CHAPTER THREE: THE COLONIAL LANDSCAPE -URBAN AND RURAL COMMUNITIES (THEME THREE)

THE EARLY COLONIAL SETTLEMENT AND LANDSCAPE OF NEVIS AND ST. KITTS - AN INTRODUCTION

Roger Leech and Bruce Williams

Research Aims

"The early colonial settlement and landscape of Nevis and St Kitts" is the title given to the project supported from 2001 by the British Academy and the Society of Antiquaries of London and being undertaken in association with the Nevis Historical and Conservation Society and the St Christopher Heritage Society. The overall aims of the project are to formulate a strategy and plan for a wider study of the two islands of Nevis and St Kitts, reconstructing the colonial landscape of each island from the sea to the mountain, using the field evidence in conjunction with documentary sources, to transform our understanding of the seventeenth-century English colonisation of the Leeward Islands. The work on Nevis, being undertaken by the University of Southampton and Bristol City Museum, is centred on the former Pinney estates, especially on Mountravers and adjacent areas of landscape. The work on St Kitts is being undertaken largely by the University of Bristol and is centred on the Wingfield and Romney estates.

Our first specific objective in the project is to reconstruct two samples of colonial landscape, from Nevis and St Kitts. These will enable a view and interpretation of the enclosed European landscape of the 1630s onwards. Within these landscapes we will identify/record roads and other routeways, plantation houses and works, villages, yards and allotments of enslaved Africans, water supply and other plantation infrastructure, and the relationships of these to the urban settlements.

Secondly from this data we aim to understand how European, African and indigenous cultural identities were transformed in the economies of the seventeenth-century Caribbean and Atlantic. From the assessment we can already begin to see how English building techniques were combined with those from the Americas to create a new housing culture. We can also begin to see possibilities for identifying the earliest slave villages, of the mid to later seventeenth century, which in turn will enable us to provide new insights into the emergence of African-Caribbean cultural identities. In both these areas we will be looking for the archaeology of the indigenous Amerindian peoples, collaborating with colleagues researching the prehistoric settlement of Nevis.

Thirdly we aim to begin to understand how to provide archaeological perspectives on the economic and social changes resulting from the seventeenth-century establishment of tobacco and then sugar production, and on who and what was involved in the Atlantic trade.

The methodologies being used to achieve these objectives are several. Mountravers on Nevis and Wingfield on St Kitts have been selected from the assessment as the two sample landscapes, each extending through scrub and rain forest from the sea to the mountain and each well documented from the early eighteenth century in the Pinney and Jefferson papers (in Bristol University and Hamilton College, N.Y., respectively).

Within these now partly forested areas various techniques are being evaluated, including GPS (Global Positioning by Satellite), topographic survey, and the use of historic air photographs and maps, for the reconstruction of the early colonial landscape, boundaries and roads. For the plantation centres, works and slave villages, we are evaluating surface pick up, archaeo-magnetic dating of production sites, shovel pitting and very selective excavation, the last intended to enable predictive modelling of erosion/deposition.

We are also exploring the potential of the documentation, in the Nevis records, in available estate papers and in the PRO. In the fieldwork and in the preparation of the interims and final report the two

university departments will be working together on the two adjacent islands and in subsequent seminars, maximising the intellectual input from students and others involved in the project. It is also important that we maintain close contact with other research projects on the two islands.

Fieldwork and research in 2002

From the fieldwork undertaken in 2001-2 on Nevis and St Kitts a clearer picture is emerging of the small-scale plantations of the seventeenth century and the consolidation of these small farms into the much larger estates of the eighteenth and early nineteenth centuries. On Nevis, archaeological field survey is identifying a relict landscape of the seventeenth century. This has resulted from a process of consolidation, leaving abandoned small plantation nuclei, planters' houses, servant and slave houses, to be identified archaeologically, both within the later plantations and also above the gradually receding later altitudinal limits of cultivation for sugar. On the higher slopes erosion has been a major factor contributing to the abandonment of plantations.

As in 2001, the main focus of our work on Nevis has been at Mountravers (described in more detail below by Andrew Townsend). This year attention was directed at the plantation house, garden and works yard. The plantation house can now be seen to have undergone at least four phases of substantial rebuilding and extension. The earliest house yet identified is of the seventeenth century. Four substantial post holes correspond to one side wall of this house; the likely building date, well before c.1680, is likely to be established from the commencement of the pottery, clay pipes and other dated series of artifacts from the site as a whole. This was succeeded by a house with stone walls, cellared on the downhill side and built at right angles to the contours. This is the house reported on last year, the Freeman "great house" built c.1680; one internal feature must have been decorated with blue and white delft tiles.

This year's great surprise was the realization that the house that succeeded the Freeman house, the house built in the 1700s, was twice as large as originally thought. We now know this house to have been built to two rooms in depth. The western part was built up over the brick and stone paved cellars examined last year. The eastern part was on the same level as the garden, which is now seen to have been laid out to a regular geometric design. Garden deposits from the eighteenth and nineteenth centuries appear to include as much African-Caribbean as European pottery types.

At Mountravers Nigel Fradgley from English Heritage also extended the survey of the Huggins period house. The clearance of vegetation on a much larger scale than previously by the Island Prison workforce enabled the north side of the house to be recorded from the exterior for the first time.

Field survey of sites in the Mountravers transect continued. Close to Mountravers the house, mill and boiling house at Scarborough's was planned and recorded. Uphill of Mountravers, the survey of Woodlands undertaken in 2001 was augmented with the survey of an even higher plantation site above Rossington - in the absence of a known name we have called this Upper Rossington. At both Scarborough's and Upper Rossington the works and house were possibly of the late seventeenth or early eighteenth century.

Downhill of Mountravers, the site at Pinney's Yard was planned and recorded. In the seventeenth century this was the plantation first of William Leach, then of William Alleine, later known as Charlot's and then acquired by Azariah Pinney. Survey has identified what is probably the cellar of the seventeenth century stone house, and, of especial interest, a possible stone enclosure wall around the plantation buildings as a whole. Close to the sea, it would be of great interest to know if this site was originally provided with a quasi-fortified enclosure wall.

Forming part of the Mountravers estate by the late nineteenth century was the site recorded on the Iles map as “Paris's”. Those familiar with the minutiae of this map will have noticed how Iles records two places as "Pariss” and “Paris's" respectively. On an estate map of 1879 these are noted as “Parris old works” and “Parris Garden”. Survey has now provided an explanation of this duplication and distinction. Paris's works are still visible behind Seafood Madness. Paris's Garden is a little more

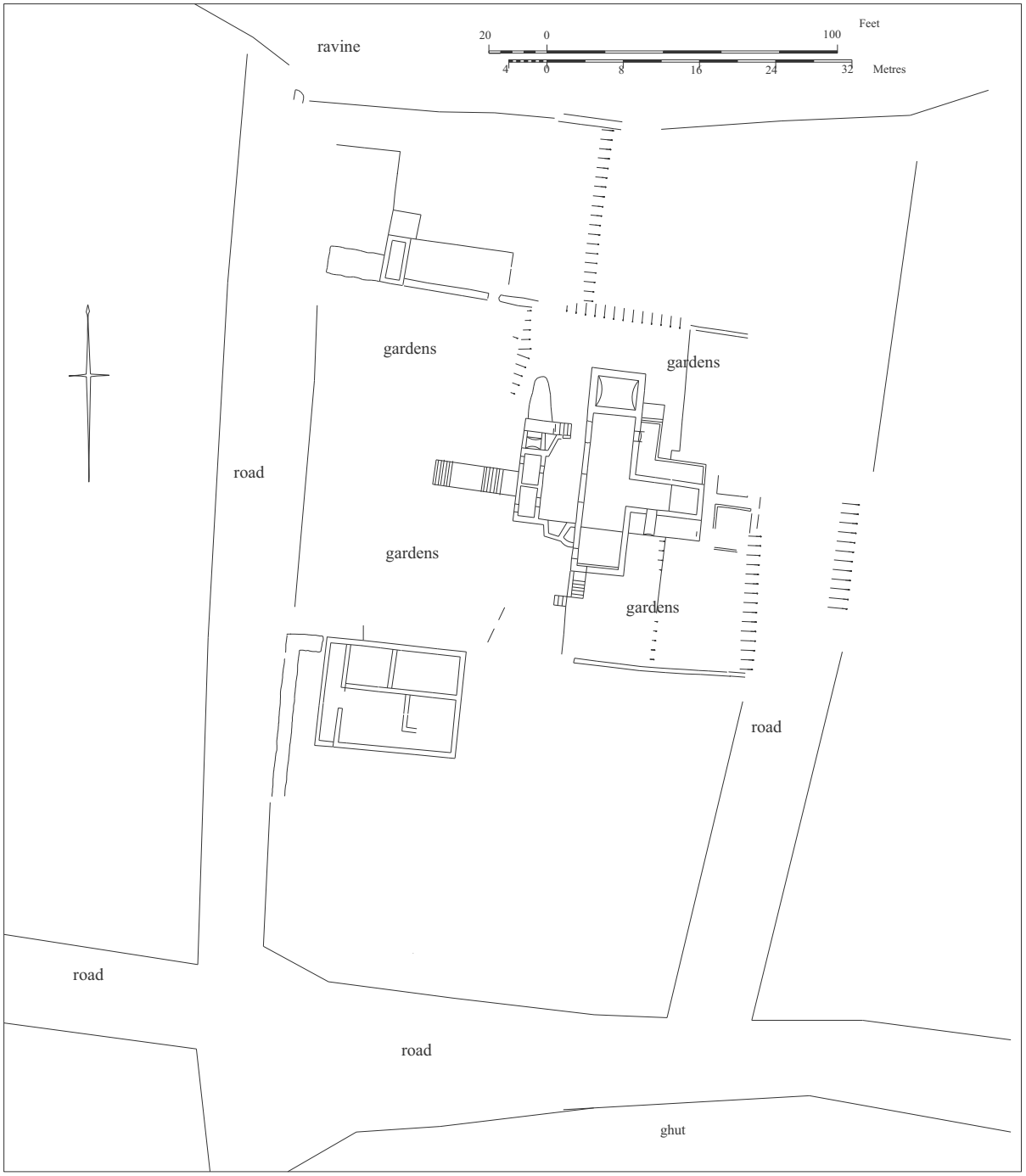

Fig 3.1 Paris's Garden, 18th century villa above Charlestown, from survey and air photography

Fig. 3.2 Paris's garden, the steps to the veranda of the eighteenth-century villa above Charlestown, former windows to the vaulted cellars on either side of the steps

Fig. 3.3 Upper Rawlins, Nigel Fradgely of English Heritage speaking to members of the Nevis Heritage and Conservation Society on the Sunday afternoon visit to the seventeenth-century plantation site

difficult to access - our first visit from Mountravers some 800 metres to the north took over four hours through the bush and Acacia! Survey has revealed the remains of an out of town villa, certainly built there by the eighteenth century (Figures 3.1and 3.2). The house was positioned for the view, forms part of a geometrically arranged ensemble of buildings and associated structures, and was set within a formal garden the outlines of which can still be traced. There are no associated works, confirming that this is a villa of the type that contemporary wealthy merchants in cities such as London and Bristol would have built for themselves, distanced from their places of business and industry.

Away from Mountravers, but in a transect which includes the Pinney estate at Clay Ghut, we undertook a survey following the suggestion and enquiry originally made by the Premier, the Hon. Vance Amory. This survey was of an enigmatic site first relocated in 1999 by Mr Edward Herbert. Following further reconnaissance in 2001 we concluded that it was probably a sugar plantation of early date, at a high altitude where soil erosion would have set in early on, and therefore a complex of ruins of the seventeenth century probably not much altered by any later rebuilding (Figures 3.3 and 3.12). This indeed proved to be the case. Once cleared of shrubs and thick vegetation by the Prison workforce, the interconnected elements of mill platform, plantation house and boiling house were all visible. The house was a simple rectangular structure similar to that at Scarborough's. The boiling house was characterized by a Spanish Train, i.e. with separate hearths to each copper, subsequently modified to be a Jamaica Train. Adjacent were further platforms cut into the hillside for smaller buildings. These could be the sites of houses for either indentured servants or slaves, or perhaps both. We will be assisting Mr Herbert with a booklet for visitors to this site, named provisionally as Upper Rawlins, at 1300 feet one of the highest and also one of the least altered seventeenth-century plantation sites easily visible on any of the former English islands in the Caribbean.

Geophysical survey of Cottle churchyard in 2001 was thwarted by the ground being too dry. In 2002 conditions were more favourable. A second survey, again at the invitation of the Cottle churchyard project, was undertaken by Emily Dodd, a geophysics undergraduate (see below for a fuller summary).

MOUNTRAVERS: THE 2002 EXCAVATIONS

Andrew Townsend

The 2002 excavations at Mountravers comprised two operations, first the continuation of the excavation work in the cellar area commenced by Time Team in 1998 and the present project in 2001, and secondly the opening up of a new excavation area in the garden area immediately to the south of Mountravers House, previously investigated in 2001 using only test-trenches.

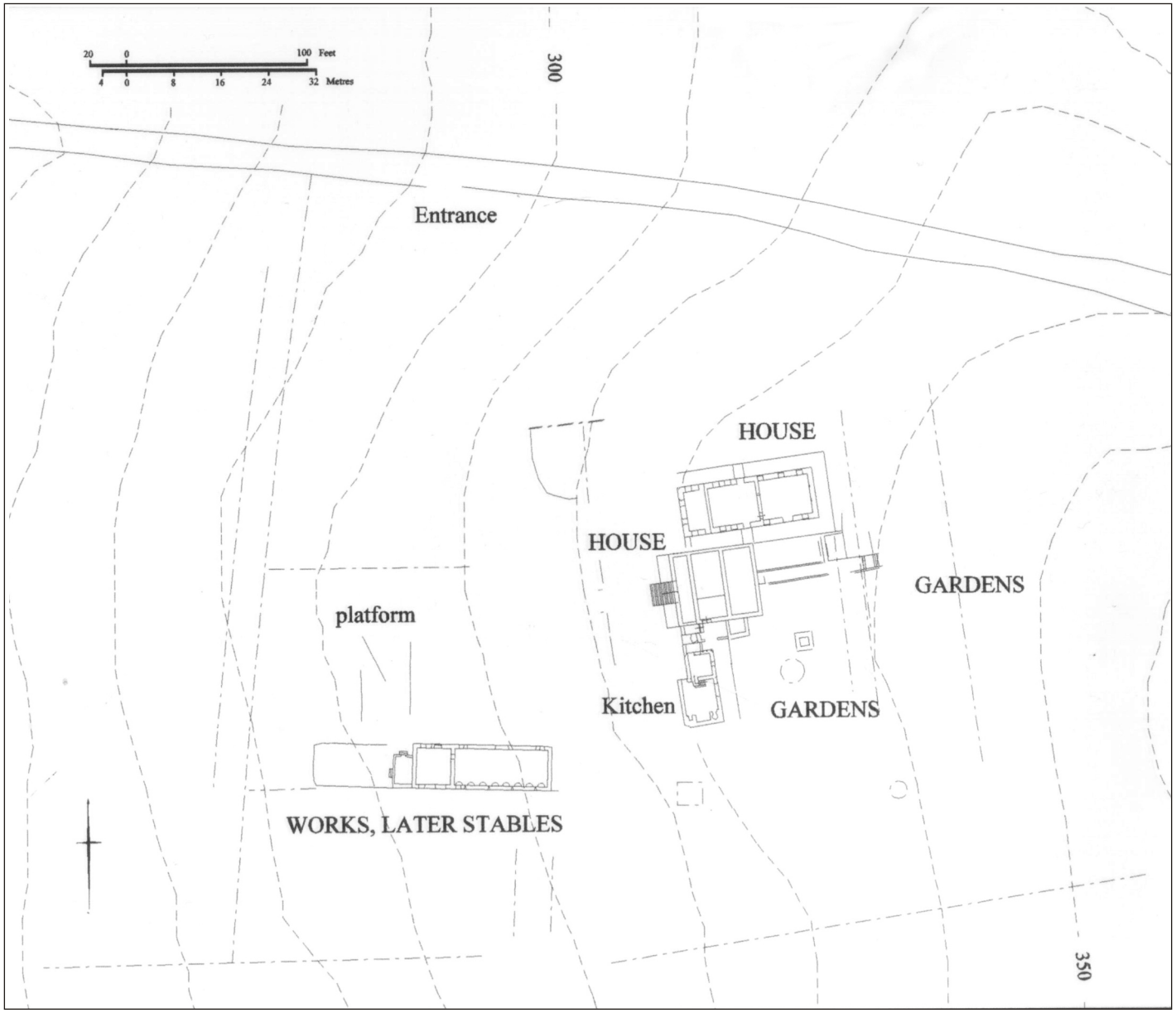

Fig. 3.4 Mountravers, plantation yard, 2002: survey and excavation (solid) and from air photography (dot/dash)

The cellar area

On commencement of the present season, the cellar area generally comprised walls (703)-(706) (729) (734), surfaces (707) (709) (714) (733) (737) and other features. Surfaces (733) (707) (709) were partly removed in 2001. The natural bedrock (732) had been exposed in areas due to the part-removal of surfaces (707) (733). What appeared to be a rammed-earth surface (737) was also exposed after the part-removal of (709). A feature of particular note was a post-hole (739) and fill (740)/(742) exposed in the south of the area.

In 2002 the remaining areas of surfaces (709) (714) (733) were removed. A cut [743] was exposed in deposits (707) (708) (732) and wall (730). The feature contained a brick-built feature (747), external dimensions 0.83 x 0.64 m, filled by deposit (746). Two further deposits (744) (745) also filled cut [743] but lay above feature 747. A mortar platform (763), possibly the remnant of a structure, was exposed at the top south-west corner of feature (747).

The removal of surface (714) exposed a deposit of light-brown soil (749) that, itself, overlay a deposit of dark-brown soil (754). A cut [753] was exposed in the latter deposit and contained a series of fill-deposits (752) (755) (758) (760) (761). The removal of the fill-deposits revealed that the feature comprised a sub-rectilinear cut, maximum dimensions on plan 2.76 x 1.00 m, maximum 0.70 m in depth. The base of the feature comprised natural bedrock (732). Two half-brick-thick sleeper walls (756) (757) were constructed within the cut, both of roughly east/west orientation and founded on the natural bedrock (732).

Two stone-built walls (750) (762) were exposed and appeared to relate to the same structure as wall (730) exposed in the 2001 season. Wall (750) was of north/south orientation and appeared to directly underlie deposit (749), while wall (762) was of east/west orientation and directly underlay wall (706). It was observed that wall (750) was founded directly on the natural bedrock (732).

Two cut-features [764] [766] were exposed in the bedrock (732), both roughly curvilinear on plan. Feature [764] was 0.19 m in depth and filled to its extremities by soil deposit (765). Feature [766] was 0.39 m in depth and filled to its extremities by soil deposit (767). Both features appeared to relate to the same earth-fast structure as feature [739] exposed during the 2001 season. Note that features [739] [764] [766] formed a roughly north/south alignment.

The garden area

At the commencement of work in 2002 the entire area of the former garden to the east of the cellar was heavily overgrown with vegetation which was cleared initially in order to ascertain any features remaining visible on the surface. A total of three test-pits had been excavated in the area during the 2001 season (see 2001 Report: Fig. 3.1).

Initially a deposit (810) comprised of stone-rubble, brick and tile fragments strewn over the surface was exposed under the surface-vegetation. The deposit appeared to consist of material arising from demolition activities that was randomly spread over the ground surface. A series of brick/stone linear features (811) (812) (814) (815) were also exposed on the surface and appeared to comprise the remnants of edging-features, pathways, planting beds and the like.

An area some 9.80 x 8.60 m on plan was then stripped of the overlying topsoil (809) and debris-deposit (810) revealing the truncated walls of a substantial stone-built structure, a gravelled pathway, and planting areas associated with a formal garden. The remnant of a structure referred to as the 'pantry' building was also exposed in the south-west corner of the excavation area although this was not investigated in detail.

Walls (802) (824) were partly exposed during 2001 and were further investigated during the present excavation season. A soil deposit (823) underlying deposit (817) fully exposed the base of wall (824)

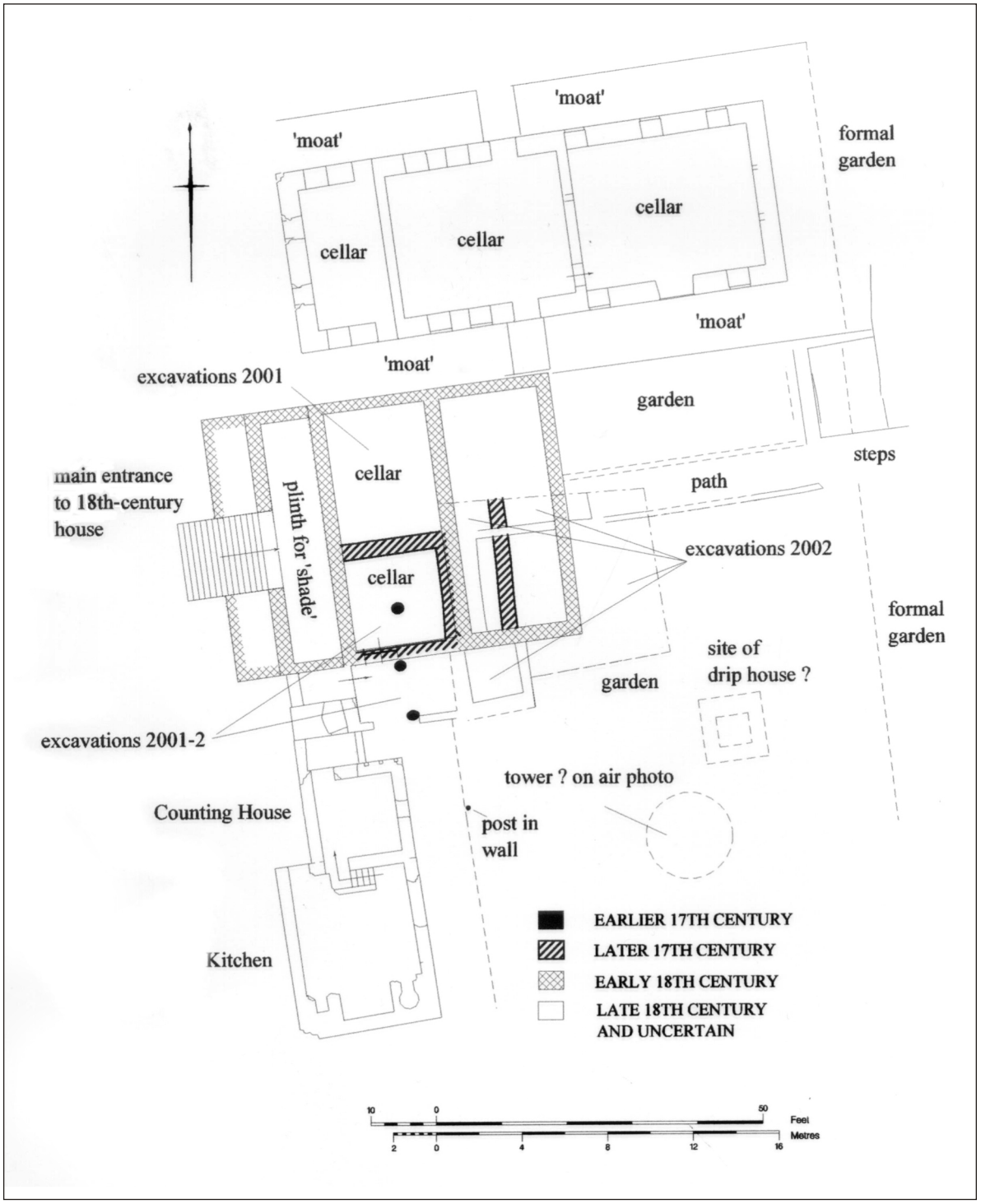

Fig. 3.5 Mountravers, dwelling house complex, the earliest house evidenced by three post holes

and cobbled surface (805)/(841)/(847). A test-pit, 2.2 x 0.90 m on plan, remained from the 2001 excavation season and incorporated wall (803) and stone surface (805). A spread of soil and rubble (816) was exposed in the north-west corner of the area. The deposit overlay a brown-coloured loam that, itself, overlay a cobbled stone surface (847=805/841). The location and extent of deposit (816) suggested that it comprised the base for an access-path to Mountravers House.

Two substantial stone-built walls (818) (819) were exposed. Wall (818) was of north/south orientation. The wall continued beyond the north section of the excavation area but joined up with wall (819) at its southern end. The total length of the wall, as exposed was 6.60 m, maximum width 0.70 m. Wall (819) was of east/west orientation. The wall joined up with wall (818) at its eastern end but the relationship of its western end with adjacent features (e.g., wall 824) was uncertain. The total length of the wall, as exposed, was 4.40 m and its maximum width 0.65 m. The area to the west of wall (818)/north of wall (819) was covered by a dark-brown loam (817) overlying the natural bedrock (806)/(838).

A stone-built wall (822) of north/south orientation was also exposed. The wall proved to be a continuation of wall (803) exposed in 2001 and was also exposed north of wall (802) where it was assigned context (844). The northern end of the wall appeared to continue under wall (802) but the relationship of its southern end with wall (819) was uncertain.

A stone surface (841) was exposed and was a continuation of that (805) exposed in 2001. The area exposed comprised a north/south strip, 0.90 x 4.30 m on plan. The surface appeared to abut wall (822) to the east. To the west, the wall appeared to continue under soil deposit (823) underlying wall (824). The surface was also exposed to the north of wall (802) where it was assigned context (847).

A roughly square stone-built feature comprised of walls (835) and (840) was exposed. Wall (840) was of north/south orientation and wall (835) of east/west orientation. The northern end of wall (840) continued beyond the excavation section while its southern end joined up with wall (835). The western end of wall (835) appeared to abut wall (818) while its western end joined up with wall (840). The area to the west of wall (840)/north of wall (835) was covered by a brown soil deposit (837) that overlay the natural bedrock (806)/(838).

A rectilinear stone- and brick-built feature comprised of (826)-(829) was exposed adjacent to the east flank of the excavation area. A box-section excavated inside the feature revealed that (826)-(829) partly demarcated a trough [849] cut into the natural bedrock (806)/(838). The trough was filled by brown-coloured soil deposits (832) (845).

A further rectilinear feature comprised of stone- and brick-built features (828) (830) (831) appeared to be a continuation of that comprised of (826)-(829) and was filled by a brown soil deposit (833). Two areas of gravel surfacing (825) (834) were also exposed. Deposit (825) was the largest of the two, maximum dimensions 6.90 x 2.60 m on plan, and covered the area roughly between wall (818) and features (829) (831). The south-west corner of the deposit was possibly separated from soil deposit (836) by a crude arrangement of stones (851). Deposit (834) was situated in the north-east corner of the excavation area, north of feature (826) and east of feature (840). The deposit continued beyond the north and east sections of the excavation area. Note that a box-section excavated in deposit (825) revealed that it overlay the natural bedrock (806)/(838).

Discussion

The work in the cellar continued that undertaken by Time Team in 1998 and by the present project in 2001. While further investigation is required, it is possible to confirm at this stage that the features and deposits exposed probably relate to the seventeenth-, eighteenth- and nineteenth-century uses of the site. Furthermore, a number have been linked to those exposed in 1998 and 2001.

The seventeenth century

In the cellar area a number of features were probably of the seventeenth century. Features [764] [766] were cut into the bedrock (732) and probably housed the structural elements of an earth-fast building.

The features appeared to relate to a cut-feature [739] exposed in 2001. Combined, the three features formed a roughly north/south alignment adding weight to the argument that they related to the structural elements of a building. The evidence suggests that the building pre-dated that comprised of stone-built walls (730) (750) (762).

Walls (730) (750) (762) appeared to comprise the major structural elements of a rectilinear building of seventeenth-century date. The west wall of the structure was not encountered. Although further investigation of the structure is required, it is plausible to suggest that the building related to the structure comprised of wall (803)/(822)/(844) and surface (805)/(841)/(847) encountered in the garden area (see below). The possible seventeenth-century date of the building suggests that it comprised part of the house built for the Freeman family in c.1680.

In the garden area were further features of the seventeenth century. Two stone-built walls (822) (844) comprised a continuation of wall (803) exposed in 2001. Two areas of cobbled-stone surface (841) (847) were exposed. Surface (841) related to wall (822) while (847) related to wall (844). Both surfaces appeared to comprise a continuation of surface (805) exposed in 2001. It appeared that walls (803) (822) (844) and surfaces (805) (841) (847) formed part of a rectilinear building, possibly the same as that formed by walls (730) (750) (762) exposed in the cellar area (see above).

The eighteenth century

No features or deposits of the eighteenth century additional to those recorded in 1998 and 2001 were exposed. Part of the cellar floor surface was, however, removed during 2002. A brick-built structure comprised of cut [743] and wall (747) possibly functioned as a sump formed in the eighteenth-century cellar floor, and was itself of the nineteenth century. Feature [753]/(756)/(757) appeared to be of nineteenth-century date although its possible function was not ascertained. A large quantity of iron nails were recovered from fill-deposits (752) (755) (758) suggesting that the feature in its original form was mainly of timber construction.

Within the garden area two substantial stone-built walls (818) (819) appeared to comprise the major structural elements of a rectilinear building of the eighteenth century. Wall (818) continued beyond the northern edge of the excavation area. The relationship of wall (819) to the 'pantry' area and wall (824) was not fully ascertained and warrants further excavation. The remnants of a sub-floor deposit (817) was exposed north of wall (819)/west of wall (818) indicating that this area probably comprised the interior of a building. The evidence suggests that the walls comprised part of the house built in the early-eighteenth century.

Of the eighteenth or nineteenth century was a series of stone/brick-built linear features (826)-(831). The features enclosed two soil-filled cuts [849] [850] in the bedrock (806)/(838). Box-sections excavated through the features led to the conclusion that each functioned as a planting trough. Given the relatively thin covering of topsoil over the garden area, additional depths of soil would have been required in order to provide adequate rootage for bushes and trees. Two further stone-built features, (835)/(840) abutting wall (818), (851) abutting wall (819), also possibly functioned as a planting features. Two areas of gravelled surface (825) (834) were exposed. The location of the surfaces suggested that each comprised a garden pathway. Both surfaces continued beyond the area of the excavation. The overall impression gained from the planting-features and gravelled surfaces strongly suggested that they comprised part of a formal garden. Further exposure of features and deposits to the north, east and south of the present excavation area will facilitate a much clearer picture on the precise layout and extent of the garden.

Nineteenth and twentieth centuries

A deposit (816) comprised of rubble interstratified with soil was exposed north of wall (802). The location of the deposit suggested that it comprised the sub-base for a pathway leading from the garden area to the nineteenth-century Huggins family house situated to the north. Walls (802) (824) appeared to comprise part of the same nineteenth-century Huggins garden. The evidence suggests that a formal garden existed in the present excavation area during the eighteenth century and was remodelled in the nineteenth century on the construction of the Huggins family house.

Fig. 3.6 Mountravers, the early nineteenth century house, north and south elevations, drawn by Nigel Fradgely

Following initial clearance of vegetation a significant quantity of building-related debris (810) was observed strewn across the excavation area. The remnants of brick- and stone-built features were also visible protruding above the level of the topsoil. The removal of the topsoil (809) also exposed stone- and brick-built walls and gravelled surfaces.

Conclusions

The 2002 season of excavations at Mountravers exposed deposits and features relating to the seventeenth-, eighteenth- and nineteenth-century uses of the site, adding to the data obtained in 1998 and 2001. Features relating to a seventeenth-century earth-fast building were exposed in the cellar area. Stone-built walls of seventeenth-century date were also exposed in the cellar and garden and were probably associated with the house built for the Freeman family in c. 1680. Further stone-built walls of eighteenth-century date were exposed in the cellar and garden area and were probably associated with the house built in the early-eighteenth century. The remnant of a formal garden, including gravelled

Fig. 3. 7 Mountravers, the lower part of the seventeenth to eighteenth century houses, two postholes for an earthfast building in the fore ground

Fig. 3. 8 Mountravers, excavations as completed in 2002,visit from the Director of Planning, left to right: Lilpeth Richards, Stephen Metcalfe, Kristopher Poole, Simon Williams, Rebecca Buckley, Laura Gadsby, Lisa Barlow, Tusa Sokoni, Claire Forshaw, Vince Hubbard, Rebecca Sams, Alastair Threlfall, Lester Blackett (Director of Planning), Roger Leech (Photograph by Bruce Williams

Fig. 3.9 Mountravers, the planning and recording of the structural sequence above the cellar

Fig. 3. 10 Mountravers, the 2002 excavations at an early stage

Fig. 3. 11 Upper Rawlins, the flue to the hearth beneath a single copper has been blocked when a Spanish Train has been converted to a Jamaica Train

Fig. 3. 12 Upper Rawlins, the Jamaica Train of the boiling house, a modification of the earlier Spanish Train

pathways and planting troughs were exposed, possibly of eighteenth- or nineteenth-century date. Two features of nineteenth-century date were exposed in the cellar. One of the features possibly functioned as a sump while the function of the other feature could not be determined.

THE FINDS FROM MOUNTRAVERS, 2002

Rachel Heaton

The finds assemblage for the excavation at Mountravers Great House consisted of 3293 artefacts. There were a range of materials including pottery, glass, and animal bone. All artefacts have been recorded and quantified, though only the pottery and decorated tile have been analysed at the present time.

Metals

There were 1155 metal objects retrieved during the 2002 summer excavation. Approximately 99 % of these objects are made of iron and although all are corroded, most are easily identifiable as structural nails. The remaining 1 % of metal objects are made of lead or copper alloy and include pieces of wire and window lead.

The assemblage of special interest iron finds includes a horseshoe, remains of a pair of scissors and a small weight. Unfortunately many objects are corroded, X Radiography will help determine their function.

There are 14 objects of copper alloy, several of these are likely to have been used by a seamstress. The objects include thimbles, pins, and part of a possible brooch. The most notable artefacts of lead are a pair of lead seals. Only two items of silver were retrieved during the 2002 season. The first of these artefacts is a spoon in very bad condition, the bowl has broken away from the handle. The second item is a coin, which has been identified as a Charles 1 Spanish American 2 Reale piece.

Glass

A significant quantity of glass was recovered during the excavation. The glass retrieved includes pieces of wine bottle and drinking vessels.

Pottery

The pottery assemblage of 722 sherds included European and Afro-Caribbean Wares. Analysis of the pottery artefacts will carried out by David Barker and Elaine Morris.

Animal Bone

A small bone assemblage was recovered during the excavation. Species identification has yet to be done.

Ceramic Building Material

Ceramic building materials include samples of red brick and roof tile. These materials are common on sites of similar date in the UK but more unusual in the Caribbean. Analysis of inclusions within the fabric of these building materials will identify the place of production and therefore tell us whether they were transported to the island or produced locally to a similar specification.

Decorated Tile

Much of the tile retrieved from the site is Delft Ware and dates from the late seventeenth or early eighteenth centuries.

Clay Tobacco Pipe

A small percentage of the assemblage is made up of clay tobacco pipes. Only small amount of those found are decorated or have clear markings. However, one pipe bowl in particular has a design with clear parallels with pipes made in Bristol. The bowl shows a coat of arms topped with a crown. The coat of arms is flanked by a Lion to the left and a Unicorn to the right.

Stone
An assemblage of 32 pieces of stone was retrieved. The stone objects mostly consisted of gunflints, but some fragments of slate and a small piece of marble was also retrieved.

MOUNTRAVERS (MTS 01 & MTS 02): THE EUROPEAN CERAMICS

David Barker

The two seasons' excavations have produced 1074 sherds of European pottery, excluding unstratified finds; 651 of these are from the area of the cellar and 423 from the garden. Of the garden area contexts, the topsoil layer (809) has produced by far the greatest quantity of sherds; there are 258 European sherds, as well as 190 hand-made Afro-Caribbean sherds. The European ceramics are for the most part of nineteenth century date, which may shed some light upon the date of the hand-made material. Smaller quantities of European ceramics were recovered from (800) 36; (801) 1 sherd; (804) 2 sherds; (816) 24 sherds and 28 of A/C pottery; (817) 41 sherds and 9 of A/C pottery; (823) 27 sherds; (832) 21 sherds; (833) 8 sherds; and (839) 5 sherds, as well as 5 sherds of A/C pottery.

By far the best-represented type of European material is early nineteenth century pearlware, much of it with blue transfer-printed decoration. A number of the printed designs match those recovered from Trench 1 of the 1998 Time Team excavations at Mountravers. Whitewares, bone chinas and creamwares are also common nineteenth century types, as are coarse earthenware forms. Smaller numbers of brown salt-glazed stoneware and grey stoneware are also of nineteenth century date. A few sherds of delftware, and coarse earthenware sugar moulds (the latter especially in (823)) are probably of early eighteenth centruy date and compare with the range of earlier material found in the cellar area excavations. Three sherds of Dutch delftware tiles in (823) and (832) are identical in type to those recovered in considerably greater numbers in the cellar area excavation.

The ceramics from cellar area contexts are very different in composition and include a large number of delftwares and delftware tiles, smaller numbers of brown salt-glazed and Westerwald stonewares, porcelains, Staffordshire-type slipwares and North Italian, all of which are of late seventeenth to early eighteenth century date. Blue-painted delftware tiles are Dutch and compare very closely with tiles inserted into a fireplace in the Warner House at Strawbery Banke in New Hampshire; this house dates to c. 1716. Considerable quantities of coarse earthenwares include sugar moulds 64 sherds in (731), 28 in (735), 47 in (736), 14 in (754), 2 in (735) and (708), and one each in (710), (758) and (762). Also related to sugar production are sherds of coarse earthenware syrup pots; there are 6 sherds in (736), 2 sherds each in (731) and (735), and one each in (749) and(754). Other diagnostic coarse earthenwares, with thin internal brown/black glazes, appear to be large jars which were probably water coolers; similar examples are still to be seen about the island. There are 105 such sherds in (736) and 16 in (754), both of which appear to be early eighteenth century contexts. Similar vessels were recovered from the 1998 Time Team excavation in the cellar.

The ceramics from the two areas provide a good picture of the ceramics in use at Mountravers in the early years of the eighteenth century and in the first half of the nineteenth century, but the material culture of the mid to late eighteenth century and of the later nineteenth century is not represented here in any quantity. The presence in both areas of large quantities of Afro-Caribbean pottery is significant, and the association with well-dated European material should help to understand this type's development. The presence, too, of large numbers of sherds of coarse earthenware vessels associated with sugar production suggests major activity on site in the early eighteenth century. At this same time as this industrial activity, the inhabitants of the plantation house were living in some comfort; their table wares included decorated delftwares and the presence of Chinese porcelain tea wares suggests that tea drinking was enjoyed. At least one fireplace within the house was adorned with decorated Dutch delftware tiles, an unnecessary luxury given the island's climate.

Fig. 3. 13 Ceramics found at Mountravers. Left:Creamware sauce tureen lid with over-glaze painted griffin crest; late 18th/ early 19th century (725), Centre: Dutch delftware tile, c. 1720 (754), Right: Chinese porcelain saucer with blue-painted decoration, early 18th century (749).

GEOPHYSICAL INVESTIGATIONS

Emily Dodd

Geophysical survey undertaken in 2002 was directed at several sites, completing the earlier 2001 survey at Jamestown, resurveying the churchyard at Cottle, and undertaking a new survey at Paradise. The surveys were undertaken between 26 June and 17 July 2002, using a resistance meter in the twin array electrode configuration, a double fluxgate gradiometer and a magnetic susceptibility search coil.

For each survey, various techniques were used to produce the most informative data composite plots. The GMT data processing flow includes geometry corrections, subtracting the grid mean, hand balancing grids, adjusting the display parameters of colour scale and colour palette, histogram equalising the colour palette, interpolation, clipping high grid values and applying Gaussian, boxcar, cosine arch and mode filters.

Cottle Churchyard

Cottle churchyard is situated on the Round Hill estate on the north side of the island. It lies on the Hurricane Hill volcanics / the differential flank deposits of Nevis Peak Volcano (Hutton 1978). The site is historically significant as the first non-

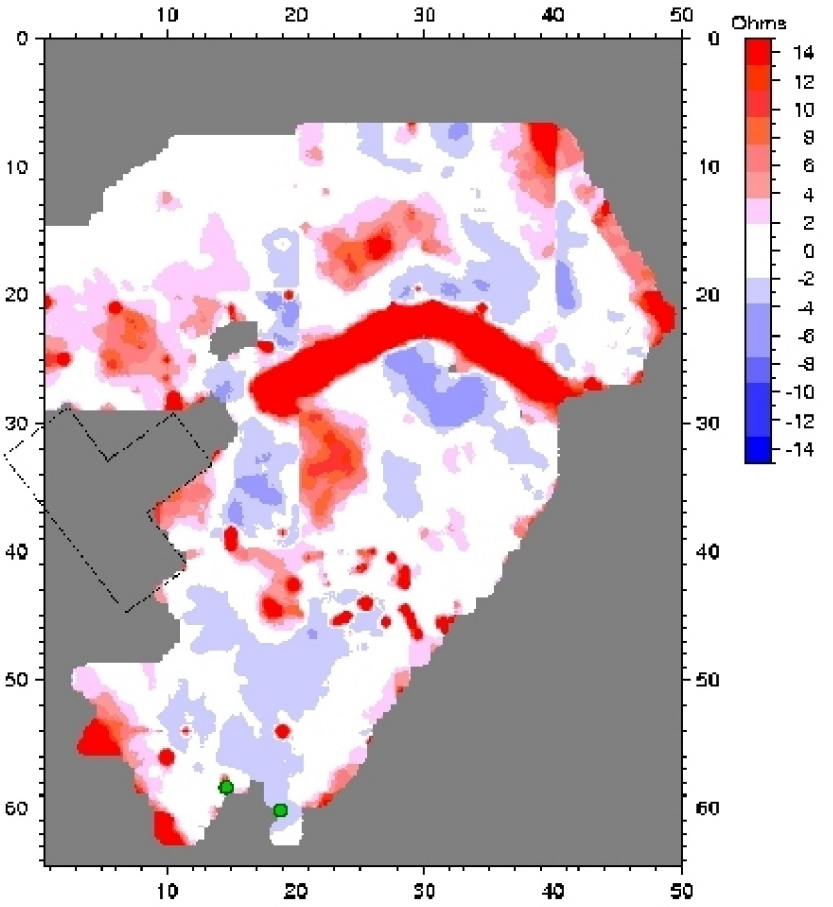

Fig. 3. 14 The Processed Cottle church resistance data composite levelled to match background resistance between grids, interpolated at a resolution of 0.1m and filtered with a probability filter of width 1m. Relative resistance values are displayed in Ohms. Resistance values that exceed the scale are given the maximum scale colour. Areas of no data are shown in grey.

segregated church on the island, completed by Thomas John Cottle in June 1823. The geophysical survey was undertaken at the request of the Cottle Church Historic Trust to identify graves and any other features not now visible on the surface. A previous resistance survey in 2001 undertaken by Dr J R Andrews had been unsuccessful owing to dry ground conditions.

The survey aims were as follows:

- To determine the existence and location of the graves using standard resistance and magnetic survey techniques at a resolution of 0.5 m
- To discover and locate possible sites of previous archaeological structural features
- To test a magnetic susceptibility coil as a high resolution survey technique in comparison with the standard survey techniques

An area of approximately 180m^2 was surveyed within the perimeter fence that surrounds the churchyard. The survey area comprises of relatively flat dry grassland littered with occasional rocks. Thick vegetation surrounds the perimeter fence on three sides, preventing surveying outside the fence. Lines and piles of building stone from the restoration work were stored in two piles, one of which can be seen to the right of the church. A dead tree trunk and two short stone pillars in the east of the survey area prevented survey here. A 5 m square visitor platform has recently been erected to the south of the survey area.

There is no visible evidence for burials at the site. Literature sources indicate the presence of graves: 'Many burials took place in and around the chapel' (Walker 1990). Headstones are said to have marked the graves in the 1930s (Albert Powell, pers. com.).

The Cottle church is orientated NE to SW and has been recently restored. The orientation may suggest that the church was built onto previous foundations or archaeological structures, which in turn may have influenced the orientation of burials. Archaeological finds of pottery, nails, a clay pipe and small cubes of cut rock provide a hint that the church was possibly built on the site of an earlier structure.

The most informative composite plot is shown in Fig. 3. 14. 85% of resistance anomalies ranged between 6 and 6 Ohms after hand levelling the background resistance between grids. Individual high resistance spikes reached up to 1699 Ohms. A high resistance linear anomaly 3m wide and 27m long may represent the principle pathway and further high resistance anomalies may represent both deep and shallow graves and the original churchyard boundary. It is possible that some anomalies may represent pre-church building structures.

High resolution magnetic susceptibility surveying supported the resistance data showing anomalies of the same geometry. Magnetic gradiometer data was not used due to its jumbled anomaly pattern produced by balancing problems and the magnetic nature of the Nevisian geology. Data location accuracy is approximately 20cm. A detailed account of the geophysical investigation is presented in Dodd 2003.

The Paradise Plantation

The Paradise plantation is situated in St Thomas's parish on the west side of the island. It lies on the undifferential flank deposits of Nevis Peak Volcano, mainly ask and block flow deposits (Hutton 1978). Uphill and to the east of the surviving ruins of the works is a large rectangular level platform, possibly the site of an early timber house of the same earthfast construction and seventeenth-century date as the surviving house at Hermitage. The geophysical survey of this platform, using the same equipment as for the Cottle survey, was undertaken in June and July 2002 to investigate this possibility:

- To investigate whether geophysical surveying techniques could identify post holes and other cut features on the possible house platform
- To compare results obtained from different geophysical techniques including a topographic survey
- To test a magnetic susceptibility coil as a high resolution survey technique in comparison with the standard survey techniques.

The results obtained were of interest, showing the signatures of possible features associated with the use of the level platform. Archaeogical excavation would now be needed to investigate further the results of the geophysical survey.

EDUCATION

A major part of the project was again its educational dimension. The work served as a field school for the University of Southampton students, and also as an introduction to archaeology for two sixth form students from Bristol, all with a West Indian or African background. Bristol City Museum's archaeological unit is supporting this part of the project as a means of involving young people from a significant minority group within the city in archaeology - linking this to the ongoing programme to bring a multi-cultural perspective to the city's complex Atlantic past and involvement in the slave trade.

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Fig 3. 15 The 2002 crew, the seventeenth-century Hermitage behind, left to right: front row, Laura Gadsby, Lisa Barlow, Emily Dodd, Claire Forshaw, Rebecca Sams, Rebecca Buckley, Daniel Cherry, Tusa Sokoni; middle row, Tara Brett, Kristopher Poole, Rachel Heaton, Alastair Threlfall, Simon Williams; back row, Andrew Townsend, Roger Leech, Nigel Fradgely, Bruce Williams, Stephen Metcalfe

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CHAPTER FOUR - PLAIN LANGUAGE RESOURCES (THEME FIVE)

Elaine L. Morris

I am sorry to have to relate that I have not been able to do any more work on the production of the Redoubt, Newcastle fortification storybook over the past year. The money which I had hoped to have available for finalising this book for children, and its publication, has not been available. Therefore, the production of this, the first contribution to communicating the exciting discoveries at the Redoubt fort, cannot be presented to the public at this time.

I am planning to pay Tessa Machling to prepare the text for another public booklet, this time for secondary school children and adults, about the Redoubt. The layout of this booklet has already been prepared by Rebecca Lawrence, and the photographs and other illustrations have been chosen. Tessa will be writing the text after completing her doctoral thesis (see Chapter Two).