Searching for the 17th Century on Nevis

The Survey and Excavation of Two Early Plantation Sites

Robert A. Philpott
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with contributions by

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Front Cover: the sugar works at Upper Rawlins before the excavations

Back Cover: the 1675 date-stone for John Combes from Fenton Hill

The Early Colonial Settlement and Landscape of Nevis and St Kitts:
Studies in the Historical Archaeology of the Eastern Caribbean

This series will provide the full publication of the historical archaeology projects undertaken between 1999 and 2009 on Nevis in the Eastern Caribbean by the Department of Archaeology, University of Southampton. Collaborating organisations included the island historical societies, Bristol City Museums and Art Galleries, and National Museums Liverpool together with various scholars from Britain and North America. The lead editors for the series are Professor Roger Leech (University of Southampton) and Dr Robert Philpott (University of Liverpool). The following reports are planned:

1. Searching for the 17th Century on Nevis: The Survey and Excavation of Two Early Plantation Sites
2. Urban Settlement on Nevis: Charlestown and Jamestown
3. Mountravers - The Survey and Excavation of a Nevis Plantation House and Slave Village

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The appendices are available online at http://doi.org/10.32028/9781789698862-appendices

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List of Contributors

David Barker BA PhD: Freelance ceramics and archaeological consultant, Beechcroft, Sunny Hollow, May Bank, Newcastle-under-Lyme ST5 0RW, UK

Clive Gamble MA PhD FSA FBA DSc (London): Emeritus Professor, Faculty of Arts and Humanities (Archaeology), University of Southampton, Avenue Campus, Highfield Road, Southampton SO17 1BF, UK

Jerzy H. G. Gawronski Prof. dr.: Professor of Maritime and Urban Archaeology of the Late Medieval and Early Modern Periods, Faculty of Humanities, University of Amsterdam, 1090 GE Amsterdam, Netherlands (J.Gawronski@amsterdam.nl)

Sheila Hamilton-Dyer BSc Hons Southampton. Visiting Fellow to the Department of Archaeology and Anthropology, Faculty of Science & Technology, Bournemouth University, Talbot Campus, Fern Barrow, Poole, Dorset BH12 5BB, UK

David A. Higgins BA PhD: Honorary Research Fellow, Department of Archaeology, Classics and Egyptology, School of Histories, Languages and Cultures, 2-14 Abercromby Square, University of Liverpool, L69 7WZ, UK

Roger H. Leech MA PhD FSA MCIfA: Visiting Professor Faculty of Arts and Humanities (Archaeology), University of Southampton, Avenue Campus, Highfield Road, Southampton SO17 1BF, UK

Linda Mitchell BA MA: freelance archaeological finds specialist, Hedge End, Southampton, UK

Elaine L. Morris BA PhD MCIfA FSA: Visiting Fellow, Faculty of Arts and Humanities (Archaeology), University of Southampton, Avenue Campus, Highfield Road, Southampton SO17 1BF, UK

Sebastiaan Ostkamp BA: Freelance Senior Achaeologist and Specialist Medieval and Early Modern Material Culture, s.ostkamp@chello.nl, Netherlands.

Robert A. Philpott BA PhD MCIfA FSA: Research Assistant, Department of Archaeology, Classics and Egyptology, School of Histories, Languages and Cultures, 2-14 Abercromby Square, University of Liverpool, L69 7WZ, UK

Rex Taylor BSc PhD: Associate Professor in Geochemistry and Volcanology, School of Ocean and Earth Science, National Oceanography Centre Southampton, University of Southampton, Waterfront Campus, European Way, Southampton SO14 3ZH, UK

Jaco Weinstock BA MA PhD: Associate Professor of Archaeology, Faculty of Arts and Humanities (Archaeology), University of Southampton, Avenue Campus, Highfield Road, Southampton SO17 1BF, UK

Acknowledgements

Fenton Hill

Two seasons of research were undertaken at Fenton Hill, in 2007 and 2009. The work was directed by Roger Leech and Robert Philpott. Subsequent post-excavation work and the preparation of this report has been led by Robert Philpott, assisted by Roger Leech, both of whom are very grateful to Elaine Morris, Director of the Nevis Heritage Project, for her continued support of this part of the overall project.

The authors would like to record their grateful thanks to the following: the site owner, Mr Wade Knowles, for his enthusiastic and generous support for the project, and for his unstinting efforts to facilitate the excavation; Mr John Guilbert, former Director of the Nevis Historical and Conservation Society; and generous contributors to the Nevis Heritage Project, Mr Ernie Dover of Morning Star and the late Dr Vince Hubbard. A fieldwork permit for the Fenton Hill excavation was obtained from the Planning Department of the Nevis Island Administration with the valuable assistance of Mr John Guilbert.

The re-interpretation of Structure A was greatly aided by the discussions and suggestions from archaeologists and architectural historians Fraser Neiman, Carter Hudgins, Martha Hill and Derek Wheeler, who visited the site during the fieldwork for the St Kitts-Nevis Digital Archaeology Initiative in July 2008.

In 2007 undergraduate students at the University of Southampton Louise King, Rachel Basinger, Naomi Holliday, Rebecca Lee, James Miles, Sarah Parker, Luke Paton, Fiona Ritchie, Graham Tahernia and Michael Whitty undertook the excavation, with the assistance of volunteers Jean Hunter and Mike Hunter who undertook much of the initial photography of the finds on site. Kathryn Attrill was finds supervisor, Deborah Costen supervised the environmental sampling, and Pamela Leech completed the recording of finds after the students had left. Lynsey Bates, then a PhD student at Pennsylvania State University, Philadelphia, assisted with the total station survey in 2008.

In 2009 the excavation team was supervised by Bradford University MSc student Anys Price and consisted of University of Southampton undergraduates Rebecca Blake, Nicholas Byrne, James Elkins, Stuart Locke, Ian Marks, Sophie-Alice Meyer, Abigail Parkinson and Emma Young. The finds were processed initially on site by Sophie-Alice Meyer, and from the second week onwards by Pamela Leech.

Specialist finds reports were provided by David Barker (European ceramics), Sheila Hamilton-Dyer (faunal remains, animal bone and shell), David Higgins (clay tobacco pipes), Elaine Morris (prehistoric pottery, Afro-Caribbean pottery and sugar mould) and Robert Philpott (glass, metalwork, other small finds and building materials).

Elaine Morris would like to thank Penny Copeland for the photographs and illustrations of the selection of Afro-Caribbean pottery and sugar-refining moulds, Barbara McNee for her illustration of the sugar mould and Jill Phillips for her preparation of the thin-sections for petrological analysis of the British and Nevisian sugar mould fabrics. In particular, Elaine would like to thank Clive Gamble who immediately recognised the prehistoric sherd as a turtle when he saw it for the first time emerging from a plastic finds bag at Constitution Hill house on Nevis in 2013.

David Higgins would like to give particular thanks to Jan van Oostveen for his help with the identification of the Dutch clay tobacco pipes and to Susie White who prepared the clay pipe illustrations.

We are grateful to Graham Usher, Head of Furniture Conservation, National Museums Liverpool, for his examination of the timber sample from Fenton Hill, to the late Geoff Egan for his advice on the date of the copper-alloy buckle (SF76) and to Rex Taylor, who kindly provided petrological descriptions of some stone objects.

Upper Rawlins

The site was first surveyed by Roger Leech and Nigel Fradgley in July 2002, assisted in site clearance by Alex and Eric Klingelhofer. The first season of excavations in 2005 was directed by Roger Leech and Bruce Williams, and assisted by the late Andrew Townsend and Amanda Summerfield, the last three of Bristol and Region Archaeological Services (BaRAS).

This work took place with the permission and support of Mr Edward Herbert and the Nevis Historical and Conservation Society, and coincided with the first overseas conference of the Society for Post-Medieval Archaeology held on Nevis in June 2005, being visited by the Society's conference tour. The initial survey and the subsequent excavations were much assisted by the clearance of vegetation across the site and adjacent hillside, undertaken by residents of the Nevis

Prison Farm under the overall direction of Inspector Alton Liburd; the work was further supported by Vince Hubbard, historian, whose encouragement and enthusiasm has been much appreciated. Further excavations in 2006-7 were directed by Roger Leech and Robert Philpott, then of National Museums Liverpool. A fieldwork permit for the Upper Rawlins excavation was obtained from the Planning Department of the Nevis Island Administration with the valuable assistance of Mr John Guilbert.

In 2005 the finds supervisor was Linda Mitchell, and work on site was undertaken by University of Southampton postgraduate student Alexander Threlfall (site supervisor) and undergraduate students Clare Forshaw, Michael Antoniades, Sophie Bradley, Robert Brooks, Matthew Fletcher, Kristian Hodges-Peck and Charlotte Ward.

In 2006 work on site was undertaken by University of Southampton undergraduate students Mike Hancock (site supervisor), Hollie Turner (finds supervisor), Louise King, Sam Chapman, Isobel Keith, Meya Kallala, Robert Lee, Andrew Lennox, Vanessa Rees-Heaver and Sophie Wright, with some input in the final week from Robert Philpott. Pamela Leech undertook the initial processing of the finds on site.

Post-excavation work and preparation of this report has been led by Robert Philpott, assisted by Roger Leech, both of whom are, once again, grateful to Elaine Morris for her continued support of this part of the overall project.

Specialist finds reports were provided by David Barker (European ceramics), David Higgins (clay tobacco pipes), Elaine Morris (Afro-Caribbean pottery and sugar mould, and faunal remains) and Robert Philpott (glass, stone objects, building materials and metalwork). The authors would like to thank Linda Mitchell, Clive Gamble and Jaco Weinstock for their assistance with the molluscs and faunal remains report, Jerzy Gawronski and Sebastiaan Ostkamp kindly commented on the Westerwald portrait mug fragment. Rex Taylor provided identifications on the petrology of the utilised stones. Kate Sarbutt prepared the glass drawings, while the clay tobacco pipe drawings were prepared by Susie White. Elaine Morris would like to thank Penny Copeland for her drawing of illustrated Afro-Caribbean ware sherds Figures 3.26-27, 1-27, Barbara McNee for sherds Figure 3.28, 8-32 and her illustration of the sugar mould, and Jill Phillips for her preparation of the thin-section for petrological analysis of the mould fabric. The mould fragment photographs are Jill Phillips's own.

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Elaine Morris of the University of Southampton secured vital funding for the post-excavation analysis and publication from the bequest of Dr Vince Hubbard, via the Hubbard Bequest Trust and through the good advice from Mr Martin Dalgleish formerly of Dunbar Mill, Zetlands, Nevis. Elaine is especially grateful for Martin's unremitting faith in the Nevis Heritage Project. She would also like to take this opportunity to thank her now late parents, Drew and Marjorie Morris of Clifton Springs, New York, for their decades of commitment to and financial support of the Nevis Heritage Project.

Dedication

This volume is dedicated to the memory of Dr Vincent K. Hubbard.

Vince Hubbard at the Fenton Hill excavation in 2007 proudly displaying his book *Swords, Ships & Sugar* (photograph: Robert Philpott)

Vince Hubbard hailed from the town of Kingsport, Tennessee. He studied for a BA in Political Science and History at Vanderbilt University, followed by a JD from the University's School of Law. He was a long-term resident of Nevis, where he settled in 1985, and had been active in the Nevis Historical and Conservation Society, serving as President for six years. His interest in the fortifications and ruined buildings that studded the islands led to research on the history of both St Kitts and Nevis. In 1991 he published his first book *Swords, Ships & Sugar: History of Nevis* (Premiere Editions International, Corvallis, Oregon), which went through seven editions, and in 2002, *A History of St Kitts: The Sweet Trade* (Macmillan Caribbean, Oxford). His continued interest in the excavations which are published in the present volume meant he was a frequent visitor to the sites, bringing new insights with an infectious enthusiasm and a boundless sense of curiosity. He was also a generous funder of the Nevis Heritage Project's archaeological work, and his contribution is gratefully acknowledged here.

Vince working on the excavations at Mountravers in the summer of 2001 (photograph: Roger Leech)

Vince with his latest discovery on the beach north of New River, July 2003 (photograph: Roger Leech)

1. Nevis: Settlement and Sugar

Robert Philpott and Roger Leech

The Historical Archaeology of 17th-Century Nevis

This volume is intended as the first of a series reporting on the research in historical archaeology undertaken for the Nevis Heritage Project between 1999 and 2009 on the island of Nevis, one of the Lesser Antilles in the Eastern Caribbean (Figure 1.1): *The Early Colonial Settlement and Landscape of Nevis and St Kitts: Studies in the Historical Archaeology of the Eastern Caribbean.* The focus of this monograph is two research projects designed to advance our understanding of life in Nevis in the 17th century: at River Path, Fenton Hill (Chapter 2) and Upper Rawlins (Chapter 3) in St George's Gingerland parish (Figure 1.2).

The archaeology of the English islands of the Caribbean in the first century of settlement is not well understood. From an assessment of the historical and documentary sources and research undertaken elsewhere in North America, various possibilities for future research on Nevis were identified. In this account some emphasis is given to the first decade of the 18th century, well documented as a consequence of the French raid of 1706, the documentation for the 1700s offers many insights into Nevis in the preceding century.

Topography, Geology and Soils of Nevis

Nevis has an area of 93km² and is oval in plan, with a length north-south of 12.3km and a maximum width of 9.6km. Topographically, the island is dominated by the central Nevis Peak, rising to 985m, with a series of lower volcanic hills with a broad south-east to north-west trend, from Saddle Hill (381m) in the south-east to Windy Hill (309m) in the north-west, and the dominant ridge of Butlers Mountain (478m) projecting from the central mountain to the north-east. The ground slopes steeply down from Nevis Peak, at a gradient of 40%, flattening out on to gentler slopes from the foot of the

Figure 1.1. Location of Nevis and the Leeward Islands in the Caribbean

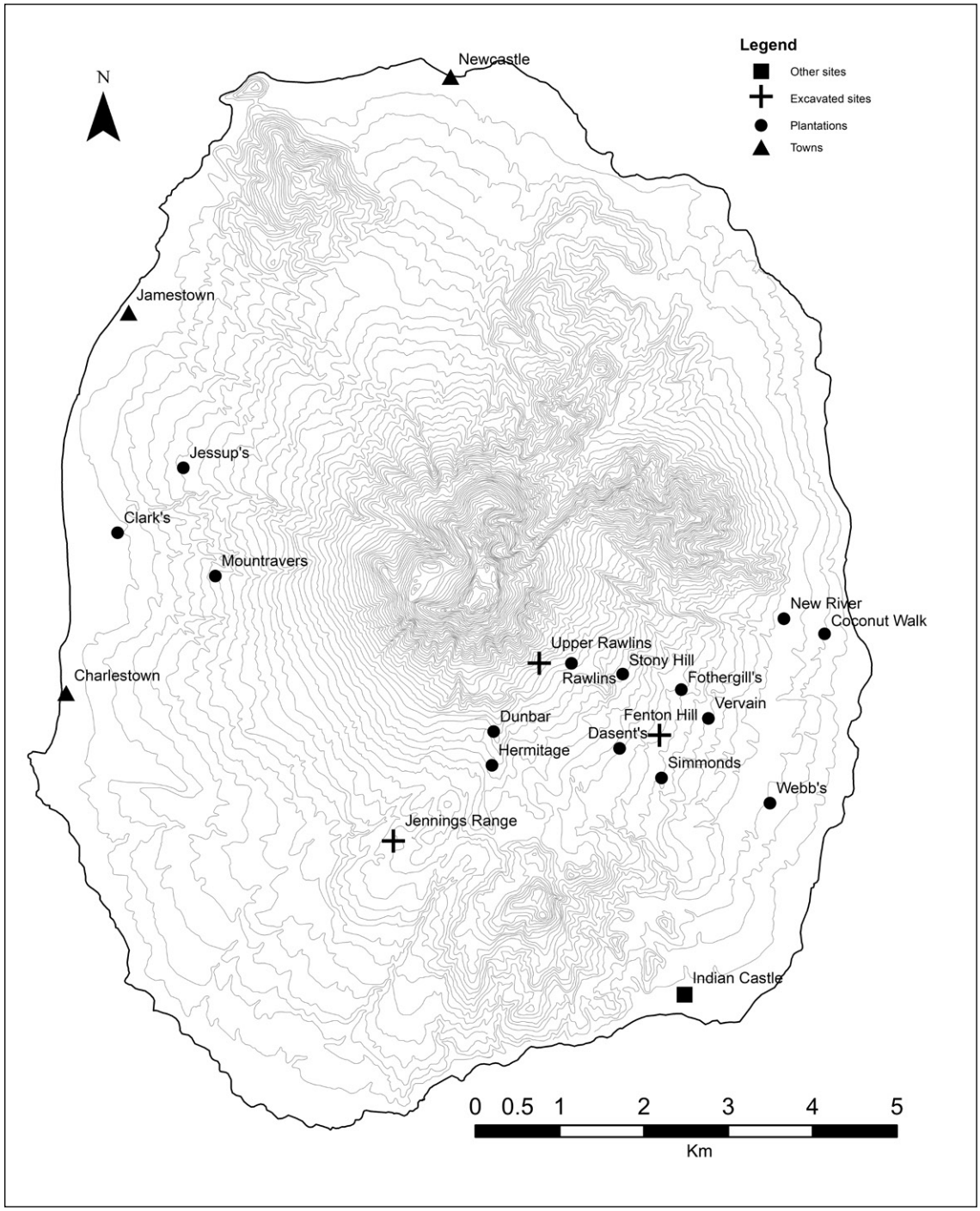

Figure 1.2. Nevis, showing the location of towns and the main plantations mentioned in the text (contour interval 50 feet)

mountain to the sea creating a broad coastal fringe. The mountain sides and coastal plain are dissected by ten steep-sided valleys, known locally as ghuts,[1] which hold intermittent watercourses, with only the Bath Stream, fed by perennial springs, flowing all year round.

The climate is tropical marine, with steady north-east trade winds and relatively high year-round humidity. Average annual rainfall in Nevis is 1170mm with distinct variation between the drier windward or east side of the island where Fenton Hill, for example, is situated with an approximate annual rainfall of 800-900mm compared to the wetter leeward or west side. The average temperature is about 27°C with little seasonal or diurnal variation (Lindsay and Horwith 1999).

[1] Ghut, also spelt gut or ghaut, is a term used widely in the Eastern Caribbean for a watercourse (e.g. Dyde 2005, 5). It is defined as 'a small cleft in a hill through which a rivulet runs down to the sea' derived from the 17th-century *gaot,* a mountain pass, from Hindi: *ghat*; the latter has the meaning of a set of steps down to a watercourse (*Collins English Dictionary*).

Geologically, the island of Nevis consists of a single volcanic complex comprising several volcanic domes or centres. The prominent central Nevis Peak is a typical andesitic lava dome, characteristic of the Lesser Antilles. The island is largely made up of volcanic deposits of Pliocene origin with the exception of the oldest unit, on the southern slopes of Saddle Hill, a small outcrop of conglomerate containing blocks of crystalline limestone which contain mid-Eocene foraminera (DoE n.d.). The Fenton Hill estate and Upper Rawlins lie on undifferentiated flank deposits from Nevis Peak, consisting mostly of block/ash flow deposits (Hutton and Nockolds 1978).

The soils of Nevis are derived from ejected volcanic rock and ash deposits, so are rich in minerals sought by plants. The physical properties are such that the parent material weathers rapidly into soil. Despite soil erosion on cultivated slopes around the island, as a result of recent land management, the ill effects have been to some extent offset by rapid soil formation. Nevisian soils are deficient in potash, an imbalance which was rectified in colonial times by planters manuring cane fields (Lindsay and Horwith 1999).

The English Settlement of Nevis

First, a few words must be said about the historical context. Nevis was initially settled in the years 1628-31, together with Barbados, St Christopher (usually known as St Kitts), Antigua and Montserrat, one of a number of islands settled under the patent issued by James I to the Earl of Carlisle (for the details of which see Dunn 1973, 119-20). Prior to this, the islands of both St Kitts and Nevis were first sighted by Europeans in 1493 during the second voyage of exploration and colonisation by Christopher Columbus (Watts 1987, 90). The Spanish interest lay in the large islands of the Western Caribbean, which Columbus encountered in his first voyage, and the American mainland, and so they did not make landfall in the Leeward Islands. Initial confusion over the names of Nevis, St Kitts and other islands bestowed by Columbus was resolved in favour of the current nomenclature by 1525, although Nevis was still known to some as 'Dulcina' in the 17th century (Dyde 2005, 13-16; Appendix 1, various wills).

The Spanish were the first to plant colonies in the Western Caribbean. Their Greater Antilles settlements had their economic basis in sugar and hides during the 16th century. The involvement of the French and English was largely restricted in that century to semi-officially authorised privateers plundering Spanish treasure ships or coastal towns, or the rapid exploitation of resources without the expense and complication of permanent settlement. The foundation of the English settlement in Virginia marked a watershed in attitudes to the region. The arrival in England of the first tobacco crops in 1612 or 1613 (Watts 1987, 135) demonstrated the potential for the economic value of permanent settlement for production of high value crops. With the establishment of stable transatlantic trade routes, largely through the agency of the Dutch who had been trading with the Caribbean since the end of the 16th century, the circumstances were created whereby private enterprise, in the form of companies of merchants with a financial interest in creating permanent settlements, could invest in expeditions aimed at settling new Caribbean colonies with government approval.

The area chosen by the English and French for their colonisation was the relatively isolated Leeward and Windward Islands in the Eastern Caribbean, which lay remote from Spanish possessions and interference (Watts 1987, 136). The north–west European colonisation of the Caribbean islands began in the 1620s, with settlement in St Christopher (St Kitts) and Barbados, the latter uninhabited, the former occupied by several hundred Carib natives.

In 1624 Thomas Warner with 13 others landed on St Kitts to create a permanent English settlement. Warner was familiar with the island from a visit two years earlier during the withdrawal from a failed colony in Guyana on the coast of South America (Watts 1987, 142). Months later a French party under Pierre d'Esbambuc and Urbain de Roissy landed on the same island with 35 men, followed later by 100 more. The French and English agreed to divide the island between them for mutual defence against the indigenous Caribs and Spanish, an arrangement which was to last, with intermittent conflict and continual mistrust, until 1713. The clearance and partition of St Kitts is described in the account by storekeeper John Hilton *c.* 1675 (see Appendix 1).

The first European settlers to arrive in Nevis in 1628 were English, led by Anthony Hilton, a ship's captain and merchant from Durham, with 'a considerable companie' (Harlow 1925, 14), 150 people from the newly settled neighbouring island of St Kitts. There is no record of whether the settlers comprised men only or included couples or families, only the likelihood that John Bourne, Mr Toby the minister to the parish of Jesus, John Young, Capt. John Huddlestone, Thomas Newman and Jenkyn Lloyd, all mentioned in the second will of John Bourne (see Appendix 1), were amongst them. Within a year the new colonists on both Nevis and St Kitts suffered an attack from the Spanish in 1629, who finding only token resistance, quickly overcame the English defences, burning the newly built houses, destroying crops, and driving off many of the settlers (for John Hilton's account, see Appendix 1). The remaining settlers at St Kitts, who had fled to the interior rather than face deportation to England, began to rebuild. For St Kitts this was merely the first

Figure 1.3. 'Plan de l'Isle de Sainct Christophe. Plan de l'Isle Nieves' c. 1630 (Bibliothèque nationale de France GE D- 17178)

of a sequence of attacks which led to the repeated destruction of property and crops through the 17th century. The population of Nevis had been shipped to England, and only in 1630 did the settlers return under John Hilton.

Before the permanent European settlement, occasional visitors described the island. Pirates and privateers from England and Netherlands were familiar with Nevis and St Kitts as they had good supplies of fresh water remote from the Spanish islands (Dyde 2005, 17). Captain John Smith described the island after landing there in 1607 on his way to establish the colony of Jamestown in Virginia:

'It is all woddy ... in most places the wod groweth close to the water side, at a high water marke, and in some places so thicke of a soft spungy wood like a wilde figge tree, you cannot get through it, but by making your way with hatchets, or fauchions' (Arber 1910, 909; Bridenbaugh and Bridenbaugh 1972, 41).

When the English settlers first arrived in Nevis in 1628, the island was still cloaked in dense forest down to the water's edge. As in St Kitts the new arrivals took advantage of small temporary clearings and shifting garden clearances, *conucos*, created by the native Amerindian population but the initial clearance of land for agriculture was an arduous task. Sir Henry Colt who stopped at Nevis in 1631 described it: 'The rest of the island [apart from the hill] shews to be flat ground but all full of woods' (for Colt's account, see Appendix 1).

In time, the arrival of European settlers led to changes in the vegetation of the two islands. In contrast to the interior of much larger islands, such as Jamaica, where there were large areas of swamp or mountainous land, remote and inaccessible, the island of Nevis was small and presented easy terrain for settlement around the coastal fringe of the large central volcano. A French map of Nevis, drawn in 1630 shortly after the English settlement of the island and a year after the Spanish raid, shows the first steps in the establishment of the incipient colony (BNF GE D- 17178; Figure 1.3). The most prominent feature is a square fortress with projecting corner bastions which protected a series of eight laid-out rectilinear enclosures extending on either side on the lower slope towards the sea. All but one of the newly cleared plantations contained a single building, the one exception being empty. All were concentrated on the western side, facing the parent island of St Kitts, in the vicinity of Fort Charles to the south of the major fort, beside what became the later settlement of Charlestown. As Colt wrote in 1631 'the houses and familyes of the Ilanders standing farr of one from the other' (Appendix 1).

Within half a century of the initial settlement the island had been extensively cleared and settled. Early descriptions emphasise the extent of clearance for cultivation. For De Rochefort, writing in 1658, the central high mountain of Nevis Peak was 'cover'd with great Trees up to the very top' but he could already see the progress in forest clearance, 'the Plantations are all about the Mountain, beginning from the Sea-side, till you come to the highest part of it' (Davies 1666, 20). Stapleton (22 Nov 1676) reported that Nevis 'contains by computation 320,000 acres, about 7 miles in breadth and 15 miles in length, 2,000 acres patented, the whole Island settled, except the top of the mountain'

(Appendix 1). Sloane made a similar observation during his visit in 1687, 'the ground is cleared almost to the top of the hill, where there remains some Wood, and where are Run-away Negros that harbour themselves in it' (Sloane 1707, 42). In 1708 Oldmixon described the landscape thus: 'there's but one Mountain, and that is in the midst of it, very high, and cover'd with great Trees to the top. The Plantations are all round the mountain, beginning from the Sea-side, and ending only at the Summet of the Mountain' (1708, 195). By this time, cultivation for sugar occupied all the accessible land.

A century later, in 1775, the surgeon James Rymer emphasised the picturesque quality of the cultivated landscape. 'Taking in planters dwelling houses, their different works, etc. together with the negro huts situated in clusters at some little distance from the masters abode, the prospect of the Island is altogether pleasing and agreeable, being variegated with trees and shrubs and fields of sugar canes, whose several never ceasing vegetations confirm the constant spring' (Rymer 1775, 3-4).

The Economy of Nevis and St Kitts in the 17th Century

During the first two decades after the initial settlement the farmers grew cash crops for sale, notably indigo, ginger and tobacco, as well as most of their own food. Indigo was popular in the mid 17th century, but after the highly profitable cultivation of sugar was established on Barbados and other Caribbean islands in the mid 1640s, it was increasingly superseded by sugar during the later 17th century (Dunn 1973, 126, 129). On arrival at his father's plantation on St Kitts in 1676, Christopher Jeaffreson modernised what was perceived as an outmoded estate by rapidly switching from indigo to sugar cultivation (Dunn 1973, 126). In 1689 the exports of indigo to England from Nevis amounted to 5954lbs, compared with those from St Kitts which had declined to a mere 785lbs; by contrast the crop remained popular in Jamaica which shipped 132,704lbs (Fortescue 1901, 758-9). Revd William Smith writing of his sojourn in Nevis from 1716 to 1722 (Oliver 1912, 370) recorded that both ginger and indigo which had been prevalent, were no longer in cultivation during his time: 'the Indico Works were then wholly laid aside' (Smith 1745, 206), although plants still grew wild. Indigo processing was described by De Rochefort in the 17th century (Davies 1666, 197), as substantially the same method as described nearly a century later: the bushes - cut up, 'bruised, boiled, and put into a cistern of water in order to extract from it the pure Indico, which will settle at Bottom' (Smith 1745, 206). A small quantity of cotton was also grown on small plots in St Kitts in the early decades of settlement, alongside other commercial crops as well as food crops (Watts 1987, 159).

Tobacco was the main cash crop in the early colonial days. The large quantities of tobacco shipped from St Kitts to London resulted in a drop in the price. In 1639 Governor Warner halted production in St Kitts in an attempt to raise prices in England (Dunn 1973, 120), and both the French and English began the search to find alternative staple crops (Higham 1921, 185). Tobacco growing was in rapid decline in Nevis after the introduction of sugar, and after 1677 it disappears as an export crop from records (Higham 1921, 185). The tobacco was of low quality compared with Maryland and Virginia. Its reputation had not improved by the early 18th century when William Smith reported 'our tobacco there is so strong, that few, or no People of Condition smoak it' (Smith 1745, 211).

From the above evidence and from existing historical appraisals, notably those by Pares (1950) and Dunn (1973), it is apparent that the economy and population of Nevis underwent significant changes in the 17th century. An economy initially centred on the cultivation of tobacco was by the end of the century firmly based on the production of sugar.

The Move to Sugar Cultivation

The first colonists and visitors observed that wild sugar cane was present on St Kitts prior to its main development as a cultivated crop. One of Sir Thomas Warner's colleagues, Richard Graecocke, noted that the native vegetation included sugar canes 'not tame, four or five feet high' (cited in Merrill 1958, 45). Sir Henry Colt recorded how he overwintered in 1631 at St Kitts, building a house on an abandoned native Carib plantation, and reported 'we weer alsoe seated amongst plantaines and sugar canes yt growes like ye reeds or canes in ye ponds of England, very sweet in taste, but unwholesome' (cited in Merrill 1958, 45).

Sugar and hides were the basis of the 16th-century economy of the Spanish West Indies (Watts 1987, 123). Sugar had been cultivated by the Spanish since the early 16th century in Hispaniola (Greater Antilles), using technology imported from the Mediterranean (Watts 1987, 104), but it became commercially important only with two significant developments: the use of improved mill technology developed in the Canary Islands which used two upright rollers operated by a series of geared wheels, and the importation and use of enslaved black Africans as a labour force (Watts 1987, 113-4).

In the 1640s cultivated sugar was introduced to St Kitts, either from Barbados or from one of the other islands (Bridenbaugh and Bridenbaugh 1972, 81). The introduction of cultivated sugar cane, and the technical expertise to process it, is generally attributed to Sephardic Jews from Brazil, but the planning and financing of the move to sugar has in part been attributed

to investment by the active mercantile community of Charlestown on Nevis (Watts 1987, 224).

European planters found that sugar cane thrived in the fertile soils and tropical climate of Nevis and St Kitts and sugar rapidly became a highly profitable crop, yielding rich rewards for the growers. The first mention of sugar in a Nevis will is that of John Scott, dated 30 August 1648, who records his assets thus, 'my share of the plantations and houses, with all cattle, goats, hogs, turkeys, tobaccoes, sugars equally' (Oliver 1916, 106), an indication that sugar cultivation was beginning to represent a serious rival to tobacco. The transition to sugar was swift. By 1655 sugar had replaced tobacco as the most important export crop from Nevis (Dunn 1973, 122). Exports from Nevis in 1677 to 1684 show the changing nature of cash crop cultivation. In 1677, although in serious decline, 5000lbs of tobacco were shipped to England; however, tobacco cultivation ceased after that (Higham 1921, 185). By contrast, in the same year, Nevis and St Kitts shipped 280,000lbs of sugar to New England (Higham 1921, 209). Wills indicate bequests were now made in sugar rather than tobacco. In that year, a report noted that apart from some tobacco grown on the windward side of the island, agricultural land in Nevis was put down to sugar cane (cited in Watts 1987, 224). The island drew ahead of its closer neighbours in promoting sugar cultivation, stimulated by the planning and financing of the Charlestown merchant community. The value of the estates and wealth of the island of Nevis was calculated in 1676 as £384,660, a figure which Stapleton recognised was an underestimate due to planters concealing the number of slaves, who attracted a poll tax. The figures for St Kitts were £67,000, Antigua £67,000, and Montserrat £62,500 (Dunn 1973, 128-9, table 13), demonstrating the pre-eminence of Nevis at that time. From the 1670s sugar was not only the main cash crop but also the chief currency in Nevis, used for all transactions in fines, salaries, levies and contracts (Pares 1950, 34-5). Smith, writing nearly a century later, reported 'we have Money enough for a currency, but pay for most commodities in Muscovado (or Blackish) Sugar, because every body strives to lay up their Riches in London' (Smith 1745, 220). By 1664 there was concern in official circles that food production was suffering as a result of the drive to sugar production (Watts 1987, 224).

The transition to sugar production was dependent on the move from a workforce composed of indentured servants to one consisting predominantly of enslaved Africans. This, it has more recently been argued, was perhaps not such a great change as might be thought – indentured servants lived a life not so far removed from that of the formally enslaved (see especially Beckles 2011). A consequence of this was that Nevis changed from having the largest white population of the Leeward Islands in the 1670s to having a total white population of 1,118 against 8,380 enslaved Africans in 1756 (Pares 1950, 22). These changes might be evident in the archaeological record of agriculture and industry, and of cultural identity.

Demographic Change from the Late 17th Century

In the last third of the 17th century the islands saw a considerable expansion of European settlement and sugar production, stimulated by the energetic governor William Stapleton (Dunn 1973, 124-5). Through his marriage into the wealthy Russell family, Stapleton acquired large plantations in all four of the Leeward Islands: Nevis, St Kitts, Antigua and Montserrat (Johnston 1965; Mason 1993). His main residence was in Nevis, at Jennings and Balls Range, in an area now known as Low Ground. Following his appointment, as governor of the Leeward Islands in 1672, the islands saw a dramatic increase in the introduction of slave labour, with over 4000 enslaved Africans imported into the Leeward Islands. The population of enslaved Africans increased more than two-fold, from 3184 in 1672 to 8449 in 1678 (Dunn 1973, 125), and in the latter year the exportation of tobacco was replaced by that of sugar on St Kitts and Nevis. In 1678 Stapleton undertook a census of the Leeward Islands, which recorded a white population of 3521 in Nevis (Oliver 1914, 27-35, 70-81). Dunn's analysis of the census shows the extent to which Nevis was dominated by small farmers and servants. Small farmers with between 0-19 slaves numbered around 1000, middling planters with 20-59 slaves totalled 45, while large estates were few, a mere eight having 60 or more slaves. Servants comprised about 500 of the total population, and the slave population at 3849 had begun to outnumber whites at 3521. By 1678 Nevis was by far the most prosperous of the Leeward Islands, having been the only one to escape the devastation of French invasion in 1666/67. However, Zacek's analysis of Nevis from the 1678 census shows that the island's great wealth had created a more highly stratified society in socio-economic terms than the other Leewards. Rich planters were in a tiny minority, dozens held only a few slaves and more than 150 individuals owned none (2010, 57-9). A considerable proportion of the settlers were recorded as impoverished.

Indentured Servants and Enslaved Africans

The labour force on the mid 17th-century Nevisian plantations was for the most part white, in contrast to those of St Kitts and Barbados (Watts 1987, 224). The white indentured servants were drawn from three groups, those who bound themselves voluntarily to masters to serve for an agreed term of years in return for their passage and a bounty on termination of their service; those who were criminals released from prison on condition they served as indentured servants in

the colonies; and lastly those who were transported to the colonies as political prisoners (Higham 1921, 166-7). The bounty to be paid in sugar was equivalent approximately to £10, although as sugar prices fluctuated so did its value. An Act of 1672 in Nevis regulated terms of the contract; servants over 16 years old were to serve four years, those under 16 were to serve seven (Higham 1921, 167).

The status of indentured servants was little better than slaves. They were bought by the planter from the merchant and could be transferred to another master; one well-known servant trader was Mr Cole of Bristol, 'a merchant that deals in slaves and the souls of men' (Beckles 2011, 206-13), possibly Daniel Cole (Appendix 1, will of 1688) or another member of his family. What proved a lucrative trade for merchants led to abuses, and 'spiriting' of unwilling servants in home ports became a theme in popular ballads as well as a powerful disincentive to engage in the life (Higham 1921, 168-9). The dissatisfaction of indentured servants with their lot was demonstrated at an early stage in the settlement of Nevis. During the Spanish attack on the island in 1631, Hilton records how 'our Servants proved treacherous, runn away from us & Swimed aboard & told them where we hid our provisions, & in what case our Islands stood in' (Appendix 1).

With indentures commonly lasting four or five years, the supply of white servants who had served their indenture created a substantial class of smallholders. Higham observes that the more industrious and capable of the indentured servants could obtain positions as overseers or agents on the larger plantations, rent land on the margins of those estates, and crush cane on their landlords' mills, and in time some might acquire their own land. Christopher Jeaffreson on St Kitts wrote 'there are now several examples [...] to my knowledge – men raised from little or nothing to vast estates' (cited in Higham 1921, 178).

The settlement by indentured white servants lasted much longer in Nevis than Barbados due to the inability on the part of the Nevis colonists to afford to import African slaves. Bristol registers for the later 17th century show the destination of indentured servants to 'America'. As Barbados declined, Nevis and later Jamaica became favoured destinations (Dunn 1973, 70-2, table 3). In the decade 1670-79 a total of 379 servants left Bristol for Nevis, down from the 811 of the previous decade, before falling away in the period 1680-86 to only 14. Ireland supplied many of the indentured servants, and at the census of 1678 nearly a quarter of the population in Nevis was Irish (Pares 1950, 8). They were not liked by plantation owners, who suspected their loyalty; their fears over the Irish Roman Catholic interests were realised when many in St Kitts went over to the French in 1689, a betrayal which resulted in the disarming of Irish settlers in the other Leeward Islands (Pares 1950, 8).

The trade in unwilling servants was suppressed in 1682 by Judge Jefferys in Bristol, and attention turned to an alternative reservoir of suitable labour, the criminal class whose sentences could be commuted to transportation (Pares 1950, 8-9). Plots against the government or king were rife in the later 17th century, providing a class of politically active men, without women, who could be transported for labour, and who did not consist principally of criminals, a rather more welcome sector of the population in the eyes of the existing planters. Ten-year sentences were common, and they formed an important injection of white labour to the islands. Governor Stapleton alone received a hundred of the political prisoners in the mid 1680s (Pares 1950, 9).

The later 17th century saw rapid change in the character of society in Nevis as some small planters and white servants abandoned the islands and the larger planters consolidated their hold not only on the land but also their political power in the council and assembly (Dunn 1973, 131). Smaller plantations were less profitable and with exhaustion of the soil were absorbed into large plantations (Higham 1921, 178). Higham observes that during the Restoration (1660-88), there is no evidence that the formation of large estates and the 'squeezing out' of the small planter had begun, although it was to be a significant feature of the 18th century in the islands. The small men existed side by side with larger planters, and the majority of the former indentured servants remained on the islands, working for hire or for themselves, or becoming small scale planters in their own right (1921, 190). However, as early as 1667 there were complaints that all the available land had been occupied by what were for Nevis relatively large-scale planters, those with estates of 150 to 200 acres (69-81ha), including some from St Kitts who had lost land or property in the French conflict there (Watts 1987, 289). During the latter part of the 17th century, wealthy landowners bought up the small farms and combined them into larger plantations dedicated to producing sugar. The progress of consolidation of estates in the later 17th and 18th centuries has been charted by Watts. At the 1678 census only 13 major landowners held more than 50 slaves, with 37 'middling' planters between 20 and 49, but both groups were vastly outnumbered by the 251 small planters who had fewer than 19 slaves each (Watts 1987, 334, table 8.3). There was little continuity of councillors and members of assembly from the 1660s to 1680s. The unstable population, with a rapid turnover of landowners, was exacerbated by debt due to poor management. Land abandoned by failed planters was either purchased or acquired by foreclosure by the prudent or successful owners, who enlarged their estates at the expense of

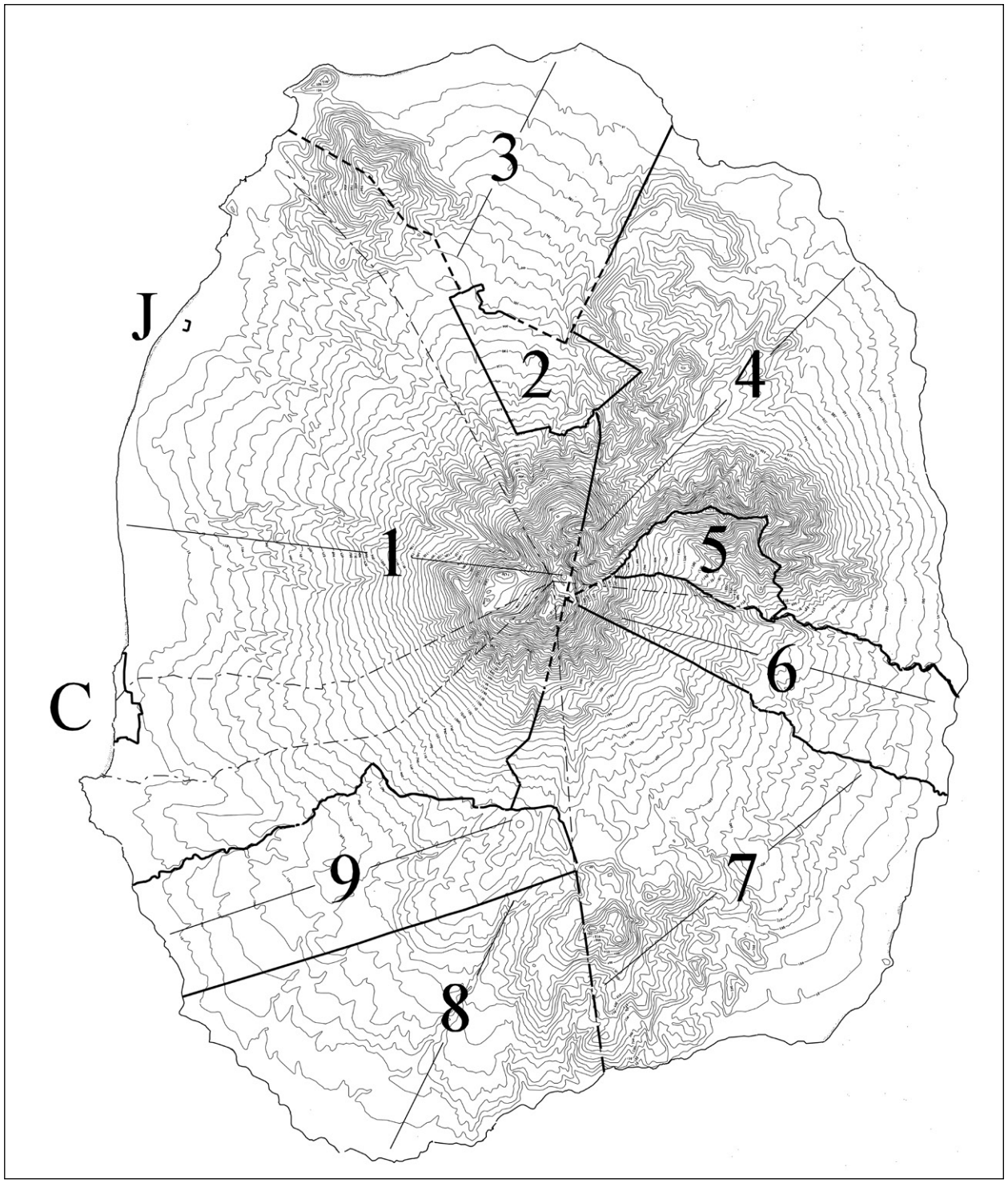

Figure 1.4. The Divisions of Nevis, reconstructed from documentary sources, air photographs and field survey (Leech 2007, fig. 3).

the smaller landholders (Watts 1987, 334). As a result of these profound social and economic changes, shortly after the French invasion of 1706, Governor Parke describes the island as being largely divided amongst a few rich men, several of whom live in England and had only one Englishman to look after great numbers of slaves (Headlam 1916, 521; Watts 1987, 334).

To the concern of the Nevis assembly, the supply of indentured servants was in steep decline by the end of the 17th century. By a law of 1701 the assembly sought to attract white servants; indentured servants, men and women aged 16 to 50, were to serve no more than four years and they were to receive 400lbs sugar on completion of their service. The concern was to counterbalance the rapid rise in the black population, which rose to between 12 and 20 black slaves to every

white man. In times of war the government was compelled, for shortage of whites, to arm companies of black slaves and set them between white companies. The insecurity made white planters fear for their lives, especially in times of international conflict when they were afraid the blacks might take the side of their enemies. In the event, in the French attack of 1706, it was the black slaves who organised the defence of the island after the capitulation of the white masters and drove back repeated French assaults until the French left the island (Hubbard 2002, 118).

Data from the censuses of 1678 and 1708 illustrate the reduction of the white population of Nevis to a third, with a reduced number of white owners holding larger estates. The balance of whites against imported black slaves shifted decisively in the late 17th century (Pares 1950, 22). The white population of 3521 against 3860 black in 1678 had changed to 1353 white against 6023 black by 1706; after the French raid of 1706 the white population of 1104 had seen the loss of many slaves down to 3676; by 1756 the 1118 whites, of whom only 394 were adult men, were heavily outnumbered by 8380 blacks (Pares 1950, 22).

The creation of the Royal African Company in 1670 by the British was an attempt to secure the supply of African slaves to work the sugar plantations of the Leeward Islands. The principal source of labour increasingly was the importation of enslaved Africans via the Guinea trade with West Africa (Higham 1921, 206-8). The Company held a legal monopoly on supply and as Nevis was the company's slave market in the Leeward Islands its situation created highly favourable opportunities for the Nevis plantation owners to buy black slaves. Between 1674 and 1686 the Company brought 8000 Africans into the islands (Higham 1921, 57; Merrill 1958, 57). Nevis began to lose its pre-eminent economic position by the end of the 17th century. Nevis had played a key role as the principal slave entrepôt in the Leeward Islands but the ending of the monopoly of the Royal African Company in 1698 opened up the competition (Mason 1993, 108).

The French attack of 1706 was a severe blow to the economic development of the island. The raid on Nevis in March of that year saw the burning of houses and sugar works in an attempt to inflict economic, and symbolic, damage on the island's population (Oldmixon 1708, 217). The detailed insurance claims for Nevis, unlike those for St Kitts, do not survive, but occasional individual estate records preserve the detail. The Stapleton plantation of Jennings and Balls lay in the path of the attackers, and lost 147 out of 183 slaves, and saw the destruction of the main house, sugar works and several acres of cane and ratoons (Mason 1993, 108). Another casualty of the French attack was Azariah Pinney's house at his plantation Charlots (later Sharloes), in St Paul's parish, where 'one dwelling house of two roomes below and above, boarded, shingled and good timber' was valued at £250. His boiling house, also boarded and shingled, and fittings such as the copper wheel, brasses and new half gudgeon, valued at £150, were destroyed (cited in Hobson 2007, 308; Pares 1950, 49). Pinney also rated the loss of one of his two storehouses in Charlestown at £1441. The final settlements were recorded and in 1711 the government authorised the distribution of £75,000 for the Nevis settlers, after extravagant claims were disallowed and those approved were reduced to two-ninths of the value (Pares 1950, 49; Dunn 1973, 137).

Sugar production in the island was seriously hit by the French attack and was reduced to one-fifth of the level of 1704. The planters' misfortunes were not yet over as in the following year, 1707, a hurricane caused further damage to houses and sugar works (Oldmixon 1708, 218). A major consequence of the French attack was rapid change in the composition of society. The census of 1708 shows that the white population, at 1104, had shrunk to under one-third of its total 30 years earlier, while the black population, largely as a result of the loss of half its slaves to the French, had dropped below its former level at 3570 (Dunn 1973, 140). Re-establishing estates took time and resources, and sugar production took decades to reach its pre-war level (Watts 1987, 289). However, the northern Leeward Islands (Antigua, St Kitts, Nevis and Montserrat) recovered sufficiently to dominate West Indian sugar production in the period 1710-50, overtaking the pre-eminent British sugar island of Barbados (Watts 1987, 232).

The Division of the Island

The wider context of the initial settlement of Nevis may also be seen in the subdivision of the island into discrete estates, a process similar in some respects to the enclosure of open fields and moorland in 17th-century England (see Leech 2007 and 2008 for a fuller discussion). Like other lands settled first in the 17th century, Nevis was probably initially surveyed from the sea, the island being subdivided into some nine 'divisions' radiating out from a central point approximate to the centre of the volcanic Nevis Peak (Figure 1.4). Separate estates formed segments of each division, set parallel or at right angles to the division boundaries. Stapleton/Low Ground was one such estate. Governor Stapleton reported in 1676 that there were 'in Nevis, four parishes or precincts, thirteen divisions, which take their appellations as before from such and such captains', the parishes corresponding with the four churches reported by him (Appendix 1).

The boundaries of the estate centred on Upper Rawlins proved impossible to establish with the evidence gained from documentary and field research, while that at

Figure 1.5. 'Carte de l'Isle de Nieves' by J.-N. Bellin, published 1764, from Petit atlas maritime, *Vol. I, no 84 (by courtesy of The University of Liverpool Library, classmark k.3.66)*

Fenton Hill has been determined tentatively (Figure 2.4; Figure 3.1).

The Island Roads

The early clearance and settlement of neighbouring St Kitts had been achieved by cutting a circular path round the island, 32 miles in length, through the forest, which served as the basis for allocation of lands between French and English settlers. The English took the eight miles to leeward and windward of the centre line, while the French took the eight miles beyond the English, giving them the two ends of the island (Leech 2007, 192). A similar circular road on Nevis possibly

had an early origin in the division of the landscape. The incorporation of the inner, or upper, road in the boundaries of plantations (Figure 1.4), for instance between Fothergill's and Golden Rock plantations, between the Bath and Stoney Grove plantations, and as part of the boundary of the Paradise plantation, indicates it was established at an early date (Leech 2007, 195). It is without doubt the single road existing in Nevis in 1676, which was described in that year by Stapleton as 'the best in all these [Leeward] islands'.

The creation of the path or round-island road enabled the opening up of the landscape to development and cultivation. It can be identified as the lower round road, the 'Round Road' of Burke Iles's map of 1871 (Figure 2.1), and was often referred to in the 18th century as the 'common path' or 'the king's highway'. For instance, in 1766 Fenton's Plantation, probably adjacent to that of Fenton Hill or River Path (see in this volume), *c.* 15 acres, was 'bounded to the west with the common path or king's highway and to the south with the common path or king's highway known as Jewry's Plain' (Nevis Common Records 1764-7, fol. 504). The road connected the plantations and the nucleated settlements to the main port at Charlestown and lesser harbours providing crucial access to supplies and provisions as well as the all-important access for transporting processed sugar to the port. The road also provided a route for the militia to defend the island against foreign invaders in the proxy European wars, and, in the 18th century, provided a degree of security for the white planters increasingly fearful of their enslaved black workforce (Machling 2012, 287-9).

This lower road, which hugged the shore as far as the topography allowed, appears to have had a primarily strategic military importance, linking the coastal batteries and forts, and enabling the island militia to respond to sea-borne attack. The repair of the 'round paths' of the island were repeatedly the subject of Acts of Assembly in the first years of the 18th century, when the threat from the French encouraged the governor and residents of Nevis to repair the defences and construct new fortifications (Machling 2012, 287-9). An Act in 1680 required all the common paths to be at least 18 feet wide (TNA CO 154/2/32, 8 May 1680). A mid 18th-century French plan (Bellin 1758; Figure 1.5) shows a network of smaller tracks linking individual plantations with the king's highway. Within each estate, field tracks divided estates into roughly equal-sized cane fields, for ease of transportation and access to fields during the time-critical periods of the cane harvest. The lower round road and (above it on the south and west sides of the island) the 'upper round road' of Burke Iles's map, were also social highways, connecting planters to one another for mutual defence and social interaction, and were vital to the economic operation of plantation life.

Impermanent Architecture and the Tobacco Economy

Archaeologists and architectural historians have proposed that in 17th-century North America the tobacco economy was linked to the adoption by settlers of buildings of earthfast construction, an impermanent architecture which minimised investment in buildings, while awaiting a quick return from a cash crop (Carson *et al.* 1981). Searching for the evidence of impermanent architecture, either through archaeology or the observation of surviving buildings, it was thought might reveal this phenomenon in the context of the economy of the Caribbean in the 17th century. Earthfast buildings have now been located at the Hermitage, Mountravers and Fenton Hill plantations, at the urban site of Crosse's Alley, Charlestown, all on Nevis, and at Nags Head, at the southern extremity of St Kitts. They are discussed more fully below (Leech 2006a; 2006b; and below pp. 35-55 and pp. 58-64).

The Sugar Industry

Similarly, either through archaeology or the observation of surviving buildings, it was considered that a better understanding of the early development of the sugar industry might be secured. Meniketti (2006) and others have argued for an industrial revolution in the production of sugar in the Caribbean between the 17th and the 19th centuries, with sugar mills being driven successively by cattle, wind and then by steam.

The sugar plantation as it developed first in Barbados and soon after in other West Indian islands was based on the Pernambuco model. Using cane production techniques imported from Madeira in the later 16th century, plantations in Brazil took on an efficient and organised form which maximised productivity and profitability. The self-sufficient plantation had at its centre the cane-crushing mill and the planter's house, with regular cane fields surrounded by tropical forest which supplied timber for fuel and buildings, with provision plots and scattered houses for the slaves (Watts 1987, 179-84).

The Pernambuco model was transferred to Barbados by entrepreneurial English planters who drew on the knowledge of Dutch intermediaries to introduce three-roller mills and coppers from Pernambuco itself. By 1644 the innovative Barbados planter James Drax had processed his first sugar crop, and sugar cultivation was rapidly adopted in Barbados by cotton and tobacco producers. The development of production was aided by Sephardic Jews recently expelled from newly Catholic-controlled Brazil who were familiar with the sugar technology. The Pernambuco model was adapted to local conditions in Barbados, as the efficiency of scale achieved in Brazil was modified to

Figure 1.6. Detail from William Hack's 1687 map 'The west end of Nevis; & part of St Christopher' (copyright The British Library Board, Sloane MS 45.74).

accommodate the smaller, more intensively settled landscape of Barbados. Forest clearance was well advanced to maximise productive land and plantation sizes were much smaller than the vast 600ha estates found in Brazil. Estates were consolidated by buying up the small plots of cotton growers, partly developed or unprofitable. The model was widely adopted in modified form across the Caribbean in both British and French islands.

The physical infrastructure of the plantation works took a standardised form across the English sugar-producing islands, and in Nevis and St Kitts this was no different, although modified and adapted to suit the local topography. Descriptions of the technical aspects of sugar production are numerous from the mid 17th century onwards (e.g. Ligon 1657; Davies 1666) and will be discussed later. However, the physical requirements of sugar production imposed constraints on the layout of the component parts.

Animal Mills

The animal mill usually took the form of a raised circular platform, sometimes surrounded by a stone wall, around which walked cattle or other draught animals (horses, mules, and donkeys) harnessed to a horizontal beam which drove the cane-grinding mechanism located in the centre. There were usually three vertical rollers set within a massive wooden frame. Contemporary illustrations show that some were protected from the weather by an open-sided roof, while others, especially by the 19th century, were fully enclosed structures. The cane juice was fed from the rollers to the boiling house by gravity, hence the mill needed to be at the most elevated location in the sequence. Animal mills were relatively slow and cumbersome. Keeping livestock in good condition was difficult, feed was in short supply, and replacements for worn out or diseased animals represented a continual drain on resources. By the early 18th century horses were common in the Leeward Islands, cattle less so, but most horses were imported from England or New England (Smith 1745, 220-1; Watts 1987, 407).

Alternative sources of power were used although the lack of suitable rivers on Nevis meant that water power could only infrequently be used. Water mills appear

at St Kitts only at Wingfield and Cayon (Hicks 2007; *Parliamentary Papers* 1843, 29).

Windmills

Windmills on Barbados, built on the north-western European model, were first employed as an alternative source of power as early as 1647, but their use developed rapidly during the later 17th century with no fewer than 400 recorded on that island by 1676 (Watts 1987, 411-8). The planters of Nevis and St Kitts lagged behind the innovative planters of Barbados. However, two windmills are shown on William Hack's schematic map of the western end of Nevis which is dated 1687, along with other buildings which appear to represent plantation houses (BL Sloane MS 45.74; Figure 1.6). Unlike the wooden post-mills shown on the 1673 map of the neighbouring island of Montserrat (Pulsipher 1987), the early Nevis examples appear to be stone tower mills. This type was derived from English brick or stone mills, and by the 18th century they were to develop a highly standardised form, a characteristic of those surveyed in St Kitts and other islands in the Leewards (Figure 1.7).

The animal mill at Upper Rawlins takes the form of a flat-topped curvilinear platform, of oval plan, with a revetment wall on the downward side to retain the earth fill. Unlike many longer-lived plantations, including the neighbouring Rawlins plantation further downslope which had a stone windmill, the plantation owner did not convert to wind power. There are some parallels with the plantation at Fenton Hill, which also failed to convert to wind or steam power.

Boiling House and Curing House

The process of sugar manufacturing in the 17th and 18th centuries is recorded in both contemporary historical accounts and illustrations. Although some technical improvements were made over time, the basic process remained largely unchanged through the period.

For the mid 17th century De Rochefort records the process of sugar making (in Davies's translation, 1666, 195). The cane is crushed between two rollers, and the fresh juice 'falls into a great Cistern whence it is convey'd through long pipes or channels into the vessels appointed for the boiling of it'. The largest sugar works had six coppers actually made of that metal, unlike later when they were iron. The first three were clarifiers in which the cane juice was heated gently and a 'temper' or strong lye (mixture of ashes and water) added to purify the juice, and impurities removed with a 'great brass skimmer'. It was strained and passed through a series of three basins of a different metal, about a foot and a half in depth, where the heat was greater and then continually stirred, with the addition

Figure 1.7. Coconut Walk windmill, Nevis (photograph: Robert Philpott, 2009)

of oil to reduce the tendency to boil over; then once it thickens 'it is dispos'd into vessels of wood or earth, and so carry'd into the Curing-house'. Smaller producers could make good sugar with one or two coppers and a small mill-like press worked by two or three men or a horse (Davies 1666, 196). Heat is the main clarifying agent in sugar production as the rising air bubbles trap suspended particles and impurities and bring them to the surface; heat also serves to thicken the liquid sugar. Lime or 'lye', imported by cask from Bristol, was added to purify the sugar, as James Grainger relates in his poem, 'The Sugar-Cane', emphasising too the importance of repeated skimming to remove impurities (Grainger 1764).

Du Tertre's famous illustration of sugar making (1667, 122; Figure 1.8) shows the animal mill, driven by oxen, standing upslope of the boiling train and consisting of three vertical rollers that receive their rotary power from the central one. The crushed juice is conveyed by a gutter to a rectangular tank in the boiling house. A pipe set above the base of the tank leads to the first and largest of the four coppers in the train. Each copper or *chaudière* [lit. boiler] is heated by an individual *fourneau* or oven. The boiling train has a hipped roof supported on timber posts at the four corners of the structure. A low wall is present but the sides are open.

As regards the layout of the boiling and curing house, Richard Ligon illustrates examples of the 'ingenio' or

Figure 1.8. A mid 17th-century view of sugar making (Du Tertre 1667, II ,122)

sugar works and the principles on which the sugar works were laid out:

> 'First then, it is fit to set down, what manner of place is to be chosen, to set this Sugar-work, or Ingenio, upon; and it must be the brow of a small hill, that hath within the compasse of eighty foot, twelve foot descent, viz. from the grinding place, which is the highest ground, and stands upon a flat, to the Still house, and that by these descents: From the grinding place to the boyling house, four foot and a halfe, from thence to the fire-room, seven foot and a halfe; and some little descent to the Still house. And the reason of these descents are these; the top of the Cistern, into which the first liquor runs, is, and must be, somewhat lower than the Pipe that convaies it, and that is a little under ground. Then, the liquor which runs from that Cistern must vent it selfe at the bottom, otherwise it cannot run all out; and that Cistern is two foot and a halfe deep: and so, running upon a little descent, to the clarifying Copper, which is a foot and a halfe above the flowre of the Boyling house, (and so is the whole Frame, where all the Coppers stand); it must of necessity fall out, that the flowre of the Boyling house must be below the flowre of the Mill house, four foot and a halfe. Then admit the largest Copper be a foot and a halfe deep, the bottom of the Copper will be lower than the flowre of the Boyling-house, by a foot; the bottom of the Furnaces must be three foot below the Coppers; and the holes under the Furnaces, into which the ashes fall, is three foot below the bottom of the Furnaces: A little more fall is required to the Still-house, and so the account is made up. Upon what place the Sugar-work is to be set, I have drawn two Plots, that expresse more than language can do, to which I refer you' (Ligon 1657, 86-7).

The Boiling Train

Ligon (1657) describes the usual mid 17th-century practice from his experience in Barbados between 1647 and 1650 where the series of metal basins, known as coppers, were individually heated in a system known as the Spanish train. He described the boiling train as follows 'The Frame where the Coppers stand, which is raised above the flowre or levell of the room, about a foot and a halfe, and is made of Dutch Bricks, which they call Klinkers, and plaister of Paris' (Ligon 1657, plan opp. p. 84). Klinker bricks are hard-fired yellow bricks found commonly in Dutch colonial contexts in the 17th and 18th centuries (Noël Hume 1969, 83) and occur in small numbers at Nevisian sites such as Crosse's Alley in Charlestown and the Mountravers plantation.

De Rochefort (trans. Davies 1666, 195), writing in the mid 17th century, reported that, in his day, the largest sugar works had six coppers, but the smallest producers might make use of one or two. The coppers diminished in size, with the largest receiving the fresh cane juice, and the volume of liquid reduced by boiling along the sequence. Du Tertre illustrates four coppers in the boiling train

(Figure 1.8), which seems to have been a standard pattern in the earlier sugar works. The Jamaica boiling train had a series of graded metal vessels, diminishing in size through the process, heated by a single fire. The *Encyclopédie* of Diderot (1762), probably illustrated from an example in Haiti, shows the train with the fire set under the smallest, the last in the sequence, the hot gases were drawn through the flue under the five pans by updraught from the chimney, although the latter is not illustrated (Needham *et al.* 1996, 363). In time the number of coppers increased to five or six, and Meniketti notes that 'all boiling facilities surveyed that date later than 1750 had at least six, and this came to be a reliable secondary chronological indicator' (2006, 62). Diderot also illustrates the clarifying tank which receives the cane juice with a pipe set above the base of the tank which led to the first copper.

By the late 17th century modifications were introduced to increase the efficiency of the boiling train by the conversion to a classic Jamaica train where all the coppers were heated with a single fire and flue, with the smallest final copper closest to the fire. Structurally, the conversion to a Jamaica train involves blocking off all the stokeholes or hearths except one, which is the final basin, known as the 'teache', in which the sugar is closest to crystallisation and requires the greatest heat. The introduction of the Jamaica train to Barbados by 1657 and St Kitts by 1658 is said by one authority to have derived from Dutch practice in Brazil, as a result of the Dutch occupation of northern Brazil from 1630-1654 (Needham *et al.* 1996, 410). Watts attributes the innovation of the Jamaica train, despite the name, to Barbados in the 1680s or 1690s (1987, 399, 406, figure 9.5). The introduction of the Jamaica train was a response to a growing shortage of fuel due to deforestation, but it also ensured greater efficiency of labour in reducing the number of hearths to tend. Another related innovation to reduce the demand for timber was the introduction of the use of bagasse, the dried cane waste, as a fuel. One practical consideration was noted by Revd William Smith (1745, 309), resident in Nevis 1716-22, who observed that 'the holes under our sugar-coppers are all on the western-side of our Boyling-houses', to capture the prevailing trade wind.

The sugar process required the raw cane juice to be channelled from the mill to the boiling house, where it flowed into a clarifier, a large metal pan. Lime and ashes were added to the juice and it was heated to remove impurities. The juice was then ladled into the first of a series of 'coppers' (although in fact usually made of iron), which were heated to drive off the moisture. The juice was heated and was ladled successively down the line of coppers as it thickened and reduced in volume. The impurities rose to the surface forming scum which was removed with 'scummers' or skimmers.

In the last and smallest copper of the train, when the syrupy sugar was close to crystallising, it was ladled into a cooling cistern. Making sugar was a highly specialised process. It was critical to know the precise moment when the sugar was ready to set. A highly skilled slave known as the boiler would test the sugar with his elbow or by rubbing the hot sticky syrup between the fingers. His was one of the most important jobs on the plantation and a skilled boiler was a valuable slave. After the French raid of 1706 Ann Hackett, a plantation owner in St Kitts, made an insurance claim for the large sum of £60 for the loss of her slave called Jack, 'a good boyler and clayer of sugar' (TNA CO 243/2 fo. 603, 1708).

Curing the Sugar

From the cooling cistern, once the sugar had granulated and cooled, it was transferred to large wooden hogsheads. The casks were set in the upper floor of the curing house, and the syrupy molasses drained slowly out through holes pierced in the base, leaving behind golden-brown muscovado sugar.

Although most English islands including the Leewards used wooden hogsheads to cure the sugar (Watts 1987, 262), the Barbadian practice followed the French method which was to cure the sugar in earthenware pots, or sugar moulds, to produce high quality clayed sugar. In the late 18th century, Bryan Edwards described the process, using 'conical pots or pans, called by the French *formes*, with the points downwards, having a hole about half an inch in diameter at the bottom, for the melasses to drain through, but which at first is closed with a plug' (Edwards 1793, 227). About 12 hours after the hot sugar is poured in, it becomes a solid mass, and the 'pot [is] placed over a large jar, intending to receive the syrup or melasses that drains from it' and the plug is removed. After the molasses have drained out, a layer of clay is spread on the sugar and moistened with water. The fine clay particles slowly seep through taking more of the molasses, leaving behind a whiter and purer sugar. The process took longer, up to four months, but the resultant sugar was more valuable, although it attracted a far higher import duty in England.

In the late 17th century, attempts were made by Nevis plantation owners to emulate the Barbadian method to produce highly refined white sugar. The Nevis planter turned London merchant William Freeman described in his letters how he experimented with new techniques in the late 1670s. He had heard about the innovation of boiling molasses in lead cisterns which was the method employed in Barbados, and cooling it in earthen pots and drips, and planters claying their own sugar at the estate, and introduced them at his plantations (Hancock 2000, 25, n. 58). Freeman's letters recorded the supply of clay moulds for his plantations in Nevis through 1678 to 1680 (Hancock 2000), and clay pots and drips were

still being imported to the island until at least 1687 (TNA CO 157/1). Another substantial planter Sir John Bawdon attempted to produce white sugar in the 1680s but, despite importing a skilled refiner from Barbados, the project failed, although a small quantity had subsequently been produced for home consumption or gifts (Oldmixon 1708, 197).

The main obstacle to the production of 'clayed' or refined white sugar on the plantations was economic rather than technical. The mercantilist system strongly discouraged manufacturing by the colonies, which included sugar processing, shipping only raw materials to England (Andrews and Andrews 1921, 99, n.). Most of the production from the sugar islands was exported as lightly processed brown muscovado. High taxes on importation of refined sugar were intended to discourage planters from refining their own, to protect home refiners, and to stimulate increased production in the ports (Dunn 1973, 206). From 1651 clayed or semi-refined sugar was taxed at 5s per hundredweight against 1s 6d for raw muscovado, a rate which was doubled in 1675 until the expiry of the tax in 1693 (Watts 1987, 263-4).

The muscovado was itself a valuable commodity, often being shipped to Europe for further refining. Rum and molasses were shipped in small quantities from the West Indies to New England by 1650. By 1670 these by-products became commercially lucrative (Bridenbaugh and Bridenbaugh 1972, 296) and larger plantations had a distillery expressly for making rum which was distilled from molasses. The cost of building a distillery was comparable to that of constructing a boiling or curing house so only the larger plantations had them.

Shipping the Sugar

After curing, the sugar was packed into hogsheads for storage at the plantation to await despatch to England. In the 17th century smaller planters sold their sugar to factors or ships' captains in the islands (Dunn 1973, 208). Some large planters attempted to avoid the onerous charges imposed by the middlemen, by shipping their own sugar and trading directly with commission agents in England. Surviving documents for the mid 18th century show the operation of companies such as the large family houses of Mills or Messrs Wilkinson and Gaviller in London who served as commission agents for numerous planters in the Leeward Islands (Mills Letter Books, Museum of London Docklands 2006.178; Pares 1950). The proceeds of sales were held in an account by the agent and used to offset the costs of goods shipped to the planter, or could be drawn on for bills of credit (Dunn 1973, 208).

The sugar was shipped in small consignments and often a single vessel carried cargoes for several planters. This not only kept the price high by avoiding overloading the market with a single planter's produce but also spread the ever-present risk of loss on the voyage (Dunn 1973, 208-9).

The laws of the Leeward Islands by 1672 recognised five 'lawful shipping places', Bath Bay, Ould Road, Morton's Bay, New Windward (probably New River, according to Machling) and Indian Castle (TNA CO 154/1/114; Machling 2012, 128). At the beginning of the 18th century there were two official ports, Morton's Bay (Jamestown) and Charlestown, at which customs dues were payable. An Act of the Nevis Assembly in 1704/5 added an official shipping place at Port George, Indian Castle Bay, on the south-eastern coast but customs dues were to be paid at Charlestown (TNA CO 185/2, 49). The island also had lesser ports, at Newcastle on the north coast and Cades Bay to the west (Meniketti 2015, 153-4). Port facilities were rudimentary and even the main port Charlestown lacked a formal landing place in the form of a pier until as late as the mid 19th century (Dyde 2005, 96). Many estates shipped their sugar to vessels moored off the coast close to the plantation, avoiding the cumbersome task of transporting sugar overland. The sugar was packed in casks, usually hogsheads, and conveyed to vessels at anchor in the open road on small local craft known in Nevis as sugar-droghers. The Pinney archives record high expenditure on carriage of sugar by these vessels, amounting in 1800 to 20s per hogshead (Pares 1950, 224-5). Sugar was loaded at a number of embarkation points around the coast, often in places protected by batteries or forts (Machling 2012, 56-7). Thus, at St Kitts Thomas Mills sent a shallop to Deep Bay, on the northern tip of the island, to collect sugars for a client, while loading slaves on the same vessel at the main port in Basseterre (Thomas Mills Letter Book, 19 Mar 1753, Museum of London Docklands 2006.178/1). The informal character of these embarkation points is illustrated by the title page of Thomas Jefferys's *The West Indian Atlas* (1780; Figure 1.9). The idealised picturesque scene depicts the shore in an unnamed bay in the Caribbean, where under the eye of three slaves and an overseer three casks of sugar and a turtle await dispatch, the latter intended no doubt as the exotic centrepiece of a turtle feast in England (cf. Mandelkern 2013). The cargo awaits loading into an empty rowing boat while two sailing ships ride at anchor in the bay.

At times, access to the coast for loading sugar could be disputed. Along with the king's highway, the common paths were public roads but a network of field tracks existed within and between plantations where rights of way were less clearly defined. An Act of the Nevis Assembly in 1701 had recognised the need to define and maintain roads for the public good, and allowed private paths to be altered or turned into public roads, on payment of agreed compensation to the landowner ('An Act for the more easy repairing of Highways',

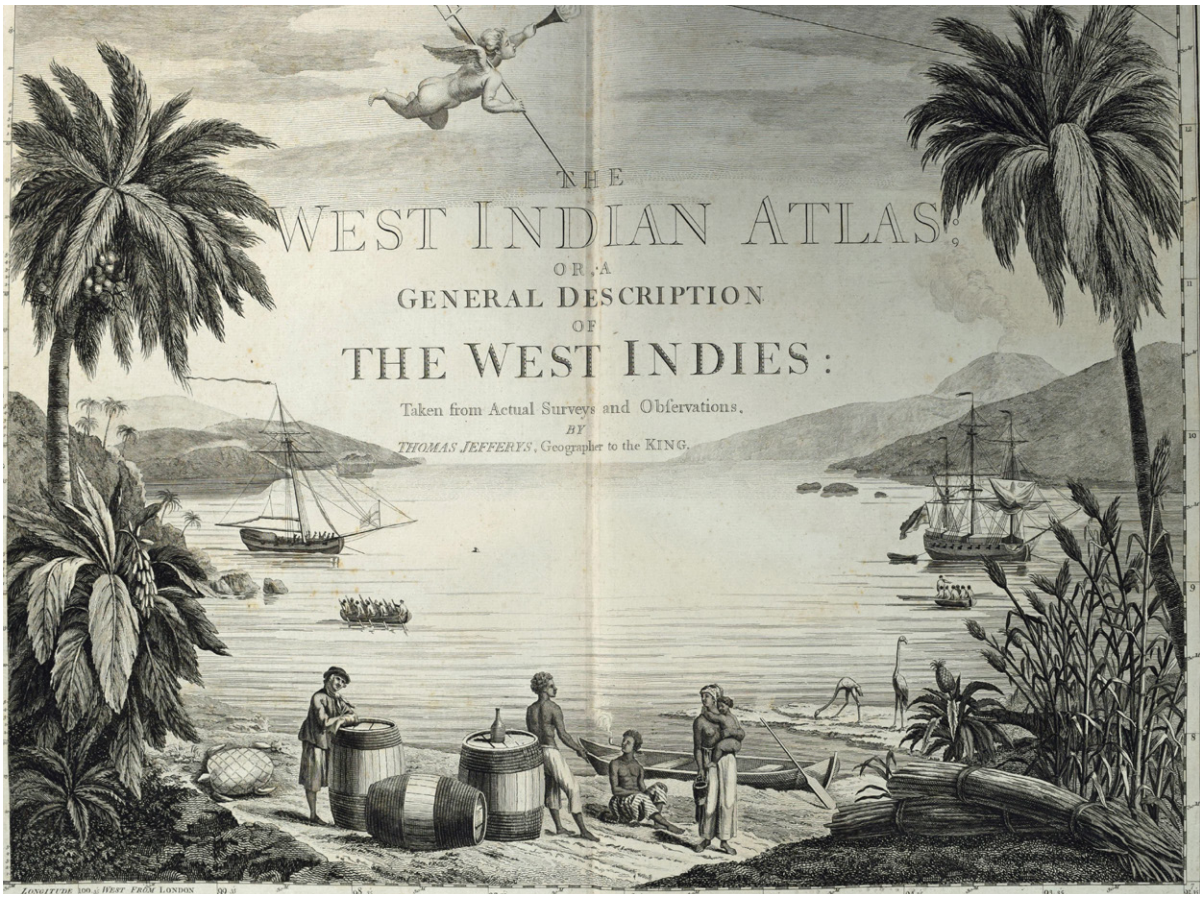

Figure 1.9. Title page of Thomas Jefferys's The West Indian Atlas (1780) showing an informal loading place for sugar, at an unnamed Caribbean location (copyright The National Archives CO 700/West Indies21)

1701, TNA CO 185/2, 40-1). Disputes could still arise. In neighbouring St Kitts, Thomas Mills complains to John Mills that a Mr Mollineux had been persuaded 'to demand a path through your pen to the Bay with his sugars and claims it as his right' (Thomas Mills Letter Book, 3 Mar 1753, Museum of London Docklands 2006.178/1).

Cisterns

Securing a consistent water supply was a challenge to the planters, as drought was an intermittent but unpredictable problem. The consequences could be severe. A drought lasting from early December 1725 to July 1726 led to a lack of provisions for the enslaved workforce, death of livestock and failure of much of the sugar crop (Meniketti 2006, 55). In 1682 William Freeman lamented that a great hurricane and drought had resulted in poor sugar quality (Hancock 2002, 280).

The practice of collecting rain water in storage cisterns fed from gutters carried from the house roofs was widespread in the Leeward Islands, born of experience of the periodic water shortages which visited the islands. Ligon refers to the practice in Barbados in the mid 17th century, 'water they save likewise from their houses, by gutters at the eves, which carrie it down to cisterns' (Ligon 1657, 29). The 1687 Hack map of part of Nevis and St Kitts includes in its description (apparently referring to St Kitts) 'the fresh water on this island is not very good, it is so hot, that you can scarce keep your hand in it. The inhabitants save raine water & keep it in cisterns built up with stones for theire necessary ocasions' (BL Sloane 45.74). Sir Hans Sloane, who visited Nevis in 1687, reported 'they have neither Springs nor Rivers, but have what Water they make use of from Cisterns receiving the Rain-Water' (Sloane 1707, 42). Sloane's brief visit did not allow him to gain the degree of familiarity of the island which Revd William Smith had in the early 18th century. Smith (1745, 220) noted that 'we usually drink cistern water' when not near the supplies of fresh water available from Bath River, New River or Newcastle River.

The cisterns were vulnerable to damage in earthquakes. The impact of a particularly severe earthquake in 1690 was recorded by John Oldmixon '...'tis usual almost at every House in this island to have a large Cistern, to contain the Rain Water, of about 9 or 10 Foot deep, and 15 or 20 Foot Diameter; several of which, with the Violence of the Earthquake, threw out the Water 8 or 10 Foot high' (Oldmixon 1708, 215). Revd Smith reported

how an earth tremor in Nevis in 1717 lasted two and half minutes and 'shook the whole house, causing it to crack loudly' though apart from cracking cisterns and boiling house walls on the island it caused no major damage (Smith 1745, 61-2).

Figure 1.10. Hermitage plantation, Nevis: cistern (photograph: Robert Philpott, 2013)

Cisterns were a vital part of plantation infrastructure and have been present at all the estate centres recorded archaeologically. By the 1770s Rymer reported 'There are some estates which are supplied with rain water only. The water is received and contained in cisterns, which being considerably under the common surface, and having arched roofs, the contained water is very cool' (Rymer 1775, 4-5). Many Nevisian sites have a circular cistern set largely below ground and plastered internally, with a low circular wall above the ground surface. An example at the Hermitage demonstrates the survival of the domed cap (Figure 1.10). Beside the Hermitage cistern is another structure, the drip filter (Figure 1.11), also described by Rymer 'They also improve [the water] by allowing it to pass thro' a filtering stone into a jar made on purpose, where the filtrated water becomes very pure and cool' (1775, 4-5).

Urban Settlement

The majority of the cultivable land was taken up with sugar plantations by the later 17th century, with few nucleated settlements, only two of which could be termed urban. In his description of the island in 1676 Governor Stapleton reports, 'In Nevis, five places for trade, but two considerable; Charles Town, where are good dwellings and storehouses, built with the country timber, not exceeding 60 feet long and 20 broad, story and a half, the "Hurri-Canes" having taught the people to build low. Morton Bay, where are but few houses, because ships ride at Charles Town and send their long boats to Morton Bay for lading' (Stapleton 11 Nov 1676; Appendix 1). By 1684 Morton's Bay had been renamed Jamestown, in honour of James II (Machling 2012, 105). The character of the urban environment at Charlestown and Jamestown is indicated by Stapleton's description. The towns were dominated by merchants with their townhouses and storehouses; the latter were essential for secure storage of their sugar crop awaiting transportation to England, as well as the reception depot for goods and provisions imported to Nevis from England or New England. A brief physical survey of Charlestown in 2004 and map evidence shows a series of large rectangular plots, of broadly regular size, like medieval urban plots in English towns, arranged along two principal streets parallel to the waterfront. Major merchants such as Joseph Jory, Azariah Pinney, and William Stapleton had their townhouses and storehouses there. By the turn of the 18th century, the settlements classed officially as towns included Newcastle. In 1700 an Act of the Nevis Assembly was passed to prevent fire as the 'several towns' in the island had suffered many fires. The towns specified were Charlestown and Jamestown, but Newcastle was now added, presumably being one of Stapleton's five places for trade ('An Act for suppressing Thatcht Houses; and erecting Brick or Stone Chimnies in all Towns', TNA CO 185/2, 1700, 24-5).

Wills and other documents of the 17th century (for which see Appendix 1) underline the close links between Nevis and the trading seaport city of Bristol (discussed further in Chapter 4). It was anticipated that archaeological fieldwork would reveal more of these links, already noted in the context of the excavations undertaken in Crosse's Alley, Charlestown (Leech 2004, 157-64; 2014, 357-8).

The Research Projects

Two projects form the focus of this volume, Upper Rawlins and Fenton Hill. Upper Rawlins was surveyed and selectively excavated as a plantation superficially similar to that depicted by Du Tertre in 1667. A ruin at Fenton Hill was identified as a former dwelling house of

Figure 1.11. Hermitage: drip filter with reused 18th-century Montelupo olive oil jar inside to catch water (photograph: Robert Philpott, 2013)

earthfast construction, with adjacent sugar processing installations, all then surveyed and selectively excavated to understand further the context of impermanent architecture in the early settlement of Nevis.

Another site, at Jennings Range/Low Ground, the home of the Governor William Stapleton, was identified through documentary and cartographic research by Roger Leech followed up by fieldwork to locate the estate centre. Surface collection of artefacts in advance of development produced some late 17th- and 18th-century material, which indicates a significant presence during Stapleton's lifetime and beyond. Having identified the approximate location of the substantial house shown in elevation on the Hack map (Figure 1.6), it was disappointing not to identify the house site through archaeological fieldwork. Nevertheless, it was confirmed that plantation remains, including cisterns, exist at the location identified from documentary sources to be the upper plantation works of the Stapleton estate. Future fieldwork in this area could well provide further information about the Stapleton house, its adjacent gardens and plantation works. This site will be the subject of publication in a future volume.

Further volumes in the current series will explore themes touched on in this first report. They include the results of excavations on two urban sites at Charlestown (Crosse's Alley) and Jamestown, including both the structural evidence and the finds assemblages, and a detailed consideration of the earthfast or post-in-the-ground buildings which are exemplified by Structure A at Fenton Hill in the light of the investigation of buildings of similar construction at Mountravers. A preliminary discussion has focussed upon the Hermitage and Fenton Hill, advancing the proposition that the inspiration for this style of building came as much from the indigenous cultures of the New World as from long remembered earlier techniques of building in Europe (Leech 2006a).

Future volumes will also present the work on archaeological field surveys in both Nevis and St Kitts which have investigated the buildings at the heart of sugar estates and mapped the plantation landscape layout and development. Another theme is the growing evidence for sugar-refining ceramics known from fieldwork identified through the Nevis Heritage Project, to establish the chronology, source and scale of local production.

2. Excavations at Fenton Hill, St George's Gingerland Parish, 2007 and 2009

Robert Philpott and Roger Leech

Introduction

Roger Leech

The site known here as Fenton Hill was first brought to the attention of Roger Leech in the summer of 2003 when visiting a ruined gabled stone building with Martin Dalgleish, a resident of nearby Dunbar Mill on Nevis, who had developed an interest in the history of the island. This ruined building proved to be the boiling house (Figure 2.1, Structure B), described and discussed later in this report. On the hillside to the north-east of this ruin was a second much smaller ruined building (Structure A), which rapid examination showed to be of exceptional interest since it appeared to have been built around an earlier timber structure of post-in-the-ground or earthfast construction (Figure 2.2). A measured survey of the building was undertaken by Roger Leech in July 2003 so as to contribute to a more general discussion of impermanent architecture in the Caribbean (Leech 2006a, fig. 10.8). This form of building where timber posts are set in the ground has been recognised increasingly in the Caribbean and eastern USA. North American scholars have argued that this was a mode of construction reflecting the European origins of settlers wishing to minimise investment in plantations through lower cost, impermanent building. Roger Leech has argued rather that early settlers in the Caribbean and the Tidewater followed the indigenous peoples of the region in using building techniques well-suited to withstand hurricanes and tropical storms, and that North American scholars have played down the role of the indigenous peoples in shaping the new form of the continent (Leech 2006a). Other visible structures and features which formed part of the plantation remains were also surveyed at the time.

Figure 2.1. Fenton Hill: boiling house (B) from SE

In subsequent reporting the site of these two buildings has been referred to as Fenton Hill, the nearest name shown on the modern maps of Nevis. Locally the site might be known as 'River Path', the name of the now concrete track way that leads to it southwards from the main round the island road. Historical research (for which see below) has suggested the site formed part of the 18th-century estate known as Jory's.

Following the completion of the excavation and survey of an early plantation site at Upper Rawlins (see Chapter 3), the further investigation of the buildings and plantation remains at Fenton Hill was seen in 2007 as representing an added opportunity to gain a better understanding of plantation life on Nevis in the first century or so of English settlement. Possession of the site had by that date passed to Mr Wade Knowles, owner of the Chateau chain of restaurants in New Jersey (USA), who was enthusiastic that further research into the archaeology and history of the ruined buildings might take place, and to whom the authors are most grateful for all the assistance that he has rendered to the project outlined below.

The investigation of the site near Fenton Hill, St George Gingerland parish, Nevis, forms part of the University of Southampton's ongoing Nevis Heritage Project. Theme 3 of the Project concerns the historical archaeology of urban and rural communities and in 2007 continued to investigate the early settlement of the island. The excavation of the site at Fenton Hill as a teaching excavation was directed by Professor Roger Leech of the University of Southampton and Dr Robert Philpott then of National Museums Liverpool, with the assistance of undergraduate students from the University of Southampton and volunteers. The fieldwork was undertaken between 2-21 September 2007 and further investigation by the University of Southampton took place from 29 June to 23 July 2009. The site is located at BWI Grid Reference 0340140 1894217, at an altitude of about 165m.

Figure 2.2. Fenton Hill: interior of Structure A, after removal of topsoil layer 100 in SE corner, from W

Early Settlement in St George's Gingerland

The parish of St George's Gingerland forms one of the primary 'divisions' into which the island was partitioned. Its boundaries follow in part the topographical feature of the New River Gut to the north, while to the west it takes the straight line drawn by surveyors to the mountain peak (Figure 1.4; see Leech 2007 for discussion of land divisions). Settlement of Gingerland appears to have been well advanced by the mid 17th century, although there are no records to enable us to chart the extent and speed of progress. The name indicates that ginger was a favoured crop there in the early days of settlement.

European settlement was well established on the south-eastern quarter of the island by the later 17th century. Thomas Ayson, a Bristol merchant, had acquired a plantation in Gingerland (probably Vervain, discussed below) by the early 1660s, as it was left to his wife Elizabeth (née Symonds, later Combes) on his death in 1665 (Oliver 1919a, 279-80). John Combes himself had amassed several plots by the 1670s, purchasing from three individuals to create a sizeable plantation.

By 1678, when the first census of Nevis took place under Governor Stapleton, Gingerland had a population of 326 white men, women and children and 284 blacks (Oliver 1914, 76), a relatively small proportion of the total island population of 3521 whites and 3849 blacks (Dunn 1973, 127, table 12).

Historical Evidence for the Plantation

Robert Philpott

The plantation at Fenton Hill lies on the windward, south-east side of the island of Nevis, in the parish of St George Gingerland. The estate centre lies on a site sloping down to the south-east at an altitude of about 150m above sea level and, on topographical grounds, it is likely that two major seasonal river valleys or ghuts defined the northern and southern boundaries of the estate. About 150m to the south-west of the plantation works lies the deeply incised Kitt Ghut, an intermittent watercourse, while 200m to the north-east is an unnamed ghut.

Within the historic plantation landscape, the sugar works at Fenton Hill lie roughly midway between Vervain estate, 600m to the east-north-east, and Simmonds estate, to the south. Immediately south-west of the site is a long-established road aligned roughly north-west by south-east which turns just south-east of the plantation works to head towards Vervain plantation. On the east is Fothergill's plantation, to the south-west is Dasent's estate, while to the north, across the main round island road, is Golden Rock plantation (Figure 2.3).

The Burke Iles map of 1871 shows the post-emancipation village of Fenton Hill as a series of three parallel rows of houses aligned on the road on which River Path now stands (Figure 2.4). The date of the foundation of the village, in common with other villages, lies in the early years after the Slavery Abolition Act of 1833, which came into force on 1 August 1834.

Documented History

Roger Leech

Historically Nevis is an enclosed European landscape laid out from the 1630s onwards within nine principal 'divisions' (see Chapter 1, pp. 9-10, Figure 1.4). The central southern division, corresponding to the parish of St George, with its principal property boundaries running parallel to the coast, was possibly the last division to be set out. In all the other 'divisions' the principal property boundaries were laid out at right angles to the coast (Leech 2007, 191, 195).

The histories and boundaries of the estates encompassing and surrounding the excavated remains at Fenton Hill are not easily discerned, since few historical estate maps survive for this part of the island in the parish of St George. The surveyed and excavated remains at Fenton Hill are clearly those of a former sugar plantation, but they are not easily traced in the documentary records.

On Nevis the title to a property is held in two ways. First, the title may be recorded as registered in the system adopted from the mid 19th century onwards. In the Nevis courthouse records there are no registered titles for the property on which the remains lie, nor for any of the nearby older plantation estates, such as

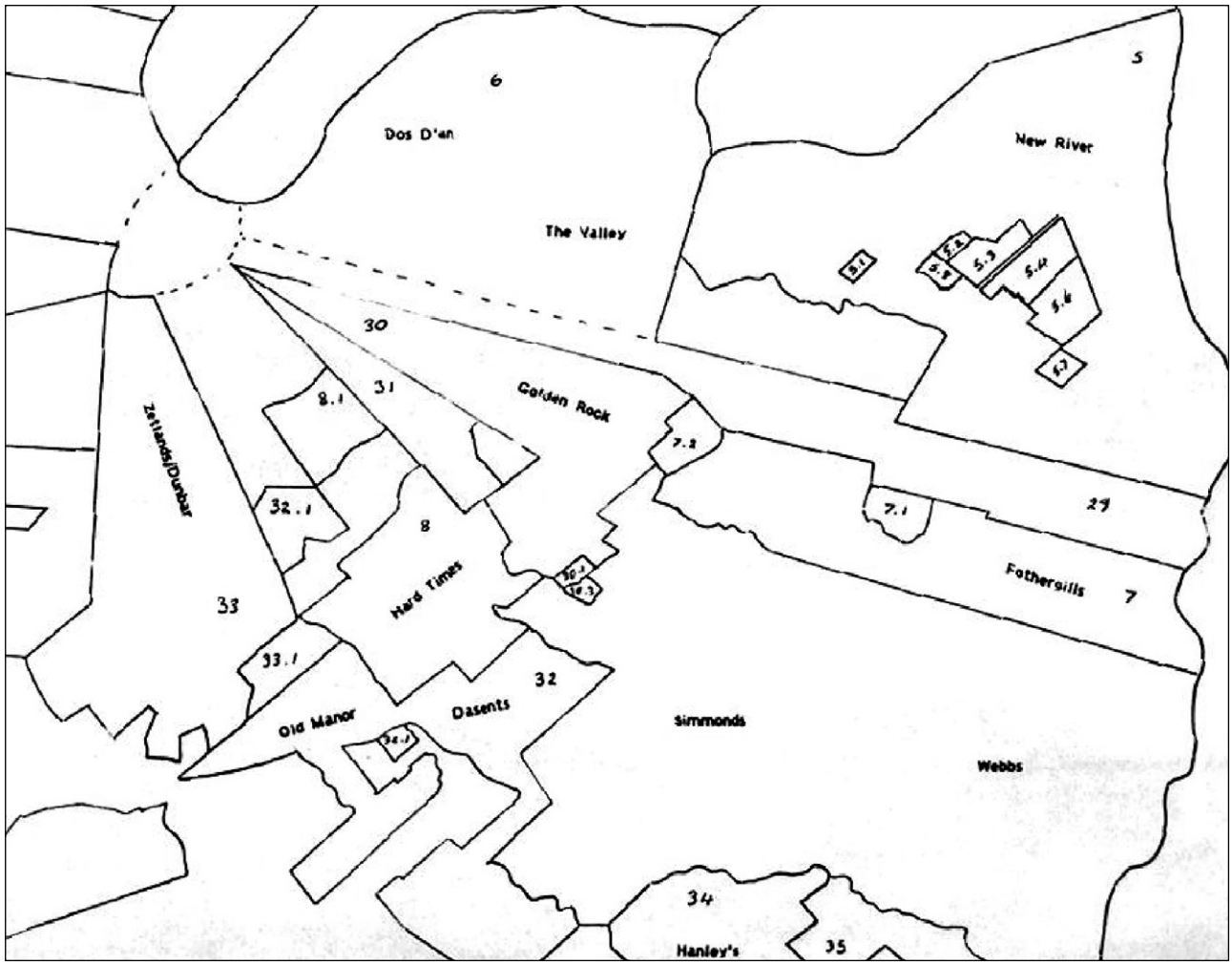

Figure 2.3. Detail of Sharpe's map of late 1990s, showing estates in St George's parish

Vervain or Simmonds. The closest title plan is that of the Fothergill estate (EAP794/1/10/1/25; Figure 2.5).

A second way in which title may be claimed is by recourse to the books of Common Records (EAP794/1/1), compiled for the convenience of the inhabitants from the beginning of the 18th century or earlier. These offer a few clues to the identity of the surveyed and excavated plantation. The closest easily identified plantation to that excavated was and is Vervain, where the windmill tower still remains, converted to a residence. To the west and north of Vervain was the plantation known as Jewry's, recorded in 1763, 1766 and 1767 as being of Henry Sharpe esq. A level part of the round the island road close to Fenton Hill was probably named 'Jewry's Plain' after the plantation below it (EAP794/1/1 Common Records 1764-7, fol. 504). To the south of Jewry's was another plantation, recorded in 1763 and 1767 as in the possession of James Chapman esq. and Elizabeth his wife who conveyed it then to Josiah Webbe esq. of Stoney Hill. To the west of Jewry's was the plantation possibly giving its name to Fenton Hill, in 1766 known as Fenton's Plantation. The history of these various plantations can be summarised as follows:

Chapman's Plantation

In 1763 and 1767 this was the plantation or piece of land in the parish of St George, *c.* 14 acres 2 roods, bounded to the north-east by Jewry's Plantation of Henry Sharpe esq., to the north-west with the common path or king's highway, to the south-east with the plantation of the late James Symonds esq. decd., and to the south-west with lands of John Dasent esq., together with a dwelling house and two other parcels of land, conveyed by James Chapman esq. and Elizabeth his wife to Josiah Webbe of Stoney Hill (EAP794/1/1 Common Records 1790-2, fols 8-20).

Jewry's Plantation

In 1763, 1766 and 1767 this was the plantation known as Jewry's, now in the possession of Henry Sharpe esq., to the west and north of the Vervain Plantation (EAP794/1/1 Common Records 1764-7, fol. 622ff, abuttals from Chapman's Plantation).

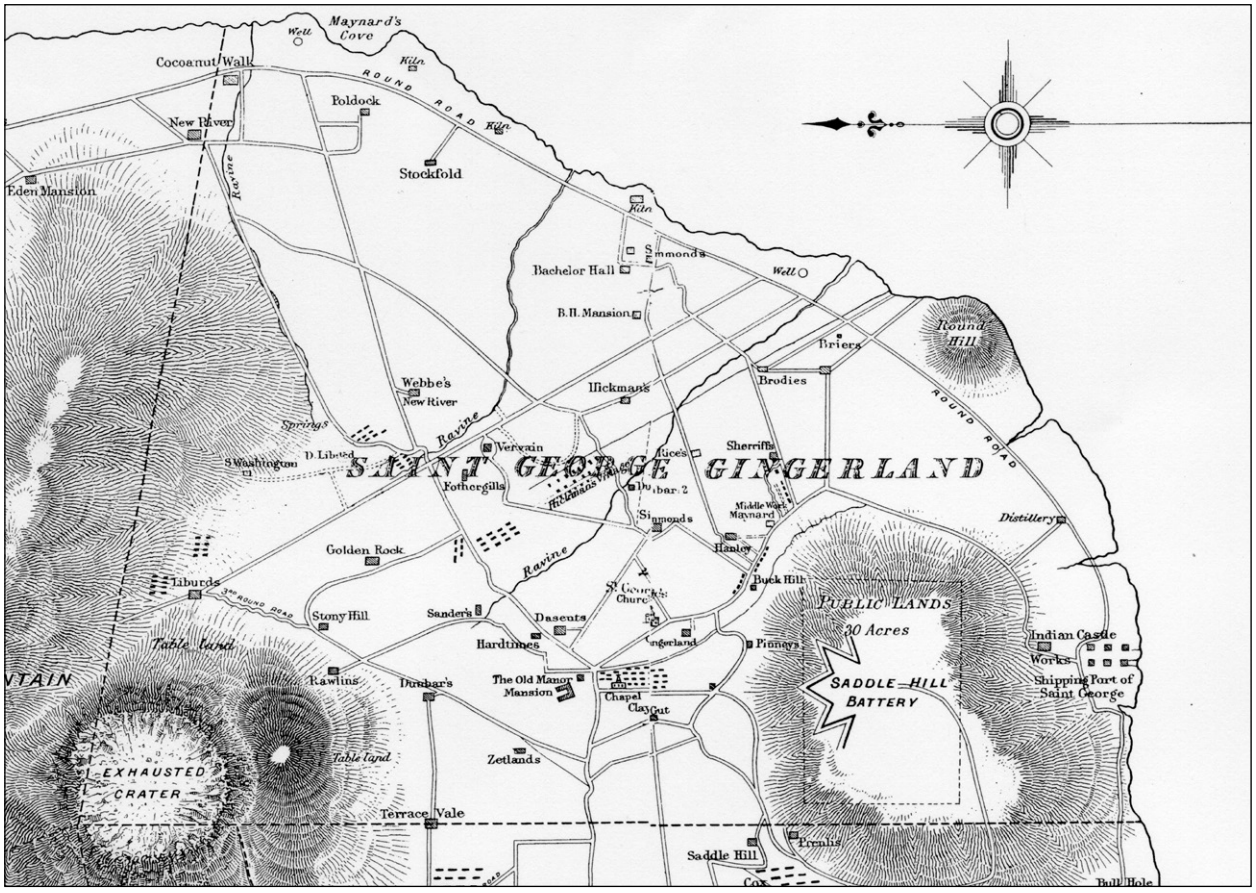

Figure 2.4. Burke Iles's map of Nevis 1871, detail of St George Gingerland parish

Fenton's Plantation

In 1766 this was Fenton's Plantation, *c.* 15 acres, bounded to the east with Jewry's plantation now of Henry Sharpe esq., to the west with the common path or king's highway, to the north with lands of William Burke the younger esq., to the south with the common path or king's highway known as Jewry's Plain, mortgaged by John Burke of the parish of St George, gent. to William Tuckett attorney (EAP794/1/1 Common Records 1764-7, fol. 504). Fenton Hill in St George's parish probably takes its name from this plantation.

Ownership of the Estate

Robert Philpott

Documentary research prior to excavation identified the remains as being those of a plantation to the north-west of the Vervain and Simmonds estates. A number of relevant documents were transcribed, both in the Common Records (EAP794/1/1) held in the Court House on Nevis, and in the Suffolk Archives at Ipswich, England, which holds records relating to the Maynard family on Nevis. The site at Fenton Hill was probably known as Jewry's or Jory's.

One potential line of enquiry to identify the ownership of the plantation is the inscribed date-stone of 1675 bearing the initials 'IC' or 'JC'. The stone was found by the site owner, Wade Knowles, during landscaping works on the site (Figure 2.6). The first census of Nevis, taken in 1678, is nearly contemporary with the date-stone and there is thus a strong possibility that the census records the identity of IC/JC. The census gives the names of all the householders in Nevis with the number of white and black men, women and children attached to the household, arranged by division or company (Oliver 1914, 27-35, 70-81). The divisions correspond to the five Nevis parishes, but the parishes are not named. However, it is possible to identify the parish of St George with the division or company commanded by Captain John Smith (Oliver 1914, 74), as Smith owned Stony Hill plantation in St George before 1719 (Oliver 1912, 270). In the census record for Smith's division only four individuals have the initials IC or JC. Of these, John Connell was described as poor, while two others, John Carter and John Chapman, have no significant property. The final individual, John Combes, is by far the strongest candidate.

John Combes (d. 1689)

The name John Combes appears in two divisions in the 1678 census. From the size of the household, one has

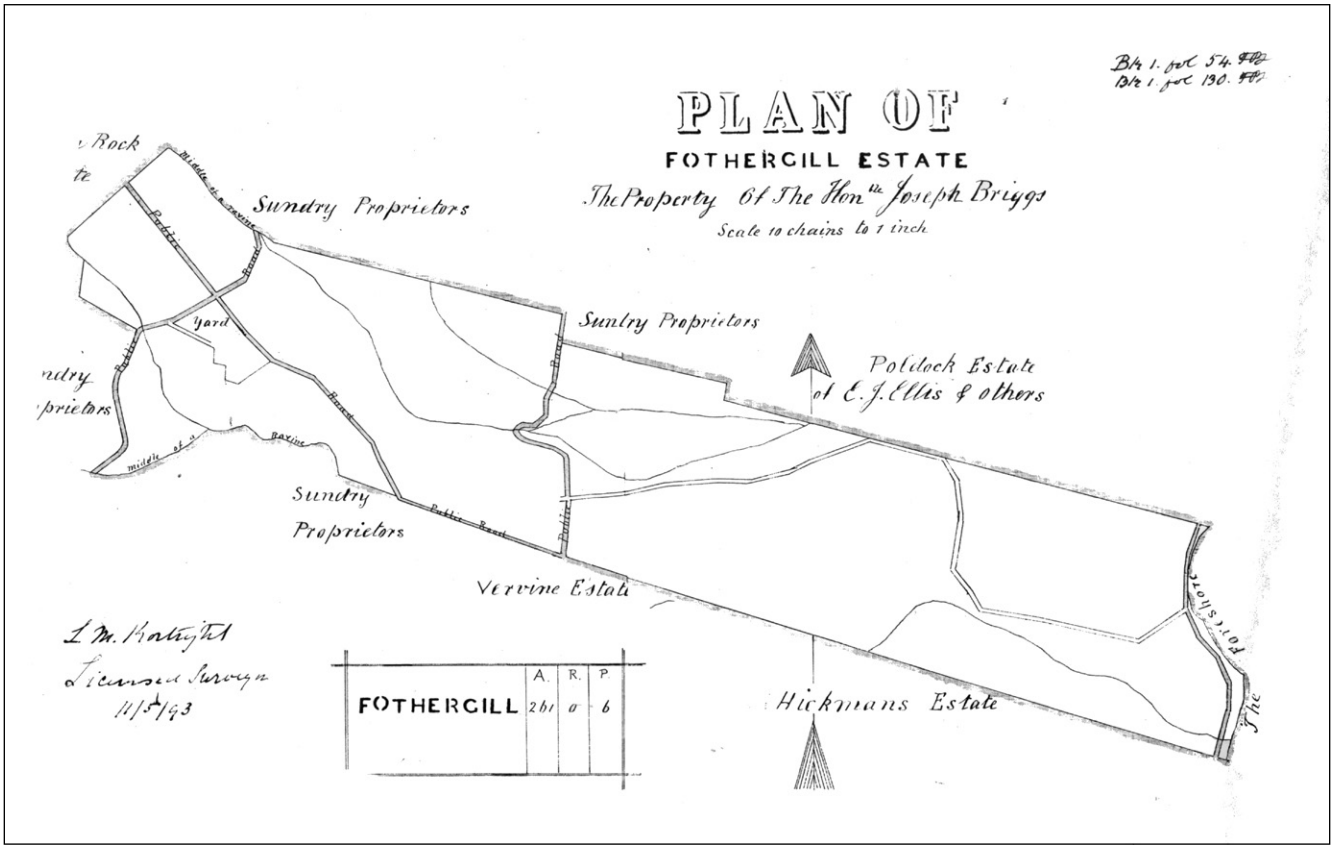

Figure 2.5. Plan of the Fothergill Estate, 1893, by L. M. Kortright (Courthouse records, Land Title Register Book 1, fol. 54; EAP794/1/10/1/25); the copy obtained has cut off two names on the left side, 'Golden Rock Estate' and 'Sundry Proprietors'

a substantial sugar plantation with a total of 80 slaves, while the other looks more like a small family dwelling which had one white man, one white woman and four white children in Butler's division elsewhere on the island (Oliver 1914, 78). The latter may be the 'John Combs' recorded in the 1708 census in a household with one white male and one white female, one black female and two black males (Oliver 1914, 173). It is probable therefore that the owner of the Fenton Hill estate was the first John Combes.

John Combes, a merchant usually described as 'of Bristol', but on one occasion in 1676 as 'of Southampton' (Sainsbury 1893, 417-35), owned plantations and lands in Nevis. In the 1678 census he is recorded as having a considerable workforce, including 80 enslaved Africans on his estate in St George: 'Mr John Combes 9 white men 1 white woman, 30 negro men, 26 negro women, 24 negro children' (Oliver 1914, 74). Combes was one of an elite group of planters on Nevis, one of only eight individuals who held more than 60 slaves (Dunn 1973, 129). He was a man of some stature in the island plantocracy, as a member of the council of Nevis in July 1672, July 1676 and again in June 1678 (Sainsbury 1889, 382-98; Sainsbury and Fortescue 1896, 256-68); he was reported as leaving for England in July 1676 (Sainsbury 1893, 417-35).

Combes's origins are uncertain. He may have begun his career in the West Indies as an indentured servant, but by the end of his life he was described as a Bristol merchant, member of the island council, and one of the largest slave owners in the island. As he left no children, he directed that his own plantations and slaves should be sold on his death, although no documentary evidence has yet been found which shows the purchaser. His two executors, John Streater and Streater's brother-in-law William Minor, like Combes, were Bristol merchants. Minor is described as a merchant formerly of Bristol but now of Nevis in his will of 1691 (Oliver 1919a, 304). John Streater[1] and company of Nevis were involved in the mortgaging of Charlots estate, which was mortgaged to them in 1684 and was later acquired by Azariah Pinney in a complicated series of transactions in the 1690s and early 1700s, forming the nucleus of Pinney's Mountravers plantation (Pares 1950, 36-7). The Streaters also appear to have been previous occupants of Azariah Pinney's townhouse in the northern part of Charlestown (Hobson 2007, 305, n. 37).

Combes died in 1689 in Antigua where his will was proved (Oliver 1912, 180; TNA Prob/11/395/185). The

[1] John Streater's will was dated 12 November 1691, letters of administration on 20 June 1694 (Oliver 1919a, 303). See Appendix A.

Figure 2.6. Fenton Hill: the date-stone, reading I C / XX / 1675, found close to the probable site of the main house, as built into the modern house

following extract lists the lands he held in Nevis and his intentions for the estate after his death:

> 'I do order and appoint and do hereby give power and authority to William Mynor and John Streton [*sic*] late of Bristoll but now of the West Indies merchants jointly and severally to sell and dispose as soon as conveniently they can after my death the lands and plantations by me some time since purchased of the widdow Jones and also the lands called 'Crooks land' and a parcel of land bought of Robert Harrison lying in the lowe grounds by the seaside in the Island of Nevis and adjoining to the plantation of my late wives [*sic*] and also to sell and dispose of all the stock Negroes and goods thereon and which shall be in being there at the time of my death and also all the stock and improvements made on my plantation which was my late wives [*sic*] for the best rate and price they or either of them can get for the same.' (Will of John Combes, TNA Prob/11/395/185 1689)

The will shows the source of John Combes's land. He was engaged in the process of buying up and amalgamating smaller holdings, perhaps of former indentured servants. In a series of transactions he had purchased a plantation and land in his own right from the 'widdow Jones', 'Crooks land', and he purchased a parcel of land from Robert Harrison adjacent to his wife's plantation 'in the lowe grounds by the seaside' in Nevis. As for the former owners' identity, a Robert Harrison appears in Barbados in a parish register recording his marriage to Elizabeth Austin in 1674 (Oliver 1914, 200). The date may be significant as the following year Combes erected his house at Fenton Hill, and it might be suggested tentatively that Harrison sold his holding to Combes prior to the move to Barbados. However, if it is correct to draw a distinction between Widow Jones's 'land and plantations' and simply 'lands' and 'a parcel of land' of Harrison and Crook, it might be argued that the site at Fenton Hill should be identified with one of the plantations purchased from Widow Jones. She is likely to be the same Mrs Jones named in the census for 1677-78 in Captain Robert Hammon's division, in a household which, significantly for her status as widow, consisted of no white men, one white woman, one white child and three 'negro' men (Oliver 1914, 77). The identity of Widow Jones and her deceased husband, and the date of their arrival in Nevis, are uncertain, although one candidate for her spouse is Miles Jones, who is recorded as a witness to the will of a Gingerland planter James Hewett in 1648 (Oliver 1916, 107). However, the Bristol register of servants sent to foreign plantations shows no fewer than 14 women named Jones who disembarked from Bristol for Nevis between 1654 and 1675, and the data are insufficient to narrow down a single individual. Over 10,000 individuals, very largely originating in the West Country, West Midlands or Wales, were carried to Virginia, Maryland or the West Indies (Coldham 1988).

Crook may have been one of the Crook(e) family of St Kitts, present in that island from at least as early as 1648 (Oliver 1912, 194).[2] Members of the family, including Lt. John Crook, Ensign Samuel Crook, and Henry and Benjamin Crook, are recorded in St John Capisterre parish on St Kitts in the 1678 census, while Richard Crook appears under Sandy Point in 1678 (Oliver 1912, 69-70). Subsequently, during the 18th century, the Crook(e) family owned The Spring and The Lodge plantations on St Kitts. The 1698 Norwood map of St Kitts shows Ensign Samuel Crook owned land in St Mary Cayon Parish, which should probably be identified with The Lodge plantation that Clement Crooke held around the beginning of the 18th century (Pierre Buor map, dated *c.* 1711-13, British Library Maps K.Top.123.79.2 TAB)[3]. A Thomas Crook was listed in the 1677-78 census of Montserrat (Oliver 1914, 347). On Nevis itself, Henry Crook, described as 'old and poor', with a household of one white man and one white child, was listed in the 1678 census under Captain Robert Choppin's Company or Division (Oliver 1912, 80), and we may here have the individual from whom Combes acquired 'Crooks land'. The modern Ordnance Survey map of Nevis records Crooks Ground in Gingerland to the south-west of the excavated site which may preserve the memory of the late 17th-century individual and his holding.

[2] A genealogy of the Crooke family of St Kitts is given in *Caribbeana* (Oliver 1914, 193-7).

[3] Buor's map can be dated from internal evidence to 1711-13 (see references, p. 215).

John Combes's will provides details of his wider family. He had two brothers, James, who lived in Antigua, and Adam, master of the ship *William and Ann*. Adam, also of Bristol, died in 1691 and was husband of Joanna Combes. To his daughter Elizabeth Combes, the daughter of his former wife Elizabeth Combes, he left 100,000lbs of sugar to be paid by Mr Walter Symonds, a planter in Nevis (Oliver 1919a, 302). Another daughter was Susanna, who was witness to Elizabeth Combes's will (d. 1685).

Thomas Ayson d. 1665

By virtue of an advantageous marriage, John Combes gained access to his wife Elizabeth's plantations and on her death those of her deceased husband, Thomas Ayson, a Bristol merchant (Oliver 1919a, 279-80). In her will, dated 28 November 1685, Elizabeth leaves 'to my said husband John Combes for life my plantations on the Island of Nevis in America which were formerly those of my said husband Thomas Ayson. After his death to be left to my kinsman Walter Symonds in fee subject to certain legacies. Probate 7 Dec 1685 by John Combes husband and executor.'

Thomas Ayson's will, dated 1665 (Oliver 1912, 310; summarised in Oliver 1916, 109), records that his wife Elizabeth was the daughter of Joseph Symonds, while her own will shows she was the sister of John Symonds (Oliver 1912, 311; transcription in Oliver 1919a, 279-80). Thomas Ayson left a bequest to the poor of the parish of Madley, Herefordshire, a village where he had a tenement, which was in the possession of Joseph Simmonds, his father-in-law (Herefordshire Archive Service BK52/41).

Walter Symonds (Simmonds) d. 1699

According to the terms of Elizabeth's will, on the death of her second husband John Combes, her estates were to pass to her kinsman Walter Symonds (Simmonds). Her relationship to Walter Symonds is not yet clear, although he may have been her uncle. A close family connection is suggested by the fact that Captain Walter Symonds was a witness to, and one of the overseers of, Ayson's will, receiving 5000lbs of sugar for the service (Probate 11 November 1665; Oliver 1912, 310).

Walter Symonds appears in the 1678 Nevis census under Captain Thomas Butler's division in a household consisting of 1 white man, 1 white woman, 1 white child, 9 negro men, 8 negro women, and 7 negro children (Oliver 1914, 78). Symonds was a member of the Council of Nevis and was Speaker of the Council in 1668. He appears as a beneficiary of various wills in the second half of the 17th century. Lawrence Brodbelt of Nevis in 1658 left him 500lbs of sugar (Oliver 1916, 19), he was recipient of a beaver hat worth £5 in the will of Henry Gillingham in 1662 (Oliver 1916, 108) and, as an overseer of Col. John Netheway's will dated 25 July 1692, he received 1000lbs of sugar to buy a beaver hat (Oliver 1919a, 302). Walter Symonds died on 7 July 1699. He had two sons, Joseph, who matriculated from Christ Church on 10 December 1697 aged 18 (born *c.* 1679), and John, who matriculated from the same college in 1705 aged 19 (born *c.* 1686).

John Combes's Estate

The documents enable us to distinguish between two sources of the property in the possession of John Combes. He purchased some plantations and land in his own right in Nevis, but he also held other plantations which had been left to him by his wife Elizabeth on her death in 1685 for the term of his life.

John Combes's own estate was situated in Captain John Smith's division in 1678, which we can locate in the parish of St George. However, John Combes had other lands, presumably in the same division of St George where he was registered in the census. It is likely that these lands termed 'lands and plantations' purchased from Widow Jones and 'Crooks land' were in the same division, where he had his main residence at which he had a date-stone erected in 1675. His will also mentions 'improvements' on his plantation, formerly Elizabeth Combes's.

There is good evidence for the location of Elizabeth Combes's plantation. As indicated by John Combes's will above, it lay in the low ground near the sea side and adjoined a parcel of land belonging to John Combes but formerly belonging to Robert Harrison. Elizabeth herself had inherited plantations on the death of her first husband, the Bristol merchant Thomas Ayson (d. 1665). On Combes's death, Elizabeth's plantations were to pass to her relative Walter Symonds. Walter died in 1699 but had two sons, Joseph (b. *c.* 1679) and John (b. *c.* 1686) who it may be assumed inherited their father's land.

The location of Elizabeth's plantation can be traced through this descent. In 1714 Joseph Symonds is recorded as owning 'Vervin Hill', a plantation of 14 acres, bounded on the east with the common path called Indian Path, on the west with lands of John Symonds, on the north with lands of Joseph Jorey, and on the south with lands of Thomas Hickman and Mary Taylor. The latter part of lands exchanged between Joseph Symonds planter and Sarah, his wife, and John Symonds. It seems therefore that Joseph Symonds's land, which bordered that of his brother John, may be the core of the estate left by Elizabeth to Walter Symonds. The estate may have been divided on Walter's death between his two sons and can be identified as the estate still known today as Vervain.

Burke Iles (1871) shows two plantations in Nevis called Simmonds, both in the parish of St George. One lies beside the sea, south-east of Fenton Hill, near Batchelor's Hall. It is presumably that which is described in the will of Elizabeth Combes (née Symonds, m. Thomas Ayson), as after John Combes's death it reverted to Walter Symonds, perhaps taking the latter's name. The other lies immediately south of Fenton Hill and appears to border it.

We can tentatively reconstruct the early ownership of Fenton Hill as follows: the plantation probably belonged to Widow Jones, who according to the census remained on Nevis in 1678. The sale appears to have taken place several years earlier. The 1678 census shows that Widow Jones had no significant property by then, and the date-stone bearing Combes's initials shows that he had built a substantial house on the property in 1675. It might be speculated therefore that the original timber house was constructed by Widow Jones or her husband. It seems likely then that Vervain was the plantation which had originally belonged to Bristol merchant Thomas Ayson (d. 1665), making this one of the earliest identifiable plantations in St George's parish Gingerland.

Joseph Jory (1646-1725)

Direct evidence for the purchaser of Combes's plantation after his death has not yet been verified through documentary research. However, whether directly on Combes's death, or with other intervening ownership not yet traced, the plantation was purchased by Col. Joseph Jory. As Jory was influential in Nevis society in the last two decades of the 17th century, but was resident in England from about 1700, it is likely that his investment in the plantation took place at the end of the 17th century, probably directly from Combes's appointed executors. Documentary research, notably deeds of neighbouring property which refer to Jory's plantation in the abuttals, enables us to reconstruct the western part of Jory's estate with some confidence, and the location of the remainder somewhat more tentatively. It is uncertain whether Jory's large plantation was essentially identical with the estate as left by Combes, or whether Jory added to the plantation by purchase and amalgamation of other smaller holdings.

Col. Joseph Jory (spelt variously as Jorys, Jorye, Jowry, Jorey, Jury or Jewry) is the source of the plantation

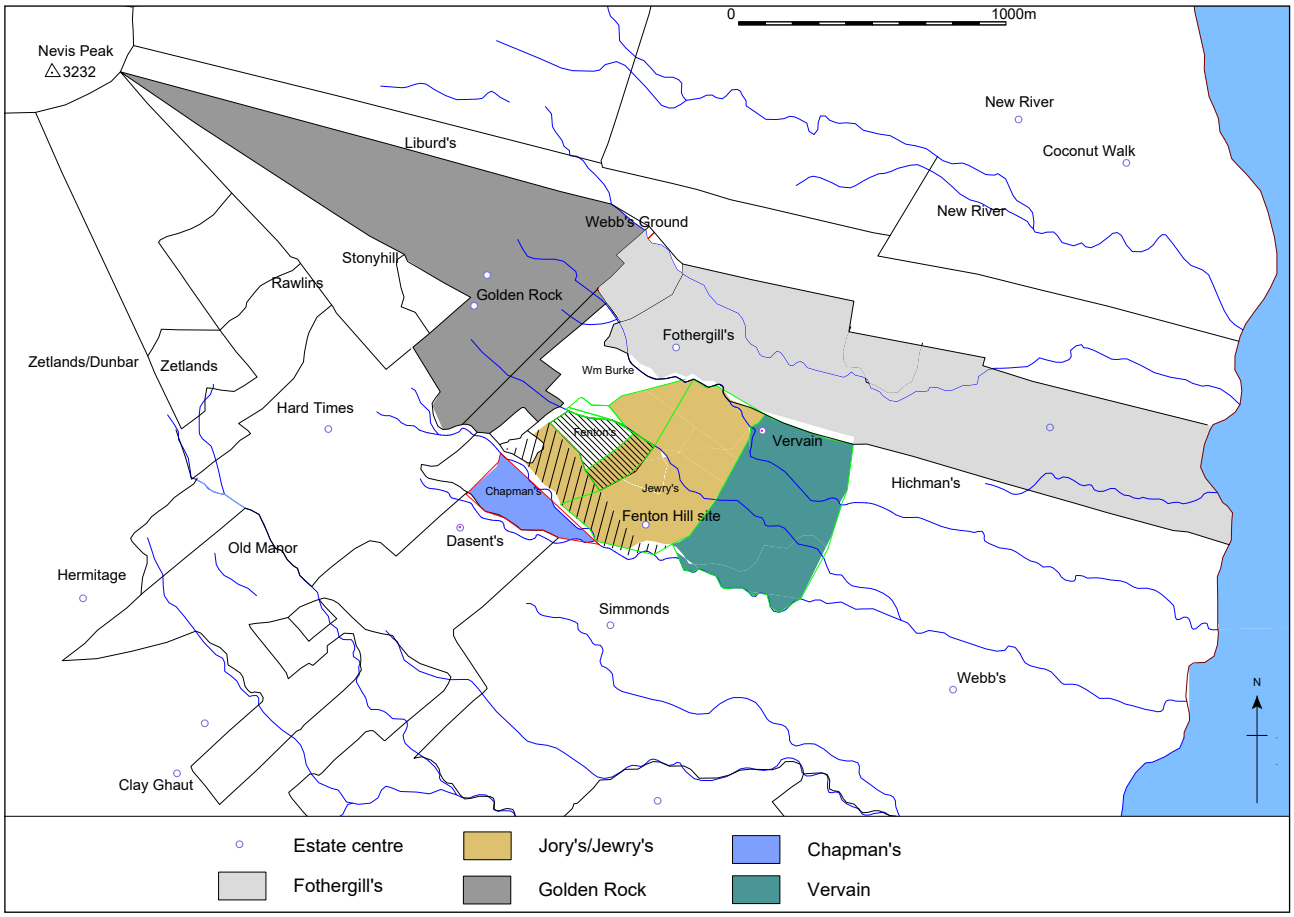

Figure 2.7. Putative reconstruction of Jory's and neighbouring estates in the mid 18th century (based on Sharpe's map, Fothergill's of 1893 and mid 18th-century Nevis Common Records)

name Jewry's, found in the Nevis Common Records (see above). Joseph Jory(e), son of Nicholas, was baptised 16 March 1646 at Plymouth St Andrew. The PCC will of Nicholas Jory of Plymouth, written 19 July 1654 and proved 22 April 1657, records Joseph and John amongst his seven children.

The earliest reference to Joseph Jory in the West Indies is as witness to a will in 1669 when he was in his early twenties (Oliver 1916, 112). In the 1678 census of Nevis, Jory appears with John Brown under the heading 'two white men' in the division of Captain William Burt. The following entry records John Jory, Joseph's brother, alongside John Ray as one of two white men in the same division (Oliver 1914, 34). The census for Captain Burt's division lists white men by name, followed by Scotch, Irish, Dutch men and Jews of both sexes - a total of 175 individuals. By contrast, white or creole women (47 in total) and children (48), and 'negro and Indian' men (35), women (26) and children (32) are listed only as aggregated totals so it is not possible to attribute these people to individual households nor to particular 'masters'. As Burt owned Tower Hill plantation in St Thomas Lowland, he would have commanded that division. Joseph Jory was not living in St George at the time of the 1678 census and must have moved there after that date.

In 1681 Joseph Jory married Frances Russell, the 15-year-old daughter of Col. Sir James Russell and Penelope Tyrrell (Madden *et al.* 1836, 163). James and his brother Col. Randolph Russell were the biggest planters on Nevis in 1678, 'truly large entrepreneurs' in the words of Dunn (1973, 128). James Russell was knighted on 10 May 1672 and served as Governor of Nevis from 1685-87. He stood at the pinnacle of the planter elite, owning 150 slaves.

Joseph and Frances Jory had one son Randolph, who was born about 1683, and attended Oxford, matriculating from St John's College, Oxford, on 3 November 1699, aged 16, and admonition at Oxford 26 November 1702 (Foster 1891).

In 1680 Joseph Jory was implicated in a case where an interloper illegally landed slaves in Nevis and the factors and agents of the Royal African Company who operated legally had been threatened with violence by prominent members of Nevisian society, including the Speaker. Jory along with Charles Pym, John Eddy, and Philip Lee, had assisted Richard Cary and Robert Belchamber to land a number of slaves, and had murdered in the process a servant of the Company (Oliver 1894, lxvi). Despite the seriousness of the accusation, Jory's career continued to prosper. His rise in Nevis society can be seen from his progression through the ranks of the island militia from lieutenant in 1680, captain by 1680, major by 1685 (Fortescue 1899, 123-35), and colonel by 1700, no doubt aided by the patronage of his father-in law, Sir James Russell.

His political career also thrived. Jory was a member of the Council of Nevis by 1682, appearing as a signatory to documents with other council members in April and July 1682 (Fortescue 1898). In that year Jory was paid disbursements for his work assisting Captain Joseph Crispe in representing the interests of the English colonists from the Leeward Islands in London in negotiations over a Treaty of Neutrality proposed in 1678 with the French (Penson 1924, 62). This was the precursor to his later appointment as Agent of Nevis, which took place in 1700 when Jory was in London (Headlam 1910, 462-83). He retained the latter post until his death in August 1725[1] (Penson 1924, 252).

The role of colonial agent in the late 17th century provided a useful advocate for the colony to the home government, but also created an opportunity for personal advancement for the incumbent (Higham 1921, 234-42; Penson 1924). The first permanent agents had been correspondents of individual governors, but agents for the colonial assembly or the colony as a whole were initially appointed to fulfil particular tasks or to undertake special missions to the home country (Higham 1921, 235). Agents were drawn from various sections of the colonial community. London merchants, such as Jory, were prominent in the role, and after his appointment in 1700, Jory operated from his Bethnal Green home 'nigh London'. His roles as the colonial agent included submission for approval laws passed by the General Assembly in Nevis to the Board of Trade and Plantations, responding to any comments of the Attorney General that might arise, and conveying to the board the minutes of the Assembly of the Leeward Islands. Jory was periodically summoned to attend the board (Penson 1924, 126, 274-5).

Meanwhile, Jory's sugar estate continued to thrive, as demonstrated by the change in the 30 years between the two censuses. By the 1708 Nevis census, Jory had no fewer than 33 black slaves (11 male, 22 female) (Oliver 1914, 174). However, the census may not have captured his holdings at their maximum extent. In the compensation claims for the 1706 French raids on St Kitts and Nevis, dated 22 April 1713, Joseph Jory acting on his own behalf as agent successfully claimed £881 12s 10d (Shaw and Slingsby 1957, 461-90). The value of Jory's debenture (certificate of debt) was one of the highest on Nevis, suggesting he suffered serious losses in the raid, and his complement of enslaved Africans may well have been severely depleted by that event. His considerable personal wealth was

[1] Penson gives the dates of Jory's service as agent as 1699-1726 (1924, 252).

demonstrated by his loan of £1500 on 17 April 1690, to the King under the Act, at 7% (Shaw 1931, 1971-2008).

In the tight-knit planter society of the late 17th century, Jory was frequently a witness or executor of the wills of fellow-planters and received various bequests for his services. Joseph Jorys [*sic*] was witness to the will of William Mildon of Bristol dated 17 June 1669 (Oliver 1916, 112) and also to the will of Col. Francis Morton 19 June 1678, which was recorded on 29 March 1716 (Oliver 1916, 291). Phillip Brome of Nevis in his will dated 8 December 1708 left £50 to 'my friend Col Joseph Jory of London' (Oliver 1919b, 8). Jory[2] was also one of the executors. He was left a guinea ring by Sir William Stapleton of Nevis, Bart. and former Governor, in his will dated 6 December 1699 (TNA Prob/11/459/368).

Jory also owned a townhouse in Charlestown, referred to in an abuttal in the will of James Bevon of Nevis dated 18 November 1720 (Oliver 1919b, 14). The townhouse gave him a foothold in the capital and chief port of Nevis, the seat of the island council and administration, and provided storage for sugar and other goods at the chief port of embarkation and disembarkation of goods and commodities, both export and imports, as well as home of the vigorous trading and merchant community.

The narrow social and political circle of English planters within which Jory operated in Nevis in the late 17th century dominated ownership of the substantial sugar plantations on the island. They also occupied key roles including officers of the island council and elected representatives on the assembly, commanded the divisions of the militia, which were organised by parish, and through intermarriage created strong bonds of kinship and common interest to form planter dynasties, thereby ensuring that the growing wealth from sugar remained within the circle of contacts. Placing important planters in the key government roles (such as colonial Agent) served the interests of the governing plantocracy.

Jory appears to have retained an interest in the municipal life of his home town. A Col. Joseph Jory was one of the aldermen of Plymouth who signed a petition to King William III in 1695-6 (Raithby 1820).

Attending the council for St Kitts, he was asked for character references for Francis Phips and William Byam (British History Nov 1708; Ledward 1920). On another occasion, , at a time of political instability with regard to the French, he petitioned the King on behalf of the government of Nevis requesting arms for the island, 'London. Dec. 30, 1701. Your Majesty's Lt. Gov., Council and Assembly of Nevis have sent home 600 match-lock barrels belonging to your Majesty's Forts there, and pray that they may be received into the Tower of London, and that a sufficient number of fire-lock arms may be ordered to be delivered forthwith out of the Tower for a supply of your Majesty's Forts there, whose necessities are very great for the want thereof. Signed, Joseph Jory'. (TNA CO 152/4. Nos. 75, 75.i.; TNA CO 153/7 pp. 331-2).

Joseph's brother John is also recorded in Nevis in the census of 1678. In 5-8 October 1688, Shippers by the *Mary* of Plymouth, Mr. John Jory, bound from Plymouth for Virginia (TNA E190/1052/21).

A notice dated 24 August 1725 appeared in *The London Gazette* recording the death of Joseph Jory 'of Abury-Hatch in the County of Essex, Esq; formerly a West-India Merchant'. The will was not immediately forthcoming. An advertisement appeared in *The London Gazette* for 5 October 1725, 'whereas Collonel [*sic*] Joseph Jory died lately at his House at Aberry-Hatch in Essex, and no Will of his as yet can be found; and whereas 'tis firmly believed by his nearest Relations that the said Deceased left a Will behind him, and Duplicates thereof in some Persons Hands at present unknown; This is therefore to give Notice, that if any Person or Persons can give any Account of the Will of the said Collonel Jory, so as the same be produced in order to be proved in the proper Court, such Persons so producing the said Original Will, shall receive the full Sum of One Hundred Guineas, from Mr. Denham Hamond, Attorney at Law, in Nicholas Lane. Den. Hamond.' (*The London Gazette,* 5 October 1725). This appears to have elicited the desired result as on 25 October 1725 there is a listing of the probate inventory of Col. Joseph Jorye on his property in Bethnal Green in Stepney, 'not including his negroes and estate at Nevis in the West Indies' (Guildhall Library MSS: Commissary Court Cause Papers: GL Ms 9186/4).

Frances Bladen (née Jory)

Jory's Nevis estate, along with his house at Aldborough Hatch, Barking in Essex, was inherited by his niece Frances Bladen. Frances had two children from her marriage to John Foche but both died within her lifetime. In 1727/8 Frances married Rt Hon. Col. Martin Bladen MP (?1680-1746), after the death of his first wife Mary in 1724. Martin Bladen built a new house at Jory's old house at Aldborough Hatch where the couple lived. Martin Bladen was a commissioner of trade and plantations, and spoke in the House of Commons on West Indian trade (Oliver 1927, 186; Sedgwick 1970).

On 29 June 1746 Frances Bladen was seized of a plantation called 'Jores' (EAP794/1/1 Common Records, 29 June 1776), which comprised about 320 acres (129.5ha). Bladen's will, dated 27 October 1746, written shortly before her death, records that her Nevis estate was leased to six individuals for a total of £300 per annum (Oliver 1894, 51). The lessees include two cousins Joseph

[2] Transcribed in error by Oliver as Jolly on p. 9.

Table 2.1. The divisions of Jory's plantation after the death of Frances Bladen in 1746 and subsequent descent

Recipient in Frances Bladen's bequest 1746	Notes	Subsequent descent 1746-53	Status in 1753
1. Deborah Hurt and her heirs	TNA C 11/1119/26		
2. Christopher Jarvis Hurt	Son of Deborah Hurt, married Mary Hooper, drowned in or before 1753 at the same time as Joseph Hooper (below)	His portion passes to Mary Hooper/Hurt/Cave on Hurt's death	Mary Cave and James Cave lease and release on 1 and 2 May 1753 Mary's three portions of the estate to Archibald Napier and William Strahan (nos 2, 3, 4); In 1763, two of the three portions (i.e. one third of the total estate) were granted to John Fothergill for the term of Mary's life
3. Joseph Hooper	Drowned at same time as Christopher Jarvis Hurt, died intestate with no heir in or before 1753	His portion passes to Mary Hooper/Hurt/Cave on Hooper's death	
4. Mary Hooper (later Hurt, later Cave), cousin of Joseph Hooper	Married Christopher Jarvis Hurt, mariner; after his death married James Cave in 1753	Inherits Joseph Hooper's share no 3, Christopher Hurt's share no 2	
5. Sarah Hooper (aunt of Mary Hooper)	On her decease, Sarah's share was to pass to Joseph Hooper and Mary Hooper equally divided	Her portion descended to Mary Cave (formerly Hooper) soon after Bladen's death (TNA C 120/843)	On Sarah Hooper's death, this share passes to Mary Cave (formerly Hooper) (TNA C 120/843); then from Mary Cave to Wm Ferguson (1753)
6. Sophia Snow	Daughter of Anne Trigge of Richmond; married Revd John Snow; had a second family (not married) in Bahamas with Governor of Bahamas John Tinker (d. 1758)	Descent of this portion uncertain	

Hooper and Mary Hooper, a 'kinswoman' Mrs Sarah Hooper, Mrs Deborah Hurt and her son Christopher Hurt, and Mrs Sophia Snow. All were to receive £50 per annum and their portion of the Nevis estate on her death. This represents the division of Jory's estate into six.

The lessees were well-connected individuals in their own right. Sophia Snow (née Trigge) had a long-term relationship with John Tinker (1700-1758), Governor and Captain General of the Bahamas. Tinker married Isabella Bladen, daughter of Martin Bladen (m. 6 February 1727/28) and they had two sons, John Bladen Tinker (1728-1762) and Jeremiah Tinker (1730-95). John Tinker, however, lived apart from Isabella, although they did not divorce, and he had a second family in the Bahamas with Sophia Trigge. John Tinker died in 1758 (Notts Archives DD/2103/7/1), bequeathing the main part of his property to Sophia to hold in trust for their two children William and Catherine Mellish. Sophia married Tinker's secretary in the Bahamas, Revd John Snow. Revd John Snow was appointed minister in the Bahamas on 26 May 1746, serving until September 1749 (Guildhall Library 9540/11, CCEd person ref 166573). Sophia Snow (otherwise Tinker) widow of Mile End Green, Middlesex, died in 1767, will proved 4 Nov 1767 (TNA Prob/11/934/30).

Another heir of Frances Bladen was Christopher Jarvis Hurt who married Mary Hooper, yet another beneficiary. After Christopher's death, Mary married James Cave, a surgeon of Chigwell in Essex. A court case between James Cave and Mary Cave v Deborah Hurt (Mary's former mother-in-law), took place in 1756 (TNA C 11/1119/26).

The subsequent descent of Jory's estate is complex. Of the six divisions of Jory's/Bladen's estate, three portions had been consolidated in the hands of Mary Hooper by 1753, as evidenced in a later indenture dated 8 November 1763 (Oliver 1894, 51; TNA C 120/843). The first portion was Mary Hooper's own, left to her by Frances Bladen in her own right. The second was left by Bladen to Joseph Hooper, which Mary Hooper inherited as Joseph's heir when the latter died intestate and without children. The third was left by Bladen to Christopher Jarvis Hurt, whom Mary Hooper married, and Mary acquired his share on his death in the same drowning incident as Joseph Hooper. The fourth she anticipated in 1753 acquiring on the death of her aunt Sarah Hooper. All the portions in Mary Hooper's possession were sold to Archibald Napier and William Strahan by lease and release of 1 and 2 May 1753 on her marriage to James Cave.

The estate, or rather the larger part of it, was leased out in 1755. Thomas Mills wrote that [William] Ottley had leased Jewry's estate for his grandson Drewry

Ottley[3] at £440 pa, and he grumbled that had Ottley not interposed Mills would have acquired the lease for a lot less (Thomas Mills to Robert Colhoun 21 May 1755, Mills Letter Book, Museum of London Docklands 2006.178/3). However, it seems that William Mills soon managed to overturn the arrangement with Ottley and acquire the lease for himself in August 1755 for an annual rent of £420 (TNA C 120/843).

To what extent the initial subdivision and subsequent changes in the ownership of the estate affected the day to day running of the plantation on the ground is unclear. The absentee ownership persisted after Bladen's death and the plantation may have continued to be managed as a single unit by a manager or attorney.

Subsequently, in 1763, John Fothergill acquired three of the six original shares of the total Jory estate. This included two of Mary Cave's three portions of the plantation which he acquired by a deed of 8 November 1763 from Archibald Buchanan, merchant of London (heir of the late James Buchanan of London), Archibald Napier and William Strahan (Oliver 1894, 51; TNA C 120/843).

This leaves three of the six divisions of the former Jory's plantation in other hands by 1763. There is evidence from the Common Records (EAP794/1/1) that at least one section, called 'Jewry's', had come into the possession of Henry Sharpe by 1763. By 1766 William Mills had purchased this from Sharpe. The descent of Jewry's from Henry Sharpe can be seen in the abuttals of Vervain plantation, where in 1766 Henry Sharpe holds Jewry's to the west and north of Vervain, but by 1779 the same plots are held by John Boddie. Boddie had contracted to purchase the estate from Fothergill in 1772 but defaulted on payment.

Henry Sharpe

Hon. Henry Sharpe was son of Lieut. William Sharpe of St Kitts, probably Ensign of Holt's regiment in 1694, and Anne, probably step-daughter of Col. John Davis, President of St Kitts, in whose will dated 1725 Henry was mentioned (Oliver 1910, 4). Henry Sharpe was a member of the St Kitts Council in 1755 and appeared in a number of records from the mid 18th century in St Kitts, including the will of John Pogson of St Kitts, as a party in a lease and release of 16 and 17 May 1754 of Pogson's two plantations in St Kitts and as a trustee of Pogson's marriage settlement (Oliver 1916, 143).

Sharpe had other property on Nevis. He inherited land which had belonged to Jeremiah Browne, formerly of Apps Court, Surrey, but later of St Christopher. In his will, dated 10 July 1754, Browne leaves 'all my plantation, negros, cattle etc, to pay the rents to my son Jackson Browne for life ... to Henry Sharpe Snr of St Kitts and George Maxwell of Mincing Lane, London' (Oliver 1910, 36). In the 1708 census of Nevis, Jeremiah Browne has five white men, two white women and 16 black slaves, so he certainly held land on Nevis earlier in the century (Oliver 1910, 35-6). While there is nothing in the documents to link Browne's holding to Bladen's, it indicates that Sharpe had begun to extend his reach from St Kitts into the neighbouring island of Nevis.

By 4 June 1763, when Ralph Payne of St Kitts appointed Henry Sharpe as his attorney, Sharpe was described as 'of Nevis', as a result of his acquisitions there. After the conclusion of the Seven Years' War with France in 1763, St Vincent and other former French colonies (the 'Ceded Islands') were transferred to Britain by the Treaty of Paris. This opened up new estate land for sugar production (Watts 1987, 251), which was partly taken up by Nevisian planters (Pares 1950, 27). Amongst them were three of Sharpe's sons who had moved to St Vincent by the mid 1760s, including Henry Jnr, who became Chief Judge of the Court there. Henry Snr's wife, Jannett, who was daughter of Sir Charles Payne, died at St Vincent on 26 May 1773 at a 'great age' (Oliver 1916, 252-3; 1919b, 82).

The Nevis Common Records for the years 1763, 1766, 1767 and 1772 (EAP794/1/1) show that Henry Sharpe Snr had acquired land called 'Jewry's', which must represent one or more of the six portions of Jory's estate after its division in 1746, probably that which was inherited from Bladen by Sophia Snow, the descent of which is otherwise unaccounted for. That Sharpe's holding 'Jewry's' did not constitute the whole of Jory's plantation is clear from an abuttal of 1772 in the Common Records where the land of Frances Bladen deceased was bordered on the south by lands including Henry Sharpe.

The subsequent ownership of Sharpe's holding was recorded in the abuttals of Vervain in the Common Records. In 1766 negotiations for the purchase of Sharpe's holding were concluded by Mills, and the same year the abuttals in the Common Records note that to the west and north of Vervain was known as Jewry's in the possession of Henry Sharpe. By 1773 at least, Sharpe had mortgaged his plantation to John Mills and Sherland Swanston, merchants of London (EAP794/1/1 Common Records 1764-7, fol. 622ff). The Common Records of 1779 indicate that the land called Jewry's held by Henry Sharpe in 1766 was then in the possession of John Boddie. The recorded occupation of the Fenton Hill site into at least the 1770s is consistent with the archaeological evidence, which indicates activity there as late as 1780-1810.

[3] Drewry Ottley (1740-1822) of St Marylebone, son of William Ottley (d. 1774) (Legacies of British Slave Ownership website http://www.ucl.ac.uk/lbs).

Fothergill's Estate

As noted above, part of Jory's estate to the north of Fenton Hill was acquired by Dr John Fothergill in 1763. Fothergill's estate consisted of one-half of Bladen's estate, consisting of three portions which had once belonged to Mary Cave (formerly Hurt).

The abstract of title of Fothergill to the moiety of the Plantation in Nevis appears in the contract dated 2 Jan 1772 for sale of the premises by Fothergill to Dr John Boddie. The first document is the will dated 27 Oct 1746 of Frances Bladen (Oliver 1912, 236). The will was cited in a subsequent court case of 28 Nov 1776, John Fothergill MD, Archibald Napier, William Strahan and Mary Cave widow v. Joseph Cave and John Boddie (TNA C 120/844). John Boddie was in debt to Fothergill secured upon Jory's Plantation; the settlement of debt for £12816 owed to Fothergill resulted in the reversion of plantation to Fothergill.

John Fothergill MD (1712–1780)

Fothergill was a well-known London physician, and a Quaker, who was born on 8 March 1712 at Carr End, near Bainbridge in Wensleydale, Yorkshire. In his youth he was apprenticed to a Bradford apothecary who encouraged his interest in natural history. Fothergill studied medicine at Edinburgh University, receiving further training at St Thomas's Hospital, London. In about 1740 he established a practice in Lombard Street, London, before moving to Harpur Street in 1767, where he died on 26 December 1780.

He distinguished himself by devising an effective treatment for scarlet fever during a notorious epidemic and wrote a book on the disease which received considerable interest and acclaim, helping to build his growing reputation in London. He identified and defined Fothergill's disease, while his *Account of the Sore Throat Attended with Ulcers* (1748) is considered the first authoritative paper on diphtheria. He was founder of the Medical Society. His reputation as a physician was enhanced by frequent contributions on medical matters to the *Gentleman's Magazine.* He was even offered the position of physician to the king, which he declined.

Fothergill was a keen naturalist and his large and notable collection of insects, shells, corals and drawings was purchased by William Hunter on this death, passing to the Hunterian Museum and later the University of Glasgow's Zoology Museum. In 1762 Fothergill purchased an estate at Upton, Essex, and there he established a five-acre botanical garden, constructing hothouses and greenhouses. He went to great lengths to acquire plants that might have a curative value or practical use in manufacture, engaging with a network of correspondents around the world who supplied him with specimens of plants, insects and shells.

Although an early biographer, John Elliot, makes no mention of Fothergill's ownership of a sugar plantation in Nevis, an interest in North America and the Caribbean is evident from his correspondence and research (Fothergill 1781). Fothergill became a friend of Benjamin Franklin, whom he got to know when Franklin fell ill on a visit to London in 1757, and he collaborated with him on a plan for the reconciliation of the American colonies in 1777, attempting to avert war. A mutual friend Daniel Roberdeau wrote to Franklin and Fothergill for assistance over the sale of a sugar plantation in St Kitts in 1770 ('From Daniel Roberdeau to Benjamin Franklin, John Fothergill, and Charles Pearce, 27 February 1770,' Founders Online, National Archives (http://founders.archives.gov/documents/Franklin/01-17-02-0041-0002 [last updated: 2015-03-20])). A West Indian connection is also evident in Fothergill's attempts to popularise the use of coffee in plantations there and promote its use in Britain, and in devising a method of generating and preserving ice in the region. Fothergill's involvement in Nevis may well have come about through the surgeon James Cave, a fellow physician and near-neighbour in Essex. It may be speculated that it was Cave who introduced Fothergill to the investment opportunity afforded by a share in a sugar plantation. Acquiring land sight unseen was not out of character for Fothergill who had purchased land in North Carolina through an intermediary, one Captain Simpson. Fothergill showed some curiosity over its situation, as he requested a correspondent to 'procure a survey that I might know somewhat of its site', but it did not extend to him ever making the effort to visit North America (Corner and Booth 1971, 211). The bounds of the Nevis estate that still bears Fothergill's name can be traced from later records (EAP794/1/10/1/25, Figure 2.5). It lies to the north-east of Fenton Hill and extends from the round island road in the west to the sea in the east.

John Fothergill was succeeded by his unmarried sister Ann, who died in 1802.

Location of Combes's and Jory's Plantation

Several strands of evidence indicate that the plantation of John Combes occupied a substantial area. First, as discussed above, the census of 1678 showed that Combes held one of the highest numbers of enslaved Africans in Nevis, and he was one of the top eight landowners. His purchases included land and plantations from Widow Jones. In addition, his will records that his own plantation included lands 'lying in the lowe grounds by the seaside ... adjoining to the plantation of my late wifes [*sic*]'. On Combes's death, his wife's plantation reverted to the Simmonds family,

Table 2.2. Summary of ownership of Fenton Hill and neighbouring plantations

Date	Owner	Transaction	Reference
Pre-1675	Widow Jones?	In John Combes's will, he records buying 'plantations' from 'Widdow Jones'	John Combes's will
Pre-1675 – 1689	John Combes	Plantation directed to be sold on Combes's death in 1689	1675 date-stone from house marks house construction
After 1689 – 1725	Joseph Jory	No record found yet of Jory's purchase of the Combes estate	Later abuttals show approximate extent of Jory's plantation
1725-1746	Frances Bladen (niece of Joseph Jory)	Jory's Plantation contained 320 acres; at her death in 1746 Frances Bladen's estate was leased out to six individuals who each inherited their portion	Inherited by Frances Bladen on death of Jory
1746		Jory's former plantation divided into six	Death of Frances Bladen, will
1755		Mr Ottley leased 'Jewry's' for his grandson Drewry Ottley for £440 pa May 1755. William Mills acquires lease for £420 pa 12 August 1755	Mills Archive Docklands Museum, 2006.178/3, 21 May 1755, Thomas Mills to Robert Colhoun (TNA C 120/843)
1763-1766/67	Henry Sharpe	By 1763 Sharpe had acquired a portion of Jory's plantation (called 'Jewry's' in the Common Records), including the excavated site, lying to N and W of Vervain plantation	Abuttals in Common Records
1766	William Mills	In 1766 Sharpe sold his plantation 'Jewry's' to William Mills. Abuttals of Vervain show Mills and Swanston own the adjacent land (i.e. Jory's) to N and W of Vervain plantation, probably including the excavated site	Abuttals in Common Records; Docklands Museum, Mills letter book 2006.178/6, letter of 26 Nov 1766
1763	John Fothergill	Fothergill acquires a moiety [three-sixths] of Bladen's/ Jory's estate in 1763	Later extent of Fothergill's from Kortright's surveyor's plan of 1893
1772-1776	John Boddie	John Fothergill sells his portion of Jory's plantation, to Dr John Boddie for £10,500; Boddie also appears to hold the former Sharpe's part of Jory's/Jewry's in 1779	TNA C 104/844; Oliver 1912, 236
1776	John Fothergill	John Boddie in debt to Fothergill secured upon Jory's plantation; settlement of debt for £12816 appears to result in reversion of plantation to Fothergill	
1780	John Fothergill	On the death of Fothergill his plantation descended to his sister Ann Fothergill	
Pre-1790	Ann Fothergill	In 1790 plantation described as 'lately purchased' by Cossley Saunders from Mrs Ann Fothergill	Common Records 1790-2, fo. 134-5
Pre-1790	Cossley Saunders	In 1790 plantation said to have 'lately purchased' by Cossley Saunders from Ann Fothergill	Common Records 1790-2, fo. 134-5
21 and 22 December 1790	1. Philip Protheroe and Robert Claxton	Plantation divided in 1790 into 2 contiguous portions: Cossley Saunders of Nevis sells the SE part of plantation called Upton or Jory's, of 230 acres, to Philip Protheroe and Robert Claxton of Bristol	Common Records 1790-2, fo. 134-5, 147-154
21 and 22 December 1790	2. Philip Protheroe, Robert Claxton, and Henry Bengough	Plantation divided in 1790 into 2 contiguous portions: Cossley Saunders sells the NW part of plantation of 90 acres, called Upton or Jory's, to Philip Protheroe and Robert Claxton of Bristol, and Henry Bengough of Bristol	Common Records 1790-2, fo. 134-5, 147-154
1799	Edward Huggins	In 1799 the NW section of Jory's plantation was purchased by Edward Huggins (d. 1829) from 'Coffley Saunders'; it was subsequently renamed Golden Rock. Sharpe's plan shows the extent of Golden Rock plantation	Oliver 1916, 45
1830	Peter Thomas Huggins	Inherits Golden Rock and Fothergill's plantations from his father Edward Huggins who died 1829	Small 2004
By 1871	Graham Briggs	Fothergill's and Golden Rock had been purchased by Barbados planter T. G. Briggs by 1871	
1893	Joseph Briggs	Surveyor's plan of Fothergill's dated 11 May 1893 gives owner as Joseph Briggs	Kortright's surveyor's plan (EAP794/1/10/1/25)

in the shape of Walter Simmonds, and appears to be the estate known in the early 18th century as Vervain.

There is no contemporary plan which shows the location of Jory's estate as a whole. However, later documents enable us to trace the approximate location of at least three of the subdivisions. The boundaries of Fothergill's can be reconstructed from a late 19th-century plan, while the approximate location of Sharpe's holding (Jewry's) can be tentatively reconstructed from 18th-century abuttals (Figure 2.7). The western part of the original Jory estate was later renamed Golden Rock, the name it still bears today. The neighbouring plantations Vervain and Hickman's were in different hands and did not form part of the Jory estate, although Vervain had been for a few years part of John Combes's plantation before reverting to the Symonds family.

Later documents, including a 1777 deed for Hickman's (EAP794/1/1 Common Records 1777), show that Jory's estate lay to the north of Hickman's, as did one of the estates of John Symonds, while John Symonds's estate abutted Jory's to the south. This supports the contention that Combes's plantation was the same as that owned by Jory. Combes's plantation therefore stretched from the sea side to the Fenton Hill site at least. In 1772 Jory's is stated to extend to the sea, so must have divided two separate Symonds holdings. Jory's plantation as held by Frances Bladen measured 320 acres. On its subdivision in 1790 the two portions measure 230 acres for Fothergill's and 90 acres for what became Golden Rock.

Abuttals of the south-eastern part of Jory's in 1772 show the estate lay adjacent to Sharpe's. Abuttals onto the same estate in 1790 indicate the land formerly Sharpe's may now have been either that of Daniel and Magnus Morton, or more likely, that of George Webbe. As the Webbes owned nearby Stoney Hill it is possible that the descent of Fenton Hill appears within the enlarged estate of George Webbe. An alternative interpretation, by reversing the sequence of abuttals to the south, means the former Sharpe land is that of Webbe Hobson. Further archival research may resolve this question.

Further pointers to the extent of Jory's are the statements that the plantation's centre line headed to the mountain. The purchase of the north-west portion of the plantation by Edward Huggins in 1799, and its renaming as Golden Rock, enables the extent of the western plantation to be determined through the map compiled by Sharpe in the 1990s. This shows the Golden Rock plantation tapering to a point towards Nevis Peak. In addition, many of the elongated plantations were narrow straight strips of land. There are several primary land divisions in northern Gingerland which follow a consistent north-east by south-west alignment and may well have formed the boundaries of early estates. One such long straight boundary runs from Liburd's estate in the north-west to the sea to New River Gut in the south-east.

The Subsequent Ownership of Jory's Plantation

In 1790, Cossley Saunders of Nevis, 'now residing Bristol', sold Jory's or Upton,[4] the former estate of Frances Bladen, which was at that time divided, one part of 90 acres and the other of 230 acres, with the boundary between them along the round island road. The smaller part to the north-west can be identified with the later Golden Rock plantation, which was purchased by Edward Huggins from Cossley Saunders in 1799 (Oliver 1916, 45). The south-eastern part, of 230 acres, is abutted to the south by lands of Webbe Hobson esq., the heirs of John Dasent esq., and lands of George Webbe, Daniel and Magnus Morton esquires, and to the north with lands of George Webbe junior esq., John Stone and the heirs of Nathaniel Kitt.

During the 19th century, Fothergill's and Golden Rock along with 13 other estates in Nevis (Hamilton's, Stoney Grove, Tower Hill, Round Hill, Old Windward, Shaw's, New River, Coconut Walk, Australia, Old Manor, Indian Castle, Morgans and Douglas) were purchased in 1859 by a wealthy proprietor and investor from Barbados, Thomas Graham Briggs. Briggs was member of the Nevis council and a JP, with seats recorded at Briggs-Dayrell, Maynards, and Farley Hill in Barbados, and Old Manor, Stoney Grove, and Round Hill in Nevis (Briggs 1880, 26-7). Briggs installed steam engines at all of them (Hicks 2007, 70; Dyde 2005, 172), and by importing Barbados managers and labour-saving machinery Briggs stimulated the cultivation of provision crops and expanded sugar cane production. However, conditions for sugar cultivation in Barbados were different from those in Nevis, and not all his innovations were successful, with some plantations reverting to pasture within a few years. Briggs owned 14 of the island's 91 estates by 1871 (Burke Iles 1871, 13-5).

[4] The name Upton was derived from the name of Fothergill's estate and botanical garden in Essex.

Archaeology of the Fenton Hill Site

Robert Philpott

The Field Survey

The excavated structures formed the core of a sugar plantation with its dwellings, domestic buildings, sugar works and stores (for survey plan see Figure 2.8). The modern property curtilage, which pays no heed to ancient land divisions, contains several visible building remains which have been surveyed by a combination of methods including taped survey by Leech in 2003 and 2009, differential GPS by Dr Fraser Neiman in 2008 and total station by Philpott in 2008 and 2009. Other remains lying outside the curtilage were not surveyed.

The structures and features recorded were as follows:

A: Rectangular stone building with slots for timber posts encapsulated in stonework. Structure A was surveyed in 2003 by Roger Leech and partially excavated in 2007 and 2009. The excavation and structural details are discussed below.

B: Boiling house. The gable walls to north and south each have a central arched entrance (Figures 2.1, 2.9). A raised platform along the north-west side of the building contains fragmentary remains of the boiling train, the masonry and mortar settings for a series of metal basins or 'coppers'. The building was surveyed in 2007 (Figure 2.10). The walls are of coursed rubble bonded with hard white mortar with an external stone buttress against the north wall, and one at each end of the west wall. The coppers remained *in situ* until the late 1990s (W. Knowles pers. comm.). The construction of the roof can be inferred from the lines of the rafters seen on the inside of the gable, probably of butt purlin construction. The floor and the outer wall in which the stokeholes for the boiling train would appear are both obscured by rubble. External dimensions 10.15m north-south by 6.25m, with walls 0.61m (2 feet) thick.

C: Cistern in mortared stone with straight sides and apsidal ends, constructed of large irregular volcanic blocks, roughly coursed with galletting (Figure 2.11). Length 11.00m north-south by 5.25m internally. A single exposed stone block attached to the south-east side of the cistern indicates the position of a wall running off towards the south-east from the cistern.

D: Cistern, circular stone-walled, with white mortar and plaster lining, in the north-eastern area of the modern plot (Figure 2.12). It retains the remains of a domed cap and an overflow channel at the top of the circular stone wall. Internal diameter 4.40m, external diameter 5.55m. Constructed in the same roughly coursed masonry with galleting as cistern E. There is an inlet in the north-west side of the wall and an overflow diametrically opposite.

E: Cistern, circular stone-walled, with white mortar and plaster lining, which lies close to the ruins of a small rectangular stone building (F). West of main house (G). Wall thickness 0.70m.

F: Small stone-walled rectangular building west of main house (G) and north-west of cistern E. Short sections of the west and east walls survive, while a fragment of the fallen south wall is visible. In rough coarse masonry with galleting, and remains of a mortar channel west of the structure towards cistern E. Wall thicknesses: west 0.56m; east 0.67m. Overall external dimensions 11m north-south by approximately 4m.

G: Stone-walled building standing on a well-defined terrace east of Structure A. Traces of the east and south wall are visible, below which the ground drops markedly in level. A flight of stone steps, with several orange ceramic tiles *in situ*, stands against the south wall face and gives access up to the higher terrace against the south wall. The visible elements of the surviving structure together with its dimensions and location of this building suggest it was the main house. The house platform was further investigated by two excavated trenches (discussed in detail below) in 2009. Dimensions are at least 16m east-west by about 7m north-south.

H: Small stone-walled building located east of cistern D. Only traces of two parallel walls set about 3.05m apart on the east and west sides are visible. The eastern wall has a sloping mortar surface. These walls were possibly part of a garden structure: walls of a similar construction, with smooth mortared upper surfaces, were noted at Paris's Garden on the western slopes of Nevis Peak (Leech 2013, 50-1).

I: A wall face visible east of the boiling house, in a level area which probably marked the site of the curing house.

J: A wall which survives as a high linear dump of rounded stones and is visible on the 1968 aerial photograph as a road-side wall.

K: A road or trackway is visible on the ground as a hollow-way passing close to east side of the stone building (Structure A). The 1968 aerial photograph shows the road defined by walls on either side (Figures 2.13, 2.14). To the east of Structure A the road has a distinct kerb of large stones on either side. The walls are now represented by tumbled 'banks' of stone on either side. The position of the road suggests it post-dates the abandonment of the sugar plantation as it cuts through the main sugar works and dwelling complex with little

regard for movement within what would have been the main estate yard.

L: A terrace edge with a distinct break of slope east of the boiling house. The height difference is up to 1.5m from top to bottom of the slope.

M: An animal mill formed by a level raised platform about 19m north-east by south-west, located 5m to the north of the boiling house (Structure B), set on sloping ground with the downslope side marked by a curving external bank, in which sections of a retaining wall are visible (Figure 2.15). The animal mill served as a platform around which cattle or other animals were yoked to a beam and walked in a circle to drive the sugar crushing rollers. The cane juice flowed through a now-lost channel to the adjacent boiling house for processing.

Excavation and Building Survey of Structure A

The Initial Hypothesis

Following a building survey in 2003, Leech (2006a, 159, 165) proposed a sequence of construction. In the 17th century, a small rectangular timber building measuring no bigger than 12 by 8 feet (3.66 by 2.44m) was constructed using earthfast timber posts. Later in the century, the timber structure was extended to the north, also using earthfast posts, almost doubling the internal area. In about 1700 the enlarged timber building was rebuilt in stone, encasing the timber posts in masonry; the posts survived after their decay as impressions in the side walls. At the same time the stone building was enlarged towards the west. The building probably survived as an occupied dwelling until the second half of the 20th century. Outside, two stretches of wall were visible which appeared to form an extension abutting the exterior of the north wall of Structure A. A further possible extension to the north of this was also postulated prior to excavation (see plan in Leech 2006a, fig. 10.8). It was suggested that the original structure was 'possibly among the first English houses built on Nevis' (Leech 2006a, 159).

Description of the Surviving Structure

At the start of excavation in 2007, Structure A survived as a roofless ruin of a rectangular stone building, standing to a maximum height of about 1.8m internally on the east (Figures 2.22-2.29). It measured at least 9.37m east-west by 5.77m externally and 7.88 by 4.00m

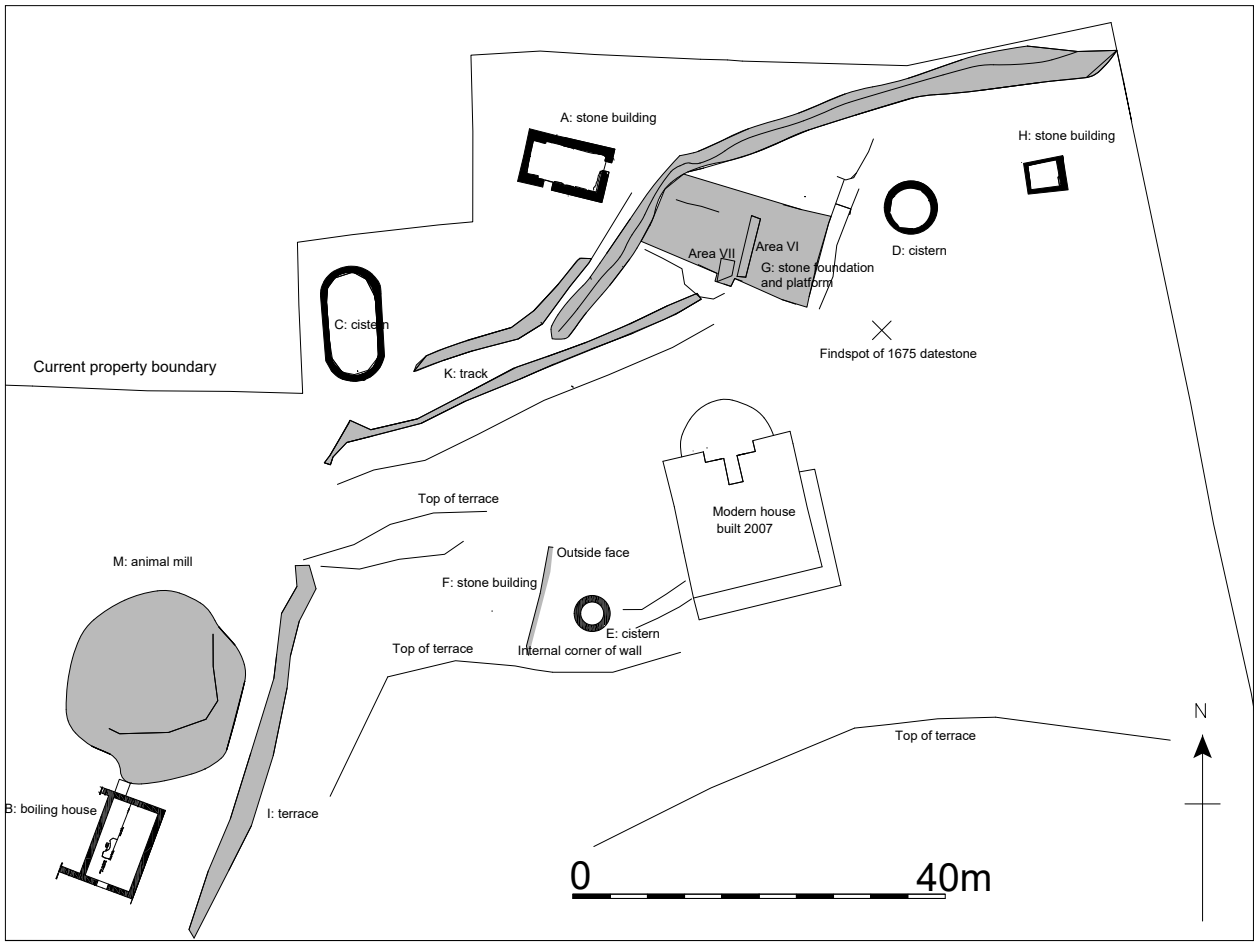

Figure 2.8. Fenton Hill: archaeological survey of the plantation remains, 2008-09

Figure 2.9. Fenton Hill: boiling house (B) from N

internally. Entrances were visible in the east, south and north walls, although the last had later been blocked. Large quantities of collapsed stone obscured the outside of the west and south walls of the building. Earthquakes had caused slippage and displacement of the walls, resulting in a major structural movement of a section of the north wall, which now leans inward, while part of the southern wall leans outward. Some external facing stones had been robbed prior to the excavation, particularly in the north-east corner, leaving the rubble core exposed, and removing structural details of the entrance in the east wall.

In light of further examination, several phases of construction were evident in the surviving remains and a revised sequence is proposed below. Superficially, the remains of the east wall (Wall 4; context 136) presented the appearance of a narrow triangular gable with a small window set in the apex (Figure 2.16), with the position of the end rafters being preserved in the stonework (cf. Leech 2006a, fig. 10.8). However, more detailed examination showed that what were originally seen as rafters resting on a narrow 'gable' represented a pair of up-braces jointed into a now-lost tie-beam set within the east wall (Figure 2.17). On the exterior, below the base of the window, the upper wall narrowed to about half the thickness of the lower part, creating a ledge which sloped down towards the exterior face (Figure 2.18). The ledge was interpreted as having held a gutter to collect rainwater from the roof and channel it to a nearby cistern, which has so far not been located. The sides and base of the window opening, as well as the upper external section of the wall, all retained mortar rendering. The impression of the window frame and sill in the mortar showed that the frame was set close to the internal face of the wall. The external face of the lower and thicker wall consisted of roughly coursed masonry using irregular stone blocks pointed with white mortar.

An entrance in the northern part of the east wall had a south jamb with a recess for a vertical post on the internal face. The post impression preserved in the mortar and stonework shows the timber had been squared with a pronounced chamfer on its south-eastern corner.

The north-eastern corner of Structure A encapsulated a slot (526). Stone robbing of the facing stones on the stretch of the wall at the junction of the north (132) and east walls (136) meant the dimensions of the slot were only preserved below ground (see below). Building recording and excavation in 2009 confirmed that the south, east and north walls all belong to a single phase of construction.

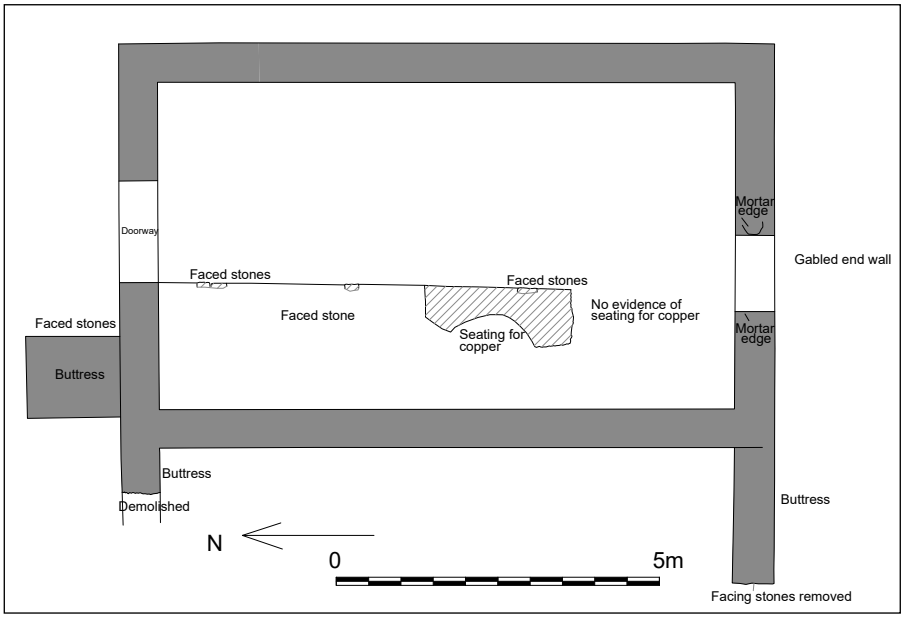

Figure 2.10. Fenton Hill: plan of Boiling House (Structure B), by R. Leech

The base of the south wall (Wall 1; context 132) consisted of an irregular spread foundation of rounded, undressed local stone rubble set in white mortar (Figures 2.19, 2.20). The internal wall face retained the impressions of four vertical posts. The two inner posts were linked by a horizontal slot in the south wall at floor level which originally held a wooden cross-rail or sill (Figure 2.19). West of the westernmost timber slot was an entrance, the eastern side of which was visible amid collapsed rubble. In the wall to the west of the entrance, near the south-west corner of the interior and set low down, was

Figure 2.11. Fenton Hill: Cistern C, from S

Figure 2.12. Fenton Hill: Cistern D, from W

a square horizontal aperture which passes through the full thickness of the wall (Figure 2.21). The slot is interpreted as a drain.

The internal face of the wall at its west end is abutted by the return of the west wall, creating a wall of double thickness for a short distance into the corner (Figure 2.22).

Minor differences in the floor level of up to 0.17m are indicated by small changes in the height of the mortar scars along the southern wall, which is rendered down to a line a few centimetres above the top of the rail.

The north wall (Wall 3; context 220) had a blocked entrance towards the western end opposite the entrance in the south wall (Figure 2.23). A short stretch of an eastward return of the west wall, of a later phase, overlapped the plastered internal face of the north wall. After removal of the blocking during excavation, the plastered threshold of the entrance was exposed, showing the original floor height inside the structure. The inner corners of the entrance had rebates, which excavation in 2009 showed to have originally held door posts.

The exterior (north-facing) face of this wall was almost entirely obscured by an accumulation of earth and collapsed stone. This was briefly examined in section only (see below).

The west wall (Wall 2; context 135) was of markedly different construction from the other three. Not only was the masonry different in character, with the consistent use of squared blocks of a distinctive pinkish stone in a neatly coursed construction, but also the north and south ends of the wall returned towards the east to overlap the internal faces of the north and south walls, so were of later construction (Figure 2.22). The surviving sections of the overlapping returns from the west wall sloped downwards, suggesting they formed a smoke-hood for an open hearth against the west wall, which formerly rose to a chimney, now lost. At the top of the surviving structure the wall measured 0.65m wide, somewhat narrower than the other stone walls which were 0.89-0.90m (three feet) wide.

The Archaeological Excavation

Methodology

The excavation of Structure A was intended to examine the hypothesis that this was one of the earliest English buildings in Nevis. It aimed to elucidate the structural

Figure 2.13. Vertical air photograph of the Fenton Hill site 1968 (courtesy of Hunting Surveys Ltd)

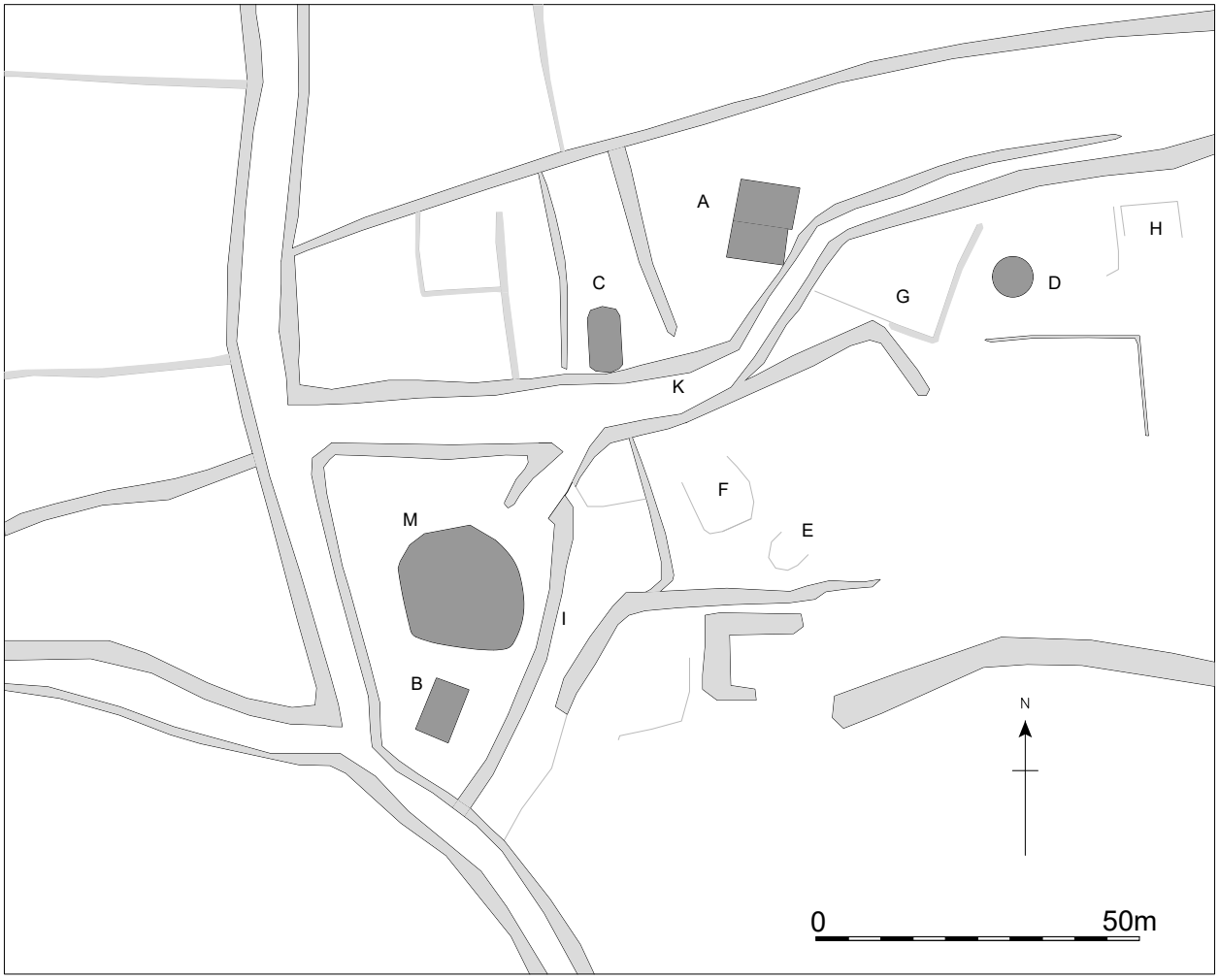

Figure 2.14. Fenton Hill: plantation remains, boundaries and structures visible on the 1968 Hunting Surveys Ltd aerial photograph (darker shading are structures, light grey are earthworks). See text for identification of structures.

sequence of the building, to identify the changing plan and function of the structure, and to recover evidence from artefacts and structural examination to date the building phases. In addition, it was hoped that the artefact and environmental assemblages would shed light on the changing circumstances of the economy, status and diet of the inhabitants.

A little over half (57%) of the 45m² interior of Structure A was excavated in opposed quadrants in 2007, and part of the remainder in 2009 (see plan, Figure 2.24). Area I to the south-east investigated the timber slots in the south wall to recover evidence for their form and chronological phasing within the structural sequence. Area II/IV, in the north-east quadrant, was defined on the north by the two-phase wall 3 (220) and the blocked entrance (221), and to the west by the western wall of the structure (135). Towards the end of the excavation Area II was expanded eastwards. The new area (Area IV) was excavated to examine a vertical post-slot (407) within the northern wall and to investigate the postulated position of a post-hole which might form the north-west corner of an original timber structure. In 2009 the south-west quadrant was excavated as Area V. In addition, small trenches were opened in the north-east corner of the interior to investigate the eastern entrance and the post-hole in the north-eastern corner (Area VIII). Finally, a small 1m square trench (Area IX) was investigated against the exterior of the south wall (132).

The evidence from the internal trenches is amalgamated below into a single structural sequence. The external sequence is presented separately but follows the same phasing.

Phase 0: Subsoil

The earliest deposit, layer 108 in Area I, was a mid reddish-brown silty clay, of large firm crumbs. Many pale buff rounded unworked stones, ranging in size from 50-300mm, were present in Area II (207), but Area I was largely stone-free. Layer 108 was not investigated in detail, but no cultural material was found in repeated cleanings of the surface. In Areas II, IV and V an identical deposit to layer 108 was identified, consisting

Figure 2.15. Fenton Hill: animal mill (M), revetment wall in foreground, from S, with Nevis mountain in background

of a mid reddish-brown silty clay (207, 405, 508), which contained many pale buff rounded unworked stones.

Cuttings made in 2007 for the improvement of the round island road showed numerous exposures of the same subsoil, a deposit characteristic of the subsoil ('B' horizon) on this part of the island in St George's Gingerland which contains variable concentrations of large, rounded or sub-rounded volcanic stones.

Within the surface of 207 was a single large stone, measuring 0.48m north-south by 0.42m, with its upper surface distinguished by a concave hollow with some slight irregularities. Around it was a mid grey deposit which raised the possibility that it has been deliberately set into a shallow pit in the ground to serve as a post-pad or as a working surface. Excavation of the grey silty clay fill (210) around the stone did not produce any finds and this interpretation could not be confirmed. Its upper surface stood proud of the terraced surface of the subsoil. However, the area contains many stones within the clay subsoil and this example is likely to have been a naturally occurring stone within the subsoil. The high

Figure 2.16. Fenton Hill: interior of Structure A, showing sill at base of walls and gable wall, from W

number of exposed upstanding stones present within the clay of the terrace appears to have resulted from scouring of the terrace surface by water action which washed away the fine clay.

Phase 1: Early Occupation c. 1635-1650/1660

The earliest phase of activity is postulated on the basis of the artefact assemblage but was not reflected in the excavated structural deposits.

Phase 2: Construction and Occupation of the Timber Building Structure A (c. 1650/1660 to 1690/1700)

Terrace for building (143)

The earliest evidence for construction was the creation of a level terrace into the hillslope, which had a strong prevailing gradient downwards towards the south. The surface of layer 108 and 207 had been deliberately levelled to create a platform for the construction of Structure A (cut 143).

The timber building survived only as a series of slots encapsulated in the masonry of the later stone building (Figures 2.19-20, 2.25, 2.29). No archaeological deposits could be associated with this phase of construction. Although the original post-slots survived below ground, their infilling succeeded the decay of the posts by many decades so was not associated with the construction of the building but rather its disuse. The dating for this phase around 1650-60 is therefore circumstantial, depending on the clay tobacco pipe evidence for the rapid increase of activity on the site in the 1660s, together with a *terminus ante quem* of *c.* 1700-20/30 for the later stone phase (Phase 4.1).

Post-slots and Post-holes: south wall

The first phase of construction is marked by the negative impressions of four vertical timber posts which were later encapsulated in the south stone wall (Wall 1, Figures 2.19, 2.20), along with a further slot in the north-east corner and another at the western door jamb of the northern entrance. A horizontal rail or sill linked the two inner posts in the south wall at about floor level. Where the vertical post-slots had been exposed to the elements the mortar lining within the slots had disappeared, but the mortar had survived below ground level within the post-pits, preserving an impression of the posts and evidence of their form and dimensions (Figures 2.20, 2.26).

The two central posts in the south wall had a chamfered southern (i.e. external) face above ground level. Some posts could be seen to change from a square section above ground to circular below ground where they were not intended to be seen. However, due to the poor

Figure 2.17. Fenton Hill: Structure A, E wall from outside showing window in gable and offset wall for gutter

survival of the mortar which plastered the interior of the slots, it was not possible to identify the precise point of transition from square- to round-sectioned post.

The post-slots are considered from east to west. The fills of the slots belonged to a later phase in the sequence, after the decomposition, or removal, of the timber (Phase 5) and are discussed below. The fills consisted of fine loose material which represented infiltration of material into the void left by the decayed posts (e.g. 229).

Cut 104, Slot 130

Set within the south-east corner of stone walls 132 and 136 was a vertical slot, measuring 0.19m east-west by 0.24m north-south. Mortar impressions showed the post was squared at the south-east corner. The mortar on the north and west faces was less well preserved

Figure 2.18. Fenton Hill: Structure A, E wall from outside showing window in gable and offset wall for gutter

Figure 2.19. Fenton Hill: Structure A, S wall showing horizontal slot (125), linking vertical slots (126 to the left, 123 to the right), the top of the offset course to the right, and the scar of the mortar facing to the left; from N

so the shape of the post could not be determined on those sides. Below ground the slot for the post became circular, with a maximum diameter of 0.50m.

Cut 114, Slot 126 (fills 113, 119)

The post impression was clearly preserved in mortar below ground level within the slot 126, giving maximum dimensions of 0.20m east-west by about 0.24m north-south. Both this post and the post in 116 had chamfered corners, to the south-west and south-east (Figure 2.26). The post measured 0.55m from the base of the horizontal slot 125 to the base of the post.

Cut 116, Slot 123 (fills 121, 118, 111)

The post-hole was half-sectioned. Above the existing ground surface, the mortar within the stone slot no longer survived. The slot itself was partially lined with mortar which, though it had survived only patchily, still retained the impression of the post indicating

Figure 2.20. Fenton Hill: Structure A, S wall showing vertical slots 126, 114, 116, 112 (L to R), horizontal slot (125) and mortar line, from N

Figure 2.21. Fenton Hill: SW corner of Structure A, showing overlapping wall, and drain hole in wall, from NE

Figure 2.22. Fenton Hill: Structure A, interior showing the W gable wall with overlapping side walls, from SE

maximum dimensions within the slot (123) were 0.17m east-west by 0.11m north-south. From the ground surface downwards, the post in 116 expanded to a thicker base in all directions, suggesting the use of unshaped timber at the base.

Cut 115, Slot 127 (fills 112, 117, 122)

The vertical slot (127) continued below ground as a post-hole where it measured 0.16m deep and 0.30m wide; the slot expanded from 0.30m wide at the upper part to 0.45m close to the ground surface.

Cut 125 Horizontal slot

A horizontal slot (125), recessed into the wall face (Wall 1; 132), joined two vertical slots, 126 to the east and 123 to the west. The horizontal slot measured 1.23m long east-west, and 0.18m in height, recessed to a depth of 0.09m into the wall, though the presence of an offset course at the base of the slot increased the depth to 0.19m. A shallow groove about 40mm wide and 20mm deep was noted within mortar at the base at the back of the slot. The groove appears to have preserved the impression of a projecting beading that ran along the outside lower lip of a horizontal rail in the wall, perhaps an external drip moulding. If this interpretation is correct, it provides evidence that an initial timber structure was subsequently encased in masonry in a separate phase of construction.

The possibility that the rail was a surviving element of an interrupted sill is enhanced by the presence of a void extending westward from post-hole 230 under the northern wall, which almost certainly originally held a now-decayed timber.

Cuts 516, 524

Two post-hole cuts either side of the south entrance in the later stone structure may have represented timber posts from the initial phase of construction.

The presence of these two post-holes just to the north of the alignment of the southern stone wall may indicate that the timber structure was slightly narrower at the western end than the succeeding stone structure. Post-hole 516 had a counterpart post in the north wall, 230. This may also represent the line of a partition. About halfway across the structure and on the same alignment was a concentration of stones (520), which even if it cannot be proved to have been a deliberately placed feature, may have been utilised as a convenient padstone. The infill of post-hole 516 was a brown silty loam unlike the fine organic fills of post-holes where the timber decayed *in situ.*

There was only a very shallow cut in the western rebate for the doorpost in the southern entrance (cut 528, fill

Figure 2.23. Fenton Hill: Structure A, plaster surface of threshold (240) after removal of blocking, showing the stone step and mid 19th-century colluvial layers, 217-219, from S

527); although the rebate post-hole appeared to be cut by the adjacent internal post this may have resulted from the latter retaining its post longer and filling up later than the slight rebate post.

Post-slots in the North Wall 220 (526, 230, 407)

In the north-east corner, where walls 220 and 136 met, a squarish post-slot (slot 526) was identified (in Area VIII) set into the thickness of the wall. Above ground the facing stones of the wall had been removed, leaving only the rubble core, so the dimensions and form of the slot were difficult to identify. Below ground, the post-hole void (526) and the original wall face survived, giving the dimensions of the wall.

The surviving mortar impression in the western rebate of the north entrance (230 cut) proved that the post had maximum dimensions of 0.12m north-south by 0.10m east-west. Above ground the post was much smaller than below the surface where excavation revealed a large circular or oval post-pit (238) at the base of the rebate into which a quantity of animal bone and other finds, including iron fittings and nails, had infiltrated into a very loose and soft fill (237). Remains of the timber post (231) were recovered *in situ* in the lower fill (232). The excessive size of the pit, compared with the post dimensions recovered from the mortar impression in the rebate, could indicate that the post had been considerably reduced in size once the stone structure was added, or that the original post was removed, or cut off, and replaced by a smaller narrower post. Another possibility, which is the most plausible, is that the void under the wall was created by the decay of a horizontal timber sill which had originally been jointed to the post and had then been sealed by the wall. The original post encapsulated in the north wall (post-slot 407) had been filled in by stones once the post had decayed (Figure 2.27).

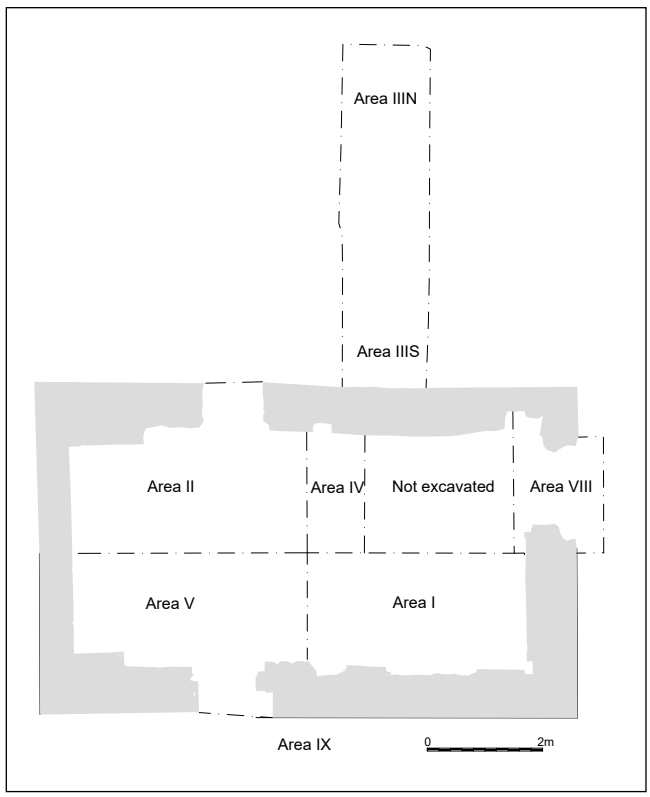

Figure 2.24. Fenton Hill: Structure A, plan of excavated areas

Phase 3: Infilled Post-holes (c. 1700)

The only probable features from Phase 3 are some of the infilled post-holes of the initial phase of timber construction. Most of the post-holes from posts incorporated into the stone phase (Phase 4.1) were infilled on the decay of the structure in Phase 5. However, a small number of post-holes in the western part of the timber building were filled in prior to the construction of the stone phase. These were posts which were not wholly incorporated in the stone structure perhaps because the timber posts were not in sufficiently good condition to merit inclusion.

Although there is no artefactual evidence to provide close dating, the presence of a small number of post-holes with a similar brown silty loam fill (516, 524), identical to the natural subsoil, suggests they were filled rapidly with existing re-deposited subsoil.

Phase 4: The Stone Structure A (c. 1700-1720/30)

Phase 4.1: Construction of Stone Structure A

The next major phase saw the encapsulation of the timber building in stone (Figures 2.18, 2.19). At its northern end, the east wall was constructed in stone directly on subsoil 108, but the offset course at the base of the wall broadened and deepened towards the south-east junction with wall 1 where the foundation had been set into a steep-sided, flat-bottomed construction trench (131) for the stone south wall (132).

The undisturbed subsoil (108) was cut by foundation trenches for the construction of stone walls on both the northern and southern sides of the excavated area. The foundation trench for the south wall (cut 131) measured 0.61m wide and 0.62m deep (Figure 2.30). The backfill (106, 140) included several very large irregular volcanic stones wedged in the base of the trench within a yellowish-brown silt-clay matrix, containing numerous broken fragments of yellowish stone, the latter representing freshly re-deposited natural subsoil which had not been much mixed with other material. The base of the trench fill had a marked concentration of mortar fragments, interpreted as material dropped in the trench during construction. The fill also contained a small sherd of white salt-glazed stoneware, a small sherd of tin-glazed earthenware, several fragments of

clay tobacco pipe stem, and some fragmentary animal bones. The pipe fragments indicate a deposition date of 1660-1700/30, while the ceramics dated to the early 18th century, provide a *terminus post quem* for the construction of the wall. The continuation of the same linear feature further west was observed extending as far as the eastern side of the southern entrance; the cut 536 had a fill 535, and in the south-west corner of the structure a shallow linear feature was observed (cut 513, fill 534). A sherd of 18th-century tin-glazed earthenware (SF2353) recovered from the original mortar of wall 132 provides direct, if imprecise, dating evidence.

Lack of time precluded the detailed investigation of the subsoil in Area II (207). However, traces of a possible foundation trench for the north wall were revealed as a lighter band of clay (227) in the cleaned surface of Area II. Although this was only partially excavated, the very clean undisturbed nature of this deposit suggested it formed a variation within the natural subsoil rather than an anthropogenic deposit. One clearly defined cut for the wall was observed at the mortared stone threshold (228) of the northern entrance which had been inserted into a shallow cut into the natural clay subsoil (cut 239), and the rough stones finished with a plaster skim (240).

A very shallow sondage, Trench IX, excavated against the exterior of the south wall 132 of Structure A, showed that the wall had been set without a foundation trench directly on to the yellowish-brown clay subsoil. The strong ground slope suggests that the foundation trench for 132 was only required on the northern side along the line of the posts; most of the east wall was built directly on the subsoil, except along the south wall line. A very narrow construction trench existed, with some mortar in the fill, but it appears that the wall was shallowly founded on this side. The prevailing ground slope obviated the need for a deep foundation trench and the stones had presumably been set against the trench edge on the south side. The sequence was restricted to a shallow recent deposit (900) immediately overlying the natural subsoil.

Thresholds

A continuous wall foundation formed the base of the threshold for all three entrances to Structure A. The foundation consisted of rounded pebbles and cobbles mortared together to create a level surface in both the east (519; Figure 2.32) and south entrances (507). The stone foundation (228) in the north entrance retained a level and finely finished plaster skim on the upper surface (240; Figure 2.23). Such a plaster surface may have been present in all three originally but had only survived where it was protected by the later blocking (222).

Evidence for a Floor

No sign of *in situ* flooring material or paving was recovered from the interior of Structure A. However, fragments of sandstone paving stones were found

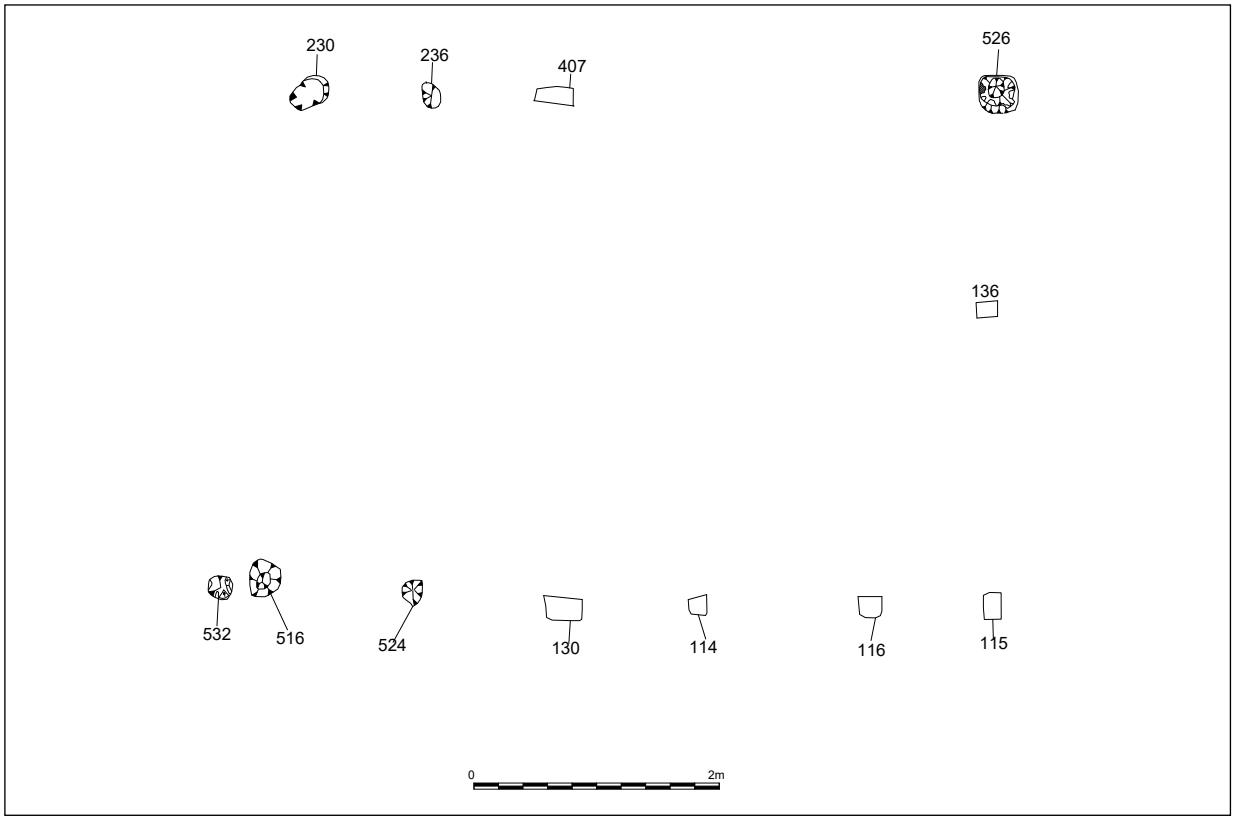

Figure 2.25. Fenton Hill: Structure A, Phase 2, showing post impressions and post-holes of original timber structure

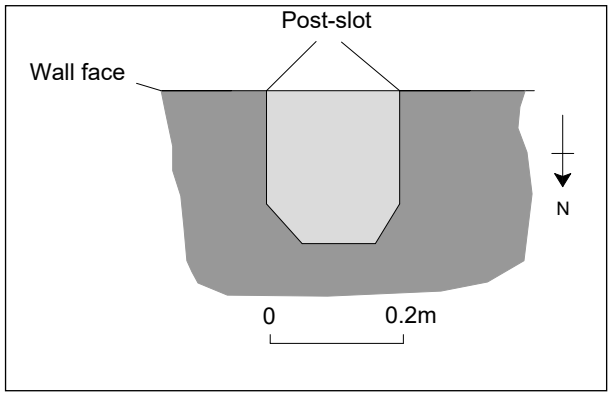

Figure 2.26. Fenton Hill: plan view of post-slot 114, showing chamfered corners

dumped in the fills of the two pits dug at the base of major structural timbers (226, 107) in a later phase (Phase 5). Greenish grey sandstone slabs (probably Pennant sandstone) found in or close to this building suggest that part of the floor was laid to flagstones.

The position of the floor can be inferred from three observations. The internal mortar skim of the south wall (west of slot 123) stopped abruptly in a line, this scar indicating the point at which the floor abutted the wall. The line coincided with the level of the horizontal slot for the interrupted sill which linked two of the vertical post-slots in the wall as well as roughly with the top of the offset foundation course in the eastern end of the south wall and the same course in the east wall. However, detailed measurements showed slight differences which may reflect variations in floor level, possibly between rooms (see below). The base of the east wall foundation followed the natural gradient sloping down towards the south. However, the top of the foundation course for the east wall was offset at a consistent horizontal level, creating a narrow ledge at the base of the wall. This may have supported floor joists for a timber floor.

Thus it seems likely that the building had a timber floor in the eastern room, using the offset ledge for timber joists. To the west of the opposed entrances the floor may have been laid with flags, where the possible kitchen area of the stone building stood, evidenced by the horizontal slot through the wall. The slight variation in the height of the floor may reflect differential flooring material. The remainder of the stone flagging has presumably been robbed for reuse elsewhere.

A marked difference in the quality of masonry for the foundation course as opposed to the stone superstructure was considered by Fraser Neiman and Carter Hudgins as evidence that the stone foundation supported a timber structure of interrupted sill beam construction, so was integral to the first timber phase. However, it could be argued that the difference in the stonework reflected what was intended to be seen and what was below ground.

In the north wall an entrance had the original threshold surviving as a well preserved floor with a thin, level skim of plaster (240). The rebates for the door posts were visible on the interior face. The sides of the door opening were rendered with mortar.

Phase 4.2: Structural Alterations to Structure A (mid-late 18th century)

Several structural alterations can be identified during the life of the stone building. Their date and relative sequence are not closely dated but the surviving evidence is discussed below.

The northern entrance (221) was blocked by laying a deposit of mortar (222) on top of the plaster skim of the threshold (240; Figure 2.23). A series of large blocks (213) was set on the mortar, so that the neatly faced, coursed stones presented a finished face externally to the north. A course of neatly laid rectangular stone blocks which had butted against the blocking on the exterior (i.e. northern side) was probably the lowest of a series of steps which led up from the building into the area north of Structure A but this was only visible in a section exposed by the removal of the blocking. Given the prevailing slope, the ground surface to the north of the building would have been higher than the terraced building platform of Structure A.

A *terminus post quem* for the blocking of the entrance was provided by an English drinking glass with a distinctive baluster knop stem (SF6), dated to the late 17th or very early 18th century, which was found against the edge of the west wall of the blocked entrance, covered by stones from tumble. This prestige object was of some age when discarded as other finds in both 213 and 222 were dated to the mid 19th century, providing a date for the blocking.

The reason for the blocking may have been the accumulation of hill-wash in heavy rain against the northern side of the building, although a change in the use of the structure may have rendered this entrance unnecessary or inconvenient. If, as is suggested, the building became a kitchen, the entrance in the east wall would have sufficed to communicate with the main house.

Rebuilding or modification of the west wall (Wall 2; context 135) –(mid 18th century)

The west wall appeared to have been constructed directly onto the clay subsoil surface 207 in a shallow foundation trench (513), running north-south at the base of the wall; the trench measured no more than 0.15m

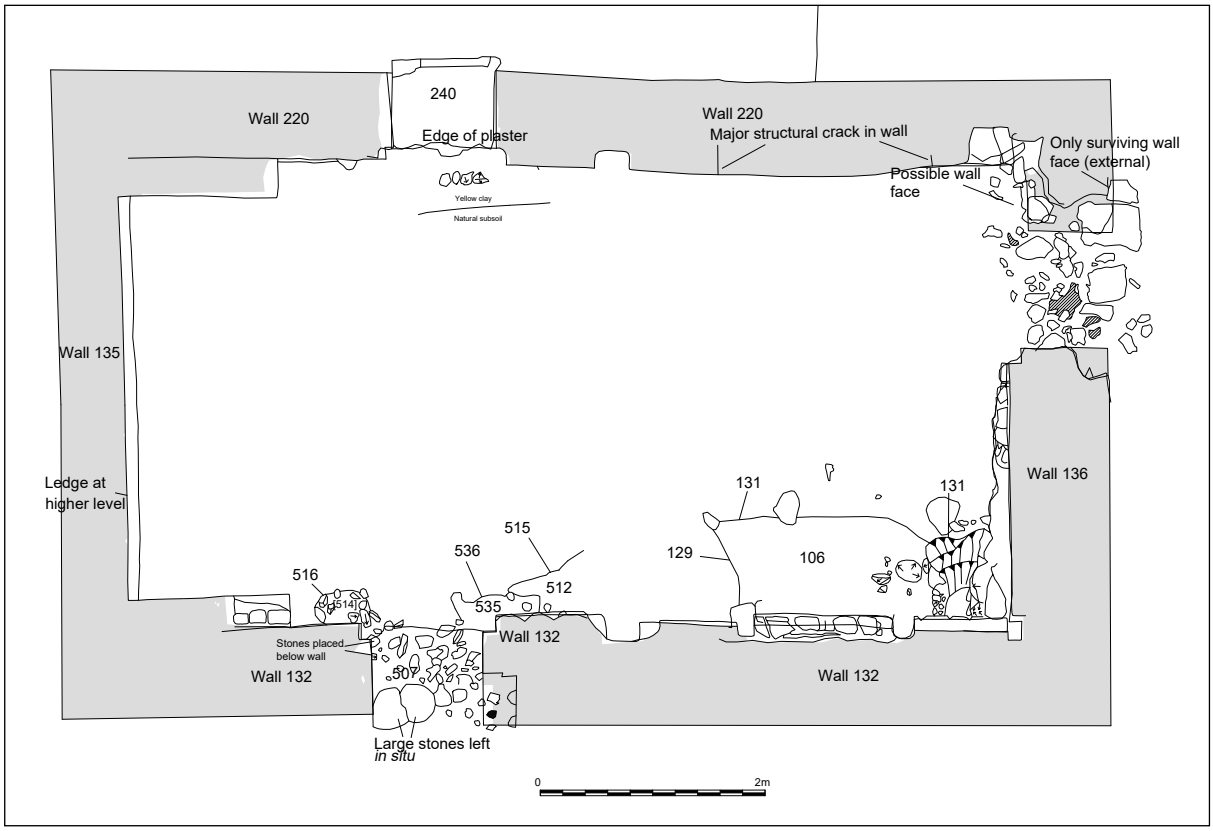

Figure 2.27. Fenton Hill: Structure A, Phase 4.1, showing stone walls encasing timbers

deep and 0.20m wide. The trench fill (510) consisted of a dark area of silty loam with a high proportion of mortar (nearly half of the volume of the matrix) along the internal face of the west wall 135. A void (fill 209, cut 212), which contained a stone that had later been removed marking the end of the return wall along the northern edge of the area, penetrated into 207, showing that the return wall also had a shallow footing into the subsoil. Context 510 contained two 18th-century tin-glazed earthenware sherds, suggesting construction before the mass influx of later 18th-century wares from the 1770s.

A fallen piece of masonry observed near the structure appears to have a curved internal surface appropriate to a chimney. The findspot suggests it had collapsed from the western gable wall, supporting the interpretation of Structure A as a kitchen, as dwelling houses were not routinely provided with fireplaces.

Post-hole fills

The voids in the internal wall faces resulted from the decay of timber posts. The date at which the posts decayed occurred is uncertain. If the building had been maintained in good order, the posts could have survived throughout the life of the stone structure. The survival until today of late 17th- or early 18th-century timber posts in the house at the Hermitage, Nevis, demonstrates that within a maintained building timber can last for several centuries. Documentary references from other Caribbean islands indicate that in the 17th century durable hardwoods such as fustick, brazilletto, ironwood and lignum vitae were preferred for timber posts (e.g. Long 1774, 19-20, fig. 7; TNA CO 243/2/24 1706 claim). It is most probable that the decay of the posts, through insect infestation and rot, and infilling of the post-holes with loose soil, including the decayed remains of the posts, followed the loss of the floor (and also perhaps the protecting roof) after the structure had fallen out of use. This is supported by the presence of mid 19th-century pottery in the post-hole fill 113. An attempt to compensate for the decay, or removal, of two opposed posts in the walls can be seen in the deliberate infilling of the voids with small stones. In the south wall post-hole 115 had been filled with stones ranging in size from 50-150mm (fills 112, 117, 122). A similar situation was found in Area IV where the opposed post-hole (fill 403, cut 407) was not excavated in 2007 due to lack of time but after removal of the fill (404) from a large pit (226) the lower part of the slot below ground could be seen to have been packed with a mass of stones, predominantly rounded cobbles, with a loose grey soil in the interstices. These had been deliberately inserted either after the post was removed or after it had rotted within the slot, suggesting that the building was once again in occupation at the time of the infilling. The north-east corner post-hole void had also been deliberately packed with stones (521).

Fills 112, 117, 122 within cut 115 (continuation below slot 127)

The upper fill of the post-hole 112 consists of very loose dark grey brown silty loam with numerous stones. Below this was a more compact fill (117), although it contained similar material including mortar fragments ranging from 0.5-4mm. Some stones ranging from 50-100mm were present, which became more numerous through the deposit and larger in size. The lowest fill 122 consisted of a mass of stones ranging from 0.10-0.15m across. The stones were not excavated. Like 403/407, which is the opposing post-hole in the north wall, the post-pipe of 115 had been filled deliberately with stones.

Finds in 112 include a clay tobacco pipe bowl with an armorial design, dated 1740-80, and an undiagnostic pottery sherd of uncertain 18th- or 19th-century date. Context 117 had clay tobacco pipe dated to 1690-1740.

Pits

Two pits were cut at the base of opposed post-holes within the building, probably at the end of the 18th or very early 19th century.

Pit (129, fill 107)

A small pit (cut 129, 515, fill 107, 512) was dug against the south wall, close to post-slot 115 and cutting through the foundation trench. The presence of tilted stones and a sherd of pottery dipping at the same angle within the fill confirmed that it was an infilled pit. The overall dimensions were 1.24m east-west by 0.67m north-south, with a depth of 0.57m.

The latest of the clay pipes dated to 1710-50, but several large joining fragments of Rococo shell-edged blue pearl-ware, dated approximately 1780-1810, provided a *terminus post quem* for the fill, and as the sherds were scattered vertically within the fill also indicated the uniformity of the infilling from top to bottom. The ceramics as a whole suggested a date of the early 19th century for the context. In view of the indications that there was a suspended timber floor in the structure, the pit must post-date the removal of the floor at a time when the stone structure was disused. Context 512 produced some 18th-century sherds including brown salt-glazed stoneware (SF2167, SF2220) along with pearl-ware with moulded shell edge and under-glaze painted decoration of late 18th- or early 19th-century date (SF2219, SF1997).

Pit (226, fill 225)

The pit cut against the north wall, adjacent to the post-slot 407, and also cut through the wall foundation trench 227 (Figure 2.29). The fill was partially excavated as 404 in 2007, and the remainder as 225 in 2009. A narrow section showed that the cut (406) had a narrow flat base and steep profile and was filled with a yellowish-brown silty clay (404) containing many fragments of mortar

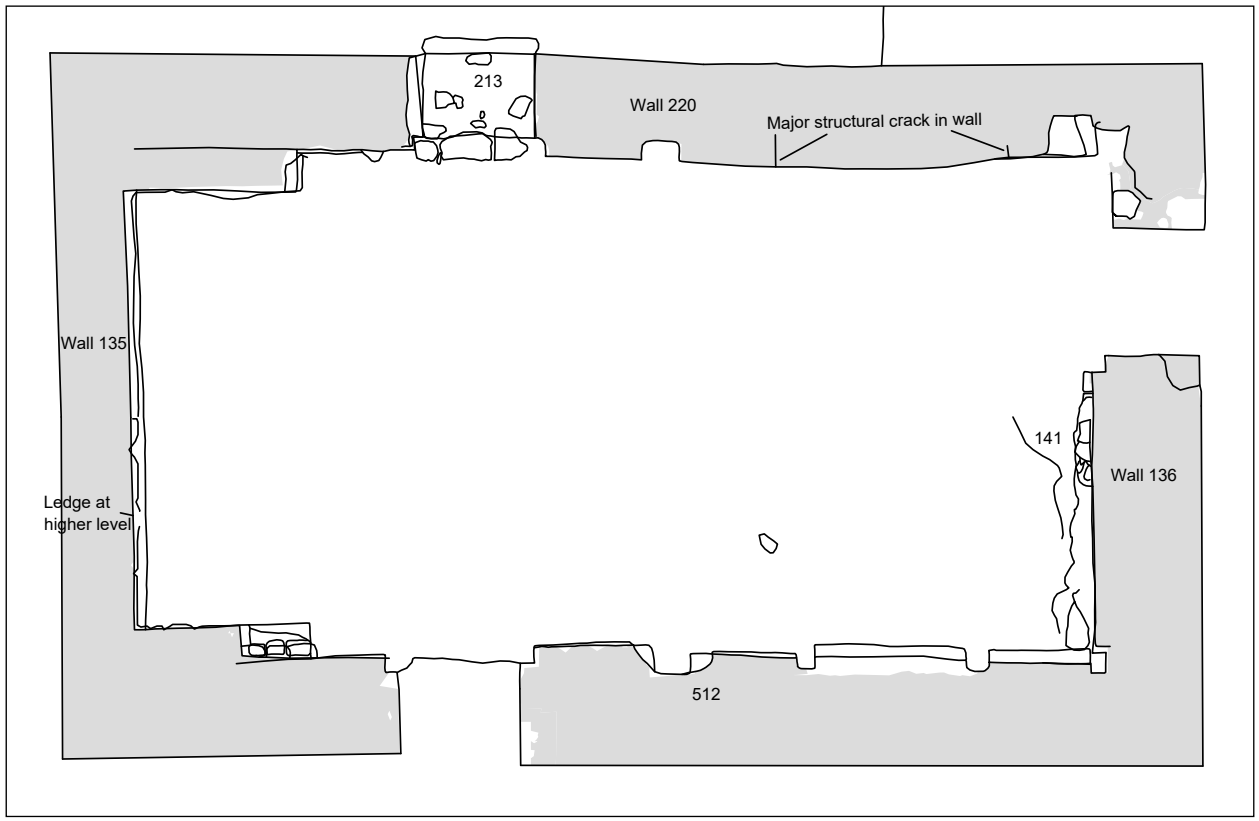

Figure 2.28. Fenton Hill: Structure A, Phase 4.2, showing structural alterations to the stone structure

Figure 2.29. Fenton Hill: interior of N wall from S, showing post-slot 407 to left

ranging in size from 3-15mm and many small stones. Finds included fragments of animal bone and a copper-alloy buckle (SF76) probably of 18th-century date (G. Egan pers. comm.), while clay tobacco pipe fragments in 225 dated to 1660-1710, with pottery of 1770-1810; fill 404 included a pipe bowl which dated post-1720 alongside late 18th-century ceramics.

Dating of ceramics in this context suggested a late 18th- or early 19th-century date for the pit. Re-examination of this area in 2009 indicated that a pit, not recognised in the dry conditions of 2007, had been cut at the base of the timber slot (cut 226, fill 225). The fill of the pit (225) was therefore the same as 404, and the latter was not the foundation trench fill. The dating for the north wall has not therefore been independently established. Wall 3 had at its base an offset course of irregular rubble which projected southwards by a maximum of about 0.15m.

The large pits at the base of the two vertical slots appear to have been dug after the removal of the timber floor to remove the base of the posts. Both pits were large and their fills contained a high proportion of stones; the base of the posts had been filled in each case with stones. In these two cases the posts appear to have been deliberately dug out by creating a large pit at the base of the vertical slot. This may have occurred when the posts were rotting, or if still intact, to reuse the timber.

Probable organic deposit (109, 110, 120, 128, 141, 142)

Immediately on the surface of 108 lay a thin and discontinuous deposit of very dark grey fine silt, no more than 20mm thick (109, 110, 120, 128, 141, 142). Although not easily defined when the soil was dry, it was more evident in damp conditions when there was a hint of a linear band extending from the eastern side of this element but it was so diffuse as to be difficult to plan. There were no inclusions or finds, and the material appeared to be organic in origin. These lenses of organic material, possibly decayed wood, may have been the decomposed remains of a collapsed former suspended timber floor, although they could have been organic material which was deposited or collected under the floor, or material accumulating after the removal of the floor. Layer 120 sealed the construction trench fill, 106.

Phase 5: Final Use and Disuse of the Stone Building (Early-Mid 19th Century)

Although two opposing post-holes in Phase 4 above were interpreted as having been infilled during the occupation of the building, other posts may have decayed after the building had fallen into disuse. Post-hole fills included some earlier material, notably clay tobacco pipe, suggesting that small objects were able to infiltrate into the post-slots when the building was occupied during the 18th century. Accordingly, the fills

Figure 2.30. Fenton Hill: Structure A: Wall 132 with foundation trench and post-hole 115, from N

of three other post-holes were interpreted as belonging to Phase 5. Post-hole fill 113 contained mid 19th-century pottery, suggesting that the post had decayed prior to that date.

Post-hole fills

Fills 121, 118 and 111 within post-hole cut 116 (continuation below slot 123)

The lowest fill 121 consisted of crumbly dark grey brown clay silt with organic inclusions, as well as some roots. Several iron nails were discovered in the fill (including SF34 and SF41); wet-sieving of the fill also produced a small yellow bead (SF46), mammal and fish bones, egg shell, and charcoal (recovered from sample 105). Above 121 was a more compact fill (118) containing small mortar flecks, most measuring under 1mm and concentrated close to the edge of the cut where they appear to have fallen from the sides of the cut. A large sherd of an 18th- to early 19th-century salt-glazed

stoneware flagon or bottle (SF50) lay on the base of 118. The uppermost fill (111) was loose dark grey brown clay silt with fragments of mortar, as well as organic inclusions such as snail shells, roots and decayed wood, the latter from shrubs rather than structural timber.

Fills 119 and 113 within post-hole cut 114 (below slot 126)

The upper fill 113 was loose sandy silt which overlay 119, a very similar material; the two contexts were given at an arbitrary level to distinguish finds from upper and lower fill. Pottery in 113 dated to the mid 19th century (D. Barker pers. comm.), while a clay tobacco pipe fragment dated to 1680-1730.

Fill of cut 104/slot 130

The lowest fill (124) of the post-hole, which stood at the south-east junction of stone walls 1 and 4, was characterised by loose crumbs of dark yellowish-brown clay silt (as is the uppermost fill 103 above); two iron nails, an iron key and a fragment of clay tobacco pipe dated 1660-1720 were found in the fill. Within the slot was a large piece of soft decayed timber (105) with one burnt end, measuring at least 145mm high and 74mm wide. The lack of any surviving timber lower down in the base of the post-hole may suggest it was not the original post but a timber inserted into the void at a later date. However, the size of the timber and the generally straight grain may indicate it is the remains of a post (see analysis by G. Usher, below). The uppermost fill (103) consisted of loose crumbs of dark yellowish-brown clay silt, with a large proportion of small mortar fragments from 1-10mm across, and a few larger mortar fragments up to 20mm. This was material presumably derived from decayed vegetation which infiltrated into the cut after the post had rotted, mixed in with mortar which had fallen from the sides of the slot.

Fill of cut 526 (north-east corner of building)

The upper fill of cut 526 was 522, a loose silty loam, which sealed a secondary fill (525), a fine very dark grey silty loam, containing much clay, mortar and a few stones. Finds within fill 525 included a copper-alloy mount (SF2233), a copper-alloy thimble (SF2312) and three sherds of pottery dated to the early-mid 18th century. The base fill was denser and more compact clay loam (533) than 525 above. The primary fill of the post-void 533, consisted of yellowish-brown clay loam with numerous mortar fragments up to 20mm long.

Fill of 238 (237)

The loose fill (237) of a cut (238) was thought originally to be part of a post-hole in the south-west rebate of the north entrance but on further examination ran underneath wall 220; it contained many mollusc shells, fragments of bone and clay tobacco pipe

Fill of 236 (233)

Context 233 was the fill of the post-hole (236) in the south-east rebate of the entrance in the north wall. It had a very dark brown loose fine-grained texture of sandy silt, containing a few fragments of mortar and bone. The fill appears to have been timber which decayed *in situ*, leaving a distinct organic appearance.

Ash-filled Pit

A shallow hollow feature found cutting the upper surface of the natural subsoil 207 was filled with wood ash (fill 208, cut 211). Several iron nails in the uniform fine fill suggested that the ash derived from burning disused timber, such as structural timber or shingles from the roof or walls. The underlying clay soil was markedly redder than elsewhere suggesting oxidation of the clay as a result of heating. The position, close to the mid-point of the western wall of the structure, suggests this building may have been used as a kitchen although no sign of burning, either by sooting or obvious heating of the stone wall immediately to the west, was observed. No dating evidence was obtained for this feature. Although it was sealed by the layer 206 it was not possible to determine whether it pre-dated the occupation of the stone structure, fell within the occupation or post-dated it, since the sealing layer 206 contained mortar and had a mid 19th-century date from finds. The possible disposal of redundant structural timber might argue for a date after the abandonment of the building, while the evidence for the likely presence of a flagged floor during the building's initial occupation suggests this pit was cut through the sub-floor area after the floor had been removed.

Phase 6: Post-Emancipation Reoccupation of the Building (1850s-1860s)

The accumulation of occupation deposits inside Structure A represented a phase of reoccupation of the disused building. By this time, the postulated suspended timber floor to the east and stone flags to the west were no longer present, allowing deposits to accumulate directly onto the natural clay subsoil surface.

Above the subsoil layer 207, and also sealing 208, was a deposit of compact dark grey clay silt (205, 206). In Area II the deposit was excavated in two spits but as the same material appeared to be present in both, the deposit was excavated as one spit as layer 402 in Area IV. It contained many broken fragments of mortar and European and Afro-Caribbean pottery. Context 205 contained ceramics dated to the 1850s-60s, and clay tobacco pipes dated to the 1870s-1900; context 206

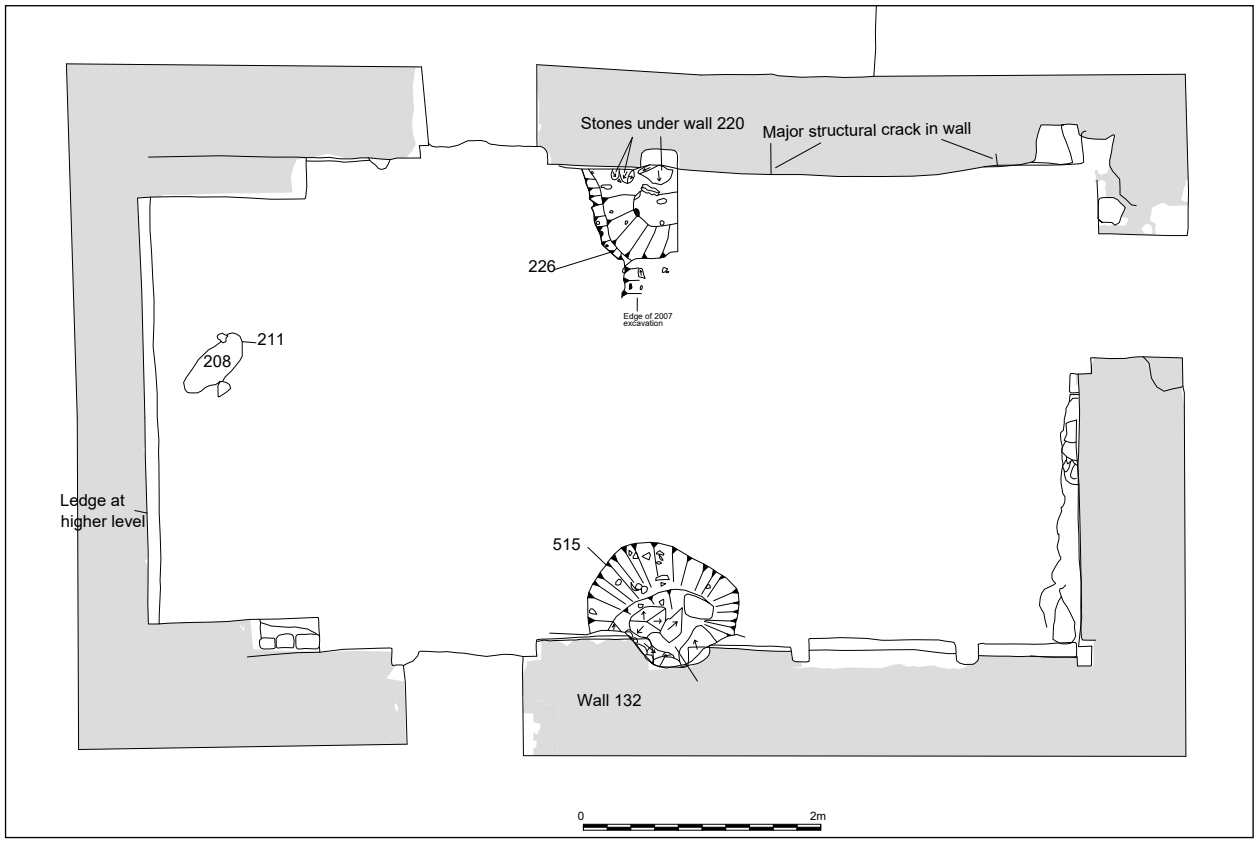

Figure 2.31. Fenton Hill: Structure A, plan of Phase 5, final use and disuse of the stone building

was dated from ceramics to the 1860s, although the clay tobacco pipes, which are almost all 1660-1710, are residual; context 402 was dated to the mid 19th century. Some of this material lay flat on what appeared to be an accumulating trodden surface. The quantity of broken white wall plaster, which included pieces with smoothed finished surfaces, shows that the deposit had accumulated as the building was decaying rather than during its construction. The dark grey deposits (205, 206) also had accumulated directly on the ground, indicating that the suspended timber or stone flagged floor was no longer present. The presence of large quantities of mortar could also in part have developed through the salvaging of usable building stone leaving the mortar behind.

In Area V, deposit 505 represents the same layer as 102 and 205 and contained highly fragmented glass wine bottles, iron nails, coral fragments, animal bone, and ceramics dated to the mid 19th century although some residual 18th-century material is present. Under 505 was a layer of similar material (506) but with fewer stones, also containing mid 19th-century pottery alongside earlier residual ceramics and intrusive modern green bottle glass. A lens of clay loam (509) represents the earliest accumulation of material over the natural subsoil in the western end of the interior of the structure but it lacked pottery or datable finds.

The main reoccupation inside the building post-dates the pits dug at the base of the posts. Fill 404 was sealed by 402. The fill of 515 (i.e. 512) was interpreted as sealed by 506, the lowest overall occupation deposit within Structure A.

Accumulation of Colluvium outside North Wall

The removal of the mortared stones blocking (213) the northern entrance of Structure A provided an opportunity to examine a section through deposits which had accumulated against the external face of the north wall of the building.

The section revealed that a depth of 0.8m of deposits had accumulated against the north side of the Structure A and had buried a stone step outside the blocked entrance. Three distinct layers were identified in the exposed section (upper 217, middle 218, lower 219). The earliest of these, context 219, was dated to the mid 19th century and included a Florida Water glass bottle dated 1857-1871 (SF595). The middle layer (218) contained large fragments of sponge-printed ware of mid 19th-century date, along with an early 18th-century glass wine bottle neck, and other ceramic finds, and pipes dating broadly 1660-1750, the early material being residual. The upper deposit contained clay pipes which could not be dated more closely than 1780-1920, and pottery dated to the 1860s.

Figure 2.32. Fenton Hill: Structure A, threshold of eastern door (context 519) from SW

The stone step appeared to have been laid against the mortared stonework of Structure A when the entrance was in use, providing access to a higher terrace to the rear of the building. After the blocking of the entrance, the steps became redundant. The quantity of large fragments of pottery and glass in the deposits demonstrate the use of the area immediately outside the building for disposal of rubbish during the 1850s-1860s.

Phase 7: Final Disuse or Casual Use of Structure A (1860s to present)

Overlying 205 was a deposit within the interior, 202, marked by a dark grey crumbly clay silt matrix containing a few small stones and some mortar fragments, mostly 20-100mm in length, though with less mortar than 205. Layer 202 occupied the whole of Trench II and consisted of a thin level deposit, with some finds lying flat both upon and within the matrix indicating the accumulation of rubbish along with a little fallen mortar from the walls on an exposed surface. Although the ceramics from this context date to 1800-1820, the presence of mid 19th-century pottery in the underlying layers indicates that the material was derived from introduced rubbish deposits containing earlier pottery (context 205 was dated from ceramics to the 1850-60s; 206 to the 1860s).

Through the blocked northern entrance into the structure, a sloping deposit of dark yellowish-brown clay silt had accumulated (203), which spread out in a fan shape into the interior of the building over 202. The material contained some tumbled stones, on average 0.20-0.30m long, alongside some smaller, more rounded stones (typical of the rubble wall cores elsewhere in the structure). The presence of a considerable number of finds within 203 (dated to the mid 19th century; with clay tobacco pipe fragments dated broadly 1770-1920) and the shape of the deposit suggested that the material had been washed down from an accumulated rubbish deposit north of the wall over the collapsed remains of the blocking (204).

A rather similar accumulation of material (201), though more heavily dominated by tumbled building stone and large broken fragments of mortar, lay in the north-west corner of the trench (201), also over 202. The present uppermost deposit (200) at the surface consisted of a humic-rich leaf litter containing loose stones and dry vegetation.

An indication that the life of the structure was prolonged after the roof had decayed is provided by a non-functional circular section of cast iron pipe (215) which had been set vertically in a small pit (cut 223, fill 214) in the north-west corner of the building interior. The pit had been cut through 205 though only a short section of the pipe survived. This may have served to provide additional support for a slumping roof, or perhaps to prop up a temporary shelter within the walls of the structure after the collapse of the roof.

In Area I the uppermost deposits consisted of layer 102, which extended across the whole area and consisted of a dark yellowish-brown soil containing stone and rubble; 102 sealed 106 and 108. Above 102 was 101, a shallow deposit cleaner and with less stone than 102, also extending across the whole trench; it contained some small fragments of mortar, mostly measuring 20-30mm across. Both 101 and 102 contained fragments of plastic, indicating activity in the later 20th century.

In Area V, above 505 (a mid 19th-century deposit) was layer 501, a loose friable deposit including mortar, fallen from adjacent walls, and stones, which is equivalent to 201 in Area II and 401 in Area IV. Layer 501 contained one sherd datable to the 1830s or 1840s.

Extension to the North of Structure A (Area III)

A stone-walled extension attached to the northern side of Structure A was investigated in Area III (Figures 2.34, 2.35). The trench was set across the east-west cross-wall 5 (310) and excavated in two areas. Before excavation the walls were thought to belong to two distinct rooms but only the southern room proved to be an enclosed interior space.

The southern area (Area IIIS) was defined by walls on three sides, Wall 6 (311) to the west, Wall 5 (310) to the north and Wall 3 (220) to the south. Wall 5 was thought by Roger Leech to abut the north-south Wall 6. The north-south Wall 6 (311) abutted Wall 3 (220).

The northern area (Area IIIN) was similarly defined by Wall 6 (311) to the west, but Wall 5 (310) formed the southern edge, a terrace slope formed by dumped stones lay to the north and the eastern edge formed the continuation northwards of the east side of Area IIIS.

Figure 2.33. Fenton Hill: Structure A: context 226 and wall slot above, from S

Phase 1: Natural Subsoil

The earliest deposit was the mid reddish-brown silty clay subsoil (312, 315), identical to 207 in Area II and 108 in Area I.

Phase 6: Accumulation of Occupation Deposits (1860s)

In Area IIIS above the subsoil (315) a series of thin level layers had developed (314, 313, 306, 304). The lowest two (314, 313), identical in matrix and finds, were only examined within the restricted area of the sondage. The lower of these (314) consisted of a dark yellowish grey crumbly clay silt, with many sherds of pottery, fragments of shell, glass, iron and other objects, which tended to lie flat within the matrix, indicating the accumulation of material on a level surface. Above 313 the whole area was excavated revealing the upper deposits of very similar character (306, 304). The pottery included a large number of comminuted Afro-Caribbean fragments (653 sherds, mean sherd weight of only 3.4g), alongside smaller quantities of mid 19th-century European ceramics (dating of 304: *c.* 1860 from pottery and after 1760 from clay tobacco pipes; 306: mid-late 19th century), with clay tobacco pipes, which included a pipe in 306 stamped McDOUGALL / GLASGOW, most likely dating from *c.* 1850-1920, and fragments of mortar. The high degree of fragmentation and small size of many sherds suggests that the surface was exposed to trampling by people and/or animals. The pottery dating suggests that these deposits accumulated rapidly as little difference in the dating can be discerned throughout the sequence. Context 304 contained a quantity of residual late 17th-century pipe fragments, suggesting the incorporation of earlier deposits in the matrix.

It was uncertain whether 313 and 314 developed after Wall 6 was constructed or whether the wall post-dated the layers as the sondage did not reach as far as the base of the wall.

The deposits were interpreted as the result of extensive dumping of rubbish north of the structure in the 18th century when it was used as a kitchen, with material subsequently trampled in the mid 19th century when the structure was extended. These layers (313, 314) closely resembled layer 309 to the north of Wall 5 and in the light of the similarity of the deposits are assigned to the same phase. Layer 309 was a compact dark grey clay silt, which had developed directly over the subsoil and contained many fragments of Afro-Caribbean and some European pottery. The deposit slopes upwards towards the northern terrace edge.

Above 309 was a layer of dark grey clay silt containing many stones, mostly within the range 0.05-0.20m, and much broken mortar (308), probably deposited as a result of the collapse of nearby Structure A. Layer 308 ran underneath Wall 5. Ceramics in layer 308 were dated to the mid-late 19th century.

Construction of Wall 5 (310)

Wall 5 (context 310), of which only two courses survived, consisted of coursed rubble, roughly squared and faced volcanic blocks laid in a hard white mortar with coral inclusions. It was constructed over the layer of white broken mortar fragments (308), suggesting it is a late wall built after the collapse of nearby structures. The diagnostic European ceramics in layer 308 suggest this did not take place before the mid 19th century.

Phase 7.1: Collapse of Walls 5 (310) and 6 (311) (1860s or later)

In Area IIIS over layer 304, a deep deposit of tumbled stone (303, 302) had accumulated from the collapse of Walls 5 and 6. The dark brown clay silt matrix in the interstices of the tumble was loose with many small rounded stones and small shells, consistent with those found elsewhere in the core of the surviving walls, as well as some small metal items, pottery sherds and glass fragments; an estimated 70% of the total volume consisted of stones. Layer 303 produced over 50 fragments of an iron vessel (SF371), while layer 302 produced European ceramics dated to the 1860s. Context 303 has four fragments of a 19th-century glass tumbler (SF862), one sherd of which joins SF477 and SF380 from 304.

In Area IIIN, the sequence of deposits above the subsoil was dominated by tumbled stones from the collapsed wall to the west or tumble from the northern edge of the terrace.

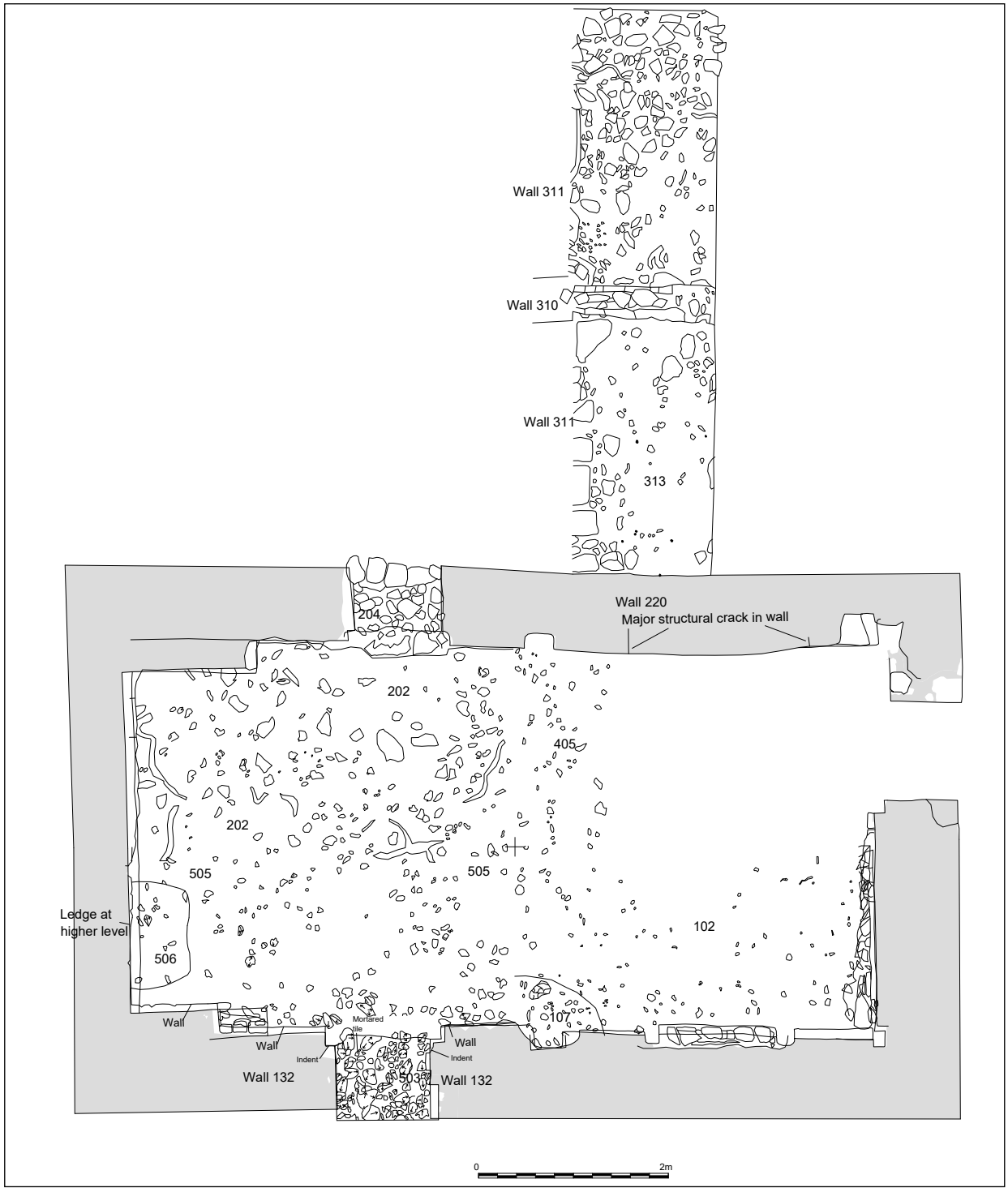

Figure 2.34. Fenton Hill: Structure A, Phase 6

Above 309 was a series of deposits which consisted very largely of tumbled stones from the wall to the west. Immediately above 309 was a deposit full of mortar and small rounded stones (308), the latter characteristic of the core of the walls, which appeared to have collapsed from the wall immediately to the west (Wall 6, 311).

Above this the overlying deposits were all largely composed of tumbled building stone, which included a few facing stones. The lowest (307) was the firmest and most consolidated and contained much broken mortar as well as building stone, concentrated on the west side of the trench below the west wall (Wall 5), and dating to the 1850s-1860s from ceramic finds. The overlying deposit, layer 305, was a further deposit of collapsed stones with a matrix of dark yellowish-brown clay silt containing some large fragments of Afro-Caribbean pottery, European ceramics dated to *c.*

Table 2.3. Archaeological and historical sequence at Fenton Hill

Phase	Date/Period	Structure A	Structure G	Historical information	Artefactual information
1	1635-1650				Pre-plantation – possible casual activity indicated by clay tobacco pipes
2	*c*. 1650-60	Construction of earthfast timber building as dwelling house		Probably plantation of 'Widow' Jones	Rise in quantity of clay tobacco pipes c. 1650/60 suggests intense and sustained occupation
3.1	1675	Continued occupation of structure	Main house built in stone with floor of Portland stone and part tiled roof. Location uncertain (see cisterns), but close to or on site of Structure G	Date-stone indicates construction by John Combes in 1675 (after purchase probably from Widow Jones, or possibly Crook or Harrison)	Date-stone of 1675, not found *in situ*
3.2	*c.* 1690/ 1710		Demolition of initial stone house	Change in ownership of plantation after death of John Combes in 1689. House possibly damaged in French attack 1706	Finds assemblage in Structure G make-up continues to early 18th century
4.1	*c*. 1710-1725	Encapsulation of timber building (Structure A) in stone as kitchen to serve new house nearby (Structure G)	Main house rebuilt on a new platform with a stone foundation and timber superstructure (Structure G)	Plantation in new ownership after 1689, probably Col. Joseph Jory who died 1725; named Jewry's by 1763	Foundation trench of Structure A has early 18th-century material
4.2	1725 to 1780/1810	Occupation of Structure A with structural alterations including blocking north door, rebuilding west wall	Continued occupation of structure through mid 18th to early 19th century,	By 1746 probably in occupation by one of the lessees of Jory's estate, or by a manager. By 1763, Jewry's in possession of Henry Sharpe	Rubbish disposal to north of Structure A, and pottery in pits in Structure A and within demolition layer of Structure G
5	Early 19th century (*c*. 1810-1820)	Abandonment of stone building Structure A	Abandonment (and destruction) of main house Structure G by *c*. 1810/20	Abandonment of plantation for sugar processing and as planter residence	Some ceramics dated 1780-1820 present, so occupation continues up to about 1810
6	1840s-1860s	Reoccupation of Structure A, construction of extension to north	Collapse or demolition of Structure G	Occupation not by emancipated African slaves but poor immigrant labourers, possibly of Portuguese (Madeiran) origin	Large quantities of cheap European ceramics, glass and pipes in situ in trampled layers in interior of Structure A; incorporates residual Afro-Caribbean pottery from reworked dumped deposits
7	1870s to present	Casual activity inside stone structure			
7.1	1870s-*c*. 1900	Use as shelter?		Burke Iles map of 1871 shows post-emancipation village extending towards the site	
7.2	20th century	Casual activity, no evidence of domestic occupation			Deposition of modern material including plastics and bottles inside Structure A

1860, a clay tobacco pipe fragment dated 1850-1920, iron nails, and numerous mortar fragments from the collapsed wall (Wall 5 to the west). Above 305 the tumbled mass of stone (302) had dark yellowish-brown humic silt in the interstices, which contained a pipe fragment of 1780-1920 and European ceramics dated to the 1860s, providing a terminus post quem. This is a less consolidated deposit of tumbled collapsed stones from Walls 5 and 6, incorporating some re-deposited cultural material in the matrix.

Phase 7.2 Modern Material (1870-present)

The uppermost deposit (301) consisted of leaf litter and a mass of tumbled stone, the latter ranging in size from 0.10-0.25m with relatively few larger stones and a few faced stones (Figure 2.35). The finds in this deposit dated to the 1850s-1860s, presumably all derived from the intensive occupation during that period which dominates the finds assemblage.

Discussion of Area III

The accumulation of dark grey silt with mid 19th-century pottery noted within Area II was paralleled in Area III north of the structure by the accumulation of material, including much rubbish, immediately north of Wall 3 (220). Here lay what appears to have been an enclosed space, possibly an extension or a small unroofed yard. The area was marked by stone walls to the west and north; the probable east wall which lay outside the excavated area was marked by a distinct line of tumble.

The area north of Wall 5 (310) consisted of a collapsed deposit of stones of varying sizes, which had accumulated on the downslope formed at the north end by what appeared to be a rubble-faced terrace edge. This was not a well-defined or faced wall as anticipated before excavation but rather represented an irregular dump of stones which formed a revetment for the terrace. To the west the area was defined by Wall 6 (311), a low wall of faced and roughly squared blocks of volcanic stone. The wall was roughly coursed, probably not mortared but had a rubble core of smaller stones. The wall face had been displaced out of position towards the east by the roots of a tree, and perhaps also by earth tremors. It appears therefore that this area did not form part of a room (as interpreted on the original survey plan: Leech 2006a, fig. 10.8) but lay outside the structure. Instead, Wall 6 within this part of the trench may have defined an exterior yard or a structure to the west.

Figure 2.35. Fenton Hill: Structure A, northern extension (Area III) showing context 301 from N

Structure G: The Main House

Before excavation began in 2009, a prominent artificial level platform was visible, set on the prevailing ground slope about 7m to the east of Structure A. The platform was retained on the downslope to the east and south by a mortared stone wall, which was continued on the eastern side by a sharp break in slope marking the wall line, while on the south side the presence of a set of entrance steps was indicated by a sloping ramp. The edge of the platform to the south-west was marked by the inner face of a wall. Sections of wall also survived, some with a sloping mortared surface, which may have formed a garden wall to the rear of the structure. The probable north wall of the structure was marked by a stone wall alignment parallel to the south wall but the uppermost stones were accidentally removed by gardeners during July 2009. Together these fragmentary remains indicated a building platform with a stone foundation, measuring at least 16m east-west by about 7m north-south (to the visible walls), with a central entrance facing south.

Two trenches were excavated to investigate the construction of the platform, and to determine whether the building had been cellared. A small sondage was dug in the base of the trench to determine the level of the pre-construction ground surface (see section, Figure 2.36; Figures 2.37-2.39). Trench VI, measuring 6m north-south by 1m east-west, extended north-south between walls 611 and 602, and 0.6m to the west, a further trench (VII), measuring 1.5 by 2.5m, was set over the southern wall (611) to investigate its character and dimensions. As Trench VI was dug by trowel and mattock, there is the consequent risk of some mixing of finds between layers.

Phase 3: Former Ground Surface (618) (Pre- c. 1700)

A small area of buried land surface (618) was revealed in a limited sondage in the base of Trench VI, with underlying natural subsoil. This represents the pre-existing ground surface before construction of Structure G.

Context 618 produced an undiagnostic bottle fragment, a fragment of curved roof tile, and a few late 17th-century clay tobacco pipe fragments, the latter providing a *terminus post quem* for the construction (SF2325).

Phase 4.1: Walls at South End and North End of Trench (611, 602)

The excavation trench was positioned between two stone walls (611 and 602), aligned east-west and spaced 4.5m apart internally. The southern wall (611) was constructed of volcanic stone blocks, roughly squared and well faced 200-300mm in length. The wall is of coursed rubble construction, with stones set in a very hard white lime mortar; courses from the bottom of the wall where visible measured 0.22 m, 0.28m and 0.22m in height. It served as a retaining wall on the southern edge of the platform, and as a levelling course for the timber superstructure. It was possibly double-faced, of local volcanic blocks, with a rubble core of rounded volcanic stones.

The northern wall (602) was also constructed of volcanic stone blocks with possible internal facing on the south side, approximately 1.16m wide although the north face was not fully excavated. Although the base of neither of the walls was excavated, it is likely that these were constructed in shallow foundation trenches for stability. The substantial width of the southern wall (611), at 1.52m, served not only to support the timber superstructure but also to act as a retaining wall for the dumped soil within the building platform.

Phase 4.1: Make-up Deposits for Building Platform (615, 616, 621, 610, 620, 619, 617, 609)

Between the two walls a series of dumped layers of re-deposited yellowish-brown natural clay subsoil mixed with lenses of dark grey humic clay loam (615, 616, 621, 610, 620, 619, 617, 609) had been deposited on the ground surface 618 to create a level platform for the structure. The stone foundation supported a timber superstructure for which no direct evidence was recovered. The dumped layers probably abutted the southern retaining wall but this relationship was not confirmed by excavation.

These deposits contained numerous finds which suggested a date for the dumping of the late 17th century, or early 18th century at the latest. A large quantity of diagnostic finds was recovered, including Westerwald and other German stonewares, tin-glazed earthenware, North Devon sgraffito, and smoothware, none of which need date later than the early 18th century. The clay tobacco pipes were dated to the late 17th-early 18th century. Layer 617 contained a drinking glass stem (SF2216), identical to a stem found in context 615 (SF2215). The form is dated to 1685-1705, and closely resembles three examples from Port Royal, Jamaica, assigned to the period 1685-1700 (Noël Hume 1969, 191, Type VI; see also Noël Hume 1967, 23, figs 4 and 9, nos 11, 13, 14). The clay tobacco pipe dates from 1660-1710. Their presence in a series of make-up layers indicates occupation on the site earlier than this building, when rubbish and other material was accumulating which was then used to dump as make-up for the platform of the stone foundation. Context 615 contained clay tobacco pipes dated 1660-1730 and pottery of late 17th- or 18th-century date, while context 610 had three clay tobacco pipe stems (SF2146), two of which dated to 1660-1700/1710, and three 18th-century tin-glazed sherds. Context 616 had datable pipes of 1680-1720 and 1680-1730 (SF2302), and 1660-1730 (SF2301); the pottery is late 17th-18th century.

Phase 4.2: Possible Colluvial Layer (608, 607)

A humic silty clay deposit (608, 607), which underlay a deposit of tumbled volcanic stones (605) from the wall at south end, appears to represent a stable soil layer, possibly of colluvial origin, which developed over the dumped infill of the house platform.

Deposits 607 and 608 were a firm silty clay with some lenses of dark grey soil, and visible in section as a distinctly darker layer, interpreted as a possible colluvial layer. It contained occasional pebbles and had some finds such as pottery sherds resting on what appeared to be a former level surface.

Dating of the finds from 608 may indicate that this material was deposited during the life of the building. The clay tobacco pipes suggest a date in the 18th century (1700-1780), suggesting a discontinuity from the make-up deposits, but the pottery in both 607 and 608 is 18th century in date with the exception of one uncertain 18th- or 19th-century sherd.

Phase 5: Demolition/Collapse (606, 605, 603, 601, 604)

The earliest deposit which appeared to represent demolition was a loose sandy loam (606) with mortar fragments, including coral and lime, a large block with wall plaster adhering, and a scatter of tin-glazed pottery and some charcoal. The pottery was all 18th century in date, while the two small fragments of clay tobacco pipe probably belonged to the late 17th century.

A dump of stonework (605) probably represented the demolition or collapse of the building and its foundation stone walls. The stone 605 lies over 608 at the south end of the trench, while loose stone from demolition lies over 607 at the north end.

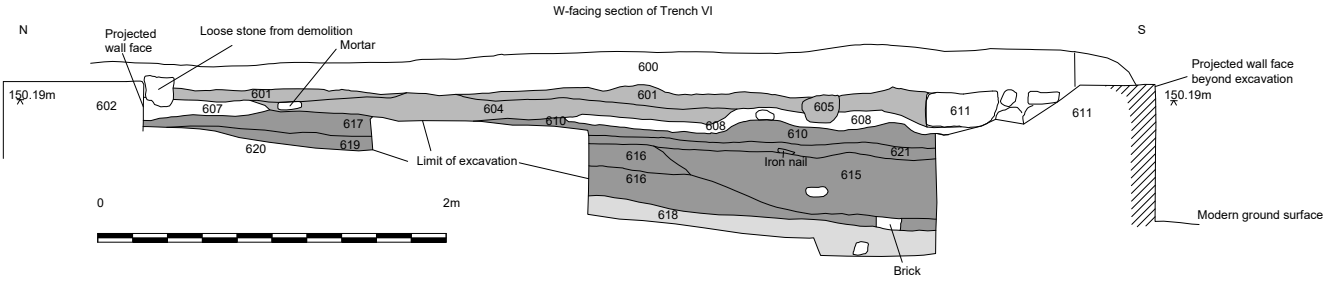

Figure 2.36. Fenton Hill: Structure G, section across building platform, with make-up (dark grey) and destruction deposits (mid grey)

Context 604 is a layer of firm silty loam, with inclusions of volcanic stone pebbles 2-6mm in size. A large concentration of iron nails was found 1-3m from the south end of the trench. Layer 604 contains a sherd of white salt-glazed stoneware dating to the mid 18th century (SF1688) and pearl-ware (including SF1637).

Above 604 were contexts 603 and 601, excavated as two vertical spits of the same firm silty clay loam with inclusions of small stones up to 30mm long, with a considerably higher proportion of occupation debris than 600 above, but fewer mortar fragments. These two contexts were allocated to the upper and lower part of the same apparently undifferentiated deposit. However, the finds did demonstrate a degree of vertical differentiation, the lower part of the deposit, 603, containing almost exclusively 18th- or very early 19th-century material. Context 603 contained clay tobacco pipes dated broadly to 1750-1920 and pottery dated 1770-1810 with one mid 19th-century sherd (SF1652). Context 601 appears to show the accumulation and incorporation of later material into the mid 19th century from ceramics of that date, although there is a considerable amount of 18th-century material present. The layer 601/603 contains some mortar fragments while the large number of nails is likely to have derived from decayed building timber, such as floor joists, framing or shingles. This deposit probably developed through the decay and destruction of the timber superstructure of the house.

Figure 2.37. Fenton Hill: Structure G, Trench VI, section through make-up layers from W

The original floor level had not survived, so only the internal earth fill with retaining walls survived. The infilled platform was presumably covered by a suspended timber floor of the superstructure.

The presence of a considerable quantity of pottery dated to 1770-1810/20 in the demolition deposits indicates the continued occupation of the main house until that date.

Phase 7.2: Modern Material (600)

Topsoil (600) formed the uppermost 20-100mm of the soil profile consisting of friable silty loam, with about 5% inclusions of angular stone fragments with some waterworn larger stones 2-300mm in length, and large quantities of white lime mortar fragments.

Discussion

There is a marked discontinuity in the deposits infilling the platform for Structure G in Trench VI. Fills representing the make-up and construction date to around 1690-1710/1720, while those representing collapse or demolition date to the late 18th-early 19th century, suggesting a lifespan for the house of between approximately 80 and 120 years. Stable deposits 607 and 608 may represent material accumulating beneath the timber floor during the main occupation of the building in the 18th century.

Trench VII

The uppermost layer of topsoil below the turf was 612, which sealed both the porch foundation 613 and wall 611, and was equivalent to layer 600/601 in Trench VI. Finds in the deposit range from early-mid 18th century up to as late as the 1830s, but it also contained some early clay tobacco pipe, as well as pipes dating to early 18th century. The lowest deposit excavated in this trench was 614, a layer of firm silty loam, under 612. Layer 614 contained later 18th- to early 19th-century

Figure 2.38. Fenton Hill: Structure G, section through building platform from W; Trench VI front, Tr. VII behind, showing wall 611

Figure 2.39. Fenton Hill: Structure G, Trenches VI (L) and VII showing southern wall of structure, context 611

pottery alongside several sherds of mid 19th-century pottery.

Discussion

Early settlement

There is no evidence for pre-European settlement or activity on the site. The presence of a single decorative prehistoric pot sherd (SF1380) is most plausibly attributed to collection of the piece as a curio in the colonial period (see Morris, this volume).

The earliest evidence of activity on the site comes from artefacts recovered in the excavation and casual surface finds. The clay tobacco pipes, which are the most chronologically sensitive and closely datable of the finds, indicate some activity on the site before 1650, with one Dutch pipe bowl from context 603 dated to *c.* 1635-50, one from the period c. 1640-60 in context 203 and another dated 1650-70 (SF73 context 402; see clay tobacco pipe report). Clay pipes dating from 1660-1700 occur in some numbers, indicating increasingly intense activity from the 1650s/60s onwards. The earliest pottery is not as closely datable as the pipes but includes North Devon sgraffito and gravel-tempered ware, German salt-glazed stoneware, and tin-glazed earthenware, all consistent with a later 17th-century date.

Structure A

The earliest phase of Structure A, the timber post-in-the-ground structure, has left no associated archaeological deposits so there is no direct evidence for the initial construction. Only a very small quantity of 17th-century pottery was recovered from the area of Structure A but the scarcity may signify no more than that the interior was kept clean and rubbish was disposed of outside the building. Without full excavation of subsoil in the surroundings - especially to the north, which appeared to have extensive mid 19th-century rubbish deposits and appears also to have contained earlier midden or rubbish deposits - the potential to recover material from the period of *c. 1630*-1675 was low. The archaeological evidence from Structure A at Fenton Hill thus does not provide definitive support for the argument that the post-in-the-ground phase is one of the earliest English houses in Nevis. However, that said, the area of the excavation was limited and the deposits in the interior are not necessarily likely to yield material related to the occupation of the structure. The absence of contemporary finds is not conclusive evidence against a 17th-century date.

A critical context for the dating of the structural sequence is the fill of the foundation trench for the insertion of the stone walls. Finds in the wall foundation trenches of Structure A indicate that the conversion to stone probably took place in the early 18th century. The backfill of the southern wall (context 106) was dated to the early 18th century as it contained a complete tobacco pipe bowl, other pipe fragments dated 1690-1720 (see clay tobacco pipe report) and a little abraded tin-glazed earthenware. Allowing for

Figure 2.40. Fenton Hill: Structure G, stone foundation (wall 611), with projecting porch and in situ earthenware tiles, from SE; Trench VII to right

Figure 2.41. Hermitage, Nevis: late 17th-century estate house showing shingled exterior; the domed cistern and drip filter stand to left of main house

a period of occupation prior to the conversion, the initial post-in-the-ground timber building belongs to the seventy-year period from the initial European settlement of Nevis in 1628 to the late 17th century. Artefactual evidence from clay tobacco pipes suggests that activity begins around 1650 at the latest, although in the 1660s there is evidence of a greater intensity of activity. The date-stone of 1675 from a nearby building (probably a main dwelling house constructed in stone, as argued below) demonstrates unequivocally that significant construction was taking place at the plantation by this time. The lifespan of an earthfast building in the United States has been estimated at 25 years, 'barring extraordinary maintenance' (Moser *et al.* 2003, 200), although the survival of quite humble structures for over a century with some maintenance has been observed, for instance in New Jersey (Gall *et al.* 2011, 43). In conclusion, it is likely that the timber phase of Structure A was constructed at the beginning of occupation on the site around 1650/60, coinciding with a peak of activity seen in deposition of clay tobacco pipes around 1660-1700, or a little before, when the pipes show the earliest human activity between 1635-1650 (see Higgins, clay tobacco pipe report, this volume).

Together, the excavation evidence, further examination of the structure and observations by colleagues require modification of Leech's previously proposed sequence for Structure A.

Before the excavation, Leech (2006a) postulated that the timber construction of Structure A occurred in two phases. The excavation demonstrated that the timber building was constructed in a single phase. Evidence from the east gable wall is crucial to the re-interpretation. Two angled slots in the wall-face either side of the window were originally interpreted as the timber impressions of rafters resting on a narrow stone gable preserved in the east wall. However, detailed examination showed these impressions represented a pair of up-braces originally jointed into a now-lost roof truss within the east wall. This removes an obstacle to the initial hypothesis, which only emerged once the excavation established the interior floor level, that the building as originally interpreted would have been impractically low. A further key piece of evidence is that there was no sign of the post-hole which had been postulated to form the north-west corner of the original small earthfast post structure (Leech 2006a, fig. 10.8), despite careful cleaning to search for it. The north wall had only three visible posts encapsulated in the stonework, while five vertical and one horizontal timber slot were evident in the south wall. The discrepancy might be explained by differential preservation of the timbers, with some of the posts of the north wall too decayed to incorporate in the stone wall.

Excavation of the south-west and north-west quadrants of the interior suggested that the timber structure originally occupied the same footprint as the later stone structure. A large and deep post-hole (230) which lay within the rebate of the south-west corner of the entrance in the north wall contained a fragment of timber from the post. The post-hole contained the same loose dark grey fill as those in the eastern part of the structure (e.g. post-holes 116, 114, 104). The discovery that this timber formed a large post below ground, narrowing (and possibly reshaped) to fit the rebate above strongly suggests that the timber structure extended further west than the obvious visible post-slots in the walls. The foundation course, which is evidenced by the foundation trench in the south wall and the broader spreading course at the base of the walls, may have extended along the full length of the stone building. However, the overlapping of the later wall returns over the internal face at the north-west and south-west corners has obscured any post-holes there, so this could not be confirmed.

Together the evidence suggests that the timber building was of one phase, aligned east-west and measuring 4.45m north-south by at least 7.8m externally. Although the full extent of the timber structure to the west is uncertain, it may have occupied the full length of the later stone building. For comparison, the dimensions of the hall at Hermitage were approximately 7.8m by 5.6m.

There are two main alternative interpretations for the relationship between the timber posts and the masonry structure which are of fundamental importance in determining the structural sequence. Were the posts part of a timber structure which was later encased in masonry, or did they form an integral and contemporary part of the initial stone structure?

The latter possibility will be considered first. A timber and stone building could have taken one of two forms: either the stone walls were constructed to their full height at the same time as the integral timbers were raised, or the posts and frame were built with a low stone foundation in one phase and only later were the walls raised to their full height in stone. The former possibility is consistent with Spanish practice in Jamaica, recorded as 'antient' by the English planter Edward Long in the 1770s, meaning prior to the English capture of Jamaica in 1655. There the full-height walls of masonry incorporate timber posts which are set into the ground (Long 1774, facing p. 20, fig. 7; Figure 2.42). As regards this possibility, one interpretation of the uncoursed rough mortar and stone foundation is that it originally supported an interrupted sill beam of which a section was preserved in the horizontal 'rail' slot in the south wall when the upper part of the structure was built in stone.

The difference in the quality of finish of the masonry above and below ground, which prompted the suggestion that the foundation may have been constructed separately from the wall above, may have no more significance than the fact that the rough stone of the foundation course was not intended to be seen.

However, two aspects of the posts suggest that the timber phase pre-dated the construction of the stone wall. First, the iron nails found lying horizontally at intervals down the southern side of the post-pipe fill of two posts, 104 and 116, shows that the southern face of the post was exposed. If it had been encapsulated in the wall from the outset, the post would not have been accessible. Furthermore, the presence of nails suggests that a walling material, such as wooden boards perhaps covered with shingles (as at the main house at the Hermitage plantation, Nevis: Figure 2.41), had originally been attached to the uprights. An alternative possibility, that the nails had been left in a reused post, is implausible since at least three posts with unshaped bases had been deliberately selected for use in this structure, with the round timber left unshaped at the base where they were buried below ground. A construction technique employing vertical posts squared above ground and circular in section below has been observed in the timber main house at the Hermitage, Nevis, which has been dated to the end of the 17th century (Leech 2006a, 157, fig. 10.7), and in North America at Cedar Park, Anne Arundel County, and Maryland, constructed in 1702 (Carson *et al.* 1981, 189). In the latter case, it is described as an uncommon practice intended to prolong the life of the post in contact with the ground. In discussion of the 1707/8 St Kitts insurance claims, Hobson suggests that rounded tree trunks were often used for house framing. In one case, the Old Road house of Edward Gillard, the description 'ye whole frame sawed' implies that this superior finish differed from the usual practice of leaving the post bases unshaped below ground (Hobson 2007, 235).

The chamfering of the external corners of the post above ground is indicated by the mortar impressions. Whilst the external chamfering on the corner posts may have been visible, it is unlikely this would apply to the midway posts, which would be expected to have been covered by shingles or boards. This could only be seen from the exterior if the stone wall were not present in the first phase; there is little point in shaping a post intended to be hidden, unless the timber were reused. It is conceivable that the timbers were chamfered on all sides, though there are no mortar impressions on internal faces to prove this one way or the other. The presence of the possible drip-moulding on the external side of the horizontal timber which originally occupied slot 125 provides corroboration that the posts of the original timber structure were intended to be seen on the exterior of the building. The internal posts in the late 17th- or early 18th-century Hermitage extension have broad chamfered corners on their internal faces. In the main house at Mansion estate on St Kitts a possible reused post in a secondary phase of timber construction of the wall has chamfered internal corners. Perhaps the most telling argument against the interrupted sill debate is that only one horizontal timber was incorporated in the stone building. Had the whole timber structure rested on a stone foundation from the beginning, it might be expected that the sills would have survived relatively intact. As it was, only one horizontal timber survived, suggesting incorporation of the only well preserved horizontal member of a post-in-the-ground structure.

At least one very substantial post (230) was trimmed above ground, or cut off and replaced by a narrower post, so that it could be incorporated in the rebate of the northern door, while a less substantial post formed the opposed rebate. The original timber structure appears to have extended to at least the western side of the opposed entrances, and it may have extended as far as the west wall but any sign of an original post in that wall would be obscured by the later stonework. Thus the original extent of the structure could not be determined with certainty but may have included an additional pair of posts to the west.

The revised hypothesis for the sequence of construction in the light of the evidence from excavation sees first the erection of a rectangular timber building using a post-in-the-ground technique where the main vertical timbers were set in post-pits dug below the ground surface. The building was probably externally clad with boards and perhaps also wooden shingles and, in the absence of clay or stone roof tiles, roofed with an organic material, such as palm or cane trash, thatch

or shingles. Subsequently, the main load-bearing posts and associated up-braces of the timber structure were encased in stone to full height by the insertion of rough stone foundations which supported mortared stone walls, thereby creating a more durable building. After the decay of the timbers the negative impressions of the posts and up-braces were preserved as empty slots in the stone and mortar wall. A similar sequence of development of a timber structure which had been encased in stone, preserving the impressions of posts, has been proposed for other buildings of this type (see Leech 2006a; 2006b). The sloping mortar facing on either side of the window in the east wall indicates that the roof was hipped.

A further aspect was tested by excavation. The extension to the north of the building abuts the stone wall. What had been identified in the original building survey as a room was found to have no northern wall, so was not an enclosed room. Only one cell or room of the structure was confirmed by the excavation.

Plan and Function of Structure A

The initial earthfast timber structure had paired posts across its width, with the use of round unshaped posts underground and squared timbers above. The posts were chamfered on the outside (Figure 2.17), and examination of surviving decayed timber within the slot suggests Courbaril, Purpleheart or Mesquite wood was used (see Usher, timber report, this volume).

The structure shows a developmental sequence from a rectangular timber building to a stone clad one. There is no evidence for the western end of the timber structure but if it was of similar dimensions to the subsequent stone phase it would have measured *c.* 7.8m long and 4.45m wide externally, compared with the stone building of at least 9.37m east-west by 5.77m externally (30ft 9in by 18ft 11in) or 7.88m by 4.19m internally (25ft 10in by 13ft 9in). The archaeological investigation together with study of the surviving structure suggested that, in its stone phase, the building had a suspended wooden floor in the eastern room, evident from scars in the mortar rendering; stone flags in the west; a kitchen area; a small window in the east gable; and a sloping drain hole through the south wall. Several greyish-green fine-grained sandstone slabs, which were probably Pennant sandstone imported from England, were found loose and unstratified in Structure A, and those are likely to have paved the floor of part of the interior. One small handmade brick may have been part of an oven, but few bricks were found. The lack of evidence for significant amounts of ceramic or stone roof tiles from Structure A at Fenton Hill suggests that the roof was covered with shingles or thatch. Both were common roofing materials in St Kitts in 1706 (Hobson 2007).

A possible partition formed by post-hole 230 in the north wall and its corresponding post-hole 516 in the south wall may mark one side of the passage, along with a possible padstone 520 on the same alignment. A possible stud set in the ground is found to the west of the entrance in the south wall (516). The horizontal timber encapsulated in stone in the south wall hints at an interrupted sill construction but this was either discontinuous or only one horizontal timber was sufficiently well preserved at the conversion to stone to merit preservation.

There were originally opposed entrances in the long walls to north and south, and a third entrance in the east wall. Although there is only slight evidence for subdivision of the interior, the arrangement of opposed entrances in the stone structure shows the building had a cross-passage plan and was therefore subdivided internally into at least two or possibly three rooms. One room lay to the west of the passageway, and one or two smaller rooms lay to the east of it, one of which was served independently by the eastern entrance. Thus Structure A was probably constructed initially as a dwelling, although it is argued below that its function changed with the construction of the stone house in 1675.

The cross-passage plan developed within the late medieval English vernacular architectural tradition and in all buildings of more than one cell was characterised by a through-passage which divided the hall from the service rooms (Mercer 1975, 50). This rural house plan was widely adopted and continued in use in much of southern England and parts of the north to the 17th century, although in other areas it persisted into the 18th century.

The conversion to a stone through-passage building in the early 18th century is consistent with the chronology of contemporary vernacular English buildings. It also indicates that the timber structure must have been of sufficient quality and in good enough condition to merit encapsulating in stone.

Function

The function of the Fenton Hill building requires consideration in the light of the dating evidence and the arrangement of other contemporary buildings in the plantation complex. Built initially as a small dwelling, several architectural details point to a change of function for the stone phase. First, there is provision of a drain through the south wall of the stone structure west of the passage. Secondly, the rebuilding, or refacing, of the west wall may have been intended to create a fireplace rather than simply to rebuild a collapsed or unsound gable. Thirdly, the blocking of the northern doorway reshaped the pattern of

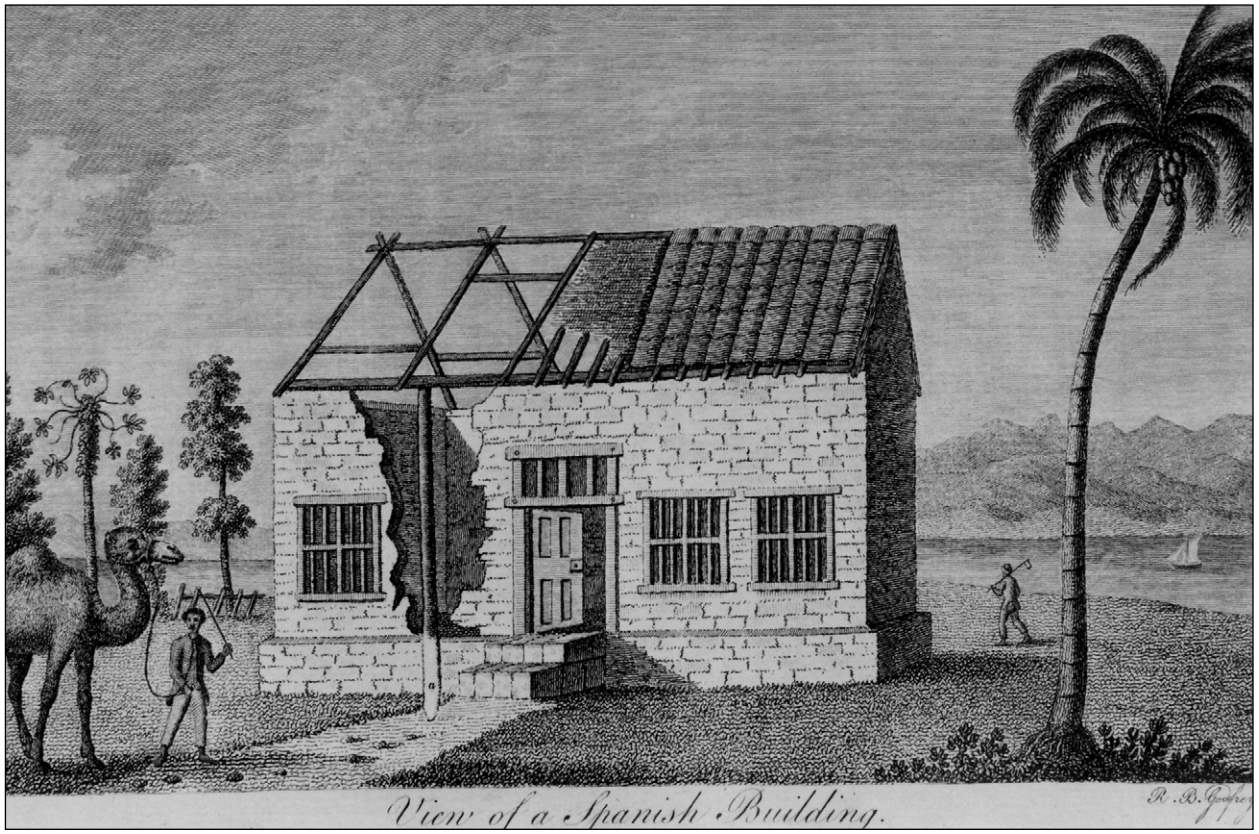

Figure 2.42. 'View of a Spanish building', a post-in-the-ground building, from Edward Long's The History of Jamaica, *1774 (vol 2)*

circulation within the building, focusing the direction of movement from the building towards the east where the main house stood. Fourthly, the creation of a stone building was part of a wider trend towards rebuilding wooden structures in stone, in line with acts intended to reduce fire hazards in the urban areas. Finally, the conversion to stone in itself reflected a desire to create a more permanent structure.

In the initial timber phase the finds do not provide much help in determining the function of the structure. There are few surviving contexts of this period and the finds were deposited almost entirely during the post-emancipation period. The main exception is the presence of much Afro-Caribbean pottery immediately to the north of the building, which lacks post-emancipation forms and appears to have been fragmented through the subsequent trampling of discarded rubbish outside the building. Several Afro-Caribbean pottery forms were associated with food preparation, notably cooking pots which retained sooting from use over a fire (see Morris, Afro-Caribbean pottery report, this volume).

Together, these aspects support the interpretation of the stone building as a kitchen and steward room for the main house to the east. An example from North America may provide a clue as to the developmental sequence of Structure A. Writing from South Carolina in 1710, Thomas Nairne reported that a family's 'small House usually serves for a Kitchen afterwards when they are in better Circumstances', indicating that small early houses were converted to kitchens in the following generations once resources were available to build larger dwellings (Nairne 1710; cited in Carson *et al.* 1981, 140-1). The stone structure was of a similar overall size and form to detached kitchens recorded in the Chesapeake, for instance at the Pruden plantation (Carson and Lounsbury 2013, 175).

By the late 18th or early 19th century Structure A was abandoned for a period, during which time the wooden floor and the timber posts decayed, and stone flags were removed. In the early 19th century, two pits were dug at the base of timber posts in the interior, and deposition of late 18th- to early 19th-century pottery suggests some activity at that time or a little later. Pit 129 contained a number of large pieces of unabraded (perhaps freshly broken) pottery from the same vessel dated 1780-1810, suggesting a deposition date at the end of the 18th or early 19th century. The digging of the pit must have post-dated the removal of the floor, as broken flagstones were found in the pit.

The drinking glass from the blocking of the north entrance dates to the early 18th century (c. 1700-20) but such a valuable prized item may have survived to be buried some decades later than its date of manufacture.

Other finds in the interstices of the blocking indicate a considerably later date.

The Fenton Hill Kitchen

The current interpretation is that the timber structure (A) began life as a small post-in-the-ground house, which was converted to a kitchen when a larger dwelling house was built close by, according to the date-stone, in 1675. The cultivation of sugar was highly profitable from the late 17th century and the accumulation of wealth rapid, and often the proceeds were used to enhance the properties, and prestige, of the planters. The 1675 house constructed in stone nearby may have replaced the small timber building as the principal residence as the planter's wealth increased and the inadequacy of the accommodation in terms of space and status became apparent. The initial timber building (Structure A) may then have been converted to a kitchen and steward room, serving the adjacent main house, before being encapsulated in stone in the early 18th century. The likelihood is that the conversion from timber to stone in the early 18th century maintained the distinct functions of the existing detached kitchen. During the 18th century the stone Structure A probably served as a detached kitchen and steward room for the adjacent main house of the plantation owner or his agent, following a common pattern established in St Kitts and Nevis plantations.

Detached Kitchens

In the West Indian islands as well as the North American mainland - Carolina, Chesapeake and Bermuda - cooking was carried out in separate kitchens outside the main house. The detached kitchen was a feature of late medieval and early post-medieval larger houses in England and Wales. In the south-east, East Anglia, south Wales and Staffordshire, surveys have identified numerous detached kitchens at vernacular houses, and in one rural manor in Essex maps show that no fewer than a third of late medieval farmhouses had a detached kitchen (Martin and Martin 1997; Meeson 2000). Chappell contrasts the use of the detached kitchen in colonial contexts with the practice in Britain where, from the West Country to the north, cooking often took place in the hall or an adjoining room well into the 18th century (2011, 107). In Bristol, with which Nevis had many connections (see Appendix 1), kitchens were normally detached in newly built houses in the 17th and early 18th centuries (Leech 2014, 309-13).

The practice was certainly well established by the late 17th century in Nevis and St Kitts. The domestic quarters at plantation centres in Nevis and St Kitts developed a standard arrangement in which the main house was served by an adjacent detached stone kitchen. Archaeological evidence for the separation can be found in surviving plantation remains, for example at Mountravers, Russell's Rest (Prison Farm), and Upper Rawlins, Nevis, and at a number of St Kitts plantations, such as Mansion, Brighton and White's. In each case the kitchen takes the form of a rectangular stone structure with a hearth and chimney above, and occasionally a surviving oven set in a stone gable wall.

Contemporary documents illustrate the phenomenon. Hobson notes the presence of probable detached kitchens amongst the 14 houses visible on the Hack map dated 1687 (Hobson 2007, 182). Late 17th-century houses on Nevis are consistent in observing the separation. In December 1681, a correspondent from Nevis, Mr Wilkins, describes a sugar plantation there as having 'one very good stone mansion house with kitchin and other necessary outhouses, etc., also down at towne two good large Storehouses consisting of 5 several tenements so that your whole estate may be really worth £8000' (British Library Egerton MSS 2395, fol. 597, 'Extract of Letter to Mr Platt from Mr Wilkins in Nevis'; Oliver 1894, lxiv; cited in Hobson 2007, 181, n 125).[5] At the peak of the social hierarchy in Nevis was the Governor Sir William Stapleton, who set out provisions for his attorneys, probably in 1684. He refers there to what must be a separate building when he issues instructions 'To cause the Cookroom and Steward Room to bee new Shingled' (Ryland Stapleton MSS 2/8).

In St Kitts, two late 17th-century leases reveal what was considered appropriate for a successful planter of the time. In a lease dated 1670/1, John Pogson records the arrangement of the main dwelling as a 'house of three rooms' together with 'one steward and cooking room' (Hobson 2007, 148). The near-contemporary inventory of Christopher Jeaffreson dated 1685 for Wingfield records 'One Dwelling House with 3 Roomes', with a separate 'Cook roome with Steward roome' (cited in Hobson 2007, 149; Hicks 2007, 82). Contemporary documents including the insurance claims following the 1706 French raid on St Kitts indicate that kitchens, or 'cook rooms', were usually detached and formed the largest of the outhouses. On the wealthier estates, kitchens were sometimes integrated with a 'steward room' which 'served for storage of everyday pewter, tableware and dried foodstuff' (Hobson 2007, 194). On occasion the kitchen could be larger than the main house. Such a structure is shown on the 1757 plan of Abednego Mathew's plantation in St George's Basseterre, St Kitts (Glamorgan Archives DMW 305).

The conversion or cladding in stone of the timber building (Structure A) may have been a response to

[5] Wilkins can be identified with the Sergeant William Wilkins recorded in 1678 under Col. Morton's division in Nevis (Oliver 1914, 29). Under the terms of his will dated 1679, Col. Francis Morton left Wilkins 'a good horse for care he takes of my plantation', indicating Wilkins was manager or overseer of the estate (Oliver 1919a, 278).

legislation enacted to reduce fire risk (Hobson 2007, 193, 235). The Nevis Assembly passed legislation in 1671 to prevent people from 'making dangerous Fires in Charlestown and Morton's Bay'. The Act decries the 'careless manner' in which town dwellers 'kindle and maintain Fires for boiling pots and dressing victuals in the streets ... very near unto the houses'[6]. A further Act of 1672 legislated that only stone or brick chimneys should be built in the two densely occupied urban areas of Charlestown and Morton's Bay (Nevis Acts, TNA CO154/2/60: 10/2/1672). This was followed in 1675 by an act 'for the suppression of thatch't houses' in the two urban areas (Nevis Acts, TNA CO 185/2, 24-25: 1680). By 1700 the Nevis assembly was ordering all thatched houses in Charlestown to be shingled or pulled down (Dunn 1973, 290, n. 43).

Although these laws were aimed at crowded urban settings where fire was a hazard which could endanger whole quarters of the town, it may have been adopted as a practical measure in plantation contexts too. Buildings frequently combined partial stone construction with timber. Hobson suggests that as a result of new fire regulations[7], many estate owners had rebuilt their kitchens with at least one gable wall in stone or brick with a hole for the flue, an observation based on the details of structures described in the St Kitts 1706 claim (Hobson 2007, 193-5).

Although the St Kitts insurance records mention a stone and lime kitchen (Hobson 2007, 255), many still retained thatched roofs, although in some cases pantiles covered the roof near the hearth wall, while others had shingled roofs (Hobson 2007, 195). The dimensions of kitchens recorded in the claims range from 16 by 12 feet (4.87 by 3.66m) for John Garnet to 42 by 23 feet (12.80 by 7.01m) for the wealthy plantation owner Joseph Crisp (Hobson 2007, 196, table 5.4).

Contemporary writers felt the need to explain the novel adoption of detached kitchens, which differed from domestic arrangements in most English houses at the time. Hans Sloane, writing of Jamaica from his visit of 1687-9, notes 'the kitchens or cook-rooms here, are always at a small distance from their houses, because of the heat and smell, which are both noisome and troublesome' (Sloane 1707, xlvii). He goes on, 'there are no chimneys or fire-places in their houses, but in the cook-room'. Revd William Smith, writing from his experience in Nevis during the period 1716-22, observes that domestic kitchens were separated and located downwind from the main dwelling house on sugar plantations (Oliver 1912, 370). A separate building was preferred to avoid the smell of cooking so that the plantation owner would breathe the 'pure eastern air' (Smith 1745, 225-6). Edward Long, writing of Jamaica in the early 1770s, makes a similar point, 'Almost every dwelling-house throughout the island is detached from the kitchen and other offices; which, though different from the practice in England, is a very judicious arrangement for this climate, where the fumes and smoak of the kitchen, and the stench of other necessary offices, would be intolerable in too near a neighbourhood' (Long 1774, 21). On the North American mainland planters in early 18th century Virginia had kitchens set apart from the house, 'because of the Smell of hot Victuals, offensive in hot Weather' (Jones 1724, 36).

However, there was another motive. A separate kitchen reinforced the segregation of the living space of the planters from the domain of the enslaved workforce. In Bermuda, Chappell observes that kitchens 'are emphatically separated', the slave-owning planters excluded their 'portable domestic labour from their midst by placing kitchens and other work rooms in separate buildings, poorly lit cellars and occasionally in rear wings.' Food was cooked in detached kitchens and carried across the rear yard in several Bermudan houses (2011, 107).

In the late 17th century in Bermuda, as well as the Chesapeake, kitchens were being removed from the main body of the house to detached buildings nearby (Chappell 2011, 106-7). In the Chesapeake the development has been attributed to the replacement of white servants by black enslaved Africans, and the desire on the part of the white planters to create a segregated and controlled space. The close association between the kitchen and the enslaved workforce is evident in inventories in Bermuda, where the slaves are treated as chattels alongside equipment and located within the kitchen conceptually in the mind of the appraiser if not in physical reality (Chappell 2011, 107).

At Fenton Hill the construction of the new stone house in 1675, marked by the date-stone, coincided with the rapid upsurge in the importation of black African slaves under the governorship of Sir William Stapleton. Three years later at the census John Combes boasted a black workforce of 80 slaves (Oliver 1914, 78). While the construction of a new house may have been motivated in part by the desire to demonstrate his new-found and growing wealth through the acquisition of sugar plantations, there is no doubt that one effect was to separate on racial grounds his domestic quarters from his growing workforce.

The Late 17th-century Main House

The 1675 date-stone offers the most striking direct dating evidence from the site and provides a clue as to the development of the structures within the plantation

[6] *Laws of Nevis. 1680-1773, appointed to be printed by Thomas Horne, 1776, Page 6 No. 3 Enacted 10 February 1671 and confirmed 8 February 1681 and 22 October 1700.*

[7] Nevis *Acts of the Assembly, Nevis, 24.*

estate. The stone is likely to have been built into one of the principal buildings. At that time, the two main buildings on a plantation were the dwelling house and the boiling/curing house. By the 18th century boiling houses were often substantial structures, grander than the house, and, as the 1706 St Kitts insurance claims demonstrate, often considerably more valuable. At Fenton Hill the stone boiling house survives. However, at that early date the boiling house is likely to have been a more modest structure, such as the one illustrated by du Tertre in 1667-71, or that at Upper Rawlins.

The date-stone is therefore more likely to have belonged to the main house. The stone was recovered close to Structure G, the platform for the main house. The date-stone's massive nature and considerable weight indicates that it embellished a stone building rather than a timber one. Date-stones in 17th-century English houses were often set above the main entrance (Johnson 2010, 154). As such, it is most unlikely to have belonged to the early, timber phase of Structure A. The date does not fit Structure G, as the finds in the construction deposits indicate it is too late. In addition, the excavated evidence of Structure G indicates a timber superstructure resting on a stone foundation, as was common in Nevis and St Kitts in the 18th century, rather than a stone building. The evidence points to the existence of a substantial earlier stone building preceding Structure G which served as the main dwelling.

The finds provide a little evidence for the construction of the early building. The presence of roof tiles suggests the roof was at least in part covered with pan-tiles, while the off-white Portland stone indicates floors flagged with imported stone.

Historical Context for Replacement of the 1675 House

A *terminus post quem* for the construction of Structure G itself can be determined by finds in the make-up deposits, which represent a rebuilding of the house using dumps of soil which contained discarded cultural material to build up the new house platform. The dumped deposits contained the largest collection of late 17th- or early 18th-century material from the site, including salt-glazed stonewares, North Devon sgraffito and gravel-tempered wares, and tin-glazed vessels which are not closely dated but which are consistent with use in the late 17th century or very early 18th. The infill deposits also contained clay tobacco pipes dated to 1680-1730, glass onion bottles, and two drinking glass stems of similar date. Together this material indicates the main house was constructed at the end of the 17th century or the first decade or so of the 18th.

Replacement or renewal of structures is part of the ongoing development and life of plantation estates and may have occurred for a variety of reasons, including a change in ownership, the manifestation of enhanced status and display, rebuilding after natural or human destruction, technological advances, or functional changes. Here, a change of ownership of the plantation may have led to the replacement or alteration of buildings deemed unsuitable or outmoded. The death of the owner John Combes in 1689 precipitated the sale of the plantation according to the terms of his will. The coincidence of the rebuilding of the kitchen/steward room in stone and the construction of the new timber dwelling house (Structure G) on a platform may indicate that local factors intrinsic to this landowner's estates determined the change.

Other factors, however, need to be considered. Two highly destructive events took place within a decade either side of 1700, which might have caused the destruction of the stone house. The first was through natural agency, which was to be such a potent factor in reshaping plantation structures in the Leeward Islands, the earthquake of 25 April 1690, which afflicted the Leeward Islands of St Kitts, Nevis and Antigua. The earthquake caused the destruction of many stone and brick houses in Charlestown, although contemporary observers noted that the more flexible buildings in wood survived (Oldmixon 1708, 215; Bridenbaugh and Bridenbaugh 1972, 189).

Destructive human agency was also a recurrent hazard in an arena where European wars were fought by proxy. Thus, the second event was the French attack on St Kitts and Nevis in March 1706. Despite the English capitulation, the French reneged on the agreed terms which should have protected the English property and with a force of 3000 treated the people 'most barbarously, ... burning their Houses and Sugar-Works', in Oldmixon's words (1708, 217). The French were bent on economic damage, destroying whatever property they could not carry away as well as kidnapping a third of the slaves. The individual insurance claims do not survive for Nevis as they do for St Kitts but the large total of the island's claim, and the substantial proportion of that which was accepted as worthy of compensation by the British government, indicates that the planters of Nevis suffered major losses of buildings, crops, livestock and slaves. We have no record of precisely what Jory lost but he did receive the considerable sum of £881 12s 10d for damage in the 1706 French attack, one of the highest payments recorded for Nevis, bearing in mind the reduction to two-ninths applied to all claims. By comparison, Azariah Pinney's losses in the 1706 French raid from his Charlot's (later known as Sharloes) plantation were lower. Out of a total loss of £1203, Pinney claimed £100 for the boiling-house and £256 18s for mill and coppers; five slaves were worth £200 and 18 acres of ratoon canes were valued at £108 (Pares 1950, 17). Another major planter family, the Stapletons, only

5km away from Fenton Hill at Low Ground, suffered the loss of 147 out of 183 slaves, the mansion-house, sugar works and several acres of sugar cane and ratoons (Mason 1993, 108). These enable the scale of Jory's loss to be gauged. The extent of destruction and targeting of houses and sugar works in vicious national rivalries makes the stone house at Fenton Hill, belonging to a wealthy and important English planter, a prime candidate as a casualty of the French attack.

Despite the obvious danger of attributing archaeological phases to known significant historical events, the dating evidence for the construction of Structure G, inasmuch as it can be refined to a decade or so, is consistent in including material of late 17th- and very early 18th-century date but no later. The dating makes it a strong possibility that it was a replacement for a house destroyed by the French raid on Nevis in 1706. The rather sparser dating evidence for the encapsulation of the small timber building in stone allows for that event to have taken place at broadly the same time, possibly as part of the same rebuilding phase, and perhaps reusing stone taken from the main house.

A further implication flows from this date. The new house (Structure G) which replaced former Combes's house is likely to have been built for an overseer or manager, rather than for Jory himself. By 1699 Jory was in Bethnal Green, and the following year was appointed as agent for Nevis, serving in his role as a London merchant. The relatively modest scale of the house seen as Structure G befitted the role of a manager serving a new absentee plantation owner.

Structure G

The building (Structure G) that replaced the 1675 stone house took the form of a dwarf stone wall foundation which supported the sill of a timber superstructure. The central steps in front of the southern wall give dimensions for the building from the walls visible above ground of at least 16m by about 7m (approx. 52 feet 6 inches by 23 feet). To the rear (north) is an additional north-south wall running back on the east side (Figure 2.8) which probably defined a yard or a garden terrace. The plan of the building is thus of long narrow rectangular form with steps up to the centre of the southern side. The presence of a porch is suggested by the central projecting platform reached by a short flight of steps at the top of which are ceramic floor tiles surviving *in situ.*

The presence of a shade might reduce the width of the rooms behind. With a 2m wide veranda, the house would closely correspond with the dimensions recorded in the post-1706 insurance claims for St Kitts. There a typical three-room house of the type occupied by most of the more substantial planters, was a long narrow bungalow measuring 16 by 60 feet (4.9 by 18.3m) (Dunn 1973, 139). Such buildings were usually divided into a central hall with a chamber at either end (Hobson 2007, 149).

The substantial terraced platform, the use of clay floor tiles in the construction, the evidence for a garden wall at the rear and the position overlooking the plantation works at the most elevated position of the site are consistent with the interpretation of Structure G as the main house. In addition, fragments of white Portland stone found in the vicinity of the house indicate a structure of some sophistication, with floors of cut and ground imported stone, utilised to keep the interior cool.

The large number of iron nails in the disuse deposits indicate the copious use of timber in construction. The near-contemporary house at Hermitage is of timber-framed construction, with vertically boarded walls, all shingled, and a shingled roof.

There was no cellar below the main house. The St Kitts insurance claims refer to houses set on a three-foot high raised stone 'basement', which would not only have kept the floor dry but would have also accommodated a sloping site (Hobson 2007, 236). English colonists in the Caribbean learnt by experience that cellars were not practical. Already by the mid 17th century, Richard Ligon advised against building cellars in Barbados as the dampness of the ground led to mould and decay (1657).

Buildings of similar design have been recorded archaeologically elsewhere on Nevis. Field survey at Woodlands plantation in St Thomas Lowland parish revealed a long rectangular stone foundation of insubstantial construction one room deep, that was considered to have supported a timber superstructure. At approximately 13 by 5m, it was a little smaller than the Fenton Hill house, but is of similar plan, with a projecting porch centrally along the west wall, which contained a flight of steps (Leech and Williams 2001, 58, fig. 3.8). The structure was interpreted as the main house from its elevated position overlooking the sugar works and set against a garden to the rear.

The precise detail of the St Kitts insurance claims documents architectural features which enable us to reconstruct with some confidence the appearance and layout of the Fenton Hill house. The example of the house of John Davis of Christchurch Nichola Town, a planter on St Kitts, at its destruction in 1706, enables the reconstruction of the closely contemporary house at Fenton Hill. Davis's is described as 'dwelling house 52 ft long 16 wide 6in the wall plate the major part of the posts mastick & lignum vitae boarded round cont. vizt A hall paved with tile two chambers floored with boards a large porch paved & lofted with doors and windows to

shut closed a shade paved with tile value £200' (TNA CO 243/2, fol. 396). The house of William and Ralph Willet, valued at £180, has no fewer than three different types of flooring, reflecting the floor types present amongst archaeological material from Structure G:

'A dwelling house of 3 rooms vizt a hall of 30 foot long 15 broad with mountain timber and thatch'd, floored with brick; a chamber 17 foot long and 16 broad roofed with mastick timber and floor'd with boards, the other room 15 foot long and 16 broad roof'd wth mastick timber and thatch't, floored with freestone, the said house walled on the windward side and on the leeward side built with mastick posts and boards' (cited in Pares 1950, 30).

The change from a postulated stone phase to a timber one reflects a response to the growing appreciation of the most appropriate materials for building in the Caribbean. Edward Long, writing about Jamaica, records in the 1770s how the early colonial Spanish houses had been constructed to withstand earthquakes and hurricanes (Figure 2.42), in contrast to the English, several of whose houses had been demolished by these natural disasters (1774, 19).

The circular cistern (D) standing to the north-east of the house platform was fed by the rainwater run-off from the main house (Figure 2.12).

Given their proximity, the functions of Structures A and G are likely to have been closely interrelated and complementary. The dual arrangement of main house and adjacent kitchen/steward room was commonly found in the North American and Caribbean colonies, including the Leeward Islands, and this provides a model for interpreting the structures at Fenton Hill. The conversion of Structure A from a probable dwelling to a kitchen may well have occurred after the construction of a stone foundation for Structure G. The sequence proposed for the key structures appears in Table 2.1.

Post-Emancipation Occupation

The excavated evidence suggests that the kitchen/steward room had gone out of use by the early 19th century, and the main house perhaps at the same time. Within a decade or so of emancipation in 1838 and probably by about 1850, Structure A was reoccupied for a period of up to two decades. The accumulating soil deposits both within Structure A and its extension to the north indicate intensive activity and deposition of rubbish inside the building. The bulk of the finds from these shallow deposits were dated to the 1850s-1860s. They include many small fragments of European and Afro-Caribbean ceramics. Over the same period, deep rubbish deposits were accumulating against the blocked doorway outside the north wall of the building as a result of intense colluvial deposition. The new occupants modified the structure by adding a room to the north and the occupation here created a deep deposit of dark grey humic soil mixed in with many comminuted fragments of pottery, including both European ceramics of the mid 19th century and fragmented Afro-Caribbean pottery, as well as animal bones, fragments of clay pipe and iron objects. The interior saw intensive activity and use of European ceramics, and the nature of other finds such as animal bones, West Indian chiton, and other molluscs indicate the varied sources of food, including wild food collected from the sea shore and the slaughter of domestic animals. Clay pipes indicate that smoking tobacco was a common leisure activity. There is virtually no post-emancipation Afro-Caribbean pottery, however, indicating that it is almost all residual in the 1850s-60s deposits. The use of a high proportion of cheaply produced European ceramics argues for low-status occupation.

The Burke Iles map shows the development by 1871 of the adjacent post-emancipation village of Fenton Hill depicted as three parallel rows of stylised houses running down the hill from the round island road. This may indicate that the former kitchen and steward room (Structure A), now lacking its timber and/or stone-flagged floor and internal posts having decayed, was reused as a dwelling at the furthest end of the village.

After emancipation in 1838, many newly freed labourers moved away from the plantations, either emigrating or setting up new homes as squatters on abandoned estate land. The movement of emancipated slave populations and establishment of new villages away from the old plantation lands indicate that some slave villages were abandoned soon after emancipation; others may have remained in use for the labourers who chose to stay on the plantation as paid workers and rented their house and land.

At first sight the finds assemblage within Structure A appears to be consistent with occupation by emancipated slaves of a disused but still serviceable building in the early post-emancipation period. However, one aspect of the finds assemblage raises doubts over this interpretation. There is virtually no recognisable Afro-Caribbean pottery from the mid 19th century or later, specifically post-emancipation types such as coalpots, monkey jars and jugs are absent. This argues for an assemblage of Afro-Caribbean material which was formed and deposited before the mid 19th century. Examination of the contexts in which the Afro-Caribbean sherds are present shows in particular a very large quantity of material in Area III (especially context 306), immediately to the north of Structure A, incorporated into deposits which were rich in mid 19th-century European ceramics, clay tobacco pipes and other discarded material. The explanation for

the presence of the Afro-Caribbean fragments in mid 19th-century deposits must lie in the fact that the area immediately to the north of Structure A had been used for rubbish disposal from the kitchen in the 18th century, and the material is residual from earlier deposits. The large quantities of material reflect both the extensive use of Afro-Caribbean vessels in food preparation in the kitchen and the fragility of this handmade pottery, fired to low temperature over bonfires. This results in a high rate of breakage, compared with contemporary European wares. The high index of fragmentation, demonstrated by low average sherd weights, suggests the trampling of old material over a long period of time. The movement of cultural material as part of the inwashing of rubbish deposits down the slope accounts for the presence of some of the Afro-Caribbean pottery; the process of deposition of colluvium can be seen graphically as 217, 218 and 219, three layers which were present as a rapid build-up in the mid 19th century against the blocked northern entrance. In addition, a colluvial 'fan' of material (203) had washed over the blocking introducing earlier residual material into the interior of Structure A, where it was subject to trampling in the mid 19th century.

The virtually complete absence of classic post-emancipation forms amongst the Afro-Caribbean pottery raises questions over the status and identity of the inhabitants of the reused Structure A. There is not necessarily a straightforward correlation between material culture and identity or ethnicity, so such questions need to be considered with caution. Two main assumptions underpin the interpretation. The first is that the occupants were poor and of low status. The evidence is that they were occupying a small disused plantation building, while their material culture was dominated by cheap mass-produced British ceramics, as well as mass-produced glassware, bottled drinks, clay tobacco pipe, and such products as Florida Water eau-de-cologne. The second assumption is that Afro-Caribbean pottery, which is common in contemporary deposits elsewhere in Nevis, was made, and used, exclusively by emancipated people of African origin or ancestry after emancipation.

There appear to be three main contenders for the identity of the Fenton Hill occupants. The first is that, counter to expectation, they were in fact emancipated slaves, but ones who chose not to use this kind of handmade pottery and instead made use almost exclusively of cheap imported mass-produced pottery of European origin. If this were true, it raises further questions over identity and symbolic associations of material culture. The absence of Afro-Caribbean pottery might then be a conscious rejection of this very distinctive low-fired handmade earthenware, a material tainted by the association with servitude. The stark visual contrast between predominantly white 'refined' ceramics and the low-fired dark handmade wares may have reinforced the perceived sophistication and 'superiority' of imported goods. Aspirational individuals who saw their identity defined through the use of imported American and European mass-manufactured goods may have shunned Afro-Caribbean pottery.

Ferguson's observations over the decline of colonoware in Carolina may be relevant here. He argues that colonoware had become rare by the mid 19th century for two main reasons: European and American goods such as iron cooking pots and ceramic dishes were becoming cheaper and easier to acquire, and 'in the face of abolitionist critiques' planters were attempting to remove obvious 'heathen' features from slave life' (1992, 106-7).

The supply of cheap imported ceramics at sufficiently low price may have rendered the production of Afro-Caribbean pottery unnecessary; did low prices drive it out of use for all but poorest? This appears to run counter to the presence of Afro-Caribbean pottery in other post-emancipation excavated contexts, and the continued use and manufacture of the material into the 20th century.

A further possibility is that Afro-Caribbean pottery had never formed part of the material culture repertoire of the occupants. There is an alternative group which fits the perceived social demography better. The chief alternative possibility is that the occupants were a non-African group of poor immigrants, forming the labour force for the sugar processing works, who were present according to the finds between the 1840s and the 1860s. These were economically marginal groups of labourers, living in poor conditions yet with sufficient means to purchase some cheap imported goods. Just such a group was in fact present on Nevis at that time. A significant number of immigrants of Portuguese origin were imported from Madeira to fill the gap in labour, arriving in the island from 1845 with periodic influxes up to 1860. In consideration of this group, the dating is crucial: clay tobacco pipe deposition increases *c.* 1850 and includes an influx of Scottish pipes reflecting the growth of the industry there, a Florida Water cologne bottle can be dated to the period 1857-1871, and the European ceramics date to the 1840s-60s. There are no 20th-century European ceramics and only a little glass or other material so there is no evidence of domestic occupation in the 20th century.

Post-Emancipation Settlers

The first half of the 19th century saw considerable decline in the fortunes of the sugar planters of the British West Indies. A reliance on a sugar monoculture hit the planters hard when sugar prices dropped.

During this period, a number of factors conspired to increase competition and reduce the price of sugar. Expansion of cultivation in foreign lands, such as Cuba and Brazil, where labour was plentiful and cheap, together with large-scale production reduced costs, while the opening of the British market to East Indian sugar from Mauritius in 1825 created additional competition. By 1845 the colonial markets had lost any advantage of preferential treatment at home for West Indian producers. With the loss of their protected status against foreign sugar, the Leeward Islands were unable to compete with the larger and more efficient producers in the world market and as prices decreased through the 19th century their production became increasingly uneconomical. A further factor was the expansion of British sugar production in the West Indies, with the accession of the ceded islands such as St Vincent and Grenada, which provided opportunities for some white settlers from St Kitts and Nevis to take advantage of low land prices, thereby reducing the white population of those islands (Merrill 1958, 88).

Sugar cultivation was inefficient in Nevis compared with the larger islands. Estate sizes were relatively small and agricultural improvements such as ploughing were difficult to introduce in the stony soil (Dyde 2005, 181). On the whole, the soil in Nevis was considered to be fertile, as the Jamaican writer Edward Long observed, the island achieved high sugar yields in the later 18th century due to the practice of manuring, but frequent rocks and stones required clearance for cultivation (Dyde 2005, 99). The difficulty of working the stony soils was noted as early as 1734 in a remark by Sir William Mathew, governor-general (Dyde 2005, 85). Thus it was not straightforward to increase competitiveness by the simple technological improvement of ploughing.

On Nevis emancipation brought little immediate change. The creation of 'apprenticeships' for the newly freed slaves on 1 August 1834 meant that the powerful planters could exercise the same brutal regime as under slavery. Emancipation brought uncertainties with labour supply. The apprentices were allocated poor land on which to grow their own food with no consideration of how they would feed themselves before the harvest. At the end of the apprenticeship workers were granted a plot of land to cultivate, a house, which was usually their own previously, access to medical care and wages of a shilling a day. Wages soon fell well below that with 6d a day reported in 1839, 10d in 1845 and as little as 5d in 1848 (Fog Olwig 1993, 95). Many seized the opportunity to emigrate to Demerara when the apprenticeship scheme ended in 1838, taking the offer of relatively attractive terms to work there. In the period 1835 to 1842 no fewer than 294 Nevisians emigrated (Fog Olwig 1993, 94-5). The lure of better wages attracted large numbers of the labouring class to other islands, notably Trinidad and St Kitts in the early 1840s; by 1846, 2609 Nevisians had left for Trinidad (Fog Olwig 1993, 95).

Wages were low in Nevis and the planters could not afford to pay even the subsistence level wages. As a result, from the early 1840s labourers were employed in cane cultivation on the half and half or metairie system (Davy 1854, 485). This sharecropping system saw workers given two acres of sugar land to cultivate and instead of wages they received between a third and half of the crop (Fog Olwig 1993, 95). Charles Day, visiting Nevis in 1852, describes the advantages over paid estate labour. For the estate owner the system provided a more reliable output of sugar than ordinary estate labour as the emancipated labourer usually employed his wife and children as additional labour for weeding, and there was an incentive for the labourer to control pests and to reduce theft of canes (Day 1852, 206-7). The system worked largely to the advantage of the owner as the labourers who undertook the physical work stood to lose if the crop was poor or failed. By the 1850s many were forced to abandon sharecropping with the failure of the crops, but the system persisted and by 1866, 40 of the 80 estates on Nevis worked wholly or partially on the sharecropping basis (Fog Olwig 1993, 95).

For Davy, the metairie system 'seems to be rather a conservative measure than one adapted for improvement – one of submission to adverse circumstances rather than of enterprising struggle to overcome them' (1854, 485). He saw no improvement or innovation in cultivation methods, with a reliance on 'the hoe and the hand' and its success was largely down to the exceptional fertility of the soil which allowed ratooning[8] of canes for between 10 and 20 years (Davy 1854, 484). The canes were crushed at the estates and sugar produced in the boiling houses at the expense of the proprietors, but here too Davy observed the failure on the part of the Nevis proprietors to engage in improvements. The only sign was a half-hearted attempt to introduce steam engines to replace cattle or wind power, but even then of the four engines constructed only one remained in working order as there was no-one on the island who could repair the others (Davy 1854, 486-7).

However, many black Nevisians chose not to operate under the metairie system, preferring instead to squat on abandoned sugar plantations. The magistrate Seymour wrote to the Colonial Office in 1855, 'the dwellings of the negroes who, giving up the cultivation of sugar cane, have retired to abandoned portions of estates, and exist upon the proceeds of the increase of their stock, are often, I regret to say, miserable to a

[8] Ratoon canes regenerated from the harvested roots of sugar cane to produce a second crop. The yield of sugar was lower than newly planted cane but avoided the hard work of 'holing' or planting and it matured more quickly than freshly planted cane (Dunn 1973, 192).

degree which I have rarely seen in any of the other West Indian Islands' (cited in Dyde 2005, 166). Davy, during his visit to Nevis around 1850, observed that there was little or no crown land so there was 'no temptation to squatting' and he observed none. 'The old villages on the estates have been nearly abandoned, and dwellings of a better description have supplied their place, either near the old ones, or on detached spots. An inclination has been shewn to purchase small portions of land, but it has not been acted upon to the same extent as in St. Kitt's [*sic*]' (Davy 1854, 483).

The planters enforced laws against trespass to prevent squatting on their land in an attempt to prevent development of a class of independent small farmers. The lack of crown land prevented the formation of free villages of the type which had developed on St Kitts at Cayon, Challengers and others. A few estates were sold off in small lots of under 2 acres, and by 1863 no fewer than 800 freeholders were recorded on these lots, a figure which had increased to 900 two years later. The sales were not formally registered and the plots themselves were too small, and often too poorly situated, to allow the development of small independent farmers (Fog Olwig 1993, 97-8). Emigration was still the only way for most black Nevisians to escape grinding poverty.

Attempts were made to fill the gap by importing labour from elsewhere. In St Kitts unskilled English labourers were introduced in the decade after 1835 but the experiment was unsuccessful. On Nevis by far the largest source of imported labour came from Portuguese labourers from Madeira. From 1840, successive crop failures in their own country drove Madeiran peasants to look for alternative sources of income, and the West Indian islands offered much higher wages than at home (Watts 1987, 473). As a result, over 425 Madeirans emigrated to Nevis in 1847. The colonial government controlled immigration so planters did not engage the workers with contracts directly for entry (Merrill 1958, 90-1). Smaller numbers of workers from St Helena, India and West Africa were also encouraged to come (Dyde 2005, 179). Mackintosh, Lieutenant-Governor in March 1850, reported that 'the Madeira peasant continues to be of great service in submitting to the call for regular and sustained labour, which the creole negro finds so irksome. But with him the tendency to withdraw from predial labour for the purpose of establishing small retail shops is still on the increase. Many Portuguese, moreover, had of late left the island altogether. The desire of bettering their condition, so remarkable in their character, renders them restless' (Merrill 1958, 91; Dyde 2005, 179). Legislation to pay a bounty to labourers stimulated a further influx of over 600 more Portuguese in the five years to 1860 (Dyde 2005, 179). The labour shortage was filled in part in the 1870s by East Indian labourers brought in to work the sugar estates (Fog Olwig 1993, 98; Dyde 2005, 178-82).

Final Stages of Settlement

There are indications that sugar processing may have been undertaken at Fenton Hill in the 19th century. A large water tank or cistern (Structure C, Figures 2.11, 2.12) was built, probably during the 19th century, and the coppers remained within the boiling house. This may indicate that, even though the domestic accommodation of the manager or owner was no longer in use, the disused plantation works were brought into service again for sugar processing. The continued use of the kitchen for food preparation, with construction of a stone extension at the rear, may indicate that a workforce was employed at the sugar works.

After the 1860s, the stone building appears to have seen no more than casual use, perhaps as a temporary shelter or as an animal pen. The cast iron drain pipe (SF776) in one corner suggests an *ad hoc* arrangement to prop up a collapsing roof or to create a temporary shelter. A scatter of recent animal bones found in the surface leaf litter suggests that the building may have been used as a ready-made animal pen in modern times; some may be from animals that had sought shelter or shade within the building.

In Nevis over decade after emancipation, Davy wrote 'the old villages on the estates have been nearly abandoned, and dwellings of a better description have supplied their place, either near the old ones, or on detached spots. An inclination has been shewn to purchase small portions of land' (Davy 1854, 483). Burke Iles in 1871 shows the post-emancipation village at Fenton Hill as three rows of stylised rectangular plots running downslope from the round island road. A late deed in the Nevis Common Records documents the abuttals of Fothergill's in 1884, including lands of George Webbe, of free tenancies, of Hardtimes, of Vervain, of Thomas Huggins and others (EAP794/1/1 Common Records 1877-99, fol. 135). Seen in conjunction, the 'free tenancies' can probably be identified with the land shown on the 1893 Kortright plan of Fothergill's to the south of the estate as that of 'sundry proprietors' (Figure 2.5). The term 'free tenancies' refers to the plots within the post-emancipation village of Fenton Hill as shown on the Burke Iles map of 1871, and embraces the Fenton Hill estate. This may mark the final demise of the sugar estate and its subdivision into small-scale tenancies.

Conclusions: Summary of Sequence

Phase 1

A hypothetical phase of casual activity on the site in the period up to 1650 is hinted at by the presence of a small number of clay tobacco pipes, including Dutch examples. There is no certain associated structural evidence, unless Structure A was built as early as this period. The

pipes may represent the presence of European settlers either engaged in small-scale cultivation of crops such as ginger or tobacco without necessarily having dwellings on the site in the early decades of settlement in this part of Nevis, or the introduction of old clay tobacco pipes by the first settlers in the 1650s. The single instance of prehistoric pottery, decorated with a turtle, is likely to have been brought in as a found piece or curio, and cannot be taken as evidence of prehistoric occupation on this site.

Phase 2

The earliest evidence of intensive activity at the plantation falls in the period 1650-60 based on the clay tobacco pipes. The site may have been the centre of a small sugar plantation at the time, as Nevis had gone over almost completely and rapidly to sugar cultivation after the crop was first introduced to the island in the 1640s. Documentary evidence in the form of John Combes's will suggests that the only 'plantation' he purchased, as opposed to the acquisition simply of 'land', was that of Widow Jones. Thus the estate may have originated with Mrs Jones or, more likely given the implication of her marital status as 'Widow' Jones, that she inherited it through her husband. The date-stone of 1675 provides a *terminus ante quem* for the acquisition by John Combes. It might be conjectured that the plantation began as a small holding perhaps created by an indentured servant who received a grant of land on serving his time.

The construction of the first timber structure with its earthfast posts may have been the earliest house on the plantation, and despite the lack of direct dating evidence might be associated with a sharp rise in material culture *c*. 1650-60.

The influence of Dutch trade with Nevis is illustrated by a small number of early Dutch pipes. A Bristol and south-western England connection is also clearly marked in the imported material, particularly the clay tobacco pipes, North Devon pottery, and imported building stone.

Phase 3

The purchase of the plantation by John Combes by 1675 probably from Widow Jones, suggests a change in fortune of the owners. Combes amassed a substantial holding, made up of several parcels of land, one of which at least lay close to his wife's plantation in the low ground near the sea in Gingerland. In addition, he inherited plantations from his wife on her death in 1685, but the lack of an heir led to the sale of Combes's own plantation, and reversion of his wife's plantation to her family. There is a possibility that one of Combes's acquisitions was the opportunistic purchase from Robert Harrison who may be the same individual who is recorded as marrying in Barbados in 1674.

Combes is described in his will as a Bristol merchant. The dominance of Bristol and south-west England in the settlement and trade with Nevis can be seen in his circle of business associates and family. John Combes's wife's first husband Thomas Ayson was also a Bristol merchant, though his wife's family had property in Madley in Herefordshire, while Messrs Stretton and Mynor to whom Combes entrusted the sale of his property on his death were former Bristol merchants, who by 1689 had settled in the West Indies. Combes's own brother Adam also of Bristol, mariner, was master of a vessel *William and Ann,* but was resident in Antigua at the time of his death. The major trading connections from Nevis were with the port of Bristol, as documentary records there show. The finds assemblage demonstrates these pervasive links. Goods from the wider hinterland of south-west England were assembled in Bristol for export through the port to the Caribbean islands. Finds from Fenton Hill include North Devon pottery, both sgraffito and gravel-tempered ware, Bristol clay tobacco pipes, and imported stone (Portland and greyish-green sandstone of probable English origin). Other imported material such as ironwork, glass and ceramic tile cannot be sourced precisely but is likely to be English in origin. There is evidence of a late 17th-century set of lead crystal drinking glasses, which probably date to the Combes era or that of his successor.

The date-stone of 1675 provides unequivocal evidence of a significant new construction by Combes, presumably a stone house, on his plantation. This probably lay on or close to the site of the Phase 4 main house, as the foundations of the latter incorporated much late 17th-century rubbish. As one of the largest slave-owners in Nevis at the 1678 census, while serving as a member of the Council of Nevis, Combes appears to have constructed a new house appropriate to his high standing in the island's plantocracy. The construction of a stone house may have been accompanied by the conversion of the original small timber house to a detached kitchen and steward room.

Phase 4

At John Combes's death in 1689, according to the terms of his will, his plantations would have been sold. Records suggest the new owner was Col. Joseph Jory, a member of the island council, colonel in the island militia and a wealthy merchant. Jory was appointed in 1700 as agent for Nevis, after which he lived at Bethnal Green in England. The date of construction of Structure G from finds in the make-up layers is consistent with the rebuilding of a stone house in the very early 18th century, which would be consistent with destruction in the French attack of 1706. In time the new owner

undertook significant alterations and physical improvements to the main buildings on the plantation, including the encapsulation in stone of the timber structure (Structure A), possibly the initial dwelling house, which had been subsequently converted to a kitchen perhaps when the main stone house was built in 1675. Although nothing of the superstructure of the main house (G) survives, there are indications that the new house was constructed in the early 18th century (probably after 1706) on a sloping plot in an evolving Leeward Islands style of architecture, with a timber superstructure over a stone foundation, approached by a central flight of steps leading up to a projecting tiled porch. The house was presumably inhabited by an agent or manager as Jory was resident in England from at least 1699 onwards.

Jory died in 1725 and his estate passed to his niece Frances Bladen. At her death in 1746 Jory's estate was divided into six portions. By 1763 the Common Records indicate that part of 'Jewry's' was in the possession of St Kitts-based planter Henry Sharpe. He appears to have moved to Nevis to take over the estate, which was probably one or more of the six portions of the original Jory's estate. The same year a large section of Jory's former estate was purchased by Dr John Fothergill. Sharpe, or his manager, appears to have continued in occupation. The descent of this part of the plantation can be traced through William Mills to John Boddie.

Archaeological evidence shows that the house was occupied for two or three generations in the later 18th century before falling into disuse, along with the adjacent kitchen, by the end of the 18th or very early 19th century. The finds assemblage provides a hint of the British planters' lifestyle, with numerous glass bottles showing the consumption of wine or other alcoholic drinks, the glass pharmaceutical jars for ailments, the smoking of tobacco and increasingly after about 1770 the use of imported mass-produced ceramics.

The sizable assemblage of Afro-Caribbean pottery largely from Structure A, and much of it residual in Phase 5 and 6 deposits, shows the use of that structure as a kitchen, with discarded broken vessels apparently dumped in a midden to the north of the building.

Phase 5

The final domestic activity at the main house is evidenced at the end of the 18th or early 19th century and both the kitchen and the main house fell into disuse at that time. The failure of the plantation to convert to wind power, and the retention of the technologically unsophisticated animal mill, suggests that the plantation centre was no longer the primary focus of a significant sugar estate after the end of the 18th century. It is likely that the estate owner was an absentee resident in the home country, as were Jory after 1700, his niece France Bladen, who rented her plantation out to six tenants, and the purchaser of a neighbouring plantation later in the 18th century, Dr John Fothergill. By the later 18th century, planters frequently bought up neighbouring estates and consolidated their sugar production at more centrally located works. The sugar-boiling coppers, however, are reported to have remained *in situ* in the boiling house into the last decade of the 20th century suggesting that the boiling house remained in use for sugar production long after the main house was abandoned.

Phase 6

The final episode saw the reoccupation of the still-surviving stone kitchen as a dwelling in the 1850s-60s. Although the presence of copious fragments of Afro-Caribbean pottery on the face of it suggests that the occupants were emancipated slaves, closer examination shows that this material contains virtually no post-emancipation forms. As the material was highly fragmented and had suffered much from trampling, it is almost certainly all residual. The reworking of colluvial deposits rich in discarded Afro-Caribbean pottery as well as other 18th-century forms is a more compelling explanation than occupation by emancipated slaves. The new ceramics of mid 19th-century date are cheap mass-produced British earthenwares. The occupants may have been either emancipated slaves who did not make and use contemporary Afro-Caribbean pottery, preferring British ceramics, or they were poor whites. The chronology and finds assemblage suggest that the best candidates are Portuguese labourers imported from Madeira in the mid 1840s. The incomers modified the building, using the shell as a dwelling, and enlarged it by adding a room to the north. They left copious evidence of their diet, material cultural preferences, their leisure activities, in the shape of clay tobacco pipes of common types exported in great numbers from Scotland, and the occasional use of the fashionable eau-de-cologne 'Florida Water'. It may have formed one of the southernmost dwellings in the post-emancipation village which sprang up extending downslope from the main round island road shown in Burke Iles's map of 1871, as three lines of stylised rectangular buildings. Such villages often developed on abandoned plantation land, and in this case reused disused plantation buildings, adapting them for use as dwellings.

Phase 7

Casual use of the plantation buildings into the late 20th century can be seen from modern finds within the structure. Structure A may have been used as an animal pen, as its walls remain intact to the present day.

The Finds

Prehistoric Decorated Sherd

Elaine L. Morris

Amongst the many sherds of European and Oriental wares and Afro-Caribbean pottery from the excavations at Fenton Hill, a single, unusual sherd of prehistoric pottery was identified. It derives from a handmade vessel, has a fabric rich with fragments of volcanic rock and disaggregated minerals of that rock, and is decorated (Figures 2.43-2.44; SF1380, context 505, Phase 6; 120g). The original vessel had a softly rounded-profile with low-set girth which returns directly towards what must have been a base area, while the upper vessel was slightly incurved. The extant wall measures between 9-11mm thick. The pot had been well-burnished on both the interior and exterior surfaces. The profile and surface treatments indicate that the vessel was likely to have been an open form, such as a bowl, measuring approximately 300mm in diameter at the girth. The decoration had been executed using applied clay moulding, deeply impressed points and tooled lines which produced a distinctive pattern. The potter had added a lump of clay to create a pronounced, oval head just above the lower rounded girth. The head was then given two deeply impressed points which created eyes to its upper part, and a tooled curved line beginning beneath one eye down along one side of the face and around and back up to beneath the opposite eye to indicate a major mouthpart to the head. The potter had also applied at least one subrectangular lump to the right of the head at the same profile level and this had been smoothly flattened in its central area and shallowly tooled just inside the edge of this flattened area following its outline shape; only part of this area remains visible. It appears that these decorative motifs represent the head and left flipper of a turtle. The location of the head and the flipper on the pot suggest that the pot itself may have been made in the shape of a turtle with the vessel wall forming the carapace. Hawksbill and Leatherback sea turtles are examples of ocean-going reptiles found in the eastern Caribbean. Significant conservation conducted on Nevis at the present time aims to prevent their extinction through protection of beach nesting sites and public awareness (Nevis Turtle Group 2020).

The shape of this vessel is very similar to a common Late Ceramic Age Ostionoid (post-Saladoid) phase vessel form referred to as a restricted bowl (Hamburg 1994, fig. 6, type 6; Hofman 1993, fig. 13, type 7b). There are at least 17 Ostionoid-era sites on Nevis (Wilson 2006); one lies 2.5km north-east of Fenton Hill at Coconut Walk and a second 2.5km south-east at White Bay north of Red Cliff (Wilson 1989, fig. 4, sites JA-1 and GE-1S respectively). Ostionoid sites range in date from about AD 600-1500 (Keegan 2000; Petersen *et al.* 2004). Published examples of this restricted bowl form from an Ostionoid site on Nevis include three from the Sulphur Ghaut site (JO-2) located on Bath Plain (Wilson 2006, fig. 4.21, b-c and 4.22, a-c), two of which are decorated with 'broad incising' that looks very similar to tooling. Two examples of modelled pelicans in the same decorative style were found on restricted bowls from the Ostionoid sites at Sandy Hill and Shoal Bay East in Anguilla (Crock and Petersen 2004, fig. 9). These pelicans are strongly differentiated from the Fenton Hill modelled turtle due to the extremely different representations of the long pelican beak versus the shorter turtle beak. The wings, however,

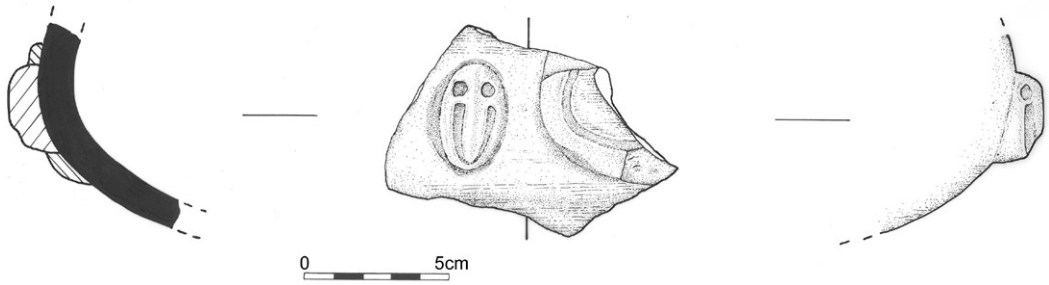

Figure 2.43. Fenton Hill: prehistoric sherd SF1380 context 505

Figure 2.44. Fenton Hill: prehistoric sherd SF1380 context 505

are represented as folded back oval platforms identical in many respects to flippers. Pre-colonial Caribbean material culture was rich with symbolic expression (cf. Waldron 2016) and the manufacture and decoration of pottery proved to be ideal for the display of designs and shapes representative of mythical creatures and fauna with 'Figurative and abstract representations of turtles, frogs, bats, pelicans, dogs and monkeys embellish(-ing) ceramics...' (Hofman *et al.* 2007, 259).

Because this is the only obviously prehistoric object from the site, it can be safely interpreted as simply a curiosity picked up by an islander when walking along the coast of Nevis in the vicinity of a prehistoric site. The frequency of shell procurement from the windward, east coast found at Fenton Hill might be the reason why there is a significant sherd of prehistoric pottery in the artefact collection; this is the principal area of pottery-rich prehistoric midden sites. The recognition of the turtle face and flipper made it worth taking home and showing others as an unusual, weird and wonderful thing representative of a well-known sea-to-shore animal, and it is possible to imagine the conversations which took place in the mid 19th century at Fenton Hill as a result.

Afro-Caribbean Pottery

Elaine L. Morris

Introduction

A total of 1425 sherds (6919g) of predominantly handmade, bonfired Afro-Caribbean pottery was recovered from the Fenton Hill site. The pottery was retrieved by excavation and dry-sieving methods. The overall mean sherd weight for this assemblage is 4.9g with sherds ranging from as little as 1g up to the single largest sherd, a fragment from the base of a cookpot, which weighs 200g. The frequency of sherds by context is presented in Appendix Table 2.2. Each sherd was analysed and recorded according to the guidelines for analysis and publication recommended by the Prehistoric Ceramics Research Group (PCRG 2010), with one exception adapted for the study of Afro-Caribbean pottery. The general uniformity in fabric visible amongst the sherds allowed for a simplification of the normally rigorous requirements for this variable. The fields of record employed are the same as presented for the Upper Rawlins assemblage described elsewhere in this volume. A unique Pottery Record Number (PRN) was assigned to each line entry in the Afro-Caribbean pottery database for this assemblage and it is referred to in the Catalogue of Illustrated Afro-Caribbean Pottery at the end of this report to indicate which sherd(s) was drawn. Nearly all of the vessels represented by rims, all of the decorated sherds, and examples of the base types are illustrated here (Figures 2.46-2.50).

Condition of the Assemblage

The mean sherd weight of the assemblage from Fenton Hill (4.9g) is just under one-third of that from the Upper Rawlins assemblage (15.8g). This difference is significant and suggests that, despite the presence of dry-sieving conducted at Fenton Hill but not at Upper Rawlins which may account for some of this difference, the nature of occupation or activities conducted at these two sites appears to have been quite different. It may simply be that there were more people using the Fenton Hill location with a greater density of trampling taking place or that animals such as donkeys or sheep/goats were the culprits. Nevertheless, the comminuted state of the Fenton Hill sherds has made it impossible to determine the actual or even estimated number of vessels represented in the assemblage with any confidence. Limited insight into an understanding of the number of vessels represented can only derive from the array and frequency of specific vessel types based on the various rim sherds, neck sherds and decorated body sherds. However, this overall mean sherd weight is nearly the same as that of the non-local or European and Oriental wares recovered from the fieldwork at 5g. Therefore, it is possible to compare aspects of the Afro-Caribbean assemblage with that of the European and Oriental wares. This indicates that these two very different groups of ceramics were treated in the same manner at Fenton Hill and that this was in considerable contrast to the treatment of the ceramics used and recovered at Upper Rawlins.

Fabrics

The fabric of every sherd in this assemblage was examined individually using x10 power binocular microscopy which revealed that all had been made from clay naturally rich with fragments of felspars, felspathic rock and mafic minerals. Infrequent fragments of iron ores or iron oxides were also identified.

The fabric of this assemblage when viewed in hand specimen appears to be slightly variable in texture ranging from approximately 30-40% to 40-50% density of inclusions and these inclusions are generally less than 3mm across (database fabric code MM), but rare examples of larger inclusions do occur. The fabric is therefore quite rich with inclusions including dull white to off-white, hard examples which are felspars, ones that are black and glittering which are mafic minerals, and a few that are red to reddish-brown and metallic in appearance which are fragments of iron oxides. Two samples from sherds representative of the general fabric range were consolidated and made into thin-sections, one each from PRN2561 (context 218; Figure 2.50, 65) and PRN2899 (context 512; Figure 2.50, 63), in order to confirm the identification of inclusions present and the general density of inclusions in this general

fabric MM. As with the Upper Rawlins assemblage, a small number of sherds had coarser inclusions present (database fabric CM; 21 sherds). This fabric variation is defined as the presence of two or more inclusions measuring between 3-4mm across in addition to the general fabric (MM) range. Two sherds had very coarse inclusions of actual igneous rocks containing felspars and mafic minerals which measured up to 7mm across (fabric VCM). One body sherd, derived from a bowl with burnished interior surface, was classified as a relative fineware in texture due to the presence of numerous examples of these various inclusions which measured 2mm or less in size (fabric FM). This finer fabric had also been observed during a scanning exercise of the assemblages from shovel-test-pit excavations at the Jessups and New River slave villages (Morris 2009). In future analysis, the full range of inclusion types and sizes will be investigated more rigorously from amongst all four pastes – general fabric MM and these more infrequent fabrics CM, VCM and FM - in order to establish whether these apparent variations are realistic and can be correlated to different sources of clay on specific estates, and possibly different vessel forms representing the products of different potters.

A total of ten samples was chosen from the Fenton Hill assemblage to determine whether all were made from Nevis clays and inclusions or whether any had been obtained from producers of Afro-Caribbean pottery on other islands in the Lesser Antilles through trade. These samples (Appendix Table 2.3) were submitted for instrumental neutron activation analysis (INAA) at the Archaeometry Laboratory Research Reactor Center of the University of Missouri and a report was produced (Ferguson 2011a; 2011b). This analysis revealed that all of the Fenton Hill samples belonged to Afro-Caribbean INAA compositional Group 1, as has 88% of the 94 Afro-Caribbean pottery samples previously submitted from two Nevis sites (New River and Jessups) with only one of these belonging to Group 3 and ten unassigned to any group (Ferguson and Glascock 2010a, table 7; 2010b, appendix 1). This near uniformity of group assignment is quite different from two nearby Leeward Islands which display a variety of compositional groups amongst their samples (St Eustatius – Group 1 with four samples, Group 4 with five samples, Group 5 with five samples, Group 6 with four samples and five samples unassigned to any group; St Kitts – Group 1 with 33 samples, Group 2 with 31 samples, Group 4 with four samples, Group 7 with two samples, and ten unassigned to any group; see also Ahlman *et al.* 2008 and 2009 for overview of research programme and clay sample locations on St Kitts respectively). The Nevis pattern is much more similar in character to the island of Montserrat with 12 of its 13 samples belonging to one group (Group 3; 92%) and one currently unassigned to any group. This is not the place to discuss what these data might mean other than to wonder at such strong patterns of evidence for each of these islands. Undoubtedly the trade or at least movement of Afro-Caribbean pottery amongst the Leeward Islands did occur. However, there is a possible geological conundrum in that clay samples from the south-eastern peninsula of St Kitts (three samples) and Nevis (five samples) were both assigned to Group 1, while a fourth sample from St Kitts was assigned to Group 2 and a fifth remains unassigned to any group. This may mean that the geology of the peninsula area, and in particular the clays from this part of St Kitts, appear to be very close in composition to that of Nevis. This requires considerable research and finance to investigate further. Most importantly, there are as yet no examples of Group 2 Afro-Caribbean pottery or clays identified amongst samples of pottery or clay from Nevis and therefore it is most likely that Group 2 represents Afro-Caribbean pottery production on St Kitts, as Group 3 does for Montserrat.

Vessel Forms: Shapes, Manufacture, and Wall Thickness

There are 17 form types in the Fenton Hill assemblage, including 11 rim types, two base types, one neck form, one rounded-profile body sherd form, decorated body sherds and plain body sherds (Appendix Table 2.2). No handles were recovered during the excavations. The most common vessel shapes or classes (59 examples) are those with restricted access which are referred to as closed forms, hollowares or jars. These comprise three types of necked vessels with either upright to slightly everted, rounded rims (R101; Figure 2.46, 1-20); those with a more expanded, everted rim profile (R109; Figure 2.48, 30-46); or a lid-seated, flared rim (R135; Figure 2.49, 60). Necked jars are common in pre-emancipation assemblages from Nevis, as at Upper Rawlins (Figure 3.28, 27), and this is supported by the recovery of several neck zone sherds at Fenton Hill (N100; Figure 2.50, 65-66) in addition to these necked jar rim types. There are two types of neckless jar in the Fenton Hill assemblage including one which has a convex-profile vessel form and either a simple-rounded, strongly-hooked, or bevelled-edge rim (R113; Figure 2.49, 47-51) and the other which bears a distinctive biconical profile with an obtuse-angled shoulder zone (R137; Figure 2.49, 61). Neckless, ovoid-shaped, convex-profile jars (R113) are present in most assemblages, but much less frequently than necked jars. Five were found at Fenton Hill, but none in the Upper Rawlins assemblage. One has been identified by the author in the Nevis Heritage Project assemblages from excavations at Crosse's Alley, Charlestown, in 2000, seven at Jamestown, Nevis, in 2005-6, and four from Mountravers in 2001-4. The largest collection of R113 jar rims, however, comes from the Redoubt, where 14 were recovered (Morris *et al.* 1999). The obtuse-angled, biconical jar (R137) may be unique to Fenton Hill.

Five types of open vessel forms or bowls were identified in the assemblage. Type R102 is a deep, hemispherical bowl with convex-profile and a flat or platform-like rim (Figure 2.47, 21-23). This type of bowl has been recovered from excavations by the British Channel 4 *Time Team* in 1998 at Jamestown (Morris 2004a, fig. P2, 2) and Mountravers (Morris 2004b, fig. P2, 5), as well as the Redoubt (Morris *et al.* 1999, fig. 9, 14), Upper Rawlins (Figure 3.27, 8), and Crosse's Alley. A total of 14 examples of R102 bowls has been recorded in the assemblage from Mountravers (2001-04) but none from Jamestown (2005-06). Type R103 is an open form with thickened rim to the interior but the profile is uncertain due to the small size of the only sherd of this type. Type R106 is another neckless, convex-profile vessel with rounded rim but is one that has only a slightly restricted form compared to the jar type R113 and all examples have interior surface treatment typical of bowls (see discussion below) (Figure 2.47, 25-29). No rims of this type were found in either the Upper Rawlins or Crosse's Alley assemblage. Two were identified in the Mountravers 1998 and 2001-04 assemblages (one from each) and four in the Jamestown 2005-6 assemblage. Type R115 is a hemispherical-profile bowl with upright, rounded rim and a variant which displays a slight angle in the profile between 5-10mm beneath the rim top edge (Figure 2.49, 52-57). One type R115 was recovered from the Redoubt (Morris *et al.* 1999, fig. 9, 8), three from Mountravers 2001-04, five from Upper Rawlins (Figure 3.28, 20-24), and seven from Jamestown 2005-06. Type R122 is a flared, conical-profile bowl or lid with rounded rim (Figure 2.49, 58).

Bases are a curiosity amongst the earlier Afro-Caribbean pottery assemblages on Nevis. As at Upper Rawlins, only sagging bases (B103; Figure 2.50, 62-63) were recorded from the 18th-century contexts of Phase 4 at Fenton Hill or redeposited in Phase 7.2 (Appendix Table 2.2). Sagging bases are notoriously difficult to identify when sherds are small and their numbers in this assemblage (just three) are likely to be under-represented due to the degree of fragmentation present. One other base type, a vertical-walled, flat base (B105; Figure 2.50, 64) was recovered from a 19th-century context (505; Phase 6). This distinctive base derives from a tankard-like vessel similar to a late 19th- early 20th-century example from Crosse's Alley (formerly Global Dominion), Charlestown (Morris 2005a, PRN1542) and a second example from Mountravers 2001-04 (MTS01-04 archive/PRN2198).

These pots were handmade and bonfired with the exception of one 18th-century wheelthrown, 12-13mm thick, completely oxidised body sherd (PRN2957) recovered from context 226 (Phase 4.2). Curiously the actual technique of vessel manufacture represented amongst all of the other handmade sherds is difficult to identify. There are no clear indicators that they had been coil-built, for example. Instead, it may well be that they were pinched and pulled up or pummelled into shape. The latter is the method used by Nevis potters whose techniques were recorded in the 20th century (Platzer 1979) and that are still used today by the principal potter, Ms Almina Cornelius, at the Newcastle Pottery. This is an important aspect to establish in future – what was the method of manufacture used to make Afro-Caribbean pottery during the period of enslavement and is this method used today? Did the method change with emancipation or is this an aspect of continuity in pottery production similar to the firing of vessels? Bonfiring was used during the colonial period as can be seen from the numerous examples of fire-clouded sherds, as well as the softly-fired condition of these sherds, from both archaeological investigations and modern examples from the Newcastle Pottery.

One quite distinctive characteristic of the vessels represented in this assemblage is that they have a range of wall thicknesses (Table 2.4). The 21 split sherds that do not have both surfaces of the vessel visible are classed as TH X; they do not contribute to this table. Careful re-examination of the thickest body sherds (codes 5-7) may reveal examples of sagging base sherds, which have proven difficult to identify in this assemblage (see above). Comparing the frequency of wall thickness between Upper Rawlins and Fenton Hill (Table 2.5) revealed a strong difference (Figure 2.45). The Fenton Hill Afro-Caribbean pottery is significantly thinner walled than the Upper Rawlins assemblage. At least 92% of the Fenton Hill material measures less than 9mm thick (code 3 or thinner), while nearly the same amount of Upper Rawlins material measures less than 11mm thick (code 4 or thinner). Most striking, however, is that 32% of the Fenton Hill assemblage measures 5mm or less in thickness while less than 5% of the Upper Rawlins assemblage is this thin. Overall, the Fenton Hill vessels were made significantly thinner than their counterparts found at Upper Rawlins. Additional examples of this type of information from

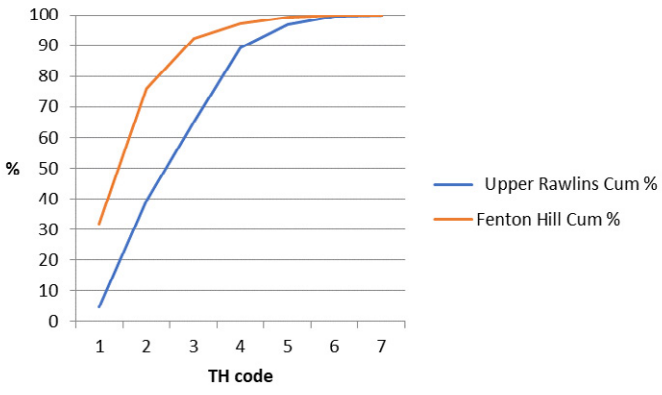

Figure 2.45. Fenton Hill and Upper Rawlins: Afro-Caribbean pottery – graphic representation of cumulative percentage frequency of wall thickness by codes

Table 2.4. Fenton Hill: Afro-Caribbean pottery - wall thickness codes by sherd count

TH code	Count	%	Cum %
1, less than 5mm	448	31.9	31.9
2, 5 - < 7mm	621	44.2	76.1
3, 7 - < 9mm	226	16.1	92.2
4, 9 - < 11mm	70	5.0	97.2
5, 11 - < 13mm	30	2.1	99.3
6, 13 - < 15mm	8	0.6	99.9
7, 15 - < 17mm	1	0.1	100.0
Total	1404	100.0	-

Table 2.5. Fenton Hill and Upper Rawlins: Afro-Caribbean pottery – cumulative percentage frequency of wall thickness by codes

	Upper Rawlins	Fenton Hill
TH code	Cum %	Cum %
1	4.7	31.9
2	39.3	76.1
3	65.1	92.2
4	89.4	97.2
5	97.0	99.3
6	99.5	99.9
7	100.0	100.0

Crosse's Alley, Mountravers and other sites with accessible datasets of Afro-Caribbean pottery with wall thickness measurement need to be compared in order for an interpretation of this evidence to be meaningful. The differences could be the result of different dates for the activities using Afro-Caribbean pottery at these sites, the sizes of the assemblages, the range of vessel forms which make up each assemblage, or the acquisition of vessels from different pot makers or markets on the island, for example.

Correlation of vessel forms to wall thickness codes is provided in Appendix Table 2.4. This indicates that type R101 jars have significantly thicker walls than those of jar type R109. This supports the distinctive gracefulness of many R109 vessels which suggests that more competent potters may have made this form of jar or that some potters took more time to make these thinner-walled, holloware vessels with their curvilinear, necked profiles and everted rims. What we seem to be seeing here is that there were many different hands making this moderately large Nevis assemblage of Afro-Caribbean pottery.

Rims

R101 – round-lipped, upright to flared rim on necked, slack or slightly globular-profile holloware vessel; closed form, jar (Figure 2.46, 1-20)

R102 – simple flat-top or bolster rim on neckless, convex-profile (hemispherical) vessel; open form, bowl (Figure 2.47, 21-23)

R103 – slightly bevelled rim on convex-profile, neckless, hemispherical, open vessel (Figure 2.47, 24)

R104 – not found at Fenton Hill

R105 – not found at Fenton Hill

R106 – rounded rim on neckless, convex-profile, ovoid vessel; open form, bowl (Figure 2.47, 25-29)

R107-108 – not found at Fenton Hill

R109 – round-lipped, everted rim on necked, slack or slightly globular-profile holloware vessel; closed form, jar (Figure 2.48, 30-46)

R110-112 – not found at Fenton Hill

R113 – hooked, rounded or bevelled rim on neckless, well-expanded, convex-profile vessel; closed form, jar (Figure 2.49, 47-51)

R114 – not found at Fenton Hill

R115 – round-lipped, upright rim on neckless, convex-profile (hemispherical) vessel; open form, bowl (Figure 2.49, 52-55)

R115v2 – R115 with a slight angle between 5-10mm beneath the rim top edge (Figure 2.49, 56-57)

R116-121 – not found at Fenton Hill

R122 – flared, conical-profile vessel; open form, bowl or lid (Figure 2.49, 58-59)

R123-134 – not found at Fenton Hill

R135 – lid-seated, flared rim on necked vessel; closed form, jar (Figure 2.49, 60)

R136 – not found at Fenton Hill

R137 – bevelled rim on biconical, obtuse-angled or shouldered-profile vessel; closed form, jar (Figure 2.49, 61)

R199 – undefined rim shape due to fragmentation; uncertain form (not illustrated)

Bases

B101 – not found at Fenton Hill

B102 – not found at Fenton Hill

B103 – rounded or sagging base without base angle (Figure 2.50, 62-63)

B104 – not found at Fenton Hill

B105 – flat base with vertical wall (Figure 2.50, 64)

Neck

N100 – sherd(s) from the restricted neck zone of holloware vessels; closed form, jar (Figure 2.50, 65-66)

Angle-profile sherds

A101 – not found at Fenton Hill

A102 – not found at Fenton Hill

A103 – round-profile sherd(s) from necked holloware jar (type N100) (Figure 2.50, 65-66)

Decorated body sherd

D100 – body sherd(s) displaying decoration (Figure 2.50, 67-70)

Plain body sherd

P100 – undecorated body sherd(s) (not illustrated)

Surface Treatment

Two types of deliberately added surface treatment were commonly identified in the assemblage: burnished (database code BU) and haematite-rubbed (database code SL). Haematite rubbed onto a surface appears visually as a red-burnished effect, but it may be that burnishing was applied as a second procedure after or on top of the haematite rubbing. Rubbing haematite onto the surface of a vessel may produce the necessary burnished effect at the same time as the addition of the colouration but this is not altogether certain. Burnish is most often found without haematite rubbing, i.e. as a single surface treatment, in this assemblage.

Whether as a practical treatment to reduce the flow of moisture into/out from the vessel, as a skeuomorphic effect to make pottery look like metal, or as an aesthetic enhancement, burnish was observed on 116 sherds in 90 database records, representing 8.1% of the assemblage by number of sherds. If burnish is observed only on the exterior surface of sherds (database position 2), then the vessel is most likely to have been a closed form type such as a holloware or jar. If it is located on just the interior surface (position 3) or on both surfaces of a sherd (position 1), then it probably derives from an open form such as a bowl. Burnish was recorded on vessel types R102 (two examples), R106 (five), R113 (three), R115 (two) and R122 (one). No examples of necked jar types R101 and R109 in the assemblage had received burnishing. The frequency of just burnished sherds at 8% of the assemblage is relatively similar to the frequency at Upper Rawlins with nearly 6.5%.

Haematite, as a geological mineral in rock form, had been rubbed onto the surface of several vessels which created a vermillion-colour effect. It is uncertain whether the colour and the polish had been applied with the same stroke or whether the haematite was too powdery to provide the resistance required to raise the burnish at the same time. Haematite occurs naturally on Nevis and can be picked up from the land surface when walking in the Jessups estate area on the west side of the island, for example. Haematite was observed on a total of 83 sherds in 69 database records representing 6% of the assemblage.

Amongst the 1257 undecorated body sherds (P100) in the assemblage, 1.4% are burnished on both surfaces with 0.7% solely burnished on the exterior and 0.6% only on the interior. The same number of sherds has both haematite and burnish on both surfaces and on the interior, but there are four times as many with haematite and burnish on the exterior only. Altogether, 8.2% of body sherds bore one or both forms of these techniques and only a limited number of identifiable vessel types display either surface treatment. In summary, surface treatments are present amongst the Afro-Caribbean pottery sherds found at Fenton Hill but they are not at all common. Nevertheless, haematite-rubbed and burnished sherds are a noticeable occurrence at 6% of this assemblage in contrast to the complete absence of this combined treatment at Upper Rawlins.

Wiping by using a cloth (database code WP) or the fingers (FWP) is an additional effect that was observed on 32 sherds, but this appears to have been simply part of the manufacturing process rather than a deliberate addition. Wiping occurred on types R101 (four examples), R115 (two) and its variant (two), R109, R122 and R199 vessels, as well as type N100 vessels (two). Two decorated sherds (Figure 2.50, 67 and 70) also displayed typical wiping. Deliberate roughening (RG) on the lower exterior of a vessel, however, does appear to be a very rare form of surface treatment in the assemblage; only one vessel, an R115 (variant) small bowl used as a cooking container, displayed this effect (Figure 2.49, 56). Roughening may have been added in order to secure this vessel when holding it. A similar, singular occurrence of deliberate roughening on an otherwise plain, holloware vessel with no slip

or burnish was observed amongst both the late 17th-early 18th-century Upper Rawlins assemblage (Figure 3.28, 27) and the late 17th-early 18th-century phase 2 assemblage from Crosse's Alley (Morris 2005a, CH00 database/PRN1566).

Decoration

Amongst these 1425 sherds, there are five sherds that display evidence of decoration. The most distinctive example is a body sherd with an irregular row of individually-impressed or punctated, triangular-shaped wedges (Figure 2.50, 69). A nearly identical example was identified in the New River Village I assemblage (DAACS 2014, sherd ID 1213-1-I-01-DRS-00044 — see website photograph). One sherd probably from near the neck of a holloware vessel displays a horizontal line around the vessel made by slashing parallel, diagonal lines to create what looks like rope, i.e. a twisted, cable-effect (Figure 2.50, 68). No other examples of this pattern are known from Nevis. The elaborately shaped rim form, R135, has an unusual form of decoration comprising a defined horizontal band of two parallel, incised lines above a series of randomly incised, individual vertical lines which are located above the neck zone of this holloware vessel or jar (Figure 2.49, 60). A second, unique type of vessel, the biconical or shouldered jar type R137, has incised parallel lines on the upper part of the vessel above the angled change in its profile (Figure 2.49, 61). It is difficult to determine whether another body sherd is decorated with a set of combed, horizontal, parallel lines or individually tooled lines as the effect is quite faint (Figure 2.49, 70). In summary, there are very few sherds representative of vessels in the Fenton Hill assemblage that are decorated but their variety adds considerably to the range of decorated vessels on Nevis and suggests that this may be a form of individual expression by potters and/or specific messages.

Vessel Forms: Frequency, Size Range, Evidence of Use and Function

The most common vessel forms are the necked jars or hollowares with either flared (R101) or everted (R109) rims; there were 32 different vessels of type R101 and 21 of R109. As mentioned above, examples with simply neck and round-shoulder zones (N100, A103) could derive from either type R101 or R109 jars. Therefore, this class of necked vessels is the most frequent in the assemblage. These pots have no fine surface treatments associated with them; instead, evidence for their use as cooking pots is common (see below). In addition, there are five convex or ovoid-profile jars (R113), along with single, unique, decorated examples each of the necked jar or holloware vessel (R135) and the neckless, biconical jar (R137) for a total of 63 jars. There are 11 examples of various simple hemispherical bowls with three R102, seven R115 (including two of the R115 variant 2), and one R125. Four ovoid (R106) and two conical-profile (R122) examples make up the remaining bowls. There are more than three times the number of jars to bowls in the Fenton Hill assemblage in contrast to the Upper Rawlins assemblage which has nearly the same number of jars as bowls. There is only one possible example of the brazier or coalpot form (R103) at Fenton Hill which is a thin-walled (TH2) fragment (10g) representing less than 1% of the rim diameter found in a phase 5 context (606); none were found at Upper Rawlins. The one positive candidate for a post-emancipation vessel is a straight-walled base from a tankard-like container (B105) found in phase 6 context 505, otherwise examples of monkeys (water jugs), pitchers and coalpots are strikingly missing from the assemblage.

Despite recovering 105 rim sherds, only 44 could be reconstructed to their approximate diameter, with these examples measuring between 100-200mm (Appendix Table 2.5). Due to the degree of fragmentation of this assemblage, 58% of rim diameters could not be reconstructed, which includes the 25% of rims that could not be assigned to a specific rim form type (R199). Nevertheless, it is significant to note that the relative rim diameter ranges which were obtained are similar to those recorded for the Upper Rawlins assemblage with regard to the presence of only small and medium-size vessels (Table 3.2); there are no examples of vessels measuring less than 100mm (very small) or more than 280mm (large and very large). However, the relative frequency of these sizes is very different with 2.5 times more smaller vessels at Fenton Hill. The repeated pattern of vessel diameter sizes helps to support the conclusion that small (100-190mm) and medium-sized (200-290mm) vessels were the preferred choice of their users and/or represent the limited range available on this island during the 18th century. These middle order vessels may have been deliberately selected as multi-purpose or as more expedient choices whether obtaining crockery from the island markets or making their own. In contrast, the sizes of vessels recovered from excavations in Port Royal, Jamaica, are significantly larger. Hauser (2008, fig. 5.25) measured the rim diameters of slipped yabbas (coarse, handmade, low-fired ceramics) from 18th-century occupation levels at several sites and discovered that 90% ranged between 200-350mm compared to those from the 17th century which are much smaller and more similar to the Fenton Hill and Upper Rawlins vessels of 18th-century date.

Many of the vessels, both jars and bowls, had been used as cooking pots. Soot rising in the smoke from wood burning in hearths often collected on the exterior surface of cookpots under overhanging rims, in addition to actual burnt residues which can be

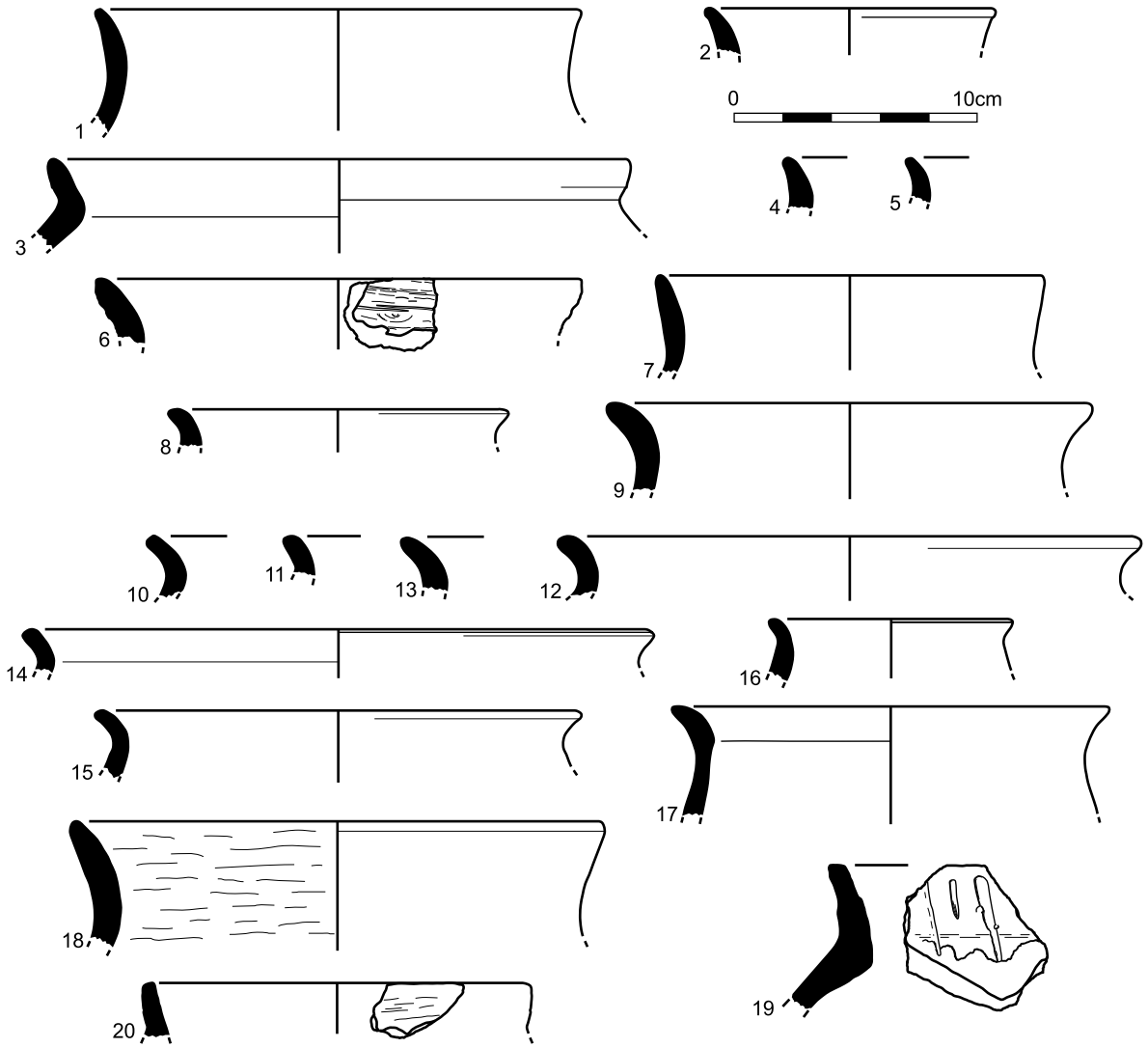

Figure 2.46. Fenton Hill: 1-20. Afro-Caribbean pottery

found on the interior of some vessels. 22% (seven of the 32 examples) of the R101 rims and 48% (ten of the 21 examples) of the R109 rims still had soot adhering to them which demonstrates that these closed form holloware vessels or jars with restricted necks were well-suited as cooking vessels; nearly one-third had clearly been used in this fashion. Three out of the seven examples of R115 hemispherical bowls display soot on the exterior, demonstrating that bowls were also used as cookpots at some time in their use-life history. Amongst the 1257 undecorated body sherds (P100) in the assemblage, 18% show patches of soot on the exterior or burnt residue on the interior surface. Therefore, this assemblage is characterised by cooking jars and bowls, with many other jars that were likely to have been used as storage containers and a modest number of well-finished, shiny red-surfaced jars and bowls. The latter may have been vessels used to store food and eat food from respectively. Their low ratio in the assemblage may have been enhanced by using carved wooden bowls or plates, or even green leaves.

Catalogue of Illustrated Afro-Caribbean Pottery in Context Order (Figures 2.46-2.50)

(PRN, Pottery Record Number in database; all are fabric MM unless otherwise indicated)

Rims

1. Jar, R101; 8% of 200mm diameter rim present; INAA sample ELM003; context 107, PRN2520

2. Jar, R101; 5% of 110mm diameter rim present; context 205, PRN2530

3. Jar, R101; 5% of 220mm diameter rim; wiped on both upper vessel surfaces; context 206, PRN2553

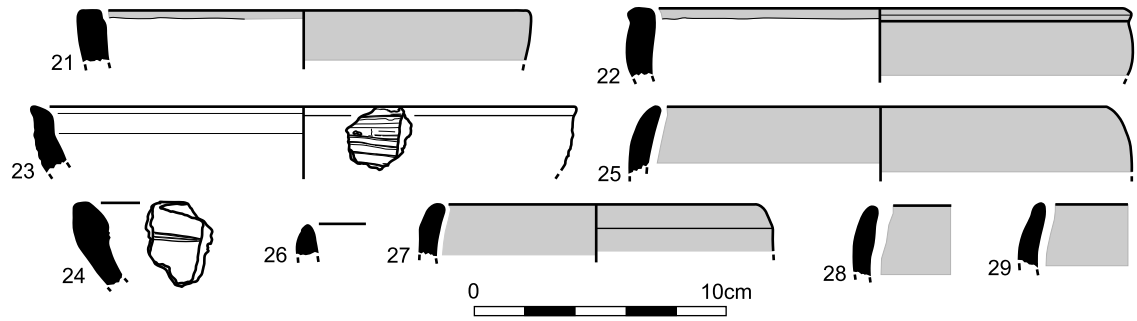

Figure 2.47. Fenton Hill: 21-29. Afro-Caribbean pottery

4. Jar, R101; less than 5% of rim present; context 206, PRN2555

5. Jar, R101; less than 5% of rim present; context 206, PRN2556

6. Jar, R101; 5% of 180mm diameter rim; wiped on upper vessel interior and exterior; context 222, PRN2568

7. Cooking jar, R101; 13% of 160mm diameter rim; wiped on upper vessel exterior; soot on exterior; context 235, PRN2837

8. Jar, R101; 6% of 130mm diameter rim; context 303, PRN2586

9. Jar, R101; 8% of 220mm diameter rim; context 303, PRN2582

10. Jar, R101; less than 5% of rim present; context 304, PRN2599

11. Jar, R101; less than 5% of rim present; context 304, PRN2601

12. Jar, R101; 4% of 220mm diameter rim; context 306, PRN2637

13. Jar, R101; less than 5% of diameter rim; context 306, PRN2641

14. Cooking jar, R101; 4% of 240mm diameter rim; lipped-groove effect around rim due to manufacture; soot on exterior; context 306, PRN2642

15. Jar, R101; 5% of 200mm diameter rim; context 306, PRN2678

16. Cooking jar, R101; 6% of 120mm diameter rim; soot on exterior; context 306, PRN2679

17. Cooking jar, R101; 7% of 160mm diameter rim; soot on exterior; context 400, PRN2712

18. Jar, R101; 4% of 210mm diameter rim; smoothed on upper vessel interior; INAA ELM009; context 404, PRN2723

19. Jar, R101; fabric VCM; less than 5% of diameter rim; wiped on upper vessel interior; INAA ELM010; context 506, PRN2887

20. Jar, R101; fabric CM; 6% of 160mm diameter rim; wiped around rim; context 512, PRN2892

21. Bowl, R102; 8% of 160mm diameter rim; applied haematite on exterior and top of rim, burnished on both surfaces; contexts 204 and 205, PRN2523 and PRN2531

22. Bowl, R102; 4% of 190mm diameter rim; applied haematite on exterior and around rim, burnished on both surfaces; INAA ELM008; context 306, PRN2670

23. Bowl, R102; 3% of 200mm diameter rim; scored decoration on exterior; context 402, PRN2717

24. Coalpot, R103; fabric CM; less than 5% of diameter rim; possible soot on exterior; context 606, PRN2963

25. Bowl, R106; 5% of 160mm diameter rim; applied haematite and burnished on both surfaces; context 204, PRN2522

26. Bowl, R106; less than 5% of diameter rim; context 302, PRN2571

27. Bowl, R106; 5% of 160mm diameter rim; applied haematite and burnished on both surfaces; context 306, PRN2629

28. Bowl, R106; less than 5% of diameter rim; applied haematite and burnished on both surfaces; context 306, PRN2701

29. Bowl, R106; less than 5% of diameter rim; applied haematite and burnished on both surfaces; context 402, PRN2716

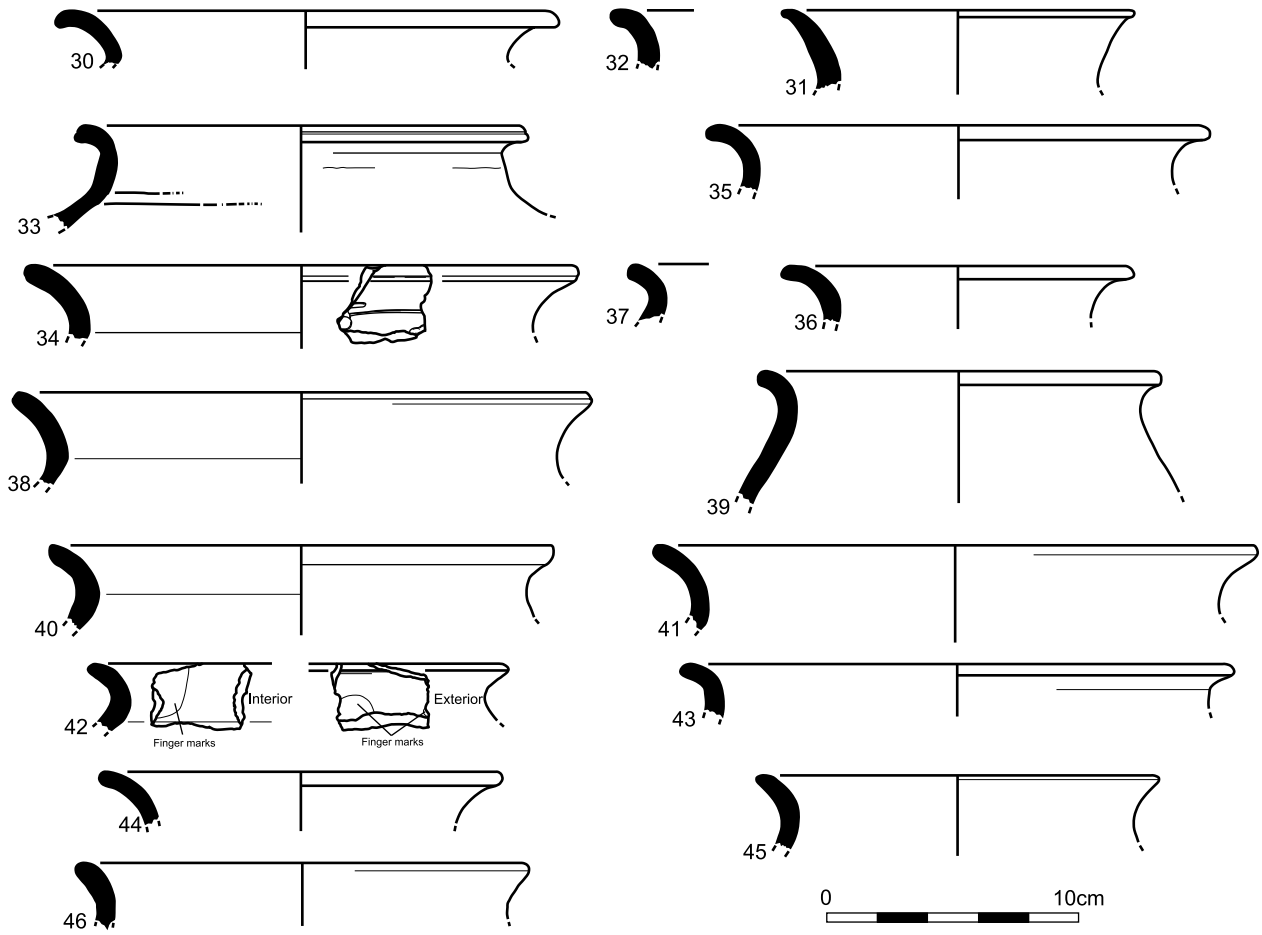

Figure 2.48. Fenton Hill: 30-46. Afro-Caribbean pottery

30. Cooking jar, R109; 5% of 185mm diameter rim present; soot on exterior surface; unstratified, PRN2500

31. Jar, R109; 5% of 140mm diameter rim; context 204, PRN2521

32. Jar, R109; less than 5% of rim present; context 206, PRN2554

33. Cooking jar, R109; 10% of 170mm diameter rim; soot on exterior; INAA ELM006; context 306, PRN2630

34. Cooking jar, R109; 4% of 200mm diameter rim; soot on exterior; context 306, PRN2631

35. Jar, R109; 4% of 190mm diameter rim; context 306, PRN2632

36. Jar, R109; 4% of 130mm diameter rim; context 306, PRN2633

37. Cooking jar, R109; less than 5% of rim present; soot on exterior; context 306, PRN2634

38. Cooking jar, R109; 6% of 220mm diameter rim; soot on exterior; context 306, PRN2635

39. Jar, R109; 6% of 160mm diameter rim; context 306, PRN2672

40. Cooking jar, R109; 6% of 200mm diameter rim; soot on exterior; context 306, PRN2673

41. Jar, R109; 4% of 230mm diameter rim; [oxidised]; context 306, PRN2674

42. Jar, R109; less than 2% of rim present; traces of applied haematite suggested on both surfaces; context 306, PRN2675

43. Cooking jar, R109; 3% of 220mm diameter rim; soot on exterior; context 306, PRN2676

44. Cooking jar, R109; 5% of 160mm diameter rim; soot on exterior; context 306, PRN2677

45. Jar, R109; 4% of 150mm diameter rim; context 306, PRN2700

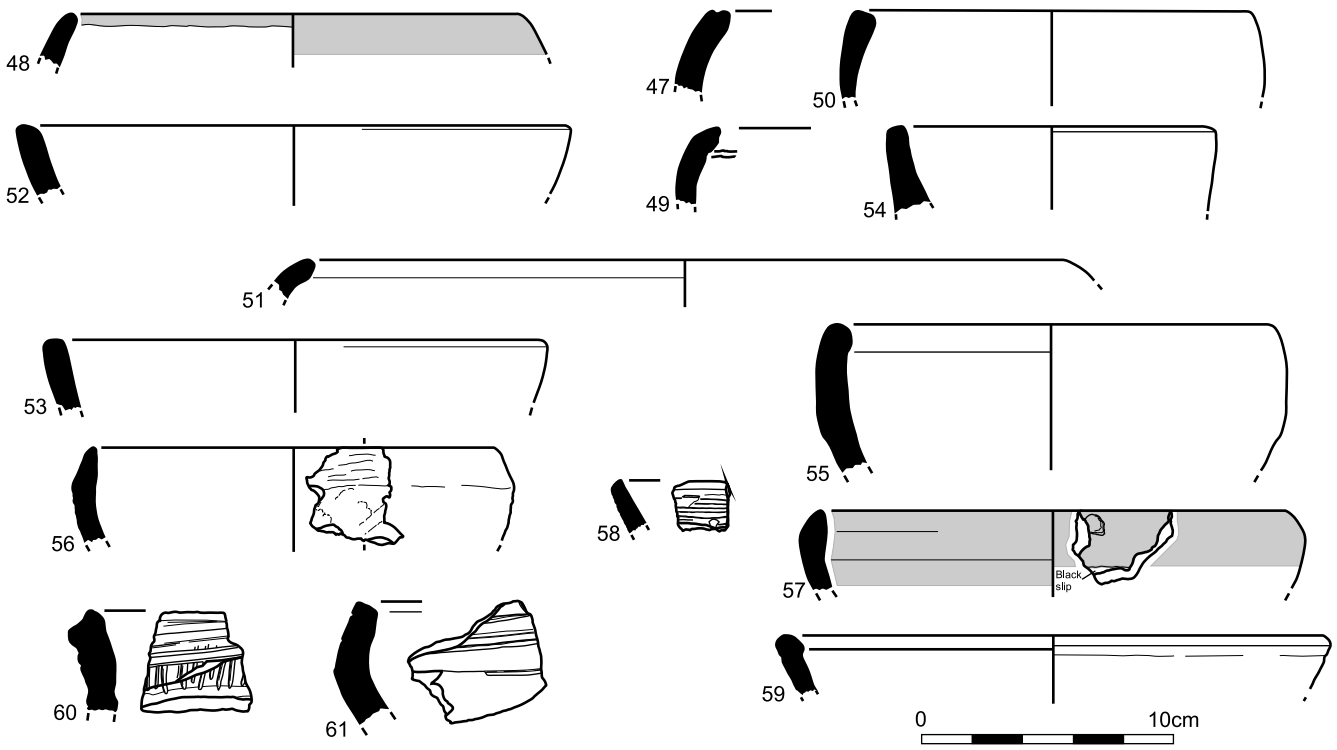

Figure 2.49. Fenton Hill: 47-61. Afro-Caribbean pottery

46. Jar, R109; 5% of 180mm diameter rim; context 505, PRN2855

47. Cooking jar, R113; less than 5% of rim present; lipped-groove effect on upper surface due to manufacturing; soot on exterior; context 102, PRN2503

48. Jar, R113; 5% of 180mm diameter rim; applied haematite and burnished on exterior and around rim interior edge; context 205, PRN2532

49. Jar, R113; less than 5% of rim present; applied haematite and burnished on exterior; context 306, PRN2668

50. Jar, R113; 4% of 150mm diameter rim; context 306, PRN2669

51. Jar, R113; 4% of 280mm diameter rim; burnished on exterior; context 402, PRN2715

52. Bowl, R115; 4% of 210mm diameter rim; context 306, PRN2627

53. Bowl, R115; 5% of 200mm diameter rim; context 306, PRN2671

54. Cooking bowl, R115; 8% of 120mm diameter rim; soot on exterior; context 237, PRN2838

55. Bowl, R115; 6% of 180mm diameter rim; wiped around rim; context 509, PRN2889

56. Cooking bowl, R115, variant 2; 5% of 150mm diameter rim present; wiped on upper vessel exterior, roughened on lower vessel exterior; soot on exterior; INAA ELM001; context 106, PRN2514

57. Bowl, R115, variant 2; 5% of 180mm diameter rim; applied haematite and burnished on both surfaces; INAA ELM005; context 306, PRN2628

58. Bowl, R122; less than 5% of rim present; scored or scratched effect on exterior; burnished on interior; context 102, PRN2505

59. Bowl, R122; 5% of 210mm diameter rim; wiped on both surfaces; context 303, PRN2583

60. Decorated jar, R135; less than 5% of rim present; two parallel incised lines above a row of randomly incised, individual vertical lines above neck zone; context 107, PRN2954

61. Decorated jar, R137; less than 5% present; possibly fabric CM; incised parallel lines on upper vessel; context 501, PRN2845

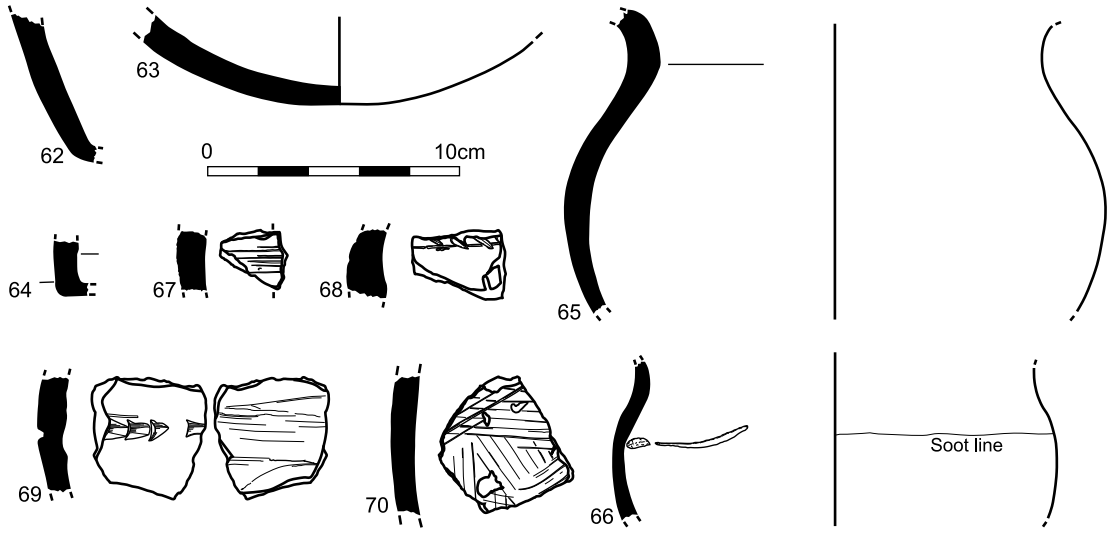

Figure 2.50. Fenton Hill: 62-70. Afro-Caribbean pottery

Bases

62. Jar base, B103; less than 5% of base present; [oxidised throughout]; INAA ELM002; context 106, PRN2758

63. Cooking vessel base, B103; less than 5% of base present; soot on exterior, burnt residue on interior; context 512, PRN2899

64. Base, B105; less than 5% of base present; possible black slip surface treatment on exterior but not burnished; context 505, PRN2859

Necked/angled-profile vessels

65. Cooking jar, neck and body N100, A103; soot on exterior; INAA ELM004; context 218, PRN2561

66. Cooking jar, N100, A103; soot on exterior; context 318, PRN2710

Decorated sherds

67. Decorated vessel, D100; scored or scratched on exterior; wiped on interior; context 102, PRN2506

68. Decorated vessel, D100; impressed, cabled-effect decoration; context 505, PRN2865

69. Decorated vessel, D100; fabric CM; horizontal row of impressed, triangle-like wedges; internal fingering support visible; context 506, PRN2881

70. Decorated cooking vessel, D100; fabric CM; combed or tooled, horizontal, parallel lines; wiped on exterior; burnt residue on interior; context 614, PRN2944

Dating and Deposition

Phase 1 (1635-1650; pre-plantation – casual activity): No sherds of Afro-Caribbean pottery were recovered from this phase of activity.

Phase 2 (*c.* 1650-60; construction of earthfast timber building as a dwelling house - Structure A): One small sherd of Afro-Caribbean pottery was recovered from this phase, a plain body sherd measuring 5-6mm thick. This may be the earliest sherd of Afro-Caribbean pottery found on Nevis or it may be a sherd that worked its way into a phase 2 context during the subsequent centuries of activity, both human and animal, on the site. The absence of Afro-Caribbean pottery from any phase 3 contexts suggests that this might be the case.

Phase 3 (1675-1689; continued occupation of Structure A and construction of main stone, brick and Portland stone-floored house by John Combes in 1675; death of Combes 1689): No Afro-Caribbean pottery was recovered from this phase of activity.

Phase 4 (*c.* 1690/1700-1780/1810): A total of 99 sherds of Afro-Caribbean pottery was recovered in association with 143 sherds of European/Oriental wares which represents 40.1% of the Phase 4 pottery assemblage. The range of forms recovered include seven upright/flared or everted rim and necked jars (types R101, R109), some of which had been used as cookpots, three types of hemispherical or ovoid bowls (R102, R106, R115), and a lid-seated necked jar (R135). In addition, only sagging bases were identified. 8.1% of the sherds assigned to this phase displayed applied haematite coating. This is 4% less than that recorded amongst the sherds recovered from the 18th-century New River Village I assemblage which had 12.2% of sherds with coloured 'slip', three times less frequent than New River Village II (24.4%),

slightly more than that from Jessups Village I (5.1%) and slightly less than Jessups Village II (9.0%) (DAACS 2014). This suggests that the users of Afro-Caribbean pottery at Fenton Hill either made the typical range of forms and applied the normal frequency of surface treatment to their pots during the 18th century or acquired the common varieties of Afro-Caribbean pottery from elsewhere on the island such as at the Sunday markets conducted by slaves where they sold their own produce (Fog Olwig 1993, 48-50). It is only the frequency of Afro-Caribbean pottery in the pottery assemblage that sets it apart from the New River and Jessups assemblages. Three of these collections are 18th century in date and derive from shovel-test-pitting at known slave villages on Nevis: 63% (NRV I), 80% (Jessups I), and 58% (Jessups II); New River Village II is an early 19th-century pre-emancipation assemblage with 67% Afro-Caribbean pottery. Therefore, Fenton Hill is somewhat different with only 41% of its pottery assemblage made of Afro-Caribbean sherds. This difference could be due to the types of activity taking place at the excavated areas of Fenton Hill which did not include a known slave village.

Phase 5 (*c.* 1780-1820/40): Only 20 sherds of Afro-Caribbean pottery were recovered from contexts assigned to this phase. Due to this, it would be inappropriate to comment upon any variation in frequencies of types or surface treatment. It may be significant to note that the mean sherd weight of these sherds at 11.4g is similar to that of the previous phase at 10.3g and therefore there is no particular reason to suspect that the Phase 5 sherds were redeposited.

Phase 6 (1840s-1860s): The largest quantity of Afro-Caribbean pottery was recovered from this immediately post-emancipation phase (1048 sherds; 4248g). In addition to numerous examples of upright/flared or everted rim, necked jars and hemispherical or ovoid bowls as found in Phase 4, there is a flat base from a vertical walled vessel such as a tankard (B105), several convex-profile neckless jars (R113), and conical profile bowls or lids (R122). 4.9% of sherds were haematite-rubbed. Nearly twice as many Afro-Caribbean potsherds (78.9%) were recovered from contexts in this phase compared to Phase 4 (40.9%). The possibility is that there were relatively more freed slaves working on this land and at its sugar works during these decades and this may have become part of the post-emancipation village complex indicated on the Burke Iles map of 1871. If this material was simply residual material redeposited as trampled layers as is suggested by the small mean sherd weight of 4.1g, then the proportion of Afro-Caribbean pottery to European wares would have been similar to that from Phases 4-5, but it is not. The dumped and trampled material found in these contexts seems to have its own distinctive character.

Phase 7 (1860s-present): Only one new vessel form, type R137, was identified amongst the 249 sherds (weighing 1270g) from contexts assigned to this phase. This is a bipartite, obtuse-angled or shouldered-profile jar that is presently unique amongst the 12 assemblages examined by this author: Crosse's Alley, Jamestown (JT98; JT06-07), Jessups Villages I and II, Mountravers (MT98; MTS01-04), New River Villages I and II, Low Ground/Upper Stapleton, The Redoubt, and Upper Rawlins.

Discussion

The Afro-Caribbean pottery from Fenton Hill is distinctive. The majority of vessels were upright or everted rim, necked jars or hollowares often used as cookpots, but a number of bowls including several that display burnished or haematite-rubbed and burnished surfaces were identified. Sherds decorated with impressed or tooled motifs were also recovered. This assemblage has similarities to the Upper Rawlins assemblage but the presence of haematite-rubbed ('slipped') surface treatment or decoration makes these vessels distinctively different from that late 17th-early 18th-century collection and more similar to the 18th- and early 19th-century assemblages recovered from fieldwork at New River and Jessups. The character of this material which derived from a non-slave village context during the 18th century has similarities to both that of the late 17th-early 18th-century assemblage from the early sugar works site at Upper Rawlins and to the 18th-century slave village assemblage from New River Village I. The presence of nearly identical, impressed or punctate-decorated sherds from Fenton Hill and New River Village I is intriguing and suggests that the same potter may have made both of the vessels represented by these sherds.

European and Oriental Ceramics

David Barker

Introduction

A total of 710 sherds of European ceramics, weighing 4125g, from stratified contexts, together with a further five unstratified sherds weighing 62g, were recovered. The counts include sugar moulds which are discussed below by Elaine Morris. The material is not evenly distributed amongst the trenches, with the greatest quantities coming from Trenches 2, 3 and 6, with 219, 174 and 231 sherds respectively. A fair degree of cross-context connectivity is evident in Trenches 2 and 3, and it is also probable that a number of other vessels are represented in more than one context. However, these

features are less evident in the material from Trenches 1, 5 and 6 and neither has been noted in Trenches 4 and 9. Sherds are mostly of a small size and exhibit little abrasion from their time in the ground. Several vessels are represented by a number of sherds, but none are in a state of completeness. Many vessels are identifiable from a single sherd and although a vessel count is difficult with such fragmentary material, it is likely that a minimum of 277 vessels is represented by the stratified and unstratified sherds combined.

The Ceramics

The ceramics are not evenly represented by chronology, with an overwhelming emphasis upon mid to late 19th-century wares which post-date the emancipation of the island's slave population. Some 43% of the material can be dated with confidence to the post-emancipation period. A smaller proportion of the diagnostic material (*c.* 16%) can be dated more closely to the late 18th to early 19th centuries, while a similar percentage is broadly of 18th-century date. However, a number of contexts with 18th-century ceramics in some quantity 604, 606, 607 and 610 are entirely without 19th-century material.

While there are 17th-century sherds in the assemblage (about 1% of the total), the ceramics offer no firm evidence to suggest that the contexts in which they were found date to the 17th century; most of these are present either as residual material in later contexts or in contexts with too few sherds to allow them to be dated with confidence. However, three contexts 615, 616 and 617 contain consistently 'early' ceramics with a date range of late 17th to mid 18th century with no later material whatsoever. Context 615 contains sherds of North Devon *sgraffito*-decorated slipware which probably date to no later than 1700.

Nor do the ceramics provide a representative cross-section of the wares available on the market. This is particularly evident with the post-emancipation period material which consists overwhelmingly of **whiteware**s (298 sherds, 41.7% of the total number of sherds). The whitewares comprise a limited range of vessel forms. Of the minimum 71 vessels represented (25.6% of the total number of vessels), at least 25 are plates and ten are bowls. Other table ware forms are a serving dish, a dish, a pie dish, a jug, a cover from a vessel of uncertain form, a mug and two vessels which are either mugs or cups; there are no saucers and for evidence that tea was drunk during the second half of the 19th century we must look to the sherds of refined blackware which include a possible teapot sherd. There is evidence of a concern with hygiene in the form of a minimum of four chamber pots and three basins.

Almost three-quarters (72.5%) of the whiteware sherds have some form of decoration, suggesting that almost all of the vessels were decorated. Sponged decoration is present on 93 sherds, representing a minimum of 26 vessels (36.6%) in a range of forms. Decoration includes amorphous blue all-over colour, patterns formed of cut sponge motifs alone and patterns that use a combination of cut sponge motifs and under-glaze painted bands of leaves. Sponge-decorated table wares include four plates (Figure 2.51, 1-3), three bowls (Figure 2.51, 4-7), a cup or mug (Figure 2.51, 8) and mugs (Figure 2.51, 9-10). All the whiteware chamber pots have sponged decoration (Figure 2.51, 11-15), as do two of the basins (Figure 2.52, 16-17). Other sponge-decorated sherds are from uncertain forms.

Eighty-two sherds have printed decoration, although these represent a minimum of 26 vessels (36.6%) – the same number as those with sponged decoration. The printed patterns are mostly in blue or light blue and, although most are too incomplete to permit identification, the patterns 'Willow' (Figure 2.52, 18-19) and 'Asiatic Pheasants' (Figure 2.52, 18) are recognisable. One plate rim from 302 bears a detail from the edge pattern typically used with the pattern 'Triumphal Car' (Figure 2.52, 20) and a small number of patterns contain potentially diagnostic elements which might aid identification in the future (e.g. Figure 2.52, 20-21). Other printed patterns are in lilac (Figure 2.52, 22), green (Figure 2.52, 18, 23), black (Figure 2.52, 20), brown and pink (not illustrated).

Thirty-two sherds have under-glaze painted decoration alone, but it is likely that a number of these are from vessels listed elsewhere in the catalogue with painted and sponged decoration (e.g. Figure 2.51, 1). Only one sherd, probably from a bowl (Figure 2.52, 24), has an under-glaze painted floral pattern which distinguishes it from other painted and possibly sponge-decorated sherds. Another sherd, a plate rim, from 205 has a moulded edge pattern of grass or leaves with beading in low relief over which is a blue painted band (Figure 2.52, 25). This is a variation of the more common shell type of moulded edge pattern which is widespread on both pearlwares and whitewares and is probably of mid 19th-century date.

Just nine whiteware sherds from a minimum of four vessels have banded slip decoration. Identifiable forms are two bowls and a cover from a vessel of uncertain form.

Next in quantity to the whitewares are sherds of tin-glazed earthenware or **delftware**, with 102 sherds (14.3% of the total number of sherds) representing a minimum of 44 vessels (15.9% of the total). Sherds are mostly small and few vessel forms can be identified, although they include at least five plates, four dishes,

two bowls, two possible cups, two drug jars and a possible jug. Twenty sherds have painted decoration in blue, although one rim sherd has an undiagnostic pattern in both blue and black (Figure 2.52, 26). The delftwares are a particularly undiagnostic collection but all probably date to the early to mid 18th century.

A few sherds of refined white-bodied earthenwares are problematic; they may be of whiteware, creamware or pearlware and cannot be closely dated. However, 68 sherds (9.5% of the total), from a minimum of 22 vessels (7.9% of the total), are certainly of **pearlware** with a late 18th- to early 19th-century date range. Identifiable vessels include five plates, two plates or serving dishes, two bowls, a tureen and a tureen cover, a possible jug, and a tea bowl. The plates and serving dishes have moulded shell edges with additional under-glaze painted decoration to the edge in blue (Figure 2.52, 27-30) and green (Figure 2.53, 31). Green painted shell moulding is also present on a tureen and a tureen or vegetable dish cover (Figure 2.53, 32). Blue printed decoration is present on at least two bowls (Figure 2.53, 33-35) and other sherds from vessels of uncertain form. Patterns are of the oriental temple landscape type and one sherd of an uncertain form is decorated with the 'Willow' pattern. One tea bowl is decorated with an oriental temple landscape pattern which has been found in early 19th-century archaeological assemblages in North America and England. Examples of pearlware saucers with this printed pattern were recovered from the privy of a merchant Stewart Dean in Maiden Lane, Albany, New York State, a deposit sealed *c.* 1809 (Hartgen Archeological Associates 2002, Sections 8.31, 9.8 and Photo 9.3) and in Liverpool it is well represented amongst the pearlwares from the fill of Manchester Dock, sealed in 1806 (NML acc. no. MLL.2007.1.4993). A further six sherds from at least four vessels of uncertain form have banded slip decoration, a tea bowl sherd has under-glaze blue painted decoration, and an undiagnostic body sherd has blue sponged decoration. One pearlware base sherd from 505 has the only manufacturer's mark in the assemblage; this is probably from a plate which bears the impressed mark 'SPODE' (Figure 2.53, 36).

Forty-five sherds of **creamware** (6.3% of the total) represent a minimum of 28 vessels (10.1% of the total). Thirteen of these are plates, of 10-inch, dinner plate size and smaller sizes. Where rims survive, they include examples of the 'royal' edge (Figure 2.53, 37) and the feather edge (Figure 2.53, 38-39). Other identifiable forms are three saucers, a mug and a possible sauce tureen. The only decoration on the creamwares consists of banded slip, which is present on four hollow ware vessels of uncertain form. The creamwares date broadly to the period *c.* 1770–1810, although the darker cream colour of the feather edge plate sherd from 302 (Figure 2.53, 38) suggests a slightly earlier date of manufacture — perhaps *c.* 1765–1775.

Mid 18th-century refined earthenwares are represented by just five sherds. One is an undiagnostic body sherd of **agateware** from 205, while the others, also undiagnostic, are of **refined blackware** – one from 600, one from 601 and two from 603. A further nine sherds of **refined blackware**, all from 601, are of mid to late 19th-century date; they may represent no more than two vessels — a jug and a possible teapot.

Nine sherds of **Chinese porcelain** are small and undiagnostic, although three tea bowls, two saucers, and a possible plate (Figure 2.53, 40) can be identified amongst the nine vessels present. Six of the sherds have blue painted decoration, while two have over-glaze painted decoration which is combined with relief-moulded detail on one.

White salt-glazed stonewares are well represented in most British and colonial assemblages from the 1720s to the end of the 18th century. However, at Fenton Hill there are just 17 sherds (2.4% of the total) from a minimum of 11 vessels (4% of the total). These comprise a possible tea bowl, a possible teapot, a bowl, a dish, four dinner plates, a small side plate and two hollow wares of uncertain form. With the exception of some turned reeding on the hollow wares, none of the vessels are decorated, although two of the plates have familiar relief-moulded edge patterns; one from 202 has an edge pattern which includes dot and diaper moulding (Figure 2.53, 41), while an unstratified rim sherd has a gadrooned edge (Figure 2.53, 42).

There are a further 70 **salt-glazed stoneware** sherds (9.8% of the total), of which 26 are of Rhenish origin and 29 English; the remainder are of uncertain Rhenish or English origin. At least five of the English sherds are of Nottinghamshire/Derbyshire type, while the remainder are probably from potteries operating in London or Bristol. Of the 36 vessels represented, recognisable forms include cylindrical blacking bottles, larger bottles or jars, a bottle with an applied moulded medallion, a probable jug and at least two mugs. The English stoneware is largely undiagnostic and consequently difficult to date more closely than to the 18th or 19th centuries. The Rhenish wares include three sherds of cylindrical mineral water bottles which are of late 18th- or 19th-century date, and there are at least three examples of round-bodied bottles; other sherds are of uncertain form. Two sherds have moulded decorative detail with additional painted blue colour; one is a body sherd from 600 with a large round or oval medallion (Figure 2.53, 43), while the other is a bottle neck from 306 with part of a relief-moulded mask (Figure 2.53, 44). These bottles probably date to the late 17th to early or mid 18th century. A further 12

sherds are of light grey Westerwald wares and comprise bottles, a mug and vessels of uncertain form; four of these have relief-moulded decoration coloured blue and, on one sherd, blue and purple, while another has what appears to be incised decoration with blue colour added. The Westerwald stonewares date to the late 17th to 18th century.

Unrefined once-fired earthenware in the assemblage include single sherds of **blackware,** a cup or mug from 203 which probably dates to the late 17th to early 18th century, and of **mottled ware,** a mug from 206 which dates to the early to late 18th century. However, the **slipwares** are both more numerous and more varied, with 26 sherds representing a minimum of 14 vessels of three main types. Eight sherds in a buff fabric are from a minimum of four press-moulded dishes of a type known to have been produced in Staffordshire and Bristol, and at many other places besides; they are decorated with cream-coloured slip trailed onto a dark red slip coat covering the vessel interior in a range of designs (Figure 2.53, 45) and one sherd from 302 has additional combing or feathering of the slip (Figure 2.54, 46). The two rim sherds have an impressed 'pie-crust' edge pattern (Figure 2.54, 46-47). Press-moulded dishes of this type were produced in the late 17th century but they are most commonly found in 18th-century assemblages, with little variation in type to help refine their dating.

Of a similar date are the 13 hollow ware sherds with trailed slip decoration. These are from a minimum of eight vessels which include at least one porringer, a possible posset pot and a possible cup; the other forms are uncertain. All the vessels are in a buff fabric and are decorated with trailed brown slip on a yellow ground (Figure 2.53, 45; Figure 2.54, 48). They, too, are known to have been produced in Staffordshire, Bristol and elsewhere.

The remaining slipwares comprise two thrown dishes with *sgraffito* decoration, with three sherds from 615 and one unstratified sherd belonging to one dish (Figure 2.54, 49), and a rim sherd from 616 being from another (Figure 2.54, 50-51). These are examples of a well-known type produced at Barnstaple in North Devon during the second half of the 17th century, but probably not beyond *c.* 1700 (Grant 1983, 60).

The coarseware component of the assemblage consists of 25 sherds, of which two are from unglazed flower pots of 18th- or 19th-century date. At least two more sherds are of North Devon gravel-tempered ware dishes of late 17th- to mid 18th-century date, with internal green-brown glazes; other sherds may be of jars of the same or a similar type. However, the dominant domestic vessel form is a flaring dish in an orange fabric and with an internal orange-brown glaze (Figure 2.54, 52), although different fabrics and glaze finishes suggest that vessels from more than one unknown source are present. A small number of orange glazed hollow ware sherds, also of uncertain origin, are also present. Perhaps most significant amongst the coarsewares are at least 31 sherds of sugar moulds, which are present in contexts 512, 600, 606, 607, 610, 615, 616 and 617; other probable sugar mould sherds are present in 100 and 604 (one in each), and in 506 (two sherds), discussed by Morris below. It is possible that one or two of the undiagnostic glazed hollow ware sherds noted above belong to syrup pots used in the production of sugar, but this is far from certain.

Discussion

The Fenton Hill ceramics are overwhelmingly British in origin, and this is particularly true of the late 18th- and 19th-century material. The only non-British material from this period consists of nine sherds of Chinese porcelain and three of Rhenish stoneware mineral water bottles. However, although the refined white-bodied earthenwares from the site are typical of the products of the industrial-scale factories operating throughout mainland Britain, their exact place of manufacture cannot be identified with any certainty. By the late 18th century ceramic manufacture was a major — and expanding — undertaking carried on in numerous centres, of which north Staffordshire was but one (albeit the largest). The period is notable for the high level of standardisation amongst the wares produced, with most manufacturers engaged in the production of those wares that were popular and that sold well, and those wares were most likely to be in a 'Staffordshire' style. Since the 1750s, Staffordshire manufacturers had increased their share of the overseas market for ceramics, claiming in 1762 to export 'from London, Bristol, Liverpool, Hull, and other Sea Ports, to our several Colonies in America and the West Indies, as well as to almost every Port in Europe' (Staffordshire Potters' petition to Parliament, 1762, cited in Mountford 1971, 11-2). By 1785, Staffordshire factories exported 'not less than five-sixths of their earthenwares' (Staffordshire Potters' Committee of Commerce Minute Book, 22 February 1785, cited in Thomas 1971, 116). Given the size of the north Staffordshire industry during the 18th and 19th centuries, it is inevitable that north Staffordshire products are well represented in the Fenton Hill assemblage, a fact confirmed by the presence of a 'Spode' marked sherd. The Spode factory in Stoke-upon-Trent was one of the major producers of the later 18th and 19th centuries, well known for their high quality earthenwares and bone chinas; impressed marks of this type were used by the factory between *c.* 1785 and 1833 (Kowalsky and Kowalsky 1999, 340). However, other unmarked refined white earthenwares may potentially originate from any of the British factories engaged in the transatlantic trade.

The standardised products of the period meant that the wares of different factories were interchangeable, but this makes for problems in their analysis. Standardisation was assisted by the very nature of the industry and the manufacturing processes at that time. A manufacturing infrastructure had developed around the north Staffordshire potteries, with a host of ancillary trades (engineers, engravers, stilt and spur makers, colour makers, copper plate makers, etc.) sustaining both the local and the national industry. Added to this, the movement of labour from Staffordshire factories to factories elsewhere in Britain, the propensity of factory owners to acquire interests in other non-Staffordshire factories, and, above all, the requirements of the market, ensured that wares made in the Staffordshire style were predominant for most of the 19th century. In effect, Staffordshire wares had become the 19th-century 'industry standard' (Barker 2001b, 78).

Staffordshire wares are identifiable by manufacturers' marks in a number of ceramic assemblages excavated on Nevis; these include, amongst others, Wedgwood and Deakin & Bailey at Mountravers (Barker 2001a, 82), Copeland & Garrett at Charlestown and Davenport at Fort Codrington (Rookley 1998, 2). The involvement of factories in other parts of the country in the transatlantic trade is highlighted by the presence at Mountravers of a sherd with a Herculaneum, Liverpool, factory mark (Barker 2001a, 82), while amongst post-emancipation material excavated at the Nugent's village site (Barker 2006, 58-9) there is a whiteware sherd with the printed 'J. & M. P. Bell & Co.' mark, a Glasgow factory operating between 1841 and 1912 (Kelly 1999, 103-7).

The well-documented involvement of Scottish pottery factories in the trade with the Caribbean islands was significant from the mid 19th century, but few Scottish products have been identified with certainty in ceramic assemblages from Nevis. The standardisation of forms and patterns during the 19th century does not help in this regard. Only rarely can a printed pattern be confidently attributed to a specific manufacturer given that copper plates of popular printed designs were widely distributed within the industry. It is the presence of manufacturers' marks that provide the evidence required, but there are none at Fenton Hill. However, one plate rim sherd from 302 has a diagnostic blue printed border pattern incorporating a dolphin fountain within a cartouche which was used with the pattern 'Triumphal Car' (Figure 2.52, 20). This pattern is known to have been made by the Glasgow factories of J. & M. P. Bell & Co. of the Glasgow Pottery (Coysh and Henrywood 1982, 370; Kelly 1999, 103-9) and R. Cochran & Co. of the Verreville Pottery (Kelly 1999, 189, 192), and by James Jamieson of the Bo'ness Pottery (Coysh and Henrywood 1982, 370; Kelly 1999, 23-7). On the strength of this, the presence of Scottish ceramics at Fenton Hill seems certain.

The association of sponge-decorated wares with the Scottish industry is regularly emphasised, but perhaps over-emphasised given the widespread evidence for the production of sponged wares in north Staffordshire and elsewhere. However, none of the sponge-decorated wares from Fenton Hill can be linked with a manufacturing centre with any certainty.

The 18th-century and earlier ceramics originate from a variety of sources, although the majority are British. The agateware and refined blackware sherds are types well known amongst the products of Staffordshire factories during the mid 18th century, but factories in other parts of the country were also engaged in their production. The same is true of the white salt-glazed stonewares, although the delftwares which are present in greater quantities are largely undiagnostic but of English manufacture. The slipwares, too, are difficult to source. Both the press-moulded dishes and the hollow wares are types known to have been produced by factories in both Staffordshire and Bristol during the late 17th and 18th centuries, but it is clear that similar types were made elsewhere. Ceramics from North Devon are present in the form of a small number of *sgraffito*-decorated slipwares and gravel-tempered wares; the former date to the mid to late 17th century (Grant 1983, 60), while the latter are more likely to date to between the late 17th and mid 18th centuries (Noël Hume I. 1970, 133).

A small number of salt-glazed stonewares are of English manufacture, while others are Continental European. Stonewares from the Rhineland are present in small quantities and comprise both *bartmann* type bottles and blue painted Westerwald wares. Other non-British wares of this date are the Chinese porcelains.

Broadly the ware types present in the Fenton Hill assemblages mirror those found in excavations elsewhere on the island. This is also true of the range of vessel forms identified and there are no surprises. The earlier wares are for the most part too fragmentary for generalisations to be made about what is and is not present, but this is easier with the post-emancipation ceramics. These are familiar forms with standard types of decoration which are well represented in other assemblages of the period. The later ceramics exhibit a very limited range of vessel forms. There is a clear emphasis upon dining and hygiene, with dinner plates, bowls, chamber pots and basins being the dominant forms, but little evidence for drinking either of tea or other beverages. This has been noted with assemblages from other sites, such as the Nugent's village site on Nevis (Barker 2006), although a single bone china cup was found here, and from The Mount, Barbados (Finch *et al.* 2013). Interestingly, there is no bone china in the Fenton Hill assemblage and nor are there any purely decorative items. This is a very functional assemblage.

With the exception of the few creamwares in the assemblage, the majority of the white-bodied wares appear to be decorated in some way. Vessels with sponged and printed decoration are well represented here. The former were the cheapest decorated earthenwares available during the second half of the 19th century (Miller 1991, 6) and are common finds on sites associated with a lower socio-economic status, whether in the UK, the Caribbean islands or North America. However, present in the Fenton Hill assemblage in more or less equal numbers are vessels with printed decoration, which were the most expensive decorated earthenwares of their day (Miller 1991). The population of Fenton Hill clearly exhibited a real preference for decorated wares during the second half of the 19th century, as did consumers elsewhere in Nevis and other Caribbean islands. The presence of both the cheapest and most expensive types in more or less equal proportions can partly be explained by the fact that the price differential between printed wares, those with other forms of decoration and undecorated wares narrowed as the 19th century progressed (Miller 1991; 1994), so that a plate with printed decoration that was 3.33 times more expensive than an undecorated equivalent in 1814 was only 1.86 times more expensive than an undecorated plate by 1854 (Miller 1991, 14). Decorated ceramics, and even those with printed decoration, had by the second half of the 19th century come within reach of a larger sector of the pottery buying public with the result that printed wares are a significant feature of British and colonial assemblages of the period. However, the ability to afford a piece of pottery is only one factor influencing a consumer's decision to purchase. Taste cannot be measured and, today, we cannot assess the quality of a piece or determine whether it was a less expensive 'second', 'third' or 'worse'.

Catalogue of Illustrated European and Oriental Ceramics

Figure 2.51: Whitewares – sponged decoration

1. Whiteware plate rim sherd with under-glaze painted decoration in red, green and black and red cut sponge flower head motif; context 303.

2. Whiteware plate rim sherds with green cut sponge decoration and under-glaze painted line in red to the edge; contexts 203 and 305.

3. Whiteware plate rim sherds with lilac and green cut sponge decoration and an under-glaze painted line to the rim edge in green; contexts 302 and 304.

4. Whiteware bowl with rim blue cut sponged pattern to exterior and interior (see Figure 2.51, 5 below); context 205.

5. As Figure 2.51, 4 above.

6. Whiteware bowl or basin with under-glaze painted and sponged decoration in lilac; context 205.

7. Whiteware bowl with under-glaze painted and sponged decoration in blue; context 501.

8. Whiteware cup or mug rim and body with red cut sponge decoration to exterior; context 203.

9. Whiteware mug or cup rim with green cut sponge decoration to the exterior; context 303.

10. Whiteware mug rim sherd with blue cut sponge decoration to the exterior; context 306.

11. Whiteware chamber pot with under-glaze painted and sponged decoration in blue; contexts 205 and 206.

12. Whiteware chamber pot with under-glaze painted and sponged decoration in blue; context 203 and 303. Sherds of this vessel are also present in contexts 304 and 306.

13. Whiteware chamber pot with under-glaze painted and sponged decoration in blue; context 218.

14. Whiteware chamber pot rims with under-glaze painted and sponged decoration in blue; context 218.

15. Whiteware chamber pot rim with blue cut sponge decoration and under-glaze blue painted band to rim edge; contexts 204 and 300.

Figure 2.52: Whitewares – sponged decoration (cont.)

16. Whiteware basin sherds with amorphous blue sponged decoration; contexts 306 and 304.

17. Miscellaneous whiteware sherds with cut sponge decoration; context 205.

Whitewares - printed decoration

18. Whiteware sherds with printed decoration, including the patterns 'Willow' (top left and centre) and 'Asiatic Pheasants' (three sherds on right); context 203.

19. Whiteware sherds with blue printed decoration, with printed patterns including 'Willow' (top right) and 'Asiatic Pheasants' (bottom right); context 303.

20. Whiteware sherds with printed patterns; the plate rim on the left bears a detail from the edge pattern

Figure 2.51. Fenton Hill: 1-15. European ceramics

typically used with the pattern 'Triumphal Car'; context 302.

21. Whiteware printed plate rim and base sherds with an undiagnostic light blue printed pattern; contexts 304 and 306.

22. Whiteware bowl with an undiagnostic lilac printed pattern; contexts 304 and 306.

23. Whiteware plate rim with unidentified green printed pattern; context 304.

Figure 2.52. Fenton Hill: 16-30. European ceramics

Whitewares – under-glaze painted decoration

24. Whiteware body sherd with under-glaze polychrome painted decoration; context 200.

25. Whiteware dinner plate rim sherd with relief-moulded edge pattern coloured in blue; context 205.

Tin-glazed

26. Undiagnostic delftware sherds with painted decoration; context 615.

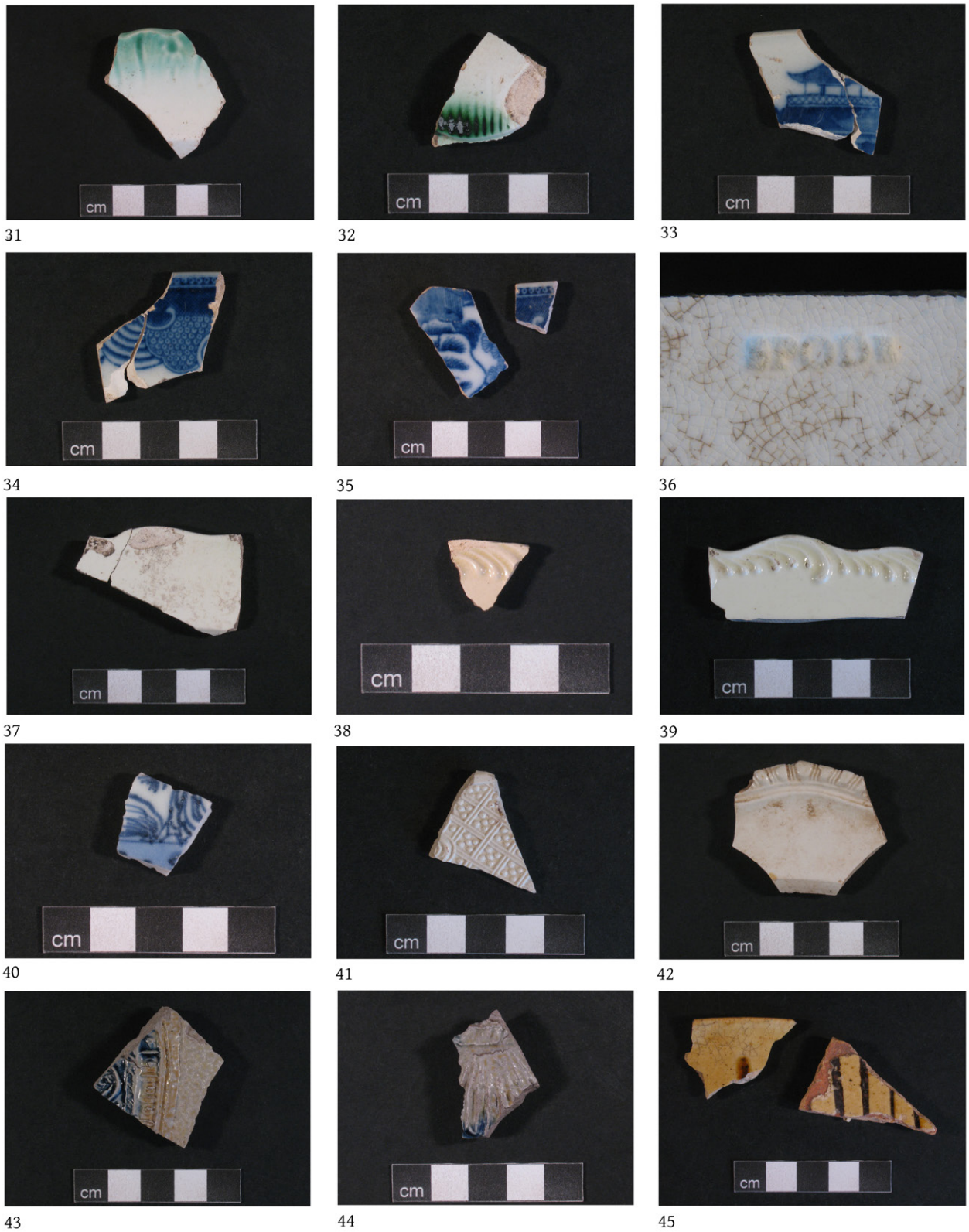

Figure 2.53. Fenton Hill: 31-39, 41-45. European ceramics; 40. Chinese porcelain

Pearlware

27. Pearlware dinner plate with moulded shell edge, coloured blue under-glaze; contexts 102 and 107.

28. Pearlware plate with moulded shell edge, coloured blue under-glaze; context 612.

29. Pearlware plate rims with moulded shell edges, coloured blue under-glaze; context 600.

30. Pearlware dinner plate with moulded shell edge, coloured blue under-glaze; context 512.

Figure 2.53: Pearlware (cont.)

31. Pearlware dinner plate rim with moulded shell edge, coloured green under-glaze; context 305.

32. Pearlware tureen or vegetable dish cover with shell moulding in relief, coloured green under-glaze; context 600.

33. Pearlware tea bowl with blue printed oriental temple landscape pattern to external and internal border pattern (as Figure 2.53, 34); context 600.

34. As Figure 2.53, 33 above.

35. Pearlware bowl with blue printed oriental landscape pattern; context 612.

36. Pearlware base sherd with impressed mark 'SPODE'; context 505.

Creamware

37. Creamware dinner plate rim with 'royal' edge; contexts 304 and 306.

38. Creamware plate with moulded 'feather' edge; context 302.

39. Creamware dinner plate with moulded 'feather' edge; context 602.

Chinese porcelain

40. Chinese porcelain base sherd, probably of a plate, with blue painted decoration; context 600.

White salt-glazed stonewares

41. White salt-glazed stoneware plate rim with moulded dot and diaper edge pattern; context 202.

42. White salt-glazed stoneware plate rim with moulded gadrooned edge pattern; unstratified.

Salt-glazed stoneware

43. Body sherd of Rhenish stoneware bottle with relief-moulded medallion or coat of arms; context 600.

44. Neck sherd of Rhenish stoneware bottle with relief-moulded mask; context 306.

Slipwares

45. Slipware posset pot or porringer rim with trailed dark brown slip decoration (left) and the base of a press-moulded slipware dish with trailed cream-coloured slip over a dark red slip coat; context 402.

Figure 2.54: Slipwares (cont.)

46. Press-moulded slipware dish rim with trailed and combed slip decoration and a pie-crust edge; context 302.

47. Press-moulded slipware dish rim with trailed slip decoration and a pie-crust edge; context 612.

48. Slipware porringer rim with trailed dark brown slip decoration; context 204.

North Devon slipware

49. North Devon *sgraffito* slipware dish/es; context 615 and unstratified (top left).

50. North Devon *sgraffito* slipware dish rim and underside (see 7122 below); context 616.

51. Underside of North Devon *sgraffito* slipware dish rim showing the partial glaze coverage; context 616.

Uncertain

52. Coarse earthenware/redware dish rim of uncertain origin; context 302.

Conclusion

The ceramics from Fenton Hill provide useful evidence for the types of wares in use on Nevis from the late 17th to late 19th centuries, complementing the small body of material already recovered through excavation and field-walking. There are strong similarities with the ceramics from other sites investigated, although the better quality and more expensive wares found at, for example, Mountravers, are lacking.

The quantity of ceramics increases as the 18th century progresses, with a decline in the number of Continental European wares and a corresponding increase in the quantity of British-made wares until, by the early 19th century, the latter effectively dominate the assemblage. By this time the assemblage comprises primarily refined white-bodied earthenwares which, even if these are not Staffordshire products, reflect the growth in influence of the Staffordshire potteries and their impact on manufacturers in other areas of Britain. Both Staffordshire and Scottish material is present in the assemblage, although the majority of the ceramics cannot be attributed to a manufacturer or manufacturing centre with any certainty and the likelihood is that the products of other regional industries are represented.

The British character of the assemblage is striking and even the earlier ceramics reflect the influence of Britain in a colony that remained British since its settlement

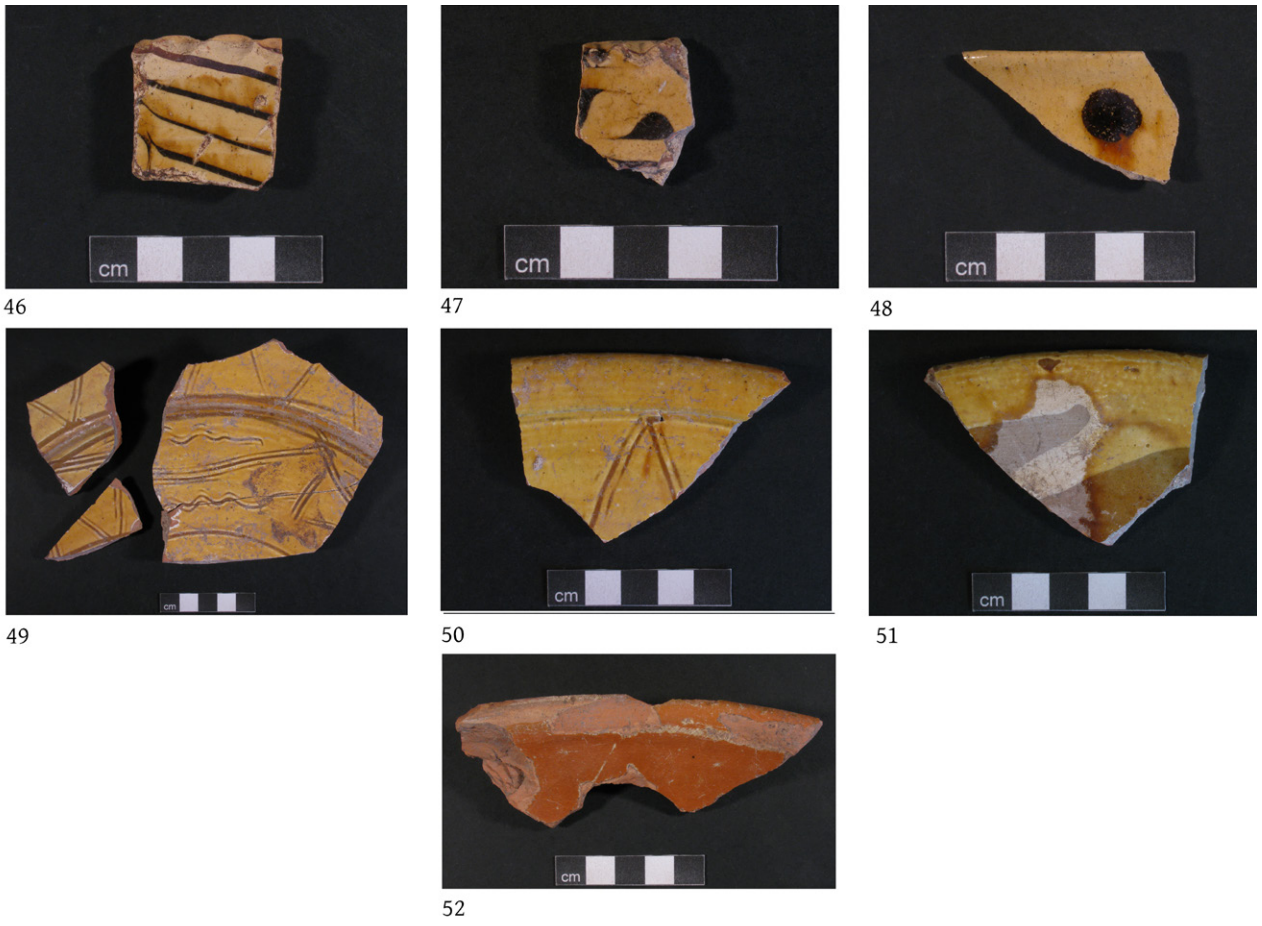

Figure 2.54. Fenton Hill: 46-52. European ceramics

by Europeans. They reflect, in effect, what was available within the wider western Atlantic market at that time and compare closely with material found both in British ports and at sites on the eastern seaboard of North America. British wares – delftwares, slipwares, gravel-tempered wares and others – are widespread during the 18th century, but British influence is also likely to be represented by the presence of European ceramics that were, most probably, transhipped to the Caribbean colonies through London and other English ports.

Further detailed analysis of assemblages from other Nevis sites, particularly Mountravers and Crosse's Alley, Charlestown, should provide valuable additional evidence to place the Fenton Hill material in a sounder context and might help to identify any peculiar Nevisian characteristics or preferences.

Sugar Cone Moulds

Elaine L. Morris

Several sherds from wheelthrown sugar cone moulds were identified amongst the European pottery assemblage (20 sherds; 454g). British sugar moulds are thick-walled (7-12mm), cone-shaped vessels of various sizes measuring approximately 180-420mm in diameter and from 350-800mm in height. These distinctive vessels always have an intended hole in their base and often display either a white slip surface treatment or smoothing on the body of their interiors (Allan 1984, 138-41, fig. 116; Brooks 1983, figs 1-4; Figures 2.55-2.59). Moulds were used in association with 'drip jars' to capture drained molasses and impurities out of sugar solutions through the base hole which allows the sugar crystals to dry into a cone-shaped loaf; however, no examples of sherds from obvious drip jars were identified in the Fenton Hill European pottery assemblage (see Barker, above). Six different vessels were identified amongst the Fenton Hill sugar mould sherds based on variation in fabric type, presence or absence of white slip and its execution, and firing condition during manufacture. Only one rim sherd was recovered, and no examples of base sherds were found.

Microscopic examination of the Fenton Hill sherds revealed that two distinctively different fabric groups, one dominated with rounded quartz sand (Figure 2.56, A) and the other with subangular minerals derived from an intermediate igneous rock (Figure 2.56, B), had been used to make the moulds. The majority of sherds derived from vessels made from the sandy fabric (18

Figure 2.55. Fenton Hill: British sugar mould sherds with slip on interior

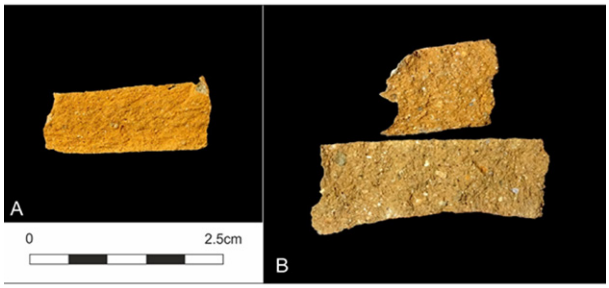

Figure 2.56. Fenton Hill: sugar mould fabrics - A: British-made and B: Nevis-made

Figure 2.58. Fenton Hill: British sugar mould with fine stripes of slip on interior - vessel 2

Figure 2.59. Fenton Hill: Nevisian sugar moulds with evidence of wheel-thrown manufacture - right, vessel 5 and left, vessel 6

sherds; 392g). This fabric contains a very common to abundant amount (30-40%) of moderately well-sorted, medium-grained quartz measuring less than 0.5mm across with rare grains up to 1.0mm in a clay matrix with very rare to rare (up to 1%) fragments of rounded to subrounded detrital flint up to 2.5mm across and possibly mica flecks. The quartz grains are usually clear and glassy but occasionally opaque which suggests they might be quartzite rather than quartz. In thin-section, there is a common to very common amount (25-30%) of rounded to subangular quartz up to 1mm across with the majority of grains less than 0.3mm, rare to sparse (2-3%) rounded iron oxides up to 0.2mm, very rare (less than 1%) subangular siltstones up to 0.1mm, and flecks of muscovite mica. This fabric is similar to one defined by Hardwick (2001) as likely to have been of British origin, but this needs confirmation by comparison to Hardwick's photomicrograph of this example of a sugar mould currently archived in the Nevis Historical and Conservation Society's Nelson Museum at Belle Vue, Charlestown. The two other sherds (62g) derive from a fabric that contains an abundance of dull off-white to grey and opaque felspars, black and shiny ferromagnesian minerals and pieces of grey igneous rock measuring up to 2mm across. No grains of quartz, flecks of mica or very rare pieces of flint are visible at x10 microscopy in this fabric. In one thin-section, a very common to abundant (30-40%) concentration of subangular to subrounded, disaggregated components of igneous rock including plagioclase felspar, hornblende, olivine and pyroxene, as well as rounded opaques, measuring up to 0.8mm with the majority up to 0.4mm across, was identified. There are also

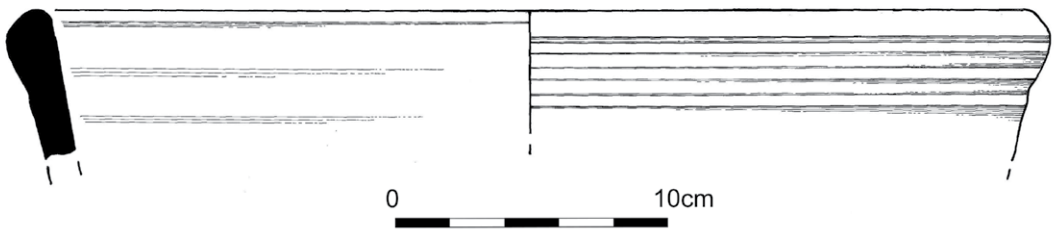

Figure 2.57. Fenton Hill: British sugar mould rim - vessel 1

frequent pieces of fine-grained dacite/andesite rock with phenocrysts of plagioclase and hornblende in particular. This range of inclusions would be expected from clay derived from the disintegration of Nevis volcanic deposits (Hutton and Nockolds 1978).

Detailed examination has revealed that four vessels were made from the British fabric. Vessel 1 is the best preserved example, with ten sherds including the only rim which was reconstructed to *c.* 320-340mm in diameter (Figure 2.57). Body sherds range from 8-11mm thick. Slip, present on the interior of each body sherd, is thin and was applied to create a striped appearance (Figure 2.58). This mould is distinctive due to its unoxidised or reduced firing condition which resulted in the fabric appearing as a mid-grey colour. Sherds from this vessel were recovered from Phases 4.1 and 4.2 only (contexts 607, 610, 615 and 617). Vessel 2, on the other hand, is represented by four completely oxidised body sherds, one each from Phases 4.1 and 4.2 and two redeposited in Phase 7.2 (context 600). This vessel is distinguished by having what appears to have been sponged-on white slip treatment rather than painted or wiped as for the striped appearance of Vessel 1 and the walls measure only 7-8mm thick. There are two body sherds from Vessel 3, one found in Phase 4.1 (context 610) and the other redeposited in Phase 5 (context 606). The interior surface of this mould seems to be inclining towards an unoxidised condition but is otherwise fully oxidised. The walls, like those of Vessel 2, measure from 7-8mm thick and display wide and narrow striped slip treatment. Vessel 4 is comprised of only one body sherd, measuring 7-9mm thick, and has crisp, narrow, well-spaced, white slip stripes on the interior and a shallow, horizontal, manufacturing groove on the exterior. This sherd was recovered from Phase 4.1 (context 610).

Two sugar moulds were made from the local Nevisian or non-British fabric. Vessel 5 is represented by a body sherd found in a Phase 4.2 context (512) (Figure 2.59, right). This sherd measures from 8-11mm thick which suggests that it derives from near the rim of the mould. It displays evidence of having been wheelthrown and fired in an oxidising atmosphere which made the vessel orange-red in colour. There is no slip on its interior. Vessel 6 is represented by a body sherd measuring 8-9mm thick and has no slip on the interior but displays strong evidence of having been wheelthrown. It had been fired in an oxidising atmosphere resulting in a brownish-orange colour (Figure 2.59, left). The subtle manufacturing differences between these two sherds indicate that they do not belong to the same vessel despite having been made from the same fabric.

In summary, evidence was found that at least six sugar moulds had been used and broken at Fenton Hill. One or more sherds from five out of six moulds were first identified in Phase 4 contexts and therefore it is appropriate to date the earliest deposition of sugar mould sherds at this site to the late 17th-early 18th century; in particular, seven of the ten mould sherds from the unoxidised vessel were found in association with *sgraffito*-decorated slipped bowl sherds in context 615 (Figure 2.54, 49). Two of the remaining sherds from these same sugar cone moulds were recovered in Phases 5 and 7 and can be considered as redeposited material rather than late examples of moulds, while the only sherd from one Nevisian-type fabric (Vessel 6) was found in a Phase 5 context (604) and may represent later production on the island.

Clay Tobacco Pipes

David A. Higgins

Methodology

Each of the fragments from this site has been individually examined and details of the pieces in each context group logged in an Excel table, a copy of which has been deposited as part of the site archive. A context summary has also been prepared (Appendix Table 2.6), which includes two dates for each context. The first date represents the overall range of the pipe fragments from each context, which is often quite general because it includes broad date ranges for the less diagnostic pieces, while the second is the most likely date of deposition based on an assessment of the pipe group as a whole. This closer dating relies on assessing the overall character of the context group and, in particular, the latest likely date for any of the individual pipe fragments present, but it does not take account of any other artefactual or stratigraphic dating evidence from the site. The recording system is based on that developed at the University of Liverpool (Higgins and Davey 2004) and the marked pipes have all been added to the as yet unpublished national catalogue that is being compiled by the author, a copy of which is held at the National Pipe Archive, currently housed at the University of Liverpool. Cast numbers for any illustrated pieces that have been added to the national catalogue are given in the figure captions below. The identification of the Bristol makers' marks and details of the pipemakers' working lives are based on a working list prepared by Roger Price (2013).

Material Recovered

A total of 427 fragments of clay tobacco pipe was recovered from 63 different contexts. These comprise 79 bowl fragments, 145 stem fragments and three mouthpieces from the 2007 excavations (227 pieces) and 56 bowl fragments, 140 stem fragments and four mouthpieces from the 2009 excavations (200 pieces), making a total of 135 bowl fragments, 285 stem fragments and seven mouthpieces in all. In general

terms, the majority of the finds are very fragmentary, suggesting that they were recovered from well-trampled and/or disturbed deposits. There are very few complete bowl forms and quite a large number of very small fragments, which can make identification and dating difficult.

The assemblage contains a total of 20 pipe fragments with lettering or makers' marks, as well as a further eight stems with decorative marks or incomplete stamps, and a bowl with the very edge of a Bristol style cartouche mark. In addition, there are four fragments with relief-moulded decoration and two joining pieces with traces of a glazed tip. There are seven fragments of 17th- or early 18th-century pipe that are certainly Dutch (and as many more pieces that may well be), together with at least three late pieces of Scottish origin (mid 19th century or later).

The Pipes in Relation to the Site

Clay tobacco pipes provide one of the most accurate and sensitive means of dating post-medieval deposits, particularly if they are present in some numbers. Unfortunately, most of the 63 context groups from this site are small, with 49 of them having produced between just one and ten fragments of pipe. Of the 14 larger groups (containing between 11 and 27 fragments) nearly half contain material of mixed date. Finally, the majority of the finds are very fragmentary and very few joining pieces were noted within or between contexts. As a result, the dating and interpretation of this assemblage largely relies on small and very fragmentary context groups, several of which have clearly built up over a period of time. Despite these constraints, it has been possible to give reasonably close dates for many of the individual fragments and there are quite a number

Table 2.6. Fenton Hill: List of Bristol makers' marks on clay tobacco pipes

Mark	Stem	Heel	Bowl	Date	Suggested Maker	Comments
LE	2		3	1665-1700	Llewellin Evans	Two stem marks (one with incuse initials, the other relief) and three incuse bowl stamps (two with initials only - one inverted on the pipe, and the third with additional surrounding decoration). Evans was a major Bristol exporter, who took his freedom in 1661 and was probably running his own business by *c.* 1665. He died in 1688 but the business was carried on by his widow Elizabeth into the 1690s and then probably passed into various other ownerships during the early 18th century via the marriage of his daughter, Mary. The well-established LE mark may, therefore, have continued in use for a few years after the deaths of Llewellin and Elizabeth, and so a date of just after 1700 for the latest examples is not impossible.
PE		1	1	1660-1703	Philip Edwards I or II	An incuse PE bowl stamp and a damaged incuse heel stamp, which probably read PE. The products of either Philip Edwards (I), free 1650, died 1683, or his son, Philip (II), who was apprenticed to his father in 1669, took his freedom in 1681 and probably died in 1703.
RN		1		1660-1700	Richard Nunney	Incuse heel stamp (Figure 2.61, 10). Made by Richard Nunney, who was born in 1631, became a founder member of the Bristol Pipemakers' Guild in 1652 and probably died in 1698. Nunney was one of the principal Bristol manufacturers and took nine apprentices.
IP	1			1680-1710	John Poyte or Jacob Prosser	Incuse stem stamp (Figure 2.61, 14). Various makers with the initials IP are recorded in Bristol but the most likely manufacturers of this piece are either John Poyte (free 1680) or Jacob Prosser (free 1663).
IS			1	1720-1750	Possibly John Squibb or Joseph Stanford	Incuse Bristol style IS bowl stamp (Figure 2.61, 13). There were quite a number of Bristol makers with these initials during the early 18th century but the most likely candidates for this mark are probably John Squibb, who seems to have taken over the large workshop formerly run by Llewellin Evans in *c.* 1704 and died in 1738, or one of the Joseph Stanfords, who were working from *c.* 1691 until *c.* 1747.
RT			1	1680-1720	Robert Tippet	Incuse bowl stamp (Figure 2.61, 12). Made by one of the several generations of pipemakers called Robert Tippet working in Bristol.
WW		1		1650-1680	William Williams	Incuse heel mark (Figure 2.61, 9). Probably made by William Williams, who was apprenticed in 1639, took his freedom in 1651 and was a founder member of the Bristol Pipemakers' Guild in 1652. He is recorded working until at least 1676, when his last apprentice was taken.
F-		1		1660-1700		Damaged incuse heel mark with Christian initial F. Bristol pipes of this period stamped FH and FR are known.
??	2			1660-1700		The very edges of two roll-stamped stem marks, probably from Bristol.
TOT	5	4	6			

of marked or decorated pieces that can be tied down to particular manufacturers or production centres. These more diagnostic pieces enhance the reliability of the context summary and dating provided in Appendix Table 2.6.

In terms of the overall occupation and use of the site, some of the stem fragments are of general 17th-century types that could technically be as early as *c.* 1610, but this seems unlikely in the absence of English settlement on the island before 1628. The earliest closely datable piece is a Dutch bowl of *c.* 1635-50 from context 603, which shows that there was probably some activity on the site before the middle of the century (Figure 2.60, 1). The origin of this piece perhaps reflects the fact that the island was an important source of tobacco for the Netherlands during this period. There is also another small bowl fragment of indeterminate origin, dating from *c.* 1640-60, which was recovered from context 203. These examples, however, are not characteristic of the assemblage as a whole, whereas there are many more fragments that fall within slightly later date ranges of *c.* 1640-70, *c.* 1650-80, and so on.

From *c.* 1660 quite large numbers of fragments are present and the pipe evidence would suggest that the site was only really used intensively from the 1650s or 1660s onwards, with a particular peak in pipe use/deposition during the period *c.* 1660-1700. This is represented archaeologically by a large number of thick stem fragments with large bores, which are characteristic of Bristol products during this period. This impression is confirmed by the presence of some 15 late 17th- or early 18th-century fragments with Bristol style stamped marks on them (5 stems, 4 heels and 6 bowls; e.g. Figure 2.60, 9, 10, 12 and 14). There are five or six Dutch stems with moulded or stamped decoration that probably belong to this phase as well, showing that a smaller but significant quantity of pipes from the Low Countries was circulating alongside the English material (Figure 2.60, 2-6). At least two of the Dutch pieces were finely burnished and represent better quality products that would have cost a little more to obtain. One or two of the bowls are probably from London (e.g. Figure 2.60, 11) and this mix/ratio of Bristol, Dutch and London products is typical of assemblages of the period from elsewhere on Nevis. The dominance of Bristol products not only reflects the importance of the Caribbean trade to that city at the time, but also the likely origin of the plantation owners during this period (see site report text, this volume).

There are still quite a significant number of early 18th-century fragments from the site, but they are far fewer in number than the late 17th-century finds. This decline is clearly shown by the fact that there is only part of one single Bristol-style cartouche mark from this period (not illustrated), one early 18th-century Bristol bowl stamp (Figure 2.60, 13) and one clearly identifiable fragment of Dutch pipe (Figure 2.60, 7). After *c.* 1730 there is an even more marked decline and hardly any pipes seem to have been deposited over the next few decades. This may in part be due to the vogue for taking snuff rather than smoking tobacco during this period, although it is not certain to what extent this shift in fashions would have influenced consumption on a colonial plantation, particularly amongst the slave workers, if they are the source of some of the material recovered here. Whatever the reason, very little material from the mid to late 18th century can be identified with any certainty, although there is one fragment from an Armorial bowl of *c.* 1740-80 from context 112. This fragment would almost certainly have been decorated with the Hanoverian arms originally and its presence is interesting to note.

Armorial pipes were particularly produced in London and the south of England, but their distribution appears uneven and there is still some debate as to how they should be interpreted. Audrey Noël Hume, in her study of Armorial pipes from Williamsburg, Virginia, records quite large numbers from this colonial capital and notes a particular association with tavern sites (Noël Hume A. 1970, 146). She also suggests that these pipes are scarce on other colonial sites (Noël Hume A. 1970, 141), although the author has seen quite a number amongst 18th-century assemblages on sites ranging from Canada to the Caribbean, and various other examples are known from Nevis itself, for example from Jamestown (Higgins 2004, 27), Mountravers (MTS 02 749 <2034>) and in the Hamilton Museum, Charlestown, Nevis (unprovenanced). It may be that the large quantity of 18th-century finds from the extensive excavations at Williamsburg has skewed the impression and properly quantified samples from a range of sites are clearly needed to make an objective comparison. Likewise, the ornate decoration on these pipes does not necessarily mean that these were 'high status' products, as witnessed by their tavern association in Williamsburg, or by examples of *c.* 1820-40 associated with prison hulks that the author has seen from Bermuda. Uncertainties of interpretation aside, the fact remains that at least one Armorial pipe found its way to Fenton Hill, where it was used during the 18th century.

Another type of pipe that is represented at the site during the 18th century is the heelless 'export style' pipe. The earlier pipes are split between heel forms (12 identifiable examples, ranging from *c.* 1640-1730) and spur forms (nine identifiable examples, ranging from *c.* 1660-1740). There are no export style pipes amongst this earlier group (i.e. before *c.* 1740) despite the fact that these were the cheapest form of pipe, and one that might have been expected to be provided for a slave population. Either this was not the case on this particular plantation, or the first main phase of

pipe deposition, *c.* 1640-1740, contained only material discarded from the plantation house itself. This second suggestion is supported by the finding of some burnished Dutch stems amongst the earlier group, which represent better quality (and therefore, more expensive) forms of pipe. By way of comparison, finds from the near-contemporary occupation of *c.* 1690-1750 at the Upper Rawlins plantation site on Nevis produced nearly 25% export style pipes (Higgins 2012).

In marked contrast, the entire later bowl forms that could be identified from Fenton Hill were plain export style bowls (six examples, ranging from *c.* 1740-1920, e.g. Figure 2.60, 15-16). These examples were often very fragmentary and hard to date accurately but, taken together, they suggest a marked change in the style of pipes being used on the site. This could simply reflect a change in preference of the site owner, or it could indicate a change of use for the excavated areas, with the majority of the finds now coming from the slave population. This latter scenario is perhaps supported by one of the pieces of *c.* 1740-1840 from context 237 where extensive tooth wear on the stem shows that this pipe had been broken but continued to be used for some time with only a 38mm surviving stem before finally being discarded (Figure 2.60, 15; Figure 2.61). Three other stem fragments also have worn ends from possible reuse, a fragment of *c.* 1680-1750 from context 222, a fragment of *c.* 1720-1820 from context 305 and a fragment of *c.* 1862-1911 from context 205 (Figure 2.60, 21; plus photo). Taken together, these pieces suggest that there was fairly regular reuse of broken pipes on the site during the 18th and 19th centuries.

It is not clear exactly when pipe deposition on this site picked up again, since many of the late 18th- or early 19th-century fragments are hard to date accurately, but it does seem that there was renewed deposition of material from *c.* 1850 onwards. This final phase of pipe use was never as intensive as the late 17th- to early 18th-century phase, but it is represented by a number of marked or decorated fragments, several of which certainly came from Scotland (Figure 2.60, 19-21). This influx of Scottish material is not totally unexpected, since the industry there grew rapidly and captured the larger part of the British export trade during the second half of the 19th century. The products of at least three of the major Scottish manufacturers are represented and this concentration of material provides the best artefactual evidence for this export trade having reached the Caribbean that the author has seen.

In broad terms, the pipes recovered from these excavations suggest that the use of this site started during the 1630s or 1640s, but that it was not until the 1650s or 1660s that substantial and sustained occupation took place. There was then a particularly active phase of settlement/pipe deposition on the site, which lasted until around 1700, followed by a slightly less active phase of deposition until around 1730. There is very little mid to late 18th-century material represented in the archaeological record, but then rather more mid to late 19th-century material, with the latest finds probably being of early 20th-century date. It should be stressed, however, that these finds can only ever represent periods when cultural material was being laid down within the excavated area and that the specific site use/waste disposal patterns will have played an equally important role in determining the composition of the archaeological record during each of these periods.

The Pipes Themselves

The pipes from this site provide a sample of those used on a Nevis plantation from the mid 17th century onwards. Although rather fragmentary, the origin and type of many of the pieces can be recognised so as to provide an overview for this site. All of the fragments recovered from the excavations are white pipes of northern European origin, although workmen have recovered two fragments of red pipe stem, now in the site owner's possession. The author has not seen these, but they could well be New World products, which were circulating in the Caribbean during the 17th and early 18th centuries.

Dutch pipes formed a small but significant element of the 17th- and early 18th-century pipes found. There were several plain fragments that may well be from Dutch pipes and at least seven pieces that certainly were (Figure 2.60, 1-7). These include a poor-quality bowl of *c.* 1635-50 with a debased Tudor Rose mark, probably made in Amsterdam (Figure 2.60, 1), as well as part of a Jonah pipe of *c.* 1650-70 (the bowl would have been decorated with a man's head, representing Jonah, looking back along the stem at a sea monster). The Jonah pipe has the maker's initials 'II' on the sides of the stem, probably for Jan Jonasz de Vriend of Gouda. The other pieces cannot be attributed to particular makers but are most likely to have been made in Gouda, which rapidly overtook Amsterdam as the main production centre in the Netherlands during the course of the 17th century. Four fragments have fleur-de-lys stamps decorating the stem (Figure 2.60, 3-6), three of which have bands of milling dividing the stem into sections. Two of these pieces are also finely burnished, showing that good quality pipes were being used on the site. The latest piece is a stem twist of *c.* 1700-50 with milled bands enhancing the decoration (Figure 2.60, 7).

The remaining pieces are British in origin and can be divided into two broad groups: the mid 17th- to early 18th-century pipes and those of mid 18th-century or later date. Amongst the earlier group are one or two pieces that were probably produced in London, for

example, a Type 22 bowl of *c.* 1680-1710 (Atkinson and Oswald 1969) shown in Figure 2.60, 11. The majority of the material, however, derives from Bristol, which became a major supplier of pipes to the New World from the mid 17th century onwards. The city encouraged pipe making around the middle of the century, with a pipemakers' guild being established in 1652 (Jackson and Price 1974, 12). Huge numbers of pipes were exported from the 1650s onwards, with many of them being marked. During the late 17th century the marks were usually placed on the base of the heel or as a roll-stamp around the stem (Figure 2.60, 9, 10, 14), but around the turn of the century heel stamps tended to be replaced by stamps placed on the bowl facing the smoker (Figure 2.60, 12-13). During the early 18th century a relief-moulded cartouche mark, usually placed on the right-hand side of the bowl, gradually became the dominant form, but pipes of this type are barely represented at Fenton Hill with just the very edge of one such mark having been recovered from context 102. A summary of the stamped Bristol marks recovered is provided in Table 2.6.

The Bristol pipes represented are all heel or spur forms, with none of the export style pipes that might be expected at this period (see discussion above). Otherwise the range and quality of these pipes is typical of those exported from Bristol and the marks include several principal manufacturers/exporters.

The mid 18th- to mid 19th-century pipe evidence is very scrappy but includes part of an Armorial bowl from context 112. Moulded decoration is also represented by a fragment with floral decoration from context 306, which was probably produced in Bristol *c.* 1760-1820 (Figure 2.60, 17). The main change in the nature of the assemblage is the apparent dominance of heelless export styles (e.g. Figure 2.60, 15-16) as discussed above. Six of these were present amongst the 18th- and 19th-century finds and there were not any other forms represented, although this may well be partly due to the small sample size and several of the later fragments would almost certainly have come from spur types (e.g. Figure 2.60, 18-21).

From the mid 19th century the nature of the pipe assemblage changes again with an influx of Scottish material. At least three of the principal Scottish manufacturers are represented (White, Davidson and McDougall; Figure 2.60, 19-21), as well as fragments from bowls that are likely to be of northern English or Scottish origin. One of these has part of what was probably a TW mark on it (Figure 2.60, 18) and another, the initials TD. Both of these marks denote styles of pipe rather than the actual initials of the maker and both were produced by many of the larger firms. The TD pipes in particular became a favoured export pattern for the North American markets. One of the Scottish fragments has traces of a yellowish-brown glaze coating the tip and most of the identifiable fragments are likely to have come from short stemmed or 'cutty' styles of pipe.

Summary and Conclusions

As well as providing good dating evidence for the individual excavated contexts and features, the pipes also provide a broader framework suggesting intensive use of the site from the 1650s or 1660s onwards and then a sharp decline in pipe deposition during the early 18th century. There is continued occupation and use of the site until the late 19th or early 20th century but the nature of the pipes deposited appears to change over time, with no evidence of the cheap 'export style' pipes amongst the pre-1740 pipes, after which they become the only form present in the excavated sample. Further work is needed on larger assemblages to see how the ratio of different styles changes over time and, in particular, whether different styles of pipe can be reliably associated with smokers of different social status (e.g. slaves/plantation owners). The assemblage from this site is rather small to make too much of the differences noted, but it certainly appears to contrast with the mix of finds recovered from near contemporary deposits at the Upper Rawlins plantation, which contained around 25% export style pipes during the *c.* 1690-1750 period. This may suggest that the pipes were being discarded from different social groups at the two sites and that there was a change of site use within the excavated areas at Fenton Hill after the early 18th century, when export style pipes became the dominant form.

List of Illustrated Clay Pipes (Figure 2.60)

A selection of the more diagnostic fragments from this site has been illustrated and the following catalogue gives the suggested date for each example, together with details of its appearance and attributes. Each entry ends with the cast reference from the as yet unpublished national catalogue that is being compiled by the author (where an impression has been made) as well as the site code, context number, co-ordinates and/or small find number. Burnished surfaces are shown with a light broken line. Incuse lettering for the marks is shown solid and relief letters in outline.

1. Complete Dutch bowl with a poor Tudor Rose stamp on the heel, probably an Amsterdam product. The whole pipe is of low quality with poorly trimmed seams and manufacturing cracks in the bowl. The bowl dates from *c.* 1635-1650 and has a fully milled rim and a stem bore of 8/64". Cast 701.33. FH09 603 SF1653.

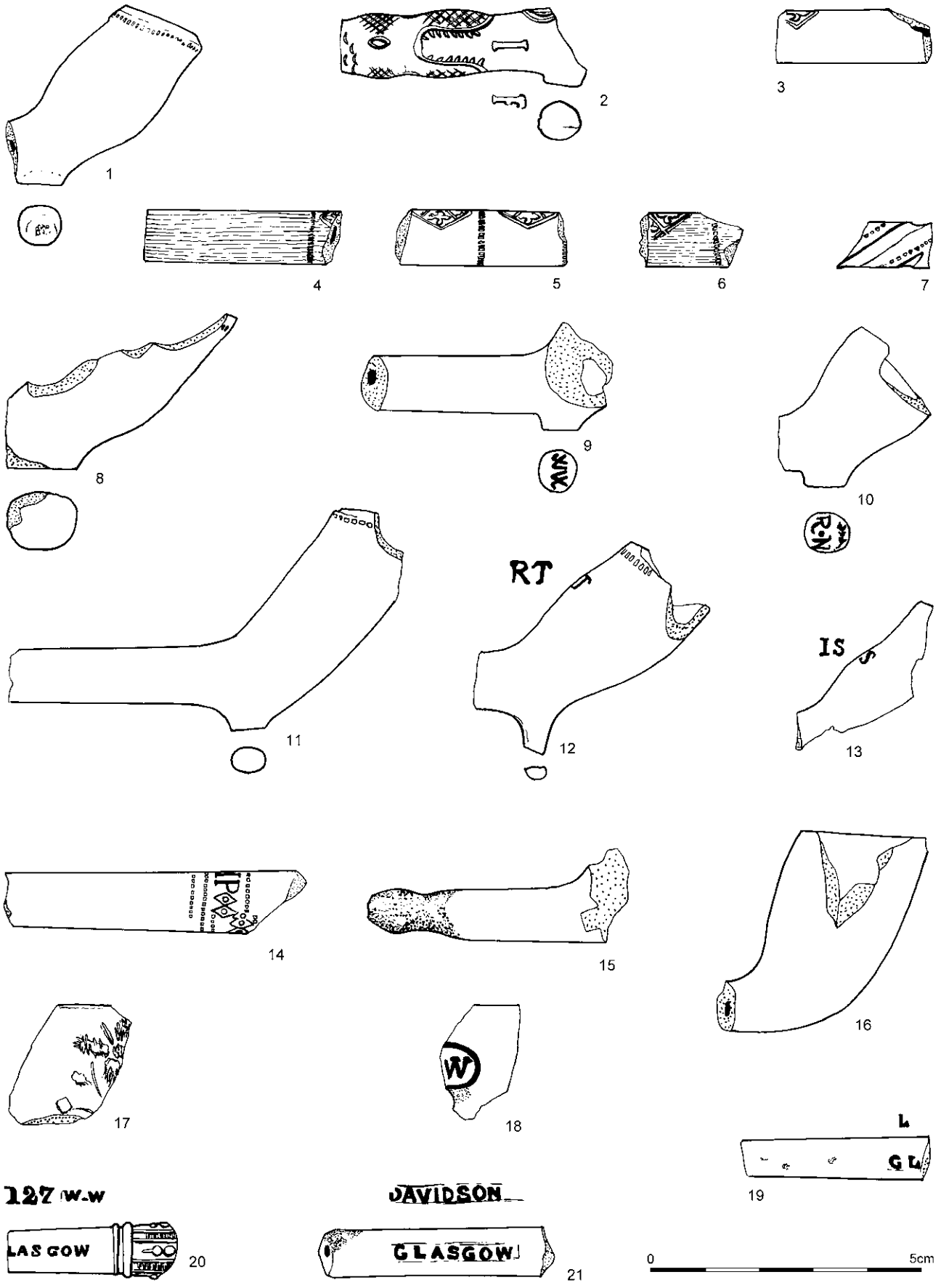

Figure 2.60. Fenton Hill: 1-19. clay tobacco pipes

Figure 2.61. Fenton Hill: detail of no. 15, pipe with worn and smoothed stem end, context 237 SF2289

2. Dutch fragment from a pipe of *c.* 1650-1670 with a stem bore of 9/64". There is a relief-moulded sea monster on the stem and the very tip of a man's beard, whose head (representing Jonah) would have formed the bowl, looking back along the stem. The maker's initials are relief-moulded on the sides of the stem. The first initial is a little unclear and could be interpreted in a number of ways but the mark has been identified as II by Jan van Oostveen, probably for Jan Jonasz de Vriend of Gouda (email dated 12-6-13). Plain heel. Cast 702.4. FH07 402 SF73.

3. Dutch stem fragment from a pipe of *c.* 1625-1675 with a stem bore of 7/64". There is part of a single fleur-de-lys lozenge stamp surviving on the top of the stem, which is hard to date closely. Cast 702.8. FH09 600 SF1225.

4. Dutch stem fragment from a pipe of *c.* 1640-1670 with a stem bore of 8/64". This is from a finely burnished pipe that would have been decorated along the stem with fleur-de-lys stamps separated by milled bands (only one band and part of one stamp survives). Probably a Gouda product. Cast 701.20 - 701.21. FH07 219 98E 204N.

5. Quite a thick Dutch stem fragment from a pipe of *c.* 1640-1670 (and possibly as late as *c.* 1700) with a stem bore of 7/64". On the stem are the remains of three milled bands dividing the stem into sections, each of which is decorated with a lozenge shaped stamp, divided into four and with each smaller lozenge containing a fleur-de-lys. Quite a glossy surface but it does not seem to be actually burnished. Probably a Gouda product. Cast 702.6. FH09 512 97E 198N SF2001.

6. Dutch stem fragment with a stem bore of 6/64". There are the remains of a milled band dividing the stem into sections and part of a lozenge shaped stamp, divided into four and with each smaller lozenge containing a fleur-de-lys. Probably a Gouda product of *c.* 1640-70, but could possibly be as late as *c.* 1700. Cast 702.7. FH09 612 SF1955.

7. Dutch stem fragment from a pipe of *c.* 1700-1750 decorated with plain spiral stem twist and three spiral bands of milling. Stem bore 6/64". Cast 702.11. FH09 237 SF2289.

8. Fragment from an unmarked Bristol style bowl of *c.* 1670-1700 with a stem bore of 7/64". FH07 205 96E 201N SF30.

9. Bowl fragment from a pipe of *c.* 1650-1680 with a stem bore of 7/64" and a Bristol style incuse stamped WW mark. Similar examples with complete bowls illustrated by Jackson and Price (1974) tend to date from quite early in the 17th century but this looks like a mid 17th-century piece and could possibly even be later. Probably made by William Williams, who was apprenticed in 1639, took his freedom in 1651 and was a founder member of the Bristol Pipemakers' Guild in 1652. He is recorded working until at least 1676, when his last apprentice was taken. Cast 701.29. FH07 203 SF019.

10. Bowl fragment from a pipe of *c.* 1660-1700 with a stem bore of 8/64", the heel stamped with an incuse Bristol mark reading RN. This can be attributed to Richard Nunney, who was born in 1631, became a founder member of the Bristol Pipemakers' Guild in 1652 and probably died in 1698. Nunney was one of the principal Bristol manufacturers and took nine apprentices. Cast 702.15. FH09 616 SF2302.

11. The larger part of quite a poorly made bowl from a London style pipe of *c.* 1680-1710 with a stem bore of 7/64". FH07 404 96E 202N SF75.

12. The larger part of a Bristol style spur bowl of *c.* 1680-1710 with incuse stamped maker's mark RT facing the smoker and a stem bore of 7/64". Made by one of the Robert Tippets of Bristol, who were active for a lengthy period during the late 17th and 18th centuries. Cast 701.35. FH09 506 93E 198N SF2071.

13. Fragment from quite a thin-walled bowl of *c.* 1720-1750 with a pronounced 'hump' facing the smoker. Incuse stamped Bristol style IS mark facing the smoker. There were quite a number of Bristol makers with these initials during the early 18th century but the most likely candidates for this mark are probably John Squibb, who seems to have taken over the large workshop formerly run by Llewellin Evans in *c.* 1704 and died in 1738, or one of the Joseph Stanfords, who were working from *c.* 1691 until *c.* 1747. Cast 701.36. FH07 205 95E 201N SF40.

14. Deep oval stem of *c.* 1680-1710 with a Bristol roll-stamped mark comprising dots within lozenges flanked by two serrated bands that include the incuse initials IP. Various makers with the initials

IP are recorded in Bristol but the most likely manufacturers of this piece are either John Poyte (free 1680) or Jacob Prosser (free 1663). Stem bore 7/64". Cast 702.12. FH09 506 95E 198N SF2078.

15. Stem fragment from a pipe of *c.* 1740-1840 with a stem bore of 6/64". The stem is just opening into an export style bowl. The broken stem end has been smoothed and extensively worn from having been smoked in a much reduced form - only 38mm of stem survives from the bowl junction. FH09 237 SF2289.

16. Three joining pieces (freshly broken) making up the larger part of a plain spurless bowl of *c.* 1780-1920 with a stem bore of 5/64". FH07 205 SF10.

17. Fragment from the right hand side of a bowl of *c.* 1760-1820 with a large four petal flower centrally at the rim and traces of a spray of smaller leaves and flowers below. Appears to be from a large and slightly forward leaning bowl. Probably a Bristol product. Cast 701.30. FH07 306 97E 204N SF63.

18. Small bowl fragment with an incuse moulded W within an oval border facing the smoker on the right hand side of a bowl dating from *c.* 1860-1920. This would almost certainly have read TW originally, a popular pattern or design (rather than the actual maker's initials) produced by many makers in the north of England and Scotland at this period. Cast 701.28. FH07 205 SF11.

19. Two joining fragments (freshly broken) from a short-stemmed cutty pipe with an incuse moulded maker's mark on the sides and splashes of a yellowish brown glaze from the tip. This piece probably dates from *c.* 1850-1920 and has a stem bore of 6/64". The incuse moulded maker's name seems to end with an L and the place name starts with GL. Almost certainly this would have read McDOUGALL/GLASGOW originally, for one of the largest Scottish firms who operated from 1846-1967. There is an abraded facet on the broken stem end furthest from the bowl, but it is not clear whether this was intentional smoothing so that the pipe could be reused or the result of idle doodling or accidental wear (for example, when partially buried in a worn surface). Cast 701.31. FH07 306 97E 204N.

20. Stem fragment from a pipe of *c.* 1860-1955 with a stem bore of 5/64". This fragment was made by the firm of William White of Glasgow, who operated from 1806-1955. The bowl had relief-moulded decoration that extends onto the stem as a series of relief-beaded bands with lines and hatching between. The incuse moulded mark would have read '127 W.WHITE / GLASGOW', the 127 being a pattern number from their catalogue (in 1900 this number was listed as 'Pearl', probably in reference to the beaded decoration on the bowl). This would have been a short-stemmed or cutty pipe. Cast 702.5. FH07 205 95E 200N SF29.

21. Stem fragment with the incuse moulded mark of Thomas Davidson Jr. who is recorded operating the Caledonian Pipe Works in Glasgow from 1862-1911. There is also the damaged end of a relief-moulded pattern number before the name (illegible). Stem bore 5/64". Cast 701.32. FH07 205 SF9.

Glass Vessels and Flat Glass

Robert Philpott

A total of 632 fragments of glass weighing 4082g was recovered from 63 contexts in the excavations at Fenton Hill. Trenches located in and around Structure A produced 518 fragments, while there were 114 from Structure G. The assemblage is dominated by 'wine' bottles[1], with much smaller quantities of drinking glasses, phials and other vessels at 622 by count (98.4%). Flat glass is represented by only ten very small fragments (weight 14g).

The glass is almost all highly fragmented, leaving few diagnostic characteristics and allowing typological classification or dating possible in only a few cases (cf. Jones O. R. 1986, 9). The glass is particularly fragmentary from deposits within Structure A, notably the 19th-century post-emancipation Phase 6 and 7 layers such as 206, 106, 501, and 505, where only the more robust fragments such as the thick base and rims of wine bottles retain any diagnostic typological characteristics. These layers appear to have been subject to much post-deposition trampling and disturbance, as the highly fragmented nature of another fragile material, the Afro-Caribbean earthenware, testifies. Delicate vessels, such as the drinking glass (SF6), survive only where protected, as in the blocking of the door (204).

Wine Bottles

The great majority of the glass by both sherd count and weight is derived from wine bottles. The typological development of English wine bottles is well understood both from examples bearing dated seals and from seriation of examples in dated archaeological contexts (e.g. Noël Hume 1961; 1969, 60-71; Dumbrell 1992).

The Fenton Hill assemblage appears to lack the globular-bodied 'shaft and globe' types current from about 1630

[1] The conventional terminology referring to 'wine bottles' does not of course preclude their use for other alcoholic drinks, nor for use as serving vessels (Jones O. R. 1986, 20-6).

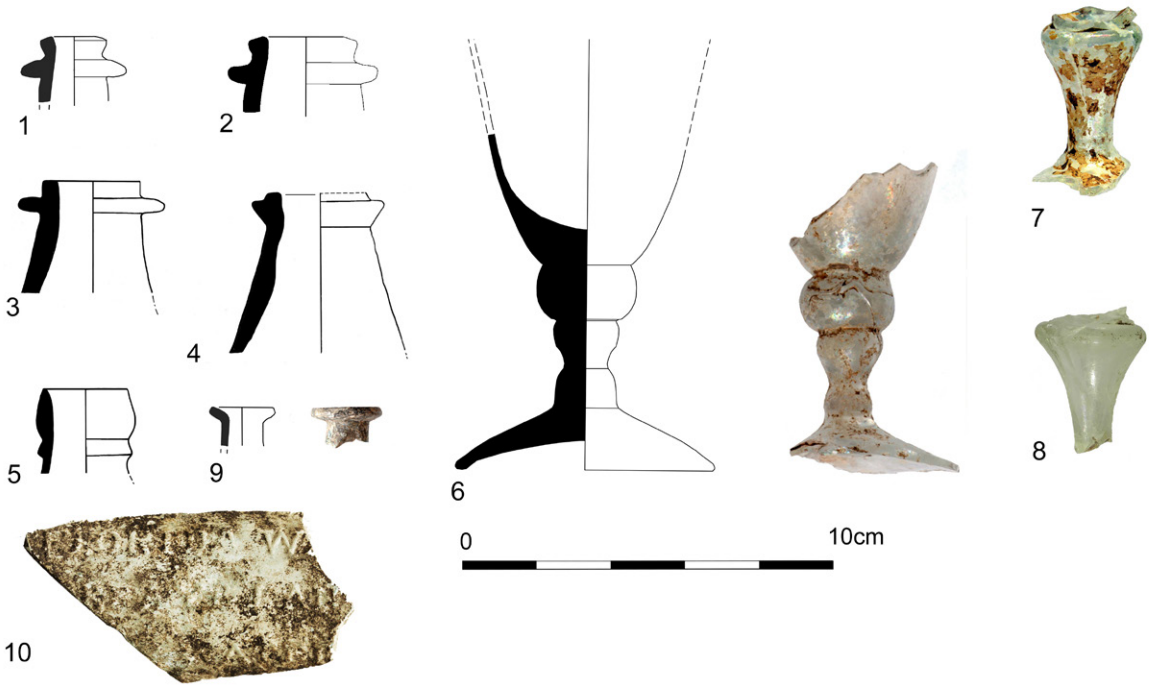

Figure 2.62. Fenton Hill: glass bottles and drinking vessels: 1-5. Glass wine bottles. 1. SF1731. 2. SF1568. 3. SF28. 4. SF469. 5. SF239. 6-8. Drinking vessels. 6. SF6. 7. SF2215. 8. SF2216. 9. SF2231 phial. 10. SF595 FLORIDA WATER bottle.

to 1680. Most of the wine bottles date to the late 17th or early 18th century, when the curvature of even small lower body sherds indicates they belong to onion bottles of late 17th- early 18th-century date (*c.* 1680-1725: Dumbrell 1992). The earliest securely stratified deposits containing glass are the make-up layers for the main house, Structure G, which are dated to the late 17th or very early 18th century. A characteristic neck form of the onion bottle, with a horizontal untooled string rim, probably dates to 1680-1715 (SF1563: Figure 2.62, 2).

There are no certain examples of the straight-sided mallet bottles, so-called for their wide straight-sided body, angled shoulders and tall neck, which are dated approximately 1725-1760. The next major typological development, the narrower-bodied cylindrical wine bottles characteristic of the mid to late 18th century, is represented by a small group of examples. Also present in only small numbers are 19th-century forms made in three-piece moulds, with neat two-stage necks with a rounded conical form (e.g. context 203, SF190; Noël Hume 1969; Dumbrell 1992; Jones O. R. 1986). There are no sealed bottles marking the personal property of the planter.

A small number of fragments come from square case bottles, which were manufactured in England from the first half of the 17th century into the 18th (Noël Hume 1969, 62), although some flat fragments where the angle of the other sides is missing could possibly be of octagonal form, a type dated to 1730-1790 (Dumbrell 1992, 87-8). Case bottles are characterised by a square body that tapers from shoulder to base, an almost horizontal shoulder and a short neck. The base is slightly arched so that the bottle rests on the four corners. Individual body sherds are easily distinguished by the flat walls, but necks are less diagnostic.

List of Wine Bottles (Figure 2.62)

1. Very small flaring neck with rounded horizontal string rim. SF1731 context 608 (Figure 2.62, 1).

2. Top of neck of wine bottle, wide horizontal untooled and irregularly applied rounded string rim; latter is a feature of *c.* 1680-1715. SF1563 context 140 (Figure 2.62, 2).

3. Neck and rim of wine bottle, squat neck with tapering rim, wide rounded string rim with flattened top and bottom (diameter at string rim 42mm). Late 17th century. SF28 context 206 (Figure 2.62, 3).

4. Neck fragment with small part of symmetrical V-tooled string rim, early 18th-century form. SF469 context 304 (Figure 2.62, 4).

5. Rim of wine bottle, rounded side and down-turned string rim, in green glass (cf. Dumbrell 1992, 115-6). Dated *c.* 1850-90. SF239 context 205 (Figure 2.62, 5).

6. Neck and rim of wine bottle, short squat neck, with upturned string rim of triangular profile, dated 1690-1725. SF74 context 218 (not illustrated).

Drinking Vessels, 17th-18th century

The assemblage contains a limited range of drinking vessels. Most are clear lead glass drinking vessels with folded feet and straight-sided conical bowls which were deposited in sealed deposits under the main house (Structure G) in late 17th- or very early 18th-century contexts. A tiny fragment with a mould-blown rib and shallow curvature may be from a large vessel, possibly of *façon de Venise* type (SF2408 context 617).

There are fragments from at least three different straight-sided conical drinking glasses (e.g. SF2286, SF2400) and two fragments of folded feet from different glasses, all in context 237, a Phase 2 context in Structure A. There is a folded foot of a drinking glass of probable 18th-century date (SF842 context 204; SF851 context 306). A number of very thin curved clear lead glass fragments (under 1mm thick) may derive from fine bowls of drinking glasses, but as most weigh under 1g they are too small to be diagnostic (e.g. SF849, SF847, SF845). The dating of those in lower make-up layers of Structure G is late 17th or very early 18th century, as in the case of a straight-sided conical bowl fragment of a drinking glass in 617 (SF2343). The folded pedestal foot was popular in the first half of the 18th century but fell out of favour when the glass tax of 1745 imposed higher taxes by weight.

List of Drinking Vessels (Figure 2.62)

7. Stem of heavy baluster drinking glass, of similar form to SF2216 below (cf. Port Royal, Jamaica, Cornman collection, nos 11 and 14, dated *c.* 1685-1700: Noël Hume 1967, 23, figs 4 and 9, nos 11, 13, 14). SF2215 context 615 (Figure 2.62, 7).

8. Stem only of heavy baluster drinking glass, single central tear in the stem, 'hexafoil' spiral pattern down the stem. The scar of the foot is present, but the stem is broken at the top of the baluster. Late 17th or early 18th century. Noël Hume dates the quatrefoil version of this form to 1685-1705 (cf. Noël Hume 1969, fig. 64, type VI). SF2216 context 617 (Figure 2.62, 8).

A fairly close parallel for the wrythen stem of these two above comes from Crosse's Alley, Charlestown (CH00, context 100), though the Charlestown example tapers more strongly.

9. Drinking glass of heavy baluster form, lead glass, domed foot of which part only survives, short baluster stem consisting of three elements: a round knop at the top, inverted baluster and small basal knop. The bowl appears to be of pointed round funnel form but is incomplete. SF6 context 204 (Figure 2.62, 6).

The heavy baluster form of drinking glass, often with a folded foot and a thin bowl of straight-sided conical form, is characteristic of the end of the 17th and early 18th century, and more precisely to the period 1685-1710 (Bickerton 1986, 12; Charleston 1984, 143). The heavy baluster stem form displayed a wide variety of forms during the period, this being the element which lent itself most readily to display of craftsmanship by the glassmaker (Charleston 1984, 133-5), so they are not closely datable without an inscription. A similar type but with a slightly longer basal knop, dated *c.* 1710, is illustrated by Bickerton (1986, 66, no. 59). The painting by Benjamin Ferrers, 'Sir Thomas Saunders Sebright, Bt., Sir John Bland, Bt. and Two other Gentlemen Smoking and Drinking', dated 1720, shows early 18th-century wine glasses in use at the table (Charleston 1984, 137, plate 34a).

Drinking vessels in clear lead glass include an 18th-century tumbler. A body sherd of a tumbler with a waisted body (SF719), decorated with simple incised horizontal lines, is of a type in use in the later 18th century (Jones and Smith 1985, 35, fig. 29).

19th-century Mould-Blown Bottles

From the second quarter of the 19th century moulded bottles became common and inscriptions usually denote the company commissioning the bottle, or the manufacturer or seller of the bottle's contents for later moulded inscriptions. There is a small number of 19th-century mould-blown bottle fragments. Several bottles with remains of moulded lettering post-date the Ricketts patent of the three-piece mould in 1821. Only one, a Florida Water bottle, represented by up to five fragments from the interior of Structure A, retains enough of the inscription to be identifiable. Another bottle in clear glass (SF854) retains the letter M only.

10. Several body sherds of a cylindrical bottle in very pale blue glass, with inscription 'FLORIDA W[ATER] / [MU]RRAY & LAN[MAN] / [No 69] WATER [ST] / [NEW YORK]'. Date of manufacture *c.* 1857-1870. SF595 context 219 (Figure 2.62, 10).

The bottle is a form known by North American chemists as the castor oil bottle. Murray & Lanman, New York, was the best-known manufacturer of Florida Water, a generic spirit-based eau-de-cologne. It was almost exclusively a North American product and had become an established commodity in perfumery shops by the 1830s and pharmaceutical stores by the following decade (Sullivan 1994). The use of the embossed

bottle may date to as early as 1857 but as the company moved from 69 Water Street in 1870 the bottle is likely to date to the period 1857-1870 (Sullivan 1994, 87-8, fig. 7). Murray & Lanman's Florida Water bottles are the most common type of Florida Water bottle found in Canada, making an appearance in the late 19th century in the English market. The company became Lanman and Kemp in 1861 but retained the Murray & Lanman branding. They exported widely to South and Central America and the Caribbean in the 19th century. Advertisements appeared in the *Saint Christopher Gazette and Charibbean [sic] Courier* in the 1870s and 1880s. One in the edition for 20 March 1874 extolled the virtues of Florida Water as 'the most healthful and finest of all cosmetics ... imparting the beautiful softness to the skin so much admired in the fair sex' (TNA CO 441/11/1). Seven Murray & Lanman's Florida Water bottles were recovered from the wreck of the SS *Republic* sunk in 1865 en route to New Orleans from New York; one illustrated example is identical to the Nevis specimen (Dobson *et al.* 2009, fig. 47).

Tumblers

There are fragments from two colourless press-moulded glass tumblers, with a tapering body form and a decorative scheme of conjoined circles.

11. A colourless glass tumbler with a plain simple vertical rim, diameter at rim 70mm and tapering body form, with press-moulded decoration in the form of conjoined circles, with one pyramidal diamond motif, mid-late 19th century, SF477, seven sherds of same vessel, three joining from 304 and 303.

12. A similar colourless tumbler but not the same vessel, with ovoid decoration. The decoration is paralleled in a Philadelphia manufacturer's catalogue dated to the 1880s but the context dating from clay tobacco pipe and ceramics suggests it is probably two or three decades earlier. SF426 context 305.

13. A body sherd of a tumbler with a waisted body, decorated with simple incised horizontal lines. This type was in use in the later 18th century (Jones and Smith 1985, 35, fig. 29). SF719 context 404.

Glass Phials

There are several fragments, probably from two vessels, of cylindrical glass phials in thin glass with distinctive everted and flattened rims. Although often described as pharmaceutical phials, in practice their uses were rather wider (Willmott 2002, 90-1, type 26.2). There are two rims of phials and a possible base. One rim of a thin glass phial with a flattened everted rim is present (SF2130 context 229), and a base fragment with a high kick-up possibly comes from a similar vessel (SF1007 context 224).

14. Rim and cylindrical neck of phial, with everted flattened rim; diameter of neck 20mm. SF2331 context 610 (Figure 2.62, 9).

Flat Glass

A total of ten fragments of flat glass was recovered. There are two distinct types. The first consists of four small fragments of very thin flat glass, no more than 0.5mm thick, with a marked bluish tinge, weighing under 2g in total. They are thin for window glass and may have served as picture frame glass. They are derived from contexts 615 and 616, so date to the 17th or very early 18th century.

Six other fragments of flat glass were found, varying in thickness from 1-4mm (total weight 12g). The small size of the fragments means that little in the way of diagnostic information survives. The earliest are two fragments, SF583 (context 404) and SF345 (context 117) from Phase 4.2, indicating a mid-late 18th-century deposition at the earliest. The small quantity and variable thickness may indicate this is not window glass but derives instead from late 17th-century or 18th-century glazed furniture such as clocks, cabinets or picture frames.

There is no reason to assume that the flat glass is derived from window panes. One way in which the subtropical architecture of the Caribbean diverged from English styles was the adoption of shutters which favoured cooling breezes and good ventilation over the weatherproofing of glass windows; the latter were very vulnerable in high winds such as hurricanes. As early as the mid 17th century Richard Ligon had designed shuttered windows more suited for the tropical climate, but they were not widely adopted (Dunn 1973, 278-9). The absence of window glass from the area of Structure A suggests this early building, probably mid 17th century in date, was not furnished with glazed windows.

Discussion

Unlike ceramic vessels or clay tobacco pipes, the place of manufacture of glass vessels can rarely be precisely located, although English bottles can usually be distinguished from continental Dutch or French products on typological grounds. Bristol and London were both major glass manufacturing centres in the 17th and 18th centuries and both had strong trading connections to Nevis. In the early 18th century the pre-eminence of Bristol in the West Indian trade makes it likely that much of the Nevis glass was both manufactured and exported from there. In the early 1720s Daniel Defoe

records, 'there are no less than fifteen glass-houses in Bristol, which is more than are in the city of London. They have indeed a very great expence of glass bottles, by sending them fill'd with beer, cyder, and wine to the West Indies, much more than goes from London' (Defoe 1927, 271). Lists of cargoes frequently include ale and cider, by the bottle, barrel or ton, imported from England or Ireland and the island of Madeira was a frequent port of call en route to the West Indies. In 1686 the pink *Rose* from Bristol brought no than fewer than nine barrels of ale 'in bottles' and 15 barrels of cider 'in bottles', suggesting the bottles were packed into barrels for transport on board ship (Higham 1921, 256).

There is little certain evidence of continental forms, although case bottles were manufactured in England, Germany and the Low Countries, from the late 16th century (Willmott 2002, 87) and continued in production well into the 20th century. They are common finds on colonial sites of the 17th and 18th century in North America but were not exclusively used for export as numerous examples have been found in English sites. The tapering body was blown into a square-sided mould and the neck was short and often had an everted lip (Noël Hume 1969, 62). Like cylindrical 'wine' bottles they were blown in dip moulds which came up to the shoulder and have pontil marks. Case bottles are sometimes referred to as 'Dutch gin bottles' from one common usage in the later 18th century, but they were not used exclusively for that purpose. The bottles were designed to fit neatly into a compartmentalised packing box or case to avoid movement during transit (Charleston 1984, 91-2; Noël Hume 1969, 62-9; Willmott 2002, 86). Nigel Jeffries (pers. comm.) notes that the assemblages of glass bottles at Crosse's Alley, Charlestown and Mountravers contain a considerably higher proportion of case bottles than would occur at contemporary sites in London, supporting the preferential use of these for export as they were easily packed in crates.

The common practice of re-using bottles, particularly the robust 'wine' bottles, means that the date of discard may follow the date of manufacture by up to several decades (Willmott 2002, 87). Bottles could also be used as 'decanters' at the table, avoiding the need for specialised vessels (Jones O.R. 1986, 20-5).

The contrast with the assemblage at Upper Rawlins is marked. At the latter no drinking glasses were found, although wine bottles were present in some quantity. Fenton Hill has a number of drinking glasses although these appear to be confined largely to the late 17th/ early 18th century. The finds of numerous wine bottle fragments and several lead crystal drinking glasses are the material remains of the kind of planter lifestyle enjoyed by the occupants of Fenton Hill in the late 17th and early 18th century.

Dress Accessories and Personal Ornaments

Robert Philpott

Note: conventions for measurements

H = height; T = thickness; W = width; L = length; D = diameter

Glass Beads

There are two glass beads from Fenton Hill. Beads are consistently found at Nevisian sites although not in large numbers. Single examples have been excavated, for instance at Montpelier House (excavated 2006, context 13), Crosse's Alley, Charlestown (SF1091), Mountravers (SF2040 context 754), and Upper Rawlins (SF1, this volume). The variety of types and colours is wide, however, and a large sample of well-dated examples is required before any definitive statement on preferences, function and chronology can be established for Nevis.

1. Bead, wound, of simple oval form in monochrome translucent blue glass; oval in section at break (cf. Karklins 2012, type WIc); D6mm, L6mm+; SF12 context 102 (Figure 2.63, 1).

2. Bead in opaque yellow glass, short cylindrical form, with small hole 4mm by 4mm (cf. Karklins 2012, type WIa); SF46, context 121 (Figure 2.63, 2).

Historical and archaeological evidence shows that beads were mostly worn as necklaces, bracelets and anklets (Handler and Lange 1978, 144). Stine *et al.* (1996) argue that blue beads had a particularly important cultural significance for African American individual expression. As a continuation of cultural practice from West and Central Africa, the wearing of beads by enslaved Africans in the North American sites, especially by women, had symbolic and mythical associations, worn both for personal adornment, at their simplest, but also as charms for protection against illness and misfortune. Blue was the most common colour in a sample of North American and Caribbean sites in the colonial period.

Buckles

3. Buckle, subrectangular single-looped frame, with narrowed and recessed integral axis bar, copper-alloy pin of flattened section tapering to a plain rounded terminal, other end looped around axis bar; copper alloy, cast; deeply incised line separates edge of frame from projecting element in centre of which is a prominent rounded knop; early 18th century (G. Egan pers. comm.); L 50mm,, W 35mm, T 10mm; SF76, context 404, fill of pit cutting through

construction trench of wall (Figure 2.63, 3). An almost identical buckle, though lacking the rounded knop, was found in 2006 at Montpelier House, Nevis (Montpelier SF1, context 6).

4. Iron buckle; broad flat double-oval frame and thin axis bar; L 44mm, W 26mm; SF66, context 402 (Figure 2.63, 4). Similar 'spectacle buckles' with angled frames are assigned to the 17th century by Whitehead though the type continues into the early 18th century (2016, 52).

5. Iron buckle; plain rectangular frame and iron roller, only the loop of pin survives; W 31mm, H 36mm; SF72, context 307 (Figure 2.63, 5).

6. Iron buckle, D-shaped with fragment of pin; frame max. L 52mm, W 36mm, T of frame *c.* 5mm but very corroded; SF2242, context 900, Area IX (Figure 2.63, 6). Goodall (2011, 339) notes that iron buckles of D-shape are the most common form in the medieval period and continue through the post-medieval period (Goodall 1993a, 32); the type has been described as 'the most easily made of all the wrought iron shapes' (Egan 2005, 36). Although the Fenton Hill example must be 17th to 19th century in date, there is a parallel of 16th- to 17th-century date at Southwark (Egan 2005, 35-6, nos 96-99).

Buttons

The earliest button is a black glass example which from the context dates to the late 17th or very early 18th century. One metal button and a metal ring, probably the frame for a Singleton button, were also recovered. The most common type is the one-piece bone button. Four of the five conform broadly to Noël Hume's Type 20 (1969, 91), consisting of a four-hole bone disc with rounded back, and are dated to the early 19th century. Lathe-turning is indicated by SF60 which also has incised lines for marking out the hole positions. The four-hole button is a very common type in the 19th century and was produced widely in North America and Britain. Small examples with four or five holes were used commonly on underwear, shirts, trousers and ladies' shawls, while larger bone types were used on outerwear.

In archaeological contexts, four-holed bone buttons with a central sunken panel are recorded from the cemetery of liberated Africans at Rupert's Valley on St Helena (MacQuarrie 2011b, 130), where they date to the mid 19th century, and in Burial 64 at the cemetery of enslaved Africans at Newton Plantation, Barbados, where they were dated to the early 19th century (Handler and Lange 1978, 152-3, fig. 28). In Britain, few excavated 19th-century examples have been published but a small sample from Scottish urban sites is reported by Cox (1996, 53-6). A bone button with four thread holes from St Andrews is a common form in Britain (Cox 1996, 54, illus. 1 no. 8). Another excavated four thread-hole button in a British context is recorded from Castle Rushen Stores on the Isle of Man from a 19th-century garden soil context (White 1996, 123, fig. 64, 2). Although single-hole bone buttons, intended to be covered in cloth, were manufactured in St Kitts at Brimstone Hill in the late 18th century (Klippel and Schroedl 1999), none of this type is present at Fenton Hill.

7. Small button in opaque black glass; domed upper surface and flat back, with linear groove to rear which carries a trace of the missing metal shank; D 11mm, T 7mm; SF2277, context 615 (Figure 2.63, 7).

8. Bone button, about one-third survives, with traces of two incomplete holes, thick rounded rim on surface with slightly dished central recess, back is flat. D *c.* 20mm; SF1303, context 505 (Figure 2.63, 8).

9. Bone button, about half surviving, with three remaining holes of original four, thread holes are countersunk at the rear; central concave sunken area surrounded by rounded profile zone; rear convex, with incised lines indicating division into quarters, and concentric turning marks; D 17mm, T 2mm; SF60, context 305.

10. Bone button, four thread holes in sunken concave central area; surrounded by flat external band 2mm wide; back is convex; D 13mm, T 2mm; SF47, context 303 (Figure 2.63, 9).

11. Bone button, near-complete; flat sunken area in centre, four thread holes, convex back; D 14mm, T 2.5mm; SF59, context 305 (Figure 2.63, 10).

12. Bone button; complete flat sunken area marked by incised line, with zone of rounded profile along edge, four thread holes, convex back; D 14mm; SF1816, context 506.

13. Button, stamped copper alloy; with central concave sunken panel pierced by four holes, and broad flat zone around circumference; D 17mm; SF35, context 205, 19th century (Figure 2.63, 11). Cf. Noël Hume 1969, 91, type 32.

14. Metal ring, incomplete and irregular with flat profile on one side and D-shape on the other; may be part of a 'Singleton' or metal frame for a textile button; SF1659, context 603. Cf. Mount Vernon 2738, from midden dated *c.* 1759-75, 18th-century example, drawn copper-alloy penannular 'ring' with oblique terminals: http://www.mountvernonmidden.org/data/objects2.html?rID=2738.

Furniture and Furnishings

Robert Philpott

Mount

1. Copper-alloy domed mount, with wavy edge and central oval hole 7 x 6mm; overall D 25mm, H 7mm; SF2233, from post-hole fill 525 in VIII (Figure 2.63, 12). The form is derived from a common class of late medieval petalled mounts and is probably a leather strap or furniture fitting

Curtain ring

2. Copper-alloy ring of hexagonal section; probably a curtain ring with small possibly unconnected undiagnostic iron adhesion, external D 25mm, W of ring 2.5mm, T 2mm; SF1943, context 229 (Figure 2.63, 13).

Egan notes that these distinctive circular frames with uneven loops, often of hexagonal section, with prominent file-finishing, are interpreted as curtain or drape rings. However, some may have been used as suspension loops or even buckle frames, although other functions are possible (Egan 2007, 165-6). They are a long-lived type, occurring from the 14th to 18th centuries, with no reliable way of distinguishing the early from late examples. The curtain or drape ring suggests the presence of soft furnishings in the interior of the kitchen/steward room. Susanna and Mary Coles of St Kitts, in an inventory of material lost included a set of new chintz curtains (cited in Hobson 2007, 225).

Studs

3. Dome-headed stud with square tapering shank; a small upholstery or furniture stud; D of head 10mm, overall L 8mm; SF13, context 205.

4. Dome-headed stud, square shank, tapering to sharp point; D10mm L15mm; SF871, context 304 (Figure 2.63, 14).

5. Dome-headed stud, square shank tapering to sharp point but tip missing; D 10mm, L 14mm; SF872 context 304 (Figure 2.63, 15).

Studs or tacks were manufactured in different sizes according to their intended purpose, which might be to decorate furniture such as chairs, chests, or saddles (Cofield 2008, 13-4). The losses after the French raid of 1706 on St Kitts records the furniture in the rooms of houses. Trunks and chests were common items of furniture for storage in households; for instance, there were several trunks and chests in the house of Andrew Thanvett (Hobson 2007, 237). Leather chairs, fashionable in the 17th century, were present in some houses. John Panton had no fewer than 18 Turkey leather chairs, together with a large couch and large elbow chair of the same leather, valued at over £34 (Hobson 2007, 251). Susanna and Mary Coles had six 'halfworne Russia leather chairs' valued at £3 and a chest of books (Hobson 2007, 225-6).

A fashion for upholstered chairs developed in the later Elizabethan period and they became even more popular in the 17th century; they were covered with fine fabrics, Turkey work (carpet), or leather, which was secured to the frame with rows of brass tacks (Cescinsky and Gribble 1922, 173-91; Joy 1962, 18, figs 43, 47-49). The use of tacks continued into the 19th century (Edwards 1983, 264-7). There are numerous examples both amongst extant furniture and from archaeological contexts. Surviving furniture includes a leather-bound oak chair with rows of dome-headed brass tacks of two sizes, dated 1670-90, in the Royal Ontario Museum, Toronto (Acc. No, ROM 920.12.19). A chair made *c.* 1640-60 in the Victoria and Albert Museum, London, has the back and seat covered with leather and studded with brass-headed nails (Clifford Smith 1930, cat. 551). Archaeological finds are common from the USA and UK, and include an upholstery tack of copper alloy with a diameter of 8mm from Mount Vernon (object ID 2753) in a kitchen midden dated *c.* 1759-1775 (http://www.mountvernonmidden.org/data/objects2.html?rID=2753). Two similar items have been found in excavations at Beeston Castle, Cheshire; from mid and late 17th-century contexts (Courtney 1993, 149, fig. 101, nos 53, 54). Two 'silvered' examples were recovered from a 17th-century yeoman's house at the Hallowes site, in Virginia (Buchanan and Heite 1971, fig. 5b, c). There is a group of five from William Harwood's site at Martin's Hundred (Noël Hume and Noël Hume 2001, 504, fig. 89, nos 18-21, 24).

Personal equipment

Robert Philpott

Box lid

1. Bone box lid; flat round upper surface with two concentric incised lines around outer edge, and fainter turning marks, screw thread, and flat interior; designed to fit cylindrical box; D 25mm, H 6mm; SF14, context 102 (Figure 2.63, 17). Port Royal, Jamaica, produced a simlar bone screw lid with incised decoration on the top, dated to the early 19th century (Mayes 1972, 130, fig. 46, no. 11).

Ferrule

2. Copper-alloy cylinder, incomplete, with part of a surviving domed terminal; probably a ferrule for a

Figure 2.63. Fenton Hill: miscellaneous finds. 1. SF12 bead (2:1). 2. SF46 bead (2:1). 3. SF76 buckle. 4. SF66 buckle. 5. SF72 buckle. 6. SF2242 buckle. 7. SF2277 button. 8. SF1303 button. 9. SF47 button. 10. SF59 button. 11. SF35 copper-alloy button. 12. SF2233 mount. 13. SF1943 curtain ring. 14. SF871 stud. 15. SF872 stud. 16. SF2312 thimble. 17. SF14 bone box lid. 18. SF64 lead ball. 19. SF2239 gunflint. 20. SF98 percussion cap. 21. SF1137 chain. 22. SF56 key. 23. SF1582 tile (1:2). Scale all 1:1 except where stated.

cane or walking stick; D 18mm, H 14mm+; SF2027, context 506.

Thimble

3. Copper-alloy thimble, with tinned surface; shallow raised border around outside at base, zone of very small punched dots around side, on top, plain central circular zone with zone of larger dots around it; H 18mm, D at base 16-13mm, high domed top 2mm; SF2312, context 525, post-hole fill in Area VIII (Figure 2.63, 16).

Kitchen or Table Equipment

Robert Philpott

Cutlery

1. Lead-alloy spoon handle, incomplete; oval profile, W 6.5mm, T 5-7mm, L58mm; SF27, context 206.

2. Fragment of lead-alloy spoon handle, of lozenge section; SF874, context 306. Pewter spoons with a trapezoidal handle from the period *c.* 1623-40 were found at the Jackson/Ward Homestead (Site B),

Martin's Hundred, VA (Noël Hume and Noël Hume 2001, 473, fig. 78, nos 2, 3).

3. Small bent and distorted thin copper-alloy sheeting, with a row of small pierced holes; appears to be evidence of circular shape as if it fitted over a pipe or spout, suggesting a function such as a filter but it is very distorted; SF875, context 107.

Uncertain lead-tin object

4. Lead-tin object of uncertain function; there is faceting along the length and it tapers in at each end; ends cut off, one slightly rounded, the other straight; L 41mm, max. D 5mm; SF2022, context 225.

Arms and Armour

Robert Philpott

Lead shot

1. Lead gun shot; a flawed casting with a misalignment of over 1mm between the two halves; D 14mm, 18.8g; SF64, context 207 (Figure 2.63, 18).

Egan (2005, 202) notes that balls of 18-20mm were suitable for musket shot while smaller examples could have been used for pistols (cites Kelso *et al.* 1998, 50). Courtney (1993, 159) suggests those measuring 11-13mm were pistol-sized shot. Moulds were hinged and of iron (Courtney 1993, 159).

Percussion cap

2. A short metal cylinder with one closed end and opposed long splits in the sides; H 8mm, D 8mm; SF98, context 101 (Figure 2.63, 20).

The percussion cap was introduced about 1820 and consisted of a metal cylinder with one closed end, into which was placed a quantity of explosive material, enabling muzzle-loading weapons to fire reliably in wet conditions. By the 1850s the percussion cap was integrated into the metallic cartridge and by the 1860s had become largely obsolete. Date *c.* 1820-70. Five examples were found in excavations at Mountravers House, Nevis.

Gun flint

3. Gunspall, D-shaped, mid grey flint; early wedge-shaped gun flint; L 29mm, W 18mm, T 6mm; SF2239, context 510 (Figure 2.63, 19).

The form is termed gunspall in North America (De Lotbiniere 1984, 206). Studies of gunflints indicate that D-shaped examples were produced in France as early as the mid 17th century but were also produced in Britain (Ballin 2012, 119). A sample of 308 gunflints was recovered from the British town and military garrison at Fort Frederica, Georgia, occupied 1736-83; the flints had an average width of 28.4mm. The D-shaped gunspalls were replaced by blade forms in the 1780s (Elliott 2009).

The Nevis find is likely to have originated in Britain. References to the supply of arms for the use of the Leeward Islands militias demonstrate the prodigious quantities of flints and projectiles involved, one consignment despatched in 1702 consisting of no fewer than 10,000 flints and 20 'barrills of musquet balls' (TNA CO152/39, p. 29).

Flint waste

4. Small pale brown flint, with bulb of percussion possible signs of working so manufacturing waste rather than a finished artefact; SF110 context 101.

Ironwork

Robert Philpott

The ironwork recovered in 2009 was examined in detail in 2013, five years after the excavation. Although most of the iron was then still in fairly good condition, further corrosion had obscured some details such as the form of nail heads and led to the disintegration of a few pieces. A few pieces were X-rayed. The iron from 2007 was examined in 2015 when the material had suffered significant deterioration; however, sufficient material survived to confirm the salient points of identifications when used in conjunction with the photographs taken when the material was freshly excavated. Only the clearly identifiable items are catalogued here, and the nails are treated in summary.

The most common category of ironwork is nails discussed above. Much of the material recovered in 2007 consisted of highly fragmented flat iron sheeting. Contexts 303, 304 and 305 together contain over 160 small fragments of flat iron sheet, including a few with a rolled-over hem, which served to strengthen the rim and avoid a sharp edge. They are likely to derive from tinplate, with the fragile coating obscured by corrosion (Logan 2007) and appear to have formed one or more flat-sided items such as a containers or vessels (SF371 context 303; SF379 context 304, SF2225, SF784 and SF539 context 305). Another vessel is suggested by flat sheet fragments in context 205 (SF225).

Alongside the flat thin sheet are some cast iron fragments which curve in two planes to form part of a round-profiled cauldron or other vessel. There are also small shattered fragments of cast iron, which in view of their context at a sugar plantation probably represent

fragments of one or more iron basins or 'coppers' used in the production of sugar.

There are several fittings and items of equipment. They include four finds of chain links (SF125; SF1137; SF1082; SF26), two hooks (SF1009, SF873), a key (SF56), and a fishhook with a sharply bent hook and circular shank (SF198). Fittings include a strap or mount of semi-circular profile with two clenched rivets (SF225); a wrought iron collar (SF67), a large rectangular hinge (SF1866), a U-shaped staple (SF68), and a possible iron rove (SF1414). Other objects can not readily be assigned a function, including a cylindrical object (SF582) and a fitting of some kind (SF72).

Equipment and fittings

1. Two conjoined chain links, elongated straight-sided form, and a broken fragment of another; SF125, context 106.

2. Two conjoined chain links, elongated straight-sided form, each 28 x 13mm, heavily worn at internal ends; SF1137, context 505 (Figure 2.63, 21).

3. Elongated oval chain link, slightly waisted near one end, broken open; L42mm; SF1082, context 505.

4. Two conjoined elongated chain links, with slight twist to each link; one L 59mm W 22mm, the other L 54mm W 21mm; SF26, context 206.

Elongated oval or straight-sided chain links are common finds in medieval and post-medieval contexts in Britain from the later 13th to at least the 18th century, as exemplified by finds from Norwich (Goodall 1993b, 140-1; cf. Goodall 2011, 301, fig. 11.15, J204-J211). Chains had a wide range of uses around the household including securing doors, suspending vessels over fires, attaching harnesses and tethering animals.

5. Iron hook of circular section; L 30mm, W 21mm, D of section 8mm; SF1009, context 501.

6. Iron hook; L 49mm, W 29mm, D of shank 7mm; SF873, context 304.

7. A neatly bent hook fishhook; L 25mm, W 11mm, D of shank 3.5mm; SF198, context 203.

8. A semi-circular section linear bar with two rivets; a strap fitting or mount; SF225, context 205.

9. Triangular link or handle?; triangular in form with one open side; L 42mm, W 38mm; SF51, context 304.

10. Diamond-shaped flat iron object, but lacking a central hole; possibly an unfinished rove; L 38mm W 30mm, T 5.5mm; SF1414, context 505.

11. Rectangular iron hinge, with open looped eye, set flush with the rear of the strap; the eye is distorted on one side; the straight parallel-sided strap has the same width as the loop; L 91mm+, W 31mm, T 6mm; SF1866, context 608.

12. Iron fitting, part of a bent strap hinge, consisting of a flat bar tapering side, with acute angled bend; at apex of bend an iron nail projects by 16mm, broken at a second nail hole at narrower end; W 21-37mm, overall L extended 114mm, T of bar *c.* 4mm; SF1197, context 600.

13. U-shaped staple, with out-splayed arms, rectangular profile arms; max T of 7.5 x 5mm at base of U, L of arm 48mm; SF68 context 218.

Goodall (2011, 162-3) notes that this is the most common form of staple. They served a variety of functions: they were driven into masonry or wood joints, held chains and hasps on doors and gates, supported various types of handle and so on.

14. Cast iron drain pipe section; L 240mm, external D 93mm; SF776 context 402. The pipe had been set vertically in the north-west corner of Structure A, presumably to support a temporary roof or shelter.

15. Iron key, plain D-shaped bow, oval/circular profile solid shank and small rectangular bit; bow L 31mm, W 19mm; bit 9 x 11mm; L 71mm, found with traces of string (no longer extant); SF56, context 124 (Figure 2.63, 22).

16. Iron ring, wrought iron, flat subrectangular section; max. D 60mm W of ring 11mm; SF61, context 107.

17. Wrought iron collar with overlapping ends, a projecting rim around the top suggests this was used as an inset into a wooden board; external D 41mm, W of projecting flange 8mm, H 20mm; SF67, context 217.

Iron sheet

A large number of small fragments of iron sheet, some with a rolled hem or rim, and for the most part measuring no more than 10mm in length, were recovered from contexts within Structure A, e.g. SF539 context 304, and contexts 202 and 107. The heavy fragmentation means the original form cannot be determined.

The material is likely to be highly degraded tinplate, iron sheeting originally coated with a thin layer of tin.

The use of tinplate developed in Britain as a significant commercial-scale industry in the 1720s in south Wales, with development of rolling and plating technology at Pontypool (Minchinton 1957). In the mid 18th century Angerstein described the works at Wortley, Barnsley, South Yorkshire, where he saw standard sized sheets of 16½ x 12½ inches and 13½ x 10½ inches packed into boxes for transportation (Berg and Berg 2001, 219). Tinplate was extensively used in the 19th century for a wide range of containers and vessels, including kitchenware such as pots, pans and pails. The rounded hem was a standard feature of such vessels. The sheeting may have formed protective metal cladding and a wide range of functions is possible. Similar iron plate with a rolled hem was found at the Crosse's Alley site, Charlestown.

Cast iron vessels

18. A large number of curved cast iron fragments from one or more vessels. They are present in context 218 (SF814), context 402 (SF454), context 306 (SF636), and context 304 (SF539). Possibly from a tripod cauldron.

19. Large crescent-shaped fragment of vessel in cast iron; profile thickens to 10mm towards outer rim, narrowing to 6mm at inner edge; max. W 50mm; SF1549, context 601; probably part of a cast iron sugar cauldron or 'copper'.

20. Iron leg of small cauldron or kettle. SF112, context 101.

Vehicle part?

21. A toothed cog wheel on an iron circular rod; L 255mm, D of bar 20mm, W of cog 21mm, bent; max. D of cog 32mm; SF1812, context 506. Dr Adrian Jarvis (University of Liverpool) comments that this fairly delicate and costly mechanism, using a deliberately braided manufacture, is most likely to have an application in a vehicle. It may have functioned to pick up power from the 'spur gear' and transmit it up the flexible part in a vehicle where it was difficult or impossible to keep the two ends of the transmission correctly aligned. This suggests a pre-1914 vehicle.

Uncertain

Objects of uncertain function include a large iron cylindrical bar with L163mm (SF2247), and a U-shaped loop of rectangular section, possibly part of a padlock or a staple (SF 2104). A curved flat bar of iron may be part of an iron horseshoe; there are no visible signs of nail holes or fullering but these may be obscured by corrosion (SF2374 context 616). A small flat cast iron object of biconical form and shallow D-shape in profile is also of uncertain function (SF72 context 307).

Structural Fittings

Robert Philpott

Roves

Four lead roves were found, taking the form of flat rectangular or diamond-shaped lead sheets, each pierced with a central hole for an iron nail. In two cases the nail remains in position (SF1570; SF65 in context 205). Roves were used with nails to join two pieces of timber, the nail being bent over at the tip to clasp the rove to form a clench bolt.

1. Flat rectangular lead rove with impression of missing nail, with square shank in central hole 5 x 5mm, and impression of circular nail head *c.* D 12mm; two fragments overall L 31mm, W 20mm, T max. 1.5mm; SF1477, context 601.

2. Rolled up rove in flat lead sheet, with central pierced hole; form uncertain but probably rectangular; dimensions as bent, L 35mm, W22mm; SF1665, context 603.

3. Lead rove, flat rectangular lead sheet, with *in situ* iron nail with square shank and corroded?oval head; rove: L 16mm, W 14mm, T 1.5mm; nail: L 32mm, head but probably oval 9mm x 6mm; SF1570, context 601.

4. Lead rove, irregular diamond shape, cut from flat sheet, with *in situ* iron nail of rectangular section; nail: L 23mm; rove: L 27mm, W 23mm, T 3.5mm; SF65, context 205.

Other Lead Object

5. A small fragment of lead strip twisted at one end, function uncertain; L 32mm, max. W 10mm, T 2mm; SF264, context 206.

Nails

Nails are the most common artefact type in iron with a total of approximately 349 examples (192 recorded in 2009; 157 in 2007). All the nails examined are wrought. Where visible, the shanks are invariably rectangular or square in cross-section, and the tips are either pointed or wedge-shaped in form. Although corrosion obscures the precise form in most cases, the heads are usually oval although a few are subrectangular or irregular in plan, and a few can be seen to be of rosette form (cf. Noël Hume 1969, 253, fig. 81, nos 1, 2). There are peaks in length at about 30mm (1¼ in.) and 39-43mm (*c.* 1¾ in.), although a few short nails are present, including one only 15mm long with a large round head 14mm in diameter (SF1561). Many are bent, especially near

the tip, where they had been clenched to secure two pieces of timber; others have shanks that are distorted or bent through use or were damaged during removal. Alongside nails in overall layers are a small number found in postholes. Nails from the postholes 121 (SF41, SF39, SF626) and 112 (SF36, SF168), and context 124 (SF53, two intact nails) resulted from decay of the wooden post and subsequent deposition in the post cavity.

A large proportion of the iron nails were found on the site of the main house in Trench VI, indicating the extensive use of nails in the construction, presumably from a range of structural elements such as flooring, framing, walling and roofing shingles. The probable demolition deposits, contexts 601 and 603, have particularly high quantities (34 and 39 respectively), while context 604 contained a concentration of nails 1-3m from the south end of the trench. Context 615, one of the make-up layers for Structure G, contains 27 nails. Many nails in these contexts are of similar dimensions, suggesting that large numbers of standard-sized nails were used in construction, probably for wall or roof shingles or walling boards. Joining of substantial timbers is indicated by a few long nails measuring from 58mm to over 100mm in Structure G. Other contexts containing more than 10 nails include 237 (13 nails), 306 (54), and 304 (32). The last two are layers in the northern extension to Structure A where much debris and rubbish had accumulated.

Construction Materials

Robert Philpott

Date-stone

The inscribed date-stone was discovered by the present owner, Mr Wade Knowles, in the garden of the house before 2007, and was subsequently incorporated into the modern house, constructed 2007-09 (Figure 2.6).

The inscription consists of three elements, two initials, I C, separated by a small cross; a symbol discussed below, and the date 1675. Here, the initials IC or JC refer to the plantation owner, identified through the 1678 census as most likely John Combes (Oliver 1914, 74).

1. Date-stone in local volcanic stone, with an inscription in low relief in three lines reading 'I + C/ XX/1675'. The stone is roughly triangular in shape; H 0.53m, W at base 0.53m, W at top 0.29m, depth *c.* 0.33-0.35m (Figure 2.6).

Conventionally, British 17th-century date-stones contain the initials of the owner in the top line, with the wife's initials below, and mark the date of construction or significant alteration of the building. The lower line is probably the date of construction of the building within which it was set, or less likely the date of the foundation of the plantation. The middle line is more problematical and there are several possible interpretations. The first is that the symbol represents the Masonic device of the compass and square, a reference to the 'divine architect'. This encounters the difficulty that the characters have serifs so appear to be letters rather than a symbol. In that case, it may represent a monogram V A or A V, which on a date-stone of that period would usually denote the wife's initials. Alternatively, the symbol may be simply two conjoined XXs, an interpretation supported by the serifs on the letters. A similar device can be seen in a building inscription on a door jamb at St John's Hill House, Pembroke, Bermuda, dated 1724, where the conjoined Xs are also placed below the builder's or owner's initials FB (Chappell 2011, 101, fig. 8). The top and bottom of the inscription are marked by decorative Xs with dots in the quarters. As such the characters may be no more than a decorative space-filler. However, the Nevis monogram is identical to the alchemical symbol for alembic (a pair of vessels, linked by a tube, for distilling alcohol), a symbol which conveyed that meaning by the 17th century (e.g. Valentine 1671, fig. 2; Le Fèvre 1670, 91). The association of the alembic with a sugar plantation where distillation of rum was very likely practised makes a purposeful reference to distilling the most plausible interpretation.[2]

Stone Paving Slabs

Several stone floor tiles are present. Their function is confirmed by traces of white mortar adhering to the less worn surface. Two types of imported stone are represented. The first is a flagstone-like sandstone, greenish grey in colour, characterised by a strong bedding surface containing some mica, with a well-sorted even grain size, feldspar or quartz in the matrix, which is pinkish under a x8 lens (Rex Taylor pers. comm.). Several of the total of 27 pieces display two contrasting colours, a reddish purple and a dull greenish grey, separated by a natural sharply defined boundary, showing that the stone has split along this bedding plane junction (e.g. SF1963 context 225; RT6 context 402; RT4 context 107; SF1 context 112; SF2143 context 233; SF1679 context 506; SF2228 context 235). Adhering mortar indicates that the greyish-green surface was invariably placed uppermost. The red layer contains mica as well as mafic crystals (hornblende), but the latter are absent from the greenish-grey layer. All are probably from the same geological unit, and appear to be Devonian-Triassic sandstone, a stone alien to Nevis. Similar stone flags were seen at Mountravers, also displaying the same combination of greenish-grey sandstone with stratified purplish-red in the same stone, suggesting

[2] I am grateful to Kate Sarbutt for this suggestion.

a similar origin to the Fenton Hill stone. This is likely to be Pennant Sandstone described as 'green-grey and blue-grey, feldspathic, micaceous, lithic arenites ('Pennant' sandstones) of southerly provenance, with thin mudstone/siltstone and seat earth interbeds and mainly thin coals' (English Heritage 2011, 6). The Forest of Dean Pennant Sandstone Formation is noted for its durability. Although usually green or bluish-grey in colour, a red iron-stained deposit is also recorded (English Heritage 2011, 6). In the excavation, this stone type is found only in association with Structure A, and it may indicate that there had been a flagged stone floor in part of the structure, which had then been removed for re-use elsewhere.

The second type of imported stone is an off-white/pale grey fine-grained fossiliferous limestone, represented by seven fragments. One large fragment of a paving slab (SF2098) bears the mason's chisel marks on the slightly worn upper side. A small block with a neatly cut flat upper surface and one side appears to be from the same white fossiliferous limestone (SF2373). There are also some small thin fragments (SF2395, SF2396, SF2398), which may have been used as floor tiles. They range in thickness from 21 to 37mm, with the majority in the middle of the range. The stone is probably Portland stone from the Isle of Portland, Dorset, UK (R. Leech pers. comm.). This is an oolitic limestone, valued as a building stone for its ability to withstand weathering but as a freestone it is easily worked. Portland stone was widely exported from the 17th century onwards.

There is a clear separation between the findspots of the two imported stones. All the greenish-grey sandstone occurred in or close to Structure A. By contrast, almost all the Portland stone tiles, with one exception (in 512), were associated with the main house (Structure G) or its predecessor. Examples from contexts 615 and 617 were associated with the demolished first house which preceded Structure G, while others in topsoil layer 600 may have been residual material from that first house. There is no certainty that the Portland stone was used in Structure G itself. A small area of ceramic tiled floor in the porch area belonging to Structure G had survived, and other ceramic tiles recovered from this structure indicate the building was provided with tiled floors.

2. An incomplete stone paving tile, worn upper surface, parts of two sides present, in sandstone with contrasting coloured laminations, in greenish grey and dark purplish red; mortar adhering to the underside; W 102+mm, L 110+mm, T 31-32mm; SF1, context 201.

3. Small neatly cut complete stone block, the underside is irregular, but it has cleanly cut vertical edges at upper side and face; very fine-grained off-white fossiliferous limestone; L 74mm, W 54mm, T 46mm; SF2373, unstratified, found on a stone heap south of main house Structure G.

4. Flat slab, three sides and one broken end of paving stone; upper side shows parallel chisel marks, with some wear; reverse is unworn; in light grey fossiliferous limestone; one edge on underside has rough chisel marks on an irregular chamfered edge, as if cut down later; the other side is neatly cut vertically. W 195mm L 260+mm, T 44mm; SF2098, context 512.

Stone or ceramic tiled floors have the practical advantage of keeping the interior cool in hot climates. However, solid floors using stone tiles have been described as 'the height of Georgian taste' (Parissien 1999, 143). Richard Neve, writing at the beginning of the 18th century, describes various configurations of two-coloured marble tiles, remarking 'paving with marble is of all other the most beautiful' (Neve 1703, 220). They were commonly used in ground floor hallways where they served to impress visitors. Less expensive flooring materials included ceramic bricks or tiles (Neve 1703, 219; Parissien 1999, 143). The use of square tiles in orange earthenware, set at 45° to the panel edge, can be seen, for example, outside the Pemberton Building on Main Street, Charlestown, while orange ceramic floor tiles are present in the 19th-century house at Mountravers, where they were used not only on the ground floor but also on external window ledges.

The St Kitts accounts of houses destroyed in 1706 indicate the use of three main types of flooring material, hardwoods, stone, and ceramic tile or brick. Bricked or tiled floors were provided in areas where heavy traffic was expected, for food or the hall, while chambers were furnished with wooden floors (Hobson 2007, 226-9, 235, 245). In St Kitts the Burrell house, formerly that of Christopher Jeaffreson at Wingfield, had a hall paved for heavy traffic and meals (Hobson 2007, 245); the Mathew house, on a two foot high stone foundation, had a porch with tiled floor but the polite part of the house had a deal floor (Hobson 2007, 241). The grand 90-foot long house of President Joseph Crisp of St Kitts, at its destruction in 1706, provides documentary evidence of the differential flooring materials. 'The hall, back room, and porch paved with large London tiles, all the rest of the rooms floored with choice boards and two inch plant hardwood sleepers' (Pares 1950, 31). The house of William and Ralph Willet, with a valuation of £180, illustrates the variety:

> A dwelling house of 3 rooms vizt a hall of 30 foot long 15 broad roofed with mountain timber and thatch't, floored with brick; a chamber 17 foot long and 16 board roofed with mastick timber and floor'd with boards, the other room 15 foot long and 16 broad roof'd with mastick timber and thatch't,

> floored with freestone. The said house wall on the windward side and on the leeward side built with mastick posts and boards' (Pares 1950, 30).

The presence of floor tiles of imported Portland stone suggests they were used for a monochrome effect in individual rooms. A few are worn smooth, suggesting they formed part of the floor that saw much use, such as close to the threshold, or in the hallway. Although it was fashionable in the Georgian period to create floors in contrasting colours (cf. Neve 1703, 218), consisting often of slabs of Portland or other pale stones set with diamonds of dark grey slate or marble, there is no indication at Fenton Hill of patterned floors.

Ceramic Building Materials

Several types of ceramic building material were recovered from the site. Alongside a small number of ceramic bricks, there are floor tiles, which can usually be identified by the thickness, the use of mortar on the underside, and sometimes wear to the upper exposed surface. There are also roof tiles which are usually sanded on one surface, are thinner than floor tiles, and generally lack mortar. Roof tiles with a distinctive S-shaped profile are pantiles, a form imported in large quantities to East Anglia from the Netherlands in the 16th-18th centuries and widely adopted in some regions of England (Lucas 1998; Moxon 1703, 240-1).

Brick

Only a few examples of the traditional imported English brick were found, with only two sizeable fragments (SF8 context 203; SF2381 context 604). The scarcity of ceramic bricks at the site cannot be attributed to thorough recycling of this useful building material, which would leave behind tell-tale fragments of unusable material. Instead, it is clear that no building was constructed primarily in brick but that bricks were used either for a small structure such as a baking oven or for enhancement of architectural detail as Noël Hume (1969, 295) observes for rectangular tiles.

One brick (SF2381 context 604) is of uncertain length (L78mm+) but the width at 97mm and height of 62mm equate approximately to imperial dimensions of 3¾in wide x 2½in high. These compare with both historical records and observed brick dimensions for the early 17th century onwards, although it is acknowledged that individual brick sizes varied considerably, even within the same structure, so it is unwise to date a single example on size alone. According to a statute of Elizabeth I (1571) bricks should measure 9in x 4¼in x 2¼in (229 x 108 x 57mm) (Noël Hume 1969, 81). Early 17th-century bricks measured between 8½in (215mm) and 9½in (240mm) long, from 3¾in (95mm) to 4⅛in (110mm) wide, and between 1¾in (44mm) and 2½in (64mm) thick (Campbell and Saint 2002, 181). During the 17th century, brick dimensions increased, so that by 1728 the statute or common small brick size in London was 9 x 4½ x 2½in (229 x 114 x 63.5mm) 'when burnt' (Campbell and Saint 2002, 180).

Ceramic Floor Tiles

Ceramic floor tiles consist of flat tiles, rectangular or square in form, and measuring from 32mm to 44mm thick. No complete example survives, although recorded widths are fairly consistent at 144mm (SF2382), 147mm (SF1918) and 150mm (SF212), equivalent to just under 6 inches. Describing paving tiles, Richard Neve (1703, 219) records square examples with dimensions ranging from 6, 8, and 10 up to 12 inches, the smallest being the most expensive.

Some examples retain mortar adhering to the underside and sides. A small area of *in situ* ceramic floor tile was observed in the porch area of Structure G. Only one glazed floor tile, with mid yellowish-brown glaze, has been recorded from this site (SF212 context 205). One large fragment has clear vegetable impressions on the underside, where it had been set to dry on straw or other vegetable material (SF1981 context 506).

Two tiles appear to have Nevisian fabrics (SF2385 context 614; SF21 context 300), but the remainder are consistent with English fabrics.

5. Corner fragment of floor tile, hard mid orange-red fabric; traces of white mortar on underside and one side; L 58+mm, W 55+mm, T 33mm; SF1582, context 604 (Figure 2.63, 23).

Flat Roof Tile

The ceramic roof tiles measure from about 10mm to 15mm thick, usually less than half the thickness of floor tiles, and lack mortar. They are further distinguished by their flat form and sanded underside. The upper surface often has fine parallel wire-drawing marks from trimming away excess clay. A small number of curved pantiles were also found. The fabrics are British. No complete lengths or widths were found.

The surviving tiles show no sign of flanges or the projecting integral nibs which, from the medieval period onwards, were used to fix tiles (Lewis 1987, 6-8, fig. 2). This suggests they were pegged, with simple perforations to enable wooden or iron nails to be driven through, although no peg holes were identified.

Writing at the turn of the 18th century, Richard Neve (1703, 271, 275) notes that 'pan-tiles' were usually laid without mortar, generally on sheds or flat-roofed buildings and lacked holes for pins, while flat tiles were

sometimes laid dry, sometimes with mortar. Seven-inch 'tile-pins' or nails were used. Plain roof tiles were by statute 10½ inches long and 6¼ inches wide, with a thickness of 'half an inch and half a quarter at least' [=$^{5}/_{8}$in] (Neve 1703, 269).

In the standard method of manufacture for roofing tiles from the medieval period onwards, a wedge of clay was thrown into a bottomless wooden frame, which was set on a moistened and sanded board to prevent the clay from adhering to the mould (Drury 1981, 136). The moulds were sanded to allow easy removal of the wet clay during manufacture, leaving distinctive sanded under-surfaces (Lewis 1987, 11; Egan 1998, 28). The process was described by the Swedish industrialist Reinhold Angerstein, who toured Britain from 1753-55, and observed their manufacture in a factory just outside the city of Bristol. The tiles were made from clay pressed into a wooden mould and the excess clay was drawn off with a bow-shaped trimming wire (Berg and Berg 2001, 137, fig. 142), leaving distinctive thin parallel striations on the upper surface of the tile. Curved roof tiles were bent into shape over a form once partially dry.

The chief identifiable source of the other building materials such as paving stones, the majority of the 17th-early 18th-century ceramics, and the clay tobacco pipes is Bristol and south-west England, suggesting the ceramic tile also comes from this region. South-west England had a clay roof tile industry from the late medieval period (Hare 1991), but as London was another major source of imported goods for Nevis, such commodities may have come from south-east England.

6. Nine fragments of roof tile; in a British fabric (E. L. Morris pers. comm.); SF2409, context 616.

7. Flat roof tile, wire-drawing marks on upper surface; dark brownish grey surfaces, dark grey core; L 53+mm, W 48+mm; T 10mm; same tile as SF1658; SF1644, context 603.

Curved Roof Tiles

A small quantity of curved pantiles was found, in a hard purplish red to grey fabric, with occasional bright orange examples. The thickness varied from 12-18mm, with most around the mid range. Some have parallel wire-drawing striations internally along the axis of curve. No complete dimensions are present.

8. Curved tile, hard brownish grey fabric, smoothed on interior; L 85+mm, W 65+mm, T 12mm; SF2077, context 506.

9. Curved roof tile; hard purplish red externally, mid grey internally; parallel wire-drawing striations internally along axis of curve; same fabric as SF2077; L 55+mm, W 50+mm, T 15mm; SF1583, context 604.

10. Small fragment of curved roof tile, external and internal surfaces, and fabric all light brownish grey; same fabric as SF1583; W 25+mm, L 40+mm, T 12mm; SF1870, context 608.

11. Four joining fragments, one from the same slightly curved tile, very hard fired, mid grey core, orange red internal and external surface; one surface sanded, the other irregular but smoothed; the four joining sherds measure 15mm in thickness; in total L 102+mm, W 75+mm; the single fragment in different fabric is very smooth orange with small area of sanded surface, L 42+mm, W 22+mm, T15mm+; SF2172, context 615.

12. One small fragment of tile, sanded underside, wiped surface, dark purplish red with reddish orange core; L 30+mm, W 27+mm, T 15mm; same tile as SF2172 joining fragments; SF2329, context 618.

13. Bright orange tile, curved sanded underside; wire-trimming indicated by fine parallel striations on surface, L 52+mm, W 34+mm, T 13mm; SF1854, context 607.

From the presence of small quantities of curved tile in contexts from Phase 3 (SF2329 context 618), it is evident that ceramic roof tiles were used in the 17th-century stone building which preceded Structure G, and similar tiles from Phases 4 and 5 are probably residual material from the same building (SF2172 context 615).

Clay tiles were well suited to low pitched roofs, which were a feature of Caribbean architecture as in high winds they offered low wind resistance and good adhesion, especially when mortared. Their regular neat appearance was praised in England in the 17th century. Thomas Wilsford writing in 1659 observed 'the most common covering of good and comely buildings is with tyles' (cited in Lucas 1998, 83). Pantiles, including glazed tiles, were imported from the Netherlands into East Anglia from the 16th to 18th centuries (Lucas 1998; Moxon 1703, 240-1).

Mortar

Large quantities of broken lime mortar were recovered, with a total weight of 10,922g, although this is artificially high as some fragments include adhering stone. No attempt was made to measure the broken fragments.

Many of the fragments exhibit a single smoothed surface. The overall colour is white or off-white and some contain prominent hard black glistening mineral inclusions, similar to minerals found in the local

volcanic rocks and fragments of coral. Some mortar from 506 has many protruding black mineral inclusions (e.g. SF1806), as a result of weathering of the exposed surface inclusions.

Extensive areas of mortar rendering had survived on the internal face of the walls of Structure A, apart from the interior of the west wall. The collapse of masonry released large amounts of mortar which fell inside the building. A few fragments with a very smooth, finely plastered surface may have come from the stone foundation (228) in the northern entrance which retained a level and finely finished plaster skim on the upper surface (240). Several fragments with a smooth plastered finish occurred in context 505, probably from the blocking of the doorway in Structure A.

Within Structure G the mortar is derived from two main sources. The earlier material is probably from a demolished structure which was associated with ceramic and Portland stone tiles along with occupation debris, such as glass and pottery. Fragments with a plastered surface were also found in the make-up deposits of Structure G, such as SF2309 in context 617, or SF2291 in context 616, and one plastered surface fragment from 608, SF1875, indicating that the predecessor of Structure G had plastered surfaces. The later of these is probably demolition deposits of Structure G itself. Context 600 has a number of fragments of very white mortar (e.g. SF1257, SF1178, SF1164) so there appears to be a strong correlation between the presence of a very white mortar (SF1200) with Trench VI.

14. A large flat piece of mortar with neat smoothed surface, and a ridge where mortar had been forced into a gap in a wooden frame, W123mm+ H124mm+, max depth 27mm, an irregular ridge 43mm wide is higher by 5mm. SF1982 context 506.

Discussion of Source

Lime mortar is composed of lime and an aggregate such as sand, mixed with water. No attempt was made to analyse the mortar fabrics from Fenton Hill in order to identify the source of the component materials. A programme of analysis of mortar samples from military and plantation sites in Nevis and St Kitts had been undertaken to compare with mortar from the 17th-century military Redoubt at Newcastle in northern Nevis (Williams 1999). A key research question was to test the locally held Nevisian theory that the hard white mortar observed at some structures on the island contained imported 'Bristol lime' as a binder in contrast to the pink or reddish mortar which was considered to contain local materials (Williams 1999, 206). The analyses of the earliest mortar from the 17th-century Redoubt identified small quantities of volcanic material in a fine-textured lime matrix, of a noticeable white colour. However, there was nothing distinctive in the petrology of the lime which enabled the source to be identified. The presence of shiny black inclusions in the Fenton Hill mortar, however, suggests that local igneous rock-derived sand may have been used as aggregate.

Lime was a vital component of mortar for building in stone, the principal locally available building material, but hydrated lime was also used in sugar production to assist in the purification of the hot liquid sugar by reacting with impurities to form insoluble calcium organic compounds which were easily removed.

Williams identified three main potential sources of lime for mortar. In the 17th and 18th centuries, lime was widely imported into Nevis and St Kitts from England. Limestone occurs in small quantities as fossiliferous blocks which are occasionally found on Nevis, but they are considered to be too infrequent to support the quantity of lime needed for large-scale building construction (Williams 1999, 210). Limestone is available on nearby islands, for example, St Kitts has limestone outcrops at Brimstone Hill and Goodwin Gut (Williams 1999, 210). A larger source is Antigua, one of the nearest islands to Nevis, as the north-eastern third of the island consists of limestone hills (Watts 1987, 170).

On West Indian islands where natural limestone does not occur, coral reefs have historically been used as a source of lime for mortar, as on St John and St Croix in the US Virgin Islands or Martinique (Knight 2006; Verrand and Vidal 2004). Lime kilns were constructed by the 19th century along the eastern coast of Nevis to exploit this natural resource. The Burke Iles map of 1871 shows three in St George Gingerland parish. A kiln, which is not shown by Burke Iles, was still in use in 2012 at Coconut Walk, Gingerland, for making lime from fossil coral. Fossil coral is composed of over 95% calcium carbonate ($CaCO_3$), the primary constituent of lime mortar. Heating coral to 900-1100°C drives off carbon dioxide and converts it to quicklime (CaO), which by the addition of water converts quicklime to mortar.

Williams observed that a number of Nevis samples, including three from the Redoubt, contained shells, possibly from coral, but also employing beach sand as an aggregate (1999, 210). Both Upper Rawlins and Fenton Hill mortar samples contain coral, suggesting at least in part mortar at those sites employed locally burnt lime from the coastal reefs. At Upper Rawlins these date to the late 17th or early 18th century; very white samples from Fenton Hill occur in 17th-century phases of Trench VI.

Occasional fragments in the matrix suggest the use of local coral as a key ingredient in lime mortar, a practice

also observed at Upper Rawlins. A total of 96 small fragments of fossil coral may be a result of the material eroding from weathered mortar within Structure A. From 2007 there are 67 fragments, with a total weight of 152g. However, if one exceptionally large piece (SF236) weighing 29g is removed, the average weight comes down to under 2g, with no fewer than 17 weighing under 1g each. In 2009 the coral was not weighed so comparison is not possible between the years. However, very few fragments were recorded in 2009 in the area of Structure G. Their small size suggests the coral was crushed and burnt for lime mortar and subsequently eroded out. The absence of coral fragments, with the exception of one probably selected as a curiosity for its cylindrical shape (SF2399) and one small piece in 615 from the make-up deposits of Structure G, suggests that coral was not routinely used in the mortar for the preceding house in the late 17th century.

Addendum: unstratified finds from the site

A considerable quantity of finds has been collected during the groundworks for the new house, and subsequent clearance of the garden from 2007 onwards. They include many hundreds of fragments of clay tobacco pipe, pottery sherds, glass bottle fragments and metal objects. The material has been retained by the owner, Mr Wade Knowles, and has not been studied in detail. A photograph of a group of metal finds included three iron hoe blades and a fork. Other finds include:

A1. Copper-alloy flat subrectangular tag, with stamped inscription 'FROM NEVIS FOR TRINIDAD' and two countersunk holes, one at either end suggesting a luggage tag for a trunk or chest; *c.* 75 x 20mm.

A2. Unidentifiable illegible copper-alloy coin or token; D *c.* 29mm.

A3. Flat copper-alloy disc, stamped centrally with 'ON' or 'NO', and subsequently crudely pierced with two holes to convert to a button or mount; D 21mm.

A4. Two fragments of clay tobacco pipe stem in an orange-red fabric. They form part of a tradition of red clay tobacco pipes found in the eastern United States from 1630-1700 (Capone and Downs 2004) and also in colonial contexts in Jamaica from the second half of the 17th and early 18th century. A large number has been recovered from Port Royal which was destroyed by earthquake in 1692, the latter probably locally made in Jamaica (Heidtke 1992).

Appendix Table 2.1 provides phasing and brief descriptions of all contexts.

Evidence of Subsistence: Faunal Remains

Sheila Hamilton-Dyer

Introduction

Excavations in 2007 and 2009 of a rectangular stone building on a former sugar plantation recovered small assemblages of animal bones and invertebrate (non-insect) remains. The material was collected by hand and by screening over a 6mm mesh. Just under five kilograms of animal bone and three kilograms of invertebrate remains were made available for analysis.

Part 1: Bones

Methodology

Taxonomic identifications were made using the author's modern comparative collections. All fragments were counted and identified to taxon and element with the following exceptions: ribs and vertebrae of the ungulates (other than axis, atlas, and sacrum) were identified only to the level of cattle/horse-sized and sheep/pig-sized. Undiagnostic shaft and other fragments were similarly divided. Any fragments that could not be assigned even to this level have been recorded as mammalian only. Where possible, sheep and goat were separated using the methods of Boessneck (1969), Payne (1985) and Halstead and Collins (2002). Recently broken bones were re-joined where possible and these have been counted as single specimens. Tooth eruption and wear stages of cattle, sheep and pig mandibles were recorded following Grant (1982). Measurements mainly follow von den Driesch (1976) for mammals and birds and Morales and Rosenlund (1979) for fish and are in millimetres unless otherwise stated. Other information including condition, butchery and pathology was also recorded for each specimen and the archive includes all the details of metrical and other data not presented in the text.

Results

On examination the fragments were recorded as being from 1120 individual specimens. This total includes 464 fragments that could not be identified beyond 'mammalian'. The small total size of the assemblage severely restricts the amount of analysis that can be carried out. The identified bones are mainly from the 18th- to 19th-century Phases 4-6, with another group of bone, almost entirely of large mammal fragments, from the late 19th- to 20th-century phases. The material is largely described below as though a single phase group because any subdivision is statistically inappropriate, but the species summary table (Table 2.7) lists the

material by phase and the condition of the material is also analysed by phase (Appendix Table 2.8). The archive tables and individual specimen records do include the context and phase detail (Appendix Tables 2.8-2.10). With so few identified elements the calculations of minimum numbers (MNI) are also meaningless and all tables list only the NISP (number of individual bone specimens).

The condition of the bone is generally good but fragmented. Each context group was scored 1 – 6 (Good to Poor) and the majority of bones come from contexts scored as class 2 (Quite Good), where most of the bones in the context have slight surface damage but where fine details such as butchery are usually still visible. Some contexts were classed as 3 (Fair), containing bones where at least half have such a degree of surface damage that some details are obscured and measurements are restricted. A large number of bones have meandering erosion tracks or 'Hackett tunnels', which are probably caused by fungi (Davis 1997); these can obliterate fine cut marks but do not usually prevent identification or measurement.

Many of the larger bone elements are broken or butchered and some are recently fragmented. The size of the recovered remains ranges from very small bones of under 10mm to one cattle-sized shaft fragment longer than 150mm. The greater majority of the specimens are less than 50mm, 86.2% of all the bones, and a further 11.1% are between 50–100mm. While all or most of the smaller fauna have bones within this size, the common domestic ungulates have many anatomical elements that are considerably larger. Fragmentation is relatively higher in Phase 4.1 but with no clear concentrations. Butchery marks are slightly more frequent in Phase 5 material than in the other main groups, although it should be noted that this is just 13 marks spread across several contexts and taxa. In addition to those with butchery there are several bones with gnaw marks, with the highest proportion observed in 4.1 and 4.2; some bones are likely to have been completely destroyed (Payne and Munson 1985). Burning was also observed and is more noticeable in Phase 6 where 57 specimens are charred and four burnt to the point of calcination. Some of the bones in this phase also had traces of ash or ashy mortar adhering.

At least 19 different taxa are present, although some could not be identified beyond family. The bones include those of large, medium and small mammals, birds, fish and one each of amphibian and reptile. The remains are dominated by the bones of the main domestic ungulates, cattle, sheep/goat and pig together with indeterminate fragments of this size class. A summary of the taxa distribution by phase is given in Table 2.7. Analysis and discussion of phase distribution, species anatomy and so on is largely inappropriate given the small sample size and taphonomic condition, the text below is mainly a descriptive summary.

Mammals

Domestic cattle are the largest represented mammal in the bones but not the most frequent numerically, although each individual animal would have provided more meat than the smaller sheep and pigs. The cattle material is heavily biased in favour of the robust teeth and foot bones, and not all of these survive intact. The 34 remains comprise nine loose teeth, nine foot bones, seven foreleg, three shin, one pelvis, four scapula and an axis vertebra. The lack of femur is, at least in part, a question of preservation and recognition; it is a large and late-fusing bone that tends to be less dense and more fragile than most of the other elements. There are 153 cattle-sized limb fragments that could well include pieces of femur. The other cattle-sized bones include 16 vertebral fragments and 23 pieces of rib. No skull fragments could be identified but loose upper and lower teeth indicate that some head parts had been present. Assuming that all the indeterminate remains are of cattle (there are no bones of equids present), and that this very small sample is representative, this spread of elements including the head and feet suggests the utilisation of whole carcasses rather than selected joints, as might be found if salt beef was the main supply. Butchery marks were observed on seven cattle bones and on 24 of the cattle-sized fragments. Although one bone fragment shows repeated small knife cuts, the majority are chop marks made by a heavy blade. Some chop marks were made from the inside face of the bone and spiral fractures are also present. The mix of elements, marks and size of fragments suggest that the bones (with or without most of the meat present) were heavily divided into small pieces. Ageing data, from teeth and epiphysial fusion, is almost completely absent and no bones could be measured.

Ovicaprid remains are numerically more frequent at 51 specimens but loose teeth account for half of the remains (25); a hyoid, maxilla and two skull fragments are also present. There are no mandible fragments, but the loose teeth include both deciduous and permanent teeth. There are also 12 foot bones and just ten limb bone fragments. These few limb bones include a femur shaft from Phase 3 (618) with a cut mark and spiral fracture; no butchery was observed on any of the other ovicaprid bones. Apart from the bones ascribed to goat that are listed below, there is a sheep/goat scapula from Phase 4.2 (222), shaft fragments of femur and tibia from a young animal in the same deposit, and a humerus shaft from Phase 5 (233). One deciduous premolar tooth could be identified as being from a young sheep and seven bones can be identified as goat; the other bones and teeth could not be distinguished. Six of the seven goat bones are from the topsoil contexts 100 and 101 of

Table 2.7. Fenton Hill: Species by phase (NISP = Number of individual bone specimens)

Common name	Taxon	3	4.1	4.2	5	6	6 or 7.1	7	7.1	7.2	0	Total NISP Species
cattle	*Bos taurus*		5	7	2	14			4	1	1	**34**
sheep/goat	*Ovis/Capra*	1	4	5	7	19	1			6		**43**
sheep	*Ovis aries*			1								**1**
goat	*Capra hircus*		1							6		**7**
pig	*Sus domesticus*		15	10	11	37	3					**76**
large mammal, cattle-sized			73	60	25	117	3	3	5	13	1	**300**
large mammal, sheep-/pig-sized			21	21	13	45	4		1	13	1	**119**
mammal, indeterminate			19	65	69	283		2	12	12	2	**464**
dog	*Canis familiaris*					2						**2**
mongoose	*Herpestes auropunctatus*						1					**1**
rat, indeterminate	*Rattus* sp.				1	1						**2**
goose, domestic/ greylag	*Anser anser*				1							**1**
domestic fowl	*Gallus gallus*		1		2							**3**
turkey	*Meleagris gallopavo*		1	1	2							**4**
bird, indeterminate			4	4	7	2						**17**
turtles	*Chelonia*			1								**1**
amphibian	*Amphibia*			1								**1**
shark/ray	*Chondrichthyes*					1						**1**
haddock	*Melanogrammus aeglefinus*					1						**1**
grouper	*Serranidae*		4			5						**9**
perch family	*Percidae*					2						**2**
seabream	*Sparidae*					1						**1**
parrotfish	*Scaridae*		1	1		2						**4**
grunt	*Haemulidae*				1							**1**
other fish species not further identified				3		1						**4**
fish, indeterminate			2	4	7	7			1			**21**
Total NISP Phase		**1**	**151**	**184**	**148**	**540**	**12**	**5**	**23**	**51**	**5**	**1120**

Phase 7.2. These bones include paired scapulae, paired metacarpals and a humerus; there are also two sheep/goat and two sheep-sized vertebral fragments in the same fill. The bones are largely complete but are fragile and several have purple mould staining and damage; it is possible that they represent a single animal and could be relatively recent. The humerus and one scapula fragment are distally fused, the other remains are too damaged to tell but the animal would have been at least six months old. The only other confirmed goat bone, a metacarpus, is from Phase 4.1 (106). This bone is both unfused and porous, suggesting a juvenile animal.

Pig bones are the most frequent of the remains identified to taxon at 76 specimens but a high number (43) are loose teeth, of which 14 are only fragments. A further ten specimens are from the head and jaws. The remaining 23 include foot elements, partial limb bones and scapulae fragments. There are few specimens with ageing data but it can be noted that none of the remains is of a very young piglet and that there are both fused and unfused elements. At least one of the upper canines is from a mature male. Butchery marks are visible on seven bones and these include evidence of chopping, axial splitting of limb bones, and also of chopping the head across (medio-laterally). The anatomical distribution together with the ageing data, though very limited, appears to indicate use of whole, probably locally produced, animals rather than the selective joints of sub-adult animals that one might expect from

Table 2.8. Fenton Hill: Species by phase (by percentage)

Common name	Species	3	4.1	4.2	5	6	6 or 7.1	7	7.1	7.2	0	Total % Species
cattle	*Bos taurus*	0	3.3	3.8	1.4	2.6	0	0	17.4	2.0	20.0	3.0
sheep/goat	*Ovis/Capra*	100	2.6	2.7	4.7	3.5	8.3	0	0	11.8	0	3.8
sheep	*Ovis aries*	0	0	0.5	0	0	0	0	0	0	0	0.1
goat	*Capra hircus*	0	0.7	0	0	0	0	0	0	11.8	0	0.6
pig	*Sus domesticus*	0	9.9	5.4	7.4	6.9	25.0	0	0	0	0	6.8
large mammal, cattle-sized		0	48.3	32.6	16.9	21.7	25.0	60.0	21.7	25.5	20.0	26.8
large mammal, sheep-/pig-sized		0	13.9	11.4	8.8	8.3	33.3	0	4.3	25.5	20.0	10.6
mammal, indeterminate		0	12.6	35.3	46.6	52.4	0	40.0	52.2	23.5	40.0	41.4
dog	*Canis familiaris*	0	0	0	0	0.4	0	0	0	0	0	0.2
mongoose	*Herpestes auropunctatus*	0	0	0	0	0	8.3	0	0	0	0	0.1
rat, indeterminate	*Rattus* sp.	0	0	0	0.7	0.2	0	0	0	0	0	0.2
goose, domestic/ greylag	*Anser anser*	0	0	0	0.7	0	0	0	0	0	0	0.1
domestic fowl	*Gallus gallus*	0	0.7	0	1.4	0	0	0	0	0	0	0.3
turkey	*Meleagris gallopavo*	0	0.7	0.5	1.4	0	0	0	0	0	0	0.4
bird, indeterminate		0	2.6	2.2	4.7	0.4	0	0	0	0	0	1.5
turtles	*Chelonia*	0	0	0.5	0	0	0	0	0	0	0	0.1
amphibian	*Amphibia*	0	0	0.5	0	0	0	0	0	0	0	0.1
shark/ray	*Chondrichthyes*	0	0	0	0	0.2	0	0	0	0	0	0.1
haddock	*Melanogrammus aeglefinus*	0	0	0	0	0.2	0	0	0	0	0	0.1
grouper	*Serranidae*	0	2.6	0	0	0.9	0	0	0	0	0	0.8
perch family	*Percidae*	0	0	0	0	0.4	0	0	0	0	0	0.2
seabream	*Sparidae*	0	0	0	0	0.2	0	0	0	0	0	0.1
parrotfish	*Scaridae*	0	0.7	0.5	0	0.4	0	0	0	0	0	0.4
grunt	*Haemulidae*	0	0	0	0.7	0	0	0	0	0	0	0.1
other fish species not further identified		0	0	1.6	0	0.2	0	0	0	0	0	0.4
fish, indeterminate		0	1.3	2.2	4.7	1.3	0	0	4.3	0	0	1.9
Total % Phase		**0.1**	**13.5**	**16.4**	**13.2**	**48.2**	**1.1**	**0.4**	**2.1**	**4.6**	**0.4**	

barrelled pork. The chronological distribution of the pig bones is broadly the same as all other bone, with the exception of the later phases where they are absent. Whether this can be considered significant with such limited data is debatable but could indicate a change of emphasis post-emancipation.

Dog bones number just two; an upper canine from 306 and a mandible from 506, both in Phase 6 but from different areas. The two teeth still remaining in the mandible are quite worn; the size can be described as 'medium'. There is also indirect evidence for dogs in the presence of gnawed bones, while pigs and small carnivores can also leave gnaw marks it is likely that the marks here are all, or mostly, of canid origin.

There is another mandible of a carnivore, from Phase 6/7 (614). This is from a much smaller animal and matches a juvenile mongoose *Herpestes auropunctatus*. Like the domestic mammals this is an introduced species; the first animals were deliberately taken to Jamaica in 1872 for rodent control, and thence spread to all the sugar producing islands within 30 years (Masseti 2011).

The two remaining mammal bones are mandibles of a rat, from different areas and phases. The species of *Rattus* was not determined, the black rat arrived much earlier in the islands than the brown, but both were present by the early 19th century (Masseti 2011) and either is possible.

Birds

Bird bones are not as frequent as those of the main domestic ungulates, but they include three different species. One bone, a carpometacarpus from Phase 5

(237), matches a goose of domestic size, and a fragment of ulna from 4.1 (617) could also be goose but is not sufficient for reliable determination. Three bones match domestic fowl: a tibiotarsus from Phase 4.1 (106), a pelvis from Phase 5 (111), and a left tibiotarsus of an immature bird from Phase 5 (237). A fragment of a similar but right-sided bone from the context is perhaps from the same bird. A coracoid from Phase 6 (505) is also immature and is probably from a domestic fowl chick. The fowl tibiotarsus from 106 is cut across the distal joint (to remove the foot), and the pelvis from 111 has been chopped across. Four partial bones are from a much larger Galliform bird, these match turkey: a tibiotarsus fragment from Phase 4.1 (615), a scapula from Phase 4.2 (222), and another from Phase 5 (237) together with a humerus. This bone is cut across the distal epicondyle, where the ulna and lower part of the wing would have been removed. A fragment of tarsometatarsus from Phase 4.2 (222) might also be from turkey but is not sufficiently complete to be sure. There are in total 16 fragments not distinguished to species that are probably also of these three species, depending on size. These birds are all domestic poultry and introduced; goose and fowl brought originally from Europe, turkey from the American mainland. In addition to the bird bones, there are also a few fragments of eggshell (of domestic fowl size) from Phase 5 (121).

Reptiles are represented by a single small fragment of turtle limb bone from Phase 4.2 (222). This bone has a shallow scrape mark, indicating utilisation of this marine resource.

Amphibians are represented by a partial pelvis of a large frog or toad from Phase 4.2 (402). A native tree frog still survives on Nevis, but this specimen is probably from the introduced cane toad.

Fish

Fish remains number 44, of which just over half are typically of undiagnostic fin rays and other fragments. One of these came from a late phase context but all other fish remains are from Phases 4-6. At least seven different taxa are represented in the other 21 bones. The remains were not defined to species level apart from one, in part through lack of sufficient comparative material and also due to the difficulty of separating osteologically similar species from fragmentary elements.

A single small shark vertebra in Phase 6 (206) is the only evidence of sharks and rays, although these may be under-represented as most of the skeleton is not calcified. All the other fish remains are of the bony fish and mainly of the perciform group, which are common food fish of the area. Several bones of groupers are present, four from two different Phase 4.1 contexts, and five from four Phase 6 contexts. These are mostly remains from fish of between 30–40cm but an articular from Phase 6 (206) is from a larger fish of about 60cm. The distinctive pharyngeals of parrotfish are present in four contexts and match *Sparisoma* species, for example the stoplight parrotfish or the redband parrotfish, both commonly caught in this area. An inferior pharyngeal in Phase 5 (237) is from a large grunt and has several cut marks. The bone lies in the throat of the fish and the cuts may have been made while removing the head or cleaning the gutted fish, or perhaps if the head was cut up for soup or stock. A sea bream vertebra was identified in Phase 6 (304). Other perciform remains, including vertebrae and some cranial elements, could not be reliably distinguished. One, a dorsal spine from Phase 5 (121), has a diagonal chop mark. A vertebra from Phase 4.1 (106), perhaps of a small jack, has a glossy etched appearance that might indicate digestion by a dog, pig or even human (Jones A. K. G. 1986; Nicholson 1993).

One other fish bone of interest is from the Gadiform group of fish (cod and allied species), namely the hyperostosed cleithrum of a haddock *Melanogrammus aeglefinus*. This bone lies behind the gills and often survives where other material is rare because of its thickened development in this species. The cleithrum lies just in the area where gadid fish heads are chopped off and can be evidence of stockfish, processing sites contain head bones but few cleithra and vertebrae, the reverse being true at consumption sites and material from wrecks (Barrett 1997; Coy *et al.* 2005). The size of this fish was probably about 40-50cm, a good-sized fish that would be appropriate for stockfish. Usually salt fish are cod but other gadids can be utilised; like cod the haddock is a cold-water species not from the Caribbean and must, therefore, have been imported. This could have originated in Europe but perhaps it is more likely to have come from the New England fishery (Murawski 2005).

Comparison with Other Sites

The sample size from Fenton Hill is so small that interpretation must be made with great caution; comparison with other assemblages may be helpful in judging the reliability of the evidence. The samples from the historic period sites on the western side of Nevis examined by Nokkert (2001; 2002b) are not large assemblages either, but together they do provide useful comparanda. Preservation of the remains was variable, but most assemblages contained highly fragmented bones, as at Fenton Hill. At all sites the faunal assemblage is dominated by mammals (Appendix Table 2.9). A direct comparison of the proportions of cattle, sheep/goat and pig appear to show a reduction through time in the amount of cattle, which are at first dominant (Appendix Table 2.10). Other than the sites with only a handful of bones, the sheep/goat increase

more than the pig. Fenton Hill is different in having a larger quantity of pig remains overall, but over half of these are teeth and fragments of teeth. Cattle remains are slightly less frequent than sheep/goat at Fenton Hill but, again, these samples are all extremely small – fewer than 100 cattle/sheep/pig bones combined in each phase group. This is also true of the western sites apart from Crosse's Alley, Charlestown. More, and larger, assemblages are needed to see if this is a genuine difference or a result of small sample size or taphonomy. In the western assemblages, apart from the large domestic meat providers, there are a few remains of equid, dog, cat and rabbit from Crosse's Alley, and several assemblages with one or two rat bones. None have any mongoose. The few bird bones are of domestic fowl/guineafowl apart from one goose from the later phase at Mountravers estate. The turkey bones at Fenton Hill are therefore also a new, if not unexpected, species. Turtle remains were found at several sites, in particular the 17th/18th-century levels at Crosse's Alley and also from the later phase at Mountravers (though most of these remains could be from one animal). Fish remains are perhaps the most variable, in part because they are rarely found unless sieving is routine, their lack at Jamestown and Mountravers slave village is likely to be the effects of recovery bias and sample size. The comparative number of fish remains is very high at Merton Villa, a town house in the capital used by prosperous white families excavated by Michelle Terrell (2005). A good variety is represented here but also from the early phase at Crosse's Alley; the groupers, grunts, parrotfish and seabreams seen at Fenton Hill are all present together with other common local species. The only imported fish, in this case three bones of cod rather than haddock, are from the early phase at Crosse's Alley and the first occupation at Merton Villa.

On St Kitts the larger assemblages from Brimstone Hill Fortress were found to have distinct differences between the British military quarters and the slave areas occupied at the same time. The remains from the British levels contain a wide variety, with ovicaprid and chicken bones frequent; the enslaved African diet also contained ovicaprid and chicken but also higher levels of beef and pork. This was probably mostly supplied as barrelled salted meat; isotopic evidence indicates cattle from temperate as well as tropical origin. Extensive sieving was carried out and fish bones of a wide variety of species are common in both assemblages, but fish from the African areas include cod, which would have been imported salt fish (Schroedl 2018, 195-6).

Detection of preserved, salted supplies at Fenton Hill is difficult, other than the haddock, which is clearly imported because of its ecological distribution. If present, any remains of barrelled pork and beef are likely to be obscured in such a small sample by the bones of fresh local meat. Bones from the premium quality salted meat would be mainly of ribs and vertebrae, usually with butchery from division into suitably sized pieces; secondary quality supplies could also include some limb bones (Klippel 2001; Coy *et al.* 2005). The salt or brine needs to enter the meat as quickly as possible and the largest joints with their fatty marrow bones are unsuitable. Salted meat would not include heads and feet, so we can be reasonably sure that these elements in the assemblage came from fresh, locally raised, animals. As the remains are few, and both butchered and fragmented, it has not been possible to say whether all the meat is from local supplies. Contemporary accounts indicate that, in 1719 at least, various animals were being raised on Nevis (Smith 1745), while other supplies were being imported from Boston. The list includes turkey, so the remains found here are likely to be locally raised birds descended from imported stock. Boston is one of the main ports involved in the salt fish trade too, and the haddock found at Fenton Hill could well have come from there.

Concluding Remarks

Examination of this limited assemblage from the eastern side of the island has added several taxa to the confirmed list for historic period Nevis. The remains of mongoose, turkey and haddock are new but not unexpected; all three are non-native and in the case of haddock indicate traded salted fish. The proportions of the main fauna are also different to any other examined site on Nevis, although the assemblages are all rather small and as a result a few specimens can alter the relative importance without perhaps being truly representative. Isotopic analysis could reveal whether any imported salted meat is present, but the finds of head and foot bones indicate that at least some came from locally raised animals. Analysis of this material, though restricted, shows that examination of even a small assemblage can offer new information, and recovery of further material from across the island is highly desirable.

Part 2: Invertebrate remains

Sheila Hamilton-Dyer

Several different types of invertebrate are represented in the 3kg of collected remains. In addition to marine gastropod and bivalve shells, which form the majority, there are terrestrial gastropod snail shells, plates of chitons, pieces of crab exoskeleton and fragments of coral (Tables 2.9, 2.10). Taxonomic identification was made using recent material and by consulting reference works. The specimens were recorded in a similar manner to the vertebrates; all but the small particles

were counted and identified as closely as the material allowed. The shells of the bivalves were counted as single valves and were sided. The approximate percentage of the original shell (or valve, or chiton plate) was recorded along with any notable features such as burning or working traces. The specimens were assigned a size class and measurements were taken on the more complete shells of the marine species; these and other data not discussed in text are detailed in Appendix Table 2.11.

The coral fragments were simply counted and their size class noted. Similarly the few small fragments of crustacea all appeared to be of crabs and were counted but were not further identified. A couple of instances of charring were observed on the crab remains but not in the shells.

The terrestrial snail shells are of two distinct types, one with a broad body whorl as seen in *Bulimulus*, the other of a narrow spired type such as *Subulina octona*. Both types are of very small animals that are probably remains of contemporary and more recent intrusives; they have also been counted and included in the tables and archive data for the sake of completeness, but are not further identified or discussed.

The bulk of the invertebrate remains are of marine gastropod and bivalve shells, of at least 11 different species of gastropod and two of bivalves. Many shell fragments could not be identified with certainty but are likely to be of the larger species. A couple of worn pieces of very large shells could represent the only finds of one of the large conch species at this site. The heavy shell of the West Indian top shell, with its distinctive black outer surface, was frequently identifiable from quite small pieces and the NISP count of 165 does not represent whole shells by any means. Pieces of this chunky gastropod shell were particularly frequent in Phase 6. A few of the more complete shells had been broken open; although much of the material was fragmented (for example, by trampling), these more deliberate breakage patterns could indicate meat extraction. An important food source in itself, the empty shells of this species are also used by the land hermit crab *Coenobita clypeatus* and can therefore be found far away from the water. Occupation by the land crab can sometimes be deduced by observation of aperture lip modification and thinning of the internal body whorl (Reitz and Wing 1999) but this was not seen in the more complete specimens and most of the remains are of small pieces. The next most frequent taxa, both in size and number of specimens, are the star shells *Lithopoma*. Several fragments (13) could not be distinguished to species but the remains include both of the common species, with the green star *L. tuber* the most common at 25 specimens and only five identified as the carved star *L. caelatum*. The remains include four operculae – some gastropods have a trapdoor to close the aperture when out of water; in this family it is a hard calcareous disc. Their presence indicates that at least some of the shells arrived at the site with the live animal intact. Other gastropods occur in small numbers, often single specimens, and include a keyhole limpet, bleeding tooth nerite, beaded periwinkle, purpura, cone and rock shells. These are smaller species but potentially edible. Purpura and rock shells can be used as a source of dyestuff but in that case one would expect to find very large quantities and probably away from habitation, as the process is very pungent. Small attractive shells could have been intentionally collected for decorative use; although few of the ones found here have holes for threading or other signs of such use. The single cone shell found is worn smooth and is perforated through the top of the spire; this is commonly seen in beach material and was probably collected empty from beach debris for use as a bead. There is a fragment of top or star shell with a 3mm hole, but this was probably made by a predatory gastropod and does not itself indicate use, although such ready-made holes are sometimes utilized. One further species of small gastropod is of special interest because it is worked and also because it is not native to the Caribbean. This is a shell of the money cowrie, *Cypraea moneta*, which has had the dorsum removed (Figure 2.64). This enables the shell to be threaded on cord or sewn onto cloth or leather. Burial goods in the West African tradition include cowries. These are rare finds in America and the West Indies, if any they are usually found as single shells (Handler 2009). An unusual burial in Barbados contained several items probably of African origin and among them a necklace that included seven money cowries along with other beads of dog teeth, fish vertebrae, glass and carnelian (Handler 1997).

The bivalve shell remains are almost all of the Caribbean donax clam together with one of the tiger lucine and two further fragments that could not be identified. Although relatively small at around 20mm long, the donax is edible and can be added to soups and stews; it has been utilised in the Caribbean since antiquity.

Figure 2.64. Fenton Hill: modified money cowrie shell, context 404

Table 2.9. Fenton Hill: Invertebrates by phase

	Phase	3		4.1		4.2		5		6		6 or 7.1		7		7.1		7.2		Total	Total
Common name	**Taxon**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**
chiton	*Chiton granulatus/ tuberculatus*			3	1			5	1	12	2	1	1							26	5
keyhole limpet	*Fissurellidae*																	1	1	1	1
West Indian top shell	*Cittarium pica*			9	1	14		4	2	107	11			6	1	5	1	20	4	181	20
bleeding tooth nerite	*Nerita peloronta*									1	1									2	1
green star shell	*Lithopoma tuber*			3	2	5	2	2	1	12	5							3	1	35	11
carved star shell	*Lithopoma caelatum*					1	1			3	2					1	1			9	4
star shell, indeterminate	*Lithopoma sp.*	1	1	3	1	4				5	1									16	3
beaded periwinkle	*Tectarius muricatus*					1	1			1	1									4	2
money cowrie	*Cypraea moneta*					1	1													2	1
reticulated cowrie helmet	*Cypraecassis testiculis*									3	1									4	1
wide mouthed purpura	*Plicopurpura patula*									4	3									7	3
deltoid rock shell	*Thais deltoidea*									1	1									2	1
rock shell, indeterminate	*Thais sp.*																	1	1	1	1
mouse cone	*Conus mus*									1	1									2	1
gastropod, indeterminate	*Gastropoda*			9	1	16	1	6	1	146	2					24	2	38	2	246	9
Caribbean donax	*Donax denticulatus*			2	1	5	2.5	3		27	12							1	1	53.5	16.5
tiger lucine	*Codakia orbicularis*																	1	1	1	1
bivalve, indeterminate	*Bivalvia*									2	1									3	1
	Total NISP/MNI	**1**	**1**	**29**	**7**	**47**	**8.5**	**20**	**5**	**325**	**44**	**1**	**1**	**6**	**1**	**30**	**4**	**65**	**11**	**524**	**82.5**
landsnail 1	Bulimulus type					6		3		32						15		4		60	
landsnail 2	Subulina type					2				9						1		5		17	
crab, indeterminate	*Decapoda*			3		1				3						1		2		10	
coral fragment				3		3		2		23								6		37	

Table 2.10. Fenton Hill: Invertebrates by phase (by percentage)

Common name	**Phase**	**3**		**4.1**		**4.2**		**5**		**6**		**6 or 7.1**		**7**		**7.1**		**7.2**			
	Taxon	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**	**NISP**	**MNI**
chiton	*Chiton granulatus/ tuberculatus*	0	0	10.3	14.3	0	0	25.0	20.0	3.7	4.5	100	100	0	0	0	0	0	0	5	6.1
keyhole limpet	*Fissurellidae*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	9.1	0.2	1.2
West Indian top shell	*Cittarium pica*	0	0	31.0	14.3	29.8	0	20.0	40.0	32.9	25.0	0	0	100	100	16.7	25.0	30.8	36.4	34.5	24.2
bleeding tooth nerite	*Nerita peloronta*	0	0	0	0	0	0	0	0	0.3	2.3	0	0	0	0	0	0	0	0	0.4	1.2
green star shell	*Lithopoma tuber*	0	0	10.3	28.6	10.6	23.5	10.0	20.0	3.7	11.4	0	0	0	0	0	0	4.6	9.1	6.7	13.3
carved star shell	*Lithopoma caelatum*	0	0	0	0	2.1	11.8	0	0	0.9	4.5	0	0	0	0	3.3	25.0	0	0	1.7	4.8
star shell, indeterminate	*Lithopoma sp.*	100	100	10.3	14.3	8.5	0	0	0	1.5	2.3	0	0	0	0	0	0	0	0	3.1	3.6
beaded periwinkle	*Tectarius muricatus*	0	0	0	0	2.1	11.8	0	0	0.3	2.3	0	0	0	0	0	0	0	0	0.8	2.4
money cowrie	*Cypraea moneta*	0	0	0	0	2.1	11.8	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
reticulated cowrie helmet	*Cypraecassis testiculis*	0	0	0	0	0	0	0	0	0.9	2.3	0	0	0	0	0	0	0	0	0.8	1.2
wide mouthed purpura	*Plicopurpura patula*	0	0	0	0	0	0	0	0	1.2	6.8	0	0	0	0	0	0	0	0	1.3	3.6
deltoid rock shell	*Thais deltoidea*	0	0	0	0	0	0	0	0	0.3	2.3	0	0	0	0	0	0	0	0	0.4	1.2
rock shell, indeterminate	*Thais sp.*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	9.1	0.2	1.2
mouse cone	*Conus mus*	0	0	0	0	0	0	0	0	0.3	2.3	0	0	0	0	0	0	0	0	0.4	1.2
gastropod, indeterminate	*Gastropoda*	0	0	31.0	14.3	34	11.8	30.0	20.0	44.9	4.5	0	0	0	0	80	50.0	58.5	18.2	46.9	10.9
Caribbean donax	*Donax denticulatus*	0	0	6.9	14.3	10.6	29.4	15.0	0	8.3	27.3	0	0	0	0	0	0	1.5	9.1	10.2	20.0
tiger lucine	*Codakia orbicularis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	9.1	0.2	1.2
bivalve, indeterminate	*Bivalvia*	0	0	0	0	0	0	0	0	0.6	2.3	0	0	0	0	0	0	0	0	0.6	1.2
	Total Phase	**0.2**		**5.5**		**9**		**3.8**		**62**		**0.2**		**1.1**		**5.7**		**12.4**			

Chitons, or coat-of-mail shells, are primitive marine molluscs that graze on algae on rocks around the splash zone. The outer 'shell' of this animal is composed of eight articulating plates and it is these that have been recovered as separate pieces. The muscular foot can be eaten raw or cooked, so the plates are likely to represent animals used for food.

Habitat of the represented species

Almost all of the taxa identified can be found in the littoral zone and, especially, rocky shores. The animals could have been picked off the rocks by hand or, if collected as dead shells, found at the tideline. The West Indian top shell is mainly found in tide pools of rocky shores and the two star shell species co-habit around and under intertidal rocks. Several species such as the chitons can be found in the splash zone. Many of the animals are algae grazers, while the purpura and rock shells are intertidal carnivores. The donax clam is a filter feeder and lives in large colonies in the beach sand at the low tide limit and can be gathered in quantity; the mixed size range of the recovered shells suggests a bulk dredging technique, but perhaps needing no more than a woven basket or scoop. Some of the species can also be found sub-tidally and may be found on the coral reef. Few of the remains are of species associated with soft substrates within estuaries, mangroves and eelgrass beds.

At a shoreline site some of the remains of chitons, hermit crabs and molluscs could be discarded fishing bait, but in the context of domestic properties away from the shore this is unlikely. Although not at the shore itself, any site on a small island may contain marine shells accidentally included in sand and other materials, in addition to those brought inland by hermit crabs, but it is assumed that all or most of those deposited with other domestic debris represent direct human use.

Frequency of the main species

The MNI (Minimum Number of Individuals) is difficult to calculate with the quantity of broken shell present, the usual method of counting the apex from each gastropod would have discarded many of the identified shells as this part was frequently damaged. Instead, gastropods were counted as individuals if at least 60% of the shell was present or 40% if the apex was present. Counts of bivalves were made by dividing the NISP in half, accounting for side. For each phase species were counted as MNI = 1 if none of the fragments present qualified otherwise. Even with this generous allowance, MNI counts for the material are extremely low; in Phase 6, which contained the majority of all shells, the donax reduce from 27 NISP to 12 MNI and green star from 12 to 5, but it is the count for the top shell that is most reduced – from 107 NISP to 11 MNI (see Table 2.9). It is likely that the true representation is slightly higher as the shells were not all of the same size, but it illustrates the fragmentary state of the shells of this large species. Whether breakage was deliberate or from trampling, the smaller species escaped much of the fragmentation. In spite of the heavy fragmentation of these larger shells the majority of the meat would have come from the West Indian top and the star shells, followed by the chitons and donax.

Comparison with other sites

Comparison with shell material from sites excavated on the western side of the island, analysed briefly by Nokkert (2001; 2002a) is worthwhile although the assemblages and methodology are not described in detail. Material from some of the excavations was screened over 2.4mm mesh and would therefore have included material of similar size to that from Fenton Hill. Donax were frequent at both Crosse's Alley and Mountravers; they were also common at the Mountravers slave village but here the remains were of eroded beach material and would not have been food remains. Several specimens of the West Indian top were found, especially at Jamestown, although it is not clear whether these are fragments or more complete shells. There is also a single rock shell. Several crabs are listed but chitons are not mentioned, and all other shells are of different species from those at Fenton Hill.

While the presence or absence of single shells may be in part an artefact of sample size, there are two notable differences between the assemblages. No star shells were found at any of the sites and instead there are several remains of various conch species. These are large shells and would not have been missed even in hand collection, revealing a definite difference between the sites. The ecology of these shellfish may be relevant; star shells are mainly associated with rocky shores and coral reefs, while the conch are mainly found on sandy substrates, grazing the eelgrass beds. The shore and near-shore habitats closest to the sites on the west coast are almost entirely of sand and eelgrass beds, whereas that immediate to Fenton Hill on the windward side is mainly composed of flat gorgonian coral and macroalgae on hardground (Bruckner and Williams 2012). Shell material from the nearby prehistoric site at Hickman's (Nokkert 2001b) was analysed in detail and reveals a species list much closer to that from Fenton Hill. The assemblage contained over 20 mainly rocky shore species with chitons, West Indian top, star shells and donax common, as at Fenton Hill, but also with many shells of green tegula (a small top shell) and nerites. As at Fenton Hill, the West Indian top shell has a large NISP but the fragments account for a much lower MNI total. The conclusion for this site, and other previously reported material, is that local availability dictates much of the choice.

Further afield, Wallman (2014) reports a wide variety of shells from a site on Martinique, including the West Indian top and several others also found at Fenton Hill. The frequency of oysters and clams is a distinct difference; these are taxa obtained from estuarine and mangrove habitats and are not available close to Fenton Hill. There were slight differences between individual households, but also from the planter's residence – where oysters were a preferred food.

At La Mahaudière plantation on Guadeloupe (Brunache 2011), remains of marine invertebrates were found in quantity, and the shells from the slave village were dominated by the West Indian top, with chitons and lucine clams frequent. The mixture of other species included both conch and star shells. A shift towards more meat from terrestrial animals is suggested from the assemblages of the later phases, which have a wider variety of shell species but in smaller quantity.

3. Excavations at Upper Rawlins, St George's Gingerland Parish, 2005 and 2006

Robert Philpott and Roger Leech

Introduction

Roger Leech and Robert Philpott

The site published here as Upper Rawlins was first brought to the attention of Roger Leech, Visiting Professor at the University of Southampton, and Bruce Williams, Director of Bristol and Region Archaeological Services (BaRAS), both undertaking historical archaeology research for the University's Nevis Heritage Project, in the summer of 2001, by Edward Herbert, a resident of nearby Zetlands. The first contact with Mr Herbert was initiated by the Hon. Vance Amory esq., then Premier of Nevis, whom Roger Leech had met by chance during Hurricane Lennie in November 1999. Mr Herbert had earlier retired from work in the United Kingdom where he had worked in Leeds, and developed a great interest in local history on Nevis. In 2001 he had recently completed the development of a tourist attraction on the 18th-century fortifications at Saddle Hill which he had named 'Nelson's Lookout' and was turning his attention to the educational and tourist potential of part of the hillside above Zetlands, which he owned and to which he had given the name 'Herbert Heights'. On part of this hillside, over 1500 feet (*c.* 460m) above sea level on the slopes of the former volcano now known as Nevis Peak, were the walls and cisterns of a former settlement; surface finds included pottery of the 18th and 19th centuries and lead bullets, which Mr Herbert rediscovered in 1999 (Leech and Williams 2003, 42, figs 3.3, 3.12). The latter might have indicated a context within the fortification of the island, but survey of the site in 2002 by Roger Leech and Nigel Fradgley, with the assistance of Eric and Alex Klingelhofer, showed conclusively that the remains were those of a sugar mill, consisting of a house, a cattle mill mound and a boiling house. Superficially, the site was of a similar plan and form to the sugar works illustrated by Du Tertre in 1667 (Figure 1.8). In 2004, Mr Herbert conducted small unrecorded excavations which produced a large quantity of finds, including Afro-Caribbean pottery, late 17th- to early 18th-century European ceramics and clay tobacco pipes. Effectively unstratified, the finds from 2004 were allocated the site code UR04 and context number 1.

Following the survey and initial discoveries, a site display poster was prepared for visitors to 'Herbert Heights' and plans were made for an excavation to commence in 2005 as part of the Nevis Heritage Project.

In July 2006, archaeologists Dr Fraser Neiman and Dr Jillian Galle of the Digital Archaeological Archive of Comparative Slavery (DAACS), Monticello, Virginia, undertook a programme of shovel-test-pitting as part of a two-week survey of three slave villages on Nevis, in collaboration with archaeologists from DePaul University, Chicago, the University of Southampton, and National Museums Liverpool. Goals included locating and initiating preliminary shovel-test-pit surveys of three slave-village sites: Jessups I, Jessups II, and Upper Rawlins; 49 shovel-test pits were excavated at Upper Rawlins (DAACS website).

Seven trenches and three test-pits were excavated in 2005 and 2006. Several were enlargements of trenches excavated by Edward Herbert in 2004. Five trenches were excavated within the boiling house/curing house area in 2005 and 2006, and two within the domestic range. A further trench had been excavated prior to 2005 by Edward Herbert against wall 16, but no record was made.

Documented history

Roger Leech

Nevis has an enclosed European landscape laid out from the 1630s onwards within nine principal 'divisions'. The central southern division, corresponding to the parish of St George, with its principal property boundaries running parallel to the coast, was possibly the last division to be set out: on the west, the inner round the island road forms part of the division boundary, and must therefore have been in use by the time the division was laid out. The other divisions of the island cut across the inner round the island road (Leech 2007, 191, 195; Figures 1.4, 1.5).

The histories and boundaries of the estates encompassing and surrounding the excavated remains at Upper Rawlins are not easily discerned, since few historical estate maps survive for this part of the island in the parish of St George. The site was given the name Upper Rawlins by the excavators since it clearly lay

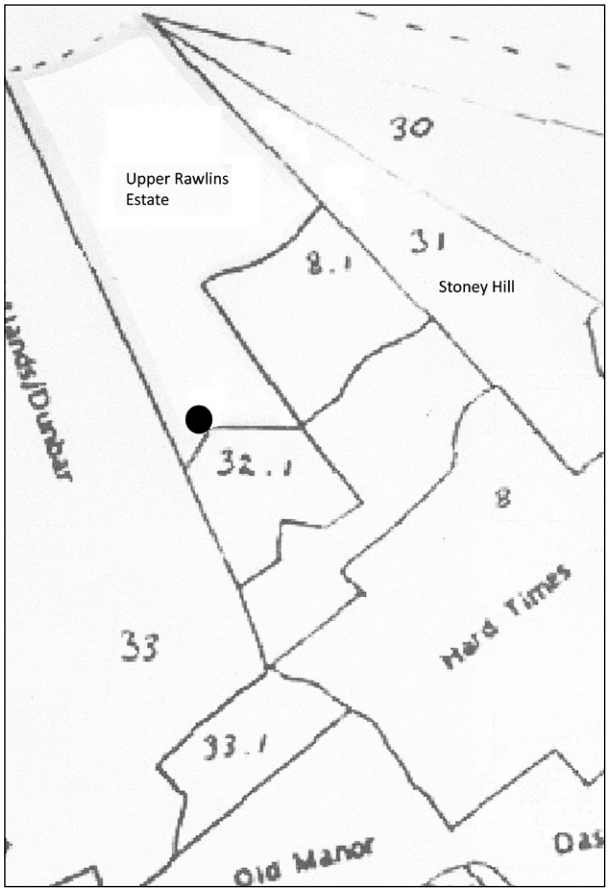

Figure 3.1. Map by Sharpe of estates in Nevis dated c. 1990, showing location of Upper Rawlins estate (north at top)

above the estate named as Rawlins on Burke Iles's map of 1871 (Figure 2.4), and above the remains of the mill still known by that name (discussed briefly by Meniketti 2015, 144-5, fig. 5.30). In recent times the excavation site could be said to lie within Herbert Heights, a tract of land claimed by the Herbert family of Zetlands. The boundaries of some of these estates can be surmised from the map of Nevis plantation estates compiled by a Mr Sharpe and held in the Nevis Planning Authority Office.[1]

Burke Iles's map of 1871 shows the approximate relationship of the land above Rawlins to the surrounding estates (Figure 2.4). To the north was Stony Hill. To the south was an area of land labelled 'Table land', perhaps a flatter area standing out from the otherwise steeply sloping mountainside. To the west and south-west were Dunbar and Zetlands, plantation centres that can be identified today.

Estate records from the 18th century can be placed into the landscape recorded from 1871 onwards. A useful starting point is the Dunbar estate, since its location and boundaries can be identified with certainty from records of the 20th century. In 1762 this was the plantation 'where Mr Dunbar then resided' called the Mountain Plantation, *c.* 60 acres, in the parish of St George, part 'bounded to the east with lands of Mrs Judith Butler, widow, to the west with lands of William Pemberton esq., to the south with lands late of William Clarke since of Patrick Flaherty and now in the occupation of Thomas Ottley esq., to the north with lands now or late of William Kitt or Michael Williams esq. and now in the occupation of George Webbe junior esq.' (EAP794 1/1 Common Records 1763-4, fols 393 and 425). On Sharpe's map, the boundaries of the Dunbar estate are shown in such a way that an estate said to be to the north must in fact have been to the north-east: the plantation named by its excavators as Upper Rawlins was probably the estate which in 1762 comprised the lands late of Kitt and Williams. Sharpe's map indicates that the lands still further to the north, known as 'the Pasture', were probably part of the Hard Times estate.

The history of the estates to the north of Dunbar's can then be usefully traced in more detail. By 1783 these formed part of the estates of William Pemberton, purchased from his nephew Robert Pemberton and Miss Frances Williams, now Frances Jones and the wife of the Revd William Jones, formerly the land of William Kitt and late of Michael Williams decd. These lands were divided by Pemberton in his will of 1783. The lands extending 'from the path leading to Morgan's to the path leading up to the mountain' passed with Terrace Gut to his son Robert. The lands extending 'from the path leading up to the mountain to the line of George Webbe esq.' passed with the Dunbar plantation to his son Edward (EAP794 1/5/1 Nevis Wills 1764-1787, 605).

Still further to the north was a tract of land known as the Pasture. In 1762 this was 'the pasture thereto adjoining' to the plantation 'where Mr Dunbar then resided' called the Mountain Plantation, 'bounded to the east with land now or late of George Webbe senior, to the west with lands of William Pemberton esq., to the south with the lands, already mentioned, now or late of William Kitt and Michael Williams esq. and late in occupation of George Webbe junior esq. and to the north with undivided woodland formerly part of the inheritance of Col. William Butler, owned by Judith Butler Dunbar widow, only child and sole heir of James Symonds esq., late President of His Majesty's Council in the island of Nevis and Mary his wife, both decd.' (EAP794 1/1 Common Records 1763-4, fols 393 and 425).

From this information it is possible to reconstruct tentatively the extent of the plantation estate of which Upper Rawlins formed part. As shown in relation to the estate boundaries mapped by Sharpe (Figure 3.1), it comprised the land between Zetlands/Dunbar

[1] A map originally compiled by Mr Sharpe, a volunteer worker for an NGO, and subsequently made available to the author by Ms Lileth Richards, then planning officer for the island of Nevis; some of Sharpe's sources are no longer accessible.

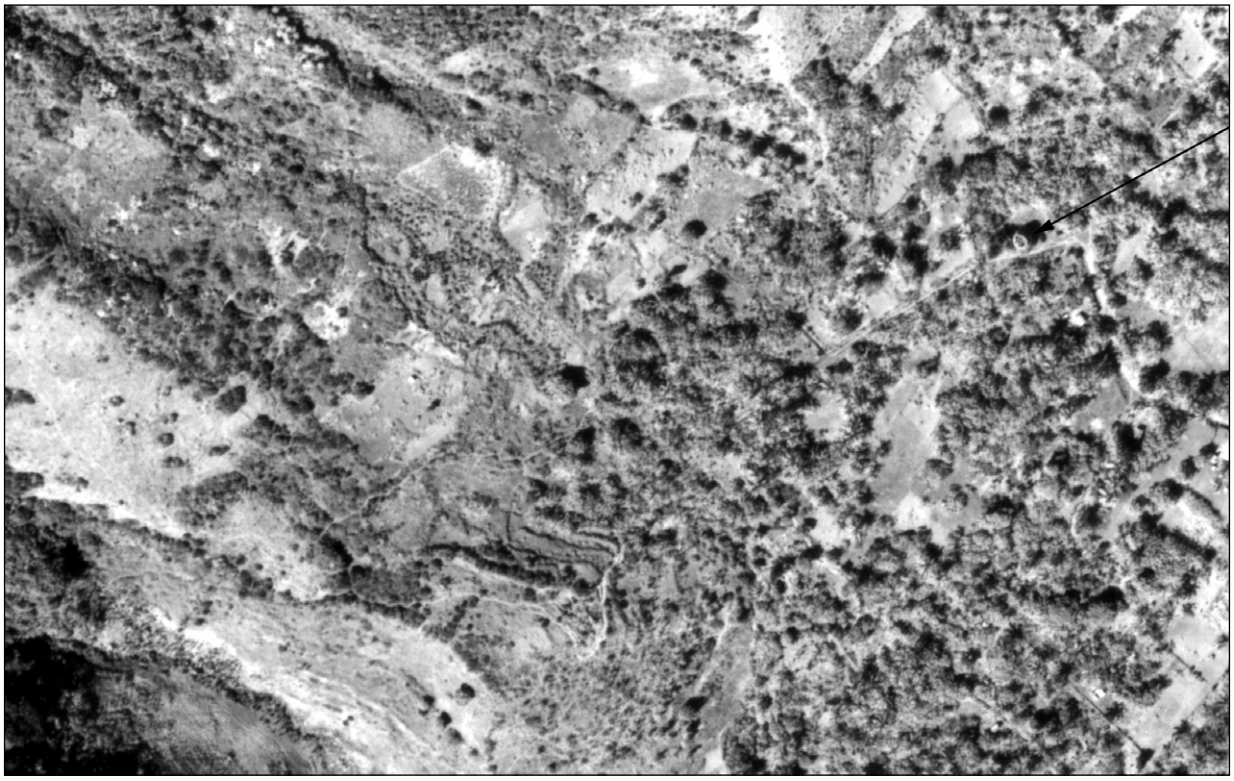

Figure 3.2. Aerial photograph of the area from Upper Rawlins (top left) to Rawlins in 1968. The Rawlins stone windmill tower is marked with an arrow top right (extract from Directorate of Overseas Surveys 99-KT.1, Nevis- 6500ft, 1 March 1968 Frame 22)

on the west and Stoney Hill on the east, uphill of the plantation road and extending to the summit of Nevis Peak (Figure 2.3). This was a plantation established on what was regarded in the 18th century as mountain land, more prone to erosion, but 'having the advantage of more rain in dry years [that will] make more tolerable returns when those in the low grounds will not enable the proprietor to pay the expenses' (Pares 1950, 104-5).

Survey of Upper Rawlins

Roger Leech and Robert Philpott

Field survey and aerial photography (Figure 3.2) have provided further information on the excavated remains at Upper Rawlins. Field survey in 2002 (Figure 3.3) by Roger Leech and Nigel Fradgley showed the site as consisting of structures set on platforms terraced into the hillside. A northernmost terrace contained on the west side a level and roughly oval platform with space for a mill approximately 14m east-west by 10m north-south. Traces of a stone retaining wall on the southern side have been interpreted as a mill mound, a level area occupied by a cattle mill such as that illustrated by Du Tertre (cf. Figure 1.8; Figure 3.3; Figure 3.4, A). To the east of this was a complex of walls, some faced with a hard white lime mortar, and including stairs of three carefully constructed steps, interpreted as being a dwelling house (C) with an ancillary structure, perhaps a kitchen (D). On the downhill side of these structures was a circular cistern (B), the interior face plastered with a hard white lime mortar, *c.* 2.9m in diameter at the rim, sited so as to capture rain water falling on the structures above.

On a lower terrace to the south were three structures, the surviving walls of which stood to heights of 0.1 to 0.6m. On the west was a walled area (F), possibly an area for the storage of fuel, including discarded crushed sugar cane waste or 'bagasse' from the mill above. The northern side was formed by the continuation of the north wall of the boiling house (Figure 3.5), while to the south a rubble wall was recorded, with an entrance (of which the door jamb was clearly identified) measuring about 5.0-6.1m east-west by 5.2m north-south. The location beside the boiling train suggests it served as both a 'fire room' (cf. Ligon 1657) and a trash house, where the crushed cane or bagasse, which was used as fuel in the boiling train, was dried and stored. In the centre was a stone-faced rectangular structure (G), interpreted as a former boiling house (H), containing a boiling train with settings for four coppers, flues and fireboxes below, and a stone spout at the lowest point of the upper surface (all recorded during the excavations and described in more detail below). To the east were two rectangular stone-walled structures, one the same depth of and part of the same overall structure as the boiling house (H), interpreted as being for the storage

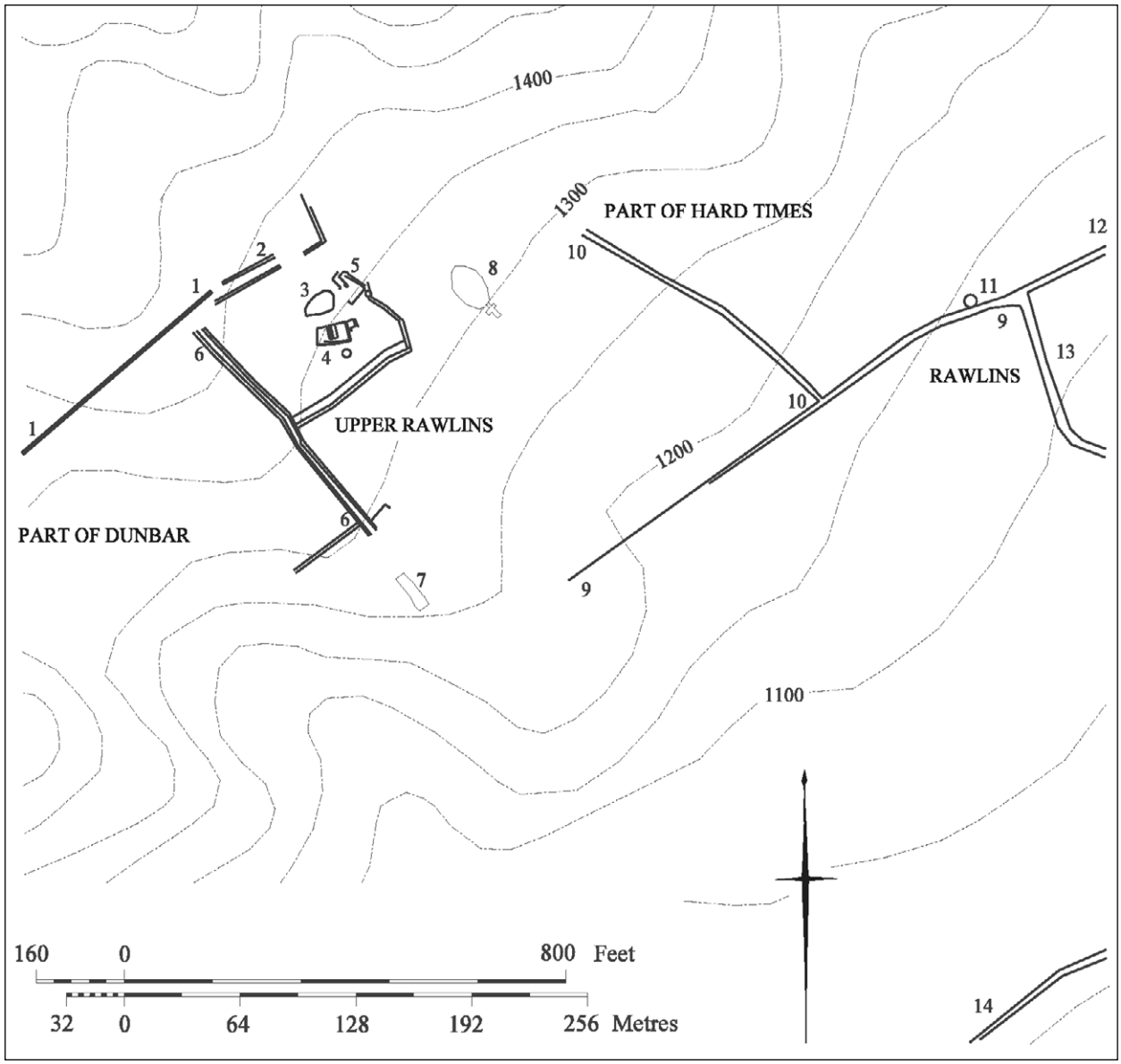

Figure 3.3. Upper Rawlins in its landscape setting: 1 boundary bank; 2 trackway on same alignment as 1; 3 the cattle mill; 4 the boiling house and adjacent structures; 5 the house; 6 the trackway or plantation road extending downhill; 7 the 'slab' or pond; 8 oval enclosure and roofed building of cruciform plan; 9 and 10 trackways; 11 ruined windmill tower of Rawlins plantation; 12 upper round road to Stoney Hill plantation; 13 modern paved road to Zetlands village; 14 modern road within Zetlands village

of tools and processed sugar, and the other a smaller addition to the east (I), the latter possibly a still house.

To the west of the terrace containing the boiling house and adjacent structures were three platforms with no visible remains of structures, but possibly utilised for the placement of workers' housing. On the hillside below the boiling house was a second circular cistern (E), the interior face plastered with a hard white lime mortar, sited so as to capture rain water falling on the structures above.

Survey of the Adjacent Hillsides

Roger Leech

Two features extend from south-west to north-east across the hillside, probably forming estate divisions from the earliest setting out of the colonial landscape. To the west of Upper Rawlins is a wide earthen and stone bank, up to 2m in width and height, and very visible on aerial photographs (Figure 3.2; Figure 3.3, 1). This becomes the north or uphill side of the trackway along the north side of the settlement at Upper Rawlins (Figure 3.3, 2). A second feature on this same alignment

is the trackway (Figure 3.3, 9) running gently uphill and westwards from a ruined windmill tower (Figure 3.3, 11), which can be identified from Burke Iles's map as being of Rawlins's plantation (Figure 2.4). This same trackway, the upper round island road, extends eastwards (Figure 3.3, 12) towards the site of the Stoney Hill plantation, and downhill (Figure 3.3, 12), as a modern paved road, to the present day village of Zetlands. Branching northwards and uphill is another trackway (Figure 3.3, 10) that from the evidence collected on Sharpe's map appears to separate Upper Rawlins from a detached portion of the Hard Times estate. Between the trackway and the settlement remains at Upper Rawlins, an aerial photograph of 1968 shows a roughly oval enclosure to the immediate south of which was then a roofed building of cruciform plan (Figure 3.3, 8); these features were only identified during post-excavation work and have not been investigated in the field. The principal east-west trackway (Figure 3.3, 9) extends westwards from the Rawlins mill tower to meet up with the continuation of a trackway (Figure 3.3, 6) extending past a 'slab' or pond (Figure 3.3, 7) northwards and uphill to the settlement remains at Upper Rawlins, probably the principal means of access to the former plantation site. Below the principal east-west trackway another road, now paved and within Zetlands village, follows the same alignment (Figure 3.3, 14). A shallow rectangular tank, of mortar and stone, near the lower slab probably represents a secondary focus of plantation structures. The tank has been tentatively interpreted as for processing indigo but was destroyed without record in 2008-9.

Location and Topography

Robert Philpott

The main plantation works and domestic buildings lie at between *c.* 465 and 468m OD (*c.* 1525-1535 feet), in a localised area of fairly level ground on the prevailing steep hill slope, located near a steep gut, on the south-east side of Nevis Peak (985m or 3231 feet). Nevis Peak is a typical andesitic lava dome, characteristic of the Lesser Antilles, and consists of block and ash flow deposits with lower down the slope undifferentiated flank deposits. The location coincides with a terrace at about the 460m contour which is considered to mark the junction of an older volcanic complex upon which a later volcanic dome developed (Hutton and Nockolds 1978). The site lies north-west of the modern village of Rawlins in the parish of St George Gingerland. The mountain slopes are now covered with regenerated forest, but extensive terracing for sugar cultivation can be traced, following the contours of the hillside. The hillside is littered with boulders and smaller rocks of volcanic origin, which result from volcanic activity and earthquakes on the central peak.

The Plantation Complex

The plantation complex was defined by a compact group of structures on a locally relatively level area within the steeply sloping hillside (Figure 3.4). Two ranges of buildings extended over two terraces aligned on the contour of the hill slope. The sugar works consisted of an animal mill on the upper terrace with the main sugar works on the lower terrace. The domestic range of the estate lay to the east and was set at an angle of about 55-60°, aligned roughly north-west by south-east, occupying both terraces.

The Excavations

Robert Philpott

Summary of Phases

Phase 1: Pre-plantation deposits (pre-late 17th century)

Phase 2a: Construction of the plantation works and dwelling (late 17th century)

Phase 2b: Modification of the plantation buildings (late 17th/early 18th century)

Phase 3: Abandonment of the plantation, decay of buildings and development of colluvial layers (early 18th century)

Phase 4: Later casual activity (late 18th-early 19th century)

The Sugar Works: Boiling House and Curing House

The excavations in the vicinity of the boiling and curing house produced a broadly consistent sequence consisting of three main deposits which are considered in chronological order beginning with the earliest.

Phase 1: Pre-plantation Deposits

Pre-boiling house deposits (86, 87, 64)

The earliest deposits, encountered in several trenches in the area of the boiling house and curing house, were sealed by the rubble foundation of the boiling house. However, these lower deposits were not examined or recorded in detail.

A consistent deposit of natural small angular volcanic stones in a mid brown 'soil' matrix (87) underlay both a compacted rubble floor foundation and also the wall 16. The same deposit was also encountered as context 86, where the stones were clearly different from the overlying deliberately laid rubble layer,

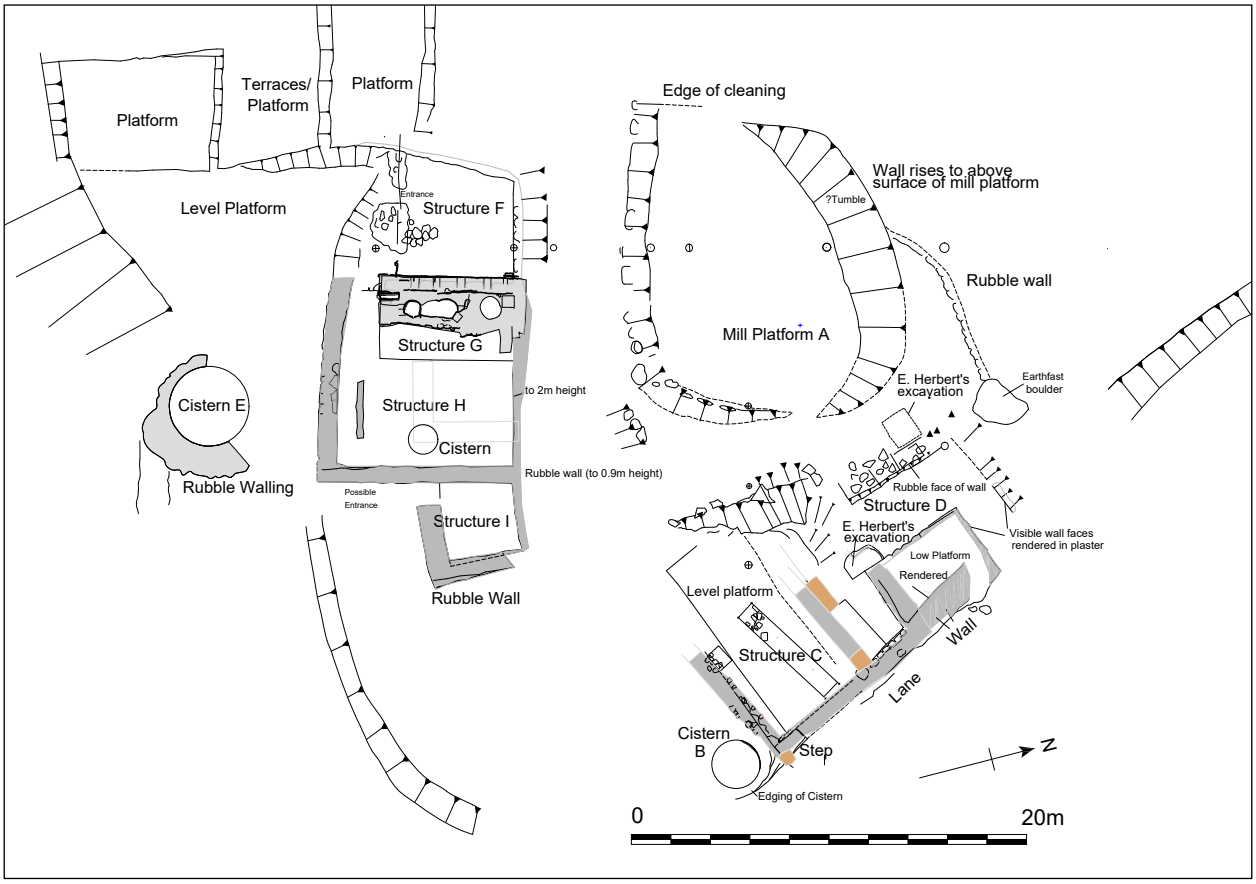

Figure 3.4. Upper Rawlins: overall plan of plantation complex from 2002 survey by R. Leech and N. Fradgley, with additions from the excavation plans

being more angular and measuring up to 50mm which marked the limit of excavation. The latter deposit probably represented the levelled platform cut into natural subsoil or bedrock which was created for the construction of the boiling house.

Context 64 lay under the main rubble platform (60) but contained no finds other than a little mortar in a 'clayey soil'. Photographs show that the rubble foundation abutted the north wall of this area. A similar deposit underlying the rubble (context 44) in the trench east of the boiling train contained a small number of finds (a fragment of Afro-Caribbean pottery and three of tile). This deposit may have pre-dated the European occupation and the finds were a consequence of material being pressed into the layer from above.

Phase 2a: Construction of the Plantation Works

The sugar processing works form a compact group of structures arranged over two terraces, set within a compound marked by terrace walls (Figures 3.3, 3.4). The first element of the works is the raised animal mill, originally revetted with a stone wall, which stood on a terraced platform immediately above the boiling house. Nothing remains of the superstructure. The mill supplied freshly extracted cane juice to the boiling train, which was built against the wall of the terrace below, to the south.

Phase 2a: Boiling Train (Initial Construction)

The boiling house and curing house survived as a freestanding mortared masonry rectangular structure built against the terrace slope, measuring internally 8.9m north-south by 8.7m east-west. There are traces of an internal division, marked by a break in slope, probably to separate the two functions of boiling and curing sugar. The excavation revealed a cistern in the interior (context 62). An east-west stretch of *in situ* masonry rendered in white mortar parallel to the south wall and 0.97m away from it, created a narrow 'passage' which may have held a staircase to an upper floor of the curing house (cf. Ligon 1657, 84).

To the west of the boiling train was a walled area (F) which probably served the dual function of fire house, where the stoke-holes were charged and tended, and a trash house for storage of bagasse, the crushed and dried sugar cane which was used as fuel in the boiling house.

Figure 3.5. Upper Rawlins: view of the plantation complex from SW, after clearance in 2002; the 2m scale stands by the boiling train

A small irregular rectangular structure (I) measuring *c.* 3.95m square, and set against the lower terrace, abutted the eastern boiling house and curing house wall. Rubble walls are evident to the east and south, the latter with a probable entrance. The location suggests this is an adjunct to the curing house. Ligon (1657, 84) illustrates a still house in this position.

The boiling train survived as a masonry rectangular structure, measuring about 6.6m north-south by 2.5m east-west, standing to a height of up to 2.5m (Figures 3.5-3.16). Mortared stone walls were present on all four sides, while to the north the train was built against the terrace on which the animal mill stood. The train was allocated separate context numbers: the west wall (15), east wall (16), rubble infill (20), south wall (22), interior wall of the train (18), stone channel (21), base of flue to south (26), base of flue to north (25), the primary rubble infill (36), and later rubble infill (37). The north wall (27) was plaster-faced to the interior and survived to at least five courses in height.

A plaster-lined tank or cistern (45) had been constructed against the north wall (27) of the boiling house (Figure 3.14). It stood close to the clarifier but at a higher level on a rubble core within a wall which stood to a height of 0.92m. The tank was rectangular in plan, although only part of the base survived, and its original dimensions are uncertain. It had been constructed on a foundation of subrounded volcanic cobbles, near the first pan of the train. It can be identified as a settling tank, receiving the freshly extracted cane juice from the mill and allowing impurities to settle out before redistribution to the clarifier, the first heated pan of the train.

Below the tank, the train consisted of a series of four hollow settings for metal basins or coppers, which are now missing, set above two heating flues. At the northern end was a separate single circular setting (19), originally occupied by a metal basin, the clarifier. The upper setting around the clarifier basin had been paved with earthenware tiles, cut down to a variety of rectangular and trapezoidal shapes to fit the complex geometry of the sloping circular surface (Figure 3.10, 3.14; Figure 3.38, 1 and 2). The flue to the south was an elongated stone-lined passage, which narrowed in two places to create settings to hold the three circular coppers, the metal cauldrons in which cane juice was boiled to convert to sugar. The sloping surrounds of the other three coppers did not survive but presumably had followed the same tiled arrangement. This arrangement is attested at boiling houses on many other plantations on Nevis. At the nearby Dunbar plantation, for instance, the copper settings are surrounded by finely cut local stone (M. Dalgleish pers. comm.).

The boiling train was constructed with faced local volcanic stone and a rubble core. The eastern wall face (16) had randomly coursed, large faced stones measuring up to 0.40 x 0.20 x 0.25m, bonded by light brown lime mortar and brownish sandy clay, and infilled with a core of smaller stones. A horizontal break in the mortar of the lower face may have marked the position of a floor. The infill of the train wall (20) consisted of rubble volcanic subrounded or subangular stones, typically 0.12 x 0.10 x 0.06m, in a mortar and clay infilling.

The stones of the west wall of the train (15) measured up to 0.43 x 0.30 x 0.30m, and consisted of regular finished blocks, squared and roughly coursed, bonded with a soft pale brown mortar and harder white mortar. In the wall (15) was a row of four original stoke-holes, where fires were set to heat each of the four coppers. The jambs, sills and lintels of the stoke-hole openings consisted of carefully selected and shaped stone. Each lintel had a shallow round arch cut into a single large stone (Figure 3.16). The stoke-holes were spaced roughly evenly, between 0.88m and 1.00m apart, each measuring 0.34-0.35m wide. The three southern stoke-holes led into a single elongated passage which ran underneath the coppers. The final stoke-hole to the north heated only the clarifier. At a higher level, set between each of the stoke-holes, was a row of smaller square apertures, each measuring about 0.20 by 0.19m, of which all but one had been blocked. They served as flues to create an updraught for each stoke-hole, before the single larger flue was created. A flue opening was present low down in the southern face of the train under the southernmost copper. This presumably linked to a flue visible as a square opening in the southern end of the boiling train.

In one area at the northern end, the upper surface of the boiling train setting survived. It consisted of a paving of terracotta tiles (19) (see the finds report, this

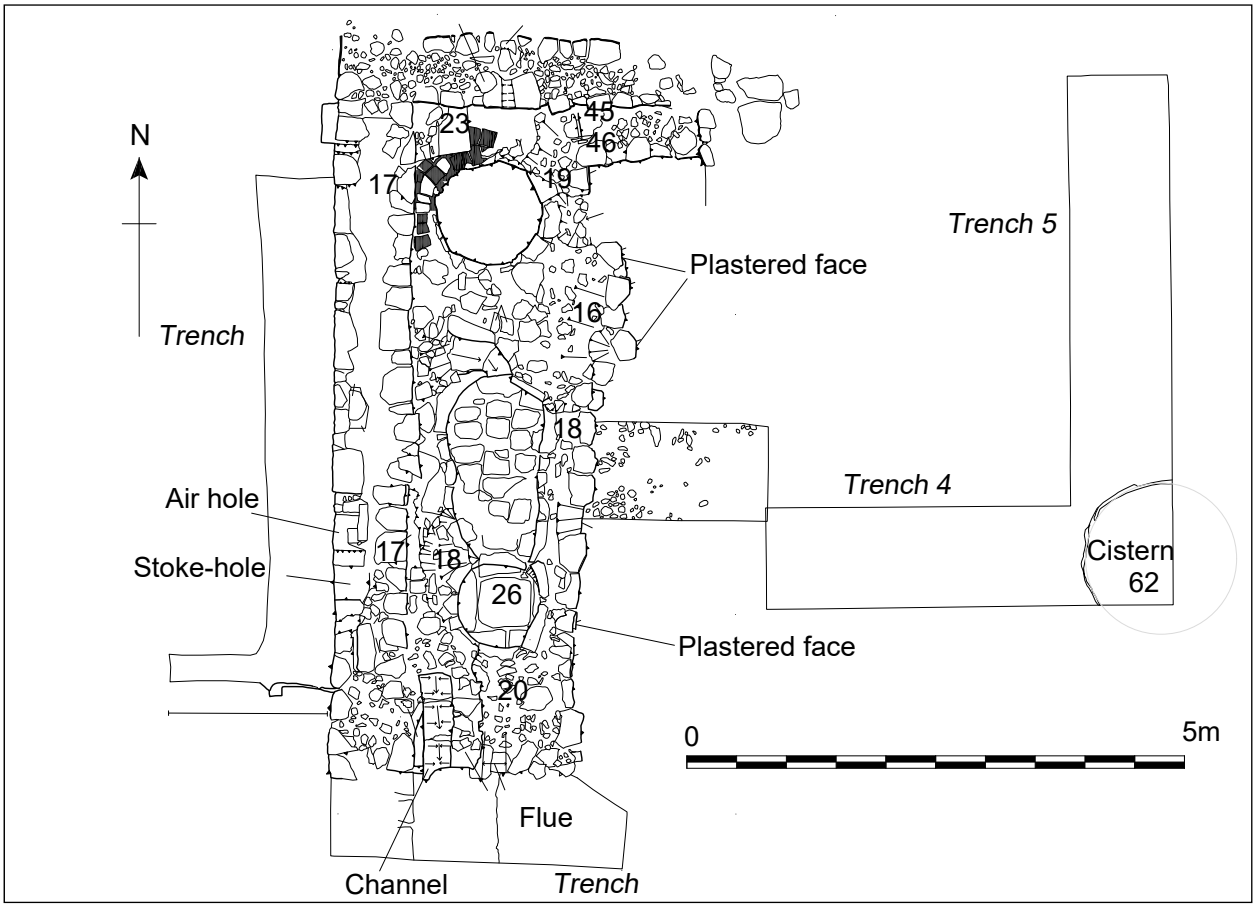

Figure 3.6. Upper Rawlins: plan of boiling train and cistern 62

volume), measuring 155 x 134 x 40mm, which formed the sloping setting for the clarifier (Figure 3.15).

Set on top of the tiled setting (19), a neatly squared volcanic block (23) was located in the north-west corner of the train. The deliberate placement of the block against the walls (27 to north: Figure 3.10; 17 to west) suggests that it served as a pad for a post, perhaps supporting a timber superstructure over the boiling train. Such a structure is illustrated by Du Tertre (1667, 122; Figure 1.8) where the train and a space for curing the sugar were housed under the same open-sided structure, sheltered by a roof supported on timber posts.

Other elements of the boiling house works include a shallow U-shaped stone channel or gutter 0.30m wide (21), which ran the length of the train above the coppers and ended at the southern wall of the train where it debouched, for the liquid to be collected (Figure 3.15). The function of the channel is uncertain, but it may have been used to drain the skimmings and impurities removed from the coppers into a vessel set at the southern end of the gutter, south of the boiling train. Skimmings were collected for reprocessing into animal feed or distillation into rum. Ligon (1657, 84) illustrates a rectangular cistern for skimmings in the still house, which is attached to the fire house.

The north wall (93) of the boiling house to the east of the train was examined by excavation in Trench 5. At the northern end of the trench the original floor level of the wall (93) can be seen as a horizontal scar in the mortar on the wall face which corresponds with the depth of the rubble.

The boiling train (18) thus displayed two phases of construction. It began as a Spanish train in which each copper was heated individually by a fire set in each of the four separate stoke-holes. The original stoke-holes for the Spanish train were visible in the west-facing wall of the boiling train (Figure 3.9). Subsequently, the train was converted to a modified Jamaica train where a single fire was used to heat three of the coppers, while the northern one was still heated separately.

Phase 2b: Modification of the Boiling Train

There were several indications of the structural modification to a Jamaica train. The original wall to the south (18) consisted of rectangular smooth blocks, some concave-faced, up to 0.39 x 0.31 x 0.14m, up to three courses high and two courses at the northern end,

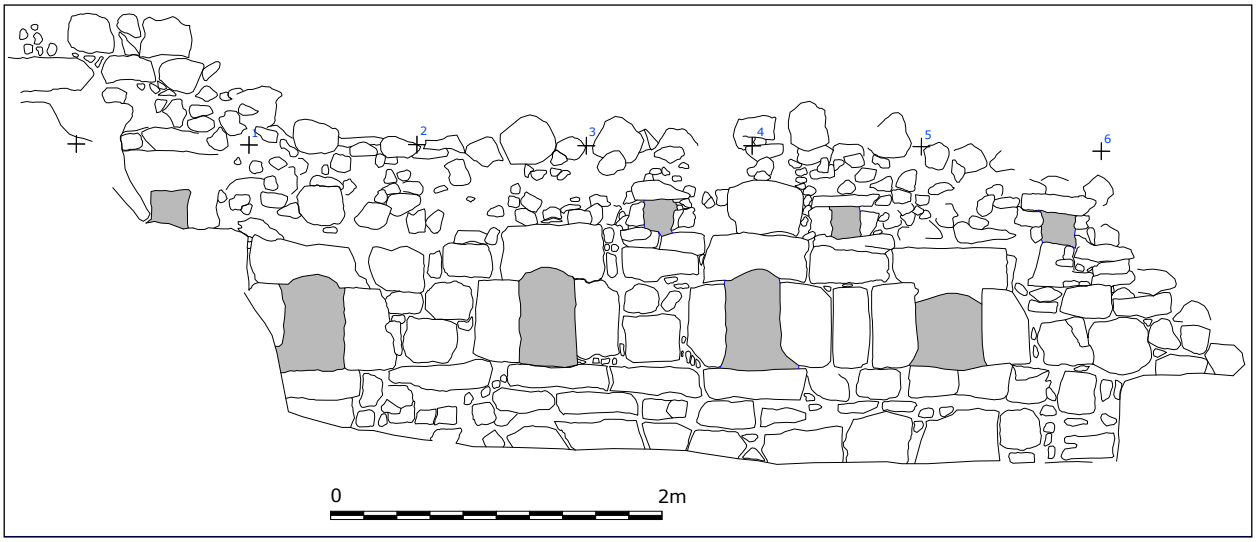

Figure 3.7. Upper Rawlins: elevation of west-facing wall of boiling train (shaded areas are voids)

forming curved walling for the southernmost setting for a copper. Differences in the mortar and the style of construction of the walling around the two northern copper settings indicate it had been rebuilt.

A break in the masonry construction within wall 18 indicated two phases of infill for wall 15. The earlier (36) consisted of small rubble stones bonded in a hard greyish-brown to white mortar. It was interpreted as the infill of the earlier north-south wall 15, associated with the Spanish train. Context 37, volcanic stone rubble in soft pale brown mortar, had been built over 36, and represented a later infill resulting from the modifications of wall 15. It was contemporary with the north-south wall 17 with pale beige mortar standing three courses high on the eastern elevation of the boiling train.

Further evidence for the rebuilding of the train can be seen in the blocking with rubble of the middle two stoke-holes, rendering them redundant; three of the higher flues were also blocked (Figure 3.16). A sloping mortar-lined flue with a maximum width of 0.26m (24) above the third copper in the train removed the smoke and exhaust gases. The flue would have connected to a chimney above roof height to create sufficient updraught, though this has not survived. In addition, the stone flooring (26) under the southernmost copper still survived as a full circle below flue level, but above the foundation the separate flues had all been amalgamated into a single elongated flue serving three coppers. The floor (25) had been also modified into a continuous level under the middle and northern coppers. Unusually, however, not all four coppers were heated from a single flue. The northernmost, the clarifier, continued to be served by a separate flue to enable the heat to be regulated independently.

Figure 3.8. Upper Rawlins: boiling train showing stoke-hole apertures and vents above, from SW

Boiling/Curing House Area

Phase 2a: Stone Floor Foundation (48, 40, 60) with Cistern (62)

The first evidence of plantation activity is the construction of the boiling train and boiling house walls

Figure 3.9. Upper Rawlins: boiling train showing stoke-hole apertures and vent above, from W

Figure 3.10. Upper Rawlins: boiling house, ceramic tiles in situ (19), surrounding the 'copper' setting, from SE

Figure 3.11. Upper Rawlins: copper settings and flue in boiling train, from SE

on the level platform cut into the hill slope. Against the walls, a rubble floor foundation of unmortared and unshaped volcanic stones (48, 40, 60) had been laid with a level upper surface and was encountered in several places. Abutting the eastern boiling train wall it was recorded as a layer of stone cobbles lacking mortar or bonding (48), of which only small areas survived intact. The coherence of this deposit, with its careful horizontal upper surface, indicated it was not an accumulation of collapsed stone from the adjacent walls (16, 27), but was a deliberately laid floor foundation layer. This interpretation was reinforced by observations in other trenches where the deposit had survived better. A coherent stone cobbled floor (40) was also exposed in the trench south of the boiling train (Figure 3.14); context 40 contained much mortar and consisted of volcanic cobbles, ranging in size from 0.05 x 0.07m to 0.15 x 0.23m. The floor (40) abutted wall 15.

Further to the east within the same structure, a coherent deposit (60) of unshaped and unworked stone and

Figure 3.12. Upper Rawlins 2005: wall and mortar tank 45, with earthenware tiles 19 surrounding copper, from E

Figure 3.13. Upper Rawlins: boiling house, rubble floor surface (40) and wall, from E

Figure 3.14. Upper Rawlins: boiling train showing base for clarifier, revetment wall to right, and first setting for copper, from SE

some mortar represents the same rubble foundation for a floor. A cistern (62) had been constructed as part of the rubble platform. The cistern was circular in plan, tapering inward towards the top, and measured about 1.5m in diameter (Figure 3.17). At the top, the interior had been skimmed with white plaster over a mortar layer which had been laid against the rubble deposit 60, indicating that the cistern and the rubble floor foundation were of contemporary construction. The cistern was presumably open at floor level. The purpose in this case was not to collect rainwater but to hold molasses draining from the hogsheads during the curing process. A cistern for a similar function, in use at about the same time, was specified in the instructions by Sir William Stapleton to his attorneys,

Figure 3.15. Upper Rawlins: stone gutter in boiling train, from SW

probably in 1684: 'a cisteme to receive molasses to bee made and placed in the middle of the windward side of the lower boyling house under the Stancins which are to be ten feet at least broad to hold two fives of hhgds [hogsheads], a receaver to be near the great copper in the said Boyling house' (Rylands Stapleton MSS 2/8, see Appendix 1).

The sparse finds within the rubble foundation consisted of one fragment of tile and another of mortar from context 60, indicating a primary deposit which incorporated only construction material. No finds were recorded in contexts 40 or 48.

Phase 2b: Cistern Infilling (63, 71, 77, 85)

Within the cistern four fills (63, 71, 77 and 85) were excavated, but the remaining fill was dug out without record after the excavation had finished. The infilling consisted of loose soil containing large fragments of tile and mortar but no other finds. The tiles, some of which were cut down by chisel to a trapezoidal shape, were identical to those used in the settings of the coppers (cf. context 19). The tile and mortar may have been deposited when the boiling train was re-modelled, which required the reworking of the settings for the coppers, reducing their extent and rendering some

Figure 3.16. Upper Rawlins: blocked flue in boiling train, showing conversion from Spanish to Jamaica train

Figure 3.17. Upper Rawlins: cistern 62 within boiling house, from SE

Figure 3.18. Upper Rawlins: Trench 5 cutting through collapsed rubble, and wall 27 of boiling house, from S

tile and mortar redundant. Alternatively, and less plausibly, the material was deliberately dumped at the disuse of the plantation as a whole to fill up the cistern.

Phase 3: Collapse from Walls (30, 10, 38) and Colluvium (8, 57, 66, 9)

Overlying the floor foundation were two principal deposits, the first consisting of rubble from collapsed walls after abandonment of the works, the second the final colluvial topsoil deposits. In two areas close to the walls the first post-abandonment deposits were heavily dominated by material from the decay of the structure. In the trench against the east wall of the boiling train, layer 10 consisted of a deposit of irregularly disposed rocks 0.60m thick, fallen from the adjacent walls of the boiling train and house. Several fragments of ceramic tile, a single fragment of pearlware and an intrusive modern knife blade (SF159) appeared in context 10.

An area of 'topsoil' (context 30) along the east wall of the train contained plaster and some volcanic stone tumble, with one clay tobacco pipe fragment, dated 1710-50. Its extent, confined to a narrow band along the wall, suggested an accumulation of material from the decay of walls 16 and 27 falling onto the deep accumulation of tumbled rubble (10; Figure 3.18). It was subsequently covered by the developing colluvial deposit (9). The uppermost layer within the boiling house was a well-sorted layer of pale to mid brown silty or sandy loam (8, 57, 66, 9). Layer 9 was 0.30m deep and contained a few fragments of white lime mortar up to 4mm. In the area immediately to the east of the boiling train, the uppermost deposit (8) was a moderately compact light brown silty loam, with occasional angular mortar fragments. This layer, which contained some tumbled stones and fragments of mortar from the decay of the walls, was interpreted as an accumulation of colluvium after the abandonment of the plantation. Layer 8 contained a considerable quantity of finds including tile, Afro-Caribbean pottery and iron.

A similar post-abandonment sequence was noted in the trench south of the boiling train. Here, the uppermost layer (38) contained frequent small subangular stones with small mortar flecks and plaster fragments, and numerous large angular or subangular stones, the latter collapsed from the walls of the boiling train and to the west to accumulate over the floor foundation.

In Trench 5 the uppermost deposit (57, same as 66) was a loose brown loam with many small stones, fragments of mortar and lime, and the handle of a German stoneware vessel. This deposit had been cut by a trench dug by Edward Herbert (context 58). It is presumably a colluvial deposit of material washed down the steep slope from the terrace above and accumulating within the walls of the building.

Discussion

The sequence of construction of the boiling house began with levelling a terrace against the slope to create a building platform, followed by the construction of the stone walls of the boiling train and boiling house, which were set directly onto the natural volcanic brash deposit (86, 87). This was followed by the laying of a compacted rubble floor foundation, to create a solid working platform. The foundation does not appear to have been paved as there was insufficient material for a tiled floor of either stone or earthenware, and a wooden floor might have left traces in its decayed state. No stone tiles were found with one possible exception, a flat fine-grained sandstone (SF1504) used as a sharpening stone; the ceramic tiles were probably derived from the modifications to the boiling train rather than paved flooring. It is possible that the floor surface was created simply of beaten earth which smoothed out the irregularity of the stone platform. A cistern was created at the same time as the rubble foundation and was lined with mortar. The tiles recovered from the cistern fills are identical to those found *in situ* in the surrounds of the coppers.

The rubble foundation was well preserved to the south of the boiling train (context 40) and in the vicinity of the cistern (62), but elsewhere was patchy (as in the area of 48). The gaps suggest post-abandonment disturbance,

perhaps through erosion and scouring of the building interior and the terraced slope by surface run-off. After abandonment of the sugar works, the boiling house began to decay, and its collapsing walls created deep spreads of random stone rubble and broken mortar which had tumbled onto the rubble floor foundation. The major phase of decay and collapse was followed by the final accumulation of colluvial deposits of pale to mid brown silty loam within the whole building complex.

Domestic Range: the House and Kitchen

Prior to excavation, a range of stone structures was visible on a different alignment from the boiling house. They included wall foundations and artificial platforms on the eastern side of the complex. Two areas were selected for detailed excavation. Trench 6 was placed in a narrow area interpreted as a space between the kitchen and main house (Figures 3.24, 3.25). Trench 1, measuring 1m wide and 10m long, was excavated through a level platform with a rubble spread defined to the south-east by partial remains of a wall to that side and a putative long side to the south-west (Figures 3.23, 3.26). The spatial arrangement of this building within the complex suggests this was the main dwelling house of the plantation owner. A further 1m² test pit was excavated against the interior face of the southern wall. The excavations yielded additional evidence for the structural history.

Phase 1: Pre-occupation Deposits

The earliest deposits revealed in Trench 6 consisted of four contexts (88, 89, 90 and 91), all sealed by context 68 cut within a recess in the Phase 2 wall (72, Figure 3.20). Context 88 consisted of a fairly compact layer of darkish brown colour. Under it, context 89 was lighter brown in colour and less compact; 90 saw a minor change to a darker colour, while 91 was identified as an irregular layer of small stones 20-40mm long and loose grainy sandy soil dark brown in colour. All appeared to represent minor variations within the pre-settlement colluvial subsoil and the absence of artefacts or significant inclusions such as mortar or tile suggests they pre-dated the construction of the plantation buildings. The lowest deposit 91 is probably the equivalent layer to 86 and 87 to the west.

In Trench 1 within the Phase 2 house, the earliest deposits consisted of two different deposits, both unfortunately recorded under the context number 67. Apparently below the topsoil layer 59, the east and west ends of the trench diverged – with a 'random assortment' of rough stones (67) at the west end, with no consistent direction or alignment, that ranged from 0.10 x 0.10m up to 0.70 x 0.40m. Although the possibility was considered that these represented a floor it was concluded at the time of excavation that they were random tumble but it is more likely that in fact it was the broken stone deposit of natural brash.

Phase 2a: Construction of the Kitchen and House

The house (Structure C) consisted of low mortared walls on three sides, measuring approximately 10.8m north-west by 5.4m south-east internally (Figures 3.19-3.26). Erosion had severely damaged the walls, reducing them to a single course of stones or less. Both wall 74 to the north-east and wall 34 to the north-west are less well preserved than the walls which enclosed the space to the north having lost their internal facing stones, revealing a core of smaller stones. The wall surfaces retained a hard plaster or mortar finish on sections of the internal and external faces (Figures 3.19, 3.20), notably to the immediate north of the adjacent circular cistern.

The same erosion process had removed most of the occupation deposits in the interior, although several distinct layers were identified in the section which did not appear to have been distinguished in plan during excavation. Photographs indicate that stones observed in these deposits did not form a floor foundation, although one distinct cluster may have been a poorly preserved wall foundation, running north-west by south-east, perhaps forming either the fourth side of the structure or an internal wall. Layer 67 contained no finds. The likelihood is that there was little significant difference in the soil deposits below the topsoil.

To the north, Trench 6 was located in a narrow rectangular space, 2.45m wide, between the wall of the house to the south-east (92, 53 and 72) and the kitchen wall (32) to the north-west (Figures 3.21-3.23). To the north-east was a further wall (39) which linked the kitchen with the house. Although it is conceivable that any wall to the south-west was obscured by rubble (see Figure 3.4), it is more likely that this was an open space and there may have been no wall on that side.

One main phase of construction was identified for all the walls, with subsequent internal modifications. The kitchen wall 32 measured 1.10m wide (nearly four feet) and was constructed in random rubble using large volcanic blocks faced with hard white plaster, some of which remained *in situ* up to about 1m above the base. Set within the wall is an entrance with a flight of at least three steps (context 42) leading down to the south-east into the narrow space, the entrance formed by long and short quoins. The wall is of one build along with 42 and 39 and was of similar construction, faced with plaster, while the upper part lacked mortar and had evidently been rebuilt at a later date from loose blocks.

Figure 3.19. Upper Rawlins: wall 53 and blocking 51, showing mortar on wall, from NW

Figure 3.20. Upper Rawlins: walls 72, 92, trench in house and test pit from N

Wall 39 survived intact up to 0.35m in height with hard white mortar on the wall surface and was pierced by a drain (73) in the south-east corner of the space immediately adjacent to the blocking (Figure 3.21). This is often a feature of a kitchen area, but in this case may have served to drain the unroofed space between the kitchen to the north and the house to the south.

Within the area of the recess and probably representing the earliest anthropogenic deposit was context 68. There were a few finds, including five fragments of glass wine bottle and a clay pipe stem. Although it contained a few fragments of charcoal, the absence of ash or any sign of burning *in situ* make it unlikely it was a hearth. A distinct mortar line near the base of the wall probably marked the contemporary ground surface. In one view the mortar can be seen to level out and a small flat area projects into the internal space on the north-west side of the wall. At a similar level the mortar line on the wall face stops. A similar line can be seen on the east wall, at the level of the base of the drain through the wall. Any

Figure 3.21. Upper Rawlins: Trench 6, wall 32 to left, with steps 42, and wall 39 to rear with drain 73, from SW. Walls 32 and 39 are of one build with 42 and of similar construction, faced with plaster. The upper part of wall 39 lacked mortar and had been rebuilt at a later date from loose blocks.

associated floor has disappeared and may in any case have been no more than beaten earth.

Phase 2b: Modification of Structures

Modifications to the original structure of the house (Structure C) can be seen by the addition of a short stretch of wall (92) against the plastered face of wall 53. This created the recessed area 72, against the south-east wall (53). To the east of the recess there is a blocked entrance (51), 0.95m wide, with plastered jambs on 39 and 53 either side of the blocking, which presumably occurred as part of the same rearrangement (Figure 3.19).

Within this external space, the additional wall may have reinforced a weak or unstable wall. However, its position directly opposite the steps from the kitchen opens up a second possibility, that it formed the base of a step into a rear entrance of the house. This would allow direct access for those delivering food from the kitchen to the house.

More convincing evidence for strengthening the walls can be seen in a spread of masonry (56) constructed against the inside house wall, which was interpreted on excavation as a possible ramp, but is more likely to represent a buttress.

Phase 3: Accumulation of Colluvial and Collapse Deposits (31, 29, 28; 80, 82, 83, 84; 49, 65, 68)

In Trench 6, the narrow space or passage between walls 32, 39 and 34 had an accumulation of deposits to a depth of up to 0.33m. Part-excavated in 2005, and again with a 1m wide extension in 2006, these deposits could be broadly correlated between the two seasons during post-excavation analysis. The earliest deposit, context

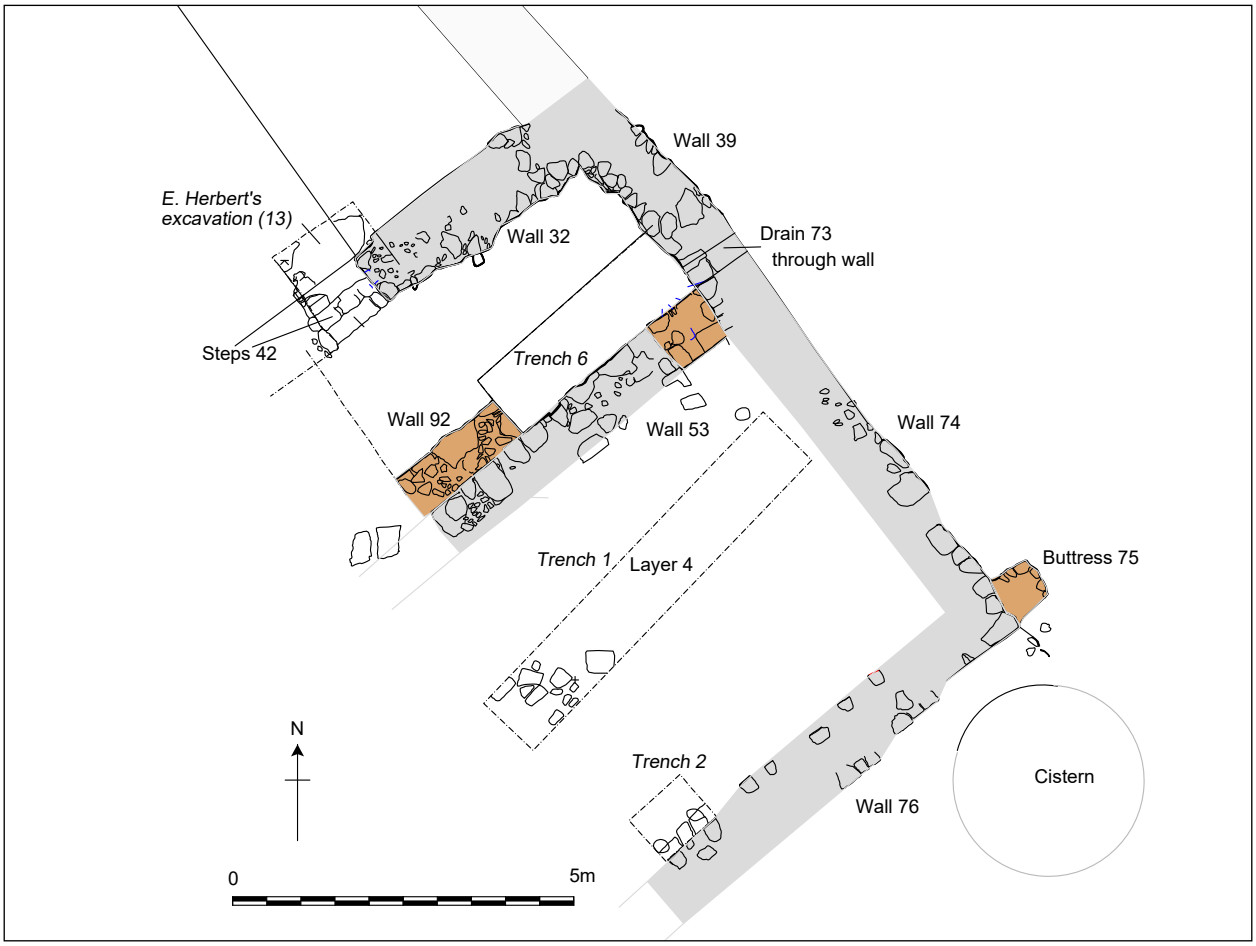

Figure 3.22. Upper Rawlins: plan of main house and kitchen area (Trenches 1, 2, and 6)

84, was a mid brown silt and contained significantly more finds than the overlying layers 83 and 82. The last two were looser textured deposits with higher quantities of stone rubble, although the relationship was not clear between them. Given the interpretation of these deposits as post-abandonment colluvium, the cultural material contained within them is in any case redeposited. Layer 31 probably should be equated to 82 and 83 to the south-west. Excavated in 2005, context 31 was a friable mid dark brown silt deposit, with up to 50% of the matrix consisting of rubble and some large blocks, and relatively large quantities of pottery, metal and other finds; it had been partly excavated by Edward Herbert in 2004. It measured 0.20m deep and it sealed the blocking 51 in the wall, providing important stratigraphical evidence that the layer represented post-occupation deposition after the destruction of that part of the wall. Although not excavated, similar material to 31 was seen to have accumulated over the decayed walls, including 32, through hillwash from the terrace above to the north-west. It is probable therefore that the bulk of the deposits between the three walls accumulated after the abandonment of this range of buildings through a combination of building collapse and the washing down of material from the upper terrace.

Layer 31 was possibly the same as 29 and was sealed by context 28. Context 29 was a friable dark brown silty deposit, colluvial in origin, with occasional lumps of plaster and mortar, and large angular and subangular stones, and abutted the two walls to the north-east and south-east. It was physically separated from 28, although the two deposits were very similar in composition, and in origin. There were concentrations of large stones at either end of the deposit which represented tumble from the two walls. Context 28 had frequent stones from small, medium to large, in a mid brown loam colluvium.

The latest deposit abutting walls 32 and 39 was a brown soil layer (49), described in 2005 as a general cleaning deposit overlying 29 and 28, and equivalent to 80 in 2006. Layer 49 was subsequently allocated context number 65 when excavated and was described as a dark brown soil with numerous small rocks and rubble; it contained two sherds of Afro-Caribbean pottery. Context 65 overlay 68, a deposit which consisted of loose fine mid brown soil, closely similar to 65 but slightly lighter in colour. The uppermost deposit described in 2005 was context 28, described as a loose to friable mid brown loam with frequent stones, and interpreted as a colluvial deposit.

Figure 3.23. Upper Rawlins: Trench 6 showing wall 32 to the rear, with steps up to kitchen area and in left foreground rubble of wall 53, from SE

Figure 3.24. Upper Rawlins: Trench 6, showing steps 42 and wall 32 to right, wall 53 to left. To rear, trench cuts through colluvial deposits 28, 29, 31, from E

It overlay context 31, while 31 in turn overlay 52. It is probable therefore that 65 is the same as 28 or 29.

Context 13 lay to the north of wall 32 and the steps 42, and represents the cleaning of a trench excavated by Edward Herbert, so the finds are effectively unstratified.

Discussion of Finds

These deposits, interpreted as colluvial in origin, contained a large proportion of the finds from the site. The European ceramics dated consistently to the period of the late 17th to early 18th century, while the clay tobacco pipes, with one or two possible exceptions, could fit within the same late 17th- to early 18th-century timeframe.

The material from the colluvial deposits is remarkably consistent in date. There is little sign of later contamination, even in the finds from Edward Herbert's excavations. Context 13, the cleaning layer from Edward Herbert's unrecorded excavations, had only a single 19th-century sherd, while another occurred in unstratified material from his excavations.

Figure 3.25. Upper Rawlins: Trench 1 within house, showing absence of floor layers and concentration of probable natural stones, from W

There is little doubt that the material was derived originally from refuse disposal deposits or occupation deposits rich in rubbish close to the kitchen. The presence of significant quantities of Afro-Caribbean pottery close to the main house is consistent with the use of handmade, bonfired, coarseware ceramic vessels in the kitchen by enslaved African domestic staff for food preparation. A similar pattern of disposal was noted at Fenton Hill where large quantities of discarded Afro-Caribbean pottery were found close to the structure which had become a detached kitchen by the 18th century.

Test Pits

A series of one metre square test pits was excavated to examine deposits in the surrounding area. The layers encountered were all interpreted as colluvial deposits.

Test pit 1 (context 2000)

2000: Friable mid to dark brown colluvium with occasional coarse and small sized stones, to a depth of 0.6m; base of deposit not revealed.

Test pit 2 (contexts 2010, 2011)

2010: Soft friable mid brown colluvium with a few angular medium-sized rocks and some larger blocks; overlying 2011.

2011: Medium brown with 'yellowish tint' friable silty clay loam with a large number of large stones on the soil. 450mm deep.

Test pit 3 (contexts 2020, 2021)

2020: Soft light to medium brown silty loam with medium-sized rocks.

2021: Friable light to medium brown orange silty loam; frequent medium-sized rocks and occasional larger rocks.

Discussion of the Buildings

The eastern range of buildings consists of a group of rectangular structures, defined by stone walls and platforms, conceived and executed as a single unit. On the upper terrace, to the north-east, a rectangular building (Structure D; Figure 3.4) was defined by walls on three sides (to the north-east, south-west, south-east), while to the north-west no clear wall line could be discerned amid the rubble, although the extent of the level platform suggested a maximum limit, but it was not investigated by excavation. Finds in the adjacent open space or passage below, to the south-west, and derived from it, indicate the room was a detached kitchen. From the kitchen platform a flight of stone steps, of which three survive, ran south-west through the wall to a lower terrace into an area enclosed by walls on three sides (excavated in 2005 and 2006). Finally, below this on the lowest platform, a rectangular structure (C) was defined by walls on three sides, but again lacking clear evidence for the extent to the south-west. A large circular cistern lay to the south of the south-eastern corner.

At the time of excavation, the narrow enclosed area at the base of the steps was interpreted as the kitchen. Consideration of the building plan, however, suggests it was more likely to be an open unroofed passage connecting a detached kitchen up the steps to the north with the dwelling house on a lower level to the south. The copious evidence from documentary references and archaeological evidence for the use of detached kitchens from the late 17th century and later in the Leeward Islands is discussed below.

Large quantities of pottery, glass and other finds had accumulated within the narrow space. Layer 29 represented a considerable accumulation of material containing much midden-like occupation detritus including glass bottles, clay pipes, broken pottery - both Afro-Caribbean and European - and broken or discarded metalwork. There is clear evidence that this is not the disposal of rubbish during the occupation of the plantation. The high proportion of small volcanic stones amongst the material of the kind used in the cores of the walls, as well as some larger blocks, represents collapsed structural material. These deposits accumulated therefore as a result of two post-abandonment processes: accumulation of collapse from the walls, and redeposition of material from the building immediately upslope to the north-west through tropical storms washing down unconsolidated deposits of material.

On the grounds of the layout and spatial arrangement, the lowest building platform was tentatively identified as the main dwelling house before excavation began. However, other than the plan and spatial arrangement, the preservation was so poor that the excavation revealed little to confirm or refute that interpretation. No internal floor layers or other occupation deposits survived within the excavated area and there is little direct evidence for its function. Finds were very sparse other than in the topsoil layer, where they are almost certainly present due to colluvial movement from further upslope.

However, the decisive evidence for this being the house remains the spatial organisation of the site, with the detached kitchen upslope but physically connected by the steps and the main house lying on the lowest terrace, overlooking the sea to the east, its roofs feeding the cistern below. This interpretation of the structural remains is consistent with the function of the walls and the level of the floor. A construction method in which low stone walls supported a timber superstructure might leave no sign of internal suspended timber floors on joists resting on the low external walls, and little trace of occupation deposits within the house. The blocked 'entrance' 51 at 0.95m probably served as the original rear entrance from the kitchen to the house. Subsequently, when this entrance was blocked, a short section of additional wall (92) was built against the main north-west wall (34). The position immediately opposite the flight of steps from the kitchen indicates it probably formed the foundation for a step to a raised entrance to the house.

Walls 74, 39 and 76 are all of one build. Strengthening of the foundation wall can be seen in the addition of a buttress (75) against wall 74 near the south-east corner where the ground falls away steeply below to the east. The buttress is of coarse rubble bonded with white mortar and plastered on the outside. Wall 76 was visible above ground level close to the excavation and its face was within Trench 2; it was constructed in coarse stone with hard white mortar rendering on the exterior. It

forms a return of 74 and appears to be of one build with it. The interior face of the wall was examined in Trench 2 (context 61). The plaster could be seen to terminate at a line about 0.10m above the offset foundation. The foundation was considered to have served to support floor joists whilst at the same time acting as a spreader course.

The dimensions of the building are clear in one direction, measuring about 7.5m externally north-west by south-east. The length south-west by north-east could not be measured directly as the wall to the south-west was not located. However, the distance from the external face of wall 39/74 to the mid point of the steps (42) is 5.0m. If the house were symmetrical about this axis, it would have measured about 10m south-west by north-east.

A large mortar-lined cistern stood near the south-east corner of the building, serving to collect rainwater from the substantial roof area of the structure (Figure 3.4, B).

No occupation deposits survived from the interior of Structure C (Figure 3.25) and the only finds consisted of material within the topsoil (59 and 61), which contained an assortment of cultural finds, including nails, pottery, glass and pipes. Possible evidence of the position of the south-west wall might be the concentration of stone in Trench 1, but its anthropogenic origin was not certain. The floors have apparently been eroded away, and sections of the walls are also largely lost. Key contexts are the accumulation of colluvial silts between the walls of the house and kitchen, which trapped the material and appear to have been used as a midden area. The superstructures as a result are difficult to reconstruct.

Conclusion

Excavation has clarified the layout of elements of the remains of the late 17th-century to early 18th-century plantation centre but has also highlighted the heavy post-abandonment erosion which had affected the building remains, particularly the eastern domestic range. Erosion had severely damaged the building interpreted as the main house, removing much of the stonework to foundation level. The more massive boiling train had survived rather better. Little survived in the way of intact stratigraphy and most of the cultural material appeared to have accumulated in colluvium. The building remains appear to have been scoured by heavy surface run-off, removing some of the stonework and any occupation deposits, and redepositing cultural material, particularly where it was trapped on the terrace space between the kitchen and house. As such the extant deposits provide little in the way of *in situ* occupation deposits, and little of the material is usefully stratified. However, the survey and excavation revealed the layout of a small early sugar plantation of a type that has been little investigated in the Leeward Islands. A phase of brief reoccupation in the late 18th or early 19th century can be identified from finds, but the relative lack of later cultural material makes this a valuable finds assemblage for a modest plantation of the late 17th to early 18th century.

The Finds

Afro-Caribbean Pottery

Elaine L Morris

A total of 433 sherds (6862g) of handmade, bonfired Afro-Caribbean pottery was found at the Upper Rawlins site between 2004-06. The pottery was recovered using a variety of different methods (Appendix Table 3.2). The overall mean sherd weight for this assemblage is 16g with sherds ranging from as little as 1g up to the single largest sherd at 154g. The physical size range of sherds varies from 5mm to 120mm across which helps to provide a visual reference as to the nature of the assemblage. The number of sherds is presented by context in Appendix Table 3.3. Each sherd was analysed and recorded according to the guidelines recommended by the Prehistoric Ceramics Research Group (PCRG 2010), with one exception. The general uniformity in fabric visible amongst the sherds allowed for a simplification of the normally rigorous requirements for this variable. The fields of record include: context of recovery, count of sherds in the record, weight of sherds, fabric, form, diameter if rim or base, percentage present if rim or base, wall thickness code (explained below), surface treatment and position on vessel, evidence of use and position on vessel, firing condition and any comment requiring free text entry. A unique Pottery Record Number (PRN) was assigned to each line entry in the Afro-Caribbean pottery database and this PRN was written with black, waterproof, lightfast ink onto the plastic bag containing the recorded sherd or sherds represented digitally.

Fabrics

The fabric of each sherd in this modest assemblage was examined individually using x10 power binocular microscopy which revealed that all had been made from clay naturally rich with fragments of feldspars, feldspathic rock, and mafic minerals. In addition, fragments of iron ores or iron oxides and rare grains of quartz were identified. The fabric appears in hand specimen to be homogenous with an abundance of

inclusions resulting in a density of approximately 40-50% concentration. These inclusions are usually poorly sorted ranging from 5mm or less across, with the majority 3mm or less in size. Occasionally sherds seem to have fabrics with slightly fewer inclusions (30-35% concentration) or slightly better sorted texture (moderately sorted), but it is possible that these visual effects may be the result of different firing temperature and variation in firing atmosphere (dark grey/black versus orange-red colour). The feldspathic rock and feldspar inclusions are primarily angular to subrounded, the mafic minerals are most often angular crystals, the quartz subrounded and the iron oxides invariably rounded in shape.

The principal variation, however, was within the size range of these inclusions. The majority of sherds had fabrics or pastes containing inclusions measuring from 0.1-3.0mm across and this is represented in the database records as fabric type MM for the concept of a fabric with 'medium-size' inclusions. This proved to accommodate the majority of sherds. There was also a small number of slightly coarser examples of this common fabric with infrequent inclusions up to 6mm and these sherds were recorded as fabric type CM, a coarser variant of the majority fabric. This bipartite division of the general fabric was maintained in order to determine if a coarser fabric had been utilised to make specific types of vessels. There is no evidence at x10 power microscopy for this medium versus coarse fabric division to be related to specific types of inclusions as the larger fragments included examples of feldspathic rock, feldspars, mafic minerals, and iron oxides.

Two sherds were selected for petrological analysis, consolidated, and thin-sectioned in order to characterise the general fabric in detail. The samples chosen were different in their firing conditions which can suggest different potters' methods of production and possibly different sources of clays used to make the vessels. Sample 1 is from PRN3501 (Figure 3.27, 26) and Sample 2 from PRN3124 (Figure 3.27, 20). In thin-section, the two fabrics proved consistent in the range of inclusion types and sizes present for the most part, but several other aspects clearly indicate that the same clay source had not been used to make both pots. Both have fragments of fine- to very fine-grained igneous rock intermediate in composition between andesite and rhyolite measuring up to 1.5mm across, individual grains of plagioclase feldspars up to 0.7mm, various ferro-magnesian minerals, and opaques. This range of inclusions would be expected for Nevis andesite/dacite which is a light grey volcanic rock containing a mixture of plagioclase and other crystalline minerals in glassy silica, similar in appearance to rhyolite. The overall frequency of these inclusions in the clay matrices of both samples is approximately 50%, making this a very well-gritted fabric. However, the rock fragments in Sample 1 are porphyritic in texture with significant phenocrysts, while Sample 2 rocks are more aphanitic in texture with rare small phenocrysts, if any at all. Similarly, there are far more rock fragments in Sample 1 (10-15%) than in Sample 2 (1-2%). As a result of these differences, there are fewer feldspars present in Sample 1 (25-35%) than in Sample 2 (45%). The shape of the rocks and feldspars is also different between the two samples with far more subrounded rocks and grains in Sample 2 than in Sample 1 which has significantly more subangular to angular material present. A similar variance was noted for the sorting of inclusions between the two samples; Sample 1 is clearly poorly sorted with inclusions measuring from 0.05mm up to 2.4mm while Sample 2 has inclusions from 0.2-1.5mm which can be classified as moderately sorted in sedimentology classification terms. Amongst the mafic or ferromagnesian minerals, Sample 1 has several examples of hornblende (an amphibole) as well as enstatite/hypersthene (an orthopyroxene), while Sample 2 has only enstatite and possible olivine. Therefore, it appears that while these two samples have many common characteristics, significant differences occur between them. These differences suggest that the clay source used to make the Sample 1 vessel may have derived from a slightly different one than that of Sample 2 with a minor variation in chemical signature and a slightly slower cooled magma based on the presence of phenocrysts (crystals in the rock) while the rock from Sample 2 may have experienced faster cooling due to its aphanatic texture which has no large crystals. This variation between the two samples is further reinforced by the shapes and sorting texture of the inclusions which suggest that the sedimentary clay deposit created from the disaggregation of the original rock used as the source to make the Sample 1 vessel was not the same as that selected for the Sample 2 vessel.

In order to determine whether the Upper Rawlins Afro-Caribbean pottery was likely to have been either made on Nevis or acquired through trade, sherd samples representative of ten different vessels (Appendix Table 3.4) were submitted for instrumental neutron activation analysis (INAA) as part of a regional research programme focusing on the characterisation of historic period pottery made in the Eastern Caribbean (Ferguson and Glascock 2010a; 2010b; Ferguson 2011a; 2011b). The results indicate that all ten Upper Rawlins samples belong to the distinctive Afro-Caribbean INAA Group 1 which has been interpreted as deriving from Nevis. The regional study discovered that out of 134 pot samples submitted from seven different Nevis assemblages, including these Upper Rawlins samples, only one sample (from the slave village excavation at New River I) did not belong to Group 1 but rather to Group 3, which has a range of mineral ratios interpreted as deriving from Montserrat (Ferguson and Glascock 2010a, sample JNS009/1213-1-M-12-DRS00001-9). Amongst the ten

Upper Rawlins samples, five were further sub-divided, based on chemical variation, as belonging to Group 1b with the remaining belonging to the main Group 1. Thin-section Sample 1 belongs to INAA Group 1b while Sample 2 belongs to INAA Group 1.

Therefore, it appears that the Upper Rawlins Afro-Caribbean pottery assemblage was made from Nevis clays and can be interpreted as having been locally manufactured on the island based on current evidence. In addition, two methods of scientific analysis (petrological and geochemical) both indicate that more than one clay source on the island was used to make different vessels in the assemblage. There is no evidence of any Afro-Caribbean pottery in this assemblage deriving from off-island production sources.

Further research is currently underway using inductively coupled plasma mass spectroscopy (ICPMS) to determine whether it is possible to refine the geochemical characterisation of fabrics from 55 Afro-Caribbean pottery vessels sampled from 11 assemblages on Nevis. If this proves to be the case, then it may be possible to establish which mode of production was taking place at different historical stages in the manufacture, distribution and use of Afro-Caribbean pottery on Nevis, in order to establish whether the equivalent of household production for estate use was taking place on most plantations around the island or whether household industry was the mode of production for local use and island-wide trade/barter at markets (cf. Peacock 1982). These stages include the early period of slavery from the late 17th to early 18th century, the later period of slavery from the second half of the 18th to early 19th century, the post-emancipation period from the mid to late 19th century, and the modern period during the first half of the 20th century. The manufacture of Afro-Caribbean pottery on Nevis in the second half of the 20th century has been recorded in varying detail (Fog Olwig 1990; 1993; Heath 1988; 1991; 1999b; Merrill 1958, 128; Platzer 1979) and, fortunately, is still being made today using many of the traditional methods of manufacture applied to new vessel types to suit a wider and more varied consumer demand.

Vessel Forms: Shapes, Manufacture, Wall Thickness and Surface Treatment

The range of vessel forms in the assemblage is distinctively limited to just seven rim types and one base type. The most common vessels are those with restricted access, traditionally referred to as jars, closed forms, or hollowares. These comprise necked vessels with either upright to slightly everted rims with rounded lips (R101), vessels with a more expanded, everted rim profile (R109) and a complex, lid-seated rim (R121). Necked jars are commonly found in pre-emancipation assemblages from Nevis, while the lid-seated jar from Upper Rawlins may prove unique. Several vessels are represented by their neck zones (N100). Without rims present, it cannot be determined whether they derive from either of the common jar types R101 or R109, for example. Three form types have been defined as bowls or open forms and all have similar hemispherical profiles. Their variations are based on different rim and lip shapes including a simple flattened-top or platform-like rim (R102), a flanged rim (R110), and a round-lip, upright rim (R115). The simple, hemispherical shape of bowl is commonly found in colonial period assemblages from Jamaica, as at Drax Hall (Armstrong 1990, fig. 42), and St Eustatius (Heath 1988, 218-20, 223-5, types 5-6 and 10), for example.

The only type of base identified in this assemblage is the sagging or round-bottom base having no discernible base angle (B103). In the absence of any sherds with base angles in the entire assemblage, it is assumed that both the bowls and the jars had been made with sagging bases. Figure 3.28 presents five examples of sagging bases revealing their unusual manufacture: two show extra layers of clay added to the base to build up this rounded, sagging effect (nos 3 and 5) and three appear to be simply rounded and made from single slabs of clay. One (no. 2) also provides an indication of the rustic execution of manufacture that can be encountered. Rounded, sagging bases are typical of some 18th-century Afro-Caribbean jars (e.g. Hauser and DeCorse 2003, 88; Hauser *et al.* 2008, fig. 3; Heath 1988, 212-25, figs 5.1-5.5; 1999b, 200). There are no examples of jugs, dishes, coalpots (braziers), casseroles, tankards, or flowerpots in this Afro-Caribbean pottery assemblage.

As stated previously, the pottery is handmade and open or bonfired, the latter evidenced by irregular patches of oxidised and unoxidised firing condition of the clay, or fire-clouding. What is challenging to ascertain, however, is the actual type of manufacturing technique employed: coil-building, collar-building, moulding, pummelling, or slab-building. There is some evidence to suggest that it could be coil-building due to the presence of sherds displaying broken edges with 45° angles, but around the neck to rim areas breakage appears in a triangular pattern which suggests a different method of manufacture. As part of a wider study of the history of Afro-Caribbean pottery manufacture on Nevis, x-radiography will be applied to complete, modern vessels known to the Newcastle Pottery co-operative on Nevis in order to determine if the present-day methods can be applied to interpret methods in the past.

Vessel wall thickness measurements have been recorded using standardised codes suitable for absorbing manufacturing variability amongst

handmade pottery: TH1, <5mm; TH2, 5-<7mm; TH3, 7-<9mm; TH4, 9-<11mm; TH5, 11-<13mm; TH6, 13-<15mm; TH7, 15-<17mm. Sherds that do not have both surfaces present are recorded as THX in the database and there were only 26 of these in the assemblage. Table 2.5 presents the frequency of sherds by thickness code. Nearly 85% of the sherds with complete vessel wall thickness measure from 5-10mm thick, with 60% from 5-8mm. The sherds that range between TH5, TH6, and TH7 are from the sagging base zone of vessels which can be hard to recognise during analysis in the absence of obvious base angles. As discussed above in Chapter 2, the walls of the Upper Rawlins vessels are thicker than those from Fenton Hill and without red-finished surfaces compared to the Fenton Hill vessels. These observations will be continued during the analysis of the Charlestown-Crosse's Alley and Mountravers assemblages in due course to determine what these patterns may be indicating about the different assemblages.

Many sherds show evidence that the original pots had been wiped on one or both surfaces with rough fingers, a damp cloth or possibly even while still damp during manufacture. A few examples were roughly smoothed on one or both surfaces which has a curious scraped appearance evidenced by the orientation of rare pieces of organic matter in the fabric/paste (e.g. Figure 3.27, 20, 26). Nine pots had been burnished at the leather-hard stage of manufacture with five burnished on both surfaces (bowls), three on the interior only (bowls), and one on the exterior only (jar); two of these are illustrated (Figure 3.26, 8; Figure 3.27, 21). The interior burnishing of vessels is associated normally with open form vessels, i.e. bowls, as it is difficult for the potter to achieve a well-polished surface on the interior of a closed form container. Rough wiping and a form of irregular, interior smoothing are not uncommon, but quality burnishing is infrequent. Burnishing can be applied to the exterior of both open and closed form vessels and these differences in type and position of surface treatments are represented in the database: BU, burnished; SM, smoothed; WP, wiped; FWP, diagnostically finger-wiped; 1, both surfaces; 2, exterior only; 3, interior only. Burnishing is an equally infrequent occurrence on the Afro-Caribbean sherds recovered at Jessups slave village I and New River slave village I (DAACS 2012). The absence of red 'slip' on any sherds in the Upper Rawlins assemblage, a decorative technique usually observed in association with burnishing, is discussed below.

Rims

R101 – round-lipped, upright to flared rim on necked, slack or slightly globular-profile vessel; closed form, jar (Figure 3.26, 1-7; Figure 3.27, 26)

R102 – flat-top/platform rim on neckless, convex-profile (hemispherical) vessel; open form, bowl (Figure 3.26, 8)

R109 – round-lipped, everted rim on necked, slack or slightly globular-profile vessel; closed form, jar (Figure 3.26, 9-18)

R110 – flat, flanged rim on neckless, convex-profile (hemispherical) vessel; open form, bowl (Figure 3.27, 19)

R115 – round-lipped, upright rim on neckless, convex-profile (hemispherical) vessel; open form, bowl (Figure 3.27, 20-24)

R121 – complex, upright, lid-seated rim on necked vessel with uncertain profile; closed form, probable jar (Figure 3.27, 25)

Handle

H102 – sub-square cross-section, strap handle (Figure 3.27, 24)

Neck sherds

N100 – sherd(s) from the restricted neck zone of vessels; closed form, jar (Figure 3.27, 27)

Decorated sherds

D100 – body sherd(s) displaying decoration (Figure 3.26, 2; Figure 3.29, 1)

Bases

B103 – sagging or rounded-profile base(s) with no obvious base angle (Figure 3.28, 28-32)

Plain body sherds

P100 – undecorated body sherd(s)

Decoration

The Upper Rawlins assemblage includes sherds from at least four decorated vessels. One vessel had additional clay applied onto the exterior neck area to create a thin, wide strip which was then impressed with what appears to have been a comb that was dragged down the neck diagonally twice across the strip to create at least two parallel rows around the vessel circumference (Figure 3.27, 26). Similar examples of applied strips with impressed motifs have been found in assemblages from St Eustatius (Heath 1988, 159-60, 163-5, figs 4-2 - 4-4). An irregular pattern of deep wiping, scratching or fine scoring decorated the body zone of a second vessel (Figure 3.27, 27). The creation of this effect may have

been conducted by a very rough type of cloth such as burlap or possibly by twigs. Another example of this unusual type of decoration was found on an early colonial period vessel excavated at the Crosse's Alley site in Charlestown on Nevis. It would be tempting to suggest that these two pots had been created by the same potter, but more effort had been invested in the Upper Rawlins vessel with its partially-smoothed interior and thinner walls compared to the Crosse's Alley vessel which is rustic with both thicker walls and an undulating interior surface created by deep indentations resulting from when the potter used their fingers as an anvil to support the application of the repeated scratches. The third vessel is a thin-walled bowl which has three incised grooves (Figure 3.26, 8): one along the upper surface of its rim, one below the exterior edge of the rim, and the third around the upper body of the vessel wall. Similar examples from other sites in the Eastern Caribbean have not yet been identified. The fourth vessel is a bowl which has two parallel, incised lines on the upper edge of its rounded rim creating a raised ridge effect (Figure 3.27, 20). It appears that the tool used to make this type of ridge was a half-tube or half-cylinder shaped object that had been dragged along the top of the rim incising the surface with a pair of parallel lines in the process. The simplest example of such a tool would be a bird bone or plant stem, sliced in half longitudinally. At present, this decoration is unique to Upper Rawlins. One bowl and one jar appear to have single incised grooves on their rims (Figures 3.26, 7 and 3.27, 22), but these may be a type of maker's mark or personal technique of rim making rather than actual decoration (discussed further below).

Excavation of 17th- to early 18th-century activity at the Crosse's Alley site produced only one scored or scratch decorated vessel amongst 16 sherds recovered from phase 12 (17th to early 18th century) deposits, but four sherds which probably derive from the same jug were red-slipped on the exterior surface. Examination of the small Afro-Caribbean assemblage from phase 1 at Mountravers (66 sherds) revealed no examples of decorated sherds. Systematic sieving at Jessups slave village I (assemblage total – 654 sherds) produced only one example, a rim with impressed decoration (DAACS 2012), while at New River slave village I similar fieldwork revealed an assemblage with three times more sherds but only two punctate decorated examples (1452 sherds; DAACS 2012). These two slave villages date from the mid 1700s to around 1780. Therefore, the presence at Upper Rawlins of four decorated vessels amongst 433 sherds seems to be significantly greater than other site assemblages of similar date. In contrast, however, there are no examples of 'slipped' surface treatment within the Upper Rawlins assemblage compared to Jessups slave village I with 5.2% of sherds 'red-slipped' and New River slave village I with 12.7% of sherds displaying this bright red to brown-red to yellow-red, and usually burnished, decorative surface treatment. Scientific examination of the 'red-slipped' effect has not yet been conducted to determine if the treatment was created by painted application of a liquid slip or dipping vessels into a slurry solution, but it may be possible that pieces of red ochre which does outcrop on Nevis had been rubbed onto the surface in a dry state and then the vessel burnished with a stone. Future detailed examination of the Afro-Caribbean pottery assemblage from the 18th-century phase of activity at the Charlestown Merton Villa site (Terrell 2005) will provide a useful comparison for understanding this period of pottery manufacture, distribution, use and recovery on an urban site, as would the large assemblage from the port settlement of Jamestown (Nevis) excavated over two seasons in 2005-6 (E. Klingelhofer, pers. comm.).

Recognition of Individual Potters

Three vessels in the assemblage suggest that it may be possible to recognise the products of individual Nevisian potters of this period. One R109 jar has a distinctive spur of clay on the lip of the rim (Figure 3.26, 10) in contrast to nearly all other examples of type R109 rims in the assemblage. This type of 'error' is actually a distinctive "maker's mark" created by the potter's fingers. Handmade pots often show characteristics which can simply be the way a potter finishes off parts of vessels, in this case the rim. Handles are another classic example of individual flourishes as each potter makes the handle and attaches it to the pot in their own way as no two potters have the same hands (...!) or experiences in making pots by hand. This effect is the equivalent of a handwriting signature and it is important to record any examples on late 17th- early 18th-century Afro-Caribbean type R109 jars in other Nevis assemblages. One jar and one bowl have a similar signature-like effect on their rims (Figures 3.26, 7 and 3.27, 22) which at first was interpreted as deliberately decorative but may simply be a product of the way the potter made these vessels as a fingering-effect characteristic.

Vessel Forms: Frequency, Size Range, and Evidence of Use

Table 3.1 presents the frequency of sherds classified by form type. It is also possible to indicate the minimum number of identifiable vessels with distinctive form types other than plain body sherds and this is listed as the number of vessels on this table. There are 19 necked jars in the assemblage, with six R101 examples, 11 R109, one R121 and one R136. In contrast, there are only seven bowls with single examples each of R102 and R110 and five of type R115. An additional nine necked vessels, represented just by the neck zone alone, were

Table 3.1. Upper Rawlins: Afro-Caribbean pottery, quantification by form type (weight in grammes)

Form Type	Sherd Count	Weight of Sherds	Number of Vessels
R101	8	172	6
R102	7	145	1
R109	19	505	11
R110	1	63	1
R115	18	666	5
R121	1	52	1
R136	1	23	1
B103	13	702	11
N100	13	419	10
D100	1	21	1
P100	352	4117	-
Total	433	6862	>47

identified, one of which is a bowl and the other eight likely to have originated from jars. These 47 vessels represent the minimum number of pots which had been used at the site during its brief history and provide the basis for an initial understanding of the range of Afro-Caribbean pottery available to the occupants of the Upper Rawlins site.

Table 3.2 gives the size range of the 20 vessels for which rim diameters could be measured. Of these, nearly equal numbers can be referred to as small-sized pots and medium-sized pots. However, there are no vessels with diameters measuring less than 160mm in the assemblage and only one bowl which measures above 220mm (Figure 3.27, 20). Therefore, the size range of vessels is considerably limited with 95% of the pots measuring within a variation of only 60mm which gives the assemblage a uni-modal appearance.

There is evidence of use still visible on many of the sherds. Burnt residue on the interior and soot on the exterior indicate that the original pot had been used to cook over an open fire at some time in its life history. Nine identifiable vessels and a further 54 plain body sherds representing between 20 and 30 vessels have these distinct carbonised remains on their surfaces. Amongst the identifiable examples, six were jars (Figure 3.26, 5-7, 12, 14; Figure 3.27, 25) and three were bowls (Figure 3.26, 8; Figure 3.27, 21, 24). In addition, five identifiable vessels display traces of possible use as cooking vessels (Figure 3.26, 2, 15, 17, 18; Figure 3.27, 19).

Dating and Deposition

The majority of the Afro-Caribbean pottery assemblage was recovered in association with late 17th- to early 18th-century European pottery or from contexts with no direct association of dated wares (see *European Ceramics* section). However, contexts 6, 7, 13 and 59 contained pottery of early to mid 19th-century date. Therefore, at least 336 Afro-Caribbean sherds can be assumed to date from activity associated with the late 17th- to early 18th-century, or 'early colonial', phase. This number can be augmented by the identification of sherds from the unstratified collection (context 1) which join stratified sherds in early period contexts, or derive from the same vessel, resulting in a total of at least 343 sherds resulting from early colonial activity. This is the largest collection of Afro-Caribbean pottery of this period found on Nevis. The only comparable early colonial assemblage was recovered from phase 2 contexts at the Crosse's Alley site, but this group comprises just 15 sherds.

The connectedness of several contexts can be demonstrated by the recognition of sherds from the same vessels deposited amongst four different layers. Principal amongst them are four illustrated vessels (Figures 3.26, 2, 10-11; Figure 3.27, 20). Identifiable sherds from vessel no. 2 were found in contexts 12 and 31, from vessel no. 10 in contexts 28 and 29 (as well as several unstratified sherds), from vessel no. 11 in contexts 28 and 31, and from vessel no. 20 in contexts 29 and 31 (as well as unstratified). This evidence supports the interpretation established during excavation that the material from contexts 28, 29 and 31 belonged to the same original midden deposit that had washed down from the upper terrace and came to rest between/within walls 32, 39 and 34 in the domestic range (kitchen area). While there is good reason to suggest that

Table 3.2. Upper Rawlins: Afro-Caribbean pottery, frequency of measurable rim diameters by form type and size division

Form Type	Very Small	Small	Medium	Large	Very Large
	<100mm	100-<200mm	200-<300mm	300-<400mm	400mm+
R101	-	160	200 x2; 220 x2	-	-
R102	-	-	220	-	-
R109	-	160 x2; 180 x4	200; 220 x2	-	-
R110	-	180	-	-	-
R115	-	160	220; 260	-	-
R121	-	-	220	-	-
Total Number	0	9	11	0	0

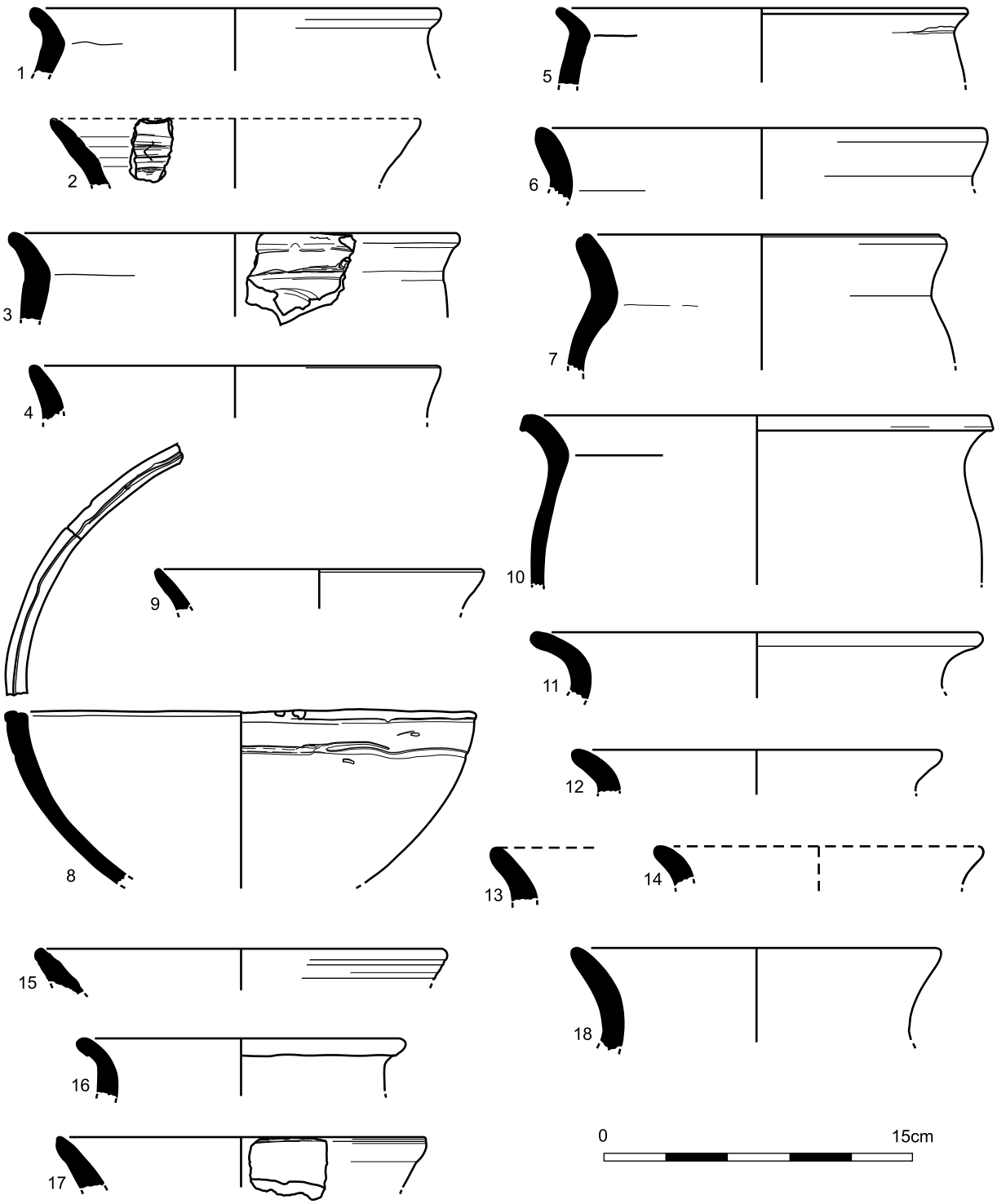

Figure 3.26. Upper Rawlins: 1-18. Afro-Caribbean pottery

contexts 80, 82, 83 and 84 are likely to correlate with contexts 28, 29 and 31, there are actually very different quantities of Afro-Caribbean pottery from them; 28, 29 and 31 produced 259 sherds (3453g), while the other set produced only eight sherds (75g). These colluvial deposits contained 62% of the Afro-Caribbean pottery assemblage from Upper Rawlins. Investigation of the primary area where the original vessels had been used, broken, discarded and accumulated prior to this redeposition phase may have proved informative.

Discussion: Significance of the Assemblage

The Upper Rawlins assemblage comprises only 433 sherds but provides several outstanding aspects

of considerable significance to the study of Afro-Caribbean pottery on Nevis and regionally within the Leeward Islands. Primary amongst these is defining the nature of the earliest collections and this is the largest assemblage dated to the late 17th to early 18th century available for study. In future, it will be possible to establish the character of the earliest Afro-Caribbean pottery made on Nevis by comparing the Upper Rawlins assemblage with those from phases 1-2 at the Crosse's Alley site and the earliest phases at Mountravers. There are as yet no known examples of Afro-Caribbean pottery of mid 17th-century date from excavations on the island.

There is a very low diversity of forms in the Upper Rawlins assemblage with only two general shapes: round-based, necked jars and hemispherical bowls. The three variants amongst the jars (slightly everted rim, fully everted rim, lid-seated rim) and three variants of bowl (flattened rim, flanged rim, rounded rim) can easily be accommodated as having been made by different potters with the same vessels in mind. These vessels are similarly low in diversity of sizes with nearly all measurable rims ranging within 160-220mm; only one bowl is larger than this. Both jars and bowls were used as cooking pots. There is an absence of red-slipped sherds in the assemblage which may well be due to the lack of jugs in the range of forms, but there is a surprisingly significant number of decorated examples amongst the estimated minimum of 35 vessels. This, therefore, is not a showy assemblage; it is very practical and distinctive, but not 'pretty'. Its role was to help make food and feed extremely hard-working, enslaved people. It is most likely that the vessels provided food for individuals eating singularly or in small groups as the smaller pots would have held approximately 1 litre of food with the larger examples holding from about 2-3 litres and capable of serving food to several people at a time. All of the evidence currently points to the entire assemblage having been made on Nevis. Therefore, the recognition of specific potters based on their individual styles of making pots – such as the spurred-jar potter and the grooved-rim potter – identifies persons living and working creatively during the era of slavery, people who would otherwise be invisible. Although these vessels may not be typical examples of beautiful ceramics, their homemade manufacture, simplicity, uniformity and basic uses emphasise the identity of their makers and users. It is very easy to suspect that Afro-Caribbean pottery did not exist in the eyes of slave owners and overseers, it too was invisible – darkly fired clays rather than white clays, rustic in manufacture being handmade rather than wheelthrown or mouldmade, and plain or indecipherably decorated, therefore altogether of no interest to Europeans. Afro-Caribbean pottery vessels were as Afro-Caribbean people, they amounted to nothing.

Catalogue of Illustrated Afro-Caribbean Pottery

(Figures 3.26-3.28)

1. Necked jar, form type R101; fabric MM; 10% of 200mm diameter present; context 7; Pottery Record Number 3024; INAA-sample code ELM021.

2. Necked jar, R101; MM; 11% and less than 5% respectively of 160m diameter but do not join; wiped on both surfaces; possibly sooted on exterior; context 12 and 31 respectively; PRN3034 and PRN3130; INAA-sample code ELM027 (PRN3130).

3. Necked jar, R101; CM; 7% of 210mm diameter; wiped on exterior; context 13; PRN3047.

4. Necked jar, R101; MM; 5% of 200mm diameter; context 29; PRN3070.

5. Necked jar, R101; MM; less than 5% of rim present; sooted on exterior; context 31; PRN3134.

6. Necked jar, R101; CM; 8% of 220mm diameter; sooted on exterior; context 65; PRN3152.

7. Necked jar, R101; MM; 9% of 180mm diameter; narrow, shallow, incised groove around top of rim; possible soot on exterior; unstratified; PRN3018.

8. Hemispherical bowl, R102; MM; 23% of 220mm diameter; two horizontal, parallel, flat-based, incised grooves on upper vessel exterior and around top of rim; burnished on both surfaces; sooted on exterior, burnt residue on interior; context 29; PRN3082; INAA-sample code ELM023, ICPMS-sample code ELM/RT007.

9. Necked jar, R109; MM, 10% of 160mm diameter; context 9; PRN3028.

10. Necked jar, R109; MM; 10%, less than 5% and 30% of 220mm diameter respectively; possible deliberate smoothing on both surfaces, finger-wiped on interior; context 28, 29 and unstratified respectively; PRN3055, 3080 and 3013; INAA-ELM022 (PRN3013).

11. Necked jar, R109; MM; 5% and 8% of 220mm diameter; context 28 and 31 respectively; PRN3058 and 3128.

12. Necked jar, R109; MM; 10% of 180mm diameter; sooted on exterior; context 31; PRN3129.

13. Necked jar, R109; MM; less than 5% present; context 31; PRN3131.

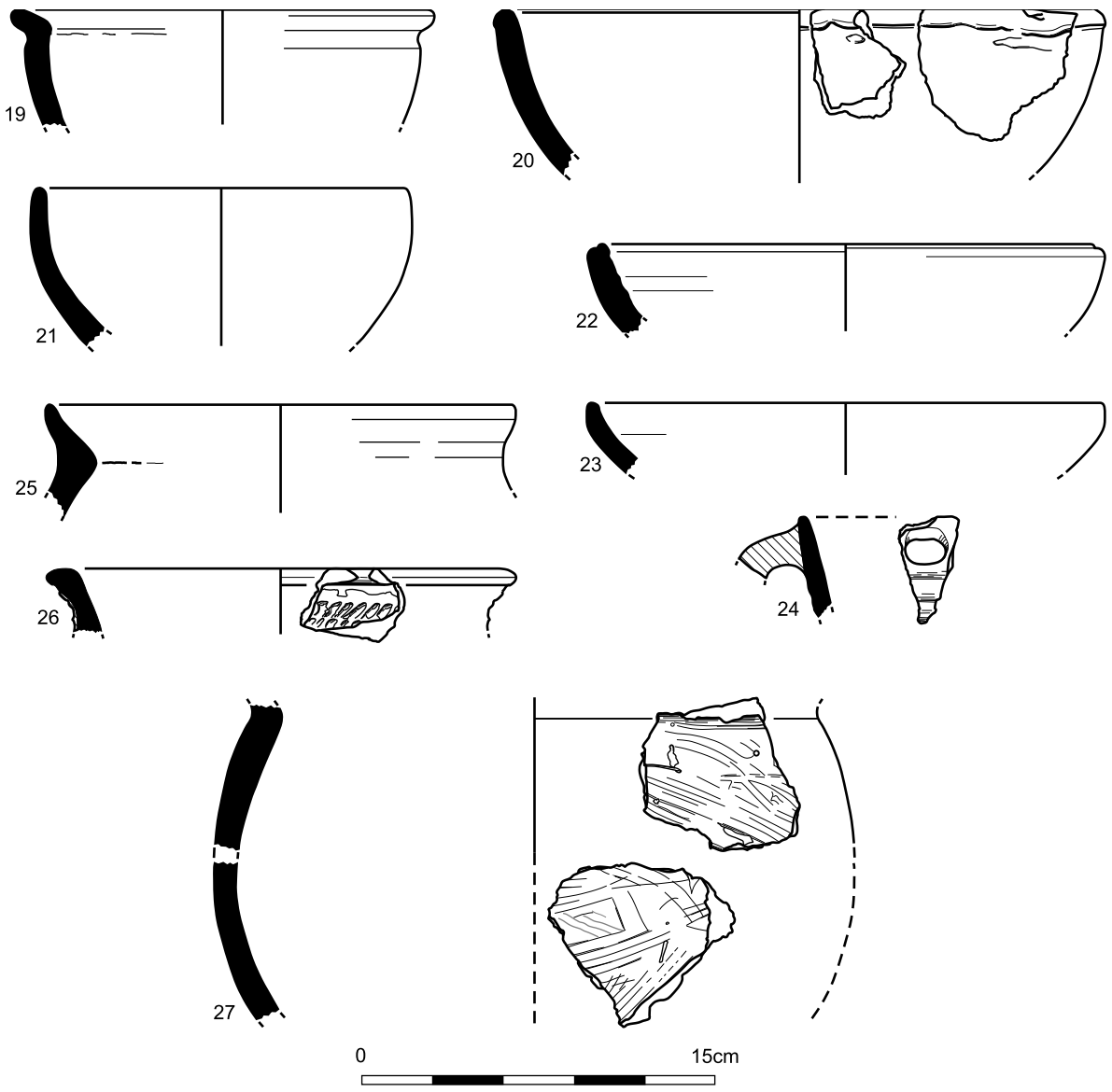

Figure 3.27. Upper Rawlins: 19-27. Afro-Caribbean pottery

14. Necked jar, R109; MM; less than 5% present; sooted on exterior; context 31; PRN3132.

15. Necked jar, R109; MM; 7% of 200mm diameter; wiped on both surfaces; possibly sooted on exterior; context 31; PRN3133.

16. Necked jar, R109; MM; 8% of *c.* 160mm (roughly made vessel); context 49; PRN3145.

17. Necked jar, R109; MM; 5% of 180mm; possible soot on exterior; unstratified; PRN3017.

18. Necked jar, R109; MM; 6% of 180mm; unstratified; PRN3019.

19. Hemispherical bowl, R110; MM; 5% of 180mm; wiped on interior; possible soot on exterior; unstratified; PRN3015.

20. Hemispherical bowl, R115; MM; 38% of 260mm diameter; well-smoothed or burnished on both surfaces and partially wiped on interior; narrow, shallow, incised groove around top of rim; context 29, 31, and unstratified; PRN3081 and PRN3124/3016/3020; thin-section Sample 2, INAA-ELM025, ICPMS-ELM/RT006.

21. Hemispherical bowl, R115; MM; 34% of 160mm diameter; both burnished and wiped on interior;

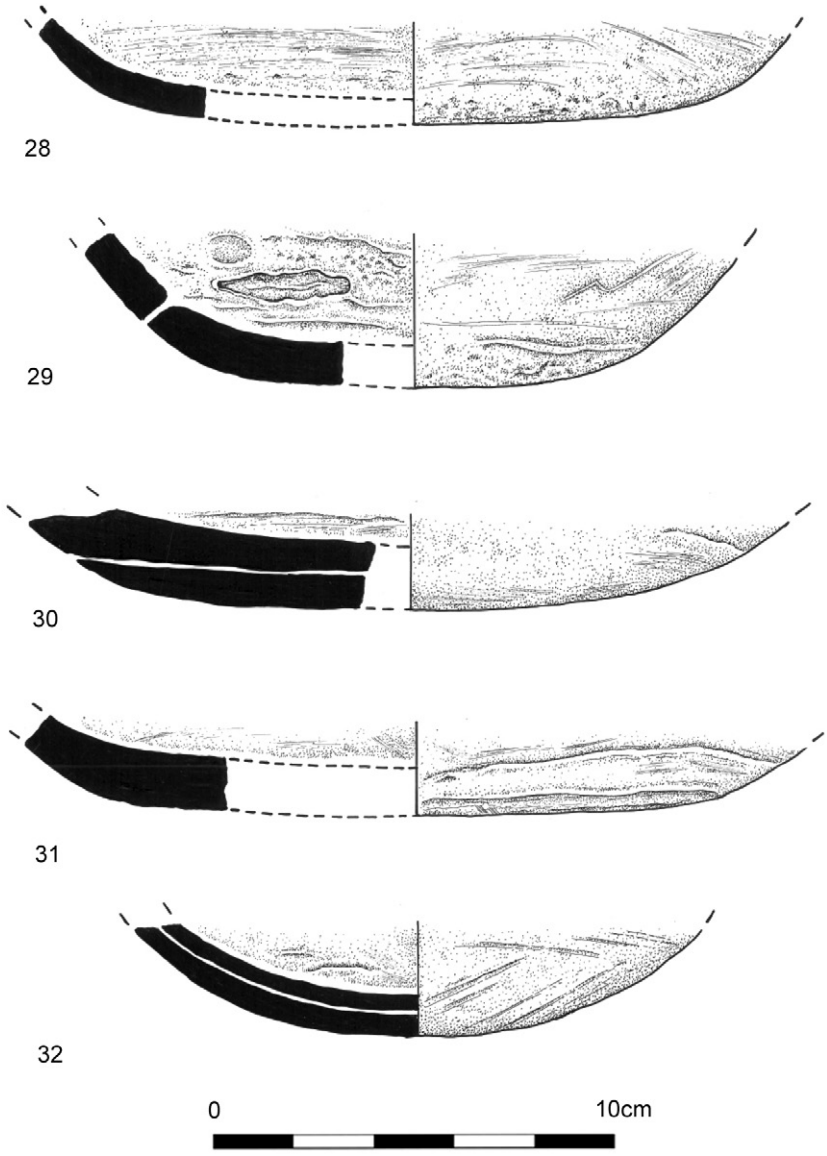

Figure 3.28. Upper Rawlins: 28-32. Afro-Caribbean pottery

sooted on exterior; context 31; PRN3125; INAA-ELM026, ICPMS-ELM/RT008.

22. Hemispherical bowl, R115; MM; less than 5% of a vessel with diameter greater than 220mm; possibly burnished on interior; narrow, shallow, incised groove on top of rim; context 31; PRN3126.

23. Hemispherical bowl, R115; MM; 5% of 220mm diameter; faint traces of possible slip on both surfaces; context 31; PRN3127.

24. Handled, hemispherical bowl, R115 and H102; MM; less than 5% present; wiped on interior; sooted on exterior; context 49; PRN3146.

25. Lid-seated jar, R121; MM; 5% of 220mm diameter; wiped on both surfaces; sooted on exterior; unstratified; PRN3014.

26. Necked jar, R136; MM; decorated with applied strip of clay covered with two parallel rows of combed impressions at neck; shovel-test-pit STP130; PRN3166.

27. Necked vessel, N100; MM; decorated with an irregular pattern of finely incised scoring all over the vessel body exterior below the neck, roughly smoothed on interior; unstratified; PRN3501; thin-section Sample 1, INAA-ELM029, ICPMS-ELM/RT009.

Figure 3.29. Upper Rawlins: Afro-Caribbean pottery, decorated sherds. 1. STP130; PRN3166. 2. Context 29 PRN3071 (no. 33, below)

28. Sagging base, B103; MM; approximately 22% of 120mm diameter; unstratified; PRN3009.

29. Sagging base, B103; MM; approximately 27% of 100mm diameter; unstratified; PRN3010.

30. Sagging base, B103; CM; approximately 20% of 120mm diameter; context 31; PRN3092.

31. Sagging base, B103; CM; approximately 25% of 140mm diameter; context 31; PRN3093.

32. Sagging base, B103; CM; approximately 20% of 100mm diameter; context 31; PRN3095.

33. Decorated body sherd, D100; MM; comb-incised parallel lines; context 29; PRN3071 (Figure 3.29).

Catalogue of Photographed Afro-Caribbean Pottery (Figure 3.29)

1. Necked jar, R136; fabric MM; less than 5% of rim present; decorated with applied strip of clay covered with two parallel rows of combed impressions at neck; shovel-test-pit STP130; PRN3166.

2. Decorated body sherd, D100; fabric MM; comb-incised parallel lines; context 29; PRN3071.

European Ceramics

David Barker, with a contribution by Jerzy Gawronski and Sebastiaan Ostkamp

Introduction

A small assemblage comprising 124 sherds of European origin which spans the period from the late 17th to early or mid 19th century was recovered. The sherds are present in 18 contexts and in the 14 contexts in which they occur with Afro-Caribbean sherds there is potential for them to inform the dating of the latter. The single British sugar mould sherd is reported on separately below.

Description of Wares by Context and Phase

Virtually all the European pottery came from Phase 3 deposits or was derived from contexts that were not securely stratified or were unphased.

Phase 3

Context 10 Body sherd of a pearlware chamber pot, possibly that present in context 7; late 18th to early 19th century.

Context 28 Base sherd of a delftware holloware vessel of uncertain form; buff fabric with a white tin glaze; late 17th to early 18th century.

Context 29 Twenty-two sherds, all dating to the late 17th to early 18th century. These include four sherds of brown salt-glazed stoneware, 13 of delftware, four of gravel-tempered ware and one of redware. The last is the rim/body of a straight-sided dish in a fine, sandy orange fabric with an internal orange glaze (Figure 3.31, 1). The neat everted rim has a 'collar' on the exterior. The gravel-tempered ware includes joining rim and body sherds of a large jar in a coarse orange fabric reduced to grey in places; the internal glaze is a mottled orange-green colour, running towards the rim and indicating that the vessel was fired upside-down (Figure 3.31, 2). Two vessels are recognisable amongst the otherwise undiagnostic delftware sherds: a round-bodied chamber pot, which has a cross-context join with a sherd from 13, and the rim of a bowl or porringer. Just one delftware sherd, from an uncertain form, has blue painted decoration. The brown salt-glazed stoneware sherds include the handle of an English-made cylindrical mug or similar and a shoulder/neck from a Rhenish bottle with part of an applied *bartmann* face mask (Figure 3.31, 3).

Context 31 Fourteen sherds of late 17th- to early 18th-century date, including five of brown salt-glazed stoneware, seven of delftware and two of gravel-tempered ware. These last are unglazed bodies from a jar and a dish or bowl, both in coarse orange fabrics with partial reduction. The delftware sherds include the rim of a bowl or porringer, and the base of a possible drug jar. Just one sherd, from a vessel of uncertain form, has a hint of blue painted decoration. Two of the brown salt-glazed stoneware sherds (Figure 3.31, 4) are bodies that are probably from the English-made rouletted mug present in contexts 1, 12 and 84. Two others are the rim and body of another mug of English manufacture, this time with no obvious decoration but with a dark mottled brown salt glaze (Figure 3.31, 5).

Context 59 Fourteen sherds, of which eight are of delftware, three are of Westerwald grey salt-glazed

stoneware and two are of coarse earthenware. These all date to the late 17th to early 18th century. One final sherd is of a refined red earthenware decorated with an applied moulded relief of a vase or similar in white clay with an internal pearl glaze over a white slip coat, dating to the early to mid 19th century. The Westerwald sherds belong to perhaps two vessels, one of which – probably a mug or a jug – has an applied moulded decorative armorial relief, combining human figures and an incomplete inscription '[...]WILHELM...' in a polygonal border (see discussion below) (Figure 3.30). A rim sherd may belong to this vessel, while a body sherd with incised decoration highlighted in blue may belong to another vessel of uncertain form. The delftware sherds are bases and bodies of uncertain forms; just one sherd has painted decoration to its exterior, in red. The coarse earthenware sherds are from two vessels – dishes or similar – with orange fabrics and internal orange and orange-yellow glazes.

Context 61 Two small body sherds of a delftware hollow-ware vessel of uncertain form; buff fabric with a white tin glaze; late 17th or 18th century.

Context 65 Body sherd of a delftware vessel of uncertain form; buff fabric with a white tin glaze and undiagnostic blue painted decoration to the exterior; late 17th or 18th century.

Context 66 Five sherds, all of late 17th- to early 18th-century date, comprising four small delftware bodies of hollow-ware vessels of uncertain form; buff fabric with white tin glaze. The other is the handle sherd of a Westerwald grey stoneware mug or similar with a blue-tinted salt glaze; there is a small impressed mark or tool mark to the upper face.

Context 80 Base sherd of a delftware holloware vessel of uncertain form; buff fabric with a white tin glaze; late 17th to early 18th century.

Figure 3.30. Upper Rawlins: Westerwald stoneware sherd with inscription, from context 59

Context 83 Body sherd of a brown salt-glazed stoneware mug or similar; sandy grey body with a dark matt brown external salt glaze; early 18th century.

Context 84 One rim and two body sherds, with two joins, of a brown salt-glazed stoneware mug; light grey fabric with an external brown wash and an internal white slip coat (Figure 3.31, 6). Decoration comprises at least two broad bands of rouletting. Two of the sherds join with a rim sherd from context 12. Late 17th to early 18th century.

Note on Westerwald Sherd from Context 59

Jerzy Gawronski and Sebastiaan Ostkamp

On the basis of parallels in Westerwald pottery references, the complete motto of the medallion on the sherd was probably WILHELMUS III DEI GRATIA MAGNAE BRITANIAE, FRANCIAE ET HIBERNIAE REX (Figure 3.30). This motto appears on several jugs and beakers from the Westerwald area. Because the medallion is multifaceted, the sherd probably belongs to a drinking mug/beer mug or square bottle. The text was placed around a portrait of William III with a wig and crown. William was born Prince of Orange, a Dutch Protestant, and was stadholder of the provinces of Holland, Zeeland, Utrecht, Gelderland, and Overijssel in the Dutch Republic from 1672 and after the Glorious Revolution of November 1688 became William III, King of England 1689-1702. The sherd will date from the reign of William III (1689-1702) or somewhat later.

The royal titles DEI GRATIA MAGNAE BRITANIAE, FRANCIAE ET HIBERNIAE REX were adopted on his accession to the throne in 1689 and appear on coinage of his reign.

Contexts not Phased or not Securely Stratified

Context 1 (cleaning on west side of boiling train). Five sherds, of which one pearlware chamber pot rim dates to *c.* 1800–1830. The other sherds date to the late 17th to early 18th century. They include the rim of a brown salt-glazed stoneware mug with rouletted decoration with a lightly mottled external brown glaze and an internal white slip coat, sherds of which are also present in contexts 12, 31 and 84; part of a delftware cover; a gravel-tempered body sherd in an orange fabric with an internal orange-green glaze; and a body sherd of a coarse earthenware dish or similar with an orange fabric and an internal orange-brown glaze.

Context 6 (Edward Herbert's (EH) spoilheap on east side of boiling train). Two body sherds of a pearlware chamber pot, possibly that present in context 7; *c.* 1800–1830.

Context 7 (continuation of EH trench on west side of boiling train). Thirty-four sherds, including one rim,

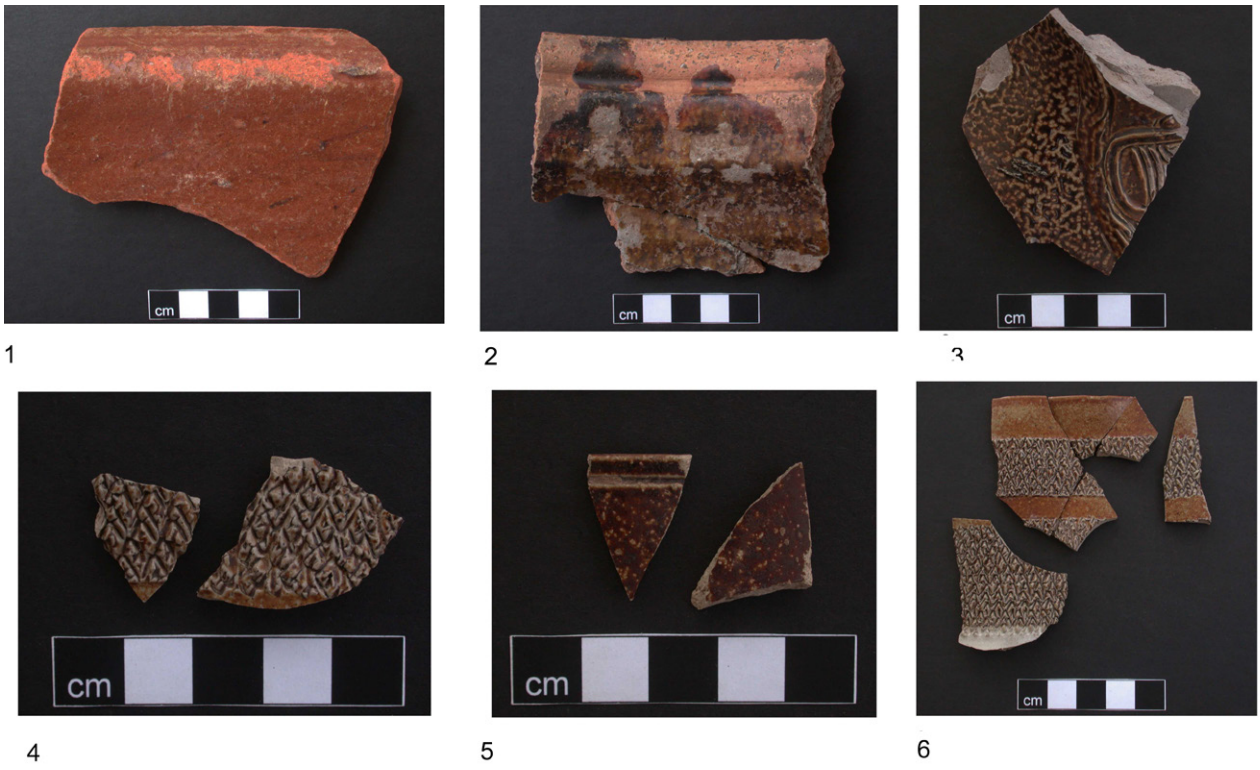

Figure 3.31. Upper Rawlins: 1-6. European ceramics

one base/body and 32 bodies, of a pearlware chamber pot, undecorated; *c.* 1800-1830.

Context 12 (EH spoilheap adjacent to kitchen). Nine sherds, three of brown salt-glazed stoneware, four of delftware and two of gravel-tempered ware, date to the late 17th to early 18th century. The salt-glazed stoneware sherds are from a mug with rouletted decoration with a lightly mottled external brown salt glaze and an internal white slip coat. There are cross-context joins with a sherd from 12. The delftware sherds include the rim of a bowl or porringer and the body of a possible chamber pot. The gravel-tempered sherds are bodies of a jar and a possible dish; both are in an orange fabric with partial reduction and mottled orange-brown and orange-green internal glazes.

Context 13 (cleaning EH trench adjacent to kitchen). Three sherds, two of delftware of late 17th- to early 18th- century date, the other of mid 19th-century whiteware. One delftware sherd is the handle of a vessel of uncertain form; buff fabric with a white tin glaze. The other is the body of a chamber pot and joins a base sherd from 29; buff fabric with a white tin glaze, missing on the exterior. The whiteware sherd is a rim from a plate of uncertain size and form, decorated with an undiagnostic blue printed floral pattern.

Context 33 (general cleaning south of boiling train). Two body sherds of a pearlware chamber pot; *c.* 1800–1830.

Not phased

Context 79 Body sherd of a delftware vessel of uncertain form; buff fabric with a white tin glaze; late 17th to early 18th century.

Context 2020 (Not phased, Test pit) Rim sherd of a ten-inch creamware plate with a 'bath' edge; *c.* 1780–1820.

Unstratified One sherd from the neck of a Rhenish brown stoneware with a mottled brown external salt glaze.

Discussion

This small assemblage comprises a limited range of 17th-, 18th- and 19th-century European wares, which in some contexts occur together. However, those contexts with a larger number of sherds appear to be quite tightly dated. Contexts 12, 29 and 31 contain wares that date to the 17th to early 18th century, with no later material; most of the sherds from context 59 can be similarly dated, but the presence of one early to mid 19th-century sherd may cast some doubt upon the integrity of this context.

The earliest of the ceramics include a small number of recognisable vessel forms in a limited range of ware type. Sherds of tin-glazed earthenware, or delftware, are most numerous (45 sherds or 36% of the European wares, including unstratified material) but vessel forms

are mostly uncertain with the exception of a chamber pot and a possible drug jar. Decoration is confined to just four sherds and is undiagnostic. The delftwares are probably all English products.

A number of sherds from 1, 12, 31 and 84 belong to a single brown salt-glazed stoneware mug with bands of rouletted decoration to the exterior and an internal white slip coat, which also seems to be present on the lower exterior body. There are cross-context joins between sherds from 12 and 84. The mug and the style of the rouletting are very reminiscent of wares produced in north Staffordshire in the late 17th to early 18th century (e.g. Kelly and Greaves 1974, 19, no. 30), but it is possible that the type was more widely produced, and a Bristol source should also be considered a possibility.

There are sherds of at least two other English brown salt-glazed stoneware mugs. A handle from context 29 may belong to the rouletted mug above, but a rim and body from 31 are from a cylindrical mug which is probably undecorated. This could be a Staffordshire product, but a sandy-bodied cylindrical mug from 83 is not.

At least one Rhenish bottle can be identified by the presence of an applied *bartmann* face mask on a sherd from 29, although there are other Rhenish sherds from 29 and 31 and another sherd is unstratified. Other German wares are present in the form of four sherds from contexts 59 and 66 of at least two Westerwald vessels that are likely to be mugs or jugs. One body sherd with incised and blue painted decoration is typical of the vast majority of Westerwald wares found in English, Caribbean and North American contexts, but another has an applied moulded decorative armorial relief with a partial inscription which refers to Wilhelm III (the English king William III) (see catalogue above), dating the vessel to 1689-1702 or later.

Coarse earthenwares include nine sherds of North Devon gravel-tempered ware from contexts 1, 12, 29 and 31. Forms are jars and dishes or bowls, all in coarse reduced orange fabrics with internal orange-yellow and orange-green glazes. Other coarse earthenware sherds from contexts 1, 29 and 59 cannot be sourced at the moment. One dish, from 29, is probably of rectangular form but others are from vessels of uncertain forms. All have orange fabrics with internal orange-brown glazes. A single unglazed vessel is the rim of a large sugar cone, providing artefactual evidence for industrial activity at Upper Rawlins although, being an unstratified find, it cannot be used as dating evidence for sugar production (see below for detailed report).

No sherds appear to date between *c.* 1720 and the end of the 18th century. A single creamware plate rim with a 'bath' edge from context 2020 could have been produced as early as the late 18th century but is more likely to date to the early 19th century. Sherds of pearlware from contexts 1, 6, 7, 10 and 33 are all likely to date to *c.* 1800–1830. All seem to be from undecorated chamber pots, with 34 sherds from context 7 alone. The redware sherd from 59 is broadly contemporary with the pearlwares, but the printed whiteware plate sherd from 13 is likely to be slightly later.

Apart from providing dating evidence and evidence for contextual relationships, the ceramics in such a small assemblage offer little interpretative potential. Too few vessels have been identified for any meaningful patterns of trade and consumption to be discerned, but the range of English and continental European wares is broadly comparable to other assemblages recovered in early deposits excavated at, for example, the plantation house at Mountravers (Barker 2003). Table wares, vessels for drinking, vessels related to health and hygiene, and wares related to food preparation and storage are all present amongst the early material.

Sugar Cone Mould

Elaine L. Morris

A single sizeable piece of rim sherd from a cone-shaped sugar-refining mould was identified (Figure 3.32). Sugar cone moulds, in association with molasses syrup-collecting or drip jars, were made specifically for use in the sugar-refining process (Allan 1984, 138-41, fig. 116; Brooks 1983, figs 1-4) and therefore can be classified as industrial ceramics. This particular sherd was found in 2004 by Mr Edward Herbert on the surface of the site near four sherds from a holloware or closed form Afro-Caribbean necked jar with scored or scarred lines on its body (Figure 3.27, 27). The unstratified sugar mould sherd weighs 305g and measures between 15-17mm thick along the body wall in the region of 50-80mm down from the neck of this rim which is much thicker. Reconstruction of the rim revealed it was originally 400mm in diameter with 9% of the rim still present. There is no streaky white slip visible despite the good condition of the interior of the sherd where this distinctive surface treatment is often observed on British-made sugar moulds (cf. Brooks 1983, 4). The vessel had been wheelthrown with the interior surface roughly smoothed with wet clay during the manufacturing process and subsequently fired in an oxidising atmospheric condition resulting in an orange appearance throughout the fabric (Figure 3.33a-b). Smoothing of the interior surface is thought to be equivalent to the application of white slip to the interior surface in order to help remove the sugar loaf.

The vessel had been made from naturally gritty clay of volcanic origin. Examination of this fabric in fresh fracture (Figure 3.33c-d) under x10 binocular microscopy reveals an abundance (40-50%

concentration) of disaggregated minerals derived from a fine-grained, greyish volcanic rock dominated by feldspars and ferromagnesian minerals which are now poorly-sorted, subangular to subrounded in shape and measure 3mm or less across. In addition, there are rounded to subrounded fragments of the original igneous rock measuring up to 4mm with one exception discussed further below. In thin-section, the moderately-sorted minerals are dominated by zoned and twinned plagioclase feldspars identified as andesite in common to very common frequency (20-25%), measuring up to 0.7mm across, and with sparse (3%) hornblende up to 2mm, rare pyroxenes (1-2%), and sparse rounded opaques (3%) also present. In addition, rounded to subangular, fine-grained rocks of andesite measuring up to 1.2mm occur in sparse frequency (3-5%) and are often porphyritic in texture with phenocrysts of hornblende, pyroxenes and plagioclase. This suite of volcanic rocks and minerals is similar to the range found in the gritty clay fabric sugar mould example from Fenton Hill (pp. 95-7, this volume) and to one examined previously from the 1998 excavations by Channel 4 *Time Team* at Mountravers (Hardwick 2001). These three examples of wheelthrown, unslipped, volcanic-gritted, coarseware fabric sugar cone moulds are likely to have been manufactured on Nevis in a manner of production similar to the examples of sugar moulds made on Barbados (Handler 1963) and Guadeloupe (Yvon and Casagrande 2011) which were manufactured from island clays (Pauly 2011), wheelthrown, unslipped and kiln-fired. Detailed historical research about the Barbadian sugar moulds has revealed that African men made these European-style vessels for the sugar processing industry. It is clear that this manufacturing system was an extension of estate production methods with slaves being, once again, the prime source of labour. Production of sugar moulds in the Caribbean contrasts in all aspects to the manufacture of Afro-Caribbean pottery for domestic rather than industrial use (*contra* Finch 2013) with those vessels handmade and bonfired by women in their spare time.

The rim diameter size, wheelthrown manufacture and oxidised firing condition of this sherd are identical to the types of sugar mould manufactured in England during the 17th-19th centuries and found in cities such as Bristol, Exeter, Gloucester and Liverpool to the west; Southampton (Drake 1987) along the south coast; and London, Hull and Edinburgh on the east side of the country (Brooks 1983; Mawer, n.d.). However, the gritty fabric and absence of white slip strongly suggest a local Nevisian provenance for its production. The recognition that island production of sugar-loaf moulds for sugar refining occurred on Nevis in the 17th-18th centuries is, therefore, to be expected and it is hoped will be fully identified soon with the discovery of a kiln. Sugar mould production using kiln-firing occurred on the French Caribbean islands of Guadeloupe and Martinique imitating the standard vessel form shapes and sizes found in French ports such as La Rochelle (Gillespie 1959; Yvon 2011).

Evidence that this particular mould may have been weakened, cracked and broken during its history is provided by the presence of a very large (15mm) round piece of igneous rock which had not been removed during fabric preparation but ended up located immediately beneath the outer clay skin of the vessel rim (Figure 3.33d). It is possible to speculate that the retention of the inclusion in the fabric of this vessel was simply an oversight on behalf of the potter. However, it may be that this particular piece of rock had been left in the fabric or it had been added deliberately near the surface of the vessel. Either can be interpreted as an act of resistance by the potter in the hope that the vessel would break and the sugar and molasses lost once the pot was used at the sugar house. Industrial ceramic vessels are made in a uniform manner to look the same and perform the same; repetitive reliability is what industrialisation relies upon. Therefore, the identity of the potter who had made this particular faulty mould would have been lost amongst the array of similar vessels made by other potters at the same potwork on the island of Nevis and his act of defiance would have had its effect anonymously.

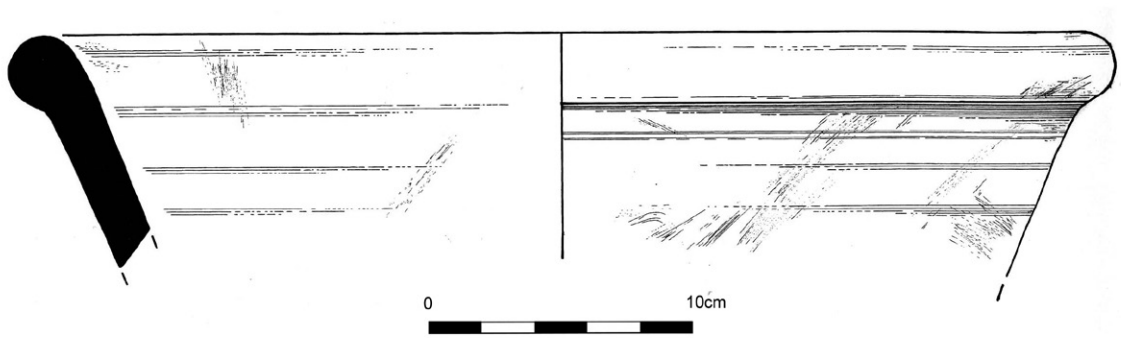

Figure 3.32. Upper Rawlins: profile of sugar mould rim

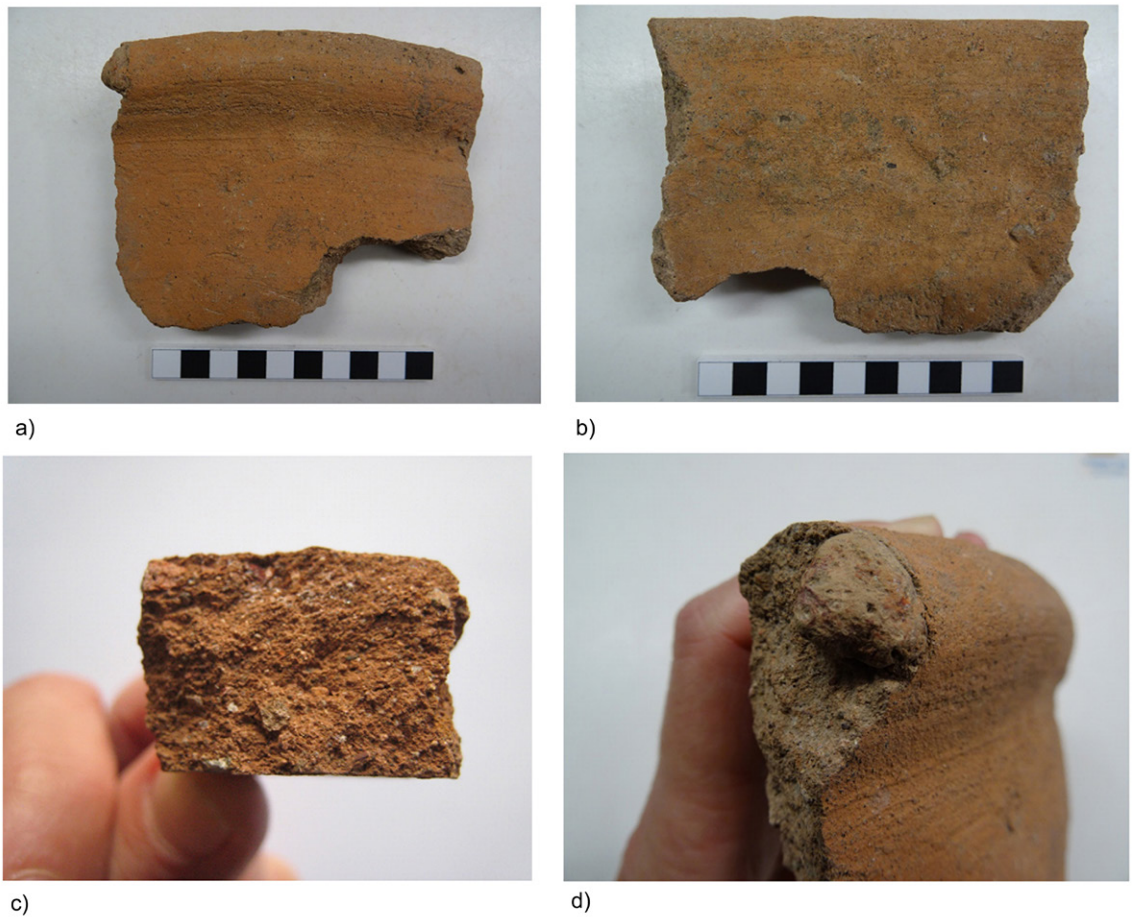

Figure 3.33. Upper Rawlins: sugar moulds. a) Surface of sugar mould rim, exterior. b) Surface of sugar mould rim, interior. c) Fabric of sugar mould sherd. d) Rock in sugar mould rim

It is recommended that investigation of the range and frequency of inclusions in the fabric of the Upper Rawlins sugar mould be compared to the suspected locally-made sugar moulds from Fenton Hill, Mountravers (Hardwick 2001; 2002: fabrics 4 and 5) and Gallows Bay (Hardwick 2001; 2002: fabric 10) and to samples of Afro-Caribbean pottery from Nevis using both petrographic and instrumental neutron activation analyses. The relative frequencies of inclusions of the amphibole hornblende, for example, may be one such indicator. This mineral is known to appear in varying quantities amongst the volcanic rocks of Nevis and many samples revealed no hornblende present (Hutton and Nockolds 1978). Examination of the 28 fabric samples from sherds of Afro-Caribbean pottery found at New River and Jessups slave villages rarely revealed pieces of hornblende (Morris 2009), which suggests that the frequency of this mineral in the Upper Rawlins and Fenton Hill sugar mould sherds may be indicative of different clay resources having been exploited to make industrial wares versus domestic vessels on the island of Nevis during the colonial period. It is also recommended that a copy of the full petrological report by Hardwick (2002), which includes colour photomicrographs of the sugar mould fabrics from excavations at Mountravers and survey at Gallows Bay, be made available on-line and used as part of the comparative material in this proposed further research.

Clay Tobacco Pipes

David A. Higgins

Methodology

Each of the fragments from this site has been individually examined and details of the pieces in each context group logged into an Excel table, a copy of which has been deposited as part of the site archive. Where more than one bowl fragment was present in any given context it was allocated an additional reference letter (A, B, C, etc.) to act as a unique identifier linking it to the detailed catalogue. This reference letter has been pencilled onto the individual fragment and appears in the detailed catalogue in the site archive. It also appears as a suffix to the context number in the list of illustrations below. A context summary has also been prepared, including two dates

for each context. The first date represents the overall range of the pipe fragments from each context, which is often quite general because it includes broad date ranges for the less diagnostic pieces, while the second is the most likely date of deposition, based on an assessment of the group as a whole. This closer dating relies on assessing the overall character of the context group and, in particular, the latest likely date for any of the individual pipe fragments present, but it does not take account of any other artefactual or stratigraphic dating evidence from the site. The recording system is based on that developed at the University of Liverpool (Higgins and Davey 2004) and the marked pipes have all been added to the as yet unpublished national catalogue that is being compiled by the author, a copy of which is held at the National Pipe Archive, currently housed at the University of Liverpool. The identification of the makers' marks and details of the pipemakers' working lives are based on a working list of Bristol pipemakers prepared by Roger Price (2007).

Material Recovered

A total of 104 fragments of clay tobacco pipe was recovered from 17 different contexts, comprising 36 bowl fragments, 64 stem fragments and four mouthpieces. The assemblage contains a total of ten marked pipe bowls, two of which have both moulded and stamped marks on them. In all, there are three stamped bowl marks facing the smoker, eight cartouche marks moulded on the right hand side of the bowl and one set of moulded initials on the sides of a heel. There is also one stem with a roll-stamped decorative border and another with just the very edge of a roll-stamp surviving. None of the other fragments is decorated, other than milling around the rim on one or two of the earlier fragments, and all the mouthpieces have simple cut ends, without any surviving trace of a coating.

The Pipes in Relation to the Site

Clay tobacco pipes provide one of the most accurate and sensitive means of dating post-medieval deposits, particularly if they are present in some numbers. Unfortunately, most of the 17 context groups from this site are small, with 15 of them having produced between just one and eight fragments of pipe. Despite this, five of these smaller contexts contain marked pieces and another produced a roll-stamped stem fragment. These pieces are more closely datable and so go some way to providing the closer dating that larger groups would have afforded. The two larger groups, contexts 29 and 31, produced 22 and 33 fragments of pipe respectively, including a further five marked pieces and another stem border. Both of these contexts contained pipes that suggest a deposition date during the first half of the 18th century, and most likely *c.* 1710-50. A summary of the pipes from each context is included here as Table 3.3. This shows the dating evidence that the pipes provide for the site and allows an assessment of the reliability of this information, based on the number of fragments that were found in each context.

As well as providing context specific dating evidence for the individual deposits from which they were recovered, the pipes also allow a more general assessment of the nature and duration of occupation on this site itself (although it must be noted that this is only a relatively small assemblage and so any conclusions are somewhat tentative). The pipe fragments from the site as a whole all fall within a general stylistic range of *c.* 1610-1800, although either end of this range is only represented by broadly datable pieces and almost all of the more diagnostic pieces fall within a bracket of *c.* 1690-1750. What is noticeable is the almost complete lack of the types of pipe that might be expected if earlier 17th-century occupation on the site had taken place to any extent. Other sites that the author has examined from Nevis usually contain quite a significant proportion of Dutch pipes amongst the 17th-century finds and these often had fleur-de-lys stem decoration on them during the period *c.* 1620-70. No stems of this type were present amongst the Upper Rawlins assemblage.

There are some stems that could be of 17th-century date, but the earliest firmly datable pieces are two decorated stems that fall somewhere between *c.* 1660 and *c.* 1710 (contexts 29 and 49) and a small bowl fragment of *c.* 1660-1730 (context 12). These suggest that activity in the excavated area had probably started by the late 17th century. There were not, however, large numbers of stems with large bores of around 8/64in to 9/64in, which are typical of Bristol pipes dating from around *c.* 1660-1700 and occur frequently amongst assemblages of this date from elsewhere on the island.

After around 1700 the stem bores used at Bristol typically decreased to around 6/64in or 7/64in in diameter and the use of stem stamps was replaced with moulded bowl cartouche marks or stamped initials on the bowl facing the smoker. Both of these characteristics are well represented amongst the Upper Rawlins finds and suggest that the majority of the depositional activity within the excavated areas took place during the first half of the 18th century. Some of the smaller contexts include fragments that could date from the late 17th century, so activity on the site could have started around 1690, but the two largest context groups (29 and 31) both date from *c.* 1710-50, perhaps indicating the main period of activity. There are one or two pieces that could date from the later 18th century but, as with the earlier finds, there is nothing particularly diagnostic. From the deposits so far excavated, the pipe evidence does not suggest that this site was used much after about 1750.

The final way in which the pipes can shed light on the site is with regard to the nature and social status of the finds recovered. A range of different pipe styles was offered by the pipemakers and, at its most basic level, the price of these pipes was determined by stem length and the quality of finish. Longer stems were more difficult and time consuming to make and more prone to breakage during the manufacturing process. As a result, the longer the stem, the more expensive the pipe. Likewise, more was charged for pipes that had been carefully finished and given a glossy appearance by the application of a burnished surface. None of the fragments from Upper Rawlins appears to have been burnished. Although a few of the pieces are too abraded for any original surface finish to be determined, this still suggests that most, if not all, of the pipes were of an ordinary finish.

Stem length is harder to determine, although a long fragment (110mm) from context 49 suggests both a little disturbed deposit and a pipe of reasonable length. Perhaps more telling are the bowl forms, which were also related to stem length. The most common style represented amongst the excavated pipes is spur bowls, of which there are at least ten examples (e.g. Figure 3.34, 5-6). There are five examples of heel bowls (e.g. Figure 3.34, 2-4), but only the remains of one spurless export style pipe (Figure 3.34, 10). This latter style appears to have been used for short stemmed pipes (Kincaid 2011), most likely the 'Virginia pipes' with 8½in stems, which are listed in the Bristol Pipemakers Guild regulations of 1710 (Jackson and Price 1974, 85). This was the shortest and cheapest type of pipe produced and the one that might have been expected to be in everyday use or supplied to the slaves. It is known that pipes were an integral part of the barter system used for obtaining slaves in Africa as well as being part of the 'provisions' supplied to them on the slave ships (Taylor 2012). There are also accounts of 'negro pipes' being landed in the Caribbean (Jackson and Jackson 1984, 13) and so plantation sites might be expected to produce types of pipe specifically associated with the slave population being used there. On the face of it, there seems to have been a low number of export style pipes in use on the site, but this low number may be partly due to the small sample size and fragmentary nature of the finds. When bowl junctions from spurless pipes are also counted there are three more, one each from contexts 1, 6 and 29. This brings the total to four, which is close to the figure for heel bowls and represents nearly one quarter of all the identifiable bowl forms from the site. This is a much higher percentage than noted by the author from a site in Charlestown, the capital of the island, where heel and spur forms dominated, many of which appear to have had relatively long stems, perhaps the 'Jamaica pipes' with 13in stems listed in the 1710 Bristol Guild regulations (Jackson and Price 1974, 85). Larger assemblages are clearly needed from sites with a range of different functions/social status, but the initial indications are that the Upper Rawlins assemblage contains a higher proportion of the short, cheap pipes than were found at a site in the capital and these may well be associated with the slave population. The Upper Rawlins assemblage appears to be entirely English in origin, of average or cheap quality and almost exclusively confined to the period *c.* 1690-1750.

The Pipes Themselves

This site has produced another sample of the pipes that were being exported from Europe to the Caribbean to add to the growing body of excavated evidence from that region. Several of the sites on Nevis have now produced small groups of pipes, but many of these only shed light on one brief period of settlement, as is the case here where all of the more diagnostic pieces date from *c.* 1690-1750. While each assemblage may only shed light on one particular site type or period of occupation, these individual groups offer the potential for future research to draw together a more complete picture of the production centres exporting to this region and the socio-economic status that the pipe styles represent.

Although only a relatively small assemblage of pipes has been recovered from this site, all of the fragments recovered appear to be English in origin, with nine of the ten marked pieces being of Bristol manufacture as well as at least one of the two decorated stems. Bristol was one of the most important pipe production centres in Britain, particularly for the export trade across the Atlantic, and pipes from the city are commonly found on colonial sites ranging from Canada to the Caribbean and beyond. Studies in the 1970s (Jackson and Price 1974; Walker 1977) established the importance of the Bristol industry and there have been a number of excavated groups published since that date (for example, Becky 2006; Becky *et al.* 2001; Becky and Jackson 1986a; 1986b; Becky and Price 2006; Jackson and Saysell 1987; Price 1984; and Price *et al.* 1984). Most of these more recently published groups, however, are predominantly of 19th-century date and, where studies of earlier assemblages have taken place, they did not appear in print until after this report was originally prepared in 2012 (Jarrett 2013; Higgins 2017). The general range of bowl forms, marks and decoration encountered in Bristol was set out by Jackson and Price in 1974 and their publication, together with Price's updated list of makers (2007), still forms the basis for the study of pipes from the city.

Marked and Decorated Pipes

Late 17th-century Bristol exports are represented by just one decorated stem, the other decorated stem being too fragmentary to identify its source (although Bristol is the most likely). The identifiable stem border comprises two bands of milling flanking a line of incuse lozenges with

raised dots in their centres (Figure 3.34, 1). There would have been a second flanking pair of milled bands on the other side of these lozenges. This style of stem decoration is characteristic of Bristol and many of these borders also incorporate the maker's initials, although this one is purely decorative.

The other nine pipes that are certainly of Bristol origin have makers' marks on them, comprising either incuse stamped initials facing the smoker and/or a relief moulded cartouche on the right hand side of the bowl (Figure 3.34, 4-9). There is one bowl attributed to Edward Reed with both styles of mark on the same bowl (Figure 3.34, 4). Edward Reed took his freedom in 1706 and probably died in June 1758, aged about 74 (Price 2007). At least two and probably three bowls had a mark belonging to one of the Evans family with their surname moulded below a shield containing an anchor motif (Figure 3.34, 5-6). In one instance (Figure 3.34, 5) the mark is inverted, perhaps suggesting that the mark was punched into the mould using a die that had been accidentally inverted.

At least two and probably three examples of the pipes are marked RT and/or R TIPPET (Figure 3.34, 7-8). These were made by one of the Robert Tippets, who belonged to one of the most important pipemaking families in Bristol. The following notes on this family are taken from Price (2007). The first Robert Tippet was probably born in the 1630s, married in 1659 and took his freedom in 1660. Within a few months of taking his freedom he took the first of his three known apprentices and so was already running an expanding business. His son Robert (born 1660) was also a pipemaker and took his freedom in 1678, the year before Robert (I) died. Following Robert Senior's death in 1679 his widow Joan continued to run the family business, taking on apprentices in her own right, before her death in 1715. Robert (II) married in 1687 and between 1698 and 1721 was prominent in the affairs of the Lewin's Mead Meeting House; he died in 1722. Robert (II) also had a son called Robert, who was born in 1692 and took his freedom as a pipemaker in 1713. Robert (III) took an apprentice in 1714 but nothing is known of his later life. So, the three generations of this family called Robert are known to have been pipemakers between at least 1660 and 1722. There are, however, mid to late 18th-century pipes marked RT or R TIPPET, which suggest that either there was an as yet unidentified later member of the family or that the mark had become so well established that it was used as a 'brand name', rather than denoting the actual maker. This latter suggestion perhaps seems more likely, since pipes marked RT or R TIPPET have been found amongst kiln waste of *c.* 1790 from the kiln of Israel Carey (Jackson and Price 1974, 115-20).

The Upper Rawlins finds include one fragment from a late 17th- or early 18th-century RT bowl, with traces of rim milling, which dates from *c.* 1680-1720 (Figure 3.34, 7). This fragment clearly dates from the period when the Tippets are known to have been working. In contrast, the much larger bowl with cut rim and both stamped and moulded marks dates from *c.* 1710-50 and could well have been made after the family is last documented (Figure 3.34, 8). The other Bristol products include the very edge of a cartouche mark (illegible) and another fragment with a blurred T mark within the cartouche (Figure 3.34, 9). Moulded single letter 'T' marks within a lozenge are known on export style bowls associated with kiln waste of the 1780s or 1790s from Bristol (Jackson and Price 1974, 119). A complete spur bowl of *c.* 1700-1750 with a single letter T in a cartouche on the right hand side of the bowl has been found at the Mountravers site on Nevis (MTS 01 736 <1036>). The Mountravers example has a plain circular border to the cartouche and a single dot on either side of the 'T'.

In contrast to the relatively large proportion of finds that can be identified as having come from Bristol, there are only one or two pieces of London origin. One is an unmarked heel fragment from a transitional bowl of *c.* 1680-1710 (Figure 3.34, 2), which is not of a typical Bristol style and seems most likely to have come from a London Type 22 bowl (Atkinson and Oswald 1969). This style of pipe was rarely marked, but the form is distinctive enough to make the attribution reasonably certain. The other example is from a similar bowl form but, on this occasion, also has a distinctive London style mark, comprising crowned initials, as well (Figure 3.34, 3). The initials themselves are not very clear but are probably IC.

Summary and Conclusions

As well as providing good dating evidence for the excavated contexts and features, the pipes also contribute to a broader understanding of the types of pipe that were being exported from England to the Caribbean during the first half of the 17th century. The pipes suggest that there was little occupation on the site prior to about 1680 or 1690 and that the majority of the excavated deposits were laid down during the period *c.* 1690-1750. All the pipes recovered appear to be of English origin with an absence of any Dutch pipes, which normally make up a small but significant part of any pipe group recovered from the island. This absence, however, may be due to the small size of this particular assemblage and so not too much weight should be placed on their absence. The majority of the pipes that were recovered clearly came from Bristol with a smaller proportion having been produced in London. All these pipes are of an average quality, none of them having been burnished. Spur forms are the most commonly represented, making up about a half of the total, with heel bowls and heelless export styles each making up roughly a quarter of the assemblage. The heel and spur forms are likely to have had stems

Table 3.3. Context Summary: Summary of the clay tobacco pipes recovered from the Upper Rawlins excavations (UR04 – UR06) by context, showing the numbers of bowl (B), stem (S) and mouthpiece (M) fragments recovered from each group. A note of any marked or decorated pieces is also given, together with the total number of marked (Tot Mkd) or decorated pieces (Tot Dec) from each context. The overall date range represented within each group is listed (Date Range), as well as the likely deposition date based on the latest pipe fragments recovered (Deposition). For illustrations see Figure 3.34.

Cxt	B	S	M	Tot	Marks	Tot Mkd	Dec	Tot Dec	Date Range	Deposition	Figure	Comments
1	3	5		8	EVANS	1			1610-1770	1690-1730	5	All three spur bowl fragments are of *c*. 1690-1730 types and the stems would be consistent with this as a deposition date (they range *c*. 1610-1770 with the latest *c*. 1700-70). One fragment possibly from a spurless export style bowl.
6		3		3					1690-1800	1720-1800		All C. 18th types, with the most likely latest date being 1720-1800. One piece probably from an export style pipe.
9	2	1		3	ER (double)	1 (double)			1700-1800	1710-1750	4, 10	All three fragments appear to be of C. 18th types with the best dated being a bowl marked ER of *c*. 1710-50.
12	2	5	1	8	RT	1			1610-1750	1680-1720	7	All stems of C. 17th to mid C. 18th types, but both bowls of late C. 17th or early C. 18th form, giving a likely date of deposition.
13	2	4		6	[TIPP]ET	1			1620-1800	1700-1740		Wide overall dating as bowl fragments are small and stems of general types, but most pieces probably late C. 17th or early C. 18th and one bowl cartouche fragment is probably from a TIPPET pipe of *c*. 1700-40.
2021		1		1								An extremely abraded stem fragment of C. 17th or C. 18th date, but perhaps most likely to be early C. 18th in date.
28		1		1					1680-1800	1680-1800		Small and abraded stem fragment. Not easy to date but probably *c*. 1680-1800 range. Does not look very 'fresh' and this dating is not to be relied on in isolation.
29	13	8	1	22	EVANS x 2; ?? X 1	3	roll-stamped stem x 1	1	1640-1800	1710-1750	1, 2, 6	Overall the fragments range *c*. 1640-1800 but with the more diagnostic pieces all clustering in the early C. 18th. There are one or two residual late C. 17th fragments, including a decorative stem border, and some thin bowl fragments that could be later C. 18th, but the group as a whole is dominated by thin-walled spur forms, at least 3 of which had early C. 18th cartouche marks (two probably Evans and one illegible). There is also a bowl junction from a heelless export style pipe.
30	1			1	T x 1	1			1710-1750	1710-1750	9	Bowl fragment from a large, thin-walled bowl with a clear mould line below the rim and 'streaky' mould surface finish. Blurred cartouche mark with a large relief T within a plain raised ring on the RHS. Can't tell if there was any mark facing the smoker.
31	10	21	2	33	IC? Crowned x 1; RT/R TIPPET x 1 (double mark)	2 (1 double)			1610-1800	1710-1750	3, 8	Although there are one or two probably residual C. 17th stem fragments, the overwhelming majority are of types likely to date from the first half of the C. 18th. One or two pieces could be either of this date or later in the century, but the group as a whole would fit well with activity centred on *c.* 1710-50, which matches with the bowl fragments. The bowl fragments include a couple of transitional pieces but are mainly from large, thin-walled bowls of *c*. 1710-50. One London bowl of *c.* 1680-1710 with crowned initials (IC?) and one double marked Bristol bowl by R TIPPET of *c*. 1710-50.

49		4		4			roll-stamped stem x 1	1	1660-1750	1660-1720		Most of these stems have large bores, including a long, fresh looking piece surviving to 110mm in length - suggests a fresh deposit. One has part of a roll-stamped border of *c.* 1660-1720, and may be no later than *c*. 1700.
59	1	2		3					1680-1770	1710-1760		All fragments very abraded. Two stems are of late C. 17th or C. 18th date, probably *c*. 1680-1760, and the bowl fragment from a thin-walled bowl of c. 1710-70.
61		3		3					1680-1750	1680-1750		Abraded stems, hard to date by themselves but most likely *c.* 1680-1750, with an early C. 18th date being the most probable.
66	1			1					1690-1740	1690-1740		Small and extremely abraded spur fragment of *c*. 1690-1740 style (deep oval stem).
68		1		1					1640-1730	1640-1730		Stem hard to date by itself, but of general *c*. 1640-1730 type, with late C. 17th or early C. 18th date most likely.
80	1	3		4					1680-1760	1700-1750		All rather small and undiagnostic pieces but would fit best as a group with a date in first half of the C. 18th.
82		2		2					1670-1740	1690-1740		Two stems of late C. 17th or early C. 18th types.
	36	64	4	104		10		2				There are 10 bowls with surviving marks, two of which have double marks, and two stem borders.

of around 11½ to 13 inches (29.2-33.0mm) in length but the heelless forms are likely to have represented cheaper, shorter pipes of around 8½ inches, and these may have been particularly associated with the slave population on the island.

List of Illustrated Clay Pipes (Figure 3.34, 1-10)

The most diagnostic fragments from this site have been illustrated by the author at 1:1 and the following catalogue gives a suggested date for each example, together with details of its appearance and attributes. Each entry ends with the site code and context number. None of these pieces is burnished. Incuse lettering for the marks is shown solid and relief lettering in outline.

1. Stem fragment of *c.* 1670-1710 with part of a Bristol style roll-stamped border, comprising incuse lozenges with raised central dots flanked by milled bands. The stem bore is 8/64in. UR05 context 29.

2. The lower part of a London style Type 22 bowl of *c.* 1680-1710. No maker's mark. Stem bore 7/64in. UR05 context 29 A.

3. Heel from a London style Type 22 bowl of *c.* 1680-1710 with a relief moulded crowned mark that appears to read IC (the surname initial is particularly blurred). Stem bore 6/64in. UR05 context 31 A.

4. An almost complete heel bowl of *c.* 1710-1750 with double mark; the incuse stamped initials ER facing the smoker and a relief moulded cartouche on the right hand side of the bowl with E.R in relief within a raised circular border. This can be attributed to the workshop of Edward Reed of Bristol (Free 1706 and probably died in June 1758, aged about 74). There are large chunks of the rim missing, but the broken edges seem blackened as if the pipe has been smoked in this state. Stem bore 5/64in. UR05 context 9 A.

5. About half of a Bristol spur bowl of *c.* 1705-1730 with a very high relief cartouche on the right hand side with an inverted EVANS mark (lettering below an anchor in a shield). Quite a deep oval section to the stem. Base of spur not trimmed. Stem bore 6/64in. UR04 context 1 A.

6. Part of a Bristol spur bowl of *c.* 1705-1730 with long slender spur and traces of rim milling. Moulded EVANS mark with anchor motif on right hand side but no surviving mark facing the smoker. Quite a deep oval stem at bowl junction. Stem bore 6/64in. UR05 context 29 B.

7. Small bowl fragment of *c.* 1680-1720 with an incuse RT mark facing the smoker and traces of milling at the rim. This mark was used by at least three generations of Bristol pipemakers named Robert Tippet. UR05 context 12.

8. Two joining fragments from a large, thin-walled bowl with cut rim. There is an incuse stamped RT mark facing the smoker and a relief moulded R TIPPET mark

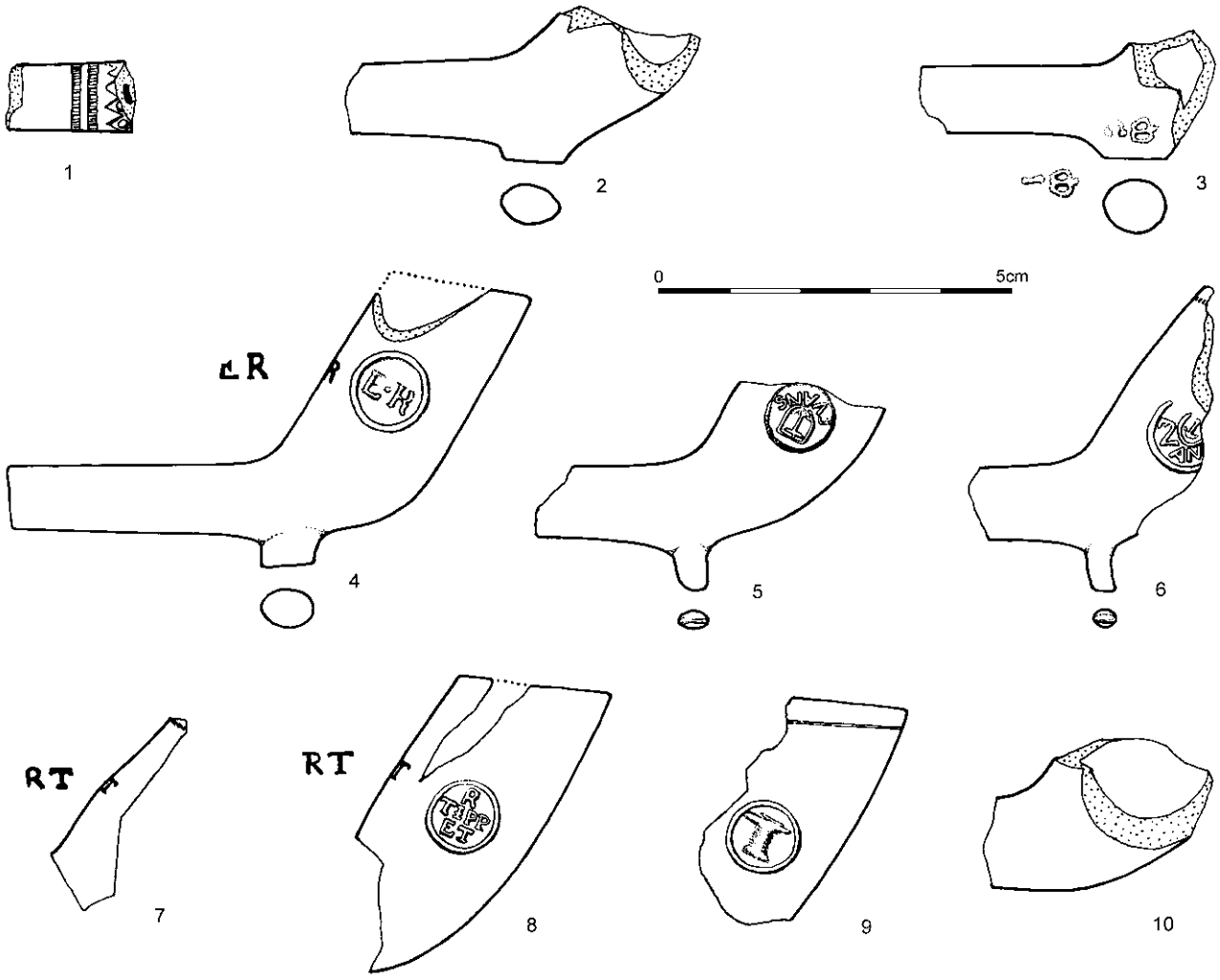

Figure 3.34. Upper Rawlins: clay tobacco pipes (1:1)

in a cartouche on the right hand side of the bowl. These marks were used by at least three generations of Bristol pipemakers named Robert Tippet, who are last documented in 1722. There are, however, examples of pipes bearing these marks dating from right up to the end of the 18th century and so either there were further, as yet undocumented, members of the family or (and perhaps more likely) these marks became so well known that they were used as a 'brand' of pipe by later makers. The large bowl size and thin walls of this example suggest a date of *c.* 1710-50 for this piece, and could even be later than this. UR05 context 31 C and D.

9. Bowl fragment from a large, thin-walled bowl of *c.* 1710-50 with a clear mould line below the rim and a 'streaky' mould surface finish. There is a blurred cartouche mark with a large relief T within a plain raised ring on the right hand side of the bowl. UR05 context 30.

10. The lower part (bowl/stem junction) of a heelless export style pipe. Smaller versions of this design were popular for export from around 1660 onwards and larger examples like this were made right through into the 19th century. This makes exact dating difficult, but this almost certainly dates from the 18th century, and most likely *c.* 1700-50 based on the dating of other finds from the site. UR05 context 9 B.

Glass

Robert Philpott

The glass assemblage consists of 164 fragments, weighing 1534g in total, from 19 contexts.

Wine Bottles

The great majority of glass by weight and sherd count is derived from so-called wine bottles, though the high degree of fragmentation means that no complete profiles and few diagnostic elements are present. The typological features of the majority are characteristic of bottles that can be dated by reference to both

excavated forms and to dated sealed examples to the period 1680 to 1725 (cf. Dumbrell 1992, figs 39-87; Mayes 1972, 119-23, figs 40-42; Noël Hume 1969, 60-71). Such elements include a small string rim, in one case at least set close to the top of the vessel, a short squat neck which tapers outward rapidly towards the shoulder and a lower wall which curves inward towards the base. The absence of the diagnostic straight-walled bottle forms of the 'mallet' type indicates a date before *c.* 1725 for the great majority of the wine bottles. It is not possible to estimate the number of vessels due to the high degree of fragmentation, but a relatively small number of bottles could produce this quantity of small fragments.

There is a small component of later wine bottles, including two fragments of flat brownish green glass from a mould-blown case bottle (SF119 and SF121), probably of square form. Mould-blown bottles of square section developed in the 17th century and were particularly suited for packing into wooden cases with compartments for export (Charleston 1984, 91-2; Noël Hume 1969, 62-9; Willmott 2002, 86). A well-preserved pine case with 15 compartments still containing 13 square-sectioned bottles was found in the wreck of the sloop HMS *Swift*, lost off the coast of Patagonia in 1770 (Elkin *et al.* 2011, 236-7, 284-5). Initially small, at 150mm in height, case bottles increased in size and became common finds on early colonial sites in North America in the 18th century. Case bottles were also made in the Low Countries but the neck sealing with a pewter threaded cap distinguishes them from English examples, which tended to be sealed with a wooden bung (Willmott 2002, 86-8). Case bottles are well represented amongst the glass assemblage from the Crosse's Alley site (N. Jeffries pers. comm.) and have been recovered from archaeological work on nearby Caribbean islands. Excavations on the Dutch island of Saba, for example, have produced square-bodied case bottles from a trash pit (Espersen 2009, photo 4).

Late 17th- to Early 18th-Century Glass Wine Bottles

Phase 3

1. A short-necked wine bottle with broad tapering neck, neatly symmetrical rounded disc string rim, of *c.* 1690-1720; one shoulder sherd of an onion bottle of similar date and four base/lower wall fragments, one of the base fragments has sufficient profile to suggest an onion bottle of similar date; the remainder are undiagnostic body sherds; all are in a dark opaque glass; SF100, context 29.

2. Lower wall fragment of an onion bottle, late 17th-early 18th century, some use wear on the base; SF103, context 28.

3. Three fragments of wine bottle; one lower wall to base fragment is rounded, late 17th-early 18th century; plus two non-diagnostic body sherds possibly of the same or similar vessel; SF105, context 29.

4. Wine bottle neck, with chamfered string rim set very close to the top of an irregular neck, late 17th-early 18th century; SF1034, context 80 (Figure 3.35, 1).

5. Seven sherds (two joining), all probably the same vessel, base and wall sherd show profile of lower part of late 17th- to early 18th-century onion bottle; SF104, context 38 (Figure 3.35, 2).

Unphased– not securely stratified

6. A small fragment of short-necked form and rim with small disc string rim, late 17th-early 18th century; SF115, context 12.

7. Six fragments of late 17th- to early 18th-century wine bottle, two base and lower wall sherds have the rounded base of this period, the others are not diagnostic, iridescent flaking surfaces; SF118, context 13.

Case bottle

8. Two fragments probably from the same mould-blown case bottle, in brownish-green glass, undecayed, probably square but the small section of the angle is not enough to determine form, at least 52mm wide, 17th-18th century; SF119, context 7; SF121, context 6 (E. Herbert's spoilheap east of boiling train).

Other Glass

Cylindrical phials are represented by a small quantity of fragments. The form is often referred to as a pharmaceutical or apothecary's bottle or phial but in practice it had a far wider range of potential functions (cf. Noël Hume 1969, fig. 17, nos 8, 10-14; late 17th to late 18th century, e.g. Charleston 1984, 92-3, pl. 18c; Gooder 1984, 221-5). This common form of cylindrical jar first appeared in the second half of the 17th century and continued in near-identical form throughout the 18th century (Willmott 2002, 90-1, type 26.2). The type is found widely on sites in Britain (e.g. Willmott 2002, fig. 115) and colonial sites in North America and the Caribbean.

The best preserved at Upper Rawlins are two fragments of a base with a high conical kick-up in pale greenish-blue glass and a diameter of about 55mm, but the wall does not survive (SF114 context 12). A rim fragment of

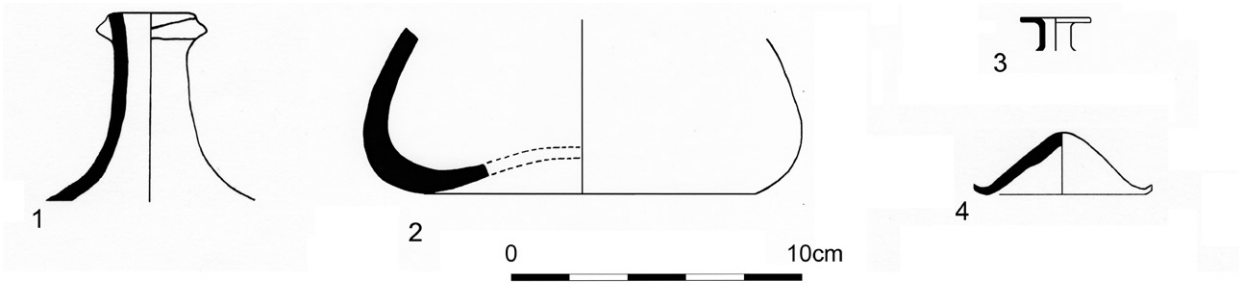

Figure 3.35. Upper Rawlins. 1-2. Glass wine bottles. 3-4. Glass phials

identical colour may be from the same vessel (SF107 context 31).

Only context 59 has non-bottle glass, consisting of a single very small fragment of clear lead glass of uncertain form, SF1039. The development of English lead-crystal glass by George Ravenscroft around 1675 provides a *terminus post quem* for the piece (Charleston 1984, 108-24).

Cylindrical phials

9. Two fragments of thin-walled very pale greenish-blue glass phial. One fragment has a broad flat disc out-turned rim, with a narrow straight cylindrical neck, and the start of a widening body. The other sherd, a pale blue-green thin body sherd of a mould-blown vessel, undiagnostic but probably the same form as above. D of top of rim 26mm; SF107, context 31 (Figure 3.35, 3).

10. Two small base fragments of a flat-bottomed narrow phial or bottle, from the same vessel but not joining, in translucent pale green glass. Very little survives of the walls but the angle at the base suggests vertical sides. The walls and base are thick, measuring 2mm at the base, with a round pontil scar, and narrowing off to 1mm up the wall; D of base 20mm; SF101, context 29.

11. Two tiny fragments of pale green thin glass from a jar or phial, same vessel; undiagnostic; SF111, context 29.

12. Small base and lower wall fragments of pale greenish-blue cylindrical jar or phial; D of base 55mm, H of conical kick-up 22mm, with circular D 16mm pontil scar, mid 17th-18th century; SF113 and SF114, context 12 (Figure 3.35, 4) (unphased, spoilheap of E. Herbert's excavation by kitchen).

Discussion

Where diagnostic characteristics are present, the great majority of the glass can be seen to belong to wine bottles, and in virtually all the contexts with glass, the diagnostic material dates to no later than the late 17th-early 18th century. In this they are consistent with the dating of the European ceramics and clay tobacco pipes. The small quantity of non-bottle glass consists largely of cylindrical phials. The absence of both flat window glass and lead window cames indicates that leaded lights or glazed windows were not in use at the plantation.

The case bottle fragments at Upper Rawlins in contexts 6 and 7, which both contain European ceramics dated 1800-1830 (D. Barker report, see above), suggests limited activity at, or even re-occupation of, the disused plantation works in the early 19th century. The early 19th-century glass and other finds suggest re-occupation of the house and/or sugar works. This may be associated with the rebuilding of field walls after partial collapse, indicating maintenance of the field structure and perhaps use of the terraces for cultivation.

By contrast with the majority of contexts which contain late 17th- to early 18th-century glass, or in a few cases early 19th-century glass, contexts 33, 4, 6 and 7 have produced a small quantity of later 19th- to 20th-century glass. This suggests drinking by casual visitors to the site who may have taken advantage of its remote and secluded location.

Other Later Bottles

13. Late 20th-century clear glass mould-blown bottle, underside reads 'LIQUOR BOTTLE'/2226, 80/PPG latter in oblique line; SF116, context 33 (general cleaning layer).

14. Three fragments from same thin-walled colourless cylindrical bottle, with vertical mould seam; 19th-20th century; D of body *c.* 60mm; SF120, context 7; SF122, context 6; SF123, context 4.

Other Finds

Robert Philpott

Utilised Stones

Whetstone

1. A roughly rectangular flat stone, with the upper surface showing two dished areas of heavy wear at either end. These are consistent with use as a whetstone or grinding stone. The underside is rough, and there is evidence of sooting on the stone, as if it has been heated or used in a hearth. L 190mm, W 141mm, H 41mm, wt 1810g; SF1504, context 1.

Dr Rex Taylor of the Univerisity of Southampton notes that the material is a micaceous feldspathic sandstone, reddish-brown, of imported Devonian/Triassic type similar to rocks from the UK but not certainly from there, although the alien lithology indicates it is not a Nevis rock.

The shape has been created by a natural split along the original bedding plane of the parent rock which created a flat plate-like tranche-like object. Surface has use wear observed as 'white scratches' (Figure 3.36, 1) due to abrasion of feldspar grains appearing through the 'black surface polish'. The stone is suitable as a 'whetstone' due to its fine grain size.

Hone

2. Stone hone, fine-grained stone with prominent colour change, one side light whitish grey, the other dark bluish grey; subrectangular in profile; wear on flatter side and fine striations on rest of stone suggest use wear; L 67mm, max. W 12mm, H 10mm; SF1023, context 61 (Figure 3.36, 2).

Hammerstone

3. Beach-worn pebble utilised as a hammerstone. Well-polished on the large flat face, and evidence of percussion use as a pounder on one end, and possibly also on the opposing, pointed end; the polished surface shows a different intensity from elsewhere on the surface; Ovoid in plan, in profile, flattened ovoid with one distinct highly polished surface, 'the base' on which it sits; L 173mm, W 91mm, H 88mm; SF126, context 9 (Figure 3.36, 3).

Dr Rex Taylor commented 'This beach-worn pebble is characterised by andesitic/dacitic composition, *c.* 50-80% phenocrysts of which are plagioclase feldspar and possibly quartz, with the remaining being mafic minerals dominated by amphibole; displays orange-red-brown bands which seem to be flow-banded segregations of a slightly more crystalline material of the same character; presumably when the lava was fresh rock it would have been very hard and it is this quality of hardness resulting from its homogeneity which made it ideal as a hammerstone; it is only mildly porphyritic but there are small phenocrysts present.'

This beach pebble of Nevisian origin was selected for hand comfort and for the hardness of the rock for use as a hammerstone. The similar opportunistic use of waterworn cobbles can be seen at both an aceramic prehistoric site at Smith's Gut and a colonial-era sugar plantation site at the Cul-de-Sac area on the nearby island of St Eustatius (Grant Gilmore *et al.* 2011, 31, fig. 19, 49, and fig. 30).

Flint/chert

A total of 14 fragments of flint or chert were found by sieving with a 6mm mesh. There are ten greyish brown flint/chert flakes or chips, two blades with repeated impact wear on the two lateral edges indicating use as strike-lights, and a single small triangular flint which is a possible tool. All the material comes from colluvial deposits associated with the kitchen.

4. Blade, in light brown to mid grey chert; use wear of repeated impact on two lateral edges; L 40mm, W 17mm, T 5mm; SF211, context 31 (Figure 3.36, 4).

5. Blade, in dark grey chert, the two lateral edges have use wear from repeated impact; a strike-light; L 28mm, W 13mm, T 5mm; SF210, context 31 (Figure 3.36, 5).

6. Grey brown chert, triangular form, with two retouched edges and possible broken point; SF1049, context 83.

7. Two mid brown chips; SF207, context 12.

8. Nine small fragments, one a small dark grey chert pebble, the others small chips and flakes, six with cortex; SF208, context 31.

Discussion

The nearest sources of chert are reported to be Saddle Hill on Nevis (Bellamy 2002), the south-east peninsula of St Kitts (Ahlman *et al.* 2014), and the limestone outcrops of Antigua (Donovan *et al.* 2014). The presence of a small quantity of flint and chert chips and three re-touched items, together with a hammerstone, may indicate prehistoric activity on the natural terrace on the side of Mount Nevis. If so, the absence of prehistoric pottery suggests an aceramic phase of activity. However, the possibility that this material represents opportunistic or expedient use of earlier

Figure 3.36. Upper Rawlins: utilised stones. 1. SF1504 whetstone (1:2). 2. SF1023 hone (1:1). 3. SF126 hammerstone (1:2). 4. SF211 chert (1:1), and detail of edge with use-wear (2:1). 5. SF210 chert (1:1)

materials should also be considered. On neighbouring St Kitts, the expedient use of flint or chert by enslaved Africans on plantations has been suggested as a means to create fire flints, with debitage a by-product of the manufacture, although some stone tools may have been used on wood and other soft materials (Ahlman *et al.* 2014). It has been suggested that the fire flints were not confined to household use but were used for trade in formal or informal markets as part of an economy in which enslaved Africans made and sold pottery, and traded crops and animals (Ahlman *et al.* 2014, 20-1).

Coral

Four pieces of white fossil coral were recovered from the site. They are all derived from the coast where coral is present in quantity and is deposited on the beaches around the island from offshore coral reefs. Three are small fragments (SF129 context 10; SF128 context 8; and SF1018 context 66), which were possibly introduced as inclusions in lime mortar, manufactured on the island by burning coral in limekilns. The fourth (SF127 context 38) is a larger and more 'attractive' piece and may have been collected as a curiosity from the coast.

Personal Ornaments and Dress Fittings

Robert Philpott

Bead

1. Small bead in bright monochrome yellow glass, wound, 'doughnut' shaped; some pitting on surface;

Karklins Type WId (Karklins 2012); L 3mm, D 2.5mm; SF01, context 29 (Figure 3.37, 1).

Buckle

2. Plain double-loop buckle with octagonal frame and two rectangular compartments with small square internal corner mouldings; pin missing; L 60mm, W 41mm; SF204, context 31 (Figure 3.37, 2).

Button

3. Button, copper-alloy, plain convex form with remains of iron wire loop, incomplete, in centre; solid cast head, undecorated; D 27mm; SF206, context 31 (Figure 3.37, 3). A similar plain example, but in lead-tin and smaller, is recorded from London (Egan 2005, fig. 33, no. 205).

Household Fittings

Robert Philpott

Upholstery or leather tacks

4. Dome-headed tack, copper-alloy, intact, with tapering pointed shaft of square section; D of head 7mm, L 6mm; SF161, context 31 (Figure 3.37, 4).

5. Dome-headed tack, copper-alloy, shank missing; D of head 9mm; SF162, context 31.

Small tacks of copper-alloy, often brass, were used in upholstery and leather work, for instance in fastening the skirting around chair seats of 17th-century furniture (Noël Hume 1969, 227-8). Christopher Jeaffreson's inventory dated 1685 for his St Kitts estate includes six leather chairs (Hicks 2007, 37), which are likely to have been secured with tacks of this kind. However, such decorative tacks may have been used in leather work or casket embellishment. Fenton Hill has produced three copper-alloy dome-headed tacks (see this volume). Two similar items have been found at Beeston Castle, Cheshire; one in a Civil War context and another in a late 17th-century context (Courtney 1993, 149, fig. 101, nos 53, 54).

Strap fitting

6. Strap fitting, copper-alloy; a straight section ends in a rounded weakly tri-lobed terminal; along the strapping are one small hole and traces of two others, stained with iron corrosion products suggesting the position of rivets along the length of the strip; the strip broadens at a deliberate bend and narrows again to finish in a right-angled bend with a large pierced attachment hole at which point the strip is broken; L 142mm, W 10-22mm, T *c.* 1.5mm; SF205, context 31 (Figure 3.37, 5).

The function of this item is illustrated by medieval chests and caskets where straight strappings in either iron or copper-alloy are attached vertically to the visible sides and broaden out where they curve around the lower edge of the box (e.g. the Talbot Casket: Brenan 1998, 66, fig. 45).

Sugar Processing Equipment

Robert Philpott

7. A copper-alloy skimmer; two joining fragments of a circular flat copper-alloy sheet, pierced with four concentric circles of irregular holes which are circular to oval in shape and increase in size towards the centre; distance from the circumference to the centre of the holes in concentric rows: 20, 40 and 67mm; D of plate 320mm, D of innermost surviving hole 6mm, outermost 2-5mm; SF158, context 29 (Figure 3.37, 6).

In form skimmers may be flat or bowl-shaped and were characterised by a pierced circular plate attached to a long handle of highly variable form but which are sometimes decorated. Examples from Norwich (probably 15th century) and from London (post-medieval) show one form of socketed attachment for a wooden handle (Goodall A. 1981, 65-6, fig. 63, 5; Egan 1998, fig. 126; Museum of London Acc. No 90.45). The Portable Antiquities Scheme[1] has recorded no fewer than 82 examples from England and Wales (to April 2017), in the form of circular plates pierced with holes, often arranged concentrically, with socketed handles. Examples from Dorset (DOR-01F432), Wiltshire (WILT-896C75) and Herefordshire (HESH-5EFC15) are not closely dated and may be medieval or later. A shallow bowl-shaped skimmer was found in post-Roman deposits at Colchester (Crummy 1988, 36, fig. 40, no. 1956). An example in a context dated *c.* 1600-1800 at the Gun and Shot Wharf, Southwark, is considered to be a residual late 15th-century find (Egan 2005, 97, no. 438).

Skimmers developed in Britain at the end of the medieval period, with examples illustrated in the Luttrell Psalter, and were originally used for removing items from stew-pots (Egan 1998, 155; 2005, 97, fig. 84). They continue in manufacture and use throughout the post-medieval period in Britain. They were introduced into Caribbean sugar works for skimming detritus from the surface of the heated cane juice within the copper. Contemporary 18th- and 19th-century illustrations show enslaved

[1] The Portable Antiquities Scheme is a UK national government-funded project to encourage the voluntary recording of archaeological objects found by members of the public in England and Wales. https://finds.org.uk/

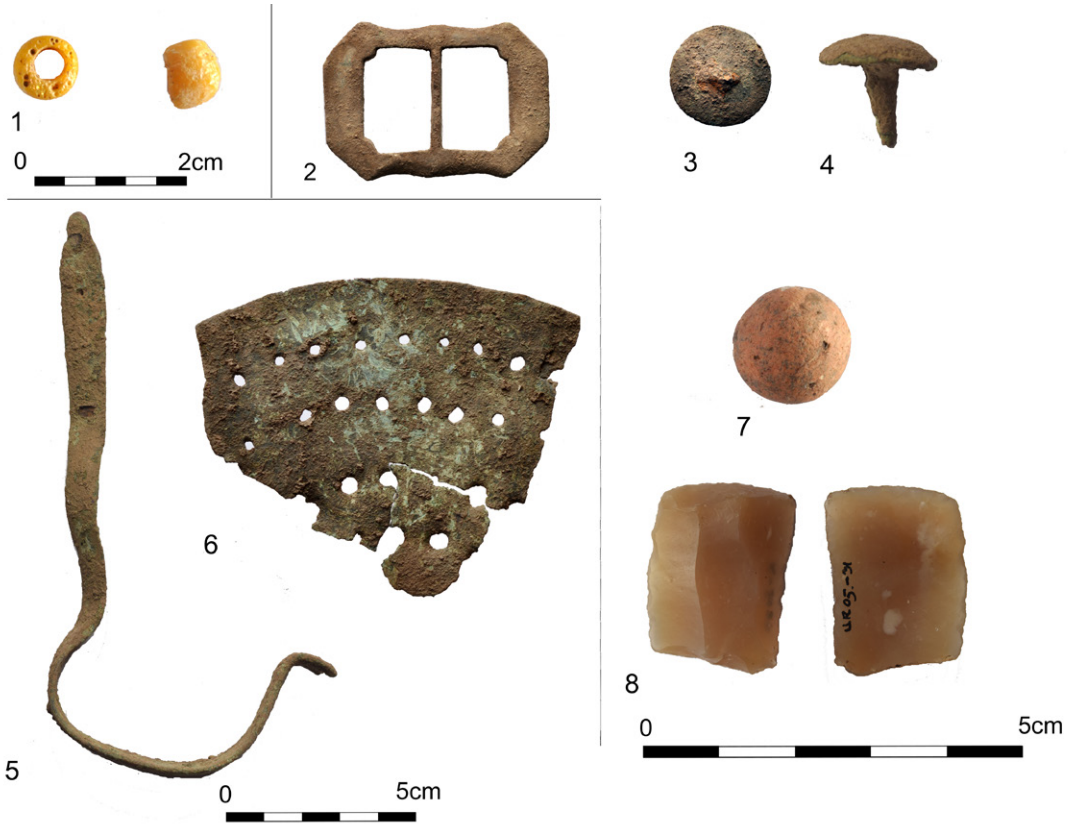

Figure 3.37. Upper Rawlins: miscellaneous finds. 1. SF01 bead (2:1). 2. SF204 buckle (1:1). 3. SF206 button (1:1). 4. SF161 tack (1:1). 5. SF205 strap fitting (1:2). 6. SF158 skimmer (1:2). 7. SF124 marble (1:1). 8. SF125 gunflint (1:1)

African workers using skimmers to remove debris from the coppers in the boiling house (e.g. Diderot 1762, vol. 1 pl. IV; Figure 3.39). Thomas Tryon described in 1700 the work of the enslaved labourers in the boiling house 'the Climate is so hot, and the labor so constant, that the [black] Servants night and day standing great Boyling Houses, where there are Six Seven large Coppers or Furnaces kept perpetually boyling; and from which with heavy Ladles and Scummers, they Skim off the excrementatious parts of the Canes, till it comes to its perfection and cleanness, while others as Stoakers, Broil, as it were alive, in managing the Fires; and one part is constantly at the Mill, to supply it with Canes, night and day, during the whole Season of making Sugar, which is about six Months of the year' (cited in Bridenbaugh and Bridenbaugh 1972, 303; Tryon 1700). A century later, in 1802, Maria Nugent observed the sugar works at Mr Mitchell's Penn in Jamaica, noting 'at each cauldron in the boiling-house was a man, with a large skimmer upon a long pole, constantly stirring the sugar' (Wright 1966, 62). Skimmers were imported from Britain to the Caribbean as essential items of equipment for sugar making, and they appear not only as entries in goods shipped to the islands, but also in inventories of possessions. An inventory of the estate of the plantation owner Captain Christopher Jeaffreson of Wingfield, St Kitts, in 1685 lists amongst other sugar equipment, three skimmers, one ladle and one 'scoupe' (Hicks 2007, 80). In a list of payments dated 13 December 1682 Jeaffreson had paid 14s 8d for '1 Copper ladle & scummer with socket handles' (Hicks 2007, 94). Goods shipped from Bristol to Sir Thomas Champney's Nutts River Estate, Jamaica, in 1807 included 'six copper skimmers' (Hants Record Office 2007, 11).

Household Equipment

Robert Philpott

8. Lead-tin spoon handle, in two fragments, of octagonal section, with one slightly concave broad side (more chamfered rectangular section), possibly leads to rat-tail, with a moulding at the end, and another at the side; severe decay makes it difficult to determine the original form; original L 59mm but broken, W 9mm, T 6mm; SF160, context 31.

9. Fifteen small fragments of a thin sheet-walled shallow copper-alloy vessel, perhaps a bowl or dish, but the profile and original dimensions are uncertain; SF191, context 29.

10. Candlestick, expanded socket with cranked stem; L 84mm, L of socket 56mm, max. D at mouth 16mm;

SF198, context 31. A 14th-century example of the type is recorded from Winchester, England (Goodall 2011, 300, 316, fig. 11.8, J115).

Ceramic marble

11. Small earthenware spherical marble; coated with pale red slip to create a marbled effect; D 15mm; SF124, context 29 (Figure 3.37, 7).

Ceramic alleys or marbles first appear in the 16th century and are very common finds on post-medieval sites both in Britain and the American colonies (Schofield and Pearce 2009). They were made in stone, ceramic and, from the 19th century, in glass and were used in a number of games, not necessarily played by children. They may be in plain grey or brown clay, or sometimes mixed clays to give a marbled or agate effect (Noël Hume 1969, 320). On Nevis, marbles have been found at Mountravers, which has two ceramic, one glass and one unusual coral example, while at Crosse's Alley, Charlestown, a single ceramic example was recovered (SF1093).

Uncertain object

12. Lead object, a subrectangular flat sheet with traces of a possible illegible design; if deliberate this may be a lead token; L approx. 27mm, W 20mm; SF1022, context 59.

Arms and Armour

Robert Philpott

13. Lead musket or pistol shot; D 16mm; wt 26g; SF157, context 31.

The bore size of 17th-century guns varied according to the type of weapon. Pistol bore was of .40-.60 calibre (= 10-16mm), against the carbine .62-.67 calibre and musket .70-.87 calibre. A small margin was allowed for 'windage', the term for the small difference (normally 0.05-0.10in = 0.12-0.25mm) between the gun bore and the diameter of the shot. The use of a slightly smaller ball allowed more rapid loading and reduced the risk of the ball fouling through the build-up of black powder residue in the barrel with repeated firing (Sivilich 1996, 107).

14. Gunflint, rectangular in form, in a pale translucent light yellowish-brown flint; wt 4g; SF125, context 31 (Figure 3.37, 8).

Apart from a reported source of chert at Saddle Hill (Bellamy 2002), there is no indigenous source of flint in Nevis and the material is either imported from other Caribbean islands such as the south-east peninsula of neighbouring St Kitts (Ahlman *et al.* 2014) or Antigua with its limestone deposit and within sight of Nevis (Donovan *et al.* 2014); or most likely from Europe or North America.

Ironwork

Robert Philpott

Conditions of storage meant that the iron had severely degraded by the time it was examined in May 2012, although some assistance with identifications was provided by photographs taken in 2006. Consequently, it was not possible to take accurate dimensions or identify much of the material. The great majority of the identifiable ironwork consists of iron nails but there is also structural ironwork, tools, horseshoes, a padlock, a candlestick, iron sheeting (possibly tinplate) and material of uncertain function.

Security Equipment

1. A barrel padlock, highly degraded when examined, but described at the time of excavation as a 'cylinder with a handle'; the remains show a cylindrical casing 60mm in diameter with a flattened side internally and a broad flat arm attached to the top of the cylinder; SF195, context 29/31. The barrel padlock was current in late medieval and post-medieval England and continued in production into the 18th century (Noël Hume 1969, 249; Egan 1998, 91-9; Goodall 2011, 231-4).

2. U-shaped staple with decayed fragments of iron sheeting; L 60mm, external W of staple 56mm; one side is wider at terminal than the other which tapers to a decayed point; sheeting: with impression of rusted U-shaped staple on one face, showing that part of the staple lay against the sheeting as if it were encased within it; a probable padlock with staple or possible lock plate; max. L 49mm, W 49mm, T 3mm, (cf. Noël Hume 1969, fig. 79); SF1029, context 61.

3. Iron strips, flat iron sheet, fragments of narrow iron strip may be part of the springs of the padlock; largest of three: L 63mm, W 30mm, T 3mm; SF188, context 29.

Horse Equipment

4. Fragment of iron horse shoe, row of holes visible without fullering; broad flat upper and lower surface, narrows to square-ended terminal, broken midway round arch; L 107mm, W 35mm, T 9mm; SF193, context 29.

5. Possible iron horse shoe, curved flat fragment of an object; without X-ray it is uncertain whether there

are nail holes; L 63mm, W 25mm, T 7mm; SF181, context 31.

Iron Sheeting

6. Forty small fragments of flat iron sheet; the largest measures 22+mm x 15+mm, T 0.3mm; SF192, context 29.

7. Three fragments of sheet iron; the largest measures 37+mm x 35+mm, T 1mm; SF1024, context 84.

Sheet iron is a common find on Nevisian sites such as Crosse's Alley in Charlestown, Fenton Hill and Mountravers. The function of flat sheet iron is difficult to determine in the absence of any diagnostic form. Much of it probably took the form of tinplate but the thin plating is no longer evident due to corrosion.

Iron Tool

8. **S**tonemason's wedge, a tapering tool, with broad flat blade and characteristic flared top from hammering; L 96mm, W 57mm, H 28mm; SF173, context 7.

Wedges were used for splitting wood or rock by hammering. In Britain stonemasons' wedges are not common finds, but an example from Castell-y-Bere, Gwynedd, provides a close parallel to the Upper Rawlins find (Goodall I. 1981, 53, fig. 52). Other examples, of medieval date but similar in form, are recorded from Britain (Goodall 2011, 43-4, fig. 4.1). In the Caribbean, two are mentioned in probate inventories in Port Royal, Jamaica, and two were found in deposits associated with the 1692 earthquake there (Franklin 1992, 126-7). Closer to Nevis, Christopher Jeaffreson of Wingfield plantation in St Kitts reported expenditure on three wedges in 1685 (Hicks 2007, 85).

Nails and Other Fittings

A total of 74 iron nails or fragments of nails was recovered, although few are complete so lengths can rarely be recorded accurately. The greatest quantity comes from the collapsed deposits 31 (37 examples) and 29 (13), and another collapsed deposit 38 south of the boiling house (9). Other contexts have yielded no more than three.

A few are probably spikes, especially the 247mm long nail (SF1005, context 85), though there is a cluster around 50mm long. Most nails are rectangular in section, with oval, sub-square or subrectangular heads. A small number of shorter nails measuring roughly 30mm long may have been used to nail wooden shingles to the roof or walls.

Building Materials

Robert Philpott

Building materials consisted of mortar fragments, including some with smoothed external surfaces, ceramic floor tile and roof tile, and stone floor tile. Together these provide an indication of the original construction materials and appearance of the structures. Both local resources and imported materials were used at Upper Rawlins. As with other plantations on Nevis, fossil coral was burnt to produce lime for mortar in one of the lime kilns near the shore. At least one certain example of a tile made in Nevis was present, although the majority of the earthenware tile is in imported fabrics, probably from Britain.

Mortar

Mortar fragments were present in a relatively large number of contexts. Most of the mortar consists of small broken fragments, though some coarse white fragments retained flat external surfaces. A larger number have flat surfaces, while one has a curved moulded surface. The recovery from the infilling of the cistern (contexts 63, 71, 77, 82) of 37 mortar fragments, several of which retain angled surfaces, suggests that the mortar was from the internal plastering of the cistern wall. They have an off-white internal surface above a buff rougher mortar (SF1044, context 71; 11 fragments) in which are embedded angular local stones, and are probably from the cistern lining. However, many ceramic tiles were also present in the cistern fills, and their presence can be correlated with the modifications of the boiling train, which suggests some of the mortar was deposited during the same episode. The largest mortar deposit was found in the cistern (82), into which building materials including mortar and ceramic tiles had been thrown.

Visual inspection has identified plaster surfaces on two fragments; one has a fine white plastered surface less than 1mm thick skimmed onto the background mortar. One piece (SF140, context 6), which retains a 90 degree angle with rounded profile, has a fine white plaster surface skimmed over a coarser white mortar; the coarser mortar had been laid between 50-100mm thick over an earlier plastered surface which itself overlay coarse mortar (Figure 3.38, 3). This represents re-plastering of a mortar-lined structure, most likely a cistern. The interior mortar has large fragments of stone in the matrix. Another mortar fragment (SF135, context 29) with a rough exterior surface, a rounded change in angle and two flattish faces is likely to be the upper edge of a cistern lining, forming a vertical inner face and a sloping rim to the cistern. The white exterior mortar has been applied to a pinkish mortar containing numerous coral inclusions. Two fragments

with external surfaces are present, one a relatively sharp curve indicating moulding, the other a slight angled face; the latter is greyish not white as usual (SF139, context 38).

Small pieces with a flat internal surface may have derived either from cisterns or from mortar used to render internal wall surfaces. The white mortar frequently contained visible fragments of coral in the matrix, indicating one source of lime was the island's coral reefs, although lime imported from England may have also been used. A discussion of the potential sources of lime follows below. Several other large mortar fragments which displayed an external surface (probably of the cistern interior) in fine white mortar, had been laid onto an initial layer of coarser buff mortar containing small pieces of rock.

Ceramic Tiles

Tile Fabrics

Elaine L. Morris

Ceramic tiles were present in three distinct fabrics, each fabric relating to a different size and function of tile (identifications made using x10 power hand lens).

Tile fabric 1 (TF1) (e.g. SF152) is a dense fabric characterised by a moderate amount (10-15%) of subrounded to rounded fine-grained quartz, 0.2mm or less, with rare rounded grains up to 2mm, and sparse (3%) iron oxides of similar size to the quartz; most likely of British origin.

TF2 (e.g. SF153) has abundant (50%) disaggregated volcanic rock consisting of feldspars and mafic minerals (ferro-magnesian minerals), 3mm or less across, with the majority 1mm or less; most likely of local, Nevis origin.

TF3 is a dense highly laminated or layered fabric, distinctive for the visibility of different coloured clay layers, comprising a fine sandy clay matrix with microscopic quartz and sparse (5-15%), subangular to rounded, deep red inclusions of either iron oxides or argillaceous matter, measuring 14mm or less; the clay colours range from light buff/off-white to pale orange. The red inclusions and the clays are extremely distinctive and may be unwedged as in SF155, or well-wedged as in SF146. Source uncertain.

Floor Tiles

Robert Philpott

Two different types of flat floor tile are present, each correlated closely with the two tile fabrics TF1 and TF3.

TF3: Tiles in this fabric are represented by several complete or near-complete examples in a consistent pale pinkish colour, ranging in thickness from 27 to 31mm (see above for fabric description).

Some display one vertical and one original chamfered edge on one side only, a feature which ensured that the tiles met closely at the surface. Many examples, in particular those recovered from the cistern, have been cut down to a trapezoidal shape, the edges bearing chisel marks. These tiles were used to line the settings around the coppers of the boiling train, where some remained *in situ* at the beginning of the excavation. They are mortared on the underside.

TF1: The second group consists of light orange earthenware tiles, in almost all cases unglazed, although three fragments, possibly from the same tile, have green glaze. Amongst them are some with a consistent thickness of 25-29mm (i.e. just over an inch) and in one case SF144 has mortar on the underside only (TF1 – SF144, SF143). This tile is not square but has an acute angle at the one surviving corner, and has one chamfered side and one vertical. It has also been reused, having white mortar attached to broken edges and all faces. Part of one original side survives with a thickness of 29mm (SF142 context 10).

1. Light yellowish brown floor tile, with red subrounded inclusions, one side chamfered; mortar on broken edge and underside; TF3; T 29mm; SF145, context 6.

2. Light pinkish brown floor tile, with red subrounded inclusions, one side chamfered with striated edge, one side vertical; mortar on original edge and base only; TF3; T 27mm; SF146, context 6.

3. Light pinkish brown floor tile, complete but cut down to tapering form; TF3; L 164mm, W 118-156mm, T 31mm; SF1009, context 77 (Figure 3.38, 1).

The earthenware flat tiles are mortared on broken edges and on both faces in some instances, suggesting they were incorporated into a structure. A number of the thicker pinkish earthenware tiles (TF3) have been modified by trimming down with a chisel to a trapezoidal shape. The context for the modified tiles can be seen in the sloping circular setting around the metal clarifier at the end of the boiling train (Figure 3.10). The setting (context 19) was lined with earthenware tiles measuring 155 x 134 x 40mm, cut down to a variety of trapezoidal and rectangular shapes to fit the complex geometry of the sloping circular surfaces. Although employed in the boiling train, it is uncertain whether tiles of this fabric were used in structures elsewhere on the site.

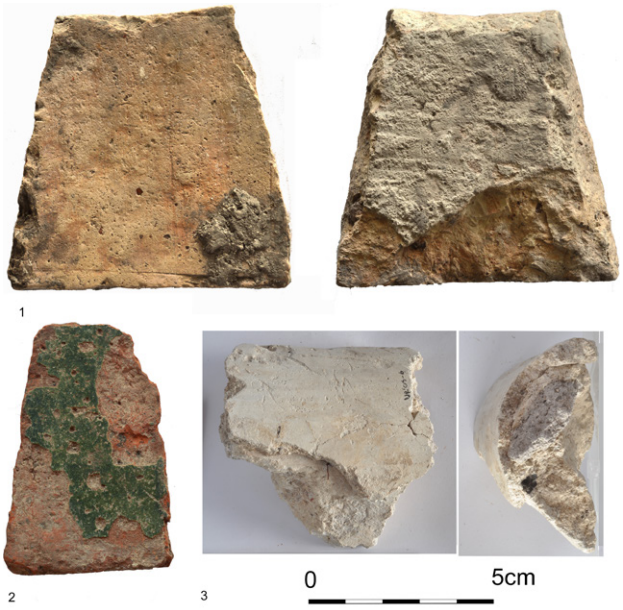

Figure 3.38. Upper Rawlins: building materials. 1. SF1009 unglazed cut-down tile. 2. SF2000 green-glazed tile. 3. SF140 curved plaster surface

Green-glazed floor tile

There are three fragments of green-glazed earthenware floor tile. All have a fine well-sorted red earthenware body, with bright mid green glaze over a pale cream slip, in TF1 of British origin. Two are possibly from the same item (SF148, context 8; SF130, context 1). The third (SF2000) is a large fragment with mortared underside recovered from an uncertain location on the site by Mr Herbert in 2000, which confirms that these are floor tiles.

4. A large fragment of green-glazed tile, green-glazed over cream slip on edge; some large subrounded reddish brown inclusions to 2mm; mortar on the underside indicates floor tile; one edge has been cut with a chisel; TF1; T 28mm; SF2000, unstratified (Figure 3.38, 2).

Roof tile

A small quantity of flat roof tile was recovered. All are in an identical light red earthenware fabric (TF1) with a smooth upper surface and rougher underside, and measure 12mm thick. They consist of SF149 context 49, with strong laminations in fabric, mould made; SF150 context 13; SF151 context 31; SF152 context 29.

A single pantile fragment is present in TF1 (SF1000, context 85), with a thickness of 10mm. Two fragments of curved roof tile (SF1013, context 59 and SF153, context 8) are in the locally made Nevisian fabric (TF2). Both are mould-made in a pale orange brown fabric and vary in thickness from 15-19mm.

The manufacture of clay tiles on Nevis is known from field observations at a surface kiln site on the south side of the island between Indian Castle estate and Saddle Hill, St George Gingerland parish (E. L. Morris pers. comm.).

Conclusions

The finds assemblage represents an arbitrary selection of surviving objects, determined in part by the material from which objects were made, and also by the accident of deposition or discard. In common with most post-medieval domestic assemblages, it is heavily dominated by common classes of object such as durable pottery and glass, but overall represents only a tiny subset of the material in use or present in the plantation in the 17th and 18th centuries. Some classes of possessions, which are documented in contemporary inventories, are wholly absent, notably perishables such as textiles, paper, clothing, wood, or leather, while portable inheritable goods including valuables such as silverware or pewter, clocks, and cash are equally virtually unrepresented in the archaeological record. Thus, the excavated deposits contain an unknown fraction of the material goods once present and are selective in the occupation phases that they represent. Some phases are for taphonomic reasons wholly or nearly absent, and the circumstances of rubbish disposal and casual or accidental loss present a highly selective sample of material. Shipping records document the imported goods in detail, while inventories preserve detailed accounts of the material possessions of an individual at their death. The dictates of the mercantilist system, as well as practical circumstances, determined that the great majority of manufactured goods were imported, whether from North America, or Britain and Ireland. However, archaeological excavations demonstrate that a small quantity of material goods was manufactured in Nevis, notably in the context of sugar plantations. They include some sugar moulds, although only one fragment was found at Upper Rawlins, but others are present at Mountravers and Fenton Hill. Upper Rawlins also produced two fragments of curved roof tile manufactured locally in Nevis. Another local product was lime. Although much lime was imported in wooden barrels, the supply was augmented by local sources using coral reefs located just off the shore.

Few securely stratified deposits were encountered in the excavation trenches. Sealed contexts included the interior of the cistern (62) inside the boiling/curing house and the deposit under the rubble floor foundation of the same building, but the latter produced almost no artefacts. The largest finds assemblages consisting of quantities of broken and discarded artefacts were found

in layers 28, 29 and 31 (and associated deposits 83, 84) which accumulated in the narrow space between the probable kitchen and the dwelling house. Examination of the stratification suggests the material was deposited after abandonment of the buildings as a result of secondary colluvial deposits washing down in the heavy tropical rain from the terrace above and accumulating between the two walls. An accumulation of stone blocks at either end of 29 suggests this deposit also incorporated collapse from the wall. The identification of collapse is also pertinent for the large quantity of nails, suggesting the residue of decayed timber structural elements. As to the function of the area, the presence of a significant quantity of Afro-Caribbean pottery in the deposits compared to European wares suggests that it was derived from the kitchen where such wares were used for food storage and preparation by enslaved Africans. The Afro-Caribbean pottery contributes a major group of finds, and scientific analysis has indicated that while all the material examined from Upper Rawlins was manufactured in Nevis, at least two different clay sources were used. The forms are limited to only seven rim types, derived from two main forms. The hollowares, with restricted necks and rounded bases, are the most common, and simple hemispherical bowls, differentiated by three main variations in rim form, are present. A lid-seated jar is possibly a unique form. Both jars and bowls may have served as cooking pots, and the implication of what Elaine Morris (see above) calls 'practical and distinctive, but not pretty' material is to make food and feed people. She identifies two main functions, with vessels holding about one litre of food suitable for serving an individual, while larger vessels with a capacity of two or three litres suitable for serving two to three people. The absences are also significant – there are no examples of jugs, dishes, coalpots or braziers, tankards, casseroles or flowerpots. Few of the Upper Rawlins pots are decorated, but one type has a close parallel with a vessel from Charlestown, possibly the product of the same potter.

Dating

The key datable elements of the finds assemblage - the European pottery, glass and clay tobacco pipes - indicate that the main period of occupation was short-lived and fell within the late 17th to early 18th century. On the evidence of the clay tobacco pipes, undoubtedly the most sensitive chronological indicator, David notes that some of the smaller contexts include forms that could date from the late 17th century, so activity on the site could have started around 1690, but the two largest context groups (29 and 31) both date from *c.* 1710-50, perhaps indicating the main period of activity. The two other sources suggest that the occupation is concentrated on the earlier part of that range. Analysis of the European ceramics suggests a late 17th-century date at the earliest, but there is nothing later than 1720 for the main occupation of the plantation. Similarly, the wine bottles lack the distinctive forms of mallet and straight-sided types that were introduced about 1725. Therefore, the main occupation can perhaps be narrowed to the period from *c.* 1690 to 1720. A small amount of material of all three types suggests that there was either very limited re-occupation at the plantation or at least some activity in the late 18th-early 19th century.

Early 19th-century Re-occupation

The presence of early 19th-century chamber pot fragments, along with a few glass bottles and clay tobacco pipes, long after the main plantation complex fell out of use suggests the site saw some later activity for a short time. One distinct possibility is that the abandoned buildings were used by the enslaved Africans for the cultivation of provision grounds. Estate plans, such as Jessup's drawn in 1755, depict areas of 'Negro ground', high up on the mountain slope. These were areas of unproductive or unprofitable land which were given over to slaves on a customary basis so they could cultivate their own crops and keep livestock to supplement their diet and provide produce for sale in Sunday markets (Fog Olwig 1993, 46-52). It is uncertain whether this was a limited permitted (or tolerated) re-occupation of the site, perhaps as a shelter during the cultivation of provision grounds, the more casual use of the site for clandestine activities involving drinking, or as a refuge for escaped slaves.

Evidence of Subsistence: Faunal Remains

Invertebrates

Elaine L. Morris

A total of 25 pieces of shell representing a minimum of 18 individual gastropods was recovered from four contexts (Appendix Table 3.8). Examples of both littoral zone seashells and land snail shells have been identified. No examples of bivalves or worms were found in this very small collection.

Amongst the five seashells, three are West Indian top shells (*Cittarum pica*), a type of human food source found in tide pools and rocky shores of exposed coasts. Top shells were exploited elsewhere on Nevis, first by Amerindians (Kozuch and Wing 2006) and subsequently during the colonial and post-emancipation periods as at Fenton Hill (see Hamilton Dyer, this volume) and Jamestown and Mountravers (Nokkert 2004; 2005). All three were found in Phase 3 colluvial and collapsed deposits after abandonment of the plantation and therefore may have been part of the redeposited cultural debris. Despite their recovery from two different Phase 3 contexts, the other two seashells may have been a

mating pair of Caribbean vase shells (*Vasum muricatum*), a medium to large edible sea snail (McKillop and Winemuller 2004) that is usually found in pairs. At this height above sea level, it is uncertain how these shells arrived at Upper Rawlins. This author has observed the presence of hermit crabs inhabiting borrowed *Cittarium pica* shells of some significant size (up to 8cm diameter) just below Saddle Hill at *c.* 500m and Golden Rock Inn at 305m. Therefore, whether generations of crabs moved these shells to such heights or they simply occupied empty historical shells at particular human habitation sites such as Upper Rawlins, located at *c.* 350m, is uncertain.

However, by far the most common invertebrates in the collection (12 MNI) are terrestrial snail shells of three distinct types; one with a narrow spired form (*Subulina octona*), one having a broader, more oval profile (*Olivela muticata*), and the third a flat coiled type such as *Ocala liptooth*. All three are derived from small to very small creatures and are equally likely to represent colonial period or modern intrusives. They are not discussed further in this report.

Vertebrates

Elaine L. Morris and Robert A. Philpott, with identifications by Clive Gamble, Linda Mitchell and Jaco Weinstock

A total of 28 pieces of animal bone was recovered from the three seasons of fieldwork at Upper Rawlins (Appendix Table 3.7). In 2005 and 2006, dry sieving of all contexts through 11mm mesh and wet sieving were employed to improve the recovery rate from the hand excavated first season, but this had no effect on the frequency of small, delicate bone in the collection. The bones are quite fragmented and those with spongy content particularly fragile.

This collection derives from primarily unstratified contexts and comprises parts from at the most three cows, two sheep/goats, two pigs, a possible dog and a probable rabbit. With the exception of the rabbit, these species are commonly found at other sugar plantation sites in the Caribbean (see Hamilton-Dyer, this volume). The rabbit bone, though unstratified, may hint at one of the rarer domesticated food sources. Rabbits were recorded in the mid 17th century in Barbados ('tame') and St Kitts (Watts 1987, 164, 209; Ligon 1657, 35), and formed part of the diet of both engineers and enslaved Africans at Brimstone Hill fort in St Kitts from the late 18th to mid 19th century (Schroedl 2018, 195-6). Revd Smith (present from 1716 to 1722) records that they were kept as domesticated animals on Nevis, and were fed with 'Spanish potatoes', which from his description of vine-like leaves can be identified as the Sweet Potato (*Ipomoea batatas*) (1745, 232). The formal management of rabbits as a resource can be seen in an agreement drawn up by Azariah Pinney in 1696. His 'coney warren' at Charlots plantation was to be managed in his absence by an overseer in return for half the produce (Pares 1950, 19).

4. Plantation Society, Material Culture and Global Connections

Robert Philpott

Although the original research design for the Upper Rawlins and Fenton Hill sites was aimed at investigating 17th-century sugar plantations, the archaeological sequences and the finds assemblages have produced valuable evidence that falls outside those narrow chronological limits. This chapter is intended to discuss at greater length themes that have been identified during the excavation, documentary research and finds analysis from these two sites.

The Estate of Upper Rawlins

The circumstances of foundation and subsequent development of the two main plantations, Upper Rawlins and Fenton Hill, reflected their different locations and ownership histories.

In the absence of a documentary record associated with the Upper Rawlins estate, the precise circumstances of the establishment and subsequent abandonment of the plantation are uncertain. Documentary research has not yet securely identified either the name of the estate or the identity of the owner of the Upper Rawlins plantation in the later 17th century, although the individual concerned may well appear unrecognised in the 1678 muster roll within the division or company commanded by Captain John Smith. However, the broader social and economic developments on the island of Nevis provide a plausible context for these events.

Upper Rawlins is located on a steep location on marginal land high on the slope of Nevis Peak, the main central volcanic mountain, and a little over a kilometre from the main round island road. The finds indicate that the small plantation was established in the late 17th century, occupied for no more than a few decades and abandoned by the early 18th century, with only casual activity after that. It is possible that the context for the original settlement lay in the grant of a small plot to a member of the numerous class of time-served indentured servants who formed a significant proportion of the land-owning population of late 17th-century Nevis. Establishing the Upper Rawlins plantation on this relatively inaccessible elevated situation required considerable initial investment of labour and cash in constructing the sugar works and domestic buildings, as well as clearing the land and constructing the series of terraces with stone walls on the steep slope to retain soil for growing sugar cane. As an illustration of the cost of establishing a plantation, in 1650 Richard Ligon had calculated that it cost £1000 to buy the land, construct the buildings and pay for the slaves and servants for a sugar plantation in Barbados (Watts 1987, 187). The simplest way to get established was to buy an existing plantation, but prices of land soared in the 1640s, putting that option out of the reach of all but the very wealthy. Fifty years later in 1700, Thomas Tryon estimated that before a man could make a hundredweight of sugar worth 12-14 shillings he had to spend between £3000 and £10,000 buying or setting up the plantation (Bridenbaugh and Bridenbaugh 1972, 288).

The economic circumstances of sugar production were changing in the later 17th century. Elevated plantations were vulnerable to soil erosion, and the cultivation of sugar and transportation of cut cane on the steep slope were inconvenient and inefficient. Deterioration of soils has been recognised from erosion and loss of nutrients. Clearance of the rainforest radically reduced the nutrient store, much of which was locked up within the plants themselves, and the sugar cane was a demanding crop on nutrients (Watts 1987, 396-7). The restricted area for cane growing in the Leeward Islands meant that the same land was used continuously, with consequent depletion of fertility. The majority of early evidence for soil depletion comes from Barbados, where declining crop yields were noted in the last third of the 17th century, while a greater intensity of slave input was needed to maintain production levels. However, declining fertility had not escaped the notice of the contemporary writers, and for one at least its effects were entirely predictable. Oldmixon observed of Nevis in 1708, 'The soil is fertile, especially in the Valleys. The rising Ground is stony, and the Plantations grow worse and worse in Fertility, the higher the Plants settl'd on the Mountain. Land was much cheaper there than in the Vale, being courser, and not easily cultivated. 'Tis the same with us in England and for the same Reasons; So this Observation might have been spar'd' (1708, 196). Erosion was a further problem; once released from their rainforest cover, exposed soils were easily washed away and were only restored by such labour-intensive efforts as slaves carrying the soil back uphill or by construction of terrace walls to hold back the soil. By the end of the 17th century much of the most severely depleted soils had been removed from cultivation (Watts 1987, 397). Although manuring was introduced to the Leeward Islands from Barbados by the 1670s and in the 18th century, new methods of manuring included the use of boiling house ashes and soot, they all placed greater demands on the labour of the workforce so raised the planter's costs (Watts 1987, 400, fig. 9.5, 405).

Figure 4.1. 'Jesups' estate plan (courtesy of Southampton Archives Office D/MW)

A further pressure on plantation owners came from falling sugar prices in the later 17th century, with a decline from the initial years of cultivation in 1645 of about 70% by 1680 (Watts 1987, 268). Market prices of £2 per pound weight at the Restoration of 1660 had fallen to 25s in the 1670s and were down to a low of 16s in 1686-7, a fall attributed to increased levels of sugar production causing a glut in the market. They rose to 20s in 1690 and continuing upwards afterwards (Pares 1950, 35; Watts 1987, 269). In times of war the price rose, but then so did the cost of freight and insurance so the producers did little better (Dunn 1973, 205). Taxes on sugar arriving in England rose under James II and the commercial middlemen also extracted a substantial percentage for shipping. The price declined from 43s 3d a pound in the London market in the half-decade 1700-04 to less than half that by 1730-34. Furthermore, political unrest in the European arena spread to the Caribbean and the War of Spanish Succession, which pitted England against France, resulted in the French attacks of 1706 which caused great damage to many plantations in Nevis and St Kitts. Although there is no direct evidence for damage at Upper Rawlins, it is likely that Fenton Hill suffered in the raid (see Chapter 2).

Although Upper Rawlins may have lasted as a viable sugar plantation no longer than the working life of a single owner, it did last long enough to witness the investment in modifications to the boiling train in the interests of greater efficiency. However, Upper Rawlins was probably one of the suite of plantations that by the early 18th century were already deemed unprofitable and were abandoned to the forest or converted to pasture. The later history of the estate suggests in 1762 it comprised the lands late of Kitt and Williams but by the late 18th century it had been subdivided. An area apparently adjacent to the estate was called The Pasture, suggesting it had been removed from cultivation, or that cane had never been grown there. However, in the absence of detailed documentary records, and without excavated sequences and securely stratified finds assemblages, the precise chronology of the development is unclear.

The abandonment of the higher plantations on Nevis Peak and consolidation of estates at less elevated locations down the slope can be seen in two of the surviving estate maps for Nevis. The plan of Edward Jessup's estate drawn in 1755 (Southampton Archives Office D/MW; Figure 4.1) illustrates how small plantations were amalgamated into a larger estate by a major landowner. In Jessup's holding, which totalled 180 acres, a group of smaller plantations had been combined into a single estate, running from the coast up the mountain. The map suggests consolidation of cane growing and sugar production on the middle and lower estate, leaving the elevated upper plantation, and the site of the 'Old works', to revert to scrub or forest. Jessup acquired most of the plantation by 1736 from Phillip de Witt,[1] and purchased another small plot, Cole's Point, in 1738.[2] Clarke's, the neighbouring plantation to Jessups, was surveyed and mapped in about 1818 when in the possession of John Henry Clarke (NHCS archive; Figure 4.2). This too shows the upper section of the plantation with an 'old works' on 'mountain land', no longer in cultivation and abandoned to scrub.[3] The amalgamation of estates and reduction in the number of planters meant there was over-provision of processing works, which were expensive to maintain, leading to the abandonment of some as a measure for reduction of expenditure at a time of diminishing profits.

Archaeologically the process of abandonment of unprofitable estates can be identified in the presence of disused plantation buildings at a number of elevated sites in Nevis, such as Wards, Upper Wanseys or Rossington, suggesting that the phenomenon was widespread.[4] Meniketti identified two previously unknown mill-complexes in St George parish close to 1500 feet (457m), both dated to the 17th century from artefacts and constructional details (2015, 120). Remains of other abandoned estates can be seen at high altitude locations on the slopes of Nevis Peak and the former existence of some, although not Upper Rawlins, is preserved in contemporary maps.

After the abandonment of the plantation, a small but unusual assemblage of artefacts dating to the later 18th or early 19th century was found at Upper Rawlins, consisting of glass bottles and clay tobacco pipes along with a small quantity of refined ceramics. The Jessups map and documentary accounts allied to estate plans from other better-recorded islands such as Jamaica may provide a clue as to the presence of these finds. A combination of the abandoned buildings together with the elevated location suggests that the 're-occupation' was likely to belong to enslaved Africans using the buildings as shelter while cultivating their provision grounds high on the slope of Mount Nevis. The site of the disused plantation became a particular niche for clandestine drinking and smoking. As the pottery is all from chamber pots, these large vessels may have served as pots for communal drinking rather than their intended original, European, purpose. The opportunity

[1] For a pedigree of de Witt, see Oliver 1894, 202.
[2] Machling (2012, 236-47) has identified and discussed the late 17th-century British fort at Cole's Point, located at modern Cotton Ground.
[3] Although undated, the date of the Clarke's estate map can be narrowed down from internal evidence. It was signed by J. and W. Newton, Chancery Lane, London, a well-known firm of cartographers. John Newton (1754-1848) established the firm in 1780 and when his son William joined the firm around 1818, the name was changed to J. and W. Newton. The map records the owner of a contiguous plantation to Clarke's as John Pinney. As Pinney died in 1818, the map must date to that year or very soon after.
[4] Publication of field surveys of these sites by Roger Leech is planned for a future volume in this series.

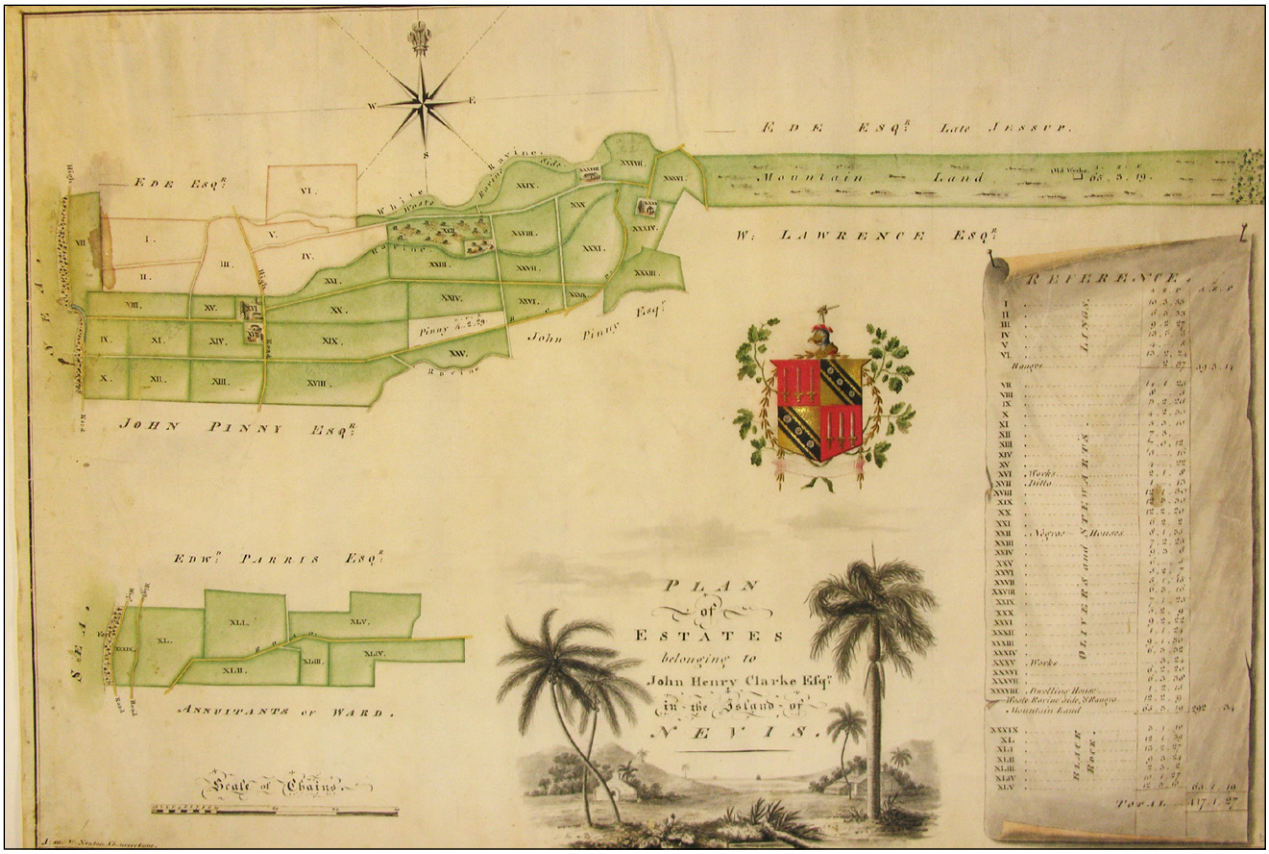

Figure 4.2. Clarke's estate plan c. 1818 (courtesy of Nevis Heritage and Conservation Society)

for the slaves to occupy physical spaces away from supervision and oversight of the plantation masters allowed the creation of an alternative social locale, what Mintz refers to as an 'ecological crevice' in the Eurocentric plantation society (1985, 131). Fog Olwig considers the provision gardening to have been of considerable cultural significance for the slaves (1993, 46-7). The date of the occupation may be significant, coinciding with the growing criticism in Britain of the institution of slavery and concern over the conditions under which the slaves were kept. The benefits to the enslaved Africans were not only economic, creating the ability to grow their own produce for sale or exchange in the market, but were also social, providing relatively unsupervised spaces where they exercised a degree of autonomy over their own affairs.

Fenton Hill

The establishment and occupation of Fenton Hill followed a different trajectory from that of Upper Rawlins. Fenton Hill's lowland location, on gently shelving ground with fertile soil and set close to the main round-island road, was a very different prospect for profitable sugar production through the later 17th and 18th century. We first encounter the estate during the later 17th century when John Combes had amassed a sizeable plantation, acquiring land from three separate owners. There is no indication of the size of these parcels, but his purchase from Widow Jones of 'land and plantations' suggests they were extensive holdings. The archaeological evidence for Combes's erection of a new house in 1675 demonstrates the primacy of Fenton Hill as a centre of sugar works and dwelling for the plantation, marking the focus of Combes's investment in his estate. Fenton Hill also lay close to his wife's plantation, which appears to have been the neighbouring estate later known as Vervain. After the death of his wife Elizabeth in 1685, Combes acquired her plantations for his lifetime and at its maximum extent Combes's combined holding by his death in 1689 must have been of considerable size, although we have no way of knowing precisely how large. Elizabeth Combes's plantation passed to her family on John's death, thereby reducing the size of the overall holding, but it appears that in the last decade of the 17th century Combes's own plantation was acquired by Joseph Jory, at first as a resident planter but as an absentee from 1700 until his death in 1725. The fragmentary documentary record does not allow us to see how this large estate was managed under Combes or Jory. We cannot be sure for instance that Jory's was identical to Combes's estate, as Jory may have added to the estate both during his residency in

Figure 4.3. Fothergill's: remains of the chimney and boiling house (photograph: Robert Philpott, 2018)

the island and after he left for England around the turn of the 18th century. For Jory, however, Combes's house and works may have been marginal to his large estate.

The first indication of the size of Jory's estate at 320 acres comes from the will of his heir, another absentee Frances Bladen, dated 1746. Even before Bladen's death there are signs that this estate, on an island where a two-hundred acre plantation was considered large, had become unmanageable. During her lifetime it had been subdivided and leased out to six different tenants but on her death the estate fragmented as each tenant inherited their portions. What practical difference this made on the ground in terms of estate management is difficult to determine. The absentee status of the heirs makes it unlikely they had any close involvement in the running of their separate estates and despite the fluid ownership in the middle decades of the 18th century, estate management may have provided a measure of continuity. As most (apart from Sophia Snow) were close relatives, it is probable that they employed the same manager or attorney to run the estates on a day-to-day basis and the rapid re-amalgamation of several Bladen subdivisions by Mary Cave may have obviated the need to erect new permanent works at all. Cave had contrived to consolidate at least three of the portions back into a single holding by 1753 (Oliver 1894, 51) and this was later to become Fothergill's estate in 1763. By the 1760s the core of Combes's old plantation which formed the subject of the excavation at Fenton Hill had been acquired by Henry Sharpe, although the path of its descent from Bladen, probably through Snow, cannot yet be traced with certainty in the record. At the end of the 18th century a substantial part of Jory's original estate was subdivided into two large units and sold. This subdivision occurred along the obvious boundary marker of the main highway separating the later Golden Rock from Fothergill's and may reflect an earlier division. Of these two portions, the upper one, at the foot of the mountain slope, became Golden Rock plantation (formerly Upton), purchased by Edward Huggins in the early 19th century and apparently completely or largely rebuilt by him, while the other formed the estate still known today as Fothergill's. Sharpe's estate appears to have remained separate. By the early 19th century, if not before, each of the three component elements had its own plantation works. The neighbouring estates, Dasent's to the south-west, Simmonds to the south-east, and Vervain (formerly Elizabeth Combes's estate), also had their own separate works.

Whether the changes in ownership in the middle years of the 18th century stimulated the creation of new sugar works is uncertain. With the Fenton Hill house and works in the hands of Sharpe by 1763, the creation of the plantation works and house at Fothergill's, 600m to the north-east, may mark a shift of sugar production to a new plantation centre to serve the larger portion of Jory's former estate. The surviving sugar works at Golden Rock, built in the early years of the 19th century, may have replaced an existing upper works on Jory's estate, or formed a new works to accommodate the new formal division of the estate.

Amalgamation, consolidation and fragmentation brought the challenge for successive owners and managers of maintaining efficient production of sugar at the plantation works. The trajectory of estate management and operation could on occasion run counter to the prevailing trend towards amalgamation, as a result for the most part of the vagaries of inheritance. The Fenton Hill plantation appears to represent the breaking down of a large estate into smaller portions to secure a profitable return for the absent owner by accommodating the interests of the tenants (later heirs). Sugar production at such a large estate may have only been achieved by operating two or more processing works to minimise the time to transport cut cane to the mill. An indication of the variety of ways to manage sugar processing at such a large and elongated plantation running from the sea to the mountain can be seen in the Pinney estates at Mountravers, Clarkes or Jessups. They had multiple works located near the centre of their component fields. By contrast, the Stoney Grove estate, which was taken over by the Pinneys from the Tobins in the 1820s, was viewed by the new owners as inconveniently long. 'From the great length of the property it is laborious, three works are used, and the only still house at the extreme end, to which everything is carted from the upper and middle works to make rum, which necessarily increases the labour of the stock' (Pares 1950, 104). The Pinneys' own estate at Mountravers had works at Woodland, Mountravers itself and Charlots, and opinions varied within the Pinney family as to which was the most efficient – grinding canes at all three works locally to the cane fields, or carting canes to the lowest (Charlots) where the only still and cistern for rum production were located (Pares 1950, 104). There was additional flexibility in that the mill mechanism could be shifted from one mill-round to another, and even the coppers could be transferred and rehung in a second boiling house.

Plantation Layout

The two works complexes at Upper Rawlins and Fenton Hill display versions of the 'idealised' compact layout typical of sugar plantations in the Leeward Islands. According to this contemporary 18th-century model of plantation layout, found in both French and English writing (such as Labat 1724; discussed in Meniketti 2015, 95-7), the works were usually located within the plantation's cane fields, which were on appropriately sloping land, to maximise efficiency of transportation of cut cane to the mill. Typically, the compound consisted of the house of the plantation owner or, in the 18th century as absentee ownership increased, the house of the overseer or manager, and contained the key sugar processing buildings (mill, boiling and curing house), often a distillery, fuel store, cisterns and storage buildings. A common characteristic is the close proximity of the dwelling house with its detached kitchen to the sugar works. There is no effective separation between the sugar works and the living space of the plantation owner. However, during the 18th and early 19th century the phenomenon of increasing separation between the estate owner and the sugar works begins to appear at major plantations such as Estridge on St Kitts. There the manager or overseer's house is still adjacent to the works but by the early 19th century a grand residence has been erected at some distance. The growth of absentee ownership secured for many owners the ultimate degree of separation from their plantation works, by relocating themselves, their families, and their wealth, to the mother country.

Upper Rawlins has a tightly defined compound demarcated by stone walls on two sides and set on three terraces, in response to the steeply sloping ground. The compound was linked by a series of trackways to the cane fields and the main road below. The overall plan was asymmetrical, with the dwelling house set on the lowest terrace commanding a wide view over the terraced fields on the hillside below (see Figure 3.5). The sugar production process placed certain physical constraints on the layout. The uppermost element was the animal mill, reflecting the need for the cane juice to feed by gravity to the boiling house below. The boiling house had a small store nearby for bagasse fuel (Figure 3.5). The Upper Rawlins plantation saw some investment beyond the initial establishment in the modification of the boiling train (discussed above), although the intent was probably economy of fuel. The trajectory of development has some elements in common with Fenton Hill, although the much longer occupation is reflected in changes to the main buildings at the latter.

At Fenton Hill the plantation yard takes the usual compact form with twin ranges of domestic buildings, the main house and kitchen to the north-east and the sugar mill and works to the south-west. A track running south-east from the round-island road curves around the plantation centre and leads to Vervain plantation and is probably a long-established feature of the plantation landscape, identified as the road referred to in the Nevis Common Records by the 1760s as Jewry's Plain (see Figure 2.4). By comparison with other Caribbean islands, notably Barbados, the Nevis planters were slow to adopt wind power, and both Upper Rawlins and Fenton Hill retained their animal mills without converting to wind.

The village of the enslaved workforce often lay close to the plantation works and house, and usually set on land that was either not easily cultivated or lay on the edge of a ghut to avoid the loss of valuable cane-growing land (Bates 2014). The compact nature of the dwelling and works compound minimised the area of

land removed from productive cane cultivation, and as the slave village of the workforce often lay fairly close to the works and dwelling complex, enabled supervision and oversight in both working hours and in their domestic space. However, detailed examination of spatial organisation of two British plantations in Jamaica and Nevis suggested that oversight of the enslaved labour force was of lesser importance, what Bates terms 'the negotiation of power on the ground' (2014), in comparison with the efficiency of cane production.

Estate maps for Nevis, such as Clarke's, New River or Jessup's, show the consistent positioning of the slave village, although archaeological test-pitting identified a late 18th-century village in location at the latter two (DAACS website, www.daacs.org). At neither Fenton Hill nor Upper Rawlins was the location of the slave village identified with certainty. DAACS[1] test-pitting in 2006 to the north-west of the plantation centre at Upper Rawlins was inconclusive.

Material Culture, Trade and Economy

Comparison between the two main finds assemblages, from Fenton Hill and Upper Rawlins, reveals some consistent patterns when they were both in occupation, but the much longer chronology from the former allows us greater scope to discern the shifting direction of trade and changes in status reflected in the material culture.

Although limited in range and quantity, the finds from Upper Rawlins provide an insight into the activities and identities of the individuals living and working there. Ceramic vessels represent one of the commodities that are diagnostic of both date and source, showing the principal occupation phase at Upper Rawlins had ended by the early 18th century. European wares are present in small quantities, consisting of mugs or tankards (in English brown stoneware and German salt-glazed stoneware, including one Westerwald vessel bearing an inscription for William III), and tin-glazed earthenware, alongside more utilitarian vessels in North Devon gravel-tempered ware and other coarse earthenwares of uncertain origin.

This indication of lower status and lack of wealth is also suggested by the absence of any architectural sophistication at Upper Rawlins other than the presence of green-glazed tiles. At Upper Rawlins the clay tobacco pipes are English from the middling or cheap end of the range. The clay tobacco pipe assemblage there contains some short-stemmed pipes, the cheapest type produced at British pipe manufactories. David Higgins comments that they may be the pipes used by the enslaved population on plantations, rather than the longer stemmed examples with heels or spurs which are found in a much higher percentage of the assemblage at the Crosse's Alley, Charlestown site. The occupants of Upper Rawlins were using unburnished clay tobacco pipes, and while the absence of fine quality Dutch pipes may be due to the chronology of settlement, a little after their main importation period, it may perhaps have something to do with the status and wealth of the people who lived and worked there, eschewing higher costs. At Fenton Hill, until around 1740 the early pipes are often burnished and high-quality products, when they were replaced entirely by cheaper heelless export types. An indication of a change in the social status of those smoking the pipes in the period 1740-1840 comes from several examples where the ends of broken pipe stems have been carefully smoothed for re-use, and in one case extensive tooth wear from clamping the pipe shows a desire to keep a broken pipe in use. These may well represent careful curation of pipes by the enslaved workforce.

The occupants had little glassware apart from bottles and phials. Glass bottles typologically characteristic of the late 17th to early 18th century indicate the consumption of wine or other alcoholic beverages on the Upper Rawlins plantation. Importation to Nevis of cider, beer and ale in bottles is recorded in 1686/7, for example (Higham 1921, 256). Usually bottles of beer or cider are recorded in wooden containers, thus one hogshead of bottled beer in the *Rose* from Bristol arriving 2 March 1684 (TNA CO 157/1) suggests barrels packed with full bottles. The frequent shipment of unbottled beer and spirits in wooden barrels and other containers necessitated the occasional importation of empty bottles. This is the implication of the reference in the Bristol shipping records to the export to Nevis of glass bottles, such as in 1688 when 400 pieces of English earthenware and glass bottles were amongst the cargo of the *William and Ann* (TNA E 190/1149/1). William Freeman writes in 1680 that he is sending dozens of bottles 'in caske' to be filled with the best claret and white wine (Hancock 2002, 169). The bottles themselves were re-used and could last for decades. Willmott notes that it is not unusual to find the remains of 17th-century bottles deposited over 50 years after their date of manufacture (2002, 87). In a colonial context where the occupants were dependent upon imports from Britain or Ireland for supplies, careful curation of such useful items might have been expected. Despite the preponderance of wine bottles, there is only one small and undiagnostic glass fragment at Upper Rawlins that might belong to a drinking vessel, and the assemblage offers no hint of formal dining or table settings. Instead, drinking vessels are for the most part in German stoneware, evidence perhaps of consumption of beer or cider rather than wine.

[1] Digital Archaeological Archive on Comparative Slavery, Monticello, Virginia (www.daacs.org).

Figure 4.4. Golden Rock: plantation buildings (photograph: Robert Philpott, 2013)

Phials, of narrow-necked form with an out-turned rim and high conical kick-up to the base, first appeared in the second half of the 17th century and continued in near-identical form throughout the 18th century (Willmott 2002, 90-1, type 26.2). It is a common type at both colonial and British sites (e.g. Port Royal, Jamaica: Mayes 1972, 123, fig. 42, nos 9-14). Although often termed 'pharmaceutical jars', in practice their use is unlikely to have been so restricted and they served as storage containers for small quantities of liquids such as perfumes, unguents and chemicals as well as medicines (Willmott 2002, 89).

By contrast with the one- or two-generation occupation of Upper Rawlins, the Fenton Hill occupation is much longer-lived and more revealing of the activities and identities represented on the site as well as of the direction and volume of trade. The owners, and managers, at Fenton Hill displayed more ostentatiously the trappings of elite plantation society. Alongside a small but significant number of late 17th- early 18th-century drinking glasses, perhaps from a set, are the copious wine bottles. The clay tobacco pipes are burnished, a subtle but unmistakeable indicator to a contemporary audience of sophisticated higher priced articles.

One significant event gives an insight into the mindset and aspirations of the late 17th-century planter. The construction in 1675 of a stone house by John Combes shows a planter of elite status in the 17th-century colonial society but of middle class origins in England. Ordering his mason to carve in low relief a date-stone in the hard volcanic rock to record the event, in a form apparently unparalleled for the 17th century in Nevis, is itself an act that places Combes within the developing thought world of 17th-century Britain.[2] Mytum observes that the development of the concept of linear time in the post-medieval period across the English-speaking world was marked through date-stones, recording dates on a wide variety of public and private domains, church bells, wooden furniture and gravestones (2007). In his two study areas, Wales and Jersey, after only low-level use of date-stones in the 16th century, there was a marked expansion in the 17th century and a sharp rise in uptake after 1660. At first date-stones used only initials, but during the 18th century increasingly they displayed full names as commemoration of the individual's place within linear time. Mytum observes 'explicit dates in linear, chronological time celebrated the arrival of new money and influence..., marking their growing social significance' (2007, 392-3). The Fenton Hill date-stone fits neatly into the pattern, coinciding with the rise of

[2] Roger Leech adds: Carson has observed that 'house-proud men and women carved ... and painted their initials, names, significant dates, and other identifying devices on personal possessions in the seventeenth century as never before or since' (Carson 1994, 554). This was certainly true of houses in 17th-century Bristol and might be linked to individualism taking precedence over community, as noted by Cooper in analysing the development of the gentry house (Cooper 1999, 3-5).

the phenomenon in Combes's homeland. It shows that he was open to new ideas, setting himself as one of the middle classes for whom the construction of his new house required a permanent marker as a significant event within the creation of his own personal linear narrative. The date-stone might be read as a celebration of the fact that the young colonial society offered opportunities for social advancement, and invention of a new mode of marking one's position within society and new awareness as a significant player within the historical narrative of the islands.

Both Upper Rawlins and, to a greater extent, Fenton Hill demonstrate the important role of drinking in the social lives of the planters. Casual references to the copious consumption of alcohol abound in the contemporary accounts of life in the Leeward Islands in the 17th and 18th centuries. The French priest Father Labat who visited St Kitts from the French colonies in 1700 commented on the excessive drinking by English planters (Labat 1724, 191; Pares 1950, 29, n. 34). Anecdotally Revd William Smith, writing of a trip from his home island of Nevis to St Kitts, describes an outdoor dinner of roast lamb and salad washed down with 'a glass of rich Madeira wine' (1745, 50). Fog Olwig observes that the extravagant lifestyle of the planters was an exaggerated version of that enjoyed by the landed gentry in England (1993, 44). Dunn noted that the English clung to their North European dietary habits, even when they were poorly suited to a tropical climate (1973, 281). Social engagements amongst the white planter society included card games, parties, balls and concerts in private homes, although the most common pastime was drinking (Fog Olwig 1993, 43). On special occasions elaborate feasts were held, followed by long hours of drinking (Dunn 1973, 279-80). A hazard of the planter lifestyle was over-consumption of heavy food and alcohol. Heavy drinking was injurious to the health of the white planter class, contributing for example to the death of David Stalker, overseer of Sir William Stapleton on Nevis, as well as to the cruel maltreatment of the enslaved workforce in his care (Fog Olwig 1993, 45). The surgeon James Rymer who spent several months in Nevis in the 1770s alludes to the deleterious effects of overconsumption of alcohol – 'some Europeans who adventure into those parts ... are much addicted to downright drunkenness and irrational action' (Rymer 1775, 32). He then indulges in a little wishful thinking, 'if there was a most strict prohibition of the *immoderate* use of tall spirituous and inebriating fluids, and also a penalty, proportioned to circumstances, on each subject who plunges into intoxication and the exilement of his mental faculties by carousement, the resulting advantages to universal society would be many and invaluable' (Rymer 1775, 32-3). He goes on to recommend that wines, spirits and other alcoholic drinks should be used only in cases of medical necessity, a forlorn hope in the light of the role alcohol played in the social lives of the planters.

The lead musket shot and gunflints found at both Upper Rawlins and Fenton Hill indicate the need for a weapon on the part of the plantation owner for personal security, to prevent theft, and as a standard piece of equipment for a serving member of the island militia. By the later 17th century the able-bodied white planters were organised into the island's militia regiments, commanded by prominent planters who bore military titles. Free blacks, free coloureds and sometimes slaves served in some places in the militia. The command structure was created by legislation in each island and the military titles conferred significant social status on those who held it (Knight 1997, 195-6). The Nevis muster roll for 1677-8 enumerates individual householders by division, each division under the command of a militia officer (see Oliver 1914, 27-35, 70-81). The extent of ownership of weapons in the island in the late 17th century was widespread, as seen in the report of the 'Caribbee islands', by Colonel Philip Warner, dated 1676. Warner notes 'Nevis belongs to the English, with 1,500 men able to bear arms, of which 1,000 have arms' (Sainsbury 1893, 365-88). One source of the arms and ammunition can be seen in the shipment by the English government of large quantities of arms for the defence of Nevis and St Kitts in the face of French aggression. In 1702 the 'Particular of Ordinance [sic] Arms and Stores For the use of Her Majesties Leward Islands in America [sic]' records the despatch of no fewer than 10,000 flints and 20 'barrills of musquet balls' (TNA CO 152/39, 29).

The prominent display of arms and weapons in the 17th-century hall of the planter was, as it had been for two centuries in England, an integral element in the creation and reinforcement of status in planter society, and a mark of rank in the strict hierarchy of the island militia. Arms and armour displayed in the hall were 'deeply symbolic of the status of the individual citizen within the militia' (Leech 2000, 7). Although by 1680, as Leech argues, the practice was becoming outmoded in England, the practice of display of arms and armour in the hall appears to survive in Nevis. The losses sustained by Azariah Pinney from his townhouse in Charlestown at the French attack of 1706 included 'one silver hilted sword, 2 fuzoos and one pair pistoles, with saddle and furniture' (cited in Hobson 2007, 308). The inventory of Christopher Jeaffreson of Wingfield, St Kitts, dated 1685, records 'two fuzes', a fusee being a light musket or flintlock (Hicks 2007, 81, n. 34). Fenton Hill shows the continued use of developed weaponry into the 19th century with the presence of a single small copper-alloy percussion cap, a type of ammunition introduced *c.* 1820 but no longer in fashion by the 1860s.

Material Culture and Identity

Of the African population of Fenton Hill or Upper Rawlins, we know virtually nothing. Other Nevis plantations preserve records that document aspects of the lives of the slave populations. Amid a wealth of detail on their St Kitts and Nevis holdings, the Mills letter books, for example, make occasional mention of a favourite slave, Pembrooke (Museum of London Docklands 2006.178). A modern biography has been written of the slave Pero, born of African descent in the West Indies, who served as John Pinney's personal servant at Mountravers and later Bristol (Eickelmann and Small 2004). However, the two Gingerland plantations discussed here lack the documentation of surviving letters, or estate and business records that elsewhere preserve names and cursory references to individual enslaved Africans.

There is just one account that names an African slave from Jory's plantation. In the drought summer of 1725 the stresses of diminishing food and water on the slaves, and the anxiety over crop production from the planters created a febrile atmosphere in which rumours of slave uprisings began to circulate. In a tendentious chain of hearsay, reports by two white women in Nevis were taken as evidence of an intended revolt. One of the accounts was given on 29 September 1725 by a white woman Sarah Lytton who claimed that she had heard a man called Samuel Bayley 'say that he heard his brother John Bayley say that a negro man named Tom Cleverley belonging to Collonel Jorey knew as much or more of the matter meaning the Riseing of the Negroes, than the Negroes that were already brought in up on that account' (Zacek 2010, 37; Dyde 2005, 104). The outcome was ten slaves were jailed and two sentenced to be burnt alive by Governor Hart, with the aim of frightening the slaves into submission. Zacek notes that the alleged plot may have existed only in the minds of the planters, and sheds light on the paranoid fear of the European plantation owners with regard to their slave populations as much as on their charges' desire for freedom. While the episode illuminates little of the running of the plantation, it shows that Jory's manager was willing to act with dispatch and great cruelty to nip a potential uprising in the bud.

Despite the near-invisibility of the enslaved Africans in the documentary record, their contribution survives in material terms. This consists in the physical landscape created and maintained by the labour of the African workforce, the roads, field walls and boundaries, as well as the architecture, the houses and plantation buildings, which are anonymous testimony to their labour. The finds assemblage contributes a further dimension, whether as the product of their labour, items probably or certainly used by the enslaved population, or consumed as food. The context of the Upper Rawlins finds, recovered from the sugar works and the domestic quarters of the kitchen and house, make it difficult in most cases to attribute individual finds to any particular sector of the plantation's residents. It is not possible to tell whether the simple dress fittings such as the copper-alloy buckles or button were possessions of the enslaved African workforce or of the planter, his manager, or his family. They are not secure markers of ethnic identity and were used by enslaved Africans and free or indentured Europeans alike. There are no bone buttons with a single central hole of the type manufactured by slaves at Brimstone Hill and considered to have been covered with cloth (Klippel and Schroedl 1999).

However, there are certain objects that can be confidently associated with enslaved Africans. One distinctive African item is the modified money cowrie shell, *Cypraea moneta* (see Hamilton-Dyer, this volume). The species is not native to the Caribbean and the deliberate removal of the dorsum allowed the shell to be sewn onto cloth or threaded on a cord. They are sometimes found as burial goods. Other finds distinctive of people of African origin include glass beads. The beads were manufactured in European centres in the Netherlands, Venice and Bohemia specifically for export to West Africa as part of the Africa trade. Highly prized in West Africa where little glass was manufactured, they functioned as a currency for goods and people. A wide variety of beads was made but determining their provenance and date is difficult. Their importation to Nevis via Africa is shown by occasional references in the shipping records. A parcel of beads and some necklaces were imported from Guinea along with 80 slaves on the London vessel *Virgin* in 1684 (TNA CO 157/1), and in 1686 another parcel of beads along with typical African products from the same region, copper bars, 'a parcell of maneloes' [manillas[3]], and about 1500 wt of 'Elifonts tooth' on the London vessel *Friends Adventure* (TNA CO 157/1, 121). We can be fairly certain that the single yellow glass bead at Upper Rawlins and one yellow and one blue glass bead at Fenton Hill were the possessions of enslaved Africans. Beads in enslaved African society bore a wide range of complex symbolic meanings. Beads are found in the United States in caches, sub-floor pits, burials and other contexts in and around slave quarters (Baumann 2011). Blue beads were worn as personal adornment but were also widely considered to be effective as personal protection to ward off illness or misfortune and bring good luck (Stine *et al.* 1996). They are present in graves of enslaved Africans at Newton Ground, Barbados (Handler and Lange 1978). European beads of the first half of the 18th century were found in eight graves, two containing more than 200 each. The cemetery of liberated former African slaves on St

[3] The manilla was an early currency in West Africa, which took the form of a bracelet, usually in copper alloy.

Figure 4.5. Simmonds: the windmill, the only substantial surviving structure of the plantation (photograph: Robert Philpott, 2018)

Helena revealed eleven individuals who were buried with beads, ranging in number from a single example to 9400 in one deposit (MacQuarrie 2011a, 108-16). Out of 376 individuals recovered in the African Burial Ground at Lower Manhattan, New York, 30 were buried with personal ornaments including beads, cufflinks, buttons, and other items; 147 beads were found (Bianco *et al.* 2006).

The most distinctive legacy of the enslaved Africans, however, was their pottery. At both Fenton Hill and Upper Rawlins, Afro-Caribbean pottery represents the principal durable product of the plantation's enslaved African labour force. This handmade, unglazed and bonfired pottery is considered to have been made by women for domestic use on plantations (see Morris this volume). There is no certain Afro-Caribbean pottery at Fenton Hill before the 18th century (Phase 4); the only earlier sherd is probably intrusive. The products identified at both sites take a range of forms including upright/flared or everted rim and necked jars, ovoid or hemispherical bowls and a lid-seated jar found typically at 18th-century plantation sites in Nevis. The majority of the material at Fenton Hill appears to belong to the pre-emancipation period, although a large amount of heavily trampled residual material from an area probably used for rubbish disposal was incorporated into post-emancipation deposits. Links with one neighbouring plantation appear in the form of distinctive impressed decoration from Fenton Hill and from New River Slave Village I. At Upper Rawlins several decorated vessels are distinctors typical of one other late 17th-early 18th-century assemblage on the island, that from Crosse's Alley in Charlestown. Individuality can be seen amongst the otherwise plainer vessels with the identification of makers' 'signature' marks in the collection. Other locally made ceramics, the sugar mould fragment and tile, may well have been physically manufactured by Africans on Nevis under the supervision of English craftsmen utilising British production methods, as was the situation in Barbados in the late 17th and early 18th centuries.

Of the domestic tools and equipment recovered at Upper Rawlins, the skimmer is a tool procured by the plantation owner from England for use in sugar boiling as an essential part of the industrial process. Those using the skimmer will have had a very different perspective. The object was without doubt used by enslaved Africans in the hot, unpleasant and dangerous environment of the boiling house. The strict segregation of the activities between the labourers of African origin and the white owner-overseer class is demonstrated graphically in representations of the boiling house interior, such as the illustration of Weatheralls on Antigua in 1823. Thomas Tryon describes in 1700 the work of the enslaved labourers in the boiling house:

> the Climate is so hot, and the labor so constant, that the [black] Servants night and day stand in great Boyling Houses, where there are Six or Seven large Coppers or Furnaces kept perpetually boyling; and from which with heavy Ladles and Scummers, they Skim off the excrementatious parts of the Canes, till it comes to its perfection and cleanness, while others as Stoakers, Broil, as it were alive, in managing the Fires; and one part is constantly at the Mill, to supply it with Canes, night and day, during the whole Season of making Sugar, which is about six Months of the year.
>
> (cited in Bridenbaugh and Bridenbaugh 1972, 303; original from Tryon 1700)

Another object at Upper Rawlins that is more likely to be associated with the enslaved African population than European is a hammerstone, a utilised waterworn cobble, which has percussion marks at the pointed ends and slight polishing on the flattest face, an *ad hoc* adaptation used for hammering and perhaps smoothing. Whether this was used in food production, processing a crop such as cassava for instance, or as a multi-purpose tool, is uncertain. It shows flexibility in the adaptation of local resources to meet particular needs and at the same time indicates a lack of reliance on European metal tools such as hammers. Two other utilised stones may have been whetstones or hones (SF1504, SF1023). Todd Ahlman (pers. comm.) has noted that some enslaved people were making stone tools for a variety of purposes. While his work on St Kitts has not found an item precisely similar to this, it resembles a *mano* for grinding or crushing organic materials. However, there is a distinct possibility this represents the expedient use of a prehistoric artefact picked up from a site nearer the coast.

Other personal items are scarce at both of the sites. At Fenton Hill several objects were probably dropped on the floor of the kitchen/steward room (Structure A) and ended up infiltrating into the postholes, including a thimble, a copper-alloy mount, and a curtain or drape ring. They hint at the domestic activities undertaken there, as well as the furnishings of the room. At Upper Rawlins a ceramic marble (SF124) is an example of a common find on post-medieval colonial sites and used in leisure activities by adults as well as children.

Both sites have produced a small number of one-off items that lacked any functional value and that may have held no greater significance than that they appealed to or intrigued their finders, picked up as curios or found objects. Thus, a prehistoric pottery sherd (SF1380, context 505), decorated with an applied turtle head and flipper motif, is perhaps explicable as a curiosity in the same way as another prehistoric item, a white conch shell scraper, recovered from Crosse's Alley, Charlestown, excavations in 2000 (SF2055, context 114). A large lump of local white fossil coral from Upper Rawlins (SF127, context 38), not so obviously utilised as the white coral spherical 'marble' from Mountravers, may be another example of the phenomenon of collecting unusual eye-catching objects.

Building Materials, Furnishings and Fixtures

The natural forest cover of Nevis came under increasing pressure through the 17th century from clearance for sugar cultivation and felling timber for settlement. From Rochefort onwards, early visitors noted the extent of clearance for cultivation, with woods and great trees confined to the top of the mountain (Davies 1666; Sloane 1707; Rymer 1775). With the loss of native trees, planters began to look to the extensive forested landscapes of North America for timber. The principal source for Nevis from the mid 17th century onwards was New England, a trade that increased once sugar cultivation became established (Watts 1987, 173, 398). Building timber, particularly softwood pine, was imported in the form of boards, roofing shingles and even complete prefabricated houses. Other timber products essential for the sugar industry were staves and hoops which were turned into hogsheads and other casks by local coopers (Higham 1921, 208, 257; O'Shaughnessy 2000, 69). Thus, wooden boards and roofing shingles were imported by the *Tryall* of New England on 2 October 1686 (Higham 1921, 257). The Nevis planters appear to have stockpiled materials for use on their plantations or perhaps keeping some for opportunistic sale in the town. Amongst the material lost by Azariah Pinney from his town house in Charlestown in the French raid of 1706 were 'divers caskes of nails', 'paveing stones', hogheads of lime and staves for hogsheads (Merriweather 1708; Pares 1950, 49).

Nevis had ample supplies of local volcanic stone from which the foundations, and sometimes the superstructure, of plantation buildings were constructed. However, some of the earlier surviving structures on the island, dating for the most part to the early 18th century, are characterised by galleted masonry, a technique where roughly faced blocks of irregular shape have the mortar at the corners chinked with smaller stones. In south-east England the technique was used where freestone, which could be easily worked to create flat faces, was not locally available. In Nevis it may result from a shortage of skilled manpower to work the material, and the consistent production of neatly squared blocks appears to have developed later in the 18th century as they are invariably a feature of later construction in the building sequence on the island.

While local stone was suitable for rough walling, from the 17th century onwards planters preferred to import paving for house or boiling house floors from England because paving stones provided a smooth, flat and less porous surface compared to the local volcanic stone type, andesite/dacite. A typical cargo imported into Nevis from Bristol on the pink[4] *Rose* included 50 yards of paving stones on 27 June 1687 (Higham 1921, 256); on another occasion, 2 March 1684, 140 yards of paving stone was imported by the same vessel (TNA CO 157/1). Occasionally both the source and intended function were specified (Hancock 2000, 25). On one occasion in 1681/2 William Freeman wrote to his business partner

[4] A pink is defined as any small ship with a narrow stern, a flat-bottomed boat with bulging sides, used for coasting and fishing, from the Middle Dutch pincke (Oxford English Dictionary).

Robert Helme in Nevis to order paving stones from Mr Orchard of Poole (Dorset). Freeman states the purpose of the request, 'the paveing stones I judge very convenient for cureing houses or storehowses to save the molasses & if you judge convenient may convert part thereof to our owne uses' (Hancock 2002, 251). In the boiling houses, Ligon had advocated the use of paving for floors in Barbados as early as 1657, and later illustrations portray paved boiling house floors[5] (e.g. Clark 1823). The motive was partly practical, as Freeman's comment reveals. The Nevis planters needed impermeable close-fitting level flooring to catch the molasses. At Fenton Hill, the use of imported stone paving extended to the kitchen in Structure A, but the boiling house was not investigated archaeologically. However, at Upper Rawlins the planter had used imported earthenware tiles, a few of which were green-glazed and therefore less permeable than unglazed and created tiled surrounds for the coppers so any spillage would drain back into the basin.

In the main houses, the use of stone or earthenware tiles had both functional and decorative effects. Stone or clay tile floors had the advantage of keeping rooms cool in the hot climate. The use of paving stones from English quarries had a further practical aspect, exploiting their well-known qualities, splitting readily along bedding planes to create hardwearing and durable flagstones. Particularly prized were fine-grained high-quality paving stones in Portland stone, or those from Poole, probably Purbeck Limestone (Hancock 2000, 25). Excavations at Pinney's plantation, Mountravers, have revealed the use of a range of imported stones, while at the same site in 2015 flags of fossiliferous white limestone, probably Purbeck marble, and a greenish-grey and purplish-red sandstone, probably Pennant sandstone, which is identical to the feldspathic stone paving flags found at Fenton Hill were observed. Elsewhere, Meniketti records imported slates for floors and steps at Ridge House in St John's parish, and at Paris's Garden townhouse and Bush Hill estate (2015, 151). The use of imported stone, especially types renowned for their aesthetic qualities such as pale Portland stone, had without doubt a symbolic value, conferring prestige on the structure and on the owner who could afford such luxuries, and serving as a striking visual indicator of conspicuous consumption.

At Fenton Hill and Upper Rawlins structural fittings are dominated by iron nails, which were widely used in wooden building construction using roofing or boarding shingles or fastening structural timbers, but also in such items as furniture and carts. Upper Rawlins produced 74 iron nails in the excavations. Of the total of 349 at Fenton Hill most were nails within demolition deposits, though in the earthfast building Structure A nails were also found in the void where posts had decayed. The larger total may indicate little more than the fact that the excavation investigated better preserved deposits containing decayed structural components such as collapsed structural timbers from the roof or flooring. Nails were amongst construction materials exported in large quantities from Britain to the West Indies. John Underwood, manager of a Barbados plantation, ordered items from the absentee owner in England to refurbish the sugar works, including '50,000 nails in assorted sizes' (Dunn 1973, 197). Imports in the late 17th century to Nevis frequently included casks of nails from English ports such as London and Bristol. Thus, two firkins of nails from London were imported to Nevis on board the *Mayflower* on 22 January 1684 (TNA CO 157/1, 99). Fenton Hill has other ironwork from structural fittings such as chain links, mounts, an iron collar and a door hinge, but many of the finds are associated with the post-emancipation period of occupation, such as an iron key in the northern extension and numerous fragments of iron sheet probably from tin plate.

Upper Rawlins has a more limited range of building materials than Fenton Hill. As well as iron nails, the short-lived site had a group of ceramic tiles, which had been chiselled to fit the surrounds of the sugar boiling coppers, but their findspot, most thrown into a cistern, suggest deliberate discard after the dismantling of the coppers. There are mortar fragments bearing one smoothed surface, and one moulded piece with a fine plastered surface that had been re-plastered. Interior wall surfaces were rendered with mortar and much of the recovered material is probably from the decay and collapse of wall mortar.

Imported lime in hogsheads is a frequent item in the Nevis customs records in the late 17th century (TNA CO 157/1). Lime was used not only for mortar and plaster in building construction, but also as a clarifier of cane juice during the boiling process, encouraging granulation of the sugar (Dunn 1973, 194). Lime, however, was one commodity that was available locally through burning of fossil coral from off-shore reefs on the eastern side of the island and, in view of the long turn-around period for goods or materials ordered from Britain, might have been regularly procured from island deposits. This may also account for the local production on Nevis of brick and tile, perhaps a response to slow delivery, filling a shortfall or gaps in the local market that might arise as the result of building projects, or repairs needed at short notice, such as those required after earthquake or hurricane damage. Surges in demand such as that which must have ensued during rebuilding after the 1706 French raid may have stimulated the exploitation of local resources and development of local industries.

[5] The aquatint illustration, published in 1823, of the interior of the Weatherall's boiling house on Antigua shows an irregular stone flagged floor (Clark 1823, no. VI).

The absence of all but a tiny number of clay roof tiles at Upper Rawlins, with only two examples in the local tile fabric, suggests either thorough robbing of roofing material or, more likely, the use of no more than small amounts of tile to roof some structures such as a bake oven or fireplace, where a fire-resistant material was required.

Ceramic building materials were also frequent items in ships' cargoes to the West Indies. An invoice of the *Friendship*'s cargo, which sailed from London to Port Royal in Jamaica in 1671, included 3970 pantiles (Dunn 1973, 209). In the later 18th century there was strong demand for building bricks, which were carried in ballast. Enfield listed the cargoes exported from Liverpool in 1770, which by that time had become the chief port for the Caribbean islands, to various destinations including Jamaica, Grenada, Montserrat and Barbados; almost all the islands received substantial quantities of bricks. To St Kitts were exported 7000 bricks and 30 chaldrons of lime, while no fewer than 40,000 bricks were despatched to Antigua (Enfield 1774, 80-1). Both Fenton Hill and Upper Rawlins were recipients of imported British earthenware tile, but examination of the fabric of bricks, tiles for the floor and roof, and incidentally also sugar moulds, demonstrated that these materials were not always imported. Local manufacture on Nevis is attested from archaeological evidence. Fabric 2 and the sugar mould fabric at Upper Rawlins have the characteristics consistent with volcanic Nevisian clays, and observations at Indian Castle indicate the production of brick and tile on Nevis. Whether there was also a cost advantage is not currently known.

Remains of furnishings or fixtures within the Upper Rawlins dwelling house are scarce. Two small copper-alloy domed tacks may have graced leather or fabric-upholstered chairs or other furniture, but they could equally have served as decoration on leather straps or belts. Three similar items were found at Fenton Hill (see this volume). A copper-alloy strapping (SF205) for a chest, or more likely a casket given its size, is a rare indication of moveable fittings in the house, and such portable furniture had the practical advantage of easy stowage on board ship. The presence of these furnishings in contemporary Leeward Island houses is shown by the inventory of the St Kitts planter Christopher Jeaffreson, of Wingfield Manor, dated 1685, which includes in the dwelling house 'six leather chaires' and 'one cargo chest' (Hicks 2007, 81). The barrel padlock (SF195) may have been used to secure a chest or door. Other household fittings at Upper Rawlins include a candleholder (SF198), an indispensable item of household furniture at a latitude where days and nights are close to even in length and artificial light was essential for extending the hours of work or leisure. Tools are rare but include a stone-mason's wedge (SF173).

Provisions

Direct two-way trade largely for provisions and perishables between the Leeward Islands and New England had begun in the mid 17th century, but later in the century New England ships expanded their trade to take advantage of the demand for wine by calling in at Madeira and the Canary Islands (Watts 1987, 173). The importation of Madeira wine, fortified with brandy to enhance its preservative qualities, proved highly profitable (Higham 1921, 208, 257). In the late 17th century, Leeward Island planters developed close commercial ties with New England. The advantage of provisions from mainland North America was that they were cheaper and more plentiful, while the shorter journey time meant that they arrived fresher (O'Shaughnessy 2000, 69). From there the colonists imported fish, including cod, scale and bass, as well as other provisions - barrels of pork, mackerel and pickled cod, Indian corn, and bread. Ireland was another source for some provisions, notably salted butter brought in firkins, and barrels of beef. A little butter was made in Nevis but only poor-quality cheese, so the latter was imported from Cheshire, Warwickshire and Gloucestershire, and occasionally good but expensive butter from Bermuda (Smith 1745, 221).

In the 18th century, Revd William Smith, who was present in Nevis 1716-22, reported how the island produced rabbits, pork, veal, mutton, turkeys, geese, ducks and fowls, a list echoed by Rymer later in the century (Smith 1745, 220-1; Rymer 1775). Smith noted the presence of 'very prolific goats' and particularly approved of the pigs which were fed on Indian corn, Spanish potatoes and sugar-cane juice, producing flesh that was 'exceeding sweet, and white as well as fat' (1745, 208-9). Local wild sources of nutrition included land crabs caught with torchlight (Smith 1745, 210) and for fish, two kinds of sprat; the Black Bill, esteemed by Smith as 'very fine eating', the other the poisonous Yellow Bill, 'very seldom if ever eaten by white persons'. Green Turtle was the only edible species of the eight turtle species found at Nevis (Smith 1745, 196-7).

As for livestock, Smith observed that the planters imported horses from London, New England, and Rhode Island (Smith 1745, 220-1), while Rymer, noting the estates produced their own horses, recorded that 'mules and camels they have from Africa, and of the former some are produced in the Island by jack-asses from England and mares from America' (1775, 4). An impression of the livestock held on individual Nevisian plantations can be gleaned from the records of Azariah Pinney's estate Charlots in St Thomas Lowland parish. In 1697 Charlots consisted of 87 acres, worked by a small black labour force, and three bulls, two cows, one bull-calf and eight sheep (Pares 1950, 36). An agreement drawn up in 1696 by Azariah Pinney records the

privileges accorded to the overseer, a Mr Westbury, on Charlots plantation. Westbury was permitted to keep one breeding sow and the young, to keep one mare and one cow, and one each of their offspring, to 'raise what ducks, turkeys and hens his wife can, within the penn only', and to 'keep the coney warren for me, for which he to have half the produce' (Pares 1950, 18-9).

The diet of the enslaved Africans consisted largely of Indian corn and fish, imported from the northern colonies and provided weekly to the slaves (Smith 1745, 232; Merrill 1958, 73). Salt herring was imported from Europe. An allowance of cane juice was stipulated by law, four to six pints of cane juice per week to the slaves during harvest time (January-June) and eight to nine pints the rest of the year, the reduction owing to the slaves' being allowed to suck the canes in croptime (Merrill 1958, 73-4). A major component of the diet of many slaves consisted of provisions that they grew on land set aside for their use, which normally consisted of mountain land or steep-sided ghuts unsuited to cane growing (Fog Olwig 1993, 45-6). The practice developed of plantation owners allowing free time to the slaves on Saturday afternoons to cultivate their plots, which soon came to be regarded as a right by slaves. Restrictions on commerce with North America with the War of Independence (1775-83) brought great hardship to the British West Indies, as islands such as Nevis had been dependent on importation of food supplies and provisions from there. The war had a serious impact on enslaved Africans in Nevis, between 300 and 400 dying of starvation when the trade was cut off (Fog Olwig 1993, 63, n. 5). The Leeward Islands slave law of 1798 regulated the food given to slaves, prescribing 'weekly allowances of 9 pt of corn or equivalent quantities of beans, peas, wheat flour, rye flour, Indian corn meal, oatmeal, rice, cassava flour, biscuits, yams, potatoes, eddoes, tanias, plantains or bananas, and 1.25lb of herring, shad, mackerel, or other salted provisions, or 2.5 lb of fresh fish or provisions' (Fog Olwig 1993, 63, n. 5). By the mid 19th century it was recorded that 'mutton is the staple animal food of Nevis' (Day 1852, 208).

The faunal evidence from Fenton Hill, although a small sample overall and derived largely from the late 18th- and early 19th-century Phase 5 as well as the post-emancipation Phase 6, broadly corroborates the documentary evidence. The main livestock kept for food are represented – pigs, sheep/goats, and some cattle, with good evidence of butchery in a number of bones. The cattle show evidence of the use of the whole carcass rather than selected joints. The ovicaprid bones are more numerous but only one bears a mark from butchery. Pigs are the most numerous mammal and their teeth, which are resistant to decay, dominate the assemblage, but the presence of the head and feet elements indicate the use of locally produced animals rather than imported salt pork. Other mammals include the rat which, while originally an accidental import that benefited from abundant food resources close to human habitation, according to Smith (1745, 209) was cooked in banana leaves and eaten by enslaved populations on Nevis, and occasionally, out of curiosity, by whites. Two dog bones are present, as is a single mongoose bone from a late Phase 6/7 context, evidence of this Indian species introduced to the West Indies in the 1870s to control rodents (Horst *et al.* 2001).

Three species of bird are represented by a few bones of each, one certain and one possible goose bone, a small number of domestic fowl bones (and eggshell possibly of the same species), and four turkey bones, the latter with cut marks. All are likely to be locally raised fowl. A single turtle bone in Phase 4.2 indicates the occasional use of this marine resource. The fish remains, apart from a single shark vertebra, were from bony fish, mainly the perciform type commonly used as food in the region. Grouper and parrotfish are present, along with small numbers of grunt and seabream. Consumption of salt fish is attested by only a single haddock bone. The late 17th-century customs records make frequent mention of imported fish, notably mackerel but also haddock. Much of the fish came as salt fish from North America or Europe; Bristol, for example, is recorded as supplying herring (TNA CO 157/1). Wild food is confined largely to invertebrates, mainly marine gastropod and bivalve shells of 11 different species, but chitons, which leave flat articulated plates, are also present as food remains.

At Upper Rawlins the faunal assemblage was much smaller than Fenton Hill and contributes little useful information on diet or livestock management, apart from demonstrating the minimal presence of cattle, sheep/goat, pig and one possible dog. One horseshoe fragment (SF193), and possibly part of another (SF181), are indications of livestock. The rabbit is a less common archaeological find but was recorded in the West Indies in the 17th and 18th centuries, at a time in Britain when the animal was widely kept for food as well as prized for its fur (Williamson 2007).

Trade Goods

In the last two decades of the 17th century, the quality of the documentary record for Nevis's trade improves dramatically. Under the governorship of William Stapleton, from 1684 onwards, the reports of the island's Naval Officer (TNA CO 157/1) begin to record in some detail the goods imported to the island. Not only is the port of departure and vessel's name recorded but the cargoes are broken down by type, enabling a detailed analysis of the materials and sources. Used in combination with other records such as the Port Books of Bristol, business records and letter books, such as those of William Freeman in the late 17th century or the Mills family in the mid 18th century (Museum of

London Docklands 2006.178), the flow of goods into Nevis can be reconstructed in some detail. While this is not the place for a detailed analysis of trade with Nevis, the combined evidence shows the movement of the main archaeological materials found in the island.

The documentary record captures material that archaeological investigation fails to recover. The archaeological material is of course subject to the usual biases of limited and partial samples, and is dependent upon a range of unmeasurable taphonomic factors, such as rubbish disposal methods and locations, post-deposition disturbance by human or natural causes, and the loss through decay of almost all the perishable or organic commodities such as food, timber for buildings, staves for hogsheads, furnishings and clothing. Nothing of course is likely to survive in archaeological contexts of luxury items such as the 'Smyrna[6] carpet and cotton hangings' sold by Christopher Jeaffreson to Lady Stapleton (Johnston 1965, 179), while the expensive silverware and textiles, the fine furnishings, clocks and paintings, were rarely discarded or lost, and have similarly left no archaeological trace. Many classes of organic items are represented only by the durable components. At best, the leather-backed 17th-century chairs recorded in the St Kitts insurance claim of 1706 will be represented by the copper-alloy tacks as the only surviving elements of leather- or textile-covered furniture or trunks, while iron nails represent the sole remains of the timber superstructure of most buildings.

Subject to the constraints inherent in archaeological dryland deposits, the archaeological assemblages, however, contain a complementary snapshot of the imperishable goods used at individual plantations. They provide valuable archaeological evidence for trade, particularly when used in conjunction with historical records which present a detailed record of the source port, though the original source of manufacture is rarely mentioned. The records also detail the quantities of materials imported but not how the cargoes were subsequently dispersed and distributed through the colony. The archaeological finds assemblages serve to show what material was imported to specific plantations. Although most classes of material are generic objects of glass, iron or other metals that cannot be reliably attributed to source, the contribution of archaeology is at its strongest in charting the movements of traceable durable commodities. Stamped clay tobacco pipes, ceramics – whether European or locally made pottery - and imported stone for building or paving are some of the most distinctive objects that can readily be located to source.

The Dutch clay pipes testify to the proximity of three Dutch islands to Nevis, St Eustatius, Saba and St Maartin/St Martin (the latter jointly owned by the Netherlands and France), and to the powerful role their merchants played in the mid 17th-century Leeward Islands trade. The earliest datable find of European origin at Fenton Hill is a moulded Dutch clay tobacco pipe bowl dated *c.* 1635-50. The following decades at the site, 1660-1700, yielded half a dozen more fragments of Dutch origin, alongside Bristol and London pipes. Excavations at Jamestown have also produced Dutch clay tobacco pipe. The majority of the clay tobacco pipe from the *Time Team* excavations at Jamestown dates from the period *c.* 1660-1700, and once again the assemblage is dominated by Bristol pipes, with at least four different manufacturers from the port represented amongst the eight stamped pipes, but with at least two 17th-century Dutch pipes also present (Higgins 2001, 90). Similarly, out of a small assemblage of 20 fragments recovered at Mountravers by *Time Team,* the pipes of known origin include one from southern England and two 17th-century Dutch examples (Higgins 2001, 91-2).

The presence of the Dutch material has its roots in the influential role of Dutch merchants in the early years of the colonial trade in the Leeward Islands. From soon after the foundation of the new English colonies in Nevis and St Kitts, Dutch merchants took advantage of the fact that they had vessels in the Caribbean and had possession of several islands in the Leeward Islands, which all lie to the north-west of Nevis, Saba, St Maartin and the renowned entrepôt and trading centre of St Eustatius. Dutch vessels visited the islands at harvest time 'to exchange tobacco for European manufactures such as textiles, ceramics (ranging from apothecary jars to plates and mugs to chamber pots), metal goods (including firearms), and provisions such as flour, beer, wine and cheese' (Koot 2011, 36). They were able to offer both lower prices for manufactured goods and lower freight charges than English merchants.

Nevis and the Home Ports

The mechanism for supply to the colonies of the West Indies, and specifically to Nevis and St Kitts, was increasingly operated through the 17th and 18th centuries by a closed system of commissions or orders from the plantation owner or manager to the factor in England to supply goods needed at the plantation. In the 1670s, Christopher Jeaffreson warned that speculative ventures by factors sending out dry goods would fail without a fine appreciation of the market. Certain kinds of goods would find no market in St Kitts (Dunn 1973, 126), as the planters were too poor to afford such luxuries as English furniture, bedding, carpets or fine cloth. One commodity considered unlikely to fail was Madeira wine (Pares 1950, 30), but even this was not foolproof. The volume of goods intended for retail declined to such an extent that the experienced merchant and planter William Freeman

[6] Now Izmir, in western Turkey.

suffered the failure of his wine and dry goods stores in Nevis and St Kitts (Hancock 2000, 21). The population of resident merchants in the islands declined during the 18th century as planters increasingly ordered stores directly from their agents in London or Bristol and bought provisions directly from the supercargoes of American ships. Pares (1950, 24-5) sees a direct correlation between the stagnation of retail trade and the decline of the Jewish merchant community, which in 1724 was estimated at a quarter of the population of Charlestown but which had almost vanished a century later (Terrell 2005, 51-5).

The 1706 French raid insurance claims provide a rare snapshot of the contents of one such shopkeeper of Nichola Town, St Kitts. Charles Barrow's stock as a merchant included such mundane dry goods as candles, flour, brown sugar and rum, but his main specialised trade was in jewellery and silver and gold ware; he claimed to have lost two diamond rings, 15 gold rings, silver tankards and spoons, and a range of other luxury goods valued at £809, despite having shipped it to Nevis for security (TNA CO 243/2, fol. 585-6). Barrow's trade consisted largely in supplying the successful planters with the high-value goods appropriate to their standing in society. It is quite probable that he had a hand in furnishing the Charlestown house of the wealthy planter, Mary Pinney, to a sufficiently grand standard to be rented out to Governor Hart a decade or so later. An inventory of the contents drawn up at the time, in 1722, records the ostentatious display of silverware and fine china, walnut furniture and expensive table linen, valued in total at £512 5s 9d (Pares 1950, appendix II, 336-9).

The development of the role of the commission agent can be seen at an early date. The account books and letter books of planters or their agents record the orders for clothing, plantation equipment and food and drink. The most illuminating for Nevis, which illustrates along the way the complexities and difficulties of West Indian trade, was that of Captain William Freeman. He was one of the first commission agents in the colonial trade and worked on behalf of the island government as well as individual planters (Hancock 2002, xxiv-xxv). Freeman handled the imports and sales for the estate owners in the Caribbean, as well as supplying their plantation with necessary goods, and taking responsibility for their accounting and financing (Hancock 2002, xxv). Hancock observes that Freeman 'did the combined work of a seller, shipper, buyer, governor, marriage counsellor, teacher, caretaker, wine steward, outfitter, accountant, banker, funds-manager, and money-lender ... for the governments and inhabitants of the Islands, and for other sugar planters' (2002, xxvi-xxvii).

Freeman was born to a planter family in St Kitts and owned estates not only on that island but also in Nevis and Montserrat (Hancock 2002). He was joint owner with Captain John Bramley of a plantation in Montserrat from 1671. Freeman lived in Nevis, and through marriage to Elizabeth Baxter acquired a network of merchant contacts in London and southern Europe (Hancock 2002, xvi-xvii). Hancock argues that three key things led to the successful rise of the commission merchant: the presence of absentee planters needing a facilitator, the experience of having a colonial origin, and the connection of personal acquaintance. Freeman could take advantage of all three. In 1674 he became one of two factors in the Leeward Islands for the Royal African Company, engaged in supplying slaves to the Nevis market, and in the same year bought a lease with his brother-in-law Robert Helme to two sugar plantations in Nevis. The first was Proctor's, a sizeable 189-acre estate in St Thomas Lowland, later known as Mountravers, the second was a smaller 40-acre estate at Mountain (Hancock 2002, xx-xxi, n. 37, 38). Freeman moved to London in 1674 or 1675 where he acted as a commission merchant. By 1680 the company of Freeman and Baxter had amassed a clientele of no fewer than 50 planters in the Leeward Islands who consigned their crops to them, concentrated on those islands where Freeman had most dealings as a resident planter in his youth – Nevis and Montserrat (Hancock 2000, 29-30). As the primary commission merchant for the islands, he built on a network of relations and personal contacts, which enabled him to build up bonds of trust, crucial for financial dealings over a long distance. One important client, Governor William Stapleton, was not only a prestigious and profitable contact but was also Freeman's relation. The role of commission merchant involved much more than simply selling the planter's sugar and supplying his own and other planters' estates with provisions, labourers, both whites and enslaved blacks, and arranging the transportation and payment for them. It involved a range of personal services such as negotiating loans, arranging schools for planters' children, legal services and so on (Hancock 2000; Pares 1950, 186-8). Freeman's letters record the supply of a wide range of goods, including iron nails and ironwork; coppers, lime, drips and pots for sugar boiling, and stills; paving stones from Poole in Dorset for the curing house and still house; and clothing for blacks and whites alike. Madeira wine was imported, as were beef and butter from Ireland (Hancock 2000, 25).

Bristol

London and Bristol were the two main home ports that maintained direct connections with Nevis, to be joined in the 18th century by Liverpool. The West Indian connection with Bristol had been established early in the 17th century as a natural concomitant of the existing African trade, and from the mid 17th century onwards many of the chief commercial links with the West Indies were sustained through the agency of the

Table 4.1. From the Bristol Port Books, exports of English earthenware (Eew) and Earthenware (Ew) of unspecified origin from Bristol to Nevis in 1662-1700 by number of pieces (p) (after Reg Jackson, http://www.bristolpottersandpotteries.org.uk/exports.php)

Date	Vessel	Cargo	Destination
1671-1672	**TNA E 190/1138/1**		
23/12	*Nevis Merchant*	1 box of 100 p Eew	Nevis
1678-1679	**TNA E 190/1140/2**		
26/4	*Prince*	200 p Ew	Nevis
7/7	*Sarah*	200 p Ew	Nevis
24/7	*Sarah*	250 p Eew	Nevis
1679-1680	**TNA E 190/1141/1**		
5/12	*New England Merchant*	100 p Eew	Nevis
1680-1681	**TNA E 190/1142/3**		
26/9	*Dymond Ketch*	250 p Eew	Nevis
12/10	*Dymond Ketch*	100 p Eew	Nevis
19/10	*Owns Endeavour*	100 p Eew	Nevis
25/11	*Patience*	400 p Eew	Nevis
5/12	*Port Royall*	20 p Eew	Nevis
23/12	*Mary*	200 p Eew	Nevis
1681 - 1682	**TNA E 190/1143/1**		
13/3	*Abraham & Isaac*	150 p Eew	Nevis
27/4	*Delight*	150 p Eew	Nevis
9/11	----- *Merchant*	100 p Eew	Nevis
1684 - 1685	**TNA E 190/1147/2**		
12/1	*Fellowship*	300 p Eew	Nevis & Cork
23/5	*Joseph*	400 p Eew & glass bottles	Cork & Nevis
25/5	*Joseph*	400 p Eew	Nevis
7/8	*New England Merchant*	350 p Eew	Nevis
27/11	*Little Bristol*	100 p Eew	Nevis
1686-1687	**TNA E 190/1148/2**		
2/5	*Nevis Merchant*	400 p Eew	Nevis
29/8	*New England Merchant*	50 p Eew	Nevis
21/10	*Morning Star*	70 p Eew	Nevis
1687-1688	**TNA E 190/1149/1**		
4/1	*William & Ann*	400 p Eew & glass bottles	Nevis
6/9	*New England Merchant*	34 p Eew	Nevis
19/11	*Nevis Merchant*	100 p Eew	Nevis
20/11	*Nevis Merchant*	100 p Eew	Nevis
22/11	*Nevis Merchant*	200 p Eew	Nevis
1694-1695	**TNA E 190/1151/1**		
8/1	*Suzana*	150 p Eew	Barbados & Leeward Islands
11/2	*Potomack*	50 p Ew	Nevis
28/3	*Adventure*	300 p Eew	Cork & Nevis
	The remainder of this volume is illegible due to water damage.		
1695-1696	**TNA E 190/1152/3**		
9/5	*New England Merchant*	1000 p Eew	Nevis
12/8	*Nevis Merchant*	400 p Eew	Nevis
17/8	*Dorothy*	200 p Eew	Nevis
1699-1700	**TNA E 190/1158/1**		
13/3	*Diligence*	1 p Eew	Nevis
19/3	*Diligence*	200 p Eew	Nevis
23/8	*Elizabeth & Phoebe*	160 p Ew	Nevis
28/8	*Elizabeth & Phoebe*	25 p Ew	Nevis
30/8	*Hereford Gally*	100 p Eew	Nevis
31/8	*Elizabeth & Phoebe*	50 p Eew	Nevis
12/9	*Hereford Gally*	250 p Eew	Nevis
15/10	*Hereford Gally*	200 p Eew	Nevis
16/10	*New England Merchant*	8 p Ew	Nevis
17/10	*Hereford Gally*	50 p Eew	Nevis

Bristol merchants (Dresser 2001). It was through Bristol that many indentured servants were transported to the Caribbean, and in the 17th century numerous planters had roots and family connections in or near Bristol. Bristol merchants were involved first hand in the slave trade, and from the 1650s a number owned plantations. The connection was strengthened by the development by the 1680s of four sugar-refining businesses in the city (Dresser 2001, 20-1).

From a British perspective the city of Bristol proved a major draw for merchants dealing with America and the Caribbean. As the principal Atlantic port, it attracted merchants predominantly from the city and neighbouring counties but also as far afield as Scotland (Morgan 1993, 190; Dresser 2001, 7-52). In the 17th century 'the fortunes of Nevis seem particularly intertwined with that of Bristol' (Dresser 2001, 20). The connections persisted, as Morgan observed, 'what is striking, in fact, is the sheer extent to which Bristol was connected with the West Indies in the eighteenth century' (Morgan 1993, 195). The links between Bristol and the Caribbean were strengthened by those who were sent to the West Indies early in their careers and who maintained and established commercial contacts that made a return to Bristol an attractive proposition (Morgan 1993, 191). Later in their careers, some married into West Indian families, cementing relationships and in several cases creating dynasties that maintained the connection over several generations. Occasionally the reverse occurred, where West Indian-born planters moved to the home port. Robert Claxton, for instance, was one of a small number of Bristol merchants who was born in the West Indies and moved to Bristol; his family had lived in Basseterre, St Kitts, since the 17th century (Morgan 1993, 190).

Bristol merchants tended to own their own ships and invested in land or plantations in the islands with which they had dealings. They thus retained control over shipping, transporting their own sugar, and making their own decisions over estate management and practice. For Morgan, 'they combined ship-ownership, trade and investment in the West Indies in an ever more concentrated fashion as the eighteenth century progressed', typified by the group of Bristol merchants Robert Claxton, Philip Protheroe, William Miles, John Pinney and James Tobin, who all owned plantations in the small island of Nevis (Morgan 1993, 193). The importance of merchants to Bristol's civic life can be seen in the positions occupied in the municipal life; Robert Claxton was at different times mayor, alderman, sheriff and councillor of Bristol (Morgan 1993, 202). A key consideration in maintaining the Bristol–West India connection was the financing and mortgage business. 'Several West India merchants were involved in extending finance for mortgages and annuities needed for slave estates'. Some invested in stock pens and stores in the islands while 'others held estates in trust on behalf of planters with whom they were friendly' (Morgan 1993, 192-4). Morgan's analysis of the business affairs of West India merchants shows that there was a high degree of convergence of the roles of sugar commission merchant and absentee planter (1993, 195). The combination of roles became more marked over time; of 29 merchant-planters identified by Morgan, 14 were still active into the 19th century.

Bristol in the 17th century played a primary role as an entrepôt for the ports of south-western England and manufacturing centres further afield, encouraging its merchants to draw on products and provisions from across south-west England to export to the colonies. Writing of his journey around Britain, which began in 1722 (published 1724-26), Daniel Defoe records how Bristol merchants 'have so great an inland trade among all the western counties, that they maintain carriers just as the London tradesmen do, to all the principal countries and towns from Southampton in the south, even to the banks of the Trent north; and tho' they have no navigable river that way, yet they drive a very great trade through all those counties' (Defoe 1927, letter 6). Barnstaple and Bideford traded extensively with Bristol, and Grant records that about 1000 dozen pieces of earthenware were shipped annually from Barnstaple to Bristol in the period 1650-1700 (Grant 2005, 130). Bristol was the major market in the 17th century for goods and produce shipped by North Devon merchants from Ireland and the American colonies. Redistribution of these earthenwares to the colonies can be seen in the exports from Bristol across the Atlantic to the Caribbean and North America.

Research into the pottery exports through Bristol demonstrates the large quantities shipped directly to the West Indies, particularly Jamaica and Barbados. The Leeward Islands were also significant recipients of ceramics, not only Nevis but also Antigua and to a lesser extent Montserrat. In the period 1671 to 1700, the Bristol Port Books record that Nevis alone received well over 7000 English earthenware vessels shipped from the city (TNA E 190/1240/6; Table 4.1). The Bristol records do not apparently record stoneware exports, which may have been exported directly from London.

The archaeological evidence accords closely with the documentary record in the source of trade from the homeland. For the late 17th century, the diagnostic material from both Upper Rawlins and Fenton Hill demonstrates the dominant role of the port of Bristol in the trading network with the Caribbean. Higgins notes that Bristol was the main supplier of late 17th-century pipes, while the 18th-century fragments suggest supplies coming from London or other south coast ports. North Devon gravel-tempered ware is

present while Bristol clay tobacco pipes dominate the finds assemblage. [7]

London

London was the other major port to the Leeward Islands in the 17th and 18th century, with merchants from the capital well represented amongst the plantation owners. One was Joseph Jory, who was born in the West Country at Plymouth, moved to Nevis by 1669 and purchased a large sugar plantation, before leaving around 1699 to become a merchant in London where he could exercise his duties as Agent for Nevis. Jory's niece, Frances, took as her second husband Martin Bladen, MP, member of the powerful West India lobby at Parliament. In the second half of the 18th century, a small coterie of medical professionals based near London invested in Nevis sugar plantations. The most celebrated was John Fothergill, who was probably introduced to the investment opportunity through mutual friendships or acquaintances.

As discussed above, the letter books of the London merchant William Freeman prove invaluable for a detailed account of trade between London and the Leeward Islands. Freeman supplied his plantations on Montserrat and Nevis in the last decades of the 17th century. His vessels shuttled back and forth from London to the Caribbean, engaged in export of commodities sought after in the colonies, and in return for the most part handling and shipping sugar. On one occasion in 1683 he lobbied the home government with the support of no fewer than 33 other London merchants trading with the Leeward Islands to protest against a law passed in St Kitts (Hancock 2002, xxiv), demonstrating the size of the trade based in London. The volume of his own trade was light, Hancock notes that in the period 1678-82 eight ships a year were despatched by Freeman to the Leeward Islands, dropping to an average of only 3.5 ships in 1683-84 (2002, xxvi).

The sources of supplies for Africa and America (including the Caribbean) were varied. London merchants supplied traders and planters alike and specialised trade goods were available from merchants such as the 'bead store', frequented by the Bristol slave trader James Rogers in the late 18th century (ref to Rawley 1981, 186, cited in Stine *et al.* 1996, 56).

Liverpool

Besides Bristol and London, a third port, Liverpool, possessed some of the same advantages as Bristol with its west-coast situation, a location convenient for Ireland and transatlantic destinations. Direct voyages to the West Indies from Liverpool were well established if not numerous in the 17th century. By 1673 the town had at least one sugar refinery, and in that year Richard Blome observed the growing transatlantic trade in Liverpool, '... divers eminent merchants and tradesmen, whose trade and traffic, especially into the West Indies, makes it famous, its situation affording, in great plenty and at reasonable rates than most ports of England, such exported commodities proper for the West Indies' (Blome 1673, 134; Kermode *et al.* 2006, 107). In 1678, the London merchant and Caribbean plantation owner William Freeman announced his intention to send three or four ships a year from the West Indies to Liverpool laden with his own sugar (Hancock 2002, 40; Longmore 2006, 113). The destination was the recently constructed sugar refinery of Daniel Danvers and Richard Cleveland. At that time, for Freeman based in the metropolis, he claimed Liverpool was 'so remote from my acquaintances and concerns' that it caused him considerable disadvantage, but here we may discern the special pleading of a canny businessman (Longmore 2006, 113).

The scale of the West Indian trade can be gauged from the fact that 32 ships were despatched from Liverpool there in 1694 (Farrer and Brownbill 1911, 23, n. 437). However, Liverpool's entrance as a major player in the triangular transatlantic slave trade occurred after the ending of the Royal African Company monopoly in 1698, which allowed private merchants to engage in the slave trade legally for the first time. Although the earliest recorded slave voyage to Africa from the port took place in 1699, Liverpool merchants were slow to exploit the trade in human beings.

In time, many Liverpool merchants were involved directly or indirectly in supplying, financing or fitting ships to West Africa. By the mid 18th century, Liverpool had overtaken Bristol in the slave trade and it is estimated that of the 11,000 ships despatched from England to Africa in the 18th century, no less than 48%

[7] Leech adds: The close links between Nevis and Bristol were evident also in the architectural preferences and domestic arrangements of merchant and planter families. The pattern of widely dispersed garden houses or villas of the late 18th and early 19th centuries recorded across the hillsides above and to the east of Charlestown mirrored that to be found on the hillsides surrounding the contemporary city of Bristol (Leech 2013; 2014, 364-5). Moving to Bristol in the 1790s John Pinney's new house in Great George Street was provided with a stone bath, the only such example recorded in the city. This possibly reflected a liking for a plunge bath mirrored in the archaeological evidence from the excavations and survey of his house at Mountravers on Nevis (volume on Mountravers forthcoming). From an earlier date Bristol property developers had also been commercially active on Nevis. At the upper end of the market, the merchant Philip Tyler, who died *c.* 1686, owning property on Nevis (see Appendix 1), had been one of those responsible for purchasing and converting the great hall of Bristol Castle to be a large town residence, no. 20 Castle Green, Tower or Belfry House (Leech 2014, selective inventory on CD). More at the lower end of the market, the clay pipe maker Llewellin Evans (see p. 98 above) was also active in property speculation, utilising his leases of houses at nos 38-41 in Old Market Street for the creation of a row of four new shophouses (Leech 2014, 357-8).

departed from Liverpool. The number of vessels leaving the town annually increased from 15 in 1730, to more than 50 in the 1750s and over 100 in the early 1770s (Richardson 1994, 67).

Unlike the distinctive regional products visible in the later 17th century from Bristol and its hinterland, or the Dutch material evident in Nevis earlier in that century, the role of the transatlantic port of Liverpool is more difficult to discern in the finds assemblages. The significance of Liverpool as a port for North America and the Caribbean was enhanced by construction in the early 18th century of a commercial wet dock, followed in the middle and later century by improved communications by road and canal with the manufacturing hinterland of the Midlands and north. The wide hinterland on which the port drew for manufactured goods obscured any obvious regional character of Liverpool's exports. From the later 18th century onwards the mass production of factory-made refined white ceramics focused in Staffordshire and the rapid shifts in the social profile of tea and coffee drinking, with increasing use of sugar, transformed the ceramic assemblages across the English-speaking world. Perhaps the best candidate to illustrate the increasing dominance of Liverpool in later 18th- and 19th-century exports is the growing prevalence of Staffordshire ceramics amongst the assemblage from Fenton Hill, yet the port itself is now a conduit not a zone of manufacture.

Finally, the rise of another west coast British port, Glasgow, can be identified in the mid 19th-century assemblage at Fenton Hill. Here, two classes of ceramics can be identified as Glasgow products. The Phase 6 occupation in the 1840s-60s produced some clay tobacco pipes from at least three of the major manufacturers, which Higgins attributes to the rapid rise of the Scottish industry in the 19th century, capturing the larger part of the export market during the second half of the century. In addition, some sponged wares, a type of cheap but decorative white earthenware common in Scotland but also made in Staffordshire, becomes common at the site, and some products can be assigned to the Glasgow factories.

Summing up

Roger Leech

The 17th century was marginally elusive in the investigation of the two sites at Fenton Hill and Upper Rawlins, not least perhaps because at both locations the severity of erosion at times of high rainfall has robbed the archaeological strata of their earliest contexts. But from both sites a wealth of structural and artefactual data has demonstrated the potential of historical archaeology to add to what we know and understand of the 17th-century 'disputatious Caribbean': 'circles of narrative, which can be discreet, concentric, hierarchical, overlapping, or interlocking, so that despite the white, European, male, literate, elite preponderance of sources, autonomy and weight can be given to each individual, irrespective of gender, color or status' (Barber 2014, 6).

5. References

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Burke Iles J. A. 1871 'Map of the Island of Nevis,' 2 January 1871, dedicated to the Hon. Thomas Graham Briggs, published by Stanford's Geographical Establishment, Charing Cross, London.

Clarke's Estate Plan *c.* 1818 Although undated, the date of the map can be determined from internal evidence. It was signed by J. and W. Newton, Chancery Lane, London, a well-known firm of cartographers. John Newton (1754-1848) established the firm in 1780 and the name was changed to J. and W. Newton around 1818. The map records the owner of a contiguous plantation to Clarke's as John Pinney. As Pinney died in 1818, the map must date to that year or very soon after. NHCS archive.

Fothergill Estate Plan 1893 'Plan of the Fothergill Estate, 1893, by L.M. Kortright[1]', Nevis Courthouse records, Register of Titles Book 1, fol. 54. EAP794/1/10/1/25.

Hack W. 1687 'A chart of the west end of Nevis and part of St. Christophers, originally described by Mr. John

[1] There is some ambiguity over the surveyor's surname, which on contemporary plans in Nevis appears as Kortrijks or Kortright.

Jenifer; drawn in 1687, by William Hack, on a scale of 2 inches to a mile'. British Library Cartographic Items Sloane MS. 45.74.

Jessup Estate Plan 1755 'A Plan of the Plantation of Edward Jesup Esquire in the Parish of St Thomas Lowland in the Island of Nevis. Surveyed AD 1755 by W. Cockburn, delineated by S. Wilkinson A Domini 1761', Southampton Archives Office D/MW 35/8a.

Mathew Estate Plan 1757 'Plan of the plantation of Abednego Mathew in St. George Basseterre, St. Christopher with additions (1800) Surveyed by William Cockburn, surveyor-general, 20 May 1757 and 'Corrected 1800 by A.M'.' The map shows plantation buildings, fields, the slave houses with illustrations of north view of the works, south view of the boiling house, and north and south views of the dwelling house. Glamorgan Archives DMW 305.

Sharpe's Map, late 20th century: this map, showing the outlines of the plantation boundaries on Nevis, and a list of sources used, was made available to the project for copying through Ms Lilith Richards of the Nevis planning office in August 2005. The map was prepared by a Mr Sharpe (present address unknown), a volunteer intern from a conservation project in the late 1990s. Much of the information came from historic plans in the Nevis Court House records, notably those in the Registers of Titles, and from the Nevis Housing & Land Development Corporation (NHLDC). These sources enable the map to be identified as accurate and reliable in its details. Some of the sources can however no longer be traced, making the map a particularly valuable tool for research.

Unpublished Archives References

The National Archives, Kew (TNA)	
C 11/1119/26	Cave v Hurt. Bill and answer. Plaintiffs: James Cave, surgeon of Chigwell, Essex and Mary Cave his wife (late Mary Hurt, widow of Christopher James Hurt, deceased). Defendants: Deborah Hurt, widow. Date 1756
C 120/843	Chancery: Master Tinney's documents
C 120/844	Chancery: Master Tinney's documents, Fothergill v Cave
CO 152/4	Leeward Islands Correspondence, original Board of Trade, 1700-1702
CO 152/39	Leeward Islands Correspondence, original Board of Trade and Secretary of State, 1693-1720
CO 153/7	Board of Trade and successors: Leeward Islands, Entry Books
CO 154/1	Colonial Office and predecessors: Leeward Islands, Acts, 1644-1673
CO 154/2	Colonial Office and predecessors: Leeward Islands, Acts 1668-1682
CO 157/1	Naval Office returns (shipping returns) for Nevis, 1683-1715
CO 185/2	Nevis Acts 1664-1739
CO 243/2	Report of the commission to inquire into losses sustained by the inhabitants of St. Kitts and Nevis, during the French invasion of 1706; claims allowed, 1708
CO 441/11/1	Papers, Correspondence and Plans: Huggins (deceased): Clark's, etc: Nevis: No. 99, 1861-1892
E 190/1052/21	The Port of Plymouth. Official: Controller Overseas.
E 190/1149	The Port of Bristol. Official: Customer and Controller Coastal.
E 190/1240	The Port of Bristol. Overseas Outwards.
Prob/11/395 /185 1689	Will of John Combes (see Appendix 1)
Prob/11/459 /368 1699	Will of William Stapleton (see Appendix 1)
Prob/11/934 /30 1767	Will of Sophia Snow otherwise Tinker, Widow of Mile End Green, Middlesex, 4 November 1767

Eastern Caribbean Courthouse Records

In 2016-17 an Endangered Archives Programme (EAP) project 'Digitising the endangered historic records of Nevis in the Leeward Islands (EAP794)' digitised 18th- to 20th-century documentary records held in the Eastern Caribbean Supreme Court (ECSC) Registry, Charlestown, Nevis (Pearson and Small 2017). Most of the documents contain information not held elsewhere. The digitised records, which date from 1705 to the early 20th century, were made accessible online in 2020 (https://eap.bl.uk/project/EAP794).

EAP794/1/5/1 Wills 1763-1880	Wills 1763-1787
EAP794/1/1	Common Deed Record Books 1763-4
	Common Deed Record Books 1764-7
	Common Deed Record Books 1775-6
	Common Deed Record Books 1776-7
	Common Deed Record Books 1777-8

	Common Deed Record Books 1790-2
	Common Deed Record Books 1877-99
EAP794/1/8	Land Title Register 1887-1904

Other Archives	
Museum of London Docklands 2006.178	Collection of Letter Books and records relating to the West Indian Plantations owned by Thomas and John Mills, 1752 - *c.* 1780
Rylands Stapleton MSS	Papers in the Stapleton MSS., deposited in the John Rylands Library Manchester, UK in 1951 by Sir Miles T. Stapleton (Johnston 1965, 1).
Guildhall Library 9540/11	Clergy of the Church of England Database (https://theclergydatabase.org.uk/jsp/search/index.jsp)
Guildhall Library MSS	Commissary Court Cause Papers
Herefordshire Archive Service BK 52/41	Overseers accounts, parish meetings, 1765-1783, 1644-1791, including copy will of Thomas Ayson of Bristol, merchant, 1664
Nottingham-shire Archives DD/2103/7/1	Will of John Tinker, Governor and Captain General of the Bahamas, 5 July 1754

Abbreviations

BNF	Bibliothèque Nationale France
DAACS	Digital Archaeological Archive of Comparative Slavery
EAP	Endangered Archives Programme
NHCS	Nevis Heritage and Conservation Society, Charlestown
NML	National Museums Liverpool
TNA	The National Archives, London (formerly the Public Record Office)

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Searching for the 17th Century on Nevis is the first of a series of monographs dedicated to the archaeological investigation of the landscape, buildings and artefacts of the Eastern Caribbean by the Nevis Heritage Project. This volume presents the results of documentary research and excavation on two sugar plantation sites on the island of Nevis. Upper Rawlins, located high on Nevis mountain, was occupied in the late 17th and early 18th century and abandoned early. Fenton Hill was occupied from the mid-17th to the mid-19th century and originated with an earthfast timber building, probably a dwelling house, later converted to a kitchen and encapsulated in stone about 1700. The adjacent main house was probably destroyed in the French raid of 1706 and rebuilt in timber. The final occupation was by Portuguese Madeiran labourers, who were introduced to fill a labour force shortage in the 1840s.

Detailed reports on the finds assemblage include discussions of the handmade, bonfired Afro-Caribbean pottery made by enslaved African women, imported European ceramics and glass, clay tobacco pipes, metalwork and building materials. The dominance of imported goods from south-western England demonstrates the strong mercantile links between Nevis and Bristol, but local Nevis production of ceramics adds new insights into the estate-based ceramic production on European lines.

Dr Robert Philpott MCIfA FSA is a researcher at the University of Liverpool, with interests in post-medieval archaeology of colonial settlement in the Caribbean, material culture and the Roman and later archaeology of North West England.

Professor Roger Leech MCIfA FSA, formerly Head of Archaeology for the Royal Commission on the Historical Monuments of England, now Visiting Professor in the Department of Archaeology at the University of Southampton, has published widely on urban archaeology and architecture, and the historical archaeology of the Caribbean.

Dr Elaine L. Morris MCIfA FSA is Visiting Fellow at the University of Southampton (UK) with interests in prehistoric and colonial archaeology in the Caribbean and prehistoric ceramics in Britain.

UNIVERSITY OF Southampton

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