment which did not correspond to the east–west bedding planes evident in the exposed bedrock. Their placement seems to be deliberate, explicitly referencing the standing position of the stone. There was no evidence of any coursing and it is interesting to note their apparent similarity to the 'slabs' noted by St George Gray at Porlock. Also from [004], and originally set against the westernmost end of the stone, came a tabular piece of worked quartz (0.07 x 0.07 x 0.05 m) with three widely spaced flake removals along the convex edge. This was the only artefact recovered from the excavation.

As excavation proceeded it became clear that the stone was located at a marked junction: to the immediate north-east bedrock was outcropping at the surface whilst to the south-east a thick peaty layer [010] had developed beneath the turf. A sub-rectangular chunk of split quartz (0.08 x 0.06 x 0.03 m) was recovered from this peaty deposit. Whether the outcropping rock was fully exposed at the time the stone was erected is unclear but it is evident that the stone was set at the point at which the natural bedrock begins to slope steeply.

Lanacombe III: stone C

In contrast to the 'clean' extraction at Lanacombe I, the pushing over of Stone C had caused considerable disturbance to the surviving archaeology. The stone was post-like in form, straight and approximately square in section. However, the ends were less regular, particularly the base which terminated in a noticeable spike (Fig. 11).

Following removal of the turf and reeds the stone-hole could clearly be seen cutting into a grey–brown silt with abundant small sub-angular stones [101]. A void at its south-west limit marked the former standing position of the stone (Fig. 11). Following excavation the stone-hole [106] was seen to be broadly circular in plan, 0.40 x 0.38 m across, and up to 0.30 m deep. In profile, the cut sloped gently from the surface before stepping down sharply to define an oval slot. At the south-west end the sides of the slot were near vertical, sloping upwards to the north-east. The stone [103] appears to have been erected hard against the vertical south-west face, with stability ensured by pushing the sharp basal spur down into the underlying natural. A thin, intermittent layer of firm brown silt [105], perhaps representing a weathering deposit, lay directly on the cut of the stone-hole. Packing stones had been wedged against the exposed back face of the stone and the remaining stone-hole backfilled with a dark orange–brown silt with abundant small sub-angular stones [104]. The shallow sloping upper 'rim' of the stone-hole was then levelled with a loose grey silt [102], into which a number of packing stones had been set vertically. Although there

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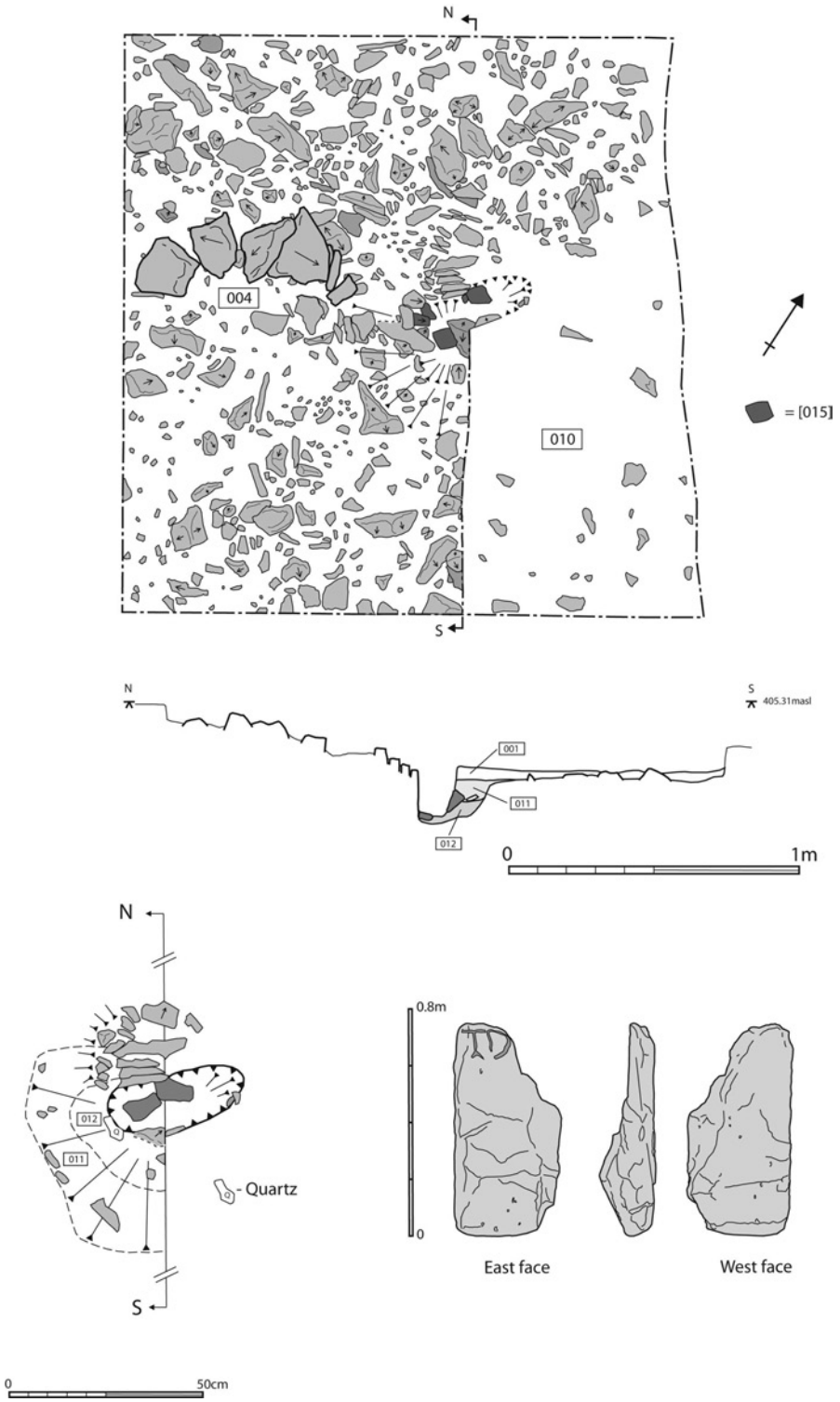

Fig. 10.
The excavation of Stone H, Lanacombe I (excavated April 2007)

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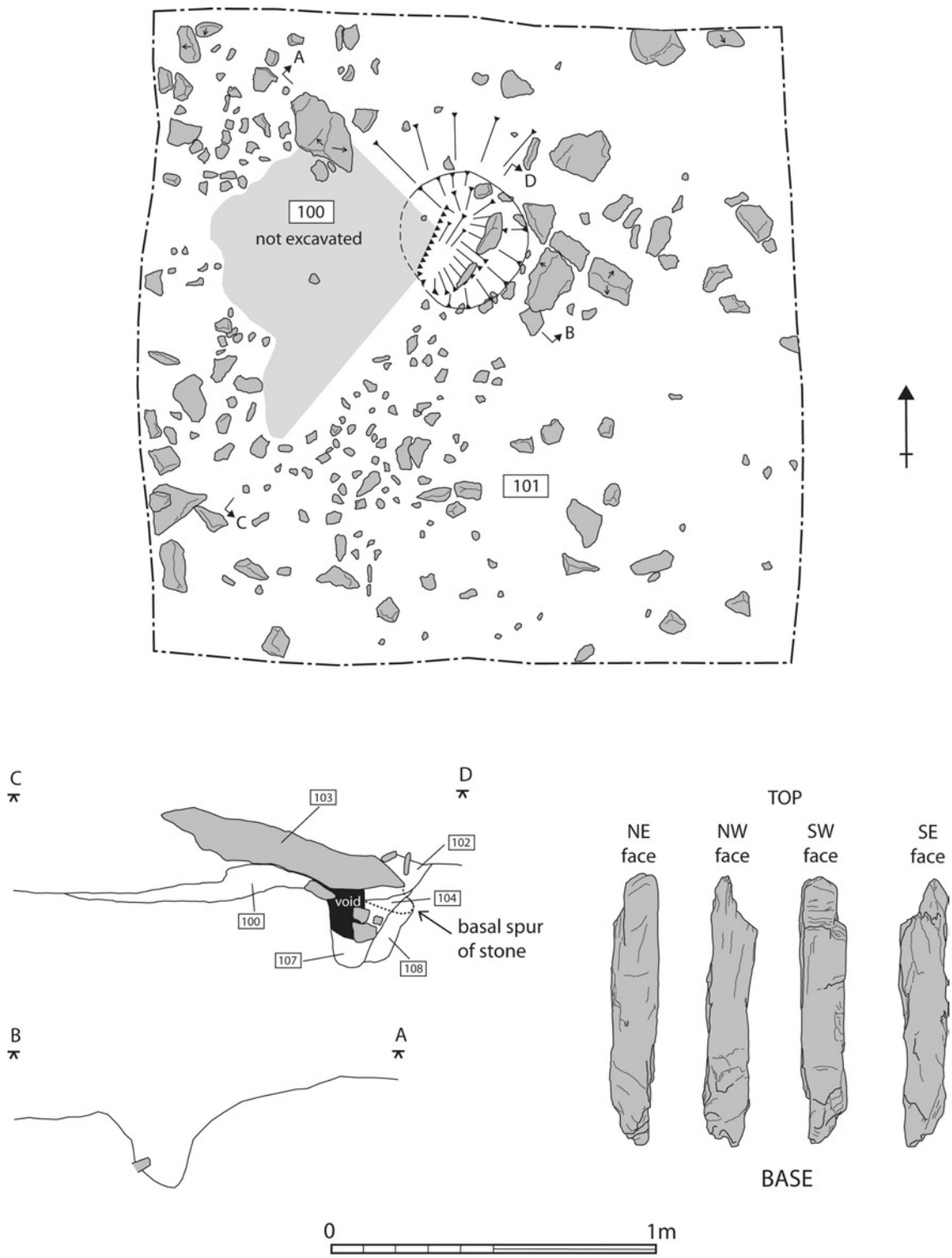

Fig. 11.
The excavation of Stone C, Lanacombe III (excavated September 2007; stone elevations drawn by Heather Adams)

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was no evidence of the linear arrangement of slabs seen at Lanacombe I, the cut of the stone-hole was bordered to the east by an arrangement of larger stones which did not appear to have been the result of disturbance caused by the toppling.

The force of toppling the stone had resulted in the sharp base ripping up through the stone-hole causing severe disturbance to the fills and profile. The very base of the stone-hole was filled with a deposit of loosely packed grey–brown silt and angular stones interspersed with notable voids [107], most likely churned material that tumbled into the vacancy left by the displaced stone.

DISCUSSION OF THE RESULTS

The geophysical results have certainly stressed the value of detailed resistance survey in the investigation of stone settings. Whilst the diminutive nature of the stone-holes makes it unlikely that former stone positions will be detected directly, it has proven useful in discriminating potential proxies for stone positions in the form of erosion hollows and has revealed strong correlations between the locations of settings and underlying geological trends. Perhaps most excitingly, it has highlighted the presence of a range of other structural features in the immediate vicinity of the Lanacombe settings in the form of fragments of a possible rectilinear field system, small cairns, and a ring cairn or hut circle, not all of which are visible on the surface. The implications are that many more stone settings may share close spatial relationships with other prehistoric features than has been previously recognised, and that geophysical survey provides an excellent survey tool for finding such features on the moor.

Geophysical survey has also confirmed a close relationship between the location of the settings and a particular geological feature, namely raised spreads of compact, shattered small stone. The off-crest location of these spreads, distinct macrofabric with clast imbrications, and the arrangement of the long axis of elongate stones with the slope axis, suggests they are a form of soliflucted deposit, or 'clitter' (Tilley *et al.* 2007, 208–12). Prior to the accumulation of the thin peat deposits on the moor, these raised stony areas would have had an enhanced visibility. At present the significance of this observed correlation between stone settings and clitter spreads is unclear: does it reflect a deliberate preference on the part of those erecting the miniliths, or are we only seeing settings on these geological features because they have not been enveloped by peat soil and the thick growths of purple moor grass that develop over it? The weight of evidence and observation favours deliberate siting of the stone settings on the clitter spreads.

The second question is whether such locations would have maintained a characteristic pattern of vegetation in the past? As has been noted, the scale of the settings is tiny and successfully relocating them can be difficult, requiring familiarity and an intimate understanding of the surrounding topography. In practice, identifying the distinctive vegetation patterns is, at present, the first stage in homing-in on the location of a given setting. The suggestion is, therefore, that stone settings may have been preferentially located in areas of the landscape that were distinctively *textured* in terms of vegetation cover in the past (Evans 2003, 45–72). However, as with all upland areas in western and northern Britain, the moor soils and the vegetation they support have undergone transformation since prehistory, through acidification, leaching, and peat formation (O'Connor & Evans 2005, 35–6), and also variation in regimes of land-use. It may therefore be the distinctive geology upon which the settings were placed that really mattered in the past.

Although small in scale, the excavations at the Lanacombe settings have produced some interesting results. Although a sample of two cannot be regarded as representative of all, there was notable variation in the character of the stone-holes and attendant technologies of stone erection. In the case of Lanacombe I, a roughly rectangular hole, approximately twice the size of the stone it was to receive, was created by grubbing out outcropping rock at the edge of a zone of geological transition. The base of the stone-hole was levelled using a thin layer of soil and small flat stones before the minilith was placed in the hole and pushed hard up against an edge defined by a vertical face in the outcropping rock. There was no evidence of any secondary supporting stones, or 'triggers', as have been noted elsewhere. At Lanacombe III a more regular pit was dug with a basal slot into which was placed a pillar-like stone. This was packed into position at the base using smaller stones and the upcast from the digging of the stone-hole. In each case the backfilling seems to have been a two-

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stage process, with distinctive upper levelling deposits sealing the primary fills. Variation in erection processes and stone-hole morphology could represent functional responses to different ground conditions, or even socially prescribed means of dealing with particular stone shapes, configurations, or places in the landscape. Further excavation should help to elucidate this issue.

At both settings there were indications of associated structural activity. At Lanacombe I a linear setting of flat stones had been placed adjacent to the stone-hole, whilst at Lanacombe III other slabs formed a perimeter to the stone-hole cut. These could result from later clearance activity, especially if areas of field system lie close by, as may be the case at Lanacombe II. Alternatively, they might hint at the existence of slight structures between and around the standing stones, or even a particular kind of lithic deposition focussed on the individual stones themselves. Such detail may seem trivial, but as a number of studies are beginning to emphasise, there is value in exploring the possibility that individual stones within larger settings carried their own significance, through material and biographical associations, perceived agency, and factors such as parent stone, shape, colour, and texture (Gillings & Pollard 1999; Pollard & Gillings 2009).

Unfortunately, artefactual material was virtually absent from the stone-holes, associated slab arrangements, and topsoil over the trenches, though this very absence may itself be telling with regards to the possible roles played by the settings. The exception was a piece of flaked quartz found in the spread of stones sealing the stone-hole at Lanacombe I. Two other pieces of quartz, both unworked, came from the same stone-hole, one seemingly deliberately pushed into the primary fill at the end of the long-axis of stone H and in direct physical contact with it. The quartz deposits look quite deliberate, reflecting an especial value to this rock that perhaps derived from its material qualities – colour, shimmer, and piezoelectric properties [3] – and a desire to physically incorporate its perceived efficacy within the stone settings. The deposition of quartz pebbles and fragments is well attested on Neolithic, Bronze Age, and even later monuments on Exmoor (Quinnell 1997, 17) and recent excavations at the site of Roman Lode, some 5.5 km to the south-west of Lanacombe, have raised the suggestion of deliberate white quartz extraction in the area in the early Bronze Age (Juleff & Bray 2007, 293). Deliberate deposition of quartz is also common elsewhere in the British Isles, the association with funerary contexts being strong, though not exclusive (*cf*. Tilley 1996; Burl 2000; Darvill 2002, Fowler & Cummings 2003).

Morphology

Survey at Tom's Hill, East Pinford, and Lanacombe has highlighted that the original formats of many of the stone settings may have been more complex than the simple rectangular arrangements that are recognisable in the field today. Piecemeal attrition has in many cases removed individual stones and there even exists the possibility that some settings have, subsequent to their identification as antiquities, been 'tidied-up' to create more geometric forms. In other instances, more complex and plan-incoherent settings such as those at Pig Hill 1 and Almsworthy Common (Riley & Wilson-North 2001, 29) could be composite constructions incorporating several individual arrangements whose form has been obscured by selective stone material. What we can take from these observations is the importance of considering each of the individual settings on its own terms, and care must be taken to reveal, rather than impose, geometrical regularity when making decisions regarding the veracity of potential settings and hollows.

At East Pinford possible broken and fallen stones were identified which, if part of the original fabric rather than natural uprights, would give the setting a form more reminiscent of a double stone row some 25 m in length; while the double stone settings in the central-western portion of the monument raise the possibility that the broken stumps represent elements of an earlier, subsequently reworked phase. Even if the 'extra' stones are the product of natural rather than human agency, the way that they are framed by the obviously 'artificial' uprights indicates careful incorporation, perhaps even a desire to emulate features of the clitter macrofabric. In all cases the size, shape, and orientation of the monuments appear to be constrained more by the need to restrict the settings to narrow bands of clitter and other features of geology (eg, the downslope outcrop at East Pinford) than by rigid adherence to a geometrical archetype. This conflation of 'natural' and 'cultural' structure is increasingly observed in prehistoric stone monuments (Bradley 2000; Bender *et al.* 2007), telling of an intimate engagement with the perceived agency (be it potency, efficacy, or mythic position) and aesthetics of geological forms.

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Dating evidence

Neither closely datable artefacts nor sealed deposits containing organic materials suitable for radiometric dating were encountered during the excavations and so little more can be added to our knowledge of the chronology of the settings. This said, one very positive outcome of the work has been the recognition that sealed deposits of packing soil exist, which, if undisturbed by recent toppling events, may well prove amenable to luminescence-based techniques.

The postulated late Neolithic–Bronze Age date range for the settings remains most likely. The geophysical survey results hint at a closer association with small cairns and cairn-defined field systems of Bronze Age date than might previously have been suspected; while the small stone technology that defines the settings is shared with more obviously 3rd and early 2nd millennium BC monument forms such as the stone circles at Porlock and Withypool Hill and Exmoor's stone rows (Riley & Wilson-North 2001, 24). It is, of course, possible that the structural associations have real chronological depth, with the stone settings being earlier (firmly Neolithic) features that acted as foci for the later placement of cairns, in much the same way as some lowland round barrow cemeteries were 'anchored off' earlier long barrows. Reversing that sequence, small stone monumental architecture is also known from the later 2nd millennium BC, as with the trapezoidal setting of over 2000 small stone uprights associated with a larger standing stone at the Devil's Quoit complex, Stackpole Warren, Pembrokeshire (Benson *et al.* 1990); it is not inconceivable that Exmoor's settings may be contemporary with, or even immediately post-date, the establishment of middle Bronze Age field systems on the moor.

CONCLUSION: WIDER FRAMEWORKS

So far we have resisted speculation over the function of the settings. There are, for example, no grounds for believing the settings incorporated astronomical alignments (Dray 2003) or served a funerary role. Nonetheless, frameworks for interpretation can be offered that work around concepts of marking and memorialisation, framing and materiality. With the first, we could envisage the settings as place or event markers, enhancing and articulating the qualities of particular landscape locations, and/or serving to perpetuate the memory of episodes of occupation or of individual people or lineage ancestors (eg, an equivalent to the practice of digging pits and depositing materials seen in other regions: Thomas 2007). Exploring the concept of framing, the settings are more actively deployed as devices for structuring gatherings, and orchestrating the arrangement of participants and/or connections between participants and the surrounding landscape. Structural rather than direct analogy could be drawn with the Bronze Age and Early Iron Age Khirigsuurs of the Mongolian Steppe (Wright 2007). Relatively small, often comprising mounds with surrounding stone settings, and generally unproductive of archaeological material, these monuments are intimately linked with nomadic pastoralism, serving as 'organizing frameworks, stages for activity or sighting points in the landscape' (*ibid.*, 353). In this model the settings become locations for periodic gatherings that involved staged performances in which the stones served as points of spatial reference for the organisation of participants and ceremonies. However, unless specific evidence for gathering can be found, we must be aware of the possibility that the Exmoor settings were rarely if ever visited once constructed: ie, they may not have worked as architectural spaces built with the intention of use as we conventionally understand it. Given the results of the fieldwork described here, the final framework, that of materiality, perhaps offers the most productive route for future exploration. Within this attention is drawn to the engagement with clitter spreads and other physical landscape features, with the process of acquiring stone, its working and incorporation within the settings, and the agental, biographical, and aesthetic qualities of the substances involved. The inventive 'play' of stone, soil, and landscape might here have taken central stage.

We should also take the scale of these settings, which makes them virtually invisible in the landscape, as a key issue in itself. Their intimate scale suggests a familiarity with the landscape and with subtle features of its geology that must have arisen through long-term inhabitation, whether this involved permanent settlement or repeated seasonal return to upland areas. In fact, if we wish to define a shared characteristic of the Exmoor settings, it is surely their underwhelming presence. To even call these settings 'monuments' flies in the face of conventional understandings of monumentality, which foreground

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grand scale, physical pre-eminence, high levels of labour and craft input, and durability. Unlike a conventional stone circle or round barrow, an individual minilithic setting could be erected by a single person in the space of an afternoon. As such, many of the recent approaches that have characterised the interpretation of monumentality during the British Neolithic and early Bronze Age, and especially those focused on the great monument complexes of the later Neolithic (eg, Cummings 2008; Harding 2003; Parker Pearson *et al.* 2006; Gillings *et al.* 2008), seem only marginally relevant for our understanding of the Exmoor settings. For example, because of their diminutive, even personal, scale, it is difficult to envisage how the stone settings might reflect kinds of social hierarchy (eg, Renfrew 1973), or provide the material conditions through which forms of social inequality might be generated and naturalised (eg, Thomas 1993; Barrett 1994). The minilithic settings are not constructions that bespeak of power relations, or at least not those sorts of relations that characterise institutionalised modes of authority. In this respect, it is surely significant that the settings display no evidence for a monumentalising tendency – in other words, there is no continuum in scale from the very small to the truly monumental that might characterise social competition through construction. Instead, it was surely the power of place, of physical components of the landscape (*cf.* Richards 1996; Bradley 1998; 2000), and of other associations that mattered in their creation.

The minilithic settings of Exmoor are key components of a rich prehistoric landscape that have the potential to challenge and enrich ongoing debates regarding monumentality in later prehistory. Despite their number, potential significance and remarkable range of configurations, compared with the attention that has been focused on other monument forms elsewhere in the British Isles, their relative neglect is remarkable. We suspect such neglect is a consequence of their diminutive scale, and that when it comes to archaeological research on prehistoric stone monuments size has often mattered (Pollard & Gillings 2009). Yet in their own way, within their own past terms of reference, the Exmoor settings were significant engagements with the landscape and played an important role in its inhabitation. They neatly highlight the interpretive challenge which faces studies of landscape and monumentality: to acknowledge the ways in which individual landscapes of monuments vary in scale, sequence and detail; the focus that is required on diversity and difference, as well as similarity; and the need to understand local contexts and transformations, as well as broader inter-regional ideologies and cosmologies.

Technical Note: All soil resistance surveys were carried out using a Geoscan RM15 meter and twin-probe array. At Tom's Hill and east Pinford samples were taken on a 1.0 x 1.0 m grid, whilst on the Lanacombe sites a sample interval of 0.5 x 1.0 m was employed. The fluxgate gradiometer surveys of Toms' Hill and East Pinford were carried out using a Geoscan FM36 whilst the Lanacombe surveys employed a Bartington Grad 601. In each case the sampling interval was 0.25 x 1.0 m. All processing was carried out using Geoplot 3.0 and Archaeosurveyor 2.0.

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Endnotes

1. Attempts have been made to 'fit' selected stone settings into established monument classes but these are at best tentative and lacking in conviction. Take, for example, the attempts of Eardley-Wilmot and Burl to see them as variant four-posters (Eardley-Wilmot 1983, 35; Burl 1988, 29–30).
2. Although referred to as the 'Little Tom's Hill' setting in earlier accounts, by the time of the RCHME survey the name had been simplified to 'Tom's Hill' and it is the latter that appears in the gazetteer of Riley and Wilson-North and the Somerset HER.
3. Juleff and Bray raise the interesting possibility that the widespread evidence of early Bronze Age crushing and breaking of quartz at the Roman Lode site may be related to precisely this property.

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