

CORNISH ARCHAEOLOGY

No 35 1996



HENDHYSCANS KERNOW

COVER: Bant's Carn Entrance Grave, St. Mary's, Isles of Scilly, after restoration.
Drawing by Roger Penhallurick (previously used on the cover of No. 15, 1976)

Cornwall Archaeological Society 1996

President

Martin Fletcher MIFA, MAAIS

Vice-Presidents

Mrs C. Gaskell-Brown MA, AMA, FSA, FRSA

Miss D. G. Harris MA

C. A. R. Radford MA, HonDLitt, FBA, FRHistS, FSA

Professor A. C. Thomas CBE, DL, DLitt, FBA, FSA, FRHistS

Joint Hon Secretaries

Mr and Mrs B. Hammond, 7 Porthmeor Road, Holmbush, St Austell PL25 3LT

Hon Treasurer

Miss U. M. Davey, 8 Dunheved Road, Saltash PL12 4BW

Hon Editors

Cornish Archaeology (this volume): P. Gathercole MA, Roseland Cottage, Veryan Green, Truro TR2 5QQ, and C. Murphy MPhil, PhD

Newsletter: H. L. Douch BA, 2 Enys Road, Truro TR1 3TE

General Committee

Ex-Officio: President, Vice-Presidents, Joint Secretaries, Treasurer, Editors, Membership Secretary

Elected: Mrs M. O. Avent, Mrs V. Brokenshire, H. L. Douch, S. Hartgroves, P. Herring, D. Hooley, N. D. Johnson, P. Lowndes, Mrs H. Quinnell, P. Rose

Co-opted: A. Langdon, Ms J. Wood

MEMBERSHIP OF THE SOCIETY is open to all interested in the history and material culture of Cornwall and the Isles of Scilly (persons under 14 being admitted at the discretion of the General Committee). The AGM usually takes place in the Spring. Enquiries about membership should be sent to: Miss I. Wood, Saveock Mill, Greenbottom, Chacewater, Truro TR4 8QQ. Requests for any of the Society's publications should be sent to Miss M. Y. Morgan, 26 Park View, Truro TR1 2BW

CONTRIBUTIONS to *Cornish Archaeology* or the *Newsletter* should be sent to the appropriate Editor

PRICE of this volume to non-members: £18

CORNISH ARCHAEOLOGY

No 35 1996

EDITORS

PETER GATHERCOLE and CONN MURPHY

(Issued 1999)

CORNWALL ARCHAEOLOGICAL SOCIETY



Frontispiece Halangy Down from the air: the excavated building remains, chambered cairn, and ancient fields are on the hill-slope
(Photograph; University of Cambridge Committee for Aerial Photography)

HALANGY DOWN, ST.MARY'S,
ISLES OF SCILLY,
EXCAVATIONS 1964-1977

PAUL ASHBEE

with contributions by

**B.M. DICKENSON, GEOFFREY W. DIMBLEBY, ROWENA GALE,
ALEC GRAY, B.R. HARTLEY, ALISON LOCKER,
JOHN SAMUELS AND D.F. WILLIAMS**

CORNISH ARCHAEOLOGY No 35, 1996

© COPYRIGHT CORNWALL ARCHAEOLOGICAL SOCIETY 1999
No part of this volume may be reproduced without permission of the Society and the
relevant author

ISSN 0070 024X

Typeset by Input Digital, Bodmin (01208) 75920
Printed and bound by Blackfords Print, St. Austell (01726) 63638

CONTENTS

1.0	PREFACE	9
2.0	SUMMARY	11
3.0	INTRODUCTION	12
3.1	The site and earlier investigations	12
3.2	Geology and topography	17
3.3	Halangy: its sites and structures	18
	The Earlier Period	18
	The Halangy Porth settlement remains	18
	The ancient fields	19
	The chambered cairns	20
	Cists	20
	The Later Period	20
	The later settlement	20
	The cist grave cemetery	23
3.4	Demolition and stone-robbing	24
3.5	The 1964-1977 excavations	25
3.6	Dates and phases	28
4.0	SITE DESCRIPTION	30
4.1	The remains of the initial structures on Halangy Down	30
	Features which preceded the ancient fields	30
	Features preceding the building aggregate	31
4.2	The lower slope sequence of structures	33
	The northern demolished structures F1 and F2	34
	The central, near-rectangular building B	34
	The southern structure C, with its rectilinear annexe	38
4.3	The courtyard house and its components	43
	The large oval chamber A	43
	The courtyard aedicule	47
	The circular chamber D	47
	The courtyard	52
	The courtyard's entrance and its modification	55
4.4	The northern oval chamber G	57
4.5	The megalithic field-wall remnants H and J	60
4.6	The walls and fields at Bar Point	61
5.0	THE MATERIAL CULTURE: DESCRIPTIONS AND COMPARISONS	67
5.1	Introduction	67
5.2	The bronze and iron brooches	67
5.3	Bronze fragments... ..	70
5.4	Iron objects	70
5.5	Iron slag... ..	70
5.6	Modern non-ferrous metal objects	71
5.7	Beads	71
	Glass	71
	Fine Stone	72
5.8	Shale	73
5.9	Glass	73
5.10	Spindle whorls	74
	Found in 1950 in the oval chamber (A) of the courtyard house	74

	Stone	74
	Ceramic	75
	From the 1964-77 excavations	75
	Stone	75
	Ceramic	76
5.11	Slate disc	76
5.12	General Comments	77
5.13	The pottery	77
	The pottery from the 1950 excavations	77
	The pottery from the 1964-77 excavations	78
	The Halangy Down pottery, by John Samuels, with D.F. Williams	81
	The Samian Ware, by B.M.Dickenson & B.R.Hartley	88
	Bar Point: The pottery	89
	Pieces of fired clay	89
5.14	The flint industry	90
	Raw material	92
	Waste material	92
	Artifacts	92
	Pieces of calcined flint	93
	General comments	94
	The Bar Point flint industry	94
5.15	Quartz	95
	Hammer-stones	95
	Choppers	97
	Points	97
	Scrapers	97
	Flakes	97
	Beach-pebbles	97
	Featureless nodules	97
	Burnt pieces	97
	General considerations	97
5.16	Beach-pebbles	98
5.17	Whetstones	98
5.18	Perforated pebble-hammer	100
5.19	Stone equipment, light and heavy	100
	Elongated beach-pebbles	100
	The square granite mould	102
	Heavy stone equipment, an introduction	104
	Post-socket stone	104
	Structural pivot-stones	104
	Entrance jamb-stone	106
	Flat cup-marked stones	106
	Saddle-querns	106
	Trough- and saucer-querns	106
	Mortar	107
	Rotary-querns	107
	Upper stones for saddle-, trough- and saucer-querns	109
	Pounder	112
	Fashioned rectangular slab	112
6.0	ENVIRONMENTAL MATERIAL: DESCRIPTIONS & COMPARISONS	113
6.1	Introduction	113
6.2	The bird bones, by Alison Locker	113
6.3	The fish bones, by Alison Locker	115

6.4	The mammal bones, by Alison Locker	...	...	...	...	...	118
6.5	The marine and non-marine molluscs, by Alison Locker	...	...	...	...	...	126
6.6	The pieces of charcoal, by Rowena Gale	...	...	...	...	...	127
	Introduction	...	...	...	...	...	127
	Materials and methods	...	...	...	...	...	127
	Results	...	...	...	...	...	127
	Samples selected for C14 dating	...	...	...	...	...	129
7.0	GENERAL CONSIDERATIONS	...	...	...	...	...	130
7.1	Halangy Down before its buildings	...	...	...	...	...	130
7.2	Scilly's sanding and the move to Halangy Down	...	...	...	...	...	131
7.3	The buildings on Halangy Down	...	...	...	...	...	132
7.4	The environmental material	...	...	...	...	...	137
7.5	The limpet-shell middens	...	...	...	...	...	138
7.6	The supportive landscape	...	...	...	...	...	140
7.7	Material culture and change	...	...	...	...	...	141
	PLATES	...	...	...	...	...	143
8.0	ADDENDA AND ESPECIAL STUDIES	...	...	...	...	...	169
8.1	Alec Gray's 1935 excavation	...	...	...	...	...	169
8.2	Dates of excavations on Halangy Down	...	...	...	...	...	171
8.3	The soil pollen, by Geoffrey W. Dimbleby	...	...	...	...	...	171
8.4	Conservation and preservation	...	...	...	...	...	174
8.5	Measurement Archive for the Mammal and Bird bones, by Alison Locker	...	...	...	...	...	176
8.6	The pieces of charcoal, genera and locations, by Rowena Gale...	...	...	...	...	...	183
	BIBLIOGRAPHY						188

1.0 PREFACE

The stone-robbled building remains on Halangy Down are among Scilly's best known monuments of early antiquity. In 1948 they were placed in the Guardianship of the Ministry of Works by the Duchy of Cornwall. During 1949, the then Chief Inspector of Ancient Monuments, B. H. St. J. O'Neil, visited the present writer's Porth Cressa cist cemetery excavation. After a joint visit to Halangy Down, the site was discussed and an invitation to excavate was extended on behalf of the Ministry of Works, as a preliminary to conservation. This offer was gladly accepted and work was undertaken during the summer of 1950. Bryan and Helen O'Neil, then at work on St. Martin's, were frequent visitors and every aspect, as well as the character of adjacent remains, was deliberated. Before further operations could be devised, Bryan O'Neil's untimely death intervened. In the event, it was not until 1964 that a programme of excavation began, this time at the invitation of Andrew D. Saunders, Inspector of Ancient Monuments for England, later Chief Inspector. It is a pleasure to acknowledge his continual support, manifest in his many and regular visits while work was in progress. He had taken part in O'Neil's undertakings and thus appreciated his verve, originality and intentions. It is therefore apposite that this account of the excavation of Halangy Down be commemorative of the many Scillonian excavations of Bryan and Helen O'Neil.

On Scilly the enterprise was given enhanced detail by the recollections and intimate local knowledge of J.H.(Joe) Treneary who had assisted Alec Gray's pioneer investigations during the 1920s and 1930s. Peter and Mary Mackenzie, stalwarts of the Isles of Scilly Museums Association, aided in manifold ways and provided storage, while Roland Phillips, Clerk to the Islands' Council, always a helpful visitor, was ever ready to lend his survey equipment. An especial debt of gratitude is owed to Major H. Maclaren, Resident Land Steward of the Duchy of Cornwall, who was often able to provide temporary accommodation for the many who worked on Halangy Down. It is pleasant to, at last, be able to make this formal expression of great and sincere appreciation.

From the outset, my wife Richmal C. L. Ashbee shouldered the considerable burden of arrangement and administration that a large-scale excavation engenders and who dealt with the recording and care of finds, an onerous and considerable task to which, in later years, our daughter Catherine, made a substantial contribution. To my wife's help and searching critical standards, especially in the preparation of this report, my debt is considerable. To cite William Stukeley and William Borlase, the eighteenth century antiquaries (they corresponded but never met) "*...it would be difficult to say whether so nice taste in the Remains of Ancient Time most recommended a young Lady*" and the "*...happy connection with one who took more than her part of domestic cares*".

At the beginning, Kenneth Wilson was the site assistant, to be succeeded by Clifford Long FSA. As principal site assistant he was responsible for dealing with the many and complicated survey problems as well as for the preparation and nomenclature of the overall plan of the buildings and the cultivation terraces. In addition, and with support, he undertook the detailed feature recording and section preparation. During the concluding seasons, Lionel Taylor managed the mechanics and endeavours of the helpers, while Terence Carney supervised the excavation of specific features including the chambers of the courtyard house. Under supervision, an excavation, which often involved the removal of substantial displaced stones, was carried out by helpers who were a changing band of largely senior schoolboys, undergraduate and graduate students. Their capacities and energies were at all times greatly valued. They were led by a cadre that has made a career in archaeology and related professions, notably Terence Carney, Naomi Field, Ian Graham, John Samuels, Kevin Stubbs and Anne Tonkin.

Sterling services were rendered by C. W. Carpenter, W. Fryer and W. J. Knapp, the Superintendents of Works for the South. Especially memorable occasions were the replacement of the fallen Bant's Carn coverstone and the raising of the great cup-marked slab, undertakings which they personally supervised. With them was the Works Architect, V. Brown, who superseded H. G. Slade, our architect at the beginning. On Scilly, J. Semmonds and T. Hall, the resident foremen, were ever ready to help when called upon. Surveyors from the Ministry of Works (subsequently the Ministry of Public Building and Works, then the Department of the Environment and latterly English Heritage), namely D. H. Henderson and W. A. Wilkins, also worked with us, and whose

admirable plans have been integral to the site's understanding. When the nature and extent of the site became evident, visits were made by Arnold J. Taylor, Chief Inspector of Ancient Monuments, T. A. Bailey, Senior Architect in charge of the Ancient Monuments of England & Wales, G. Heritage, Architect in charge of the Ancient Monuments of South West England and A.W. Cunliffe, Assistant Secretary of the Ministry of Public Building and Works. Later, Oswin Craster, Senior Inspector of Ancient Monuments, was able to see the near-conserved area. The Rt. Hon. Harold Wilson, M.P. (Lord Wilson of Rievaulx) came to the site several times during the early years.

The comments and suggestions of fellow archaeologists who visited Halangy Down were greatly valued. Dorothy Dudley captained memorable voyages to view Nornour, Sarnia Butcher explained that remarkable site's early phases. Patricia M. L. Christie came over from Carn Euny, while Florence Nankivell was both visitor and helper. Charles Thomas saw various stages of the excavation and his assistance with the nuances of the post-Roman pottery was especially appreciated.

Grateful thanks is given to those who have contributed specialist reports and other material to this monograph. Dr. John Samuels FSA studied the numerous pieces of pottery from the site and extracted a signal narrative from this refractory source.

When combined with the sherds recovered in 1950, this has firmly established Halangy Down within Scilly's evolving cultural context. Alec Gray's narrative was most kindly made available, by his son Michael, via the good offices of Peter Mackenzie in 1965. Later, the present writer had a memorable meeting with Alec Gray when the site was discussed. Professor G.W. Dimbleby FSA, with his assistant Philip Porter, came to Scilly in 1965 and his initial inquiry led to the broader based environmental investigations that have now been carried out on Scilly. Dr. M. Townsend studied Scillonian limpets, Dr. Alison Locker the bird, fish and mammal bones and Dr. Rowena Gale the charcoal fragments.

Sarah Jennings FSA, of the English Heritage Central Unit, drew the line illustrations of the metal, flint and stone artifacts. Her skill and perception led to various suggestions which have enhanced presentation.

English Heritage has been helpful and supportive at all stages in the preparation and production of this excavation report. At the outset, in 1987, Francis Kelly, Inspector of Ancient Monuments, with a responsibility for *Guardianship Sites*, now *Properties in Care*, was the conduit for their concerns. From 21 February 1989, that task was taken over by Brian Davison FSA, Head of the *Historic Branch of Properties in the South West*. In this he has been aided by his friendly and resourceful assistant, Carole Owen. Academic endeavour, like military enterprise, needs a secure, soundly administered, base. This has been their much appreciated contribution to Halangy Down.

Halangy Down, one of Scilly's first Guardianship sites, is accessible to all, and the archaeological material from the excavations has been deposited in the Museum of the Royal Institution of Cornwall, at Truro

This account of the Halangy Down Excavations was sent to the then Editor of *Cornish Archaeology* in September 1995. Sadly, uncontrollable circumstances have delayed its publication by four years. Nonetheless, unsanctioned citations suggest that it may have been widely perused with intent. Notwithstanding, Peter Gathercole, currently our Society's President, has cut the Gordian knot and, thanks to a generous grant from English Heritage most kindly arranged by Messrs. Brian Davidson and Francis Kelly, the full report is at last in print. His endeavours have been ably supported by Dr. Conn Murphy, of Darwin College, Cambridge, who has mastered the many refractory problems engendered by the situation. Thus, to them, the author's sincere thanks and appreciation.

2.0 SUMMARY

The Halangy Down homesteads, a cluster of stone-built structures, lie on a steep, west facing slope at the northwest corner of St. Mary's, the largest island of Scilly. Robbed of much of their stone for pier-building, they were noticed archaeologically at the beginning of this century and, thereafter, sporadically investigated. An initial excavation was carried out in 1950 and further work from 1964 to 1977.

A precursory settlement, now largely destroyed by the sea, in Halangy Porth, was abandoned because of blown sand. In about 400 BC a move was made to higher ground, the slope-engirdling, stone-revetted, terraced fields, upon some of which were chambered cairns. Some buildings probably preceded this considerable field system. The building aggregate utilised massive retaining field walls as foundations. A clear succession of building construction modification and dismantlement was defined upon the lower terrace. In one disused area a limpet shell midden had accumulated. Eventually a courtyard house, comparable with the Penwith series, was built, by alteration and addition, higher upon the hillside. A further massive oval building stood separately to the north of the series as did a megalithic field wall which incorporated a circular chamber.

Living quarters were denoted by sanded floors and stone slab hearths while other areas may have housed livestock and industrial processes. Keeping-places, smaller chambers and aedicular domestic shrines were within the thick, stone-faced, earth-infilled walls (O.E.D., *aedicule*: a small house or room; a niche). A group of bronze Romano-Scillonian brooches, found beneath a floor-level, in front of one of the *aediculae*, may have been a votive deposit.

Because of disturbance there was little stratigraphy and few things were found in significant situations. The pottery was fragmentary, although beads, spindle whorls and other small objects were largely undamaged. There were imported pieces in the flint assemblage and quartz was worked, while granite beach-pebbles were regularly used. Besides bowl, saucer, saddle and rotary querns, the heavy stone equipment included a piece of a mould for casting pewter dishes.

As in the earlier settlement, the subsistence economy was based upon coastal and maritime catching, and gathering, supplemented by crops and livestock. At the outset, life on Halangy Down was a continuum of the patterns of an earlier age. Romano-Scillonian times, however, may not have been without a veneer of sophistication. Besides the brooches, there was fine pottery from the mainland, Rhenish vessels and Gaulish Samian ware. Fish and marine oil may have been exported to the urban centres of Britain and Gaul.

Post-Roman grass-marked and other pottery shows that occupation continued into Early Mediaeval times. All in all, the settlement was occupied for about a millennium.

3.0 INTRODUCTION

3.1 The site and earlier excavations

The Isles of Scilly lie twenty-eight miles southwest of the Land's End, the western extremity of Cornwall, and are England's last outpost, for beyond is the Atlantic Ocean. St. Mary's (Figs 1, 2) is the largest, and most intensively cultivated, of the five inhabited islands. Halangy Down (NGR SV 910124) is the lower, steeper, slope of the descent from Telegraph hill (Ordnance Survey Bench Mark 166.3 ft) to the sea at Halangy Porth and Point This escarpment faces Crow Sound, which separates the northwestern part of St. Mary's from the neighbouring island of Tresco (Pl 1) The hillside is sheltered from northeasterly and easterly inclement weather, but is fully exposed to the southwest and west. Halangy Down, and the arresting chambered cairn (St. Mary's 2) on its crest, is often referred to as *Bani's Carn*. The actual *Bani's Carn* was a considerable granite ridge, adjacent to and NE of Halangy Point. Its seaward end was removed when an artillery emplacement was constructed during the last decade of the nineteenth century and quarrying has largely accounted for the remainder (Gill, 1975, 44). At the present time the northwestern part of St. Mary's is dominated by the high steel masts of the Decca Navigational Aid installation, erected upon land adjacent to Macfarland's Down.

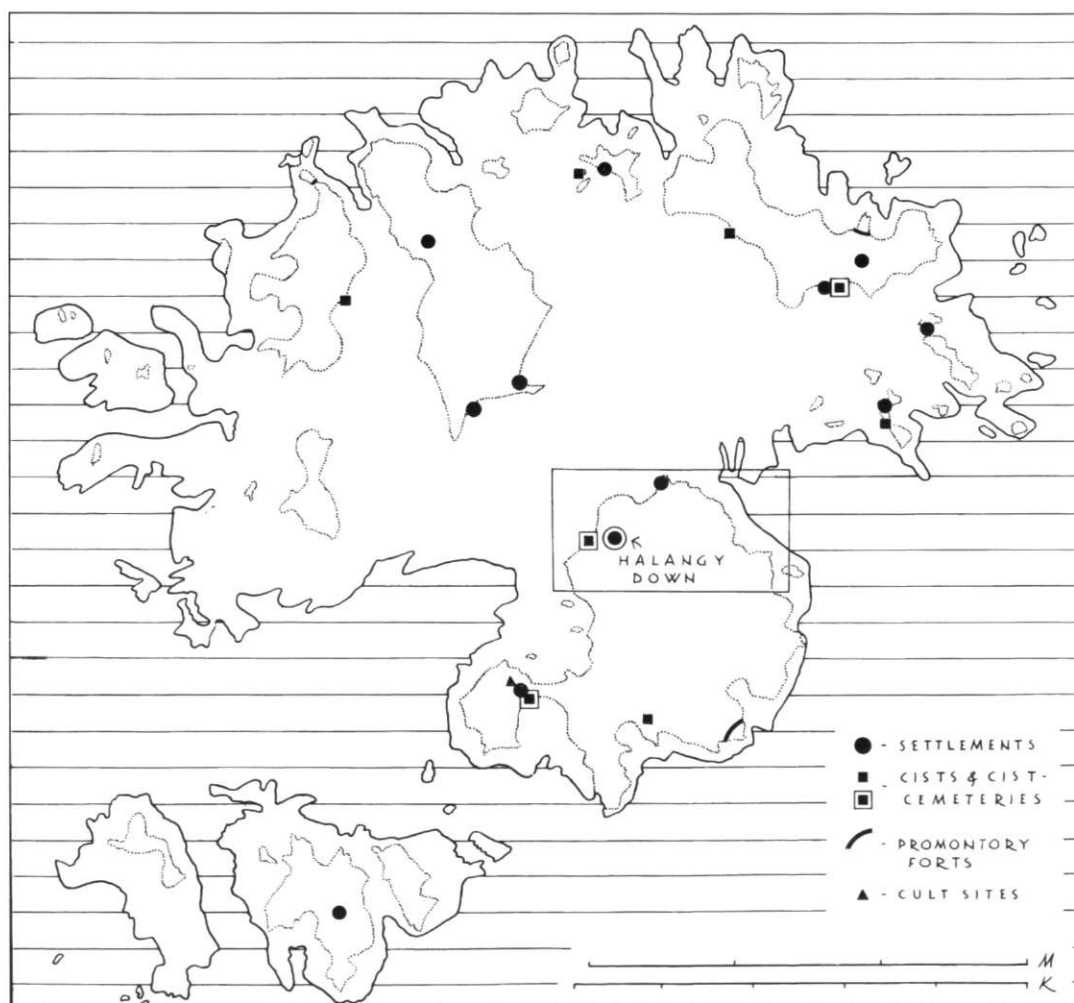


Fig 1 The Isles of Scilly and Halangy Down in Iron Age and Roman times

Halangy was established by the Ordnance Survey in 1887-88. (CORNWALL (ISLES OF SCILLY) SHEET LXXXVII N. E.), following Graeme Spence's record of *Halangy Pt.* on his 1792 map. It echoes *Hablingy*, the land holding recorded by William Borlase (1756, 33). This could derive from a noun (*heyl* or *hehil*, two syllables) meaning estuary or sea-inlet, recalling, perhaps, the large bay in the southern coast of the now largely submerged single island (Fig. 1), although it has been said that the recorded name forms are all very late (Thomas, 1985, 45; Padel, 1985, 127). An alternative is possible. A compound incorporating *hal*, moor or marsh (Padel, 1985, 125), from the swampy low-lying land of the erstwhile island (see below), and *lann*, enclosed cemetery (Padel, 1985, 142), an allusion to the hill foot cist-graves (Ashbee, 1979, 74), or perhaps even to a specific secular enclosure, could be considered, which accords with the topography and remains. *Down*, in the sense of an open expanse of elevated land, is the term applied to Scilly's heathy high ground (Lousley, 1971, 67-9). *Porth*, however, for Halangy Porth is at the bottom of Halangy Down, is a term, with Cornish antecedents, denoting an inlet or beach where a boat can be grounded (Thomas, 1979, 231; 1985, 37; Padel, 1985, 190). Scillonians customarily refer to Halangy Porth as *Lingy Par* (Ashbee, 1966, 21) and, indeed, to the whole area as *Lingy*, which recalls Borlase's *Hablingy*. *Par* or *por* is merely *porth* truncated.

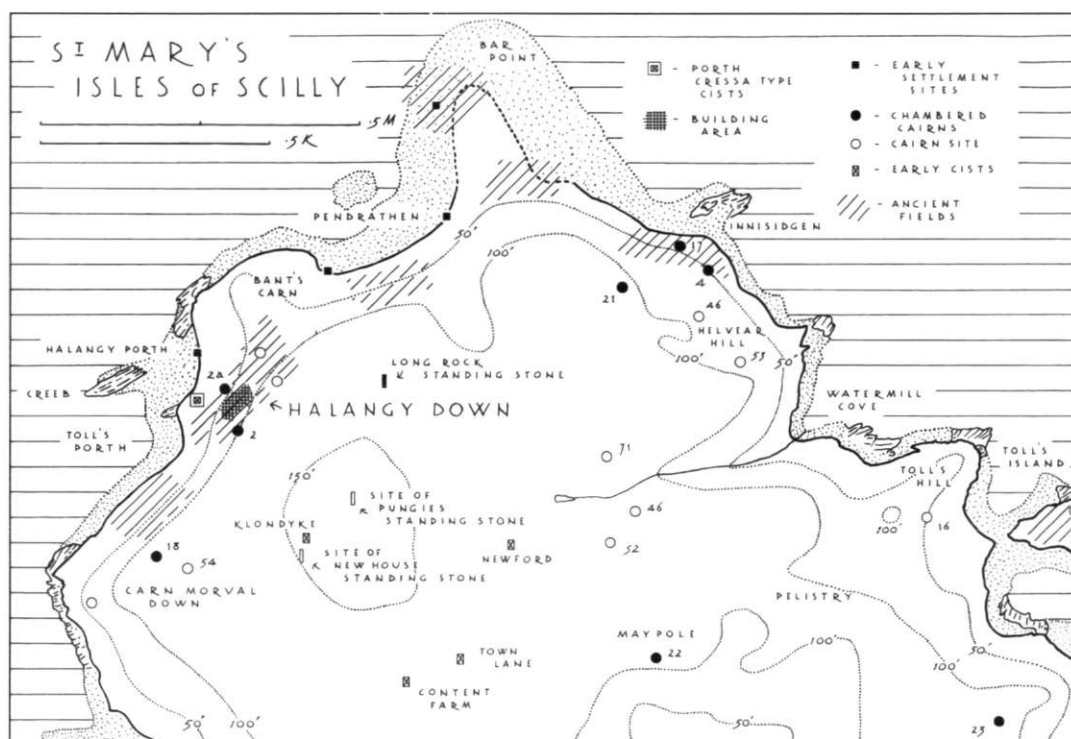


Fig 2 Halangy Down and the northern part of St. Mary's

In his *Itinerary* John Leland (?1506-1552), the antiquarian-topographer (Kendrick, 1950, 45-64) observed of Scilly (Heath, 1750, 38; Toulmin Smith, 1907, 190; Pearse Chope, 1967, 24) that there "... appere tokens in diverse [of] the islettes of habitations [now] clene down". This sixteenth century remark does not necessarily refer to ancient structures, but before the wholesale employment of stone for fortifications and harbour works, Halangy Down and other comparable sites would have loomed large in the Scillonian landscape and thus could have excited this laconic comment.

Prior to the present century, there are few allusions to Halangy Down or Bant's Carn. Robert Heath (1750, 97) includes 'Banscaron' in his list of "Divers places which require nothing very

particular to be said about them". William Borlase (1756, 33) footnotes some 'Tenements' which includes 'Hablingy' and observed that *Bant's Karn* had its name from the family of the *Bants* (1756, 40). John Troutbeck (1794) mentions "a small village called *Bant's Farm*, a quarter of a mile W. by S. from *Toll's Hill*", saying that it was divided into three "tenements". This comment was cited by Isaac North (1850, 111) who wrote that "Though the situation assigned to this farm, "divided", as he tells us, "into three tenements", does not direct us to the heap of rocks which now bears the name of *Bant's Carn* yet, doubtless, the sentence which I have quoted explains the origin of that name. To the South West of this carn is a barrow in very good preservation. It has three top or covering stones; and its sides are secured by flat stones ... It is about twelve feet in length, three feet six inches wide, two feet six inches in height. On the Downs, to the East-South-East of this, there is another barrow from which the top stones have been removed".

In his verses upon the extension of the New Pier in 1889, Robert Maybee, the Scillonian poet (Scilly Mus., 1973, 45), refers to the coast "down to *Carne Thomas*" being "worked" for stones which were shipped to the harbour in barges. Boulders, patently removed from Halangy Down's ancient structures, lie at the foot of the slope and close by are the ramps, dug down through the cliffs, into Halangy and Toll's Porths from which the barges would have been loaded. Many display signs of splitting and there is evidence of the use of explosives to displace outsized boulders and demolish a chambered cairn. Pulled-down walls, split stones and discarded breaker's iron *feathers* were regularly encountered.

In 1899, George Bonsor (Hencken, 1932, 29-30; 1933a, 16, Fig 4; Ashbee, 1980, 54; 1983, 5) investigated the remains of stone-built huts and the considerable limpet-shell midden exposed in the low cliffs of Halangy Porth. It is not known to what extent he examined the building remains on Halangy Down although a record may remain amongst his archives held at the *Castillo Mairena del Alcor*, in Spain. At about the same time Alexander Gibson made a photographic record of what was thought to be a small hut (Ashbee, 1955, 187) and C. J. King, of the St. Mary's Pharmacy, in Hughtown, records (King, 1932, 17) that "Mr. Bonsor ... found the circular foundations of many huts on the hillside just above [Halangy Porth] - the remains no doubt, of a prehistoric village". Hugh Hencken (1932, 30) mentions (on Halangy Down) that "A careful search through the ... underbrush reveals the stone foundations of a number of tiny round huts" He hazarded that this "...village would surely seem to represent the homes of the people who threw their rubbish on the neighbouring midden [Halangy Porth] and whose grave was the chambered barrow [St. Mary's 2] a little way up the hill".

For some fifteen years up to 1936, Alec Gray was living on St. Mary's, at Bant's Carn Farm adjacent to Halangy Down, and during this time he carried out a prescient pioneer study of the archaeology of the islands and in 1935 partially excavated (Fig 3) what proved to be the larger chamber of the courtyard house high on the hillslope (Section 8.1; Gray, 1972; Ashbee, 1955). He exposed the internal wall face and a stone-lined drain. His work is best summarised in his own words:

"Before I partially cleared this building in 1935, it was completely buried, the exposed corner of one stone being the only indication that anything of interest lay beneath the soil ...

An inexplicable feature of the filling of the hut was the number of large blocks of granite it contained. These were in all sorts of positions and at all depths, and were much too large to have fallen from the walls or to have formed part of a partition. There were traces of hearths close to the wall at two places: these contained ash and burnt earth but nothing else, and were just hollows in natural ram ...

The only large stone of any interest which was found, was a slab of granite, more or less square, having across the centre of one of its edges a deep groove, obviously made by friction. The stone was not in situ, and its use is obscure.

The only covering stone of the lower drain which remained in place, proved to be the lower stone of a beehive quern in excellent preservation ...

The filling [of the hut interior] was much disturbed, and this disturbance had probably taken place in ancient times. There were no definite floor levels or stratification ..."

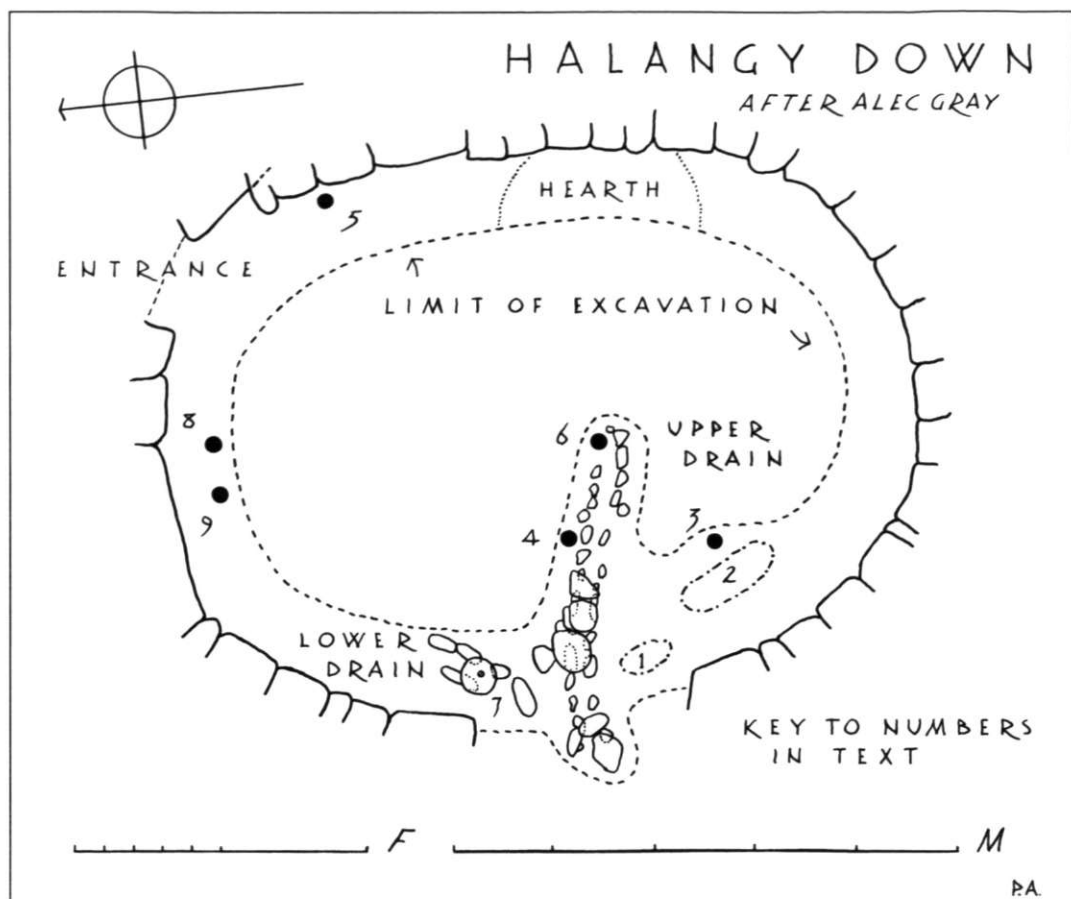


Fig 3 Alec Gray's plan of his excavation of the large oval chamber, A, of the courtyard house, carried out in 1935

He observed that pottery was scarce and, apart from a few small rough hand-made pieces, only two fragments of wheel-turned ware came to light. This investigation corrected Hencken's (1932, 30) view of the 'huts' as the abodes of those whose midden was exposed below in Halangy Porth.

Geoffrey Grigson (1948, 63) noted that just beyond the chambered cairn (St. Mary's 2) "... deep in gorse and brambles and hard to detect except in winter, are grouped the circular depressions of a village of round huts, the only one of its kind so far detected in Scilly". He also deplored the fact that when he wrote "Not a single site on the islands ... is properly safeguarded as an ancient monument".

B. H. St. J. O'Neil, Chief Inspector of Ancient Monuments for the then Ministry of Works since 1945, first visited Scilly in 1947 and thereafter annually until his untimely death in 1954 (Ashbee, 1974, 33-5; Beagrie, 1989). As a result of his investigations and negotiations, seven ancient monuments were placed in the guardianship of the Ministry of Works by the Duchy of Cornwall, those on Tresco with the agreement of Major A. A. Dorrien-Smith DSO. The so-called 'Ancient Village' on Halangy Down was included. O'Neil (1949) wrote the Ministry's guide to these monuments and this, a model of its kind, was in the form of an archaeological and historical study which enabled their relationship, one to another and to the many other monuments, to be appreciated. His examination of Halangy Down led him to write (O'Neil, 1949, 10) that

"The Ancient Village at Bant's Carn, in spite of its nearness to the Burial Chamber (St. Mary's 2)), is not likely to be of so early a date as that tomb. It consists of isolated round huts having a diameter of about 25 feet, built of large, well-laid, granite blocks. Paths and garden plots or small fields may also be detected, but much excavation will be needed before the complete plan can be ascertained. By comparison with similar huts in North Wales and the portion of a single hut recently found on the shore of St. Martin's, these huts at Bant's Carn may be assigned provisionally to the Roman period. Their walls probably once stood up to 6 feet in height and upon them, with assistance perhaps from vertical posts set in the floor, rested a conical roof of reeds, heather or turf. A single doorway gave access to the interior and may also have been the only way of admitting light. It may be presumed that each hut housed a family. Nothing is known of the means of subsistence of the time except that the presence of Roman pottery in the St. Martin's hut, along with a piece of tin ore, suggests that the inhabitants acquired Roman products in exchange for tin or for their own labour in getting the tin".

A contracted version of this description of the Halangy Down site was in the reprint of O'Neil's guide-book issued in 1950, while further editions and impressions appeared in 1961, 1964 and 1969. In these it was additionally observed that *"There is no other concentration of dwellings or village in the islands, although there are some isolated houses. There may once have been others now under the sea. The houses themselves have a possible relationship with the 'courtyard houses' of West Cornwall which can be seen in the ancient village of Chysauster"*.

As will be seen, a part of the structures on Halangy Down (Frontispiece & Pl1) is a courtyard house of West Cornish affinity (Hirst, 1937a) and it has also emerged that there were other sites of substance on Scilly, for example that examined on Nornour (Dudley, 1967; Butcher, 1978).

It was late in 1949, while conducting the excavation of the Hughtown, Porth Cressa, cist-grave cemetery (Ashbee, 1954), that the present writer, guided by J.H. (Joe) Treneary, was enabled to see something of the size and dispositions of the structural remains on Halangy Down. Indeed, the walls, rubble and drain, bared by Alec Gray's trenches more than a decade previously, were still clearly visible although the walling photographed by Alexander Gibson could not be located. A further visit in 1949, with B. H. St. J. O'Neil, and time spent beating through the brambles and bracken that enshrouded the hillside, led to the belief (Ashbee, 1955, 187) that the 'village' consisted of about eleven apparently isolated huts, together with a system of paths and garden plots.

Excavations arranged by B. H. St. J. O'Neil, for the Ministry of Works, were undertaken in 1950. This work, which began in late June and concluded in early September, was concentrated upon the component partially investigated by Alec Gray. Although, on account of his trenches, the relationship of internal features to hut walls had been destroyed, this previously partially examined structure was selected as one of the primary objects of these excavations was evidence regarding date and affinities. In the event, such evidence was obtained. Progressively, the interior, a subsidiary chamber, the lower wall and entrance were revealed (Ashbee, 1955, 190, Fig 2). At the same time clear indications were observed of adjacent structures and their general character gave grounds for comparison with the courtyard houses of the Cornish mainland (Hencken, 1933b; Hirst, 1937a). O'Neil's investigation of a site, similar to Halangy Down, on May's Hill, St. Martin's (Beagrie, 1989, 51) took place during July and part of August, 1950. Thus he was able to visit the excavation at its various stages while the present writer saw something of May's Hill, and other notable sites on St. Martin's, in his company.

The establishment of a Ministry of Works maintenance team on Scilly during the late 1950s enabled the brambles and bracken, which enshrouded and concealed the character of the site to be cleared. Also, a fire revealed, close by, a range of stone-revetted terraced fields, traced by Alec Gray, but scarcely appreciated in 1950 (Ashbee, 1955, 198). By 1963, a grass-clad slope extended to the crest of the hill and the great chambered cairn had been shorn of the bracken, brambles and small trees, all with roots that threatened the displacement of the structure's stones. However, downhill, from the 1950 'homestead' (Ashbee, 1955) to the track, leading to Halangy Porth, was an area, devoid of vegetation, strewn with a great and confused quantity of stones of all sizes. Apart

from a number of the larger ones from the 1950 excavations, they comprised the debris left from the use of the site as a quarry, when the new pier at Hughtown was built in the nineteenth century. Many large stones displayed patent signs of recent splitting with *jumper* and iron *feathers*, while smashed and broken stone abounded. The first task, before an excavation strategy could be contemplated, had to be the clearance of all such broken stone and other non-earthfast boulders from the site. It was at this juncture that the present writer visited Halangy Down in the company of Andrew Saunders, then Inspector of Ancient Monuments for England, and was asked to undertake further excavations in order that its nature and extent could be understood and its preservation as a Guardianship Monument facilitated.

In due course excavations were undertaken annually at Eastertide, for three weeks, from 1964 to 1972 and, thereafter, from 1975 to 1977. For the first three seasons work was chiefly confined to the area bounded by the 1950 'homestead' and the track leading to Halangy Porth, the lower part of the hillside. Subsequently, in 1968 and 1969, the grassed-over structures conjoined to this 'homestead' were examined. These, collectively, were considered to comprise a 'courtyard house', as, indeed, was suspected earlier. It also emerged that, for the most part, the uppermost structural remains on the hillside were the best preserved and that, with exceptions, little more than footings remained elsewhere. Between 1970 and 1972 work concentrated upon the northern span of the lower hillside, for the southern was bounded by an unambiguous destruction zone, and a recent field-wall with overt indications of ancient cultivation terraces beyond it. Here there emerged the footings of buildings that may have been modified, if not demolished, in antiquity while, contiguous, but higher, huge boulders remained from an edifice almost completely destroyed by the stone-robbers. The masonry photographed by Alexander Gibson (Pl 2) was the only remaining coherent feature. Also in 1970, the unseated and fallen proximal coverstone of the Bant's Carn chambered cairn (St. Mary's 2), was reinstated, as was a jambstone. A small excavation, primarily to resettle this stone, yielded a mass of early pottery (Ashbee, 1976). During 1975 and 1976 the patently early remains exposed in the low cliffs of Halangy Porth were examined (Ashbee, 1983) and a comprehensive survey of Halangy's sites and ancient fields made. In 1977 the catchment area was investigated and sand-covered field-walls and surfaces at Bar Point were bared (Ashbee, 1978).

Following the report upon the 1950 excavations (Pl 3), published in the *Antiquaries Journal* (Ashbee, 1955), interim accounts of the work undertaken between 1964 and 1970 have appeared in *Cornish Archaeology* (Ashbee, 1965, 1966, 1968, 1970). In 1965 Alec Gray's *Journal* of his work on Scilly between 1921 and 1936 became available and this, with its details of his 1935 Halangy Down excavation, has been edited with a commentary (Gray, 1972). A general but necessarily contracted, delineation of the work up to 1970, with an appraisal of the Halangy Down sites and monuments, was in the present writer's *Ancient Scilly* (1974). Since then, mention of Halangy having been made in a short study of culture and change on Scilly (Ashbee, 1973), details of the work at Bant's Carn and an examination of the nature of Scilly's chambered cairns have also appeared (Ashbee, 1976; 1982) as has an evaluation of George Bonsor's expeditions from Spain to Scilly, between 1899 and 1902 (Ashbee, 1980). The definitive report upon the 1975-6 excavations in Halangy Porth included details of a substantial assemblage of pottery, dug from the cliffs by Alexander Gibson in 1924, and a description of the associated ancient fields (Ashbee, 1983). A further plan of Halangy Down's early field system, with comments and illustrations of the area, is in *Exploration of a Drowned Landscape* (Thomas, 1985, Figs 46, 47). Latterly Halangy Down's structures, particularly the courtyard house, have been set into environmental and period context, in the present writer's *Ancient Scilly: retrospect, aspect and prospect* (Ashbee, 1986).

3.2 Geology and Topography

Halangy Down's geological solid is granite, for the Isles of Scilly are a number of flat-topped granite masses, collectively the remains of a granite laccolith, cloaked with the products of periglacial weathering (Barrow, 1906; Mitchell & Orme, 1967; Thomas, 1985, frontispiece). Thus Halangy Down has beneath its soil mantle the rubbly, ferruginous, concreted material termed *head* by H. M. Geological Survey. This is called locally, and in Cornwall where it also obtains, the *rabb* or *ram*. It is impervious and water accumulates and flows upon its surface. Essentially it is an

agglomeration of angular or subangular fragments of granite in an advanced stage of decomposition. In it there are sandy deposits usually called, on Scilly, *clay*, which, when removed and redeposited, dry hard, almost like mortar or cement. This contains quartz, orthoclase, felspar and mica which were, originally, combined by soluble silicates and iron. Such clay was used for flooring in the various buildings on Halangy Down, for even a thin layer is load-bearing and durable. Heath (1750, 67) mentions its efficacy as mortar for securing stone masonry while, until recently, it was regularly used for Scillonian road-surfaces.

At the foot of Halangy Down is a level area, fringed by Halangy Porth's low rabb cliffs, which are capped by blown sand. This sand (Barrow, 1906, 30-1; Lousley, 1971, Fig 2) is a remnant of the blanket that at one stage mantled much of Scilly's low-lying land, now overwhelmed by the sea. The islands are the sea-fretted remains of an erstwhile land-mass, a large, low, island, fringed with higher land and attended by smaller pieces (Thomas, 1985, 35-64). It has been shown that the waters between the present islands may only have become navigable at all tides in the sixteenth century (Fowler & Thomas, 1979, 182). On the level ancient surface, beneath the sand, are the remains of the earlier habitations, which preceded those on Halangy Down, now almost completely destroyed by the sea (Ashbee, 1983). Halangy Porth's level-land remnant was clearly sanded by Roman times because cist-graves (Fig 7) have been found dug into it (Ashbee, 1979a, 74-6).

In 1966, samples were taken from the low cliff of Halangy Porth with soil pollen in view. Excluding the blown sand, there was hillwash overlying unmodified head (Dimpleby *et al.*, 1981, 139-44; Section 8.3). The existence of an ancient soil was confirmed and an absence of tree pollen found although it was present on sites about a mile distant, indicating erstwhile woodland. Pollen taxa revealed types indicative of agriculture, arable and pastoral, and this could reflect a measure of the use of the ancient field system. This conclusion was found to apply in a wider context when a broader enquiry was undertaken.

Concurrently with the vegetational changes there had been soil-movement by hill-wash and wind erosion. The magnitude of the first is illustrated by the massive soil accumulation, retained by huge boulders, which had all but overwhelmed the chambered cairn (St. Mary's 2a) at the foot of the slope. Wind-erosion may be shown by the pockets of fine soil encountered when the soil, associated with the early circular house remnant in Halangy Porth, was removed (Ashbee, 1983, 15, Fig 6).

3.3 Halangy: its sites and structures

In their totality the sites and structures to be seen on Halangy Down (Fig 4), and exposed in the cliffs of Halangy Porth, comprise one of the more remarkable related sequences of prehistoric, and later, settlement, land-use and ritual monuments, extant in Britain. The prehistoric archaeological record of Scilly allows no more than the definition of *Earlier* and *Later* periods (Ashbee, 1974, 279-94; Thomas, 1985, 103). Thus the cliff-exposed remains in Halangy Porth, with their landward continuation, the associated terraces and the chambered cairns, are demonstrably *Early* while the structures on Halangy Down, built upon the cultivation terraces, and the cist-cemetery beneath the bulb-garden fringing Toll's Porth, are manifestly *Later*. Essentially, the earlier settlement was abandoned because of the encroachment of blown sand. Its inhabitants moved up the hill-side, on to the chambered cairn engirded field-system, into new buildings, which were used and progressively modified until post-Roman times.

It is not the intention, within the present context, to examine in detail Halangy's sites and monuments, other than the later structures on Halangy Down, for, at various times, work has been undertaken upon them and comprehensive accounts are available. With this in mind, no more than the salient attributes and affinities will be indicated.

The Earlier Period

The Halangy Porth settlement remains

Halangy Porth's ancient remains were examined by George Bonsor (Ashbee, 1980) in 1899, and a record made of the substantial midden then visible in the cliff. He realised that the pottery found there was of the same kind as that from the nearby chambered cairns (Hencken, 1932, 29-30; 1933a, 16, Fig 4). Over the years, pottery was collected from the site, notably by Alexander Gibson, while

topographical writers regularly referred to it. Alec Gray investigated the cliff-exposed features and traced others beneath the adjacent bulb-gardens (Thomas, 1985, 112, Fig 46). This was the basis of his extended study of Scillonian habitation sites (Gray, 1972). The midden was thought to have been inside a building and he recovered animal bones from it. He also found massive walling and collected about a hundredweight of pottery, including a large storage vessel. In 1949 and 1950, vestiges of Alec Gray's work were still to be seen and the walling's megalithic character even suggested the possibility that it might have been part of a sand- and soil-enshrined cairn chamber. In his narrative, which became available in 1965, pieces of this pottery were compared with examples from chambered cairns.

During 1975 and 1976 small-scale excavations were undertaken to elucidate the nature of the sand-sealed, cliff-exposed buildings for, despite the attentions of, notably, Bonsor, Gibson and Gray, there was neither plan nor positive evidence of affinity and date. These excavations (Ashbee, 1983) showed that the massive walling was the remnant of a substantial circular hut, apparently later than an adjacent sub-rectangular structure, and the associated pottery demonstrated relationship with the chambered cairns. Its quantity, always broken, and adherent residues indicated the organised rendering down of marine creature remains for oil, a contention supported by the character of the flint industry and stone artifacts. Seeds denoted garden cultivation, while grain impressions upon pottery and querns the uses of the nearby fields. After abandonment the buildings were dismantled, and some of the stone was used for the new structures on the hill-slope. After infill with soil from the slope-bottom accumulation, they may well have been used as sheltered garden plots.

The ancient fields

There are two groups of early fields on Halangy Down which belong to Scilly's *Earlier* period in that they can be shown as pre-dating either certain chambered cairns or else the buildings and courtyard house (Fig 4).

At the top and bottom of Halangy Down substantial lynchets, originally largely stone-faced, follow the contours. That at the top had the Bant's Carn chambered cairn (St. Mary's 2) sited upon it during its use-life (Thomas, 1985, 113, Fig 47b) while that at the bottom, which is considerable, partially conceals another chambered cairn (St. Mary's 2a) which, in the first instance, may also have been built upon a lynchet.

The long, rectangular, strip fields on Halangy Down, which lie between the lynchets at top and bottom, appear as serried terraces still, in places, stone-faced, which follow the contours of the slope. They extend from a point just to the southwest of Bant's Carn, where a closing wall links the end of two, perhaps three, terraces, to a recently ruined chambered cairn some 650ft to the north of that monument. This cairn appears to have been the terminal for a terrace, incorporated into a subsequent system, which lies along the 25m contour and continues the line of a partially destroyed early terrace wall. One of the lower terrace walls, upon which the buildings, the subject of this report, were sited, finishes without a closing wall or bank at a point coterminous with the ruined cairn. A higher and parallel bank or lynchet behaves in the same manner although it has also been incorporated into a later arrangement. Except at the southern end there are no closing walls or banks and fields, some 800ft in length and about 45-50ft in breadth, followed the contours of the hillside. Those higher and lower on the hillside were broader than those at the middle. A wall at right-angles, which appears to be a part of the earlier of the series of buildings on Halangy Down, may have subdivided one of these long fields, while another lynchet, from which the stones have been largely removed, could have approximately halved those higher up the slope.

Masses of small stones, termed *cobbles* (Ashbee, 1966, 24), were found adjacent to and beneath the buildings on the cultivation terraces. These cobbles can be compared with the spreads of flints that cultivation annually brings to the surface in, for example, Wessex (Fowler, 1981, 161). Here, large sarsen stones have been used as bank revetment, in much the same way as great granite boulders have been employed on Halangy Down (Fowler & Evans, 1967, 298).

At the southern end of these early embanked fields, a hollow way leads from Halangy Porth to higher ground. As Alec Gray observed (1972, 23), the fields terminate upon it. Thus it may have

been integral to the earlier landscape pattern, a route developed by those who peopled the Halangy Porth buildings. Access from level to level may have been via ramps, one of which survives at the southern end of the series.

The chambered cairns

There were formerly four chambered cairns on Halangy Down, each intimately associated with the earlier aspects of the ancient field systems. Two remain, the well-known Bant's Carn (St. Mary's 2) at the top and another (St. Mary's 2a), at the bottom of the slope. Two more are all but obliterated, one, patently, by the use of explosives. The Bant's Carn chambered cairn appears to have been sited upon a lynchet (Thomas, 1985, 113, Fig 47b), as does the dynamited cairn some 650ft to the north, while that at the bottom of the hill has been all but buried by the great quantity of accumulated slope-bottom soil, the lower lynchet. One of the two ruined cairns is also upon a modest field-margin lynchet while the other, like the Bant's Carn, was on the crest of the hill-slope.

Because of its, by Scillonian standards, grandiose dimensions, Bant's Carn has attracted considerable notice. At the inner end of the chamber, George Bonsor found four piles of burned human bones and, in the passage just outside the entrance to the chamber, broken pottery (Hencken, 1933a, 16, Fig 3; Ashbee, 1976, 16, Fig 4). He drew a remarkably accurate plan, supplemented by equally accurate sections (Hencken, 1933a, 14, Fig 1; 15, Fig 2; Ashbee, 1976, 13, Fig 2) which showed the, in 1949, fallen proximal coverstone and the displaced eastern jamb-stone *in situ* (Fig 5). These were replaced in 1970 (Pl 4) and a small excavation, to facilitate the displaced jamb-stone's resettlement, yielded a mass of pottery which supplemented that found by Bonsor and illustrated by Hencken (Ashbee, 1976).

Halangy Down Lower (St. Mary's 2a) was newly discovered when Hencken (1932, 24, 317) visited Scilly. Cairn and chamber are almost covered by a massive accumulation of hill-wash which is, at one point, almost 12ft in height (Fig 6). This has been retained by massive stones parallel to, and above, the chamber which has a narrow entrance and two remaining coverstones (Ashbee, 1976, 15, Fig 3).

The ruined cairn, some 650ft to the north of Bant's Carn (Ashbee, 1983, 9, Fig 3) and sited upon a low, but positive, lynchet, is now no more than a mattress of stones, the base of the erstwhile circular cairn. The lineaments of a chamber can be discerned and the whole is surrounded by a scatter of stones, many of which are splintered, evidence of the use of an explosive. Because of its proximity to a system of field-walls, the cairn at the crest of the hill has been even more systematically stripped of its stones. Indeed, only a grass-clad collar remains, which resembles a deep circular hut. The character of the jumbled, discarded, stones beneath the grass betrays its origins.

Cists

A cist, apparently in the vicinity of Halangy Porth, produced pottery pronounced by R. A. Smith, Keeper of British and Mediaeval Antiquities at the British Museum from 1928 to 1939, as being of the '*Megalithic Period of Scilly*' (Dowie, 1928-9, 243). The brief and only record reads: '*The sides and bottom of the cist were each composed of single slabs, the top by 5 separate slabs, all of granite. The internal dimensions were 3ft by 1ft by 1ft 6" high. Some of the sherds were decorated with incised and impressed motives*' (sic). Similar cists, found at no great distance from Halangy Down may well be related (Ashbee, 1952-3; 1974, 129, Pl 6c).

The Later Period

The later settlement

Excavation, the subject of the present paper, has shown that there was an extensive complex of interconnected stone buildings on Halangy Down. They developed and were modified during the course of almost a millennium and were built upon, and into, the stone-revetted cultivation terraces. A courtyard house, itself the product of adjustment and rebuilding, is the uppermost upon the slope while lower down there are other buildings, conjoined and related one to another. One massive cultivation terrace wall retains the lower series of buildings and its substance shows that it must have

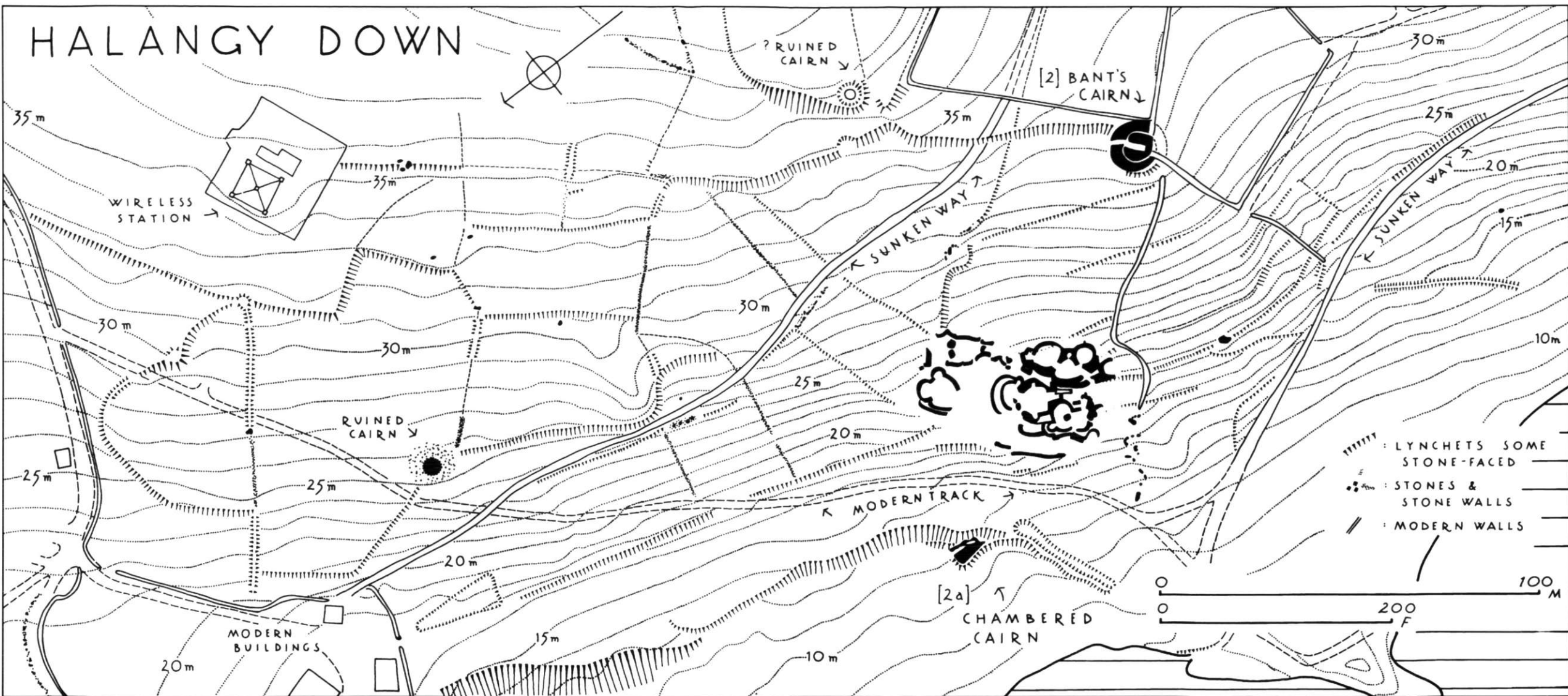


Fig 4 Halangy Down with its ancient fields and chambered cairns, showing the buildings which superseded those in Halangy Porth

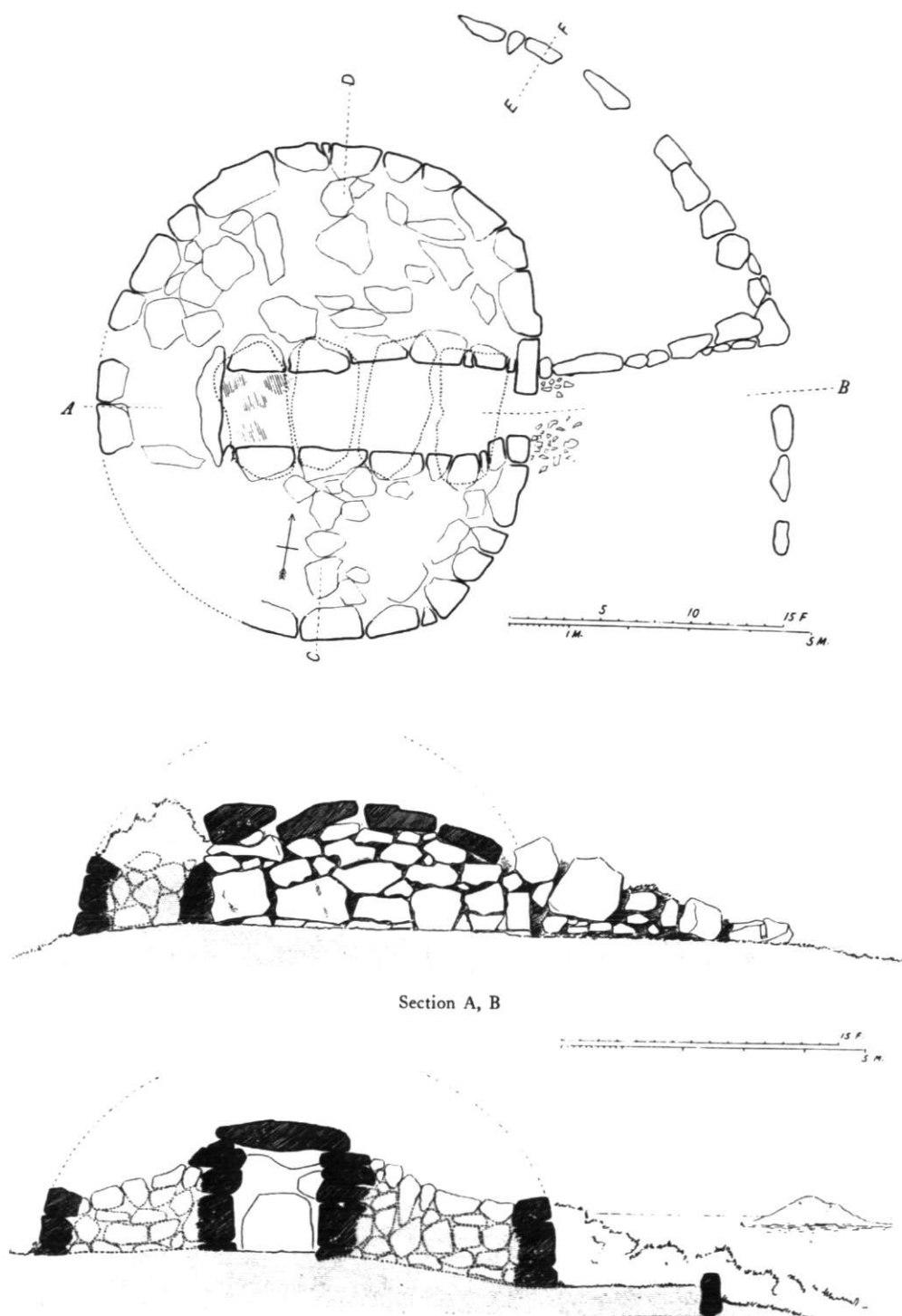


Fig 5 George Bonsor's plan and sections of the chambered cairn (St. Mary's 2) on the crest of Halangy Down

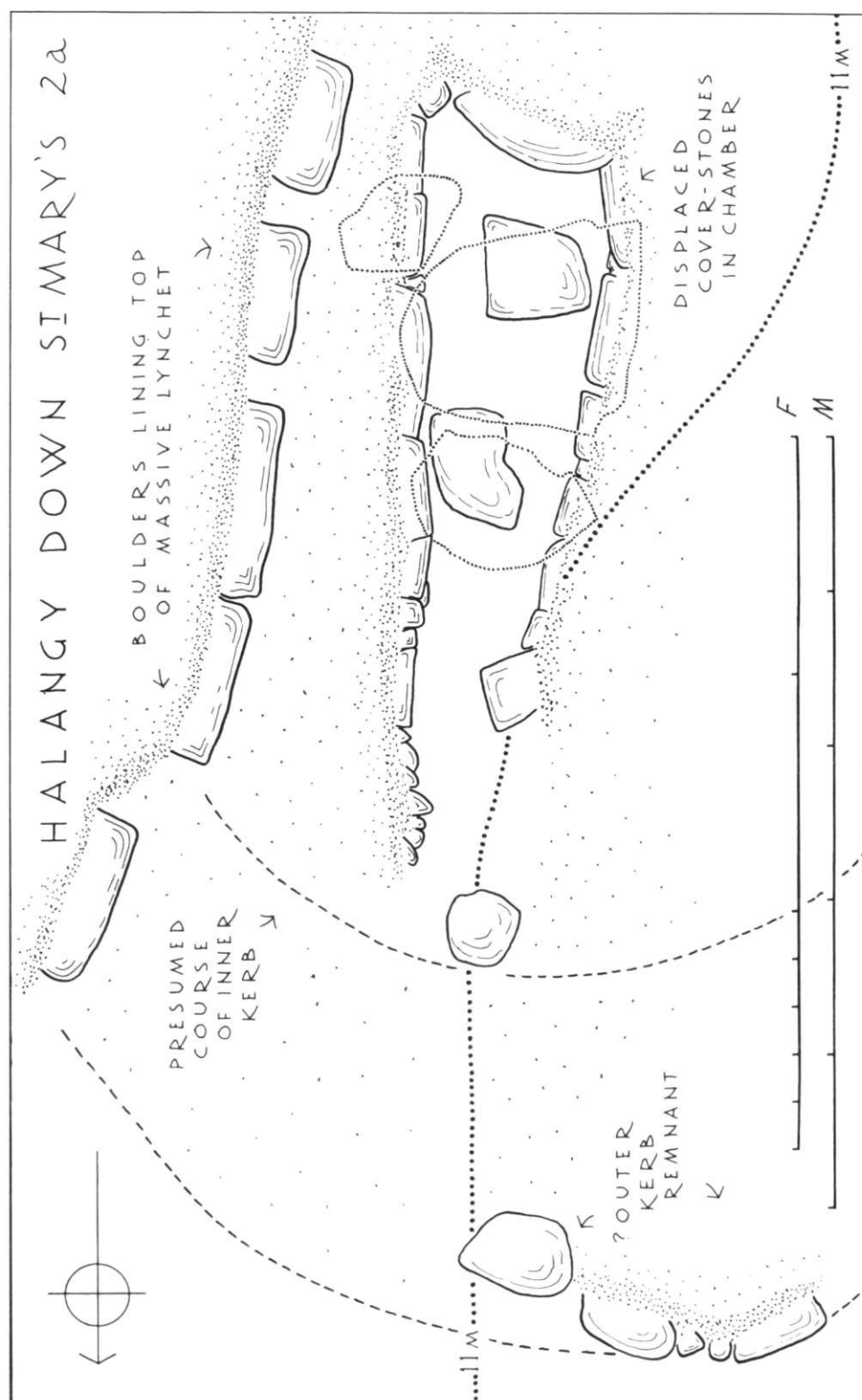


Fig 6 The chamber of the cairn (St. Mary's 2a) at the foot of Halangy Down, which was partially covered by a massive, stone-revetted, lynchet

supported a considerable depth of soil. This was modified to allow incorporation into the structures.

With the establishment and development of this settlement on the hillslope, the fields and enclosures were progressively reformed to accommodate them to this situation (Ashbee, 1983, 10). There was a radial lay-out followed by rectangular plots adjacent to, and northwards of this development, to which even larger intakes were added.

The cist-grave cemetery

A truncated cist (Pl 5, Fig 7) of Porth Cressa Type I (Ashbee, 1954) had for long been visible in the cliff (Pl 5) at the southern end of Halangy Porth (Ashbee, 1979a, 76, Fig 39) while others have been found beneath the bulb-gardens which fringe Toll's Porth (Ashbee, 1979a, 74). These suggest a cemetery associated with the settlement on Halangy Down. A part has been destroyed by the sea, as is shown by the remainder of the cist in the low cliff. Other cists have been removed when they impeded cultivation, while some remain beneath the fossil sand-dune which blankets the level area, landward of Toll's Porth.

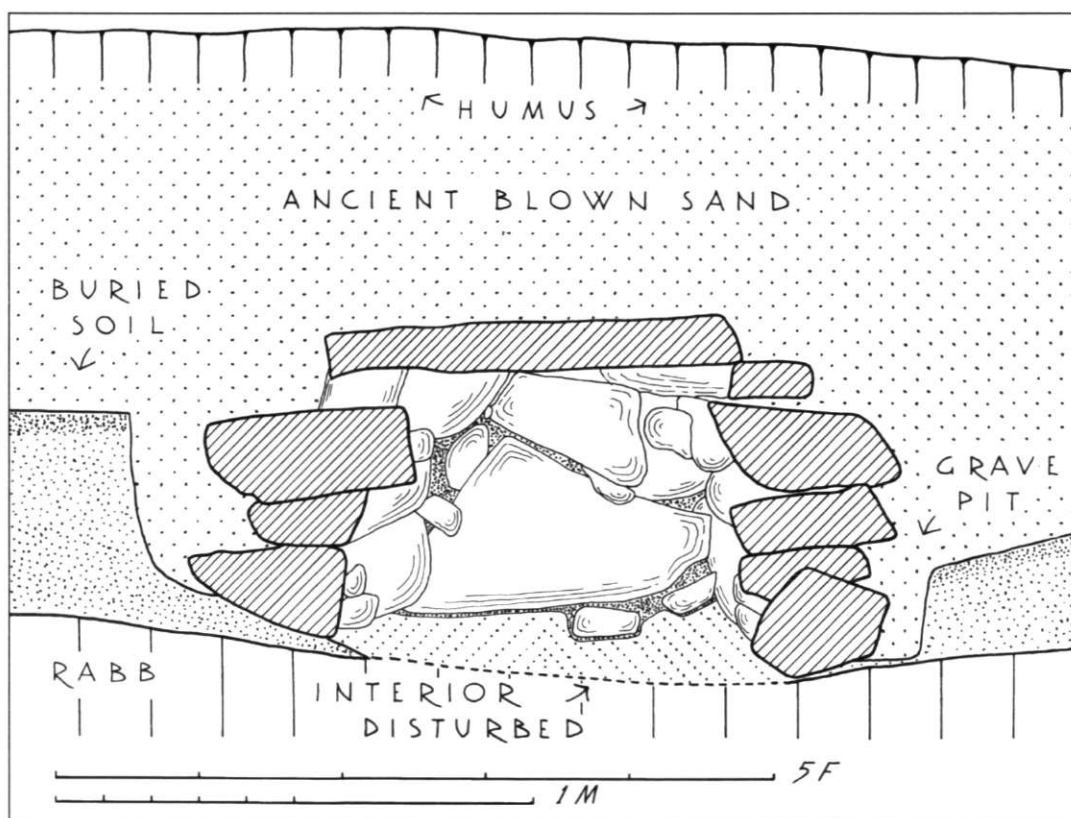


Fig 7 The Porth Cressa type cist remnant exposed in the cliff at the S end of Halangy Porth

Brooches and pottery accompanied some of the Porth Cressa, contracted burials (Ashbee, 1954), showing their use from the late first to the fourth centuries AD. They cannot be other than a Scillonian version of the cists attested in the Cornish Iron Age (Whimster, 1977; 1981, 60-74, 273-85). In view of the first century AD character of the cist-graves, which is roughly that of the beginning of Roman pressures upon the *Dumnonii*, the possibility that some are those of refugee anti-Roman tribesmen who crossed to Scilly, could be entertained (Ashbee, 1979a, 78; Thomas, 1985, 175).

3.4 Demolition and stone-robbing

Something of the processes of demolition and stone-robbing were seen in 1950 when it was observed that many of the great blocks remaining in the large oval chamber (A), bore the distinctive traces of recent stone-cutting and that the site may have been a source of building stone (Ashbee, 1955, 189). Removal of dense fern and furze from the site between 1950 and 1963 disclosed a great quantity of loose surface stones strewn across the area F1, F2, B and C (Fig 8). Many, particularly large blocks, displayed patent signs of the employment of an iron *jumper* with iron *feathers* to split them, while broken stone abounded. Indeed, before a scheme of excavation could be formulated all such material had to be removed from the site. It was also seen that tabular blocks had been concentrated at the foot of Halangy Down, the SW corner of the site, presumably for removal.

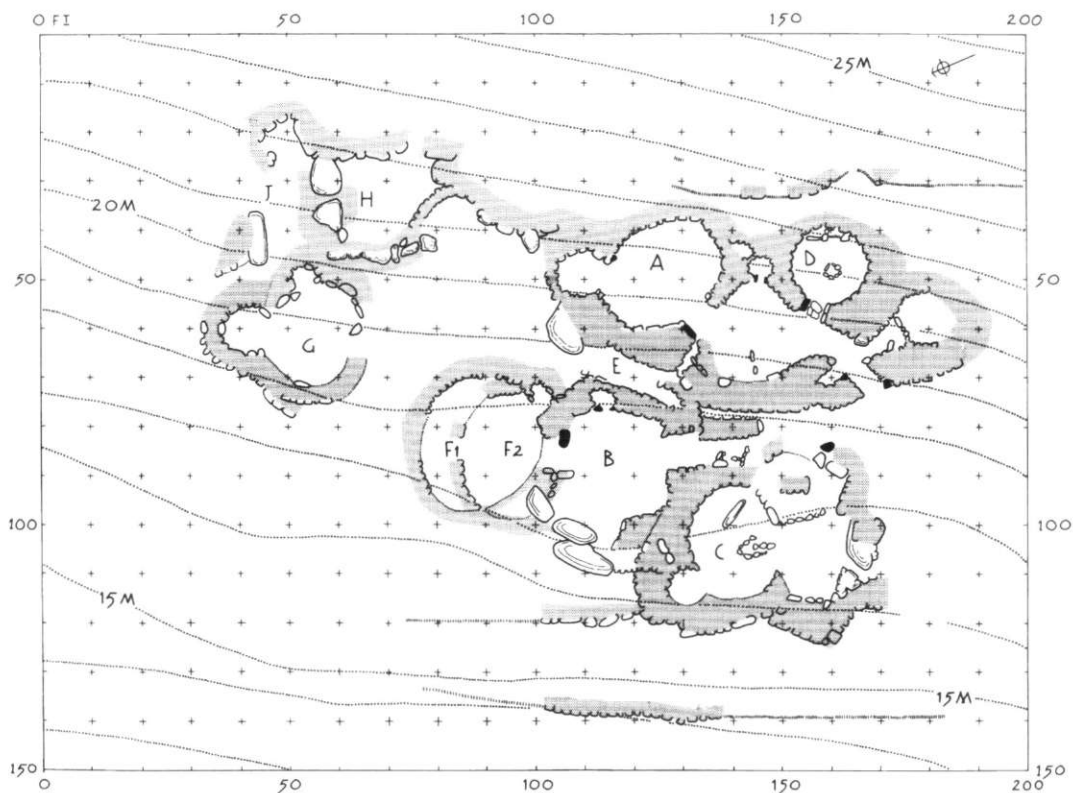


Fig 8 General plan of the excavated structures on Halangy Down, with contours (in metres) and grid (in feet)

With the exception of the features at the NE (H, J) which were constructed with huge boulders, and thus almost totally demolished, the uppermost structures (the courtyard house) were the best preserved. Elsewhere, with exceptions, as has been observed little more than the lower courses remained. The techniques of stone-robbing varied. On the one hand it seems likely that large blocks and boulders were prised from their context and split there and then, or taken to the bottom of the hillslope for collection and transportation. On the other, some walls were systematically dismantled, perhaps to past ground levels. Indeed, a line of stone taken from the high and substantial outer facing wall of the courtyard, was found at its foot, where it had been left. A quarryman's *jumper* is a centrally swollen, and thus weighted, tool-steel rod, some seven feet in length and normally pointed at each end. It is bounced successively at the same spot on a block of stone and a hole is punched, by, fundamentally, *pecking*. A line of holes is normally made across a block and *feathers*,

narrow V-shaped pieces of mild steel with a steel wedge, are inserted. The successive hammering home of these almost unfailingly splits a block of stone, although naturally the basic methodology is varied to suit all circumstances. The residue from the process is a mass of granite chips, with dust, and such material was amongst the stones, many partially split, found at the SW corner of the site.

The large scale removal of stone from the remains of the Halangy Down houses, and from the cultivation terraces here and to the S of the site, is likely to have been brought about by the construction of the New Pier, begun in 1835, reaching out to Rat Island, and subsequently extended to its present length in 1889 (Inglis-Jones, 1969, 72, 196). An account of the last phase, albeit circumstantial, was set down in verse by Robert Maybee, the Scillonian poet (Isles of Scilly Museum Publication, 9 (1973), 45), and there is reference to the coast "down to Carne Thomas", the W coast of St. Mary's being scoured for large stones, which were taken by barge down to the harbour. The relevant verses of "On the building of THE NEW PIER AT ST.MARY'S, 1889" are:

*It was early in the mornings
The stone-cutters would go
With their powder and their safety rod
To the rocks they had to blow*

*They had worked down to Carne Thomas
And the rocks they had cleared away
The barge-men took the stones on board
to build up the new quay*

*The steam crane took the stones all out
And landed them on shore
And when the stones they were all out
They steered away for more*

Maybee commemorates the final phase of the New Pier's construction, the extension beyond Rat Island, and although the demand for stone would have been substantial, it would not have been as prodigious as between 1835 and 1838. Thus Halangy Down's buildings and cultivation terraces may have been a source of stone at that time, with further recourse to what must still have been a considerable accumulation. The residue of boulders at the foot of Halangy Down, many of which display overt signs of splitting, the ramps which have been cut down to the shores of Halangy Porth and Toll's Porth, to ground and load the barges (Pl 6), as well as the stray stones beside them and on the beach, all accord well with the procedures that would have been employed and which are inferred by Maybee. The near-totally demolished chambered cairn, to the N of the buildings, still displays evidence of the employment of a considerable charge of powder, for it has a surround of shattered stones. Another on the crest of Halangy Down has been grubbed out, leaving a cavity. Mercifully, Bant's Carn (St. Mary's 2) was untouched. The chamber at the foot of the hill (St. Mary's 2a) lost only some of its coverstones, although the cairn crowning Carn Morval Down (St. Mary's 18) was, like many of the cultivation terraces, stripped. In view of the early interest in the monuments of Scilly, notably that evinced by Alexander Gibson, it is remarkable that so little is known of this phase of wholesale destruction.

3.5 The 1964 - 1977 excavations

In 1950 Halangy Down was smothered in a dense mass of gorse and bracken and, at the outset of work that year, several days were spent in clearance and in the establishment of the nature of the structural remains, the walls of which had been bared in 1935. Because of the depth of soil, and stone-rubble, in what proved to be the oval chamber (A) of the courtyard house, excavation was by quadrants, and transverse sections were obtained (Ashbee, 1955, Figs 2, 3).

Removal of gorse, bracken and underbrush from Halangy Down, over an area bounded on the NE side by the 'sunken way' and on the SW side by the recent stone hedge, had fostered the

development of grass on the upper slope and within the courtyard house. The Bant's Carn chambered cairn (St. Mary's 2) could be seen as sited upon a lynchet, one of a number made visible, and the extent of the courtyard house and its associated structures was fully appreciated for the first time. On the broad lower slope (F1, F2, B, C) there was a considerable quantity of loose stone, quarryman's debris, shattered blocks and splinters, besides blocks taken from the interior of the large oval chamber of the courtyard house in 1935 and 1950. Thus before a tactical scheme of excavation could be formulated it was necessary to remove this stone, a task which occupied many of the initial working days in March, 1964.

Control, record, and survey was by a grid (Fig 8) which was in squares 10ft by 10ft. A base line was set out upon the more or less level area, uphill from the courtyard house complex supplemented by a line at right-angles to this, at the SW end of the site where it is bounded by a stone hedge, and a further base-line at the foot of the hillslope. The ultimate containment of the Halangy Down structural remains within a rectangle 200ft by 150ft was anticipated. Appropriate compensation was made for the gradient when the SW base-line was set out. It was envisaged that excavation would proceed by squares, with a baulk between adjacent squares, and that supplementary squares would be added in accordance with developing needs. In the event it emerged that optimum sections rarely coincided with the grid-system and that especial dispositions where significant depths of soil and deposit obtained, had to be made to facilitate observation and record. As the excavation proceeded, the 10ft by 10ft square became a sub-unit and for the most part squares with 20ft sides, or 30ft sides, were employed. For record and survey purposes however, the square with 10ft sides was adhered to.

Within and about the structures on Halangy Down, stratification *per se* was at a premium and confined to deposits on or beneath floors, beneath paving, in drains, in or beneath hearths or within walls. All other situations were considered as potentially disturbed, and thus suspect, because the nineteenth century stone robbing involved digging for stone and, from time to time, soil was removed to augment that of less favoured places close by. All artifacts, metal, pottery and stone, readily identifiable pieces of bone, and large pieces of charcoal, were two-or-three dimensionally recorded (Wheeler, 1954, 68-71) within their applicable grid square. Material considered to be stratified was related to its particular feature and structure, the dimensional record indicating a precise location. Such material, it was thought, may have been disturbed but, nonetheless, it could still relate to the remains of a particular building. It has emerged that some pottery does, indeed relate to certain structures.

Excavations were carried out annually for three weeks at Eastertide (Section 8.2), the end of March, April and, rarely, early May. Although only the larger chamber of the courtyard house (A) was examined in 1950 it was clear that it was part of an integrated complex. Clearance showed the lineaments and thus a relationship with the lower slope structures (B, C), which it seemingly surmounted, emerged as a priority. In 1964, excavation bared the SW rectangular annexe of chamber C. A further enterprise, at this early stage, was the investigation of the oval chamber photographed, dug into and partially built-up, by Alexander Gibson at the beginning of the century. Subsequently the character of chamber B, its S corridor entrance and massive limpet-shell midden infill, and of C was established, which process together with the isolation of the remains of the lower, stone-bordered, cultivation terraces was completed by the end of the 1967 season. During 1968 and 1969 attention was given to the apparent courtyard house. There was excavation of the circular chamber (D), of the courtyard and its entrance, and of a blocked-off, largely dismantled, structure S of this entrance. The problems of intramural earlier features were also considered and small cuttings, to avoid undue disturbance of wall faces, had to be employed. In 1970, F1 and F2 were bared, and the relationship with B established, while, at the same time, the reinstatement of the displaced cover- and jamb-stone of the Bant's Carn chambered cairn took place (Ashbee, 1976). The NE remnants of structures (H, J), with stones of megalithic magnitude, were uncovered in 1971 besides preliminary work upon the isolated N oval chamber and annexe (G). Further work upon features that had preceded the massive upper wall of B were also undertaken as was a rescruity of the blocked-off structure S of, and adjacent to, the entrance to the courtyard house. In 1972 the investigation of G was completed, the sub-floor drains of F1 and F2 were examined as was the ostensible stone-breaker's debris which fringed the corner of the site.

For two years, 1973 and 1974, nothing was done on Scilly. In 1975 the threads were taken up again and, in addition to small cuttings, sited to reveal any surviving, earlier features between the wall faces, it was possible to investigate the internal features of the Early Phase structure remnant, beneath the fossil blanket sand-dune at the foot of Halangy Down, which had been exposed by sea-cliff erosion. A year later, in 1976, there was excavation, to landward, of these cliff-exposed remains and evidence of affinity and subsistence economy, as well as material for a radiocarbon date was recovered (Ashbee, 1983; 1988). Further work in Halangy Porth was envisaged in 1977 but as this proved impracticable because the remains were adjacent to a bulb-garden, a small excavation of an ancient field surface and a field-wall, beneath sand-dunes, at Bar Point, the limit of the Halangy Down catchment area, was carried out and further clear dating evidence of the sanding recovered (Ashbee, 1978; Thomas, 1981, 20). Scilly was visited in 1978 and, with the assistance of a group of undergraduates from the University of East Anglia, the potential catchment areas of known Early Phase sites (Ashbee 1983, 33, Fig 15) were scrutinised.

A comprehensive survey of Halangy Down and its monuments, the basis of Fig 4, as well as parts of the shoreline of Halangy Porth, was undertaken in 1975. This, underpinned by a traverse and to a scale of 1:200, with contours at 1m vertical intervals, was undertaken by W. A. Wilkins of the Central Survey Agency of the Dept. of the Environment. He worked closely with the present writer and was assisted by the principals of the excavation team. His record, a copy of which is deposited in the University of Exeter's Institute of Cornish Studies (Hayne Corfe Centre, Truro) is the basis of the initial analysis of the ancient fields (Ashbee, 1983, 10) and of the amended account in the present publication, besides the appreciation of the site within its immediate context.

From the outset the evaluation of environmental evidence pertaining to Halangy Down, over and above the considerations of animal bones, charcoal and midden material, was envisaged. The investigation of Scillonian soils, it was thought, could be rewarding for, besides the manifest blanket-dune buried soil at the foot of Halangy Down (Ashbee, 1983, 15, Fig 6), it was seen in 1965, that a soil profile exposed on the lower slope displayed a degree of podsolisation that had come about since the structures thereupon had been abandoned and ruined. Thus, in 1965, Professor G.W. Dimbleby, of the Institute of Archaeology, University of London, visited Scilly together with his assistant, Philip Porter, and began a scrutiny of Halangy Down's surround and its soils. In the event, it emerged that, as little was known of the palynology of Scilly, a limited investigation, apart from that on Halangy Porth's sand-buried soil (Dimbleby *et al.*, 1981, 139-42; Section 8.3), was impracticable. A wider enquiry was, therefore, embarked upon which began with the evaluation of a dune-buried soil at Innisidgen (Dimbleby, 1977), and was continued by work in the Higher and Lower Moors peat mires (Dimbleby *et al.*, 1981), for which radiocarbon dates are now available (Scaife, 1981; 1983). The general pattern that has emerged, one that was long suspected (Ashbee, 1976; 1982), is that there has been a neothermal decline of deciduous woodland and a corresponding rise in the incidence of weeds of cultivation. Halangy Porth's surround was completely treeless when the settlement on Halangy Down was established (Dimbleby *et al.*, 1981, 142).

Besides the massive granite artifacts, saddle- and bowl-querns &c., remaining upon the site, evidence, perhaps, of the agricultural activities that would have promoted environmental change, there are querns from Halangy Down and Halangy Porth which are still on St. Mary's but in private ownership. In 1955, Alec Gray found that, close by the entrance to the large chamber (A) of the courtyard house, the lower stone of a rotary quern had been used to cover a drain (Fig 3; Section 8.1). It was preserved upon the terrace of Seaways, Porthloo (NGR SV 908114), then in the occupation of Mrs. W. G. K. Birkenshaw, where it was photographed in 1950. There were also five saddle querns, two of which may well be from Halangy Porth (Hencken, 1932, 30; Ashbee, 1953-4; 1983, 31). A number of boulders with cup-markings, some clearly artificial, are also preserved at Seaways. It is possible that they were found upon the lands associated with Seaways, which included Halangy.

Twelve seasons of excavations, carried out over fourteen years, resulted in the accumulation of a large assemblage of artifacts, besides samples with palaeo-environmental potential, together with a substantial site archive. There were more than a thousand entries in the finds registers, although not everything was of use. This dimension is the subject of the second section of this report. The site

archive, the basis of this narrative, had three components: written records, drawings and photographs. Site diaries, a day-to-day record of the furtherance of the enterprise, descriptive notes regarding certain features, a schedule of the structural units and their sequence, details, archaeological and historical, of the quarrying of the site in the nineteenth century as well as fieldwork observations upon possible catchment areas, comprised the written record. Besides the overall survey of Halangy Down (Fig 4), sixteen plans of particular areas were made, together with sixteen sections, where conditions allowed, as well as six plans which show particular features in detail. Between 1964 and 1977, nine-hundred-and-thirteen black and white photographs were taken, some of which are duplicated because of conditions of light, wetness or dryness. To supplement these, there are five-hundred-and-fifty-nine coloured transparencies which portray, besides structures and their nuances, the site as a whole as well as working conditions.

3.6 Dates and phases

The low-level structures sited at the foot of Halangy Down, exposed during the later nineteenth century by the sea, were made untenable by blown sand. This brought about a comprehensive relocation upon the higher terraced fields (Ashbee, 1983, 32). Here the new buildings were progressively occupied and modified for around a millennium and then abandoned.

This relocation can be approximately indicated by a radiocarbon date, HAR-1330 310 ± 90 bc., obtained from charcoal which had been incorporated into the dark loam infill of the circular stone-built remnant in Halangy Porth (Ashbee, 1988). Although the date, perforce, pertains to the charcoal, and takes account of neither its possible biological age nor its possible incorporation into the deposit in which it was found, it accords well with observations regarding Scilly's blown-sand blanketing and the change of place. Indeed, some stages of this sanding were coincident with the development, if not the entire use-life, of the settlement on Halangy Down. The level land at the foot of the slope below the terraced fields, had been sanded by Romano-Scillonian times as cist-graves have been found dug into the flat sand-blanket (Ashbee, 1979a, 74-6). However, sand need not have covered the Bar Point ancient fields, at the northern extremity of St. Mary's, possibly a part of the settlement's supportive territory, until as late as 600-700 AD, since a post-Roman imported E-ware rim and lid (Thomas, 1981, 20) were found upon a plough-scarred surface. Nonetheless, the examination of a stone-walled field-system close by, deemed Iron Age, found charcoal, in a lens of black sandy loam which yielded the date HAR-3483 190 ± 70 bc. (Evans, 1983a, 22, 27). Scilly's sanding (Lousley, 1971, Fig 2), largely from SW prevailing winds, has provided the crude timescale described above. Similar settlement traces, northwards from Halangy Porth, may denote moves from its advance (Ashbee, 1983, 32). In general, the sanding was the ultimate outcome of sea-level changes. The low- and high-level sand systems of today (Lousley, 1971, 12) are clearly only the most recent manifestations of an unremitting process.

Pottery may also mark Halangy Porth's abandonment and the move to higher ground. Pieces of substantial vessels found on the ancient surface, beneath sand, during the excavation of the circular house remnant (Ashbee, 1983, Fig 9) have counterparts in Cornish Iron Age contexts (Threipland, 1956, 58, Fig 18, and examples there cited; ApSimon & Greenfield, 1972, 335, Figs 20-1, Nos. 1, 7, 23; Christie, 1978, 407, Nos. 18, 27) and are, because of their fabric, local renderings of a distinctive style. Alec Gray (1972, 47, Fig 15) found flared rims in Halangy Porth and they have also been found on Nornour (Butcher, 1978, 78, Fig 30, 84, 88, Fig 31, 92, 93). Jars with flared rims (see Samuels below) had a long life on most Scillonian (and Cornish) sites, that is from Iron Age to Romano-Scillonian times and the series from Halangy Down followed a tradition that had been established in the earlier, sanded settlement.

Although little significant stratigraphy was encountered, it is possible to proffer a sequence of chronological relationships, detailed and discussed below, derived from the partial demolition, abandonment and progressive modification of the buildings. The following order can be seen:

- a) The stone-retained terraced fields and the chambered cairns, developed during the use-life of the early settlement in Halangy Porth.

- b) The remains of small, and one larger, stone-built huts, the stances for similar structures and the bases of a series of ovens. These were sited upon the ancient fields, and, presumably, after demolition, a massive retaining wall was constructed upon a part of their foundations.
- c) The lower slope series of structures; F1 was followed by F2. These were abandoned, partially demolished and superseded by B. This was abandoned and, as was a part of F2, used to contain a considerable limpet shell midden. Thereafter C was built and subsequently extended by the addition of a rectangular annexe.
- d) The construction of A using a massive stone revetment for its downhill wall. This reverted to general use when additions were made, a courtyard, aedicule and circular chamber with hearth. These additions contrived a courtyard house, comparable with the Penwith series.
- e) A chamber adjacent to the narrow entrance to the courtyard was blocked off and demolished.
- f) The outer casing of the massive downhill wall of the courtyard was strengthened against subsidence.

It is not possible to include the northern oval house, G, in the sequence, as it stands in isolation. However, it impinges upon the megalithic walling remains, H and J, utilising a part of its walling to provide the appropriate earthen thickness for its uphill wall (Fig 27). The construction of G at some time subsequent to the massive walling, with its intra-mural hut, above it, seems inescapable.

Iron Age and Romano-Scillonian sherds shade one into another and any dating claims would be imprecise. There is, however, imported Roman pottery; scraps of Samian and Rhenish wares, as well as of bowls and jars characteristic of the West Country at that time. These last range from the second to the fourth centuries AD. The imported Samian and Rhenish pieces, perhaps from a mainland source, are representative of styles which were current from the first to the third centuries AD. This Roman pottery is supplemented by the group of bronze brooches (from B) which may have been deposited together in the fourth century AD. There are also some beads of glass and fine stone. The earliest has counterparts in mainland European Hallstatt contexts while the latest, a fine stone example, has analogues from the fourth and fifth centuries AD., in the neighbourhood of the Danube.

Halangy Down's last phase extends into post-Roman times and the early centuries of Christianity. It is marked by numerous grass-marked sherds and pottery of a fine, red, fabric (cf. Samuels, H, I, below), specified as Early Mediaeval. This grass-marked series could have been current during the seventh to eighth centuries AD and the red fabrics may have had a similar compass. E-ware, a rim and lid of which were found upon the surface of an ancient field at Bar Point, had a long prevalence, from about the end of the fifth century to the early eighth century AD, although the main phase of importation was during the last century of this time (Thomas, 1986, 95).

An end to the use-life of the settlement on Halangy Down was at some point after the generality of post-Roman times. The paucity and fragmentary nature of the approximately datable remains of its material culture, indicated that everything of value was removed, and the site abandoned. All in all, it had been occupied for around a millennium.

4.0 SITE DESCRIPTION

4.1 The remains of the initial structures on Halangy Down

Although the ancient fields presumably associated with the settlement remains, now a remnant in the low cliff of Halangy Porth (Ashbee, 1983), were in use before the aggregation of buildings on Halangy Down was built, excavation revealed indications of features and structures even earlier than this interrelated group. Such traces, which were no more than cuts, channels, and pits in the rabb, are, apart from the remains of buildings, the earlier phases of the group which was progressively modified during its use-life.

Features which preceded the ancient fields (Fig 9)

Features which preceded the ancient fields are a channel, cut deeply into the underlying rabb and found infilled with compact soil and rubble (Pls 7, 12), with a pit adjacent to it upon the S side, a smaller channel which partially followed the internal wall face of C (Fig 11) and two lunate areas close by, which may remain from hut-stances.

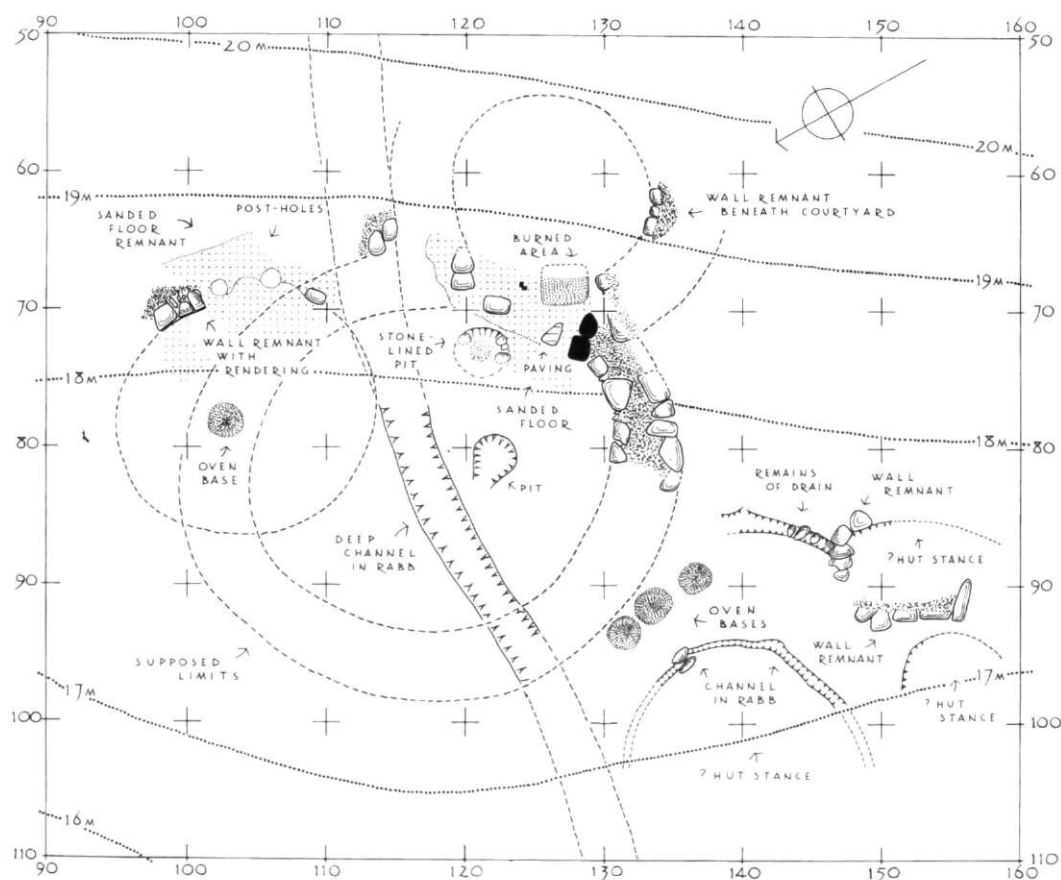


Fig 9 The fragmentary remains of the initial structures sited upon the ancient fields

This deep channel, some 3ft wide and 2ft in depth, which seemingly ran down the hillside, was exposed for a distance of rather more than 20ft beneath the denuded interior of B. It could be seen as continuing beneath the smaller chamber inset into the upper wall of B, where it had brought about a degree of subsidence and its downhill course was confirmed by a deep cutting (Fig 11, 120/120).

Uphill and between the lower wall of A, the oval chamber of the courtyard house, and the upper wall of B, its course was also bared (Fig 17, 60/120). Its presence could well have caused the subsidence of a part of the N wall of this oval chamber. However, its uphill course could not be pursued as this would have entailed the dismantlement of some of the better preserved structural remains. The infill of stones may well have been the result of a decision to use the channel as a soak-away to relieve the drain systems which were a feature of almost all the structures. Were this so, the compact soil would have collected in their interstices, largely from earthworm action. It was noticeable that during heavy rain water collected in the channel and drained down the hillslope. There is the possibility that this deep channel was choked, and thus periodically waterlogged, because an intricate pattern of drains was just above the infill and beneath the lower wall of B (Figs 11, 14) indicating damp conditions prior to its construction.

The adjacent oval pit (Figs 9, 11) had been hacked into the rabb at a point where it rose steeply. Thus while the uphill side was almost 1ft 8ins in depth, the lower was a mere 4ins. Like the deep channel, it was infilled with rubble and compact dark soil. As its uphill side almost coincides with the S, curved, corner of the uphill wall of B, there is the possibility that it may have been dug to alleviate water percolation at some juncture during the use-life of that structure although the disturbed nature of its soil 'floor' showed no trace of having been dug into and the feature only became visible when the rabb was bared.

Although it partially followed the internal wall-face of C (Fig 11), this channel, narrow and about 10ins in width on its northern side and elsewhere as much as 1ft 3ins, only became visible when the soil, below the considerable rubble slide, which infilled it was removed and the surface of the rabb exposed. Its infill was compact soil only distinguishable because of its cohesion to the sides and bottom of the channel from the general soil mantle of the area. It is possible that, like the isolated drain remnant, a short distance uphill (Fig 11, 80/150), it may have been a drain designed to collect downhill seepage through the base of C's walls. However, in the absence of side- and cover-stones, the normal adjunct of Scillonian stone-built house drains, and taking into consideration its fresh character, it could be a palisade-trench dug from a vanished surface at an early juncture, prior to the structure with which it appeared to be associated.

At no great distance (Fig 11, 80/160) from this possible palisade trench, two lunate areas, incised into the rabb of the hillslope, each some 6ins in depth, the smaller within the larger, could well have been stances for stone-built huts of modest size. A cut into the hill-slope on the upper side would have lessened the make-up necessary on the lower. The smaller could have succeeded the larger. Stone-built structures later demolished and the stone used elsewhere are indicated, for timber buildings would have been likely to have employed post-holes, no trace of which was found. Each of these lunate areas had, for the most part, clean edges where cut into the slope, a feature which could denote immediate infilling after demolition. At one point two stones remained of walling that lined the periphery of the larger stance.

Features preceding the building aggregate (Fig 9)

Isolated fragments of walling and substantial earth-fast stones indicated that three, as far as could be seen, circular hut or chambers had preceded B and the large oval chamber, A, of the courtyard house. Associated with these, and perhaps anterior, were substantial areas of sanded floor, comparable with those encountered in later structures (Fig 17) and the fired clay bases of circular ovens or kilns, (Pl 8), one isolated example and a clutch of three. One of these sanded floor areas had upon it a rectangular, deeply burned area and a circular stone-lined pit, the other two circular post-holes. All these features were between or beneath upstanding later walls and floors, which precluded full exploration.

A substantial walling remnant, terminated at its upper end by two earth-fast vertically set stones, and a paving slab, denoting an entrance, was detected at the E end of the upper wall of B (Pl 12). Its curvature indicated a structure at least 30ft in diameter and thus comparable with circular huts found upon the St.Martin's foreshore (Ashbee, 1974, 180, Fig 39; 182, Fig 41). This walling fragment had been constructed of selected stones of approximately even size and weight on both the inner and outer faces. As with later walls, it had been infilled with soil which, because of its

excessively compact nature, could have been rammed. Only the two vertically set stones, and the paving slab, denoting an entrance, clearly defined a limit to the sanded floor residuum.

A substantial stone set into the line of the wall remnant (Fig 11, 70/130), and other regular stones set upon the sanded floor, remained from a smaller, seemingly circular hut some 15ft in diameter, the remnants of which must lie beneath the large oval chamber A, of the courtyard house. An indication of dimension was obtained when a cutting was made into the surface of its courtyard and a part of the inner wall face (Fig 17, 60/130) was revealed. It seemed likely that a good part of this remained beneath the courtyard and the oval chamber. Indeed, it is possible that one of the internal drains of this chamber had been constructed so that it discharged down into this buried structure. Two regular substantial stones (Fig 17, 60/120) exposed between the upper wall of B and the massive outer wall-face of the oval chamber, A, of the courtyard house, which were bedded upon the sanded floor remainder, can also be related to the internal wall of this structure. Two further, not dissimilar, stones could, perhaps, indicate the outer wall-face which, at this point was of equal breadth to the opposite side. It is possible that the entrance to this circular hut utilised and modified the entrance to the larger circular hut.

Another circular hut, of much the same dimensions, preceded the large circular hut on its northern side. Two post-holes, which may have housed timbers and which had been cut through a sanded floor remainder (60/110), could have been the entrance. Three substantial stones, backed by soil and small-stone rubble, which were immediate behind the internal facing stones of the small chamber, or aedicule of F1 (Fig 11, 70/100), and another similar isolated block, gave an indication of erstwhile internal diameter. These three stones remaining from the inner wall-face, bore fine, sandy, hard rendering which had survived to a height of about 10ins. It was 2ins in thickness, as elsewhere where similar survivals were observed, and could remain from the internal finish of the structure.

At the centre of the interior of this small circular hut there were the burnt clay remains of the circular base of an oven or kiln (70/110). This, revealed by excavation beneath the robbed N end of the uphill wall of B, consisted of a circular platform of deeply burned, converted, clay which had been bedded upon a mattress of fine, sintered, sand which contained numerous small burned pieces of granite and quartz. A circular area within the confines of the smoothed surface was darker and comparable with the clutch of three such kiln or oven bases, encountered between B and C (90/140), which displayed the broken remains of their sides or walls. It was set upon the accumulation of soil, that of the ancient fields, which mantled the hillslope, and was rather more than 3ft distant from the sanded floor remains. Whether or not it was a feature of the interior of the small, northernmost, circular hut cannot be demonstrated, but the fact that it was bedded upon soil, and at a slightly lower level than the adjacent floor, may indicate that it was built and used in the open air after the small hut had been demolished.

Three more such kilns or oven bases were encountered between and beneath the wall-face of the S corridor of B and the inset interior wall-face of C (Figs 9, 10, 11, 90/140). The massive bottom stones of this corridor had been bedded upon the crushed remains of one of the bases, while the incut for the internal wall-face of C intruded into the surround of one and the interior base of the other. This area had been partially mantled by the margin of the limpet shell midden (Fig 12) beneath which was a raft of cobble-stones, a remnant of wall-core. These had soil and pockets of limpet shells beneath them and numerous pieces of, largely amorphous, fired, converted, clay, some of which had traces of organic reinforcement, were encountered. This compressed deposit overlaid a thick, ovate, mass of burned clay pieces among which were scattered cobbles. At this juncture it was seen that almost all the larger pieces, some about 4ins by 2ins in size, and many of the smaller, 1ins by 1½ins pieces, all of which had been tempered with granitic grit, which included rather more quartz than occurs in nature, had the regular cannulate imprints of straw or rushes. Thus they differed from the pieces of burned clay, thought to be the remains of fired rendering, regularly found in association with the building remains, notably in C, which do not contain the imprints of such organic reinforcement. Beneath all this was a layer of burned clay which had the appearance of a prepared floor.

When the jumble of pieces and ostensible floor were removed the substantial remains of the bases of the three circular kilns or ovens, with the remains of a further one beneath one of them, were

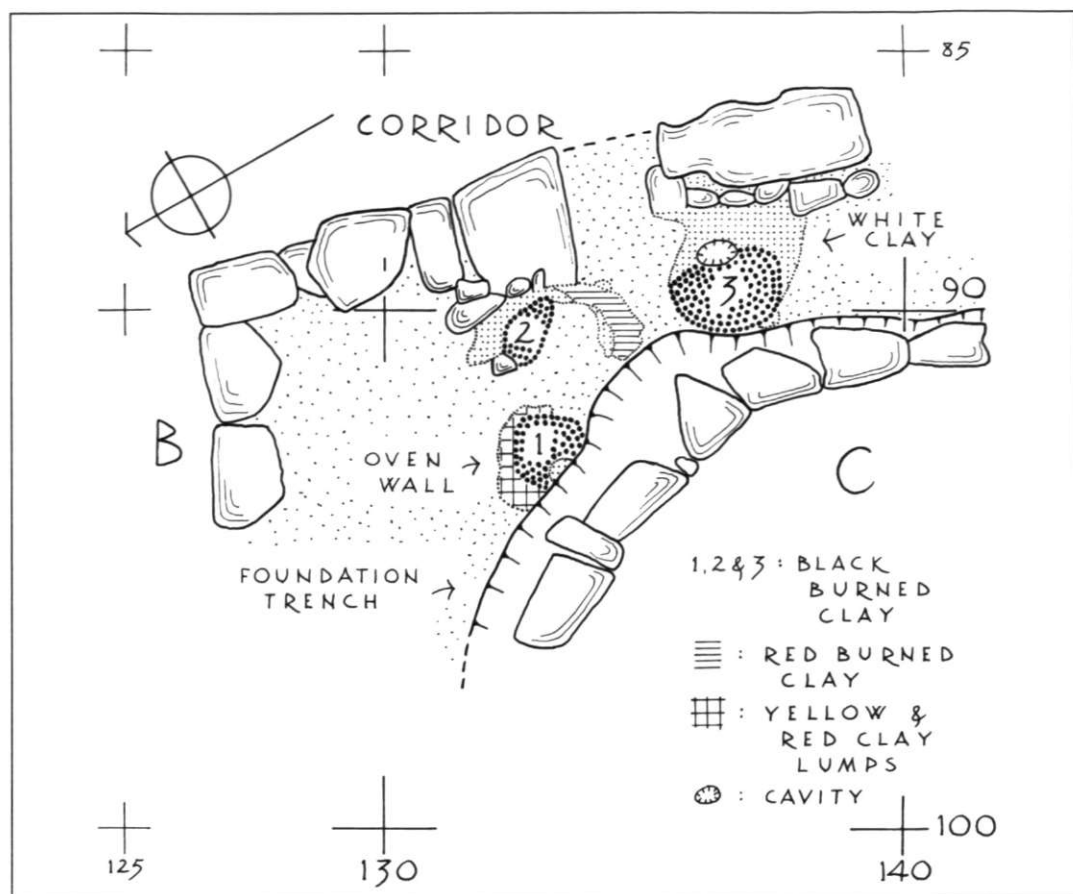


Fig 10 *The early oven bases between B and C in detail*

revealed (Pl 9; Fig 10). The best preserved (No. 1) showed that the interiors had been some 2ft 3ins in diameter, with sides some 10ins in thickness. The bases had been smoothed, the marks of a spatulate tool being clearly visible, and were burned near-black. They rested upon rafts of small cobble-sized stones beneath which was the accumulated depth of soil of a cultivation terrace. Both the burned clay surround of the ovens or kilns and their mountings, had been cut, as far as could be seen, to adjust the interior of C relative to this feature.

Beyond the S corridor entrance to B (80/140) a rabb-cut drain, which did not obviously belong to any of the complete structures, was encountered. It ran across the hillslope and its functionality could be questioned. It was cut some 4ins into the rabb and was about 1ft 2ins in width. At a point where it was bridged by a bolster-like block there were, conjoined to it, two substantial rabb-set boulders which, together with the block, formed an arc. Presumably this entity remained from a structure demolished to facilitate the construction of C, although the possibility of an attachment to the apparent corridor S entrance to B cannot be eliminated.

4.2 The lower slope sequence of structures, F1, F2, B and C with its annexe

This sequence is the result of the progressive reconstruction, extension and strengthening, of five structures, the remains of which lie across the lower, gentler slope of Halangy Down and its cultivation terraces. On the uphill side it is bounded by the courtyard house (A,D and courtyard), on the downhill by a shallow terrace, on the N by G and on the S, despite the modern stone wall there is the continuation of the terraces upon which it had been built.

Demolition in antiquity left F1 and F2 (Pl 10) as they appeared when excavated. This was, as far as can be seen, to facilitate the construction of B, the southern end of which was encroached upon to allow the setting out of C, and its cellular annexe, which was further altered by the addition of a rectilinear extension. At some stage, B was abandoned, while C was occupied, the S blocked-off corridor entrance becoming the repository for recurrent limpet shell accumulations. The construction of F1, F2 and B involved the demolition of most of the structures detailed in the previous section leaving only the wall and floor fragments from which their form was inferred. When C and its annexe were constructed, destruction of whatever may have stood on this site was even more thorough for only stances and a part of a drain remained. It was also of note that neither F1, F2, nor B had in them any traces of a hearth, though the stones could have been removed and reassembled in a new building.

The northern demolished structures F1 and F2

Before excavation, the almost level area N of B was, because of the absence of overt building traces apart from large stone-breaker damaged, earth-fast, stones, thought to have been open space. It emerged that there was a considerable soil mantle, in places as much as 2ft in depth, completely concealing the footings and floor remnants. A substantial downhill part (Fig 11, 100/110) had been destroyed, for soil removal (Gray, 1972, 23) had made a deep inroad into the hillslope and the supportive cultivation terrace.

Chamber F1 (Pl 10; Fig 11) was, to judge from its surviving remains, oval in plan. At the uphill end its internal wall-face had been built against the slope of the hillside. Elsewhere displaced boulders and rock-rubble indicated a bifacial wall between 5ft and 6ft in breadth. Where this internal wall-face had been built into and against the hillslope, the use of almost matching tabular blocks was noticeable. Conjoined with this (Fig 11, 110/110) was a small cell, or aedicule (Pl 11) retaining its sanded floor, from an earlier structure on the site (Fig 9). A section through the floor showed that it was layered, sand alternating with soil, suggesting periodic resanding. Its basal layer was of small stones, beneath which was grey, leached, soil and the fundamental rabb (Section: Fig 16).

Areas of sanded floor still remained, conjoined with the wall, on the N side of F1. Breaking into, and beneath, these was a zigzag drain system, parts of which still retained their cover-stones. Presumably it was designed to conduit, from the interior the considerable amount of groundwater, a feature of the hillslope. It was found to be infilled with compact soil, resulting from earthworm action (Atkinson, 1957, 222). Its lower end had been broken away, by the soil removal process, but it is possible that as elsewhere, notably beneath the downhill sector of B (Fig 11), the ultimate outfall was steep and thus effective.

Within F1, the internal space had been diminished by a single line of near-uniform tabular blocks (Fig 11). At one point they had been removed and, at another, a fallen orthostat was matched by a remaining columnar standing stone. Walls were normally bifacial and earth-filled, indeed, a single face would have been unstable. Thus, although this wall might have been an attempt to diminish the interior area of F1, it could equally have been the initial stage of a structure (F2) that was never completed, perhaps because of the need for the construction of B. There is, however, the possibility that a soil backing, impossible to differentiate from the soil mantle of the area, backed this seemingly single line of wall-stones, preserving the areas of the sanded floor and the drains, and that the N wall of F1 was its external support.

The interior of F2, with the exception of two tongues of sanded floor which supported the seemingly single-faced wall, was loose soil, above the rabb, which contained numerous small stones. Its excavation allowed inspection of the nature of the sanded floor area and it was seen that the sanding covered grey, granitic soil carried upon a raft of substantial blocks of stone. From the small stone rubble upon, and in, the soil within the F2 interior came a piece of a finely finished granite mould, designed for casting silver or pewter dishes (see below, Pl 31, Fig 49).

The central, near-rectangular building B (Fig 11)

A limited initial exploratory excavation exposed the sophisticated coursed masonry of the S incurve of the uphill wall. This interior face was built partly coursed and partly of large boulders. Two orthostatic blocks flanked the entrance to a small near penannular, centrally positioned, intramural

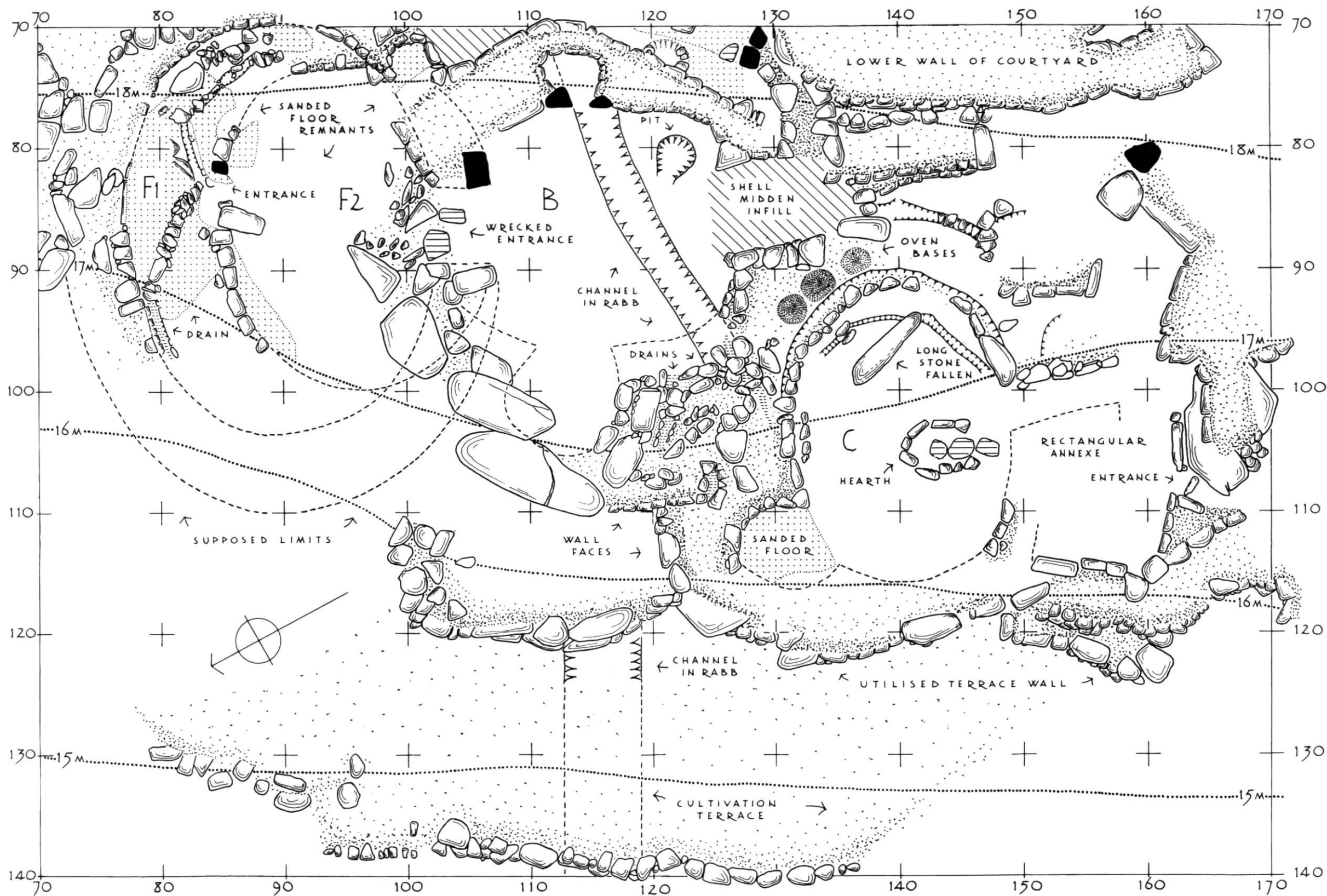


Fig 11 The lower slope sequence of structures, F1, F2, B and C

cell or aedicule. Although a course of masonry defined the wall's N end, its interior and exterior stonework had been removed. The outer, uphill face of this wall had been detected below the outer face of the downhill wall of the large chamber (A) of the courtyard house, excavated in 1950 (Ashbee, 1955, 190, Fig 2) and was thought, because of the consolidated nature of the soil cloaking it, to have been a kerb. When fully exposed, its coursed masonry was commensurate with that of the interior. At the S end the incurvature gave onto the corner blocks and tabular masonry inclusion of the N side of a wide corridor entrance, infilled with loam and a considerable limpet-shell midden (to be discussed in detail below), which had been blocked off so that it formed a small rectangular annexe. The E external jamb-stone gave some indication of its original height. Stability may have been ensured, through the length of this corridor entrance, by a long tie-stone, found fallen, which used perhaps as a crowning course, would have bound this structurally insecure wall end together. Other substantial blocks, found with this tie-stone (Pl 7), could suggest a height of some 5ft for the uphill wall.

The entrance to the centrally positioned intramural apsidal niche or aedicule was between two orthostatic blocks, the central distinctive features of the upper interior wall-face of B. They almost coincided with the point at which the deep buried channel ran beneath the wall and localised distension was visible. Coursed stonework, which included a much worn rotary quern remnant, interleaved with loam, blocked the opening between them (Pl 12). Their removal revealed that the small cell, which was D-shaped in plan, and was built of small tabular stones, not well-bonded, for runs of vertical jointing could be observed. Oversailing courses began at a height of about 2ft 3ins and the compartment could thus have been corbel-roofed, within the thickness of the wall, at a height of about 4ft. Its infill, possibly deliberate, was compact homogeneous dark soil, within which were two small flat boulders and a beach-worn slab. Although the uphill, outside, face of the wall, which has this cell within it, is predominantly coursed work, large blocks may have been introduced to strengthen it at some juncture, indeed subsidence, brought about by the buried channel, may have promoted its abandonment and infill.

On the W side of the wide corridor entrance, the basic walling consisted of a line of weighty tabular blocks which, in part, oversailed the remains of the earlier clutch of kilns or ovens. They were backed by stone rubble and soil, loosely packed and containing numerous, sometimes substantial, pieces of burned clay, reflecting, presumably, demolition. Two courses of lesser blocks, the larger backing the smaller, continuing at almost a right-angle from the inner end of this block-line, indicated that the W side had an incurvature which mirrored that of the E, uphill, wall. No trace of an outer wall-face was found because of the demolitions and adjustments incumbent upon the construction of C.

Downhill, and almost 3ft below the erstwhile interior floor-level, a roughly rectangular area retained on its N side a walling remnant, which indicated the possibility of a onetime penannular sub-chamber, and on the W side something of the lower exterior wall-face (Fig 12). Three slab-sided and -covered drains were a feature of these footings and they cannot but reflect the presence of the deep channel which, from floor-level at its upper end, descended diagonally across B's interior. One continued the line of the buried channel, but had been truncated by the construction of C, the other led through these foundations but did not have a specific outfall while a third can have done little more than ease water accumulation within what must have been a ponderous and high-standing wall. However, below these drains (Fig 12) there was a run of convex walling that related to the adjacent small, sanded floor, cellular chamber of C. Thus it is manifest that the construction of C involved, at least in this quarter, a measure of coalescence and integration with the pre-existing structure B and that on account of this, and despite the use of an area for midden deposition, B still served some useful function and was not entirely demolished. It was not possible to examine the relationship of these structures, however, in full detail as a considerable amount of demolition would have been unavoidably involved. It could be seen, nonetheless, that the continuation of this outer wall-face which engirdled the small sand-floored chamber, was of near-megalithic proportions and that it was keyed into a not dissimilar cultivation terrace remnant. Attached to the corner of this arrangement there was a length of walling, behind which boulders and rubble had been packed to the base of the exterior of B's lower wall. This cannot but have served as an extra-

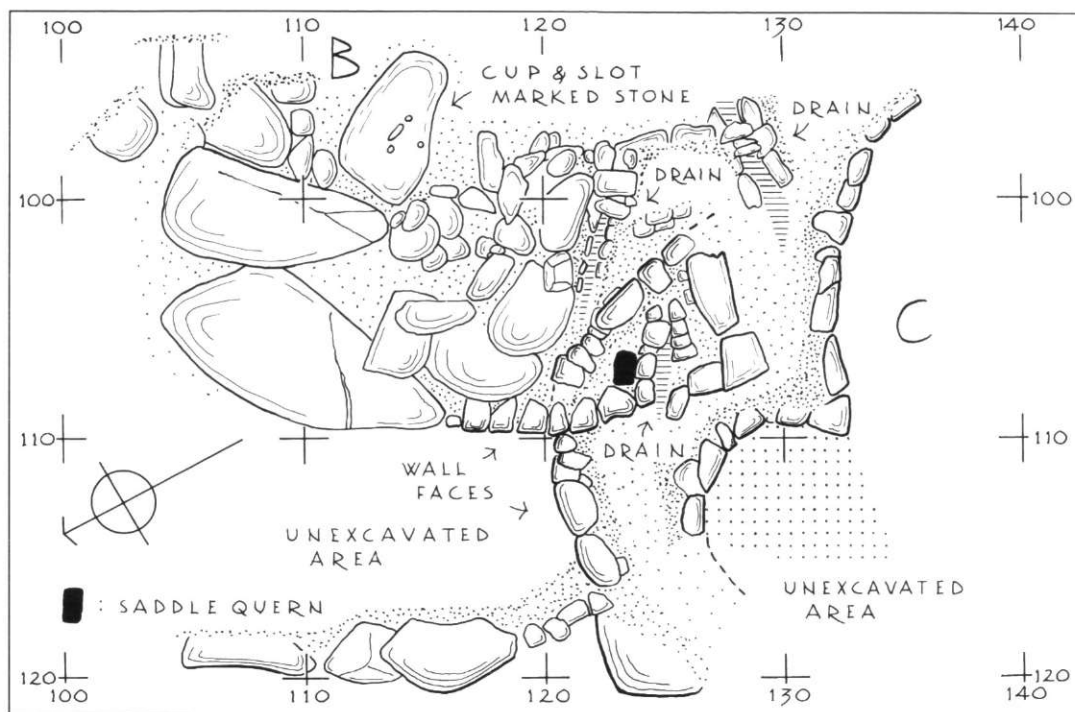


Fig 12 Detail of the B and C wall intersections

revetment to arrest the possible movement on the hillslope of what must have been battered convex conjoining walls as much as 12ft or even 14ft in height. It is of note that a massive saddle-quern was used within this complex arrangement (Pl 13). This, some sea-worn boulders and large tabular blocks may point to the Early Phase buildings having been a source of stone (Ashbee, 1983, 32).

At the N corner of B, two huge boulders, recalling that carrying the corresponding corner of A, the oval chamber of the courtyard house, lie against the general hillslope. The lower has been split, perhaps by the use of explosives. Despite this damage they both appear to be *in situ* and the upper edge of the upper boulder has been dressed, by a 'peck and batter' technique, in part to a level surface, presumably to seat floor packing stones long since removed. The lower, split, boulder's outer face lines up with the outer wall-face remnant discussed in the previous paragraph (Figs 11, 12), and its near-level upper surface could have carried appropriately secured walling.

For the most part the N wall of B had been demolished and only large boulders, perhaps discarded during the dismantlement process, remained. Nonetheless the recognisable remains of an entrance, flanked by, on the E side a massive, still standing, orthostat and, on the W side, a huge, partially fallen slab, which, with an adjacent block, gave an indication of the wall's dimensions, a thickness of about 6ft at this point. Two paving stones had survived *in situ*, while another had clearly been displaced and was found upon a spread of rubble. A massive bowl-quern was found on end and leaning against the interior face of the orthostat and it is possible that it was in its original place. Although the removal of soil (Gray, 1972, 23), a process which destroyed parts of F1 and F2, impinged upon this area, there were no overt signs of recent stone-taking. Indeed, the character of the remains was only revealed by excavation. Thus there is the likelihood that there was the removal of suitable stone, in antiquity, for the construction of, perhaps, G or the courtyard house.

From this examination of the structural nuances of B, with its largely surviving upper wall and mutilated remainder, it can be said that it was, at one point, a building with a rectangular, almost square, interior, with incurved corners, an S corridor entrance, blocked-off and perhaps serving as a rectangular annexe chamber and a W, downhill, chamber, penannular in plan. It is of note that the

wrecked N entrance and the S corridor entrance are in line, one with another, and that the surviving entrance into F2 (Fig 11) continues this line. Thus it is feasible that, at some juncture, despite the exiguous remains revealed by excavation, the F2 area could have served as an annexe in like manner to the courtyard of the later formalised courtyard house.

Removal of surface soil revealed that B's interior was like the chamber excavated in 1950 (Ashbee, 1955, 189), choked with rubble. For the most part, small stones were concentrated centrally while the larger boulders were at the sides, where they had been displaced from the walls. This debris covered a soil surface which sloped from the bottom of the interior face of the uphill wall, followed the hillslope, to approximately the top of the remainder of the lower wall, a fall of about 3ft in 30ft (Fig 11). The upper half was directly upon the rabb and its removal disclosed the deep channel (Pl 12), while the lower concealed a considerable make-up of large boulders of slab-character. The surface of this lower accumulation was, except for a small band in front of the interior of the upper wall, far below a level floor, no trace of which had survived. Besides small sherds of pottery, four brooches, three of bronze and one of iron, were found in this accumulation.

This make-up of mostly flat tabular rocks had in it, on the rabb, and contiguous with the immense N corner boulders, a great stone bearing cup-marks and a slot-mark (Pl 14), and close by it a large burned rectangular block with a perforation broken in antiquity (Pl 15). The cup-marked stone was a broad, naturally formed, irregular block, some 6ft in length, of flat lenticular section and about 4 tons in weight. Two lobar side projections, one broken in antiquity, gave it a crude cruciform appearance. It upper surface bore three unmistakable cup-marks, two relatively shallow and about 2ins in diameter, and a third, deeper, 3ins in diameter with a deep slot some 3ins wide and 9ins long, close by it. These are confined to the upper end and one side only. The seemingly weathered reverse side bore nothing positive except evidence that the lower, thicker, end had been dressed. The flat end where the greater mass and weight of the stone was concentrated was clearly its base, the whole being tapered and pointed in longitudinal section. It seems not unreasonable to suppose that it was a sometime standing stone, from an earlier phase of Scillonian prehistory, which had been brought to Halangy Down and, for some particular reason incorporated, motifs uppermost, beneath the floor of this hut interior. The perforated, reddened, rectangular block was about 2ft 10ins in length 1ft 8ins in breadth, almost 5ins thick. Its base was square and almost concave while its upper, perforated, slighter end had been convex. The perforation, 4ins in diameter, and 7ins from the upper end, was worn. A diagonal break had removed the upper corner, leaving the greater part of the perforation (Pl 15). Such a stone could have housed a spindle, and it is possible that it remained from an earlier phase industrial process. It could have been deliberately broken prior to its incorporation into the sub-floor make-up.

Two middens, predominantly of limpet shells, were associated with B. The larger had been deposited upon the loam accumulation within the blocked-off S corridor entrance (Fig 11, 80/140) and had, at some stage, spilled into and upon C (Pl 16). The smaller occupied the angle between the exterior of the upper wall of B and the stripped remnant of F1's small chamber (Fig 11, 70/110).

Rubble clearance and the removal of loose surface soil, an operation which bared the rubble spread which infilled B and C and largely blanketed their structural remains, revealed, seemingly infilling much of the S corridor entrance of B, the larger limpet shell midden (Pl 16, Fig 13). The spread of shells, which included pieces of bone, had clearly been deposited when B and C were ruined and brought down to much the same condition as when it was encountered in 1965. It was bounded upon both sides by large boulders which had, to some extent, restricted its spread. Excavation, for the deposit was deep enough to provide a practicable and informative section, showed that the main accumulation, between the lower courses of the walls of the S corridor entrance, rested upon a layer of loam, which contained lenses of limpet shells, some 2ft in depth (Fig 14).

Downhill, in what initially appeared to be the main accumulation, a spread proved to encroach upon the upper wall of C. Moreover it emerged that the upper interior wall of C was bedded upon dark soil which contained quantities of limpet shells, evidence of midden material close by when C was constructed. It is feasible, therefore, that the blocked-off S corridor entrance to B was a long-standing repository for shells, bones, and the like and that, periodically, such material was removed and used

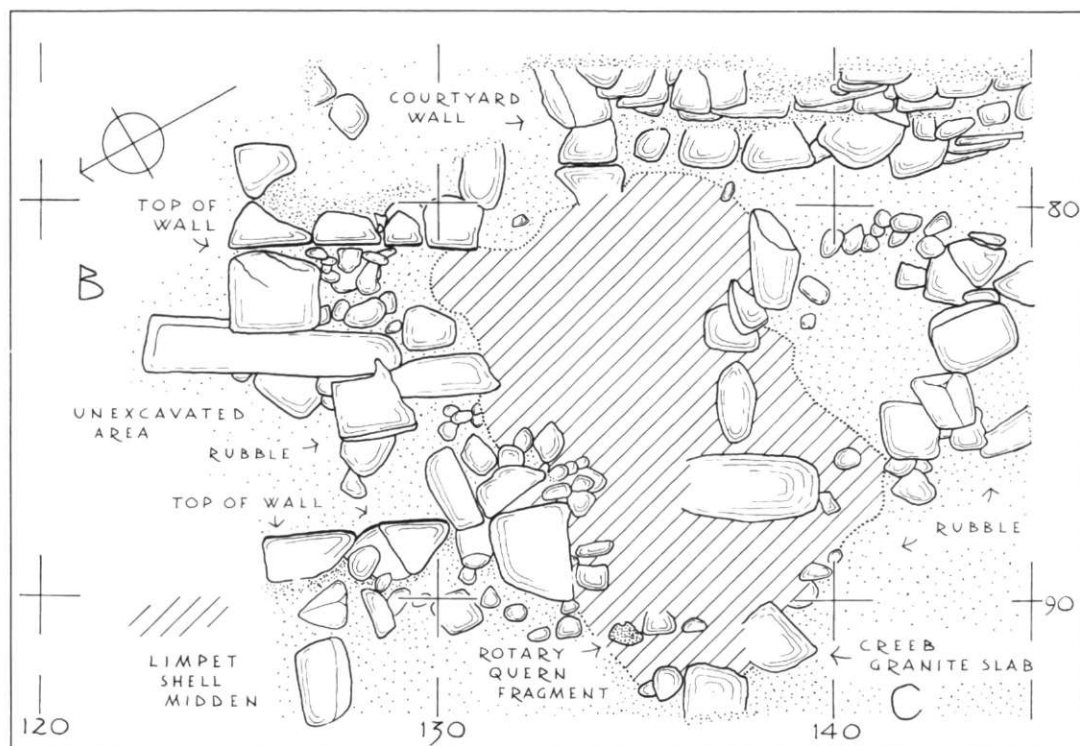


Fig 13 *The limpet-shell midden before excavation*

for garden-plot and field fertilisation. Indeed, the dark loam, almost 2ft in depth, of the cultivation terrace downhill from the B/C building remains (Fig 11) contained a number of pockets of limpet shells, broken domestic animal bones and abraded scraps of pottery. The shells incorporated into the incut for the interior wallface of C could therefore be from an earlier amassment, largely removed before the infilling on the rectangular blocked-off corridor entrance and the construction of C. Some 150 broken bones, besides numerous scraps of bone, were found in the limpet-shell midden and in the soil of the immediate area. Ox bones were the most frequent, while horse and pig were also represented. These, the fish scales and bones of small mammals will be discussed in detail below. In the event, the deposit yielded some 110,000 shells, which were the basis of a study (Townsend, 1967) which explored the nuances of their collection and use. The small accumulation of limpet shells contained in the angle made by the outer wallface of B and the back of F1's small chamber, rested upon a skin of sandy soil which mantled the rabb (Fig 11, 70/110). The shells, some 7000, were tightly packed and earthworm action had intruded but little soil. Broken ox bone fragments were present as in the main midden. Recent disturbance had, however, impinged upon the top of the deposit and weathered limpet shells were found in the surface soil over a wide radius.

The southern structure C, with its rectilinear annexe (Fig 11)

Except on its N side, at the juncture with the remnant of the small cellular compartment, the oval structure C survived as only a single course of footing stones. The uphill half had been revealed by the removal of the rubble spill downhill from the midden and it could be seen that the well-coursed walling effectively blocked a major part of the complex stone-built drainage system concentrated in B's western quarter (Fig 12). A foundation-stance had been cut into the rabb to seat the foundation blocks of this upper part and the interior levelled by further rabb removal; this to provide an even interior. Most of the stones were bedded directly upon the rabb while others were upon dark soil containing limpet shells. Earthworm action may well account for distortions and displacements

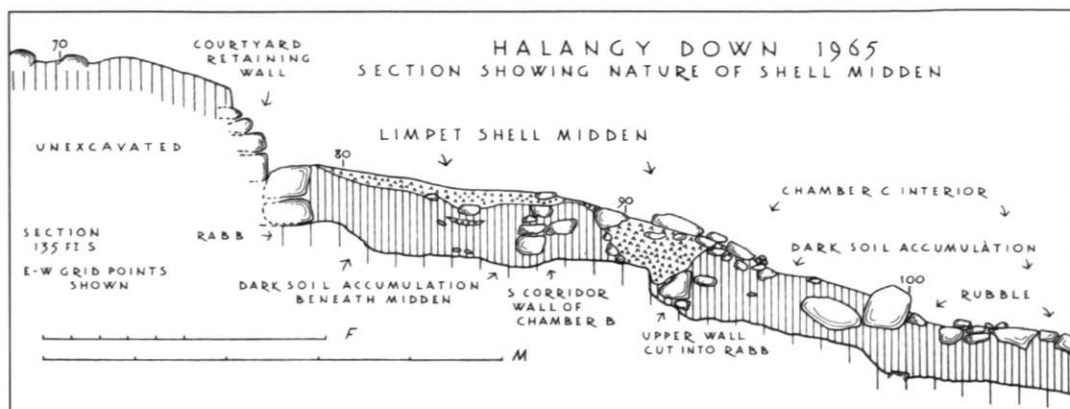


Fig 14 Section of the limpet-shell midden showing the loam accumulation within the remains of the B and C structures beneath

(Atkinson, 1957). However, midden material was also packed into the space between the rear of these stones and the cut into the rabb. It is clear that C was set out and constructed when at least the S part of B was ruinous and a repository for midden material (Fig 14). Yet C fell out of use and was demolished during the final stages of midden accumulation as is shown by the shells, stones and soil, which were found covering the single surviving course. When this wall was demolished, a shaped standing stone, bearing a pecked device, had been thrown down and discarded to be subsequently buried.

When the interior upper wall of C had been completed, presumably to a height of about 5ft, this standing stone, which had a line of large blocks adjacent to it in the S arc of the wall, would have been prominent. Coinciding with a gap from which it could have fallen, this stone (Pl 17a), some 7ft long and about 1ft 6ins in breadth, was triangular in section and had dressed, pointed, ends. Its flat face, that with the device (Pl 17b) was on a thin layer of soil, presumably the floor at the time of the structure's demolition, which covered the rabb in this area. There was no trace of the pointed butt of this stone having been dug into the rabb. Indeed, its neighbouring stones, one of which was out of place, suggest that it was secured only by conjoined masonry. The down-facing side had been dressed to a plane surface, only a small roughly rectangular area, longitudinal to the stone, being left in relief. Two near-circles, within which the surface had been slightly lowered, were adjacent to the upper corners of the relief rectangle, thus conveying an impression of a face. The possibility that this was an erstwhile standing stone, or even an ill-defined statue-menhir, which had been incorporated into this wall must be envisaged.

Against the walling which had survived on the N side were three courses of long rectangular stones cloaked and bonded by a considerable amount of white clay of almost kaolin quality. The uppermost stone was broken at one end and had in its upper surface three conjoined pecked-out ovals. The clay, when associated with a number of solid pieces, some 2ins in thickness, on edge and against the bottom of the hut wall, may remain from erstwhile internal rendering while the stones may be no more than pieces of a relict internal fitment

Apart from three conjoined stones, which marked the continuance of the internal wall-face of C, at the SW side, nothing remained of the lower, downhill, interior part of the structure. Indeed, it had been built to incorporate something of a massive cultivation terrace wall, which comprised its outer, downhill, face. This had been turned to furnish support for the small cellular compartment and, in turn, the lower exterior wallface of the rectangular annexe had been attached to it. Further down the decreasing hillslope there is a surviving terrace (Fig 11) perhaps used as a garden plot, while the trackway (Fig 4) breaches yet another such terrace, all showing how the buildings were constructed on and into a developed system. The terrace below the massive wall sustaining C was strewn with rubble. At the NW end there was a sea of small cobbles, wall-core stones discarded when walling was dismantled, while at the SW end were larger stones which included several considerable blocks,

seemingly wrenched from the great wall and never taken away. It was possible to see that there was no trace of buildings on this lower terrace, a factor which materially assisted the demarcation of the cluster of buildings on the hillside and the isolation of its components.

The part of the massive cultivation terrace wall which had been utilised as an exterior downhill wall for C and to provide containment for its structure had been subjected to considerable modification. Its principal length (Fig 11) had been terminated and a turn into the hillslope, as an outer wall for C's NW cellular chamber, constructed. This abutted the short length of surviving walling which retained B's drain system and its infill would have effectively blocked them. This convex construction, which utilised large stones such as might have been taken from a length of cultivation terrace and the other separate lengths would, when standing to their original height of some 12ft to 14ft, have had the effect of a series of stalwart bastions when seen from below.

From the sanding of the floor within the small cellular compartment at the lower N end of C, it may be presumed that at some point the entire interior floor was sanded. However, the absence of such a floor in C and its conjoined rectangular annexe might indicate that, before they were dismantled, they had sheltered livestock. Trampling would undoubtedly have destroyed sanded floors and could also account for the irregular condition of the surface of the rabb within the upper confines of C. The lower half of this interior was approximately the surface of the cultivation terrace upon which the structure had been sited. Here the break with the surviving sanded floor of the cellular compartment was marked and partitioning off, in antiquity, could be suspected. This cultivation terrace soil contained, besides pockets of rotted shells which presumably remained from agricultural practices, sandy patches perhaps from a broken-up floor. Because of the general height of the surviving bedded stones of the wall, higher than the hearth, it seems likely that the floor of C, and, for that matter, its annexe was sloping, a fall of about 1ft 3ins from top to bottom.

The sanded floor of the small cellular chamber had been set down upon compact loam which was bedded upon large, uniform, cobble stones. These had been laid upon the cultivation terrace soil accumulation which was retained by the massive lower bounding wall.

In the middle of the SW side an edge-set arrangement of slabs, all but surrounding three flat slabs, forming a hearth (Fig 23), was encountered. Adjacent to these, on the SW side, was a burnt area with reddened sintered soil, parts of which resembled the fragments of the ovens or kilns discussed above, irregular and about 2 square feet in extent. Despite this the interior faces of the stones which comprised the setting bore little or no traces of burning. A few fragments of iron-slag were found in the earthen floor adjoining the stones on the W side.

Apart from its embracement of the S entrance to C, the S rectangular annexe is conjoined only at two points. The lower external wall-face, a modification of the pre-existing massive cultivation terrace wall, abuts and obliquely continues the corresponding external wall of C. The seemingly lower internal line of walling, within the rectilinear scheme, is butted against a large bun-shaped boulder, presumably a jamb-stone, that concludes the S wall. From this point onwards the SW arc did not exist except for three stones detected below floor level (Fig 11, 110/140). This short length of walling could therefore remain from a S corridor entrance corresponding to that of B, which ultimately became a repository for the limpet-shell midden.

In common with all the Halangy Down structures, the interior of the rectangular annexe attached to C was choked with rubble and soil. Its interior wall-faces differ markedly from those of all the other arrangements in that their construction employed blocks and boulders of megalithic dimensions (Fig 15). The upper-end return used two very large tabular blocks, one some 5ft in length, which were backed by a substantial standing stone, now a prominent feature of the site, set within what would have been the soil and rubble wallface backing. This, although much weathered, may have borne the lineaments of a humanized countenance. It was joined, almost at right-angles by the S wall which was of boulders of commensurate dimensions, secured by a series of trig-stones, small stones used as wedges (Pl 18a). At a point opposite to the upper remaining, remnant of possibly a corridor entrance to C, there was a similarly large, secured, block which returned and anchored this feature to a huge recumbent boulder, some 10ft in length and 4ft in height (Figs 11, 15).

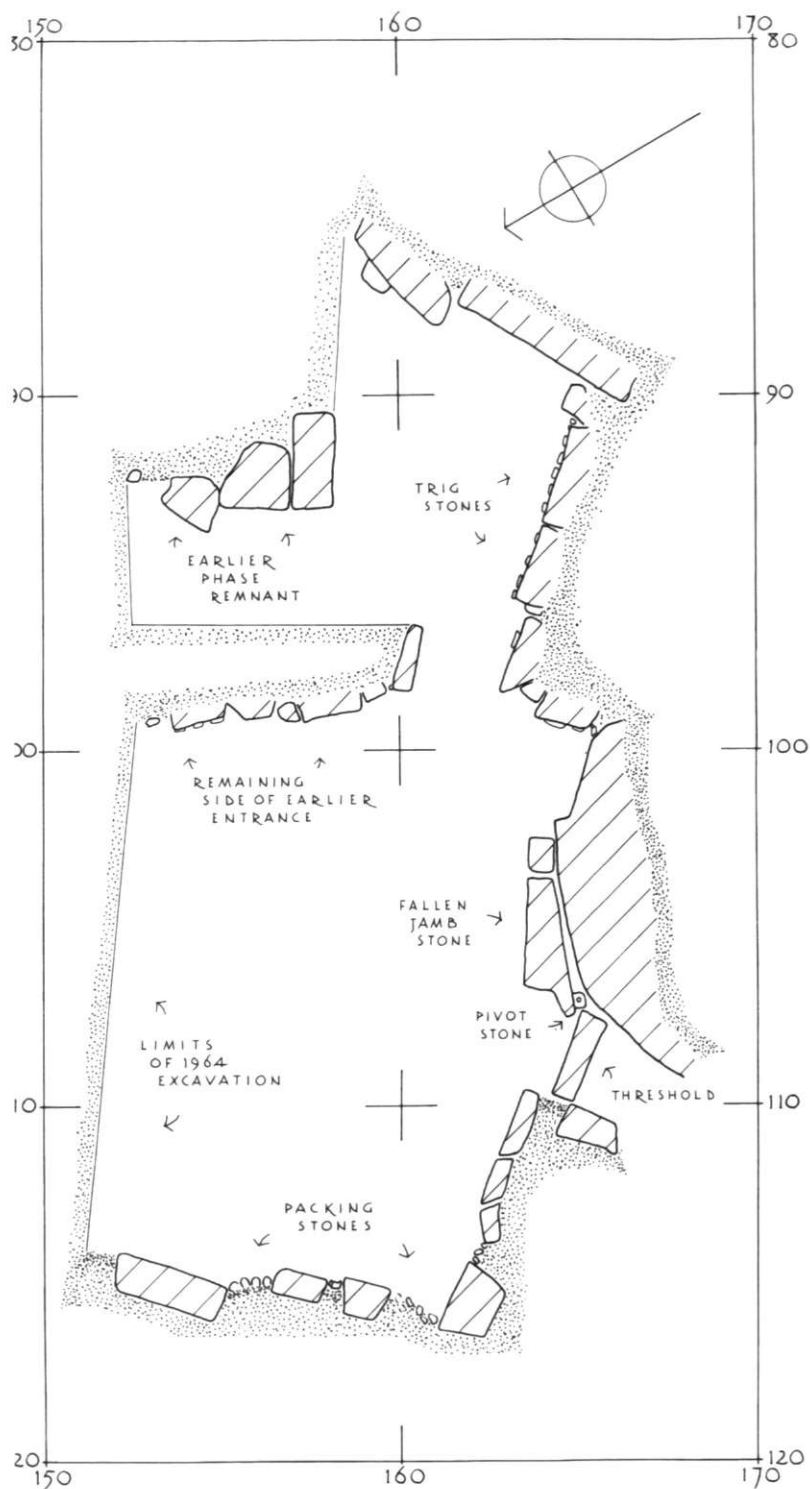


Fig 15 Details of the massive foundations of the rectangular annexe to C

Bounded by this great boulder, and on its downhill side, there was an oblique, paved, entrance (Figs 11, 15, 160/110). Inside, and inset from the inner wallface, there was a slab on edge as a threshold, while close by, and fallen away from the upper side was a slender jamb-stone. Beneath this and by the upper, inner (Pl 18b) corner of the threshold slab, a pivot-stone was encountered *in situ*. This pivot-stone, an elongated, pointed, square-sectioned block, almost 2ft in length, was earth-fast and indicated an erstwhile floor-level, of which no visible traces remained. The paved entrance was a narrow corridor, scarcely 2ft 6ins in width, which ran obliquely through the massive wall, the lower courses of which were some 8ft in thickness at that point. The lower wall interior on the SW and NW sides was of very large, almost square or rectangular, slabs set upon their edges and secured in position with small trig-stones. The upper ends of these slabs were, for the most part in contact one with another, although at and below the presumed floor level the spaces and interstices were packed with small, cobble-like, stones. Its core was soil and rubble, while the lower, outer, face was, in common with B and C, the utilised massive cultivation terrace retaining wall.

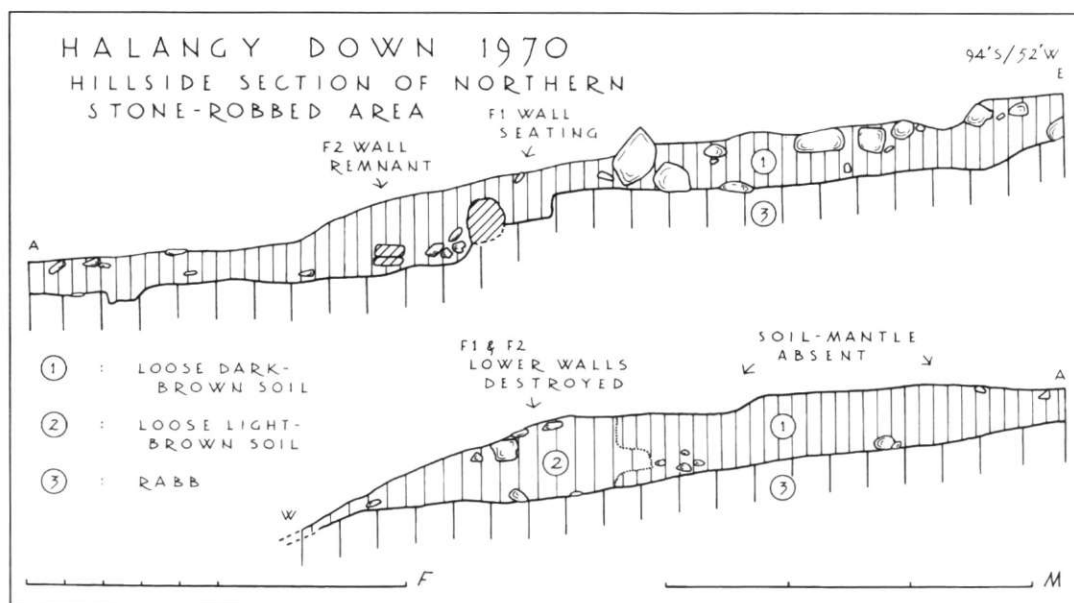


Fig 16 Section of the northern stone-robbled area showing the remnant walls of F1 and F2

Although the upper, remaining wallface of the corridor entrance to C had been retained, and could have served as an internal partition, another length of walling could have divided the upper quarter of the internal area from the lower, making it into a small, quadrilateral, annexe. The upper third of this essentially rectilinear structure had its wall remaining to a uniform height although in general, the lower part is broken and interior facing slabs and stones are missing, a condition which points to deliberate organised stone-robbing.

At the lower end, the interior facing stones had been upon humus, presumably the earthen surface of the retained cultivation terrace, while elsewhere and at the upper end the massive blocks, secured into position with trig-stones, were in contact with the rabb. Whether or not this was an original arrangement cannot be effectively determined, for the great weight of such a wall, together with earthworm action, could be responsible, as it could, indeed for local subsidences and distortions elsewhere. By and large, the bottoms of walls indicate approximate floor levels and thus the original floor of this rectangular annexe, which was earthen, for no trace of sanding even in patches, was found, and sloping, in the general direction of the hillside. There was at the upper level a considerable depth of soil above the rabb, some 1ft 6ins. While some of this could have been the

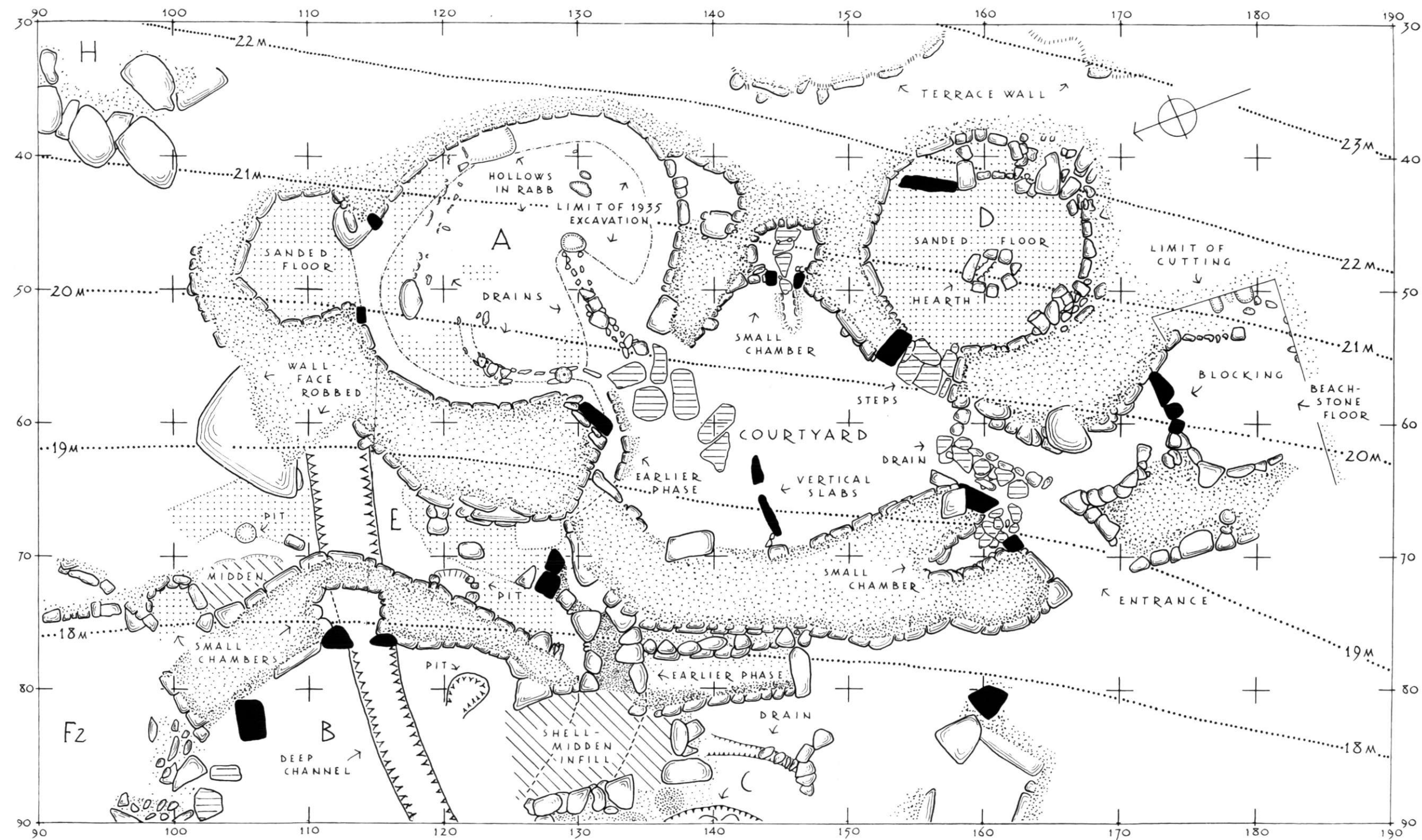


Fig 17 The upper slope structures, the courtyard house, A, D, and the courtyard with aedicule

accumulation of hill-wash, it was homogeneous and any erstwhile floor, or floors, could not be detected.

Unless subsequent alterations and recent stone-robbing have demolished another entrance, perhaps in the E area, the narrow entrance with its threshold and pivot-stone would not have allowed the area to have been used for animal husbandry. Thus, with the consideration that the hearth is almost central to the conjoined structures, domestic usages can be postulated.

4.3 The courtyard house and its components (A, D, courtyard; Fig 17)

In 1950 the 'homestead' (A) was seen to open onto a level expanse, bounded by a substantial lower wall, and thus a connection with Cornish courtyard houses was considered (Ashbee, 1955, 198, Fig 2). This was because clearance of cover had shown another, circular chamber also accessible from this area. An established footpath descended the hillslope via its interior and the entrance to the level expanse, the courtyard. By 1964 further clearance showed the conjoined character, some supplementary features, and that the considerable chamber, examined in 1950, was clearly a principal part of an extensive, composite entity. In the event the lineaments of a progressively modified composition of courtyard house character emerged (Fig 17).

This evident courtyard house has three principal components, the prominent oval chamber (A) with its N annexe (Pl 3), the lesser chamber (D) and the level expanse, the 'courtyard'. A small cell or recess is the focal point of the courtyard on the E, uphill, side and its concave facade connects the entrances to the chambers. As was seen in 1950 (Ashbee, 1955, 198) this courtyard's substantial lower wall was attached, and not integral, to the similar lower wall of the large oval chamber (A). This, and the walled-off structural remnant at its S end, shows the process of progressive modification which led to the final form of the courtyard house. Access to the courtyard is via a narrow entrance at its SW corner. Once within the courtyard, the circular chamber (D) is uphill and to the right, as is the small cell, while entry to the large oval chamber (A) involves crossing to the opposite side. At one stage a modest circular chamber, with access via a passage, lay to the immediate right (S) of the entrance but it was demolished and blocked-off in antiquity. This blocked-off passage is balanced by a small intramural chamber opposite (N) and to the left of the entrance. Drains from the large oval chamber (A) debouch into the courtyard, beneath its approach and entrance paving slabs, while that from the circular chamber (D), in which a hearth survived, ran out through a substantial slab-covered drain which floored the steeply-rising entrance.

The large oval chamber A (Fig 18)

Built into the hillslope and employing a cultivation terrace retaining wall on its lower side, this chamber is oval in plan, with a N-S axis (Figs 17, 18). A small, pentagonal, compartment built into the expanded thickness of the wall is at the N end. Internal walling on the uphill side remained to a height of 2ft 6ins, on the downhill side to about 1ft 6ins. Its downhill exterior, which incorporated the terrace's massive masonry, survived to a height almost 5ft. In 1935 the interior walls and a drain had been bared (Fig 3; Addenda 8.1) and in 1950 the excavation trench was little altered. Much of the undisturbed inner area remained (Fig 19), choked with rubble, some being of considerable size and bearing traces of recent stone-cutting.

Blocks of granite, selected for their rectangularity, comprised the mass of the internal masonry, the less substantial having been used for the uphill wall. Coursed work had survived, particularly the E uphill, and SE parts, although elsewhere, and within the NE intramural chamber, only the bottom courses remained. Varied constructional principals could be seen: spaced-out vertical joints, panels, framed by substantial vertical stones, infilled with lighter work and massive basal blocks, which would presumably have carried several courses. One foundation block in the external face of the downhill wall was 6ft in length, 3ft deep, and, as far as could be ascertained, of proportionate breadth. Adherent sandy mortar or, perhaps, rendering remnants, all of a composition comparable with the substance of the floors, were seen between some of the stones of the principal and smaller chambers besides remaining upon some blocks among the rubble (Lousley, 1971, 13).

Within the NE intramural chamber, the level, compact, sanded floor remained unimpaired but within the main chamber, apart from patches, sanded flooring was to be seen only at the N end. A

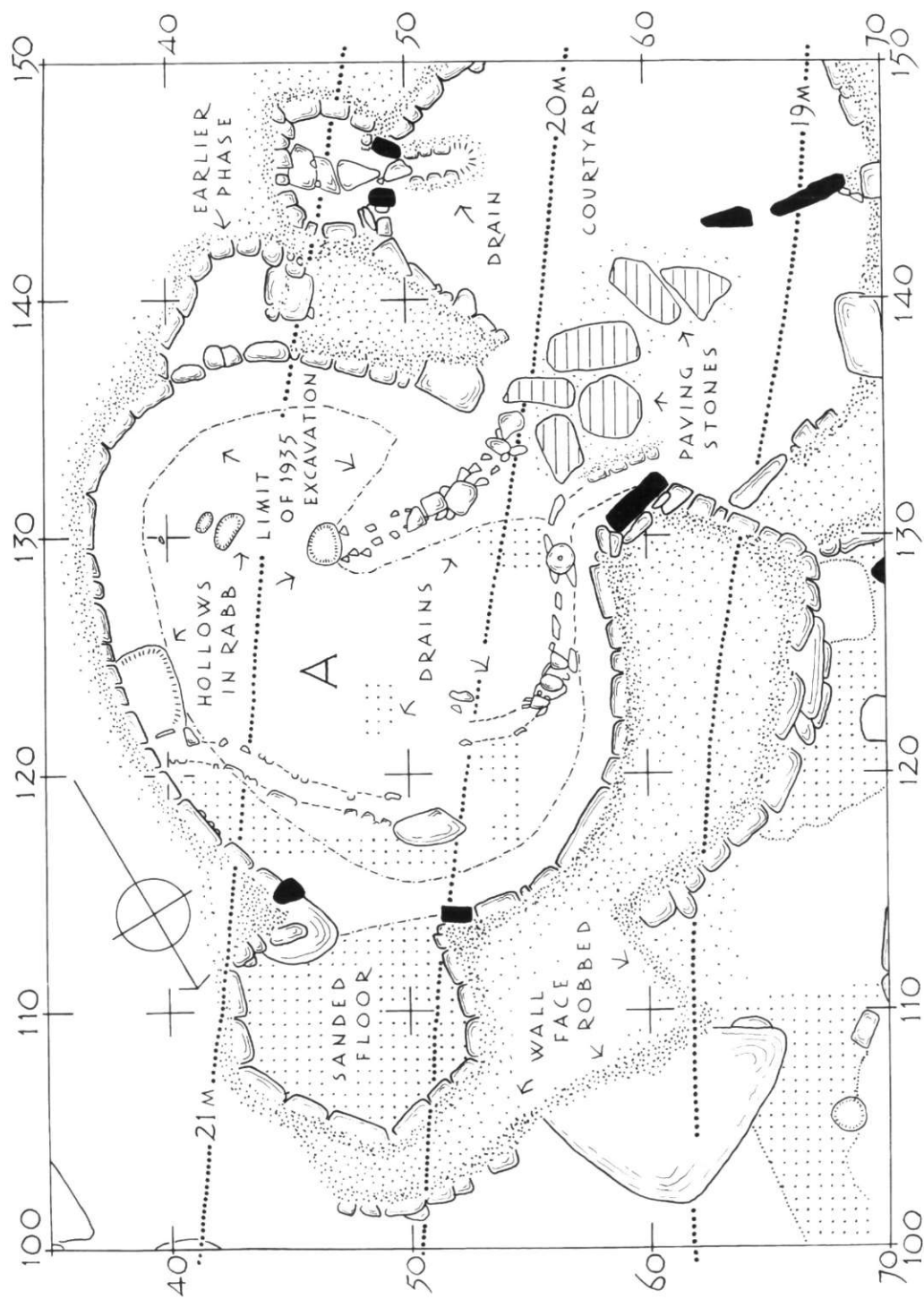


Fig 18 Details of the oval chamber, A, of the courtyard house

HALANGY DOWN 1950 AXIAL SECTIONS OF OVAL CHAMBER A

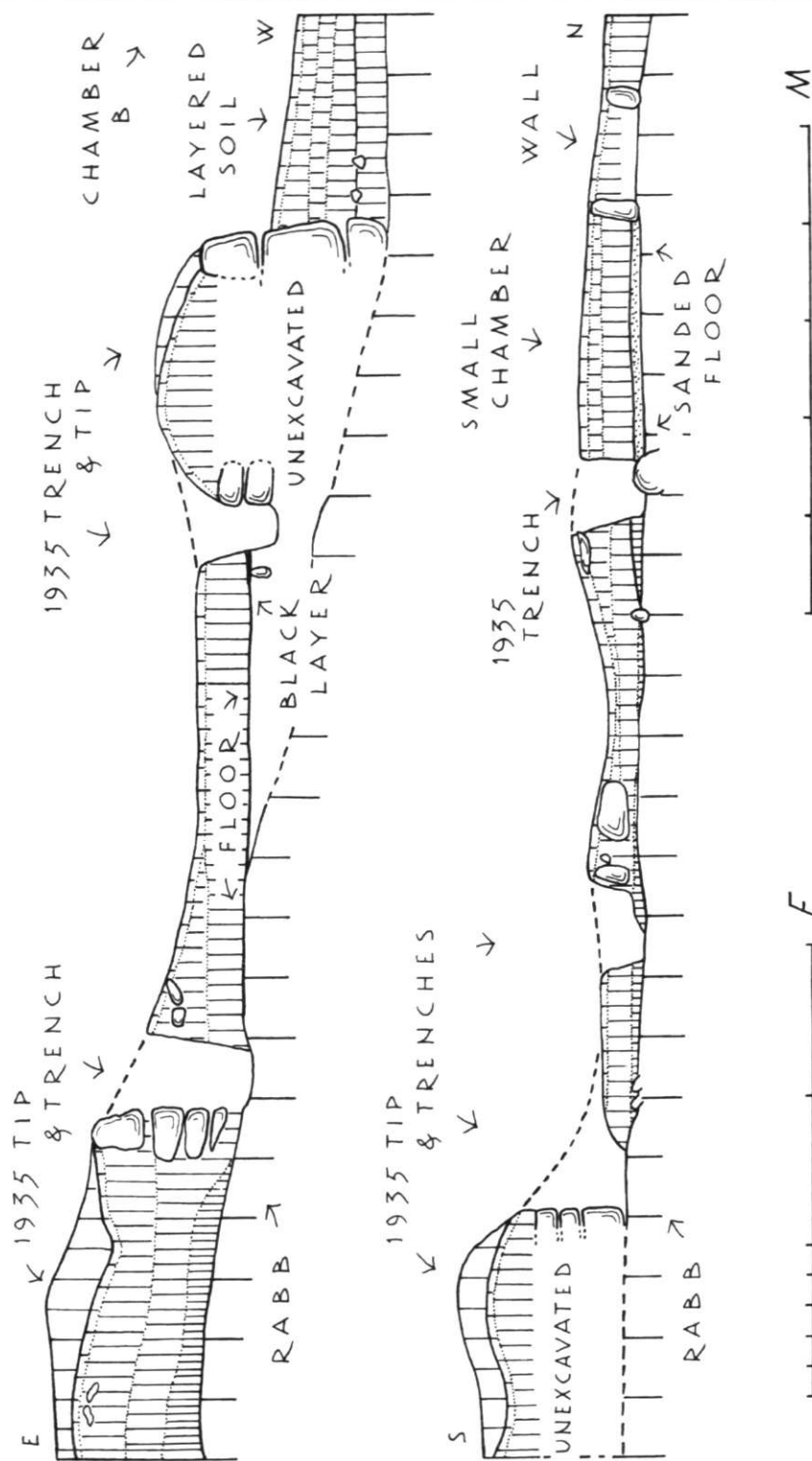


Fig 19 Axial sections of the oval chamber, A, of the courtyard house

thin layer of dark, almost black, dense, humus, mostly little more than 1½ins in depth covered, and thus defined, all sanded floors (Section, Fig 19) and the rabb. Presumably the remaining N area of sanded floor in the main chamber was linked with the intramural chamber's floor but had been dug through in 1935 when the walls were bared (Fig 3). On the uphill E side the floor was the worn and pitted surface of the rabb. Embedded boulders large and small protruded from this surface. On the downhill W side the firm-packed soil infill of the erstwhile cultivation terrace was immediately below the unsubstantial dark layer. Much of what may have been a floor surface was disturbed and destroyed on the NW side adjacent to the entrance, but half of a spindle whorl and a cherty obliquely blunted microlith were found in it (Ashbee, 1955, 196, Figs 5.1, 6.1; Jacobi, 1979, 48). The definable chamber floor, although for the most part level (Section, Fig 19), sloped gently downhill and at the entrance the sanded floor remnant was some 9ins lower than the slab paving.

A stone-covered drain, as well as a part of another, both leading to the W entrance, was uncovered in 1935 (Fig 3), while another, lacking cover-stones and certain side-stones, was found in 1950, adjacent to the sanded-floor on the NE side (Fig 18). This open drain, perhaps an earlier arrangement, began at a near-rectangular hollow in the rabb, partially covered by the uphill E wall, and fell away in a NW direction, terminating at a considerable, embedded, boulder. It was sealed and infilled by the dark occupation soil which covered the sanded floors and the worn surface of the rabb. Part of the drain, adjacent to the NW downhill wall, lacked cover-stones although such as remained were carefully separated by small trig-stones, the sides being light, selected, slabs. The lower stone of a rotary quern (preserved on the terrace of Seaways, Porthloo) was found in use as a cover in 1935. It was choked with a fine, dark, greasy, silt which contained a slate spindle whorl (Ashbee, 1955, 196, fig 5, 2). It was thought to have been a continuation of the NE, uncovered, drain but it was found to be set at a slightly higher level. In 1950 its outfall was thought to be a sump but subsequent excavation showed that it was no more than a pocket of stones mantling an earlier building remnant. The drain exposed in 1935 began at an axial hollow which did not appear as closely connected with it. Alec Gray's plan (Fig 3) shows its original broken condition encountered when this drain, and its remaining cover-stones, was initially excavated. Since then it seems to have been reconstructed, using almost identical side-slabs for those uncovered in 1950 (Ashbee, 1955, 150, Fig 2) were clearly different from those initially encountered and depicted. All the drains were constructed in a slot, cut into the rabb or the earthen make-up, which was then slab-lined and covered.

A slight, sterile, dark, soil layer covered the hard level, sanded floor of the NE intramural chamber. At its limits it coincided with, and covered the bottoms, of the wall-blocks. Entry was marked by a pair of vertical stones, that to the left being tapering and some 3ft in height while that to the right, set against a massive, rounded, earth-fast boulder, was an irregular block which consolidated two courses. For the most part, only a single course of blocks or slabs interspersed with, and presumably surmounted by, coursed work, completed the internal lining of a chamber which was essentially pentagonal in plan. Many blocks, slabs and stones bore traces of what had been either mortar, used to infill and lute joints, or perhaps even rendering. Excavation in 1935 had cut through the sanded floor, for the standing stones had been thought to denote an opposing entrance (Addenda 8.1), and thus a clear section was available. It appeared that a level layer of soil and small stones had been laid down and upon this the sand, which had the appearance of yellow sandy mortar, had been evenly spread. The two materials may well have been rammed together for the resultant floor was hard when dry and freshly cleared. Although proof against light footwear, it softened and crumbled upon exposure to rain.

Two large tabular blocks, one found broken up, had flanked the main SW entrance. There was, however, probably on the SE interior side, a worn, vertical, square-sectioned columnar stone, almost 4ft. in height. In 1935 it was found '*lying close at hand*' (Addenda 8.1) and stood into its presumed position and photographed (Gray, 1972, Pl 1). When found prone in 1950 and recognised by J. H. (Joe) Treneary it was preserved and, in 1964, stood up and secured into its supposed stance. On the N downhill side the massive tabular flanking block was in situ, although leaning inwards but its counterpart had fallen prey to the stone-cutters and was nearby in three pieces. It was seen that its appropriate height had been obtained by lines of obliquely laid small slabs spanning the breadth of

the wall. A line of substantial paving stones, laid upon soil and stone rubble, led from the courtyard to the inner side of the wide entrance, the innermost being some 9ins higher than the general floor-level of the interior.

An aedicule or small bay, detected in 1950, but not fully investigated, adjacent to the one opening into the courtyard, had been internally walled-off (Pl 19a), at the S end of the large oval chamber (Fig 18). Four courses of even tabular-block masonry had survived which, on the W side, terminated against and upon a massive rectilinear block. Presumably this was a previous arrangement which, as will be discussed below, was for some reason abandoned.

No trace of a hearth was found in the oval chamber, which is surprising in view of the well-constructed, regular, fire-settings (Fig 23) found in C, D, and G. However, Alec Gray shows a hearth against the uphill E wall on his plan made in 1935 (Fig 3). He said "*There were traces of hearths close to the wall at two places; these contained ash and burned earth but nothing else, and were just hollows in the natural ram*", and in 1950 J.H. (Joe) Treneary told the present writer about them. The undisturbed area in the immediate vicinity of the uphill 'hearth' was closely scrutinised but no traces of burning were found. It is not impossible that Alec Gray encountered residues of incidental fires kindled after the building's abandonment.

Among the rubble choking the interior, and on the E uphill side, a slab of granite was unearthed in which a regular circular depression, 6ins in diameter and 1in deep, had been pecked. By analogy with Chysauster (Hencken, 1933b, 275-7), its function may have been to house the butt of one of principal roof supports. It was also thought possible, at the time of excavation, that small depressions in the surface of the rabb could have held post-butts, conversely they could be no more than the cavities left after the clearance of inconvenient stones. Consideration was also given to the possibility of stone-corbelled roofing, in particular of the small N intramural chamber. Apart from the very considerable weight involved, the character of stone-debris did not support such a conjecture.

The courtyard aedicule (Fig 18)

This annular cell, and aedicule (Figs 17, 18), is the central point of the courtyard (Pl 19b). Its carefully constructed concave facade links the entrance to the N large oval chamber A and the S circular chamber D on the uphill E side. Well-coursed tabular masonry, surviving in places to a height of almost 3ft, had been used for this concave, indeed, infundibular, planned facade, with, as its focus, two matched, worn, jamb-stones just over 2ft in height, the entrance to the small annular cell or aedicule. Removal of the comprehensive soil infill, revealed that its walls of irregular bonded stones, some small, and standing about 3ft in height, had upper oversailing courses, terminating in a substantial slab. A number of such lengthy slabs could have been employed to form a conoid roof some 4ft 6ins or even 5ft in height, the interior being thus of beeskep form.

On the floor, flat slabs set in a line and leading directly from the jamb-stone-flanked entrance to the rear wall, covered a drain. It ran some 3ft into the courtyard, the outer end having no cover-stones. Since massive paving slabs leading into the oval chamber (A) survived, it is possible that these outer stones were removed in antiquity and were not prey to recent stonebreakers. Structural modification could be a reason for its truncation. Like the drains of the oval chamber (A) it was infilled with close-packed fine-grained greasy soil, presumably a product of progressive silting. Nothing was found in it.

After excavation and the removal of the infill, the drain-covering slabs were replaced. After heavy rain a considerable flow of ground-water from the hillside was conduited into the courtyard.

The circular chamber D (Figs 17, 20, 21)

Before excavation this chamber appeared as a circular dished hollow with, adjoining the site of the courtyard, the massive, entrance-flanking, stone's top visible. Upon removal of the peaty turf mantle (Fig 21, layer 1) the tops of the partially demolished walls were readily detectable, as were the lineaments of the megalithic entrance steps. Like the large oval chamber (A), the circular chamber was rubble-choked and it could be seen, particularly at the sides, how displaced stones followed the curve of the surviving walling, betokening systematic demolition. The removal of these

stones revealed a layer of grey leached soil (Fig 21, layer 2) with further large, and some smaller, stones in it. This covered a sanded floor (Figs 17, 20, 21, layer 4) which, in the vicinity of the hearth, had upon it irregular patches of fine, sooty soil. Greasy leached soil, with small stones, was beneath the sanded surface, and this was bedded upon the rabb (Fig 21, layer 5).

Like those of its larger oval fellow, the circumferential walls are of selected, tabular granite blocks, coursed and bonded on the NE side. Elsewhere such an arrangement had been used in conjunction with alternating large boulders and substantial foundation blocks. Vertically set stones, some of which had been partially prised from the wall, and, subsequently discarded, predominated on the SW side, although there was coursed work adjacent to the entrance from the courtyard. As elsewhere the infill between wall-faces, here the interior and courtyard faces, was soil with few stones, grey, granular and leached.

At some time subsequent to its construction, a chordal arrangement (Pl 20) had been inserted into the circular chamber, on the uphill side and parallel to the general hillslope. It was largely undamaged and had survived the attentions of the stone-collectors and breakers. An E entrance, from a stone-faced cultivation terrace, had had near-triangular spaces walled-off upon either side of it, the narrow intervening corridor being eventually blocked (Figs 20, 21). On the N side a long vertically-set slab separated the space from the chamber's interior, while on the S side a substantial block had the same function. Here the triangular space had been partially covered by a substantial near-tabular slab. The remaining narrow corridor had been closed by rectangular blocks, standing upon a line of small, floor-embedded, blocks of similar character. The chamber's sanded floor rose sharply just in front of the arrangement and thus the curtailed area was some 5-6ins higher than elsewhere (Fig 21, layer 4).

Unlike that of the oval chamber (A), the ochreous sanded floor of the circular chamber was intact (Pl 20, Fig 20). As elsewhere it was hard when dry and resisted all but the heaviest footwear, similarly rain softened it and caused crumbling. Where it rose in front of the chordal reserved area it was irregular and broken. At the entrance, the smaller slabs, supplementing the upper step, were embedded in a particularly fine compound. It is possible that this slightly elevated area, sealed by the walling-off, remained from an original floor-level and that that of the remainder had been lowered. Thus when the hearth was inserted, perhaps from elsewhere, it was necessary to remove the coverstones of the sub-floor drain.

The eccentrically sited hearth (Fig 23, detailed plan) was essentially a shallow, sloping pit, its deepest end confined by a long back-stone. Each side was flanked by smaller tabular blocks, three NE and two SW remaining, and all were worn and fire-marked. It was found filled with soil, black because of its considerable content of comminuted charcoal, which had in it a single sherd of pottery. Running diagonally beneath the hearth, and without cover-stones, was a drain completely infilled with leached, grey granular, hillwash. Without floor removal and demolition, it was not possible to trace its course and extent. Presumably it led to the drain emergence beneath the steps, detected in the courtyard, and this would have entailed a steep fall and a deep cut into the rabb (Fig 21, section). Nonetheless, the lack of cover-stones, and the infill, might indicate that it remained from an earlier construction which had been demolished without overt trace.

From the courtyard, entrance to the circular chamber was via two considerable steps (Pl 21) leading to floor-embedded paving slabs and the chamber's interior. They rose almost 2ft and were almost 5ft in breadth. These steps (Pl 20; Figs 20, 21) were constructed from rectilinear blocks, the lowest comprised a large central tread flanked by lesser ones and the upper a similar arrangement. Here, however, the largest block lay to the left, where entry was made, and thus led in that direction. To the left, there is a megalithic orthostatic block which flanks the steps on this N side and on the other masonry of which only the lower courses survived. Here the corner of the SW wall, a large square stone, stood some 2ft out from the line of the steps, thus shielding them when entrance was made into the courtyard. A slab-covered drain emerged from beneath the right, SW, side of the lower step. It led into another, more substantial, drain which, beneath slabs, had its egress down through the courtyard's SW entrance (Fig 17, 160/60).

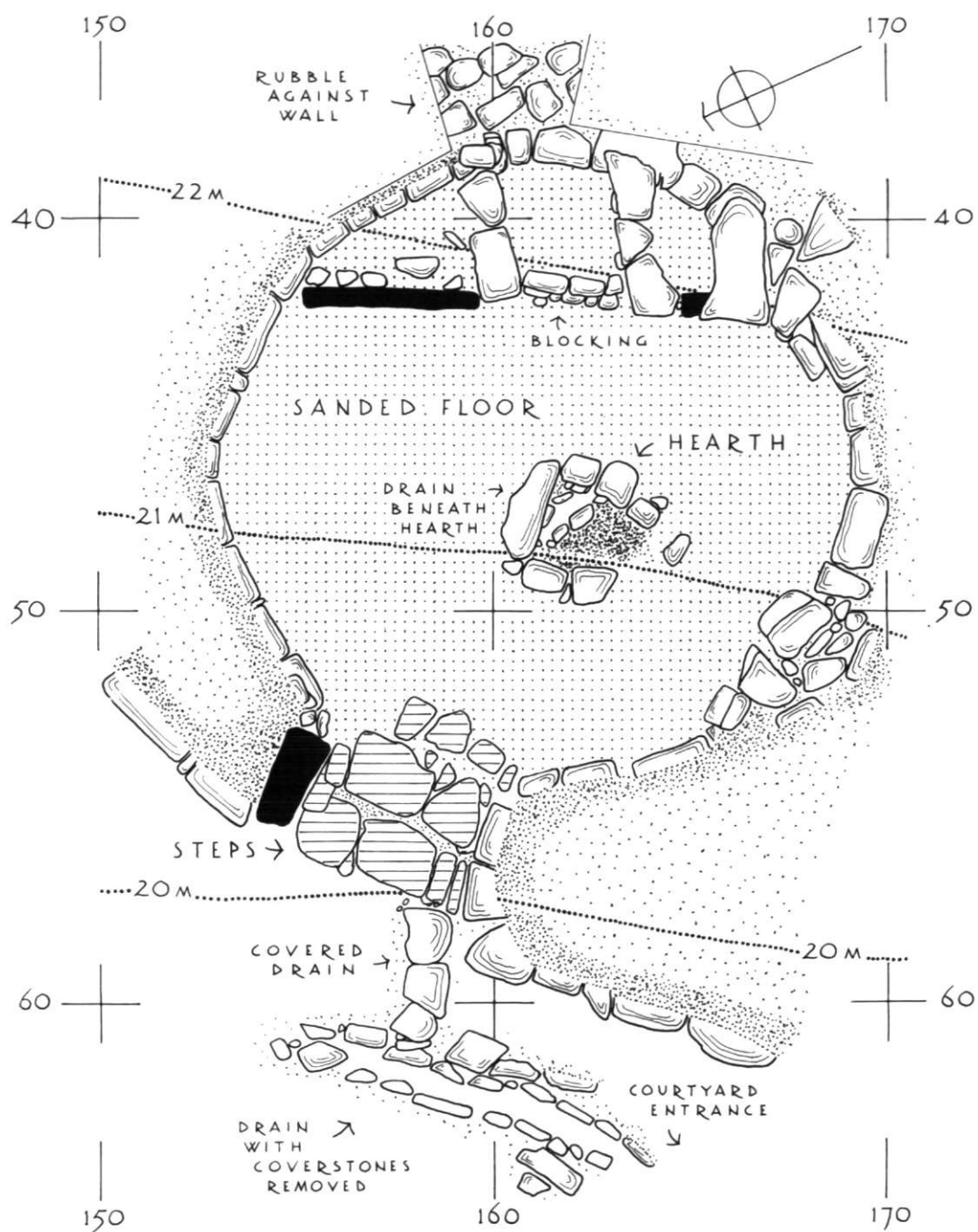


Fig 20 Details of the circular chamber, B, of the courtyard house

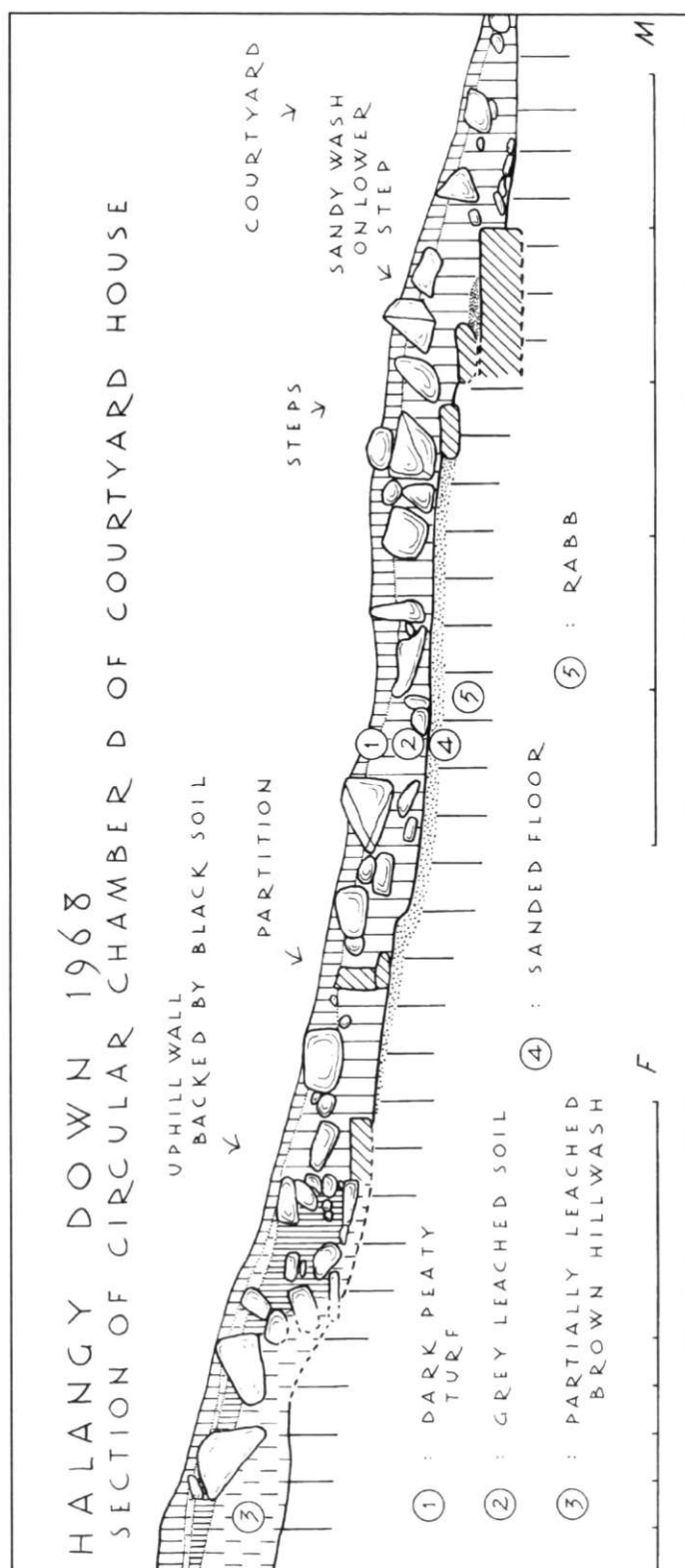


Fig 21 Section of the circular chamber, B, of the courtyard house

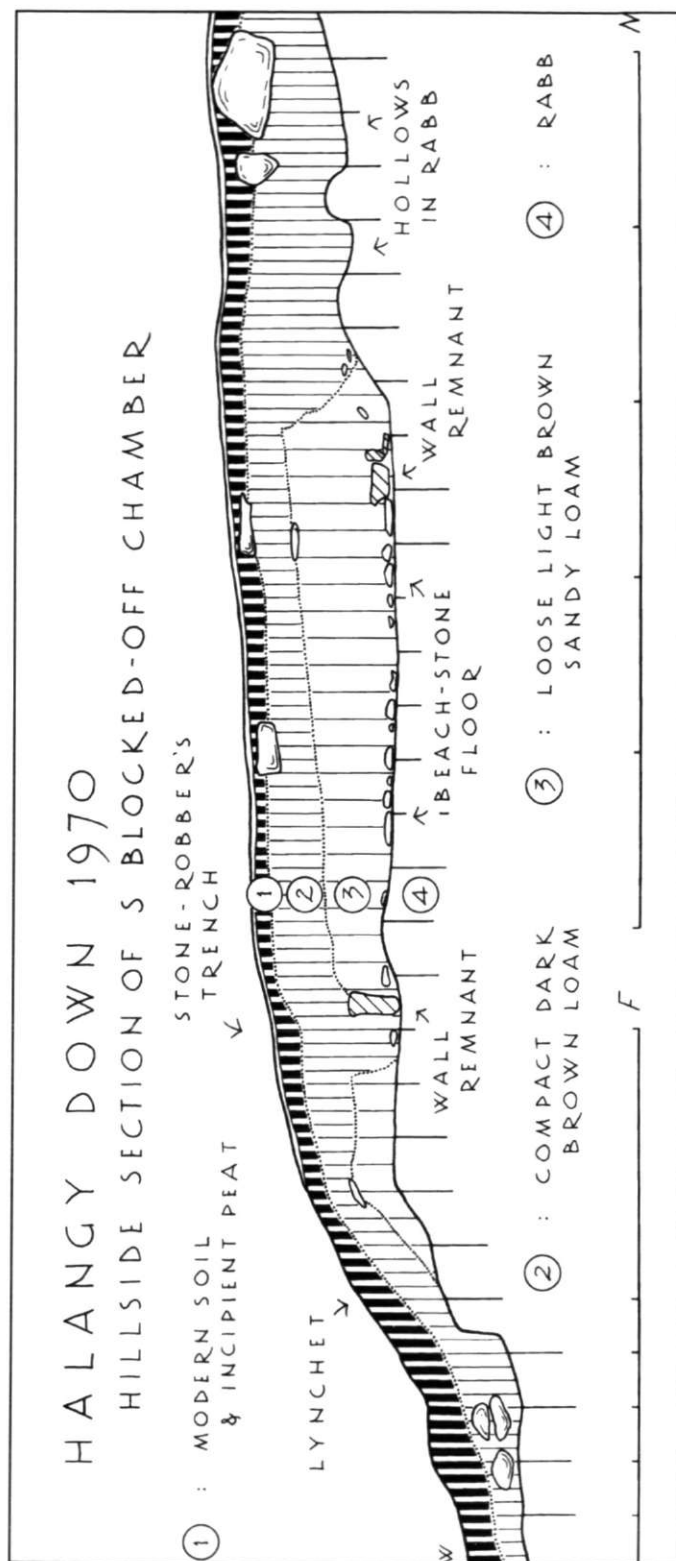


Fig 22 Section of the blocked-off chamber at the S end of the courtyard house

The courtyard (Fig 17)

The 'courtyard' is the roughly rectilinear area bounded on the W, downhill, side by a massive wall, of which only parts of the interior and exterior masonry have endured. It is entered from the SW exterior by a narrow corridor and has the aedicule as its most prominent feature and the chambers oval (A) and circular (D) opening from it. Its surface, difficult to define and patched with quantities of small stones, was about the same level as the slabs fronting the oval chamber's entrance, slightly lower than the slab floor of the aedicule and some 2ft lower than the floor of the circular chamber. It sloped gently from N to S, merging with the drain-covering slabs of the SW entrance's steep descent. No evidence of roofing was found, neither dished slabs nor post-holes. Its area is much the same as that of the oval chamber and thus roofing would not have been an insuperable problem.

Little remained of the interior face of the great downhill bounding wall which, as observed in 1950 (Ashbee, 1955, 189), was butted onto, and not bonded into, the SW corner of the similar downhill wall of the oval chamber. A length of coursed masonry, three courses high at one point, remained just to the left of the main entrance. A large tabular block could mark its course, while a slab on edge, and some masonry, show the nature of the butt jointing of the principal walls. Two slabs, standing at a right-angle to the interior wall-face at almost its medial point, may remain from erstwhile partitioning.

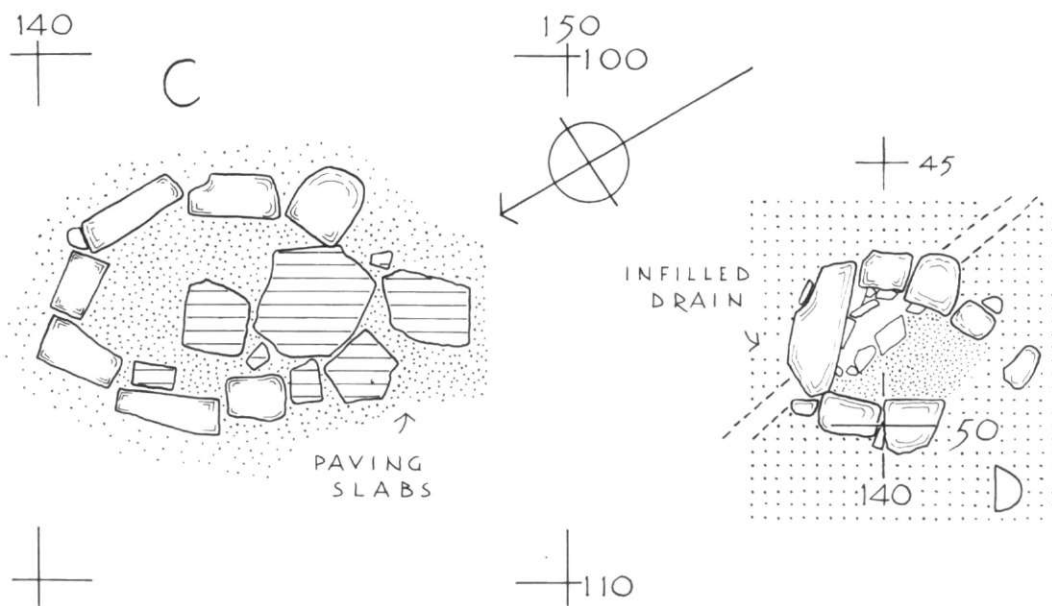


Fig 23 Details of the stone-surrounded hearths within C and D

Like that of the oval chamber, the exterior wall-face of the courtyard, to allow appropriate roofing or even a robust parapet, must have originally stood to a height of at least 11ft. At the S end, in front of which a line of blocks (Pl 22), removed and left by stone-robbers, the footings suggested strength by the device of outward curving lengths of walling. At this point also there was need to accommodate the long D-shaped intramural recess, a part of the entrance arrangement. At the N end, the turn into the hillside built upon a megalithic block, was reinforced by the walling remnant of an earlier phase. Between these there is some 15ft of straight walling with in front of it the reduced remains of a double revetment wall, presumably designed to strengthen, or even arrest a threatened collapse. Four and even five courses of the wall-face survive and they employ substantial, mostly rectilinear, boulders. In front, a further face of even larger boulders, of the same character,

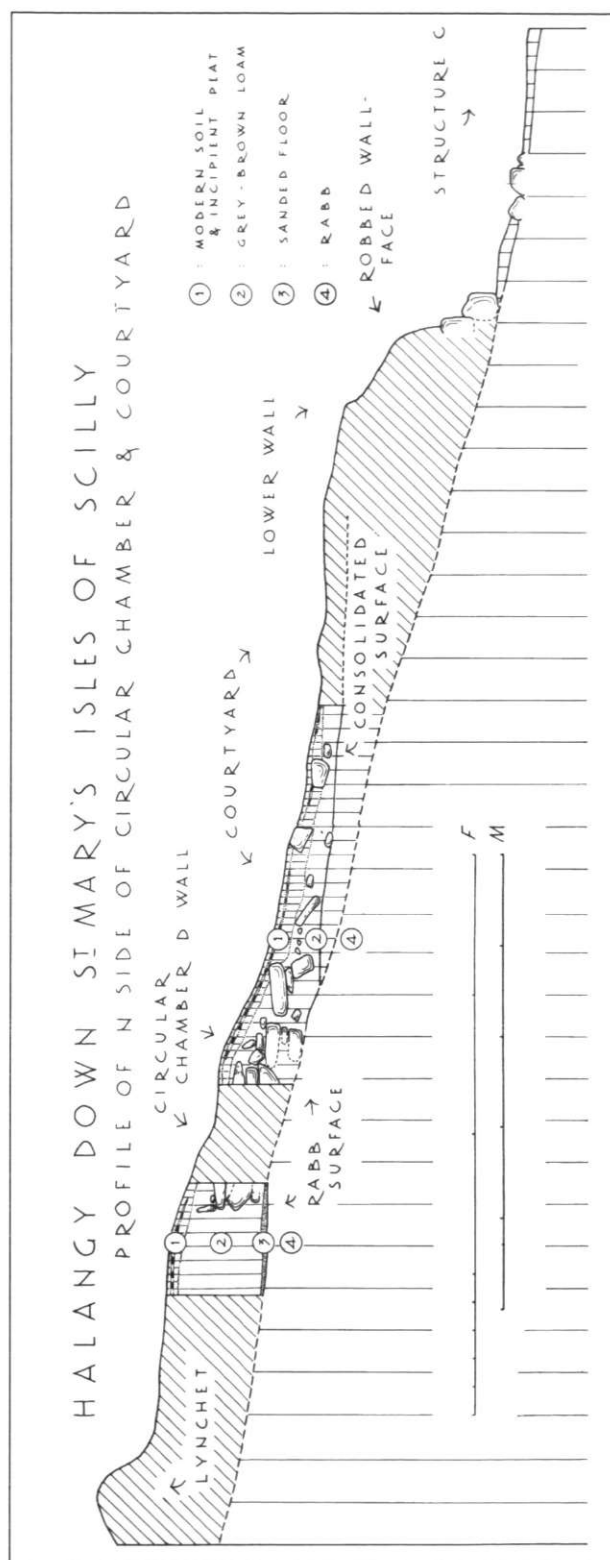


Fig 24 Profile, with sections, of part of the circular chamber D, of the courtyard house and the courtyard

HALANGY DOWN 1968 & 1969 SECTIONS OF COURTYARD ENTRANCE

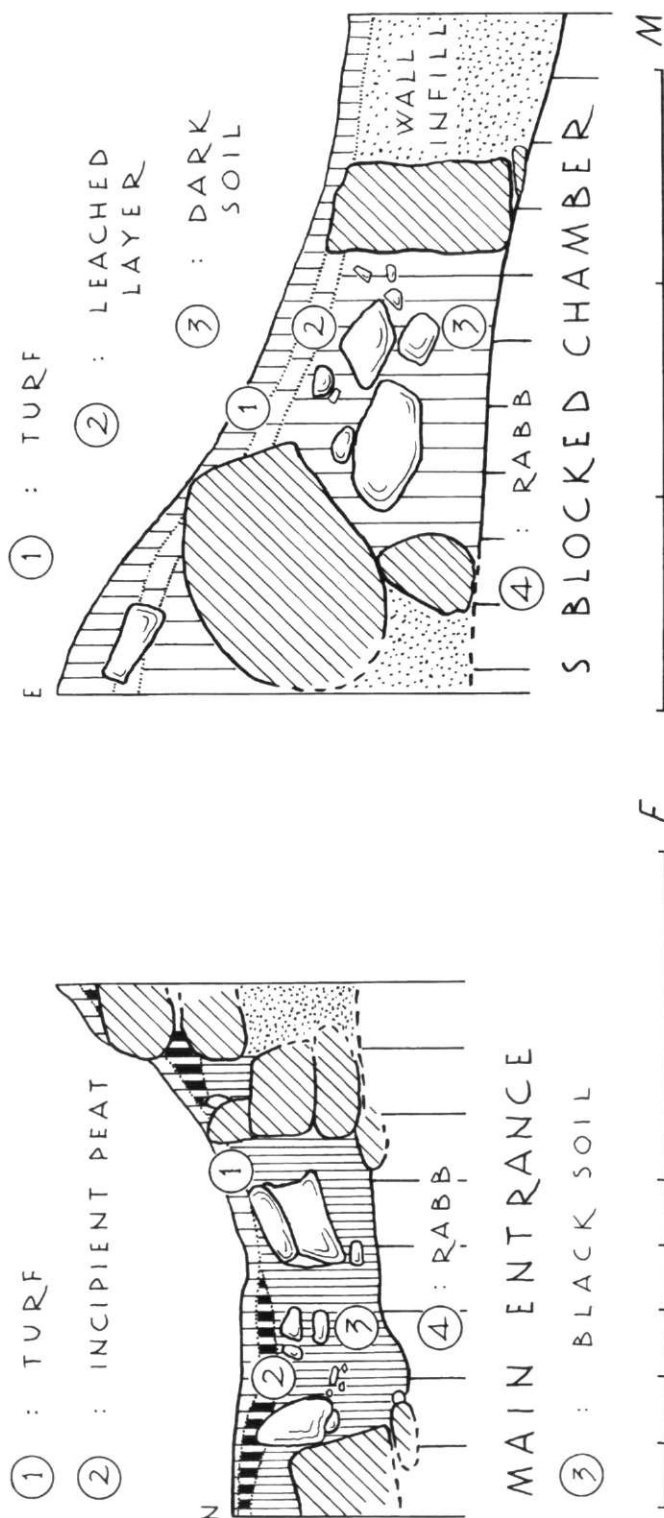


Fig 25 Sections to the entrances of the courtyard and the blocked-off chamber

was built and this was reinforced by an earth-filled apron, fronted by masonry. To have been effective it would have had to have been about 5ft in height. At the N end it was retained by the earlier phase walling remnant and at the S end by megalithic blocks, of which only one remained. This apron fronting may, however, have been reduced in antiquity, for its N outer corner was covered by a loam accumulation and the tail of the limpet-shell midden (Figs 13, 17, 130/70).

On the uphill E side the courtyard is bounded by the chamber entrances which flank the aedicule and its concave facade. It was established that the drain leading from the portal of the aedicule ran for only a short distance and discharged into the courtyard's make-up and that the one leading down though the exit from the complex began in front of the circular chamber. On the uphill side the rabb may have afforded a surface, but this sloped steeply in harmony with the hillside. Thus there was a massive make-up, to a consolidated surface (Fig 24, section), which could not be fully examined without imperiling structural features. However, a cutting into the earthen bank which developed after the removal of the courtyard's massive downhill wall's facing stones, showed that it was an admixture of soil and boulders which follow the line of a cultivation terrace (Fig 4). There had been adaptation and incorporation of the terrace and its accumulation.

The courtyard's entrance and its modification

Entry to the courtyard and to the courtyard house proved to be via a corridor, some 5ft in width at its outer end and 7ft at its inner. Its N side is the expanded end of the courtyard's downhill wall while the S side comprises an attenuated wall and the amplified SW downhill wall of the principal circular chamber, D. Upon either side there are intramural arrangements, the result of augmentation and reconstruction. Excavation disclosed that between the lower courses of its walls there was, as elsewhere on the site, a tangled mass of stones, evidence of robbing (Fig 25, sections).

Among the stones choking the entrance were tabular blocks patently removed from the walls together with five long bolster-like stones, some displaying signs of wear. As excavation revealed no signs of step seating, it is not impossible that they had been used as spanning stones which originally roofed, at least the inner part of the entrance corridor, so that it was, in effect, a tunnel through the massive walling. A slight oversailing of the upper courses, to support and secure the ends of these long stones, would have sufficed for the span. Two substantial corner stones flanked the exterior of the corridor, through which ingress was made that to the right, elongated with a convex rear, had fallen, that to the left, a megalithic, tabular block, was still in position. Presumably they carried further masonry to obtain an appropriate height. Slabby masonry lined the passage; to the left angular standing blocks marked the entrance to an intramural recess with counterparts for the blocked-off chamber opposite.

Beneath the rubble were the worn cover-stones of a gully which led down to an undetermined conclusion at the middle point of the entrance corridor. The drain outfall from below the entrance steps into the circular chamber D fed into it, although blocked off by a firmly set transverse slab. The line of large, close-set, worn cover-stones had served as paving for the interior ascent. These were set in compacted soil, a thin mantle covering the rabb, as they covered the in-cut gully.

On the NW side of the entrance gangway two angular standing blocks, that to the left columnar and that to the right rectilinear, flank the entrance to an elongated, D-form in ground plan, intramural recess (Pl 23). An arrangement of worn slabs paves its entrance although its interior is compacted soil. The coursed masonry sides, four on the upper and robbed on the lower, batter inwards and could have keeled inwards to form a roof. This recess could have been devised when the S end of the courtyard's lower wall and thus the entrance, was augmented externally and so strengthened, the uphill wall of the recess being a visible part of the original external wall-face. This probability could not, however, be fully explored and confirmed as it would have involved considerable dismantlement of established architectural features. The right, uphill, tabular portal stone of the intramural recess is opposite the great bun-shaped boulder set into the exterior SW wall of the circular chamber D and, together, they could mark the original courtyard entrance. To balance the augmentation of the courtyard's massive downhill wall, the opposite remaining part of the cultivation terrace, the basis of the courtyard's massive downhill wall, was faced with matching masonry and an aedicule was established on the right hand side of the now, lengthy, entrance

corridor (Pl 24). This modification would also account for the termination of the slab-covered gully and the steep lower descent.

At some point the aedicule was abandoned and breached, its W wall, despite a projecting wall-remnant, becoming the downhill interior wall-face of a corridor leading to a circular component (Fig 17, 170/50; Fig 22 Section; Pl 25), adjoining the massive circular chamber D on its SW flank. A part of the SW wall of D had been utilised and, to obtain a level floor, there was encroachment into the uphill side of the walled-in cultivation terrace accumulation. This was all but demolished in antiquity, leaving only short lengths of masonry. Its interior had been closely cobbled (Pl 25) with larger rounded stones on the NW side, adjacent to which, and on the downhill side, there is an area paved with slabs. After dismantlement of walls, access was blocked by a convex line of standing bolster-blocks of stone and the area sealed off by the deposition of a quantity of loose light brown sandy loam (Fig 22, section, layer 3). Thereafter, the blocked corridor entrance to this disused small circular chamber continued as a sub-rectangular recess, larger than its intramural fellow opposite, earthen floored and retaining its much worn threshold.

4.4 The northern oval chamber G (Fig 26)

Only a pattern of protruding stones and a turfy, oval, hollow denoted the remains of this structure, which is a northern and almost separate, outlier of the array of buildings on Halangy Down. The stone-robbd house-remnant consisted of a principal chamber, with its long axis SE-NW, a small chamber on the NE side, and an aedicule at its E end. A hearth remnant and a substantial stone-block drain had survived on the S side in the vicinity of which was a sanded floor remainder. Sanded floors had also endured in the small NE chamber and the E aedicule. All, principals, small chamber and aedicule had been contained within earth-packed walling of an elongated NE-SW aligned oval plan. It was, however, conjoined with the megalithic structural vestiges in its SE uphill margins. A SW gap associated with external paving stones denoted an entrance. As elsewhere on Halangy Down the downhill NW wall had been bolstered up by subsidiary walling.

Although the traces of comprehensive demolition and systematic stone-robbing were evident from the uniformly dismantled wall-remnants (Pl 26) and the complete absence of even lower courses when they might have been expected to survive, the amount of stone-rubble choking the interior was minimal, of the order of a fifth of that encountered elsewhere. Of the internal walling, only the bottom course, substantial rectilinear blocks and boulders, survived for some two-thirds of the way. Thus there was the outline of the small chamber and the aedicule, with connecting walling, and much of the S side, with hearth and drain. Only a single block in situ marked the internal wall limit of the SW, downhill, surround. Of note is the even, balanced, block construction of the small NE chamber and the massive boulders of the upper remaining course of the aedicule. This may point, as elsewhere, to an erstwhile corbelled cover.

Two and, sometimes, three bottom courses remained of the external walling on the NW downhill, part of the circuit. They were of boulders of various sizes, bedded firmly in soil, and resting upon the rabb. Only at one point, where this walling is parallel to the hillslope, had modest blocks of regular mass and dimension been used. Here, presumably, because of a considered lack of stability, a buttressing apron, employing mostly massive boulders, some set diagonally, and even walling, of which a short length had survived, had been built. This effectively doubled the thickness of the soil-infilled wall and imparted, as at the entrance of the courtyard, a corridor effect to the house entrance. Nothing remained of the external walling on the NE and SW sides and even the soil infill was denuded and dispersed. At the S extremity, and adjacent to the head of the internal wall-flanking drain, there was a conjunction with the lower wall-fragment of the megalithic structure remainder, H. Similarly, the higher course of the aedicule's masonry was conjoined with one of the surviving megalithic blocks of J, the northeasterly structure. These last factors show that this house G, could well have been built during the use-lives of the megalithic structures, H and J.

As in other houses, a level internal floor was obtained by the utilisation, at least in part, of a cultivation terrace. It was, however, augmented by a carefully laid boulder mattress, flat-laid large slabs, or similar blocks, with smaller stones wedged between them and, thereafter, a topping of soil. Little trace of the original cultivation terrace was visible and the downhill, NW outer wall-face was

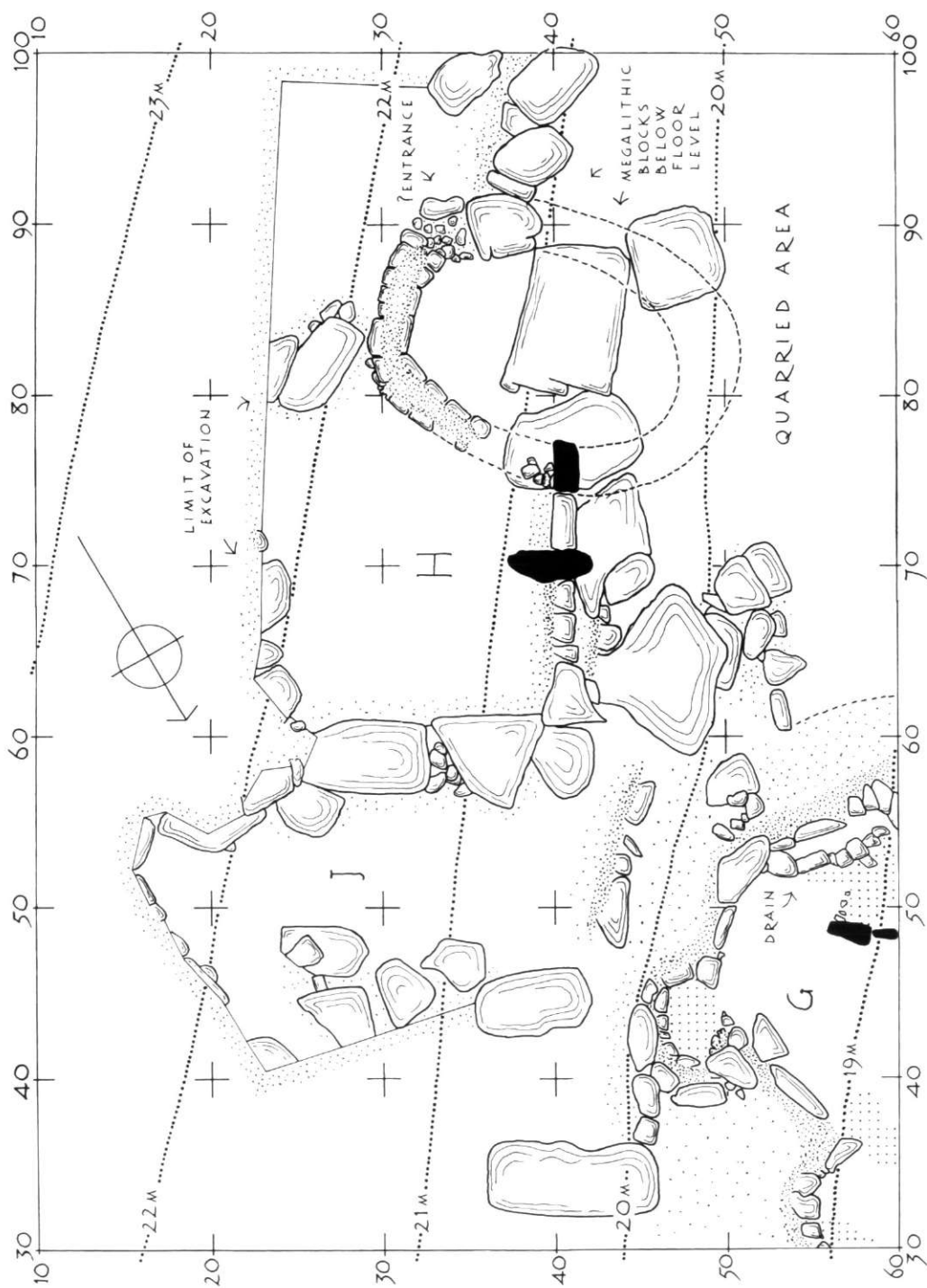


Fig 27 The megalithic foundation stones, and inbuilt hut, of the robbed NE terrace- and field-walls

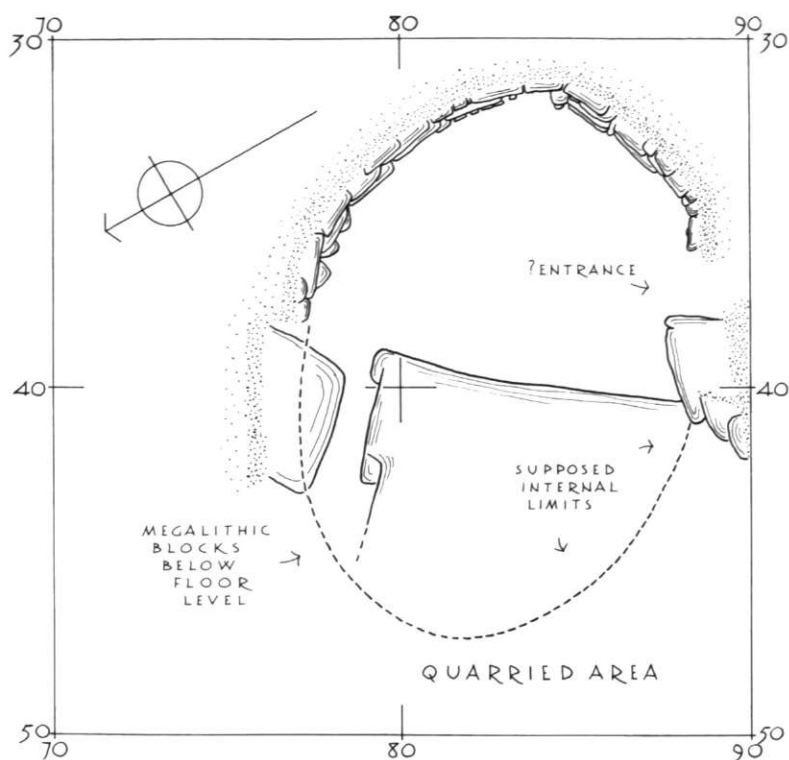


Fig 28 Details of the interior of the hut built into the megalithic terrace- and field-walls

clearly a distinct and independent construction. Floor sanding, that is the laying down of the light, sandy, granular rabb which coalesces and hardens into an effective floor, had been employed in the NE ancillary chamber and at its threshold, in the aedicule and adjacent to the hearth. Around the NE ancillary stones, and about 1 ft from the internal wall, were a disjointed series of fragments, and even pockets, of charcoal. Apart from the sanded areas, the floor was of hard, almost black, soil, which, during the process of excavation, was readily separable from its mantle of loose accumulated soil and stone-rubble. This was, however, confined to the lower two-thirds of the principal chamber, the remainder of the floor having been the rabb, which was worn and even.

The internal drain, which flanked the inside S wall-face, was of rather more blocks, slabs and boulders than other drains serving Halangy Down's structures. On one side the walling formed the side of the drain. Its infill was dark, granular, charcoal-flecked soil, of a texture scarcely to be distinguished from floor make-up. The final infill of the ubiquitous drain systems might indeed ultimately have washed down from such a source. This drain's beginning was beneath the internal walling of the chamber and the surviving masonry of H. It could not have been traced without considerable, in the circumstances, unacceptable, demolition. Its lower end terminated against a considerable block, part of the internal wall-face. Thus it is possibly a feature of H which was incorporated, and it might have provided a water-supply. It did not have a cut channel but had been built upon the rabb's surface.

Close by, on the floor and within the soil and stone mantle choking the chamber's interior, was an area of black soil and charcoal. On its NE side two slabs, and a block at right-angles to them, all deeply embedded in the floor, remained from a stone-built hearth. They displayed patent signs of burning and because of the absence of stone-cavities it was not possible to distinguish upon which side of the setting the fire-stance had been.

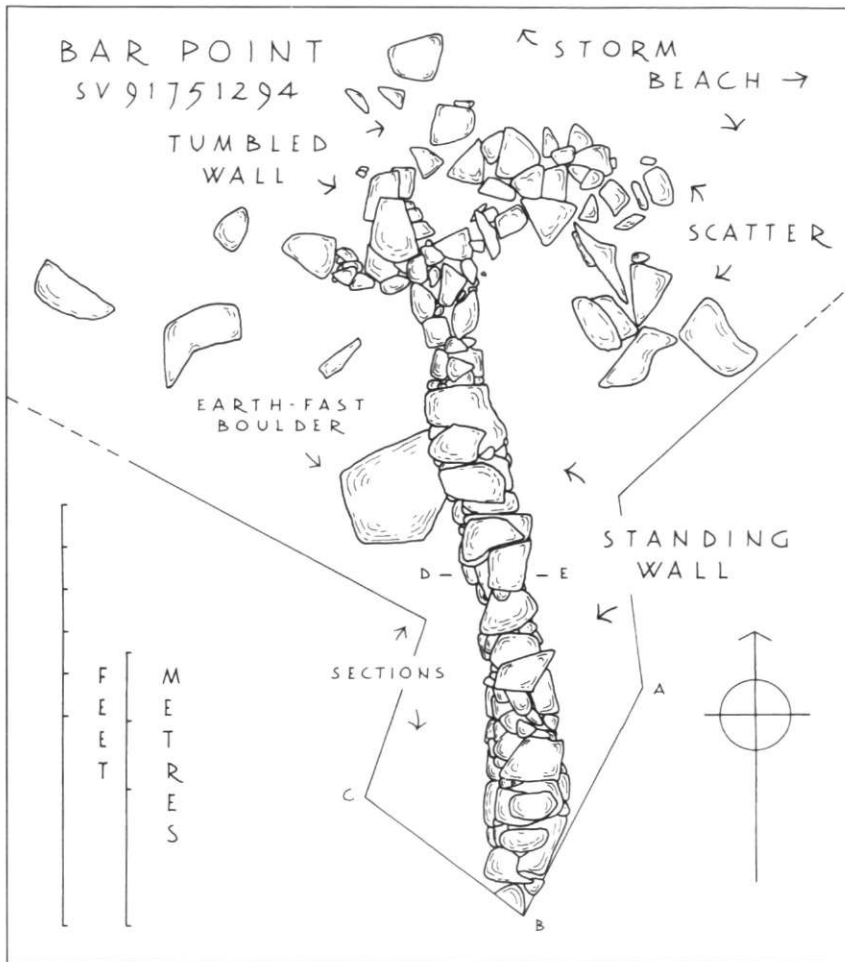


Fig 29 Bar Point: the sea-truncated field wall

Entrance to this house was gained through the broad stone-faced earthen wall in its SW quarter. Three paving slabs *in situ* fringed the downhill reinforcing buttress and led towards its exterior. Two very large slabs found lying upon the coursed walling on the N side may have flanked the entrance on that side while two angular blocks, comparable with that *in situ* at the N end of B, were similarly out of place on the S side. This exit gave upon the internal wall-face remnant of F1 which was presumably demolished and beneath the surface during the use-life of G.

4.5 The megalithic field-wall remnants H and J (Fig 27)

From the outset, Alec Gray and the present writer were aware that the house remains on Halangy Down were intimately associated with the stone-supported terraces of an ancient field system (Gray, 1972, 22; Ashbee, 1955, 198). Only during the excavation did it emerge that terrace walls had been employed for downhill walls. Clearance showed that they bracketed the site on the uphill, E, and downhill, W, sides. Hence, the apparent rectilinear arrangement of megalithic blocks associated with the oval house remnant, photographed by Alexander Gibson (c.1900), did not, because of its inconsistent scale, form and siting, conform to the structural pattern observable elsewhere on the site. Excavation showed that the enormous stone blocks were no more than the basis of an exceptionally substantial erstwhile cultivation terrace retaining wall, with a junction thereto, and that the oval 'hut' or 'house' had stood in isolation (Pl 27).

The megalithic boulders conformed to a general NE-SW line, the continuum of the terrace retaining wall which in its entirety followed the contour of the hillslope, for the most part some 10ft or less, uphill from the principal chambers of the courtyard house (Fig 17). At one point, adjoining the NE side of the oval 'hut' or 'house', a length of coursed walling and two substantial standing stones, one split and thus truncated, had survived. These may remain from a narrow gateway, later destroyed. Elsewhere only vestiges or foundations were encountered. The house G, with its aedicule and subsidiary chamber, was, on its downhill side, conjoined by walling remains. The existence of an open space between this house and the large oval chamber, A, of the courtyard house seems likely, although the foundation platform of the oval hut would have intruded, and reduced the area.

Uphill of the retaining wall, it was possible to define a compact, brown, earthen surface upon which the plot-dividing walls, which ran across the contours and joined it at right-angles, had been built, and upon which fallen stones had accumulated. All had been buried, in places to a depth of almost 2ft, by incipiently podsolised recent hillwash. Such a wall joined the SE extremity of the oval 'hut' or 'house', showing that it was an integral feature of the ancient field system, thus predating the series of buildings constructed upon them. Another directly joined the terrace wall, bracketing the surviving masonry and the standing stones at the NE end, while yet another, much disturbed, was parallel and less than 20ft from it. In many places smaller stones had been packed between the megalithic boulders while spreads of patently fallen stones showed that these had served as foundations supporting lighter masonry.

Walling, little more than 2ft in thickness, and of predominantly rectilinear blocks, distinguished the remaining part of what had been an oval structure, internally some 18ft by 11ft. As elsewhere, the walls had internal and external faces, between which was earthen packing. On the W side there had been sporadic, recent, reconstruction which was no more than the stacking of loose stones. Nonetheless, the lowest courses had survived (Fig 28). No trace of the stones in the foreground of Alexander Gibson's photograph (Pl 2), presumably set down to delineate a W wall, remained in 1964. An entrance, about 3ft in width, earthen filled and blocked with loose stones, was detected in the S side, where it was flanked by a huge rectilinear boulder. A standing stone, split and truncated, had been incorporated into the N wall. Masonry did not continue beyond either of these huge incorporated stones.

Excavation revealed that a gigantic granite slab, and its not dissimilar, but smaller, neighbour, could have formed a good part of the interior flooring, and it could be suspected that the building had been sited to take advantage of them. Streaks and pockets of clay mortar, from the rabb, were found in the loose, grassed-in soil, the SE interior, and such a floor may have existed to supplement the giant slabs. Its loose, mixed, character pointed to it having been dug into not long before. Neither pottery, nor other materials, were found in association.

4.6 The walls and fields at Bar Point (Figs 29, 30, 31, 32)

Assessment of the extent of Halangy Down's supportive territory and ancient fields, led to the investigation in 1977 (Ashbee, 1978) of what appeared to be modest stone-built huts, at no great distance from field walls exposed in the adjacent sand-pit (SV916128). One (Thomas, 1975, 91, Fig 41), on the rabb just above the storm beach had been largely destroyed and only a fortuitous boulder arrangement remained. Two others were no more than recent circles bedded in blown sand. In the event, the field system exposed in the sand-pit was the subject of a comprehensive excavation in 1979 and 1980 (Evans, 1983a). By reference to the sand-pit's exposed walls a sea-truncated length of wall was located and excavated (SV91751294). In a dramatic section, the mechanism of field-sanding and dune-shift was traced. Removal of sand beneath the apparent huts bared a sea-surge rubble-strewn area (SV91801294) of ancient field surface in which were traces of tillage. Within a raft of charcoal, among, and partially beneath the rubble there were the pieces of a lid, and rim, of a jar, of the Class E1 of the Cornish Early Christian series (Thomas, 1981, 20).

Some fifteen (15) feet of field-wall, standing upon an ancient sand-mantled, surface were exposed (Fig 29). It was seen to have been broken down at the modern shore-line and scattered. Substantial basal stones continued beyond, to the low-water mark. As in others of its kind, selected boulders had been bonded together, the great stones at the bottom, the smaller, flatter, at the top, to produce

BAR POINT
SV 91751294

① - HUMIC DUNE SURFACE SAND

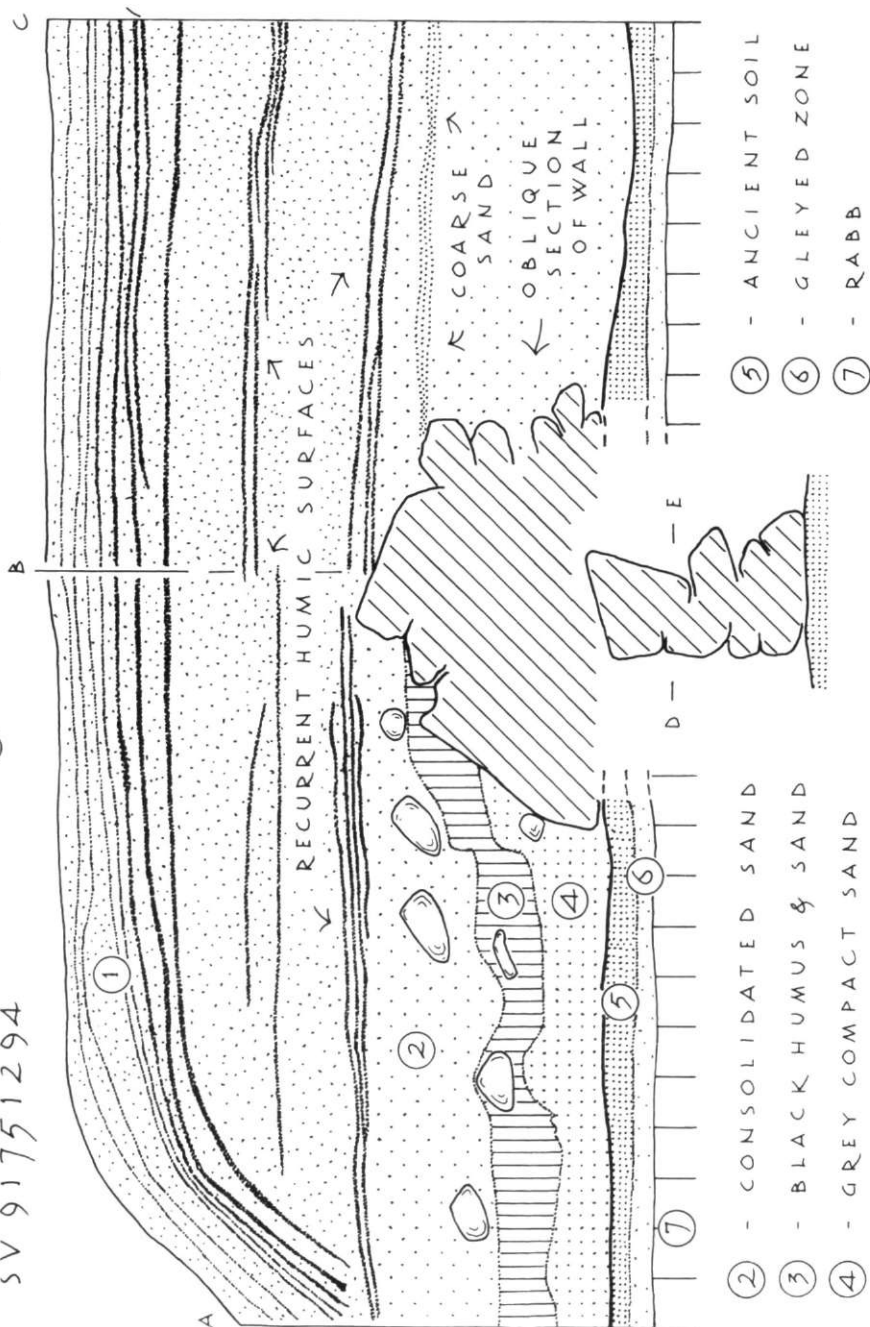


Fig 30 Bar Point: section showing the field wall, ancient surface, and the nature of the sand accumulation

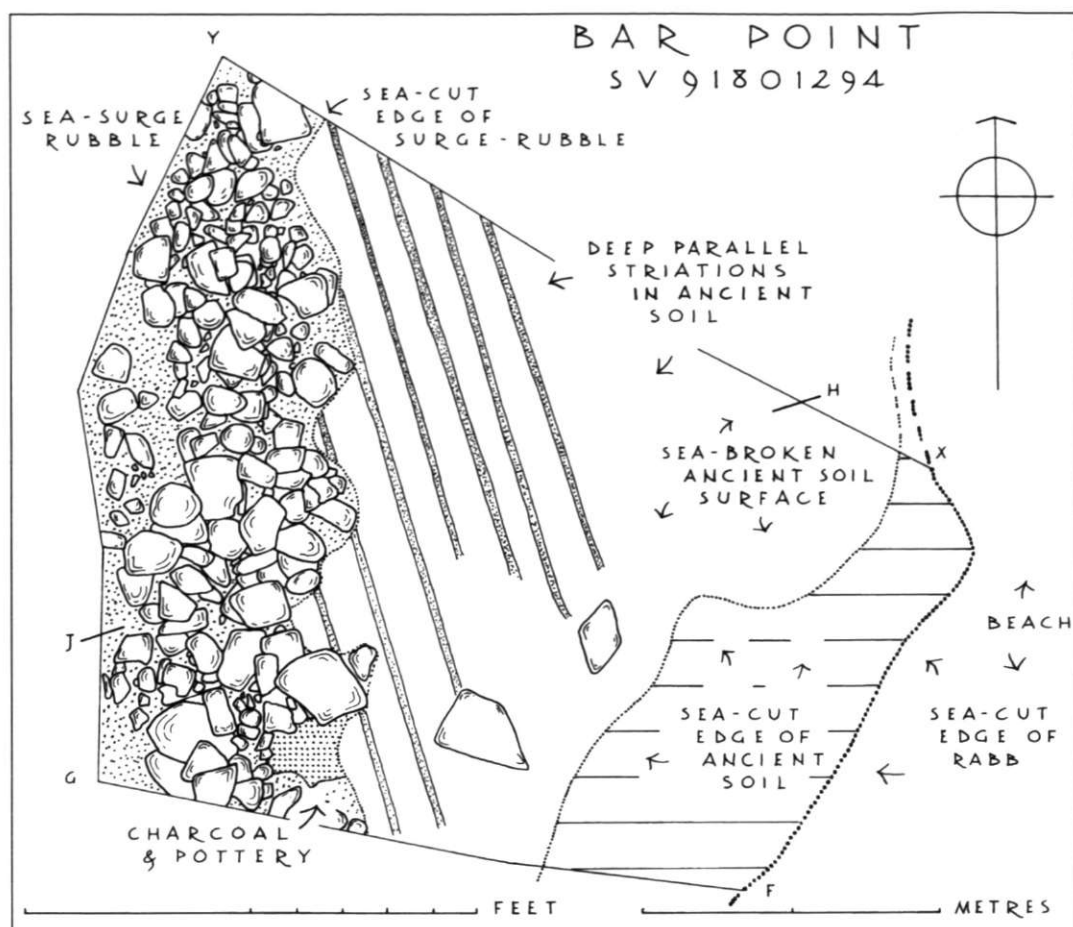


Fig 31 Bar Point: the traces of ancient tillage

a seemingly slightly built wall which displayed considerable lateral strength. A large earth-fast boulder, on its W side, could have contributed to local stability, as might others incorporated during the initial construction. Presumably such walls as this well-preserved length (Pl 28) were maintained and periodically repaired. Such a process, which, in some circumstances might require partial reconstruction, a task which would involve adhesion to a long-standing specification, would leave little archaeological trace.

Excavation and the resultant section (Fig 30) of the deep dune-sand, which had smothered the fields and, eventually, the wall, showed something of the process which had brought about its ultimate burial. Evenly deposited sand, borne by the prevailing winds from the SW, had accumulated against the W, exposed, side, to its full height. On the less exposed E side, however, the accumulation was modest and, after its deposit, a deep humic, although sandy, soil had developed upon it. This would denote a machair pasture and points to the field, bordered by a partially buried wall, remaining in use until it was smothered by further sand. Above this was the shifting, unstable, blanket-dune, which had in it recurrent humic surfaces. One series was roughly concurrent with the top of the wall, others were about fifteen (15) inches above, while the topmost part of the dune, stabilised since the nineteenth century by Marram Grass (Lousley, 1971, 97, 301), displayed no less than eight (8) well-marked humic developments. The present-day dune system has been eaten into by the sea and, to sea-ward, the upper register having been undermined by wave-action, drooped in that direction.

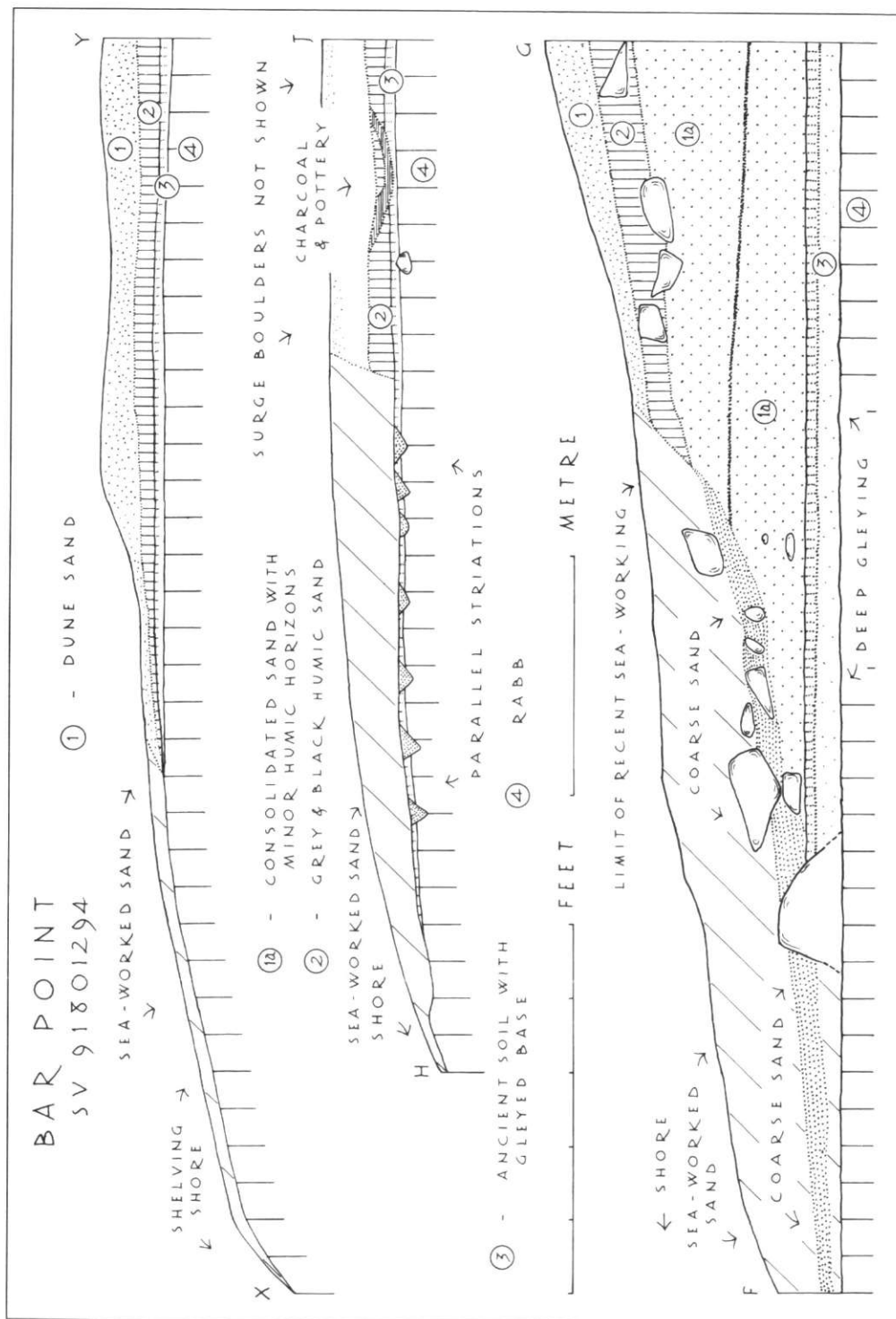


Fig 32 Bar Point: sections of the sand and surge-debris mantled tillage traces

The ancient soil, upon which the field-wall had been built, dark grey in colour and with a friable, sandy, but, nonetheless close-textured, composition had a skin of damp dark grey, sand upon its firm, almost unyielding, surface. This deep soil had beneath it a damp, almost white, gleyed base which was upon the rabb. This even profile continued beneath the wall and the gleying, caused by long-term water-logging resulting from the impermeable nature of the rabb, appeared as undisturbed by such tillage as may have taken place. Surface traces of tillage, such as plough, mattock and spade marks, were looked for in the firm, compact, surface of the areas of ancient soil bared upon either side of the wall, but nothing was found.

In order to explore a further area of ancient soil, with the object of detecting traces of tillage that might have been employed in the reasonably level fields, of about an eighth of an acre in area, a further cutting (Fig 31) was made. To seaward, there was a rabb platform which, inland, gave way to an area of disturbed, broken, ancient soil which, in turn, was mantled by grey, almost black, humic sand upon which was a blanket of water-worn granite stones. These, of which the larger were of roughly equal size and weight, were thought to have been deposited by a sea-surge (Thomas, 1985, 48-52). Although the blanket of stones closely mantled the ancient soil, it is possible that the surge stripped an area of the dunes before the rocks were deposited. Thus they could, in turn, be mantled by no more than recent sanding. Sections (Fig 32) showed that no more than loose sand covered them. This had been, in turn, worked by the sea and redeposited.

Clearance of the ancient soil revealed a series of parallel, approximately V-sectioned, grooves or channels in the firm, ancient soil (Pl 29). These were infilled with lighter, sandy, soil of the same texture as the ancient soil. This, of the same character as that beneath the field wall, was, for the most part shallow, with a commensurate slighter gleyed base above the rabb (Fig 32, sections X-Y, H-J). This was, however, a local phenomenon for, at no great distance (Fig 32, section F-G), the depth of the profile, the top soil and the gleyed layer beneath it, was in accord with that in the vicinity of, and beneath, the field wall. These grooves or channels, parallel and approximately twelve (12) inches apart, had been cut through the shallow soil mantle, the gleying beneath it, and even into the underlying rabb. They were initially visible as irregular infilled channels when the surface of the slight skin of dark, damp, grey sand, which adhered to its surface, was defined. When the firm surface of the ancient soil emerged they became clear-cut, of nearly equal breadth, and regular. There was no trace of breakage or disturbance of the firm, ancient soil upon either side of the channels and they were of more or less equal depth.

In the light of the Gwithian, Cornwall (Megaw, Thomas & Wailes, 1960-1) evidence for early agriculture, these parallel grooves were thought of as traces of ancient tillage, plough scratch marks (Ashbee, 1978). Although at Gwithian there were areas of cross-ploughing, there was much that was merely parallel furrows, while in section they were of a blurred V-form. Subsequently, excavation of the walls and parts of the ancient fields, revealed by the removal of sand from Bar Point, disclosed clear ruts as well as plough marks (Evans, 1983a, Fig 12). The ruts had sloping sides and flat bottoms, and might have been made by slide-cars, while the plough marks could have been made perhaps by a metal share, while it was possible that a mattock had also been employed.

Because of their uniform, parallel, nature, it is not impossible that the grooves or channels, recorded in 1978, might have resulted from the use of a vehicle, four (4) feet in width, but the associated imprints of the hooves of a beast of traction were not found. A further factor is that the profiles of the groove, although of V-section, are oblique: one side is steeper than the other. Such sections were observed at Gwithian (Megaw, Thomas & Wailes, 1960-1, 207) and thus it seems likely that here too an asymmetrical share may have been used. Such an instrument would have thrown a furrow and a beast of traction would have been necessary for it to be effective. Traces of neither were found.

An irregular lens of concentrated charcoal, beneath the boulder blanket and within the dark, humic, sand (Fig 31, plan; Fig 32, section H-J), which contained pieces of pottery, had the appearance of a deposit cleared from a settlement. Among the pottery was a late post-Roman E-ware lid and rim (Thomas, 1981, 20) which points to the material having been deposited and the dark, humic, sand covering the ancient tillage traces by 600-700 AD. Thus the plough-scarred surface, overlain by the dark, humic, sand, may be earlier. After examination, the walls and fields in the sand-pit,

close by, were deemed Iron Age. Charcoal in a similar lens of black, sandy loam, with littoral sand, beneath the N-S walls yielded the date HAR-3483 190 ± 70 bc. (Evans, 1983a, 22, 27). These dark, humic, layers could, until overwhelmed by further sand, have been the Scillonian equivalent of machair soils (Ranwell, 1977). Their pastures could have afforded favourable grazing.

5.0 THE MATERIAL CULTURE: DESCRIPTIONS AND COMPARISONS

5.1 Introduction

Apart from the Roman brooches of bronze and iron, the beads and pieces of glass, the pottery, on account of its forms and affinities, is the only aspect of Halangy Down's material culture to which approximate dates can be assigned. Indeed, it was sherds of pottery found within the oval chamber (A) of the courtyard house in 1935 (by Alec Gray) and 1950 that gave an indication of the likely nature of the structures on the hillslope and set them apart from the sea-damaged structural remains in Halangy Porth below (Ashbee, 1983). There was, as is frequent in the West Country (Christie, 1978, 333), inadequate stratification, largely as a result of systematic stone-robbing and associated disturbance. Only in structures A and D of the courtyard house, in the dismantled oval huts F1 and F2, and in the northern oval hut G, did floors and drains provide undisturbed contexts. Elsewhere, there were the midden and the deep earthen interiors of, notably, B and the rectangular annexe of C. Within C, only inside the small circular chamber were there remains of an original floor. In one or two instances, it was possible to associate pieces with the cultivation terraces of the hillslope which had been incorporated into the buildings.

When particular objects were associated with an undisturbed feature and thus stratified, this is indicated below. For the most part only the structure is specified, eg. A or G, which means that the sherd or other object was found in a disturbed earthen interior context. Objects are related by *Plate* or *Figure*, as appropriate, to an illustration. Numbers which relate to the site archive (Royal Institution of Cornwall Museum, Truro) are cited.

5.2 The bronze and iron brooches (Fig 33)

Five brooches, four of bronze and one of iron, were found in the disturbed soil in the interior of B. Two of the four bronze brooches were at a considerable depth, in the dark soil, below a large, broken, holed slab (Pl 15), almost in the middle of the interior. Another was amongst rubble at the back of the wall of the small chamber, while a fourth was just below the modern surface in the rabbit-disturbed area at the NE corner. With the exception of the iron brooch (6), found beneath the N entrance, they were all at no distance from the aedicule in the interior of the upper wall. Although scattered, they might well remain from a domestic votive deposit in front of it.

1) Halangy Down 385. Length 2ins; weight 1.25oz.

A heavily made bronze fantail brooch (Pl 30), with a broken, curved, pin. Below the waist it expands into a fantail, the bottom corners of which are knobbed, one more prominent than the others. It is ornamented with bosses, 1.27mm in diameter and 4mm apart around the edge. The iron-shanked spring is 45mm in width, and the brooch has a keyhole shaped plate.

It conforms to Collingwood's Group X (1930, 257), in that it has an amplified fantail, although the considerable oval above it recalls the European mainland's thistle series (Collingwood, 1930, 257). Good counterparts have been found at Camulodunum (Hawkes & Hull, 1947, 316, Pl XCIV, 82, 83, 84), Hod Hill (Brailsford, 1962, 8, Fig 7, C27, C28) and Bagendon (Clifford, 1961, 174, Fig 32, 4). In Cornwall, a fantailed brooch, with lateral knobbed wings, was among the group from St. Mawgan-in-Pydar (Threipland, 1956, 72, Fig 34). On Scilly, a fire-damaged, but comparable example was in the Nornour assemblage (Dudley, 1967, 36, Fig 14, 48).

2) Halangy Down 500. Surviving length 1.5ins; weight 0.3oz.

A bow brooch, minus its pin and catch, although a broken chain-loop survives upon its head. On the face-side of the flattened bow is a double line of zigzag ornament, bordered by two lines.

This brooch is closely similar to one from the St. Mary's Porth Cressa cist cemetery, where it had been grave furniture (Ashbee, 1954, 15, Fig 5, 3) The bow's detail was considered by M.R. Hull to copy the classic *Aucissa* form, although the head and foot were different. A flat fragment of a similar brooch was found at Bagendon, with broad central fluting between zigzag lines, and Hull

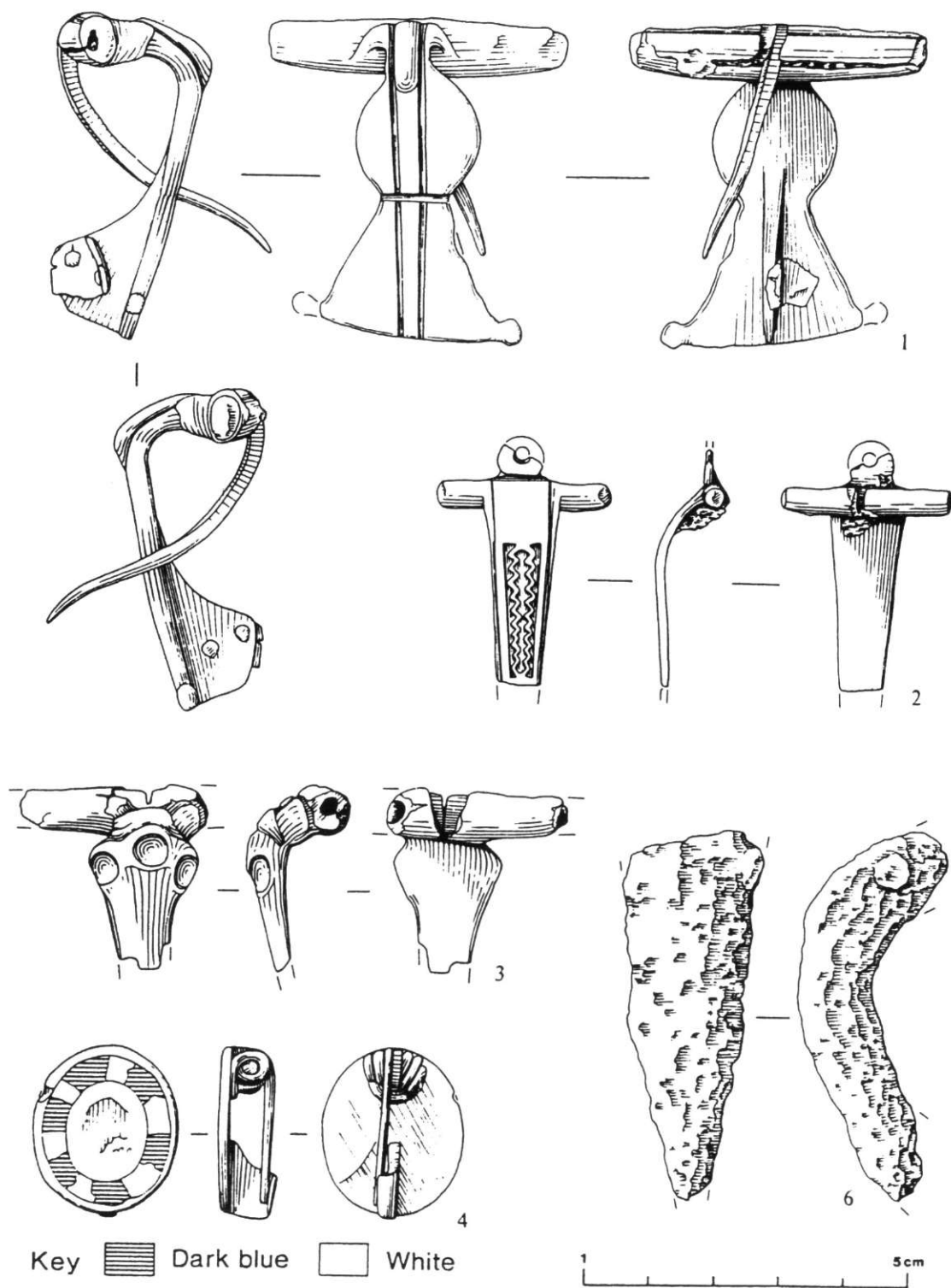


Fig 33 The bronze and iron brooches from the interior of B (actual size)

considered such copies as characteristic of the southwest (Clifford, 1961, 182, Fig 36). An example from Lavington, in Wiltshire (Cunnington & Goddard, 1934, 211, Pl LXVI, 3) is close to that from Halangy Down, while others from Hod Hill (Brailsford, 1962, Fig 7, C33-36 and C38) show the widespread currency of the form. A group from Nornour (Hull, 1967, 40-1, Fig 17, 99-106), some of which bore enamel in their bows, the Lamberton Moor type, are also comparable in that they have chain-loops. The basic *Aucissa* form is well-known in the western Roman world (Hawkes & Hull, 1947, 321).

3) Halangy Down 618. Surviving length 1.75ins; weight 0.4oz.

A broken, much corroded, apparent brooch of flat rectangular section with an expanded, lozengiform, head bearing a central circular depression above its centre which is flanked by two further, similar, concavities. Corrosion makes it impossible to ascertain whether they housed coral or enamel. Its foot, which is at a pronounced angle to the flattened bow, has a zoomorphic square-muzzled, terminal. Because of its broken, intensely corroded, condition one cannot be certain that this object is a brooch and not, for example, a handle from a tankard (Corcoran, 1952) or a small casket. It was found deep in the disturbed soil of B, in front of the aedicule and almost on the rabb.

Ten brooches from Nornour (Hull, 1967, 35, Fig 13, 37-46) have been categorised as '*Crudely T-shaped ... with a double triangle on the bow*' and the double triangles, a lozengiform, which the bows were medially expanded to accommodate, were enamelled. Their bows were deep and did not in any way resemble the flat profile of this Halangy Down example. A brooch of profile similar to this Halangy Down piece, but with a seemingly stylised head and foot and a prominent medial once-enamelled lozenge came to light in Dover's painted house (Philp, 1989, Fig 25, 43), and was considered commensurate with another from London. In general, the flattened, angular profile of this brooch is reminiscent of early, even La Tène, brooches, although its head is, nonetheless, dissimilar.

4) Halangy Down 619. Diameters 1.00ins x 0.3ins; Weight 0.35oz.

The face side of this flat, oval, brooch is ornamented with a border of alternate blue and white enamel squares which merge raggedly one into another, surrounding a corroded, ovate, interior which could have held a similar concentric arrangement, a disc or even a cone of enamel or glass. Its catch and pin were both exceptionally well-preserved. The pin turned into a shank with two coils on one side and four on the other. This shank and the catch appear, with the brooch, as part of a single casting.

Among the disc brooches from Nornour there is a similar, oval example with a red and blue outer band with, like that from Halangy Down, the central device missing, as is the spring pin (Hull, 1967, 54, Fig 22, 196). Brooches of this kind, it was said, are numerous, indeed, one was grave furniture in a Porth Cressa cist (Ashbee, 1954, Fig 5, 1). A disc brooch from Lydney (Wheeler & Wheeler, 1932, 81, Fig 16, 44) is a example of a more elaborate version of the form, while one from Rushall Down, in Wiltshire (Cunnington & Goddard, 1934, 211, Pl LXVI, 9) has the border and centre piece missing, a frequent occurrence. An oval brooch from Silchester (Boon, 1974, Fig 19, 3) has a dull opaque and dark green enamelled border which surrounds a moulded intaglio head. It is thought to be of fourth century date.

5) Halangy Down 549. Length 1.25ins, diameter (upper) 0.625ins, breadth (lower) 0.725ins. weight 0.25oz.

This corroded piece of iron has the form of a small brooch which has a fan-tail foot projecting from a disc, to which the spring cover might have been attached. From the top-soil of C.

6) Halangy Down 836. Length 2.25ins; weight 0.5oz.

This massively corroded scrap of iron has the form of a bow brooch. Its light weight mitigates against the identification of its precise nature, beneath the tumescent rust.

An iron brooch with a curved bow that could be comparable with this Halangy Down example, still retaining its hinge-pin and a vestige of a chain-loop, was found in the small Iron Age fort at

St.Mawgan-in-Pydar, where, with two others, it was associated with Hut W (Threipland, 1956, 42, Fig 33, 16). The iron brooches from Maiden Castle (Wheeler, 1943, 262, Fig 85, 32-6) and Camerton (Wedlake, 1958, 216, Fig 50, 1-4) are palpable copies of bronze types and illustrate the considerable skills of the blacksmiths. The possibility of a Scillonian copy of a brooch such as one from Porth Cressa (Ashbee, 1954, 15, Fig 5, 6) can be envisaged.

5.3 Bronze fragments

1) Halangy Porth 656.

A wire point, in two fragments, 1.00ins long, probably the broken, detached, pin of a brooch. From the topsoil.

2) Halangy Porth 1310.

Four corroded bronze fragments, broken, and each c.0.12ins in length. They appear to be from the spring of a bronze brooch. From the cobbles of the courtyard of the courtyard house.

5.4 Iron objects

Five (5) iron objects, all small, were found in and below the limpet-shell midden which had been deposited within the dismantled S corridor entrance to B.

In the midden:

1) A knife-blade, broken, 3.00ins long and 0.5ins broad (HD 243).

2) A broken lonzengiform scrap of iron, 1.00ins long, 0.625ins broad and 0.625ins in thickness (HD 324).

Beneath the midden:

1) A piece of 0.125ins square-sectioned ?rod, 1.00ins long (HD 1631).

2) A bow-shaped piece of iron, 0.25ins circular diameter, rod, 1.5ins long (HD 1632).

3) A broken fragment of a ferrule, 0.625ins original diameter and 1.0ins long (HD 1671). A similar ferrule was found at Nornour (Dudley, 1967, 25, Fig 10, 48).

From the surface and topsoil:

A number of iron objects were found just below the soil surfaces of, the accumulations within or without the various structures or in what was, patently, stone-breaker's rubble. With one exception, all these objects had been discarded or lost during the removal of stone in the earlier part of the nineteenth century. The exception is the part of a long spur (HD 171), with what was originally a revolving rowel, which could well be of seventeenth century date.

The iron objects to be related to the nineteenth century stone-breaking are a horse-shoe, a piece of rod, a fragment of a chain-link, a heavy boot-stud, a heavy broken rivet or stud from a cart, two nails, one wire and one cut, a fragment of a smashed heavy hammer and eight (8) broken and unbroken stone-breaker's *feathers*. Feathers were the small iron wedges, inserted into an iron lining, which are put into a line of holes, punched by percussion, into a block of granite. When the wedges are hammered home, the block normally splits along the desired plane.

5.5 Iron Slag

Pieces of iron slag were found in the courtyard adjacent to the large oval chamber (A) of the courtyard house in 1950. They were examined, through the kind agencies of Miss Sylvia Benton and the Ancient Mining and Metallurgy Group of the Royal Anthropological Institute, beneath the microscope. Large and small pieces were scrutinized and ferric iron was found to be present in each. Gas-holes were noted in the samples as well as evidence of weathering. The fibrous outline of a piece of metallic iron was noted in one sample, as well as, perhaps, some iron oxides and iron-rich olivine.

The fragments found in 1950 were of the order of 1lb in weight and the later excavations produced further pieces large (2ins by 2ins) and small (mere crumbs), totalling about 2.5lbs. Two were incorporated into limpet-shell middens while the remainder were from disturbed areas, including from among stone-breakers' rubble between B and C. The pieces all display gas-holes and flecks of metallic iron are visible. They appear as indistinguishable from those examined in 1950.

On the Cornish mainland, iron slag, possibly associated with a reducing furnace, was found at Chun Castle (Leeds, 1926, 223) while limonite and the small amount of slag found at Chysauster has been thought of as indicative of limited iron working (Hencken, 1933b, 270). At Trevelgue iron was produced upon a considerable scale and perhaps even exported to Wessex (Quinnell, 1986, 112). Indeed, there are iron resources at no great distance and the Great Perran Iron Lode near Perranporth, may have been exploited (Shorter *et al.*, 1969, 168). For the most part Cornish Iron Age and Roman iron production must have been, as elsewhere in England (Tylecote, 1962, 194; Cunliffe, 1991, 451), a domestic craft and this could have been the case on Scilly. As it is unlikely that ore was taken to Scilly, the possibility of a local source must be considered. Iron, as limonite or haemetite, is associated with the island's granites. They would have, however, been difficult to extract. What is more likely is the collection of what is termed *bog iron ore* (Cornwall, 1958, 40; Tylecote, 1962, 179) which on Scilly could have been iron-pan, a feature of soil podsolisation (Cornwall, 1958, 89), combined, or used in its own right, with suitable ferrous concentrations from the various exposures of the rabb. Such sources would account for the quantities of granitic material contained within the various pieces of slag. Workable iron could only have been produced by repeated heating and hammering, a process which could account for the large number of substantial bruised beach pebbles found on Halangy Down.

5.6 Modern non-ferrous metal objects

A brass cartridge case, 5mm in diameter and 1.5cm in length (HD 15) and a brass blazer button, with a blank obverse and a looped shank on the reverse, together with an inscription TREBLE GILT RICH ORANGE surrounding it, which was bordered by a pointillé circle (HD 196) were found in the topsoil of the rectangular annexe of C and B respectively.

5.7 BEADS (Fig 34)

Glass

1) Halangy Down 38.

Sky-blue translucent near-spherical bead, 0.45ins diameter, perforation diameter 0.09ins. From the base of the topsoil adjacent to the exterior face of the W wall of the large oval chamber (A) of the courtyard house.

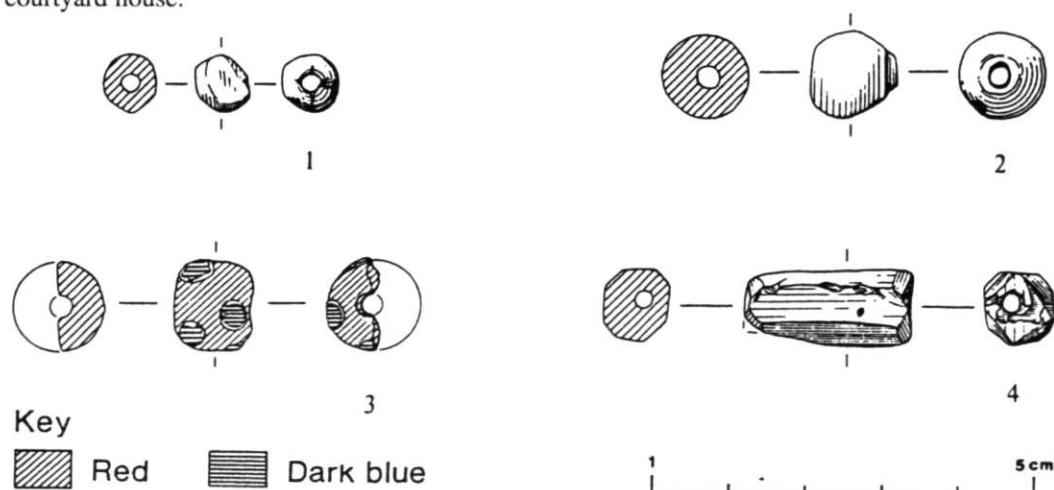


Fig 34 The glass and fine stone beads (actual size)

2) Halangy Down 1620.

Rich cobalt, almost opaque, globular, near-spherical bead, 0.27ins diameter, perforation diameter 0.0625ins. From among the upper limpet shells of the midden packed into the abandoned S corridor entrance of B.

Medium sized, translucent, sky-blue glass globular beads, of much the same size as the larger example, are widely known. There is a comparable example from Castle Dore, in Cornwall (Guido, 1978, 172). A larger rich cobalt semi-translucent bead was found unstratified at Carloggas, the small fort at St. Mawgan-in-Pydar (Threipland, 1956; Guido, 1978, 169), while another globular, translucent, cobalt bead, 0.125ins in diameter, was among the Nornour beads, which also included two other blue and one cobalt example (Guido, 1967; 1978, 26-7). The annular translucent blueish-green glass bead from a cist burial at Porth Cressa (Ashbee, 1954, 18, Fig 6, 10; Guido, 1978, 140), which was comparable with one from Maiden Castle (Wheeler, 1943, 293, Fig 98, 13) would not be out of place in the Halangy Down and Nornour contexts. Those from Carn Euny (Christie, 1978, 396, Fig 52, 23-9) are also a comparable series.

3) Halangy Down 1590.

Half of an opaque red oblate near-cylindrical, bead, 0.3ins long and 0.35ins in diameter. It carries irregular superimposed circular eyes which are black, with a partial white surround, 0.125ins in diameter. The bead had been built up upon a square-sectioned metal rod, with sides of 0.0903ins, which provided the square-sided perforation. Opaque red glass beads are rare and it is possible that it may have been intended as a yellow bead but because of a minor firing fault it became red. The bead's fabric exposed by the break, contains oval and angular, elongated, air bubbles. From the topsoil, adjacent to the megalithic field-wall remnant, J.

Opaque red glass appears in about the first century BC upon bronze objects, was possibly difficult to make and is mostly referred to as enamel (Hughes, 1972). On the European mainland beads bearing eyes are known from distant sources (Déchelette, 1914, 1319, Fig 575) and contexts (Zurn, 1970, 45-6; Abb.17, Nos. 15, 29; Taf. 25, Nos. 11, 25; Taf. 76, 1). In England, a black glass bead, bearing blue spots with white surrounds, was found at Maiden Castle (Wheeler, 1943, 292, Fig 98, 10) while, more recently, classes of such beads with various registers of white-ringed eyes, have been isolated (Guido, 1978, 45-51). They are thought to be of mainland European, or even more further afield, origin or inspiration.

Fine stone

4) Halangy Down 807.

Length 0.875ins, of approximately hexagonal section, and broken upon one side whereby the elongated perforation, 0.09ins in diameter, is half exposed. It is highly polished to an irregular form and only a few striations are visible. Porcellaneous in appearance, of a deep whiskey colour, it is of near translucent agate or carnelian (a variety of chalcedonic silica). From the earthen wall infill between B and C.

Such silica occurs as nodules or bands in chalks and limestones, thus pieces could have reached Scilly, or Cornwall, as erratics from an appropriate source (Mitchell & Orme, 1967, 83). Beads, broadly comparable with this example, have been found on St. Agnes, on fields where they had been brought, with seaweed, from Beady Pool, in Wingletang Bay. Beads from these sources are (or were) widely dispersed among Scillonians, some being mounted as tie-pins or suspended from watch-chains. They have been thought of as from Bohemia, Venice or Vienna and to be of sixteenth century date (Grigson, 1948, 51; Mortimer, 1985).

Whatever the age of the Beady Pool assemblage, beads of, ostensibly, agate have been found in distant places and were, it would seem, current from Iron Age times onwards (Beck, 1928; 1930). The shape of the Halangy Down agate or carnelian bead is known from prehistoric and Roman contexts (Wheeler & Wheeler, 1932, 84, Fig 18, 80; Clarke *et al.*, 1985, 204-16). On Scilly an agate bead is said to have been found, with the two massive bronze penannular armlets, in a barrow on Peninnis (Evans, 1881, 383), although its form is not known. Thus it is possible, although far from proven, that this broken, faceted, fusiform agate or carnelian bead is ancient. In view of the wide

currency of such beads, it is germane to observe that a string of beads exhibited in the Römisch-Germanisches Museum, Köln (Inv. Nr. D51) consisted of oblong agate beads of round section with, as a centre-piece, a long, six-sided, and thus faceted, chalcedony bead larger, but of identical colour and character to the broken example from Halangy Down. These from the neighbourhood of the Danube were considered to date from the 4th-5th centuries AD.

5.8 SHALE

Halangy Down 1224.

A segment of an armlet, 1.25ins in breadth and 2.25ins long, bearing three ribs. Light in weight and greyish-black in colour and therefore probably of Kimmeridge shale. The piece may have been flattened by natural processes. It is comparable with the beaded series from Silchester (Lawson, 1975, 254, Fig 5, 41, a, b). From the topsoil of the F1-F2 area.

5.9 GLASS

Halangy Down 415.

A scrap of clear glass, 0.75ins by 0.625ins and 0.03ins in thickness from a small, fragile, perhaps straight-sided, vessel. It bears six engraved lines, which perhaps encircled it. Two broad lines, compounded of two and four engraved lines respectively, enclose two single, deeply engraved lines, one of which is partially doubled, which enclose two doubled lines which are continuous, deep in places and partially hyphenated. This was presumably the banding of a beaker, comparable, in the generality, with that of the tall goblet from Colchester (Hawkes & Hull, 1947, Pl LXXXVIII, 77). Wheel cutting and engraving, employing flint tools, was current throughout Roman times and, with what is known of western centres of production in mind, this piece could indicate imports into Scilly from the European mainland (Price, 1976). Several small pieces of glass came to light on Nornour and it has been thought that they were collected for recycling (Dudley, 1967, 25-6; Butcher, 1978, 86). From the soil and rubble infilling of C.

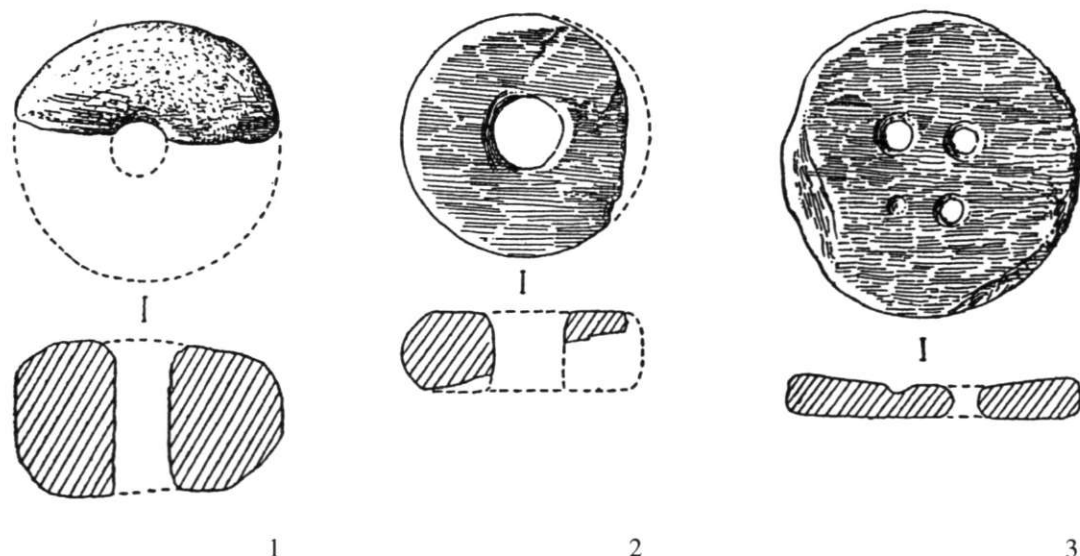


Fig 35 The spindle whorls: 1, ceramic; 2, slate. 3, the near-quadriperforate slate disc. All from the oval courtyard house, chamber A, recovered in 1950 (actual size)

5.10 SPINDLE WHORLS

Found in 1950 in the oval chamber (A) of the courtyard house (Fig 35)

Stone

Circular discoid 1.275ins diameter, circular perforation 0.52ins diameter, 0.375ins in thickness. Of buff, perhaps burned, slate with a bevelled, almost rounded, edge. Because of a flaw, a part of the edge, and one surface, has broken away. From the infilling of Drain 1a (Ashbee, 1955, Fig 2; Fig 5, 2).

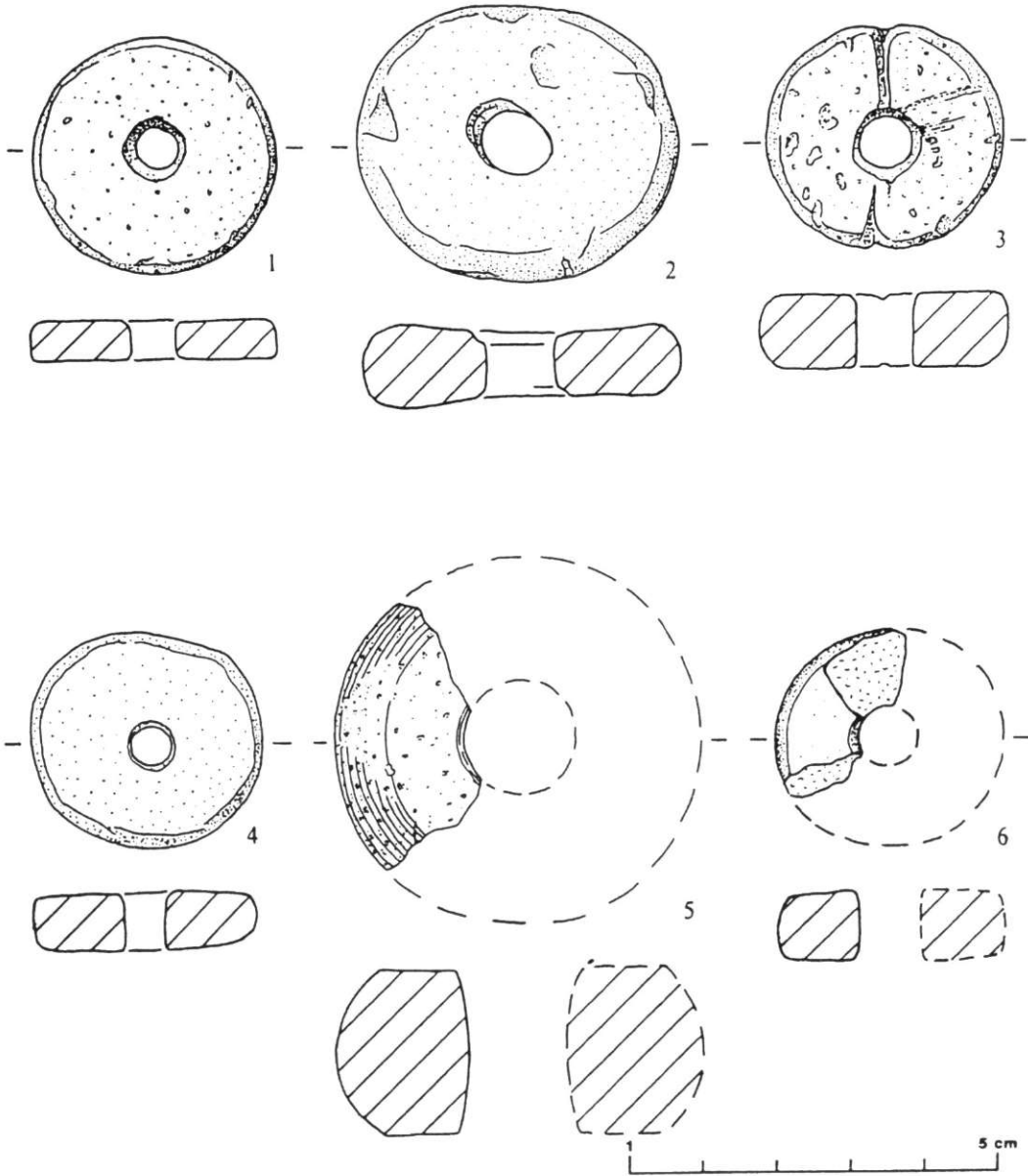


Fig 36 The spindle whorls. 1, fine granite; 2, 4, metamorphosed sandstone; 3, coarse granite; 5, 6, ceramic (actual size)

Ceramic

Half of a thick discoid, almost oblate, whorl, 1.375ins diameter, circular perforation 0.25ins diameter, 0.75ins in thickness, with an angular, almost rounded, edge. Of soft, bright red pottery, containing fine grits. From the 1935 cutting (Ashbee, 1955, Fig 2; Fig 5, 1).

From the 1964-77 excavations (Figs 36, 37)

Stone

1) Halangy Down 106.

Circular discoid, 1.275ins diameter, circular perforation 0.275ins diameter, 0.2ins in thickness, 0.5oz in weight. Of fine-grained granitic stone, polished, perhaps by use. The faces retain pitted surfaces caused by the removal of grains of quartz, feldspar &c., some of which remains. It has sharp, squared, almost unworn, edges. From the soil infill of the annexe to C.

2) Halangy Down 235.

Oval discoid, 1.675ins long and 1.375ins wide, oval perforation, 0.275ins long and 0.25ins wide, set obliquely to the whorl's axis, 0.375ins in thickness, 1.1oz in weight, with a rounded, irregular edge. Of a fine-grained metamorphosed sandstone foreign to Scilly. From the soil infill of B.

3) Halangy Down 241.

Circular discoid, 1.275ins diameter, circular perforation 0.312ins diameter, 0.375ins in thickness, 0.75oz in weight, with an angular, but rounded, edge which is vertically grooved at two opposite, axial points. Of coarse-grained granite, with a use-polished surface which is pitted because of the

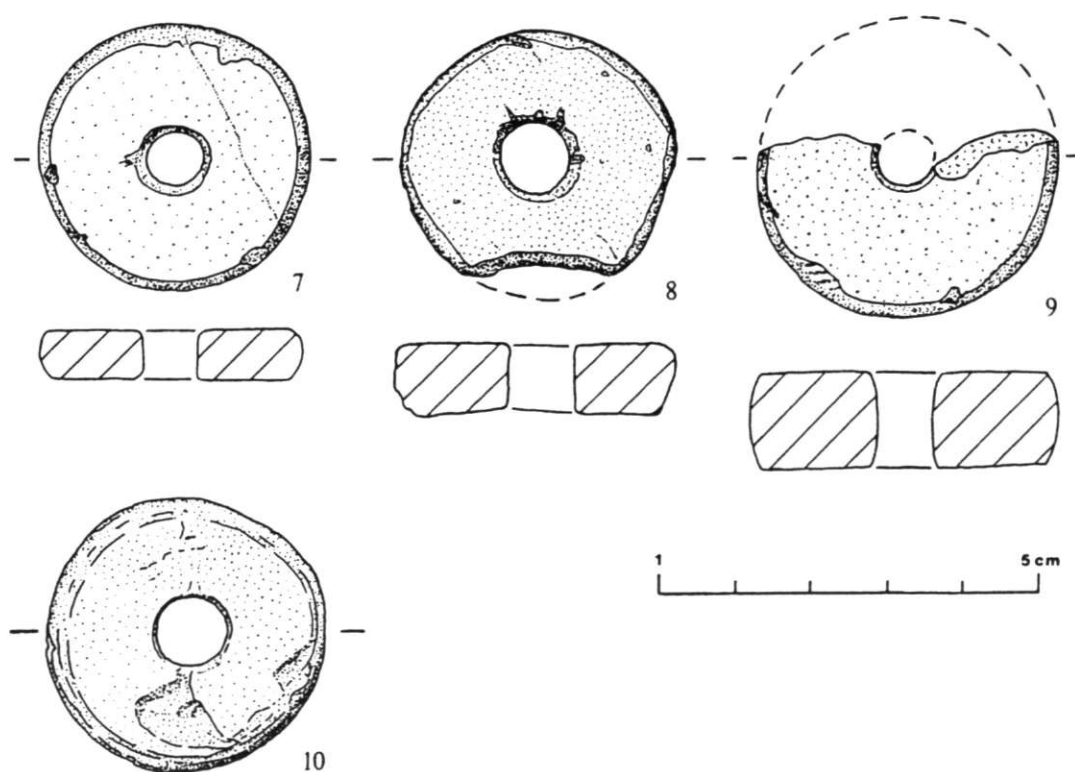


Fig 37 The spindle whorls. 7-10 ceramic (actual size)

removal of quartzes and feldspars, many of which, with abundant micas, remain. In upper part of limpet shell midden in the south corridor entrance of B (Figs 13, 14).

4) Halangy Down 1635. Oval discoid, 1.18ins long and 1.06ins wide, circular, slightly eccentric, with a straight-sided perforation which is 0.25ins diameter, 0.25ins in thickness, 0.5oz in weight. It has an irregular, rounded, edge, produced by grinding the arrises. It is reddened, perhaps by fire, and a flake has been removed from the edge in antiquity. Of a fine-grained metamorphosed sandstone foreign to Scilly. In the soil mantle of H.

Ceramic

5) Halangy Down 418.

Fragment of an oblate whorl c.1.5in diameter, with an oblique angular perforation c.0.25ins in breadth and 0.875ins in thickness. It had an even, rounded, edge and pronouncedly flattened upper and lower surfaces and an original weight of about 2.9oz. Made from clay containing a considerable admixture of mica, and other pieces of granitic origin, and fired, presumably, locally. Of a dark-faced ware comparable with the heavy sherds from Halangy Porth (Ashbee, 1983, 19-25).

6) Halangy Down 469.

Fragment of a circular, discoid, whorl which was originally c.1.0 ins in diameter, with a circular perforation c. 0.285ins diameter and 0.275ins in thickness. It had a angular, slightly rounded, edge and its original weight was about 0.9oz. Made from a sherd of pottery and retaining a red, merging to a darker, surface. From the soil infill of C.

7) Halangy Down 1000.

Circular discoid, 1.375ins diameter straight-sided, unworn, circular central perforation 0.375ins diameter, 0.5oz in weight, with a rounded edge and smoothed surfaces. Made from a weathered sherd of fine dark-faced ware, with a darker core, containing micas and small quartzes. A line, from the sherd, is visible on one face. From the floor of D.

8) Halangy Down 1704.

Circular discoid, 1.375ins diameter, straight-sided circular central perforation 0.375ins diameter, 0.375ins in thickness, 0.725oz in weight, with a square edge the arrises minimally ground down. A chordal fragment is broken from it and one face is irregular and weathered. There is a small groove across the arris from the weathered side. Made from a pot-base of a hard ware containing small quartzes. From the soil mantle of G.

9) Halangy Down 1747.

Half of a thick circular discoid, 1ins diameter, circular central perforation 0.575ins diameter 1.5ins in thickness, original weight c.1.625oz, with a square edge and the arrises minimally ground down. Made from a massive pot-base of a hard, fine, ware, containing quartzes and micas. The original surface of the base retains a trace of inburned sooting. From the soil mantle of area H.

10) Halangy Down 1764.

Thick, circular, discoid, 1.375ins diameter, circular central perforation, bevelled on one face and sharp-edged upon the other, 0.375ins diameter, 0.625ins in thickness, 1.00oz in weight with a rounded edge. Fragments have been broken from one surface. Made from a massive, weathered pot-base of a hard, sandy, ware, containing micas. From the soil infill of G.

5.11 Slate disc (Fig 35, 3)

Disc of grey slate, 1.5ins in diameter, 0.18ins in thickness, with a squared edge and the arrises removed. It bears three perforations, 0.125ins in diameter, and an incipient fourth, set in a square, with sides 0.5ins in length, in its centre. The perforations are of hour-glass character. From the interior soil mantle of the oval chamber (A) of the courtyard house, in 1950 (Ashbee, 1955, 195, Fig 5, 3).

This disc has the appearance of a large button, such might have secured a heavy coat or cloak. Slate discs of much the same size as this example are known from various accordant contexts (eg. Hamilton, 1956, 119; Ashbee, 1958, 188) but closely comparable quadriperforate examples are all but unknown. In Cornwall, however a multiperforate disc was found at Castle Dore (Radford, 1951, 75, Fig 13, 3). It was a "*Thin disc of micaceous slate, pierced with seven small holes. Use uncertain, possibly a button like the specimens in use till recently in remote parts of Britain*" (Mitchell, 1880, 98, Fig 73).

5.12 General Comments

Spindle whorls, usually undecorated, are a regular feature of sites commensurate with Halangy Down, (Threipland, 1956, 76, Fig 38; ApSimon & Greenfield, 1972, 347, Fig 24C; Christie, 1978, 393, Fig 52; Carlyon, 1982, 164; 1987, 138, Fig 14, 19-40). The well-known illustration from prehistory of spinning with a whorl, as well as weaving, is upon a Hallstatt urn from Ödenburg in Hungary (Hoernes, 1925, 559; Clark, 1952, 238, Fig 131). The practice was still current in remote parts of Scotland a century ago, when a potato was seen on a spindle (Mitchell, 1880, 1-9). Although thread can be produced without specific equipment, a reliable supply entails a spindle, with appropriate whorls (Henshall, 1950, 142; Crowfoot, 1954, 424; Hodges, 1964, 128). It is frequently contended that the size and weight of a whorl will be largely determined by the fibre employed and the nature of the desired yarn (Forbes, 1956, 153; MacGregor, 1974, 88-92). On the other hand the character of the finished yarn would depend upon the material used for whorls, a product of site, nature, and location. Besides spindle whorls, these perforated discs have been thought of, when decorated, as girdle-fasteners (Lethbridge, 1931, 76), and as fly-wheels for bow-drills (Alcock, 1963, 149).

On Scilly, besides the whorls employed for the production of, perhaps, woollen thread (Thomas, 1985, 79, 82-5), substantial examples reflecting the need for fishing-net strands might have been expected. Only one of the Halangy Down whorls is more than 1.00oz in weight and it should not be overlooked that apposite unworked stones, secured to a spindle by other than a perforation, could have been employed. However, appropriate netting strands could have been built up from various yarns and even plaiting might have been resorted to (Clark, 1952, 226).

The quadriperforate slate disc and the spindle whorls from Halangy Down point to the general use of efficient drilling tools, which could be employed to penetrate and perforate a range of appropriate materials.

5.13 The Pottery

The pottery from the 1950 excavations (Fig 38)

The excavation of the large oval chamber (A) of the courtyard house in 1950 yielded sherds of Romano-British pottery seen even then as characteristic of Cornwall and Scilly (Ashbee, 1955, 194). They were evidence for revised ideas about the date and affinities of a part of the Halangy Down series of structures which superseded previous, not unreasonable, assumptions regarding the site (Hencken, 1932, 30). When they were published, Alec Gray's narrative and conclusions (Gray, 1972, 225; Addenda &c. 8.1) were not available. Of this pottery, five rim sherds were illustrated (Ashbee 1955, 195; Fig 4) and two base sherds were described but not Figured. These pieces of two flared-rim jars and three flanged-rim bowls (Fig 38) are comparable with material found subsequently (Fig 40, Nos. 55-65; 77-85).

In addition to the rim and base sherds enumerated below there were many which exhibited the characteristics of neither rim nor base. Of these, a total of twenty five (25), twelve (12) (which includes several minute fragments) contained the crystalline gritting characteristic of the West Country. Of the thirty two (32) sherds discovered during the excavation, sixteen (16) were from the internal floor, thirteen (13) from the courtyard, two (2) unstratified and one (1) came from between the flagstones at the entrance. These sherds collectively confirm the dating evidence provided by the rims, but none is large, or individual, enough to warrant illustration. Their details (Nos. follow Fig 38) are as follows:

1) Fragment of a bowl with convex sides and flange below the rim. Finely gritted buff paste with black applied slip. A similar sherd is known from Porthmeor (Hirst, 1937b, 76). It is said to occur in the New Forest kilns (Sumner, 1927, Pls. XIV, 17; XXX, 25). From the surface of the courtyard.

2) Fragments of a jar or cooking pot with everted rim. Slightly abraded upon the interior of one of the two sherds, the other retains traces of a dark slip. They are both from the chamber floor, the first from quadrant C, the second from A. Similar rims have been met with at Chysauster (Hencken, 1933b, 265, No 20).

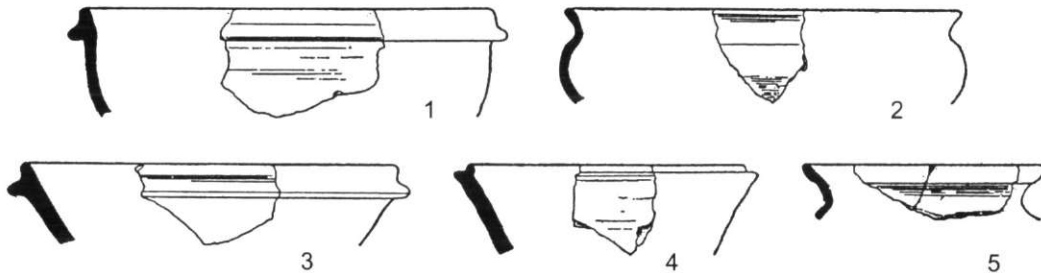


Fig 38 Pottery from the oval courtyard house chamber A, recovered in 1950 (¼)

3) Fragment of a bowl with oblique straight sides and a flange below the rim. Fine buff to brown gritted paste with black slip, abraded upon the interior side. From the soil infill of the chamber.

4) Slightly abraded fragment of a bowl with oblique straight sides and a flange below the rim. Fine gritted paste with a black applied slip. Comparable pieces are known from Porthmeor (Hirst, 1937b, 76, Fig 5, C) and Richborough (Bushe-Fox, 1926, Pl XXIX, 122). From occupation soil above the sanded floor.

5) Fragment of jar or cooking pot with a slightly everted rim. Buff paste, slightly gritted, black applied slip upon the exterior, interior plain grey colour. A comparable piece was found at Chysauster (Hencken, 1933b, 269, No 5). From the surface of the courtyard.

Not illustrated

6) Base fragment of thick heavily gritted paste with red slip upon the exterior and a dark interior. From the courtyard.

7) Coarse fragment of finely gritted hard buff paste, slightly abraded, with traces of a dark applied slip on the exterior. From the interior of the chamber.

The pottery from the 1964-77 excavations (Figs 39, 40, 41)

More than six hundred (600) sherds of pottery were found associated, mostly indeterminately, with the structures examined between 1964 and 1977. Indeed, only a very small number were significantly associated with especial features or even in the remnants of sub-floor deposits. They were mostly from the superficial accumulations of soil which blocked the rubble infills of structures and spreads of stone-collectors' debris from the last century.

Almost all the sherds were small, indeed, a piece of pottery more than a square inch in size was noteworthy. As is usual upon ancient Scillonian sites, featureless body sherds, distinguishable only by their distinctive fabrics, comprised more than eighty *per cent* (80%) of the total. In Scillonian terms, three categories of sherds could be discerned which have a general chronological and stratigraphical order. Firstly, there were small abraded, heavy, pieces, for the most part from the make-up of the cultivation terraces which preceded the structures on Halangy Down, all closely comparable with the pottery from the early structures in Halangy Porth (Ashbee, 1983, 19-25). Secondly, there were the Iron Age and Romano-British sherds, which as will be seen below, shaded one into another, the bulk of the material. These were in two categories, the patently imported

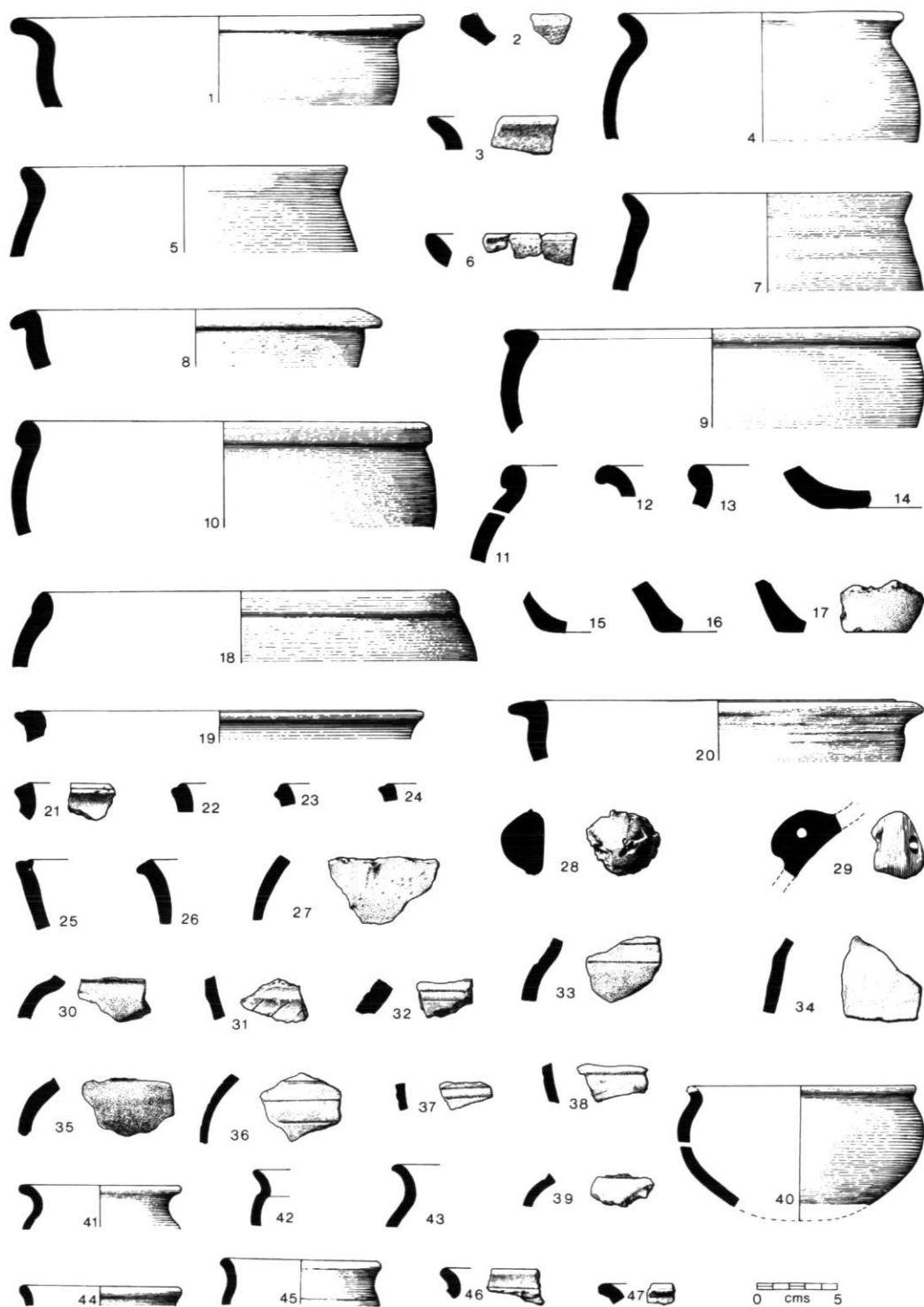


Fig 39 Coarse pottery, 1-47

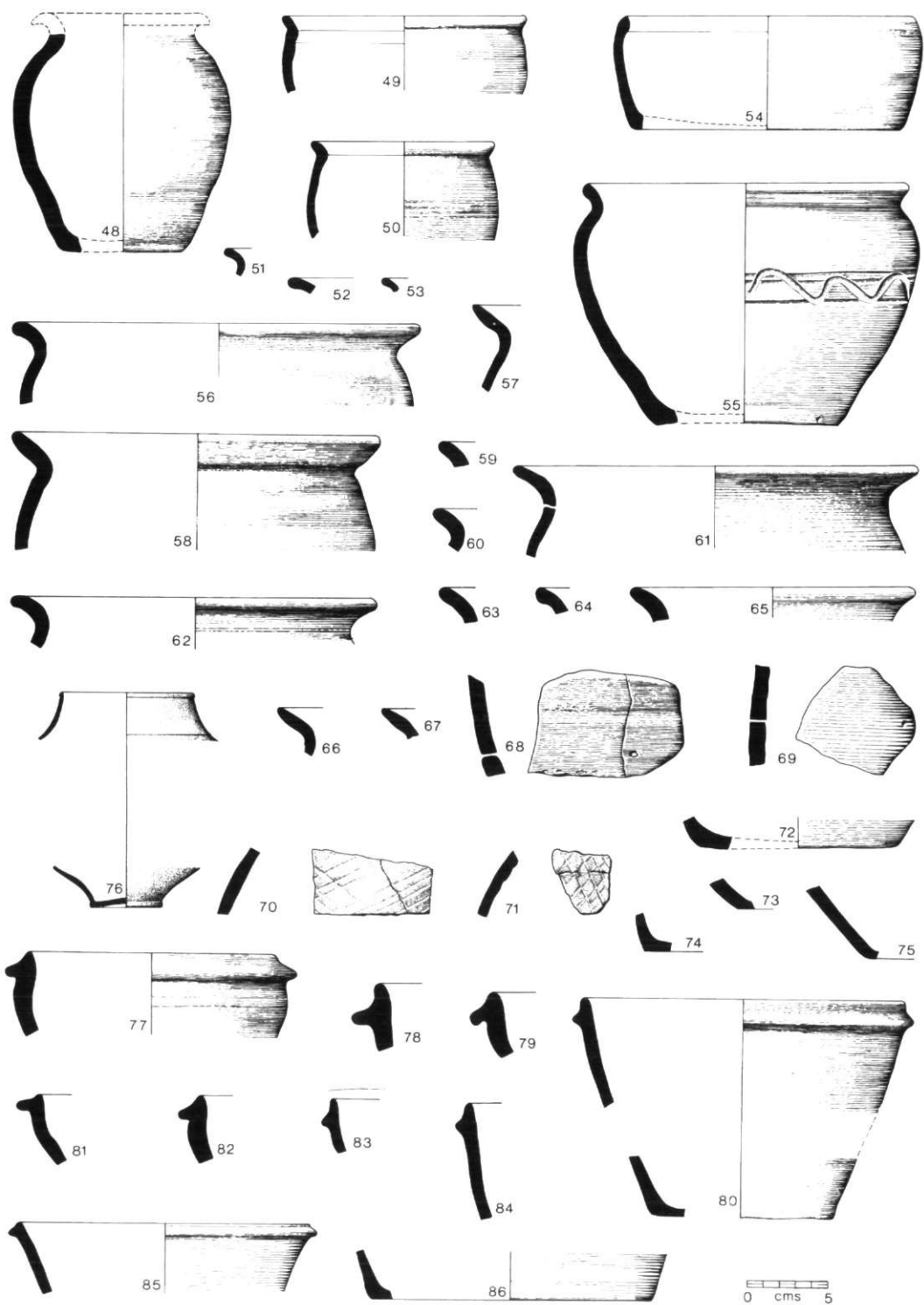


Fig 40 Coarse pottery, 48-86

pottery, flakes and scraps of Samian and Rhenish wares, and the coarse wares, small pieces of a range of bowls and jars. These, like the small assemblage associated with the oval chamber (A) of the courtyard house, recovered in 1950, were of fabrics characteristic of the West Country. Indeed, some could have been locally made and thus considered as Romano-Scillonian. A third category was the sub-Roman and post-Roman sherds, which could not, with any accuracy, be separated from the ostensible Roman coarse pottery, and the grass-marked pottery (Thomas, 1968). For the most part, the pieces of this distinctive early Mediaeval ware were from the S part of the site.

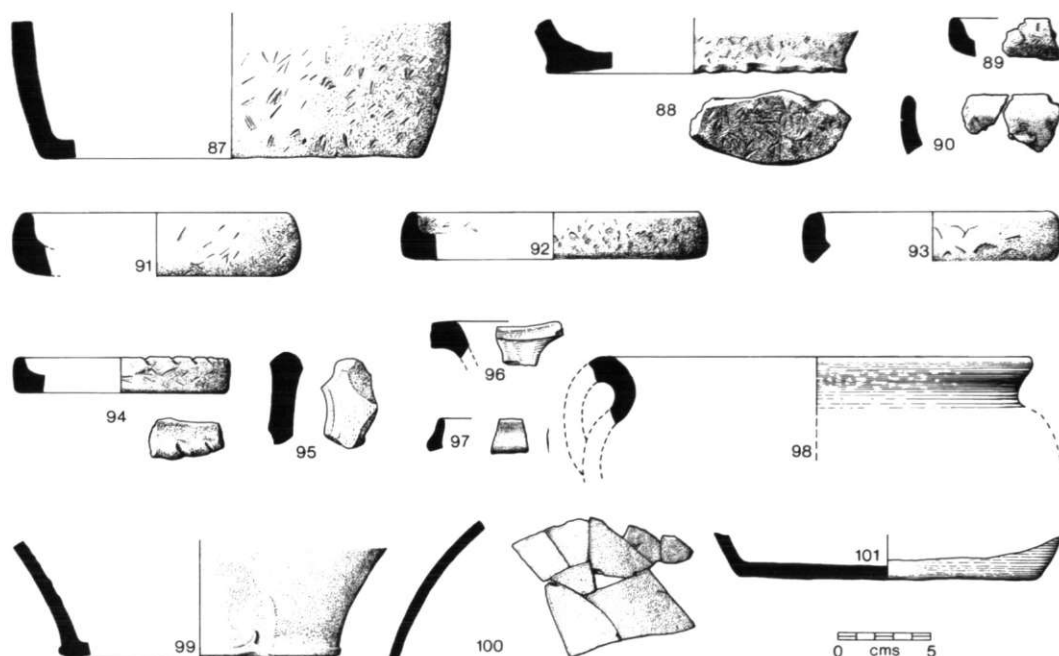


Fig 41 Coarse pottery, 87-101

This seemingly unpromising assemblage has been the subject of an especial study by John Samuels (associated with the excavations almost from the outset) who isolated fabric groups, which were examined petrologically, besides describing and supervising the reconstructional illustrations of the distinctive rim, base and other sherds. His most important conclusion has been that the pieces showed that a wider range of vessels had been current on Halangy Down than on any similar site; Nornour (Butcher, 1978), on Scilly, and Carn Euny (Christie, 1978) are cited, although in smaller quantities. Furthermore, decorated Iron Age pottery was absent and there had been, in Iron Age and Roman times, a preponderance of small to medium sized vessels. As will emerge, sherds from the same vessel have been found in widely separated parts of the site. This, and the small size and abraded condition of some sherds, may point to considerable soil movement, within and around the buildings, in antiquity.

The Halangy Down pottery

by John Samuels (with contributions by B.M.Dickenson, B.R.Hartley & D.F.Williams)

The sherds were sorted, employing a X10 hand-lens, into nine (9) fabric groups:

A, gabbroic, with white felspar, and a few quartz, fragments

B, gabbroic with few felspar, and some quartz, fragments

C, granitic, with large numbers of coarse quartz, and only occasional felspar, fragments
D, gabbroic, a hard, fine, fabric with very small fragments of felspar
E, gabbroic, a fine fabric with few inclusions. Vessels were often burnished internally
F, gabbroic, a fine fabric with small felspar, and occasional quartz fragments
G, gabbroic, a very fine fabric with small felspar, and occasional quartz, fragments
H, granitic and grass-marked
I, a fine red fabric with very few inclusions, which are generally quartz and mica
Apart from the early Mediaeval fabrics, H and I, the distinction between the various groups is slight and it is possible that some could be combined with others. The total number of sherds can be shown, in terms of fabric, quantity and weight as follows:

FABRIC	NO. OF SHERDS	Weight (Kgs)
A	93	1.770
B	119	1.600
C	95	1.330
D	47	0.442
E	13	0.140
F	11	0.150
G	64	1.670
H	127	4.100
I	25	0.218

Dr David Williams (DoE Petrology Unit, Dept. of Archaeology, University of Southampton) examined, petrologically, samples from each fabric group and two distinct categories were identified These are:

Group I, **Granitic**

This is characterised by flecks of mica on the surfaces. In fresh fractures, white grains of felspar and rock fragments are to be seen. In thin sections inclusions of tourmaline-granite together with numerous large, discrete, particles of felspar, quartz mica and some tourmaline can be seen scattered throughout the clay matrix.

Group II, **Gabbroic**

Numbers of small angular fragments of white felspar are intrinsic to the fabric of this group. A thin section showed that the most prominent inclusions were angular grains of altered felspar and colourless amphibole, many of which appeared as fibrous aggregates. Particles of pyroxene, olivine, quartz and magnetite were also present.

Petrological examination, except for the granitic fabric confirmed the preliminary scrutiny. Appropriate granitic material could have been obtained on Scilly, although, equally, like the gabbroic constituents, Cornwall, the mainland, could have been the source (Peacock, 1969; Williams, 1976, 1978).

Because of the rarity, if not lack, of significant stratification on Cornish sites, the problems inherent in the sequential dating of Iron Age and Romano-British pottery are well known (Fowler, 1962, 41; Elsdon, 1978, 402-4). Indeed, dates were given to the pottery recovered from Halangy Down in 1950 by references to Chysauster and Porthmeor (Ashbee, 1955, 194-5), where the sherds were dated only in a general manner. The Halangy Down fragments, however, illustrates a wider range of vessels in smaller quantities, than, for example, Carn Euny (Christie, 1978) or Nornour (Dudley, 1967; Butcher, 1978). They also show an absence of decorated Iron Age pottery besides a noticeable preponderance of small to medium sized Iron Age and Romano-British vessels. In general, flared rim jars seem to have had a long life on most Cornish (and Scillonian) sites, although flanged bowls might be limited to the end of their prevalence (Guthrie, 1969, 28). Twelve (12) slivers of Samian ware, and the Gaulish Rhenish ware beaker sherds, show that imported wares

reached Halangy Down. In the main, much of the pottery may be from an irregular supply, brought to Scilly from a mainland source. This would account for the modest quantities of a wide range of vessels.

It seems likely that occupation of one of Halangy Down's structures continued into early Mediaeval times. Distinctive grass-marked pottery (Fabric H) was the largest single group from the site. Its currency never extended beyond the Isles of Scilly and the western half of Cornwall (Thomas, 1968, 328). Halangy Down's grass-marked pottery fabric is, however, noticeably softer and coarser than that from Gwithian. It could have been in use from the 6th to the 10th century AD. The few sherds of later mediaeval pottery might result from sporadic stone-robbing.

All the rim and decorated body sherds are illustrated, the drawings following the general southwestern sequence. The abbreviation HM is used for hand-made, and WT for wheel-turned pottery. An indication of provenance and the register number, which allows reference to the excavation's archive, is also given.

Pottery descriptions (Figs 39, 1-47; 40, 48-86; 41, 87-101):

- 1) HM, fabric B. Light brown surfaces with a red-brown core. J, unstratified (1552).
- 2) HM, fabric A. Red-brown exterior surface and core with a black interior surface. B, sub-floor soil (194).
- 3) HM, fabric B. Dark grey burnt exterior surface with a grey-brown core and interior surface (cf. Christie, 1978, Fig 57, 4). B, sub-floor soil (237).
- 4) HM, fabric A. Black exterior and interior surface below the rim. This interior is red-brown as is the core (cf. Christie, 1978, Fig 58, 7). C, on rabb beneath shallow soil accumulation (313).
- 5) HM, fabric A. Two joining sherds, dark brown and slightly smoothed exterior surface with a lighter brown core and interior surface (cf. Christie, 1978, Fig 57, 4, 6). B, sub-floor soil (166/243).
- 6) HM, fabric B. Red-brown surfaces and core. B, sub-floor soil (507).
- 7) HM, fabric B. Two joining rim sherds with a dark brown, blackened exterior and a light brown interior surface, with a grey core (cf. Christie, 1978, Fig 57, 4, 6). B, sub-floor soil (401/420).
- 8) HM, fabric A. Dark red-brown surfaces and core (cf. Fowler, 1962, Fig 11, 9; Christie, 1978, Fig 62, 35). J, in hillwash (1558).
- 9) HM, fabric A. Red-brown surfaces, with a dark grey core, and a smoothed exterior. Soil accumulation between A and B (1359).
- 10) HM, fabric B. Two joining rim sherds with a red-brown exterior surface and core. The interior is dark grey and there is smoothing on the rim and exterior. B, sub-floor accumulation and soil between A and B (225/1360).
- 11) HM, fabric B. Red-brown to grey fabric with smoothing on rim and neck. Soil between A and B (1347).
- 12) HM, fabric A. Red-brown, blackened on rim. Soil mantle of F (1986).
- 13) HM, fabric A. Red-brown soil accumulation in C, annexe (145).
- 14) HM, fabric C. Red-brown exterior surface and core with a black, smoothed interior surface. Soil mantle of F (1427).

- 15) HM, fabric A. Red-brown. NE corner of B, below midden (517).
- 16) HM, fabric B. Red-brown exterior with a black core and black interior surface. In soil infill of channel beneath B (296).
- 17) HM, fabric B. Red-brown exterior with a black core and black interior surface. Below pavement of N entrance to B (360).
- 18) HM, fabric A. Red-brown with a smoothed rim (cf. Threipland, 1956, Fig 17, 25). Unstratified (1203).
- 19) HM, fabric C. Light brown on rim and interior, with a blackened exterior. B, sub-floor soil (593).
- 20) HM, fabric A. Two joining red-brown rim sherds. F, soil mantle (1474/1483).
- 21) HM, fabric A. Brown smoothed surfaces with a red-brown core. In soil infill of channel beneath B (309).
- 22) HM, fabric F. Red-brown. Unstratified by entrance to courtyard of courtyard house (1295).
- 23) HM, fabric A. Red-brown. F, soil mantle (1518).
- 24) HM, fabric A. Brown surfaces and a red-brown core. In hard soil of courtyard of courtyard house (331).
- 25) HM, fabric A. Dark grey external and a light grey internal surface with a light red-brown core (cf. Christie, 1978, Fig 62, 44, a similar inturned rim but less pronounced). Topsoil between A and B (36).
- 26) HM, fabric A. Light brown, abraded. G, at base of interior soil upon rabb (1542).
- 27) HM, fabric A. Grey exterior, red-brown core and interior surface. An incipient lug has been punched out from the body. Exterior of courtyard entrance (1434).
- 28) HM, fabric C. A solid lug with a red-brown exterior, core, and a black interior surface. B, sub-floor soil (226).
- 29) HM, fabric A. A horizontally perforated lug, dark grey, with traces of a black slip on the exterior surface. Midden by NE wall of B (552).
- 30) HM, fabric A. A body sherd from a shouldered jar, of red-brown to grey fabric. Below midden by NE wall of B (1630).
- 31) HM, fabric A. Dark brown fabric, with incised line decoration. Unstratified (1045).
- 32) HM, fabric C. Light brown exterior, grey core and interior surface, with incised line decoration. Beneath midden in S corridor entrance to B (173).
- 33) HM, fabric A. Red-brown with light incised line decoration. H, in soil above rabb (1612).
- 34) HM, fabric B. Dark grey surfaces and a lighter grey core. B, in sub-floor soil (854).

- 35) HM, fabric A. Red-brown. B, sub-floor soil (621).
- 36) HM, fabric F. Light brown with incised lines. C, in lower spill of midden (622)
- 37) HM, fabric A. Light brown sherd with a subdued cordon. B, N entrance, in soil accumulation (586).
- 38) HM, fabric E. Light brown fabric with a burnished exterior surface bearing a shallow groove. B, in sub-floor soil (601).
- 39) HM, fabric F. Dark red-brown with traces of exterior surface burnishing. B, in sub-floor soil (173).
- 40) HM, fabric E. Light brown, burnished, exterior, grey core and interior surface. Three sherds join and the fourth is from the same vessel. Soil mantle of E, uphill area of C, with rubble (342/498/1069; 698 from surface).
- 41) HM, fabric C. Dark grey to black exterior, grey core and interior surface. Slight smoothing on the rim. Compact soil of courtyard of courtyard house (1220).
- 42) HM, fabric D. Dark grey surfaces and a red-brown core. F, soil mantle (1441).
- 43) HM, fabric B. Dark brown to grey. Between A and B (1339).
- 44) HM, fabric F. Red-brown exterior, dark grey core and grey-brown interior surface. Midden by NE exterior of B (1409).
- 45) HM, fabric D. Black surfaces and a red-brown core. There is a subdivided cordon on the shoulder. F, soil mantle (1386).
- 46) HM, fabric B. Grey to red-brown surfaces and core, with an incised line on the shoulder. In midden accumulation at S end of B (227).
- 47) HM, fabric D. Red-brown surfaces and a grey and red-brown core. C, annexe, sub-floor soil (522).
- 48) HM, fabric D. Red-brown smoothed exterior, grey core and brown interior surface. Two sherds join and the third is from the same vessel (cf. Dudley, 1967, Fig 6, 48). B, in sub-floor soil, centre (451); B, in sub-floor soil at N entrance; C, below midden spread (1650).
- 49) WT, fabric G. Dark grey to brown with traces of a black slip on the exterior surface. Unstratified in soil adjacent to SW exterior end of courtyard house (1301). F, soil mantle (1505).
- 50) WT, fabric G. Dark grey to brown with traces of a black slip on the exterior surface. F, soil mantle (1552).
- 51) WT, fabric G. Dark grey. F, soil mantle (1510).
- 52) WT, fabric G. Dark brown with exterior black patches. C, sub-floor soil (819).
- 53) WT, fabric G. Dark grey. B, sub-floor soil (245).
- 54) WT, fabric G. Dark grey with traces of a black slip on the exterior surface

(cf. Guthrie, 1969, Fig 14, 1, 2). In soil adjacent to SW exterior end of courtyard house (1294/1302). F, soil mantle (1385).

55) Probably HM, fabric B, but containing larger grits (up to 4mm diameter) than is usual. There are seven (7) non-joining sherds from the same vessel. Dark brown with blackened exterior patches. The base has been knife-trimmed and the body decorated with incised horizontal and wavy lines (cf. Hirst, 1937b, Fig 5, G.). B, sub-floor soil (316); B, below N entrance paving (331); midden accumulation at S end of B interior (443); C, in soil and rubble mantle (819); unstratified in stone-breakers' rubble at E, exterior, of C (1308); F, soil mantle (1350/1441).

56) WT, fabric D. Dark grey with traces of a black slip on the rim (cf. Fox & Ravenhill, 1969, Fig 37, 1; Hirst, 1937b, Fig 5, I). B, in mantle of soil and rubble (769).

57) WT, fabric G. Dark brown, with grey core. There is slight burnishing on the rim and exterior surface. In soil N of robbed exterior wall of A, unstratified (1489).

58) WT, fabric G. Dark brown to grey surfaces and a grey core (cf. Fowler, 1962, Fig 9, 11; Threipland, 1956, 18, 31). B, sub-floor soil (419).

59) WT, fabric D. Dark brown surfaces and a grey core. There are traces of a black slip on the exterior surface. Unstratified, surface.

60) WT, fabric D. Dark grey, blackened around the rim. F, soil mantle (1533).

61) WT, fabric G. Eight (8) dark grey sherds from the same vessel. Surface soil in entrance to courtyard of courtyard house (1431/1490/1494).

62) WT, fabric D. Two joining sherds, dark grey with traces of a black slip on the rim. Courtyard of courtyard house (845); F, soil mantle (1501).

63) WT, fabric D. Dark brown exterior, with traces of a black slip, grey core and brown interior surface. B, E wall, soil mantle (383).

64) WT, fabric D. Dark grey surfaces and a light grey core. B, N entrance on rabb beneath paving (334).

65) WT, fabric G. Dark brown. B, sub-floor soil (237).

66) WT, fabric G. Three joining sherds, dark brown with a grey core. B, N entrance soil mantle (165/219) ; F, soil mantle (1420).

67) WT, fabric D. Brown-grey surface, with traces of a black slip on the exterior, and a light brown core. F, soil mantle (1389).

68) WT, fabric D. Two joining sherds, grey, with a lightly burnished exterior, pierced by a small hole made before the vessel was fired. From the midden at the NE corner of B (1373/1375).

69) WT, fabric G. Light grey, slightly burnished exterior, grey core and brown interior surface; pierced by a small hole made before the vessel was fired. C, soil and rubble mantle (512).

70) WT, fabric G. Dark brown surfaces and a grey core. Decorated with a shallow lattice pattern. F, soil mantle (1442).

- 71) WT, fabric G. Brown exterior, decorated with a lightly incised lattice pattern, a grey core and interior surface. F, soil mantle (1390).
- 72) HM, fabric G. Dark grey surfaces and a red-brown core. C, soil and rubble mantle (253).
- 73) WT, fabric G. Dark brown, smoothed exterior, a lighter brown core and interior surface. C, rectangular annexe, soil and rubble mantle (582).
- 74) WT, fabric G. Dark brown surfaces and a light brown core. F, soil mantle (1516).
- 75) WT, fabric D, grey. F, soil mantle (1394).
- 76) WT, three sherds from the same vessel. Dark brown colour-coated surfaces on a fine red and grey sandwiched core. Rhenish ware of Central Gaulish origin (ident. K. Greene). B, sub-floor soil (192/402); In soil infill of channel in rabb beneath B (311).
- 77) WT, fabric B. Two joining sherds red-brown surfaces and a black core. Soil mantle between A and B (824); from surface (1300).
- 78) WT, fabric B. Red-brown. No provenance.
- 79) WT, fabric B. Red-brown surfaces and a black core. F, soil mantle (1387).
- 80) WT, fabric D. Eight sherds from the same vessel. Brown surfaces with a red-brown core. The exterior has blackened patches and has been slightly burnished (cf. Dudley, 1960-61, Fig 29, 2; Hirst, 1937b, Fig 5, C). B, sub-floor soil (353); soil mantle B, S exterior (853); F, soil mantle (1531, 1419, 1430, 1492, 1493, 1531).
- 81) WT, fabric D. Red-brown (cf. Fowler, 1962, Fig 11, 5; Hirst 1937b, Fig 5, K). B, base of sub-floor soil, on rabb (686).
- 82) WT, fabric D. Red-brown (cf. Hirst, 1937b, Fig 5, A). C, annexe, soil and rubble mantle (77).
- 83) WT, fabric D. Red-brown. C, annexe, soil and rubble mantle (206).
- 84) WT, fabric D. Brown surfaces with a grey core. Slightly burnished on the exterior surface and burnt on the rim (cf. Guthrie, 1969, Fig 12, 3). Soil between A and B (853).
- 85) WT, fabric G. Grey, with traces of a black slip on the exterior surface. C, soil and rubble mantle (231).
- 86) WT, fabric D. Dark brown exterior, with traces of a black slip, a brown core and interior surface. F, soil mantle (1575).
- 87) HM, fabric H. Grass-marked, dark brown and slightly blackened on the exterior. Surface stones of courtyard of courtyard house (1229).
- 88) HM, fabric H. Grass-marked. Light brown exterior, dark grey core and interior surface, with a lightly thumbled base. C, annexe, soil and rubble mantle (395).
- 89) HM, fabric H. Grass-marked, brown. In midden at NE exterior of B (344).
- 90) HM, fabric H. Grass-marked, two non-joining sherds from the same vessel with brown surfaces and a grey core. G, soil mantle (1548).

- 91) HM, fabric H. Grass-marked, brown to dark brown. C, soil and rubble mantle (91).
- 92) HM, fabric H. Grass-marked, dark brown surfaces and brown core. C, annexe, soil and rubble mantle (386).
- 93) HM, fabric H. Grass-marked, brown surfaces and a red-brown core. C, annexe, soil and rubble mantle (396).
- 94) HM, fabric H. Grass-marked, red-brown to dark brown rim. C, annexe, soil and rubble mantle (425).
- 95) HM, fabric H. Dark red-brown smoothed surfaces with a lighter core. Either a handle or, more likely, part of a bar-lug (cf. Thomas, 1968, 321, Fig 73). Soil between A and B (845).
- 96) HM, fine red-brown fabric, smoothed on surfaces, and containing mainly small quartz grits, with some larger grits, up to 2mm diameter. Part of a handle attached to a rim. Soil between A and B (837).
- 97) WT, mediaeval. Fine red to grey fabric with a yellow-green glaze on both surfaces. W, shore limit of site, in topsoil (201).
- 98) HM, fabric H. Dark grey exterior red-brown core and brown interior surface ? bar-lug (cf. Thomas, 1968, 321, Fig 73). Surface of dismantled S wall of B (224).
- 99) WT, mediaeval. Orange exterior, orange and red core and grey interior surface. Traces of yellow-green glaze are upon the fine sandy fabric. In topsoil, S of C annexe (1699).
- 100) WT, fine sandy fabric, mediaeval. Red-brown surfaces with a grey core. Topsoil N of G (1703).
- 101) WT, fine sandy fabric with occasional large, up to 2mm diameter quartz grits, mediaeval. Orange exterior, dark grey core and light grey and interior surface. G, in topsoil (1610).

The Samian Ware by B. M. Dickenson & B. R. Hartley

- 1) Form 15/17R, South Gaulish, Neronian or Early Flavian. C, annexe soil and rubble mantle (14).
- 2) Central Gaulish fragment (?dish), second century. B, sub-floor soil at N entrance (223).
- 3) Dish fragment, Central Gaulish, probably Antonine. B, midden at S end of interior (405).
- 4) Form 31, Central Gaulish, Antonine. B, midden at S end of interior (410).
- 5) Central Gaulish scrap, second century. B, sub-floor soil (416).
- 6) Ritterling 9, burnt, in an orange, micaceous fabric of the kind produced at Lezoux in the first century. Pre-Flavian, probably Neronian. B, sub-floor soil (444).
- 7) Form 31, East Gaulish, late second or early third century. B, midden at S end of interior (623).
- 8) Central Gaulish scrap, second century. B, sub-floor soil (643).
- 9) Large enclosed jar, Central or East Gaulish, Antonine or early third century. F, soil mantle (1456).
- 10) A scrap of orange coarse ware, not necessarily a Samian imitation. G, in drain infill (1606).

11) Central Gaulish or East Gaulish fragment (bowl or dish), Antonine or early third century. H, at base of rubble spread (1757).

12) Flake, probably South Gaulish and first century. F, soil mantle (1772).

Bar Point: the Pottery

Some fourteen (14) sherds of pottery were found upon the ancient surface, which bore traces of tillage beneath coarse sand and rocky, sea-surge debris. This total included the pieces of a buff lid and rim (Fig 42) of post-Roman E-ware (Thomas, 1981, 20) which were within the irregular lens of concentrated charcoal (Section 6.6; pp. 127-9). The sherds, which included some crumbs and a small base (Fig 42), apart from the E-ware fragments, were dark-faced, wheel-made, and heavily sooted. Their fabric approximated to that of group G, as defined by Samuels (p.82). For the most part the pieces contained a high proportion of micas. B-wares were initially classified by Charles

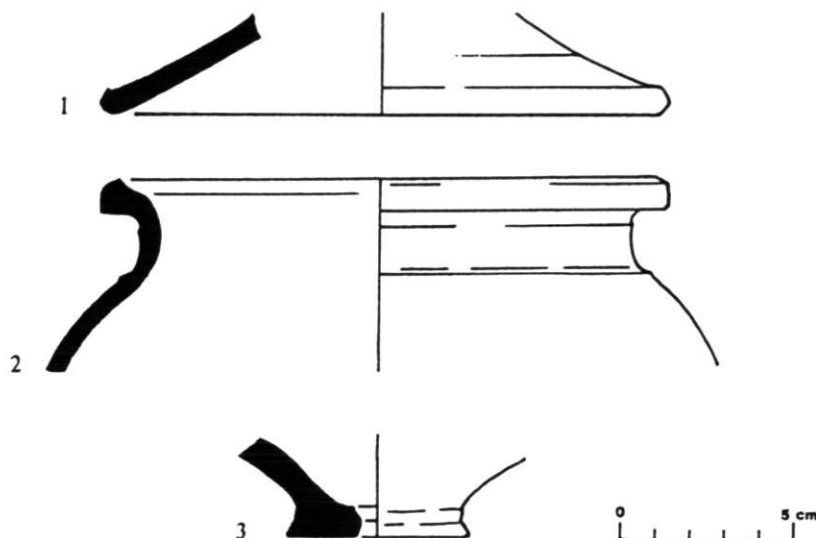


Fig 42 Bar Point, E-ware lid and rim, with small base (see Halangy Down coarse pottery group G) from the ancient tiled surface

Thomas (1959, 96-9, Fig 43) who sees them as cooking-pots, drinking-vessels, bowls, jugs and pitchers. Heavy mineral analysis points to a possible origin in Atlantic France and its importation appears as allied with D-ware, mortaria and large bowls (Thomas, 1981, 20). He scrutinised the largely reconstructed lid and the accompanying jar rim and, despite breakage, considered them in mint condition.

An approximate date for the currency of E-ware is 600-700 AD which indicates that the fields at Bar Point may not have been overwhelmed by the sea until some time thereafter.

Pieces of Fired Clay

Pieces of fired clay, ranging from crumbs to lumps as large as 3ins by 3ins, which displayed, for the most part, single and, more rarely, double faces, were found in topsoil, in the earthen infill of walls, in drains as well as in the two midden accumulations (Fig 11). All the pieces were of local clay, containing granite particles. There were few signs of burnt-out organic material within them. Pieces that had two faces were as much as 1.5ins thick and were hard-fired. Some 166 pieces were noted as related to various features on the hillslope and pieces from the topsoil were collected and noted. In the event these, when combined, weighed 29.5lbs. They were patently the pieces of the superstructure of the small kilns or ovens, the bases of which were found beneath the NE end of the uphill wall of B and beneath the walling between B and C (p.33, section 4.2, Figs 9, 10, 11).

Burned clay fragments, often associated with pierced floor pieces, were considered as cooking-ovens and floors at Maiden Castle (Wheeler, 1943, 96, 321) while similar pieces of ovens, some bearing decoration, came to light at Gussage All Saints (Wainwright, 1979, 100-4). In Cornwall, ovens are attested from the Rumps promontory fort (Brooks, 1974, 17, 18, 28, 29) although, here hearth cooking may have been the mode (Quinnell, 1986, 126).

5.14 The Flint Industry

Within the oval chamber (A) of the courtyard house, excavated in 1950, fourteen (14) pieces of flint were found in the dark occupation layer which covered the made-up sandy-mortar floor. Six (6) were unworked or naturally fractured pebbles, possibly raw material, four (4) were fracture fragments, whilst four (4) more showed signs of workmanship. One other described (Ashbee, 1955, 196, Fig 6,1) as a 'Chert blade, one edge blunted by steep trimming', from the area investigated in 1935, was subsequently identified (Jacobi, 1979, 48) as, despite its size, a geometric microlith (Fig 44, 1), which with other material, is meagre positive evidence of Mesolithic activity on Scilly (Ashbee, 1986, 195).

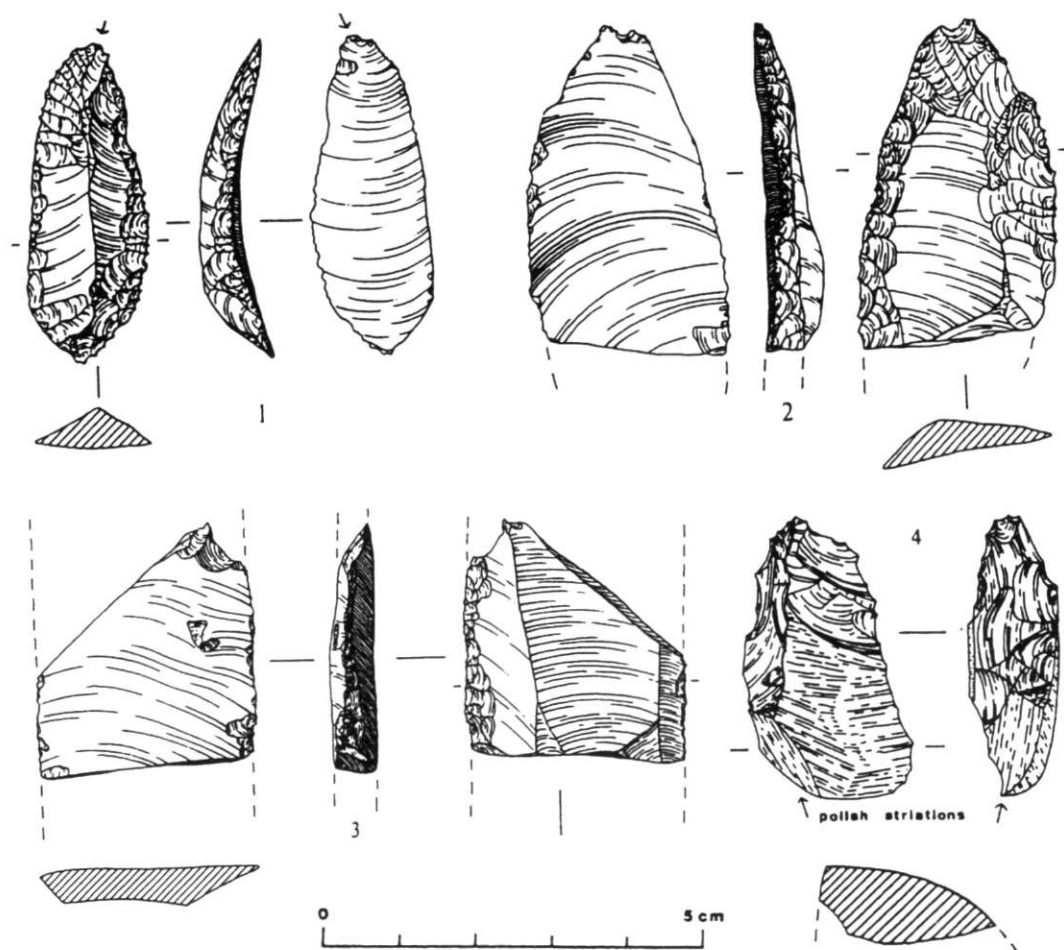


Fig 43 Flint artifact pieces: 1 plano-convex blade; 2 broken blade end, possibly of Grand Pressigny flint; 3 blade fragment of grey flint with honey coloured patina; 4 reworked fragment of a polished tool (actual size)

Between 1964 and 1977, the Halangy Down excavations produced an assemblage of 111 flint and chert pieces, all of which, with the exception of four, were artifacts.

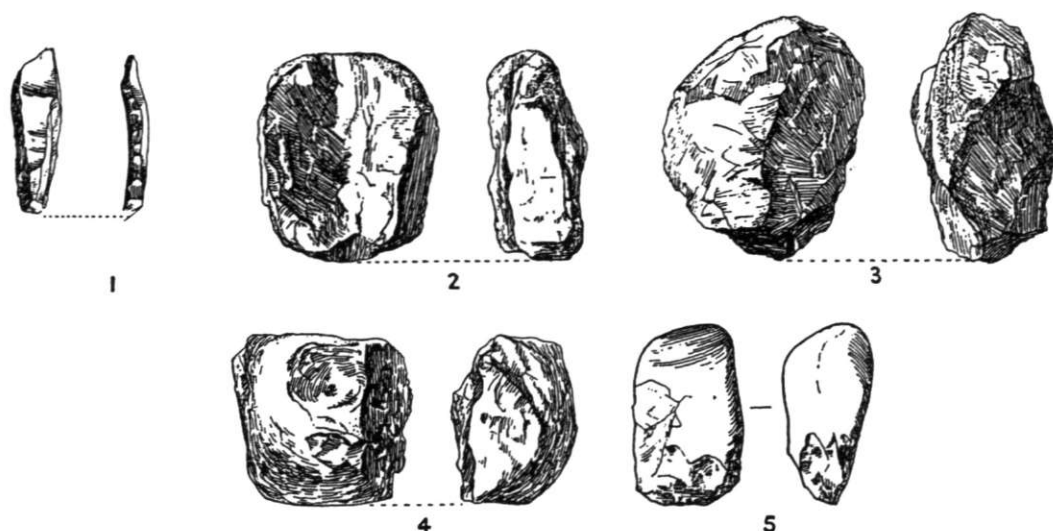


Fig 44 1 a geometric, chert microlith; 2,3 quartz hammer-stones; 4,5 quartz cleavers. Found in the oval chamber A, of the courtyard house, in 1950. 1, (actual size); 2-5, ($\frac{1}{3}$)

They were almost all found in the topsoil or the loam accumulations mantling the various structures. Unlike those found in 1950 they were all unstratified. A typological listing of the material is as follows;-

Raw material

Beach-pebbles and pieces	4
--------------------------	---

Waste material

Cores	6
Core remnants and fragments	3
Flakes	3
Spalls	3

Artifacts

Points	43
Scrapers	25
Retouched flakes	6
Retouched blades	6
Retouched spalls	4
Blade-end with shallow oblique retouch	1
Large blade fragment with side retouch	1
Dual-end pointed piano-convex blade	1
Reworked fragment of a polished tool	1

Miscellaneous

Calcined flints	4
-----------------	---

Raw material

The beach-pebbles and pieces thereof are all weathered or beach-battered and the largest is approximately the size of a substantial hen's egg. All were from the soil mantle with the exception of a chipped pebble (HD 256) which was found in the limpet shell midden which infilled the erstwhile S corridor entrance of B. Flint pebbles, sometimes large (Ashbee, 1974, 40), are to be found upon almost all Scillonian shores as well as in the thin glacial deposits which cloak the higher downs of St. Martin's and the northern parts of Bryher and Tresco. Its source would appear to be Antrim, in northern Ireland, from whence it was transported by glacial agencies (Mitchell & Orme, 1967, 83).

Waste material

All the discarded cores are small, the largest being 2.25ins by 1.5ins by 1.5ins. One has a heavy milky white patination and another is patinated and reused. Three cores have clearly definable parallel, striking platforms but others are no more than worn and weathered beach-pebbles from which flakes have been struck. One such pebble is of chert not flint. A black-grey core of good quality flint had produced small blades followed by flakes. It would have been discarded because it had finally fissured, cracked and crumbled. It can be assumed that flint cores of fair quality were progressively reduced and finally split into flakes. One of the patent core remnants, which are in general wedge-shaped, is a remnant of a heavy scraper used as a core and another a rejuvenation flake. The last has smash traces, an inevitable concomitant of poor quality flint.

All the flakes without retouch were broken and had cortex remnants. Presumably they were pieces for which a use was not found. One spall was large and almost 1ins in length while another was a smashed off piece without a bulb of percussion. Of note, however, is a spall of honey coloured flint, with a band of cortex, which matches that of the long flake and the broken plano-convex knife, exceptional artifacts which are discussed in detail below.

Artifacts

The forty-three (43) pieces which had points upon them were, after scrapers, the most numerous form of artifact. They are sometimes termed awls or borers. Various pieces were used and there are points upon thirteen (13) small and seven (7) large flakes, three (3) blades, four (4) heavy and five (5) small cores or pieces thereof, three (3) spalls, six (6) beach-pebble fragments and two (2) small weathered pieces. Nine (9) of these have a heavy white patination and thirteen (13) bore patent signs of other uses, such as retouch and use-gloss. One (1) was also a hollow scraper. Of the forty three (43), thirty one (31) had single points upon them, ten (10) double and two (2) triple. All the points were well worn and glossed and one has overt signs of continuous rotary motion and was conceivably mounted as a drill-tip (Hodges, 1964, 106, 116). Thirty one (31) are fine, light, more-or-less conical points, less than 1/8ins in diameter at their base, while fourteen (14) are coarse heavy and more than 1/8ins a diameter at their base. The remaining points are stubby and diffuse.

Of the twenty-five (25) scrapers, sixteen (16) were upon appropriate flakes, one or two being irregular, three (3) were converted core remnants, four (4) were from split beach-pebbles, or pieces thereof, and one (1) from a near circular thermally fractured segment. Three (3) of the flakes were heavily patinated white or grey-white, and one was from a massively weathered nodule. When not struck from beach-pebble flint, retain weathered pieces were the source of material. Many of the scrapers had more than one retouched, use-glossed, edge, while four (4) were combined with points, two (2) in one instance. In terms of scraping edges they are as follows: eighteen (18) rounded of which twelve (12) were shallow, that is less than 30°, while seven (7) were steep, more than 60°. There are also six (6) straight, almost squared-off edges and five (5) concave and thus of the hollow scraper category.

Three (3), of the six (6), retouched flakes are heavily patinated, one (1) is the later retouch of a patinated flake. One (1) has been struck from an ancient, heavily patinated, piece of flint and one (1) is lunate with its retouch opposite the bulb of percussion. The bulbar end of one of the patinated flakes has also been retouched. The blades have side and end retouch, two (2) are small, about 0.5 ins long, one (1) is heavy and about 1in long, while the remainder are broken. Although worn, the retouch of the heavy blade produced serration. Of the four (4) retouched spalls, all of microlithic proportions, two (2) had been finely retouched to chisel and two (2) to lunate edges.

A feature of the collection is an implement and four (4) fragments of implements (Fig 43) which display a workmanship and sophistication foreign to Scillonian flint artifact assemblages. They are, respectively, a dual end-pointed plano-convex blade, a half of a plano-convex knife of brown flint, a piece of a large, long, blade also of brown flint, and a reworked piece of a unifacially polished tool. The first and the last are of good quality grey flint with minimal milky patination, while the other two, of brown flint, one with saccharoidal flecks and an inclusion, may be of imported material. A spall of such flint has already been noted.

The end-pointed plano-convex blade (Fig 43, 1) is 1.5 ins long and 2 ins broad at the maximum medial point, and is at least the third struck from a considerable, prepared, core. It is keeled and thus robust and there is careful retouch to give, on the steep side of the keel, wide-set serrations and, on the shallow side, close-set ones. These serrations have been dulled by use and crush-marks combined with gloss are visible. The broader, presumably bulbar, end is retouched to an even, serrated, keeled point and the slighter end to an also serrated, flattened hamate point. The finer, hamate point displays rather more use-gloss than the heavier, keeled, one.

A broken blade-end (Fig 43, 2) with oblique side retouch, is of honey coloured flint, without patina and with saccharoidal flecks and an inclusion. It is at least the third blade from a substantial prepared core and could have been at least 3.5ins long and 1in broad at its widest point. It is shallowly keeled in section, the blades previously struck from the parent core having left, upon each side of the intersection, wide and narrow scars. Oblique retouch on the steep, narrow, facet is a broad band which almost obliterates it. On the other, the not overtly oblique retouch is shallower and has produced serration. It is worn and bruised. The bulbar end of the blade is missing and the surviving distal end, originally pointed, has been blunted by the removal of a spall which effectively bifurcated it. This remnant has been used as a borer as is shown by the gloss on the more prominent point of the bifurcation. This piece could be the reused end of a modest blade of *Grand Pressigny* flint and thus an import into Scilly. However, had it been manufactured locally from imported flint, it could be thought of as the remnant of a plano-convex knife of Clark's (1932, Pl XXXII) form 2 or 3. Such forms were current in the earlier Bronze Age and would thus be from Scilly's earlier phase (Ashbee, 1974, *passim*; Thomas, 1985, 103).

Another broken fragment (Fig 43, 3), honey coloured, but with a grey interior, remains from a blade which must have been about five (5) inches in length. The piece, the fourth or more from a carefully prepared core, is 1.25ins broad. Each edge has careful retouch to produce even wide and close-set serration. This on the wider shallow edge is markedly broader, and partially bifacial, than that of the narrower, steeper edge. After breakage, the fragment was given twin points and a hollow scraper end. The facets of the spalls that were struck from it expose the grey interior of the piece and have traces of use-gloss.

The reworked fragment of a polished tool (Fig 43, 4) may, perhaps, be from the butt of a unifacially polished axe or chisel. This, after breakage, was given a steep, almost vertical, 0.5ins deep, scraping edge and, at the junction of the polished face and cortex-bearing rear, a shallow, concave, scraping edge. A further edge has been produced by the removal of a flake which carried away a part of dualistically polished facets or edges, at a right angle to the polished face. It has been subjected to fine retouch, which produced widely spaced serration which has diffuse gloss even into the flake facet. An end has been dressed to a chisel-edge, culminating in a point, which is also glossed. The polish at the edge, and of the facets, of the polished surface, is fine and glossed to a greater degree than the remainder.

It is difficult to determine the nature of the polished tool from which this fragment derives, as its side facets, partially removed, as well as the cortex on the reverse side, make it scarcely possible for it to be envisaged as a unifacially polished adze or chisel remnant. A polished, heavy duty, knife, such as was found at St. Keverne (Varndell, 1983), or even scraper, is also a possible source for the piece as is an implement for polishing or buffing leather or some such organic material.

Pieces of calcined flint

Four pieces, two small flakes, a spall, and a small nodule were calcined, the small nodule intensely and almost to the point of disintegration.

General comments

In terms of knapping and retouch techniques, the industry from Halangy Down is indistinguishable from the slightly larger assemblage recovered from the Early Phase structures in Halangy Porth (Ashbee, 1983, 25). It is, however, different in that it has a larger proportion of prepared points and scrapers. As elsewhere on Scilly, there is an absence of heavy artifacts, despite the availability of suitable raw material (Ashbee, 1974, 40, 231-5). It is notable that the group includes little waste and even apparently inappropriate pieces have been utilised. In general terms it is not dissimilar to the Nornour flint repertoire although there positive points and scrapers were in a minority. Scrapers predominated at Little Bay where 452 flakes were found (Neal, 1983, 59).

It is not unreasonable to suppose that flint implements were made to be used. Therefore an assemblage should show something of the activities of its manufacturers. Points and scrapers (Thomas, 1985, 90) would be used for boring and scraping. Uses, as in earlier times, with retouched flakes, blades and spalls, for a variety of tasks such as fish preparation, flensing leather and wood working can be envisaged (Ashbee, 1983, 35). Apart from what appear to have been multi-purpose tools, nosed- and hollow-scrapers, as well as points on the same piece of flint, some of the points and scrapers may have been mounted in wooden or antler hafts. Although only one of the many intensively glossed points shows clear signs of rotary motion, the series, presumably discarded when outworn and difficult to rework, may have been mounted and used with bow, and other drills. As well as this, certain 'scrapers' display degrees of battering and bruising by impacts impossible to exert with an unhafted piece. Furthermore, some of the points and scrapers were very small and their unmounted use is difficult to envisage. Indeed should organic materials be recovered from a Scillonian site, something of the specific tasks for which the sizes and ranges of points and scrapers were used would become apparent.

Four particular implements, the plano-convex knife fragment, and the piece of a large blade with side retouch, together with the small dual end-pointed plano-convex blade and the reworked polished fragment show, as might be suspected from pieces among the largely unprovenanced flint implement collections from the islands (Ashbee, 1974, 323), that aspects of Scilly's flint industries may have been more sophisticated than has hitherto been realised. The first two, the retouched blade tip or plano-convex knife half-remainder and the piece of a large blade, as well as a spall, are of honey coloured flint which, so far, has not been encountered on Scilly. Within the substance of this flint, used for the plano-convex knife there are small saccharoidal inclusions. They are a characteristic of much of the *Grand Pressigny* flint from Indre-et-Loire in France (Smith, 1937, 10, Pl XIII). Blades, arrow-heads and other pieces of this distinctive flint have been found in the Channel Islands (Kendrick, 1928, 38, 93; Hawkes, 1939, 62; Bender & Caillaud, 1986, *passim*) and, because of the intimate maritime connections of our southwestern coasts (Ashbee, 1982), it would have been possible for pieces to have been taken to Scilly. Indeed, not only are there chambered cairns comparable with the Scillonian series on Guernsey (Ashbee, 1982, 3) but, in addition, manifestly Scillonian Early Phase pottery has been found on that island (Kendrick, 1928, 115, Fig 41) in circumstances not unreminiscent of those of Obadiah's Barrow on Gugh (Hencken, 1933a, 20-4) or the Knackyboy Cairn on St. Martin's (O'Neil, 1952). Thus reciprocal traffic could have been likely. Blades were a principal *Grand Pressigny* product and, as has been noted above, there is the possibility that the reused fragment from Halangy Down is the tip of such a blade, or dagger, as they are sometimes termed. They were widely distributed upon the European mainland (Clark, 1952, 250; Piggott, 1954, 286; Scarre, 1984, *passim*). The dual end-pointed, heavy, plano-convex blade, like the possible *Grand Pressigny* pieces, displays fine side retouch of a quality unusual upon Scilly, while the reworked polished fragment shows that sophisticated tools were made, and presumably used, when necessary. The constant reshaping and reuse of, particularly, worn or broken implements of quality, one form of which had involved selected flint and much labour for their fashioning, may have almost obliterated all but the mundane form of the Scillonian flint industries that have survived for archaeological investigation.

The Bar Point flint industry

During the course of the excavation of the length of field wall and the small area of tilled ancient

surface, fourteen (14) pieces of flint and chert were found in and upon the sand and rubble covered buried soil. They are as follows:

<i>Waste Material</i>	
Flakes	2
Spalls	5
<i>Implements</i>	
Flakes with retouch and use-gloss	2
Blade with side retouch	1
Scrapers	3
End and hollow scraper (chert)	1
	—
	14

All these pieces accord well with those found on Halangy Down and would not be out of place anywhere on Scilly (Ashbee, 1974, 231-5).

5.15 Quartz

Four (4) quartz implements (Fig 44, 2-5), which were most kindly examined and commented upon by A.D. Lacaille, were found in the soil infill of the large oval chamber (A) of the courtyard house (Ashbee, 1955, 196). There were two (2) massively bruised, heavy, ovate nodules, one of which had been flaked to that form, clearly hammer stones, and two (2) choppers. One had had flakes taken from it which had imparted an edge to it, possibly fortuitously. The other, a rectilinear beach-pebble, had been bifacially flaked at its slighter end, the more robust end providing a hand-hold.

During the excavations between 1964 and 1975 a further fifty four (54) quartz artifacts were found (Fig 45). With one exception, a flake encountered among the limpet shells of the midden which accumulated within the blocked and dismantled S corridor entrance to B, they were unstratified and in the disturbed soil covering the various lower slope structures. A typological listing is as follows:

Hammer stones	27
Choppers	4
Points	4
Scrapers	3
Flakes	10
Beach-pebbles	2
Featureless nodules	2
Burnt pieces	2
	—
	54

Hammer stones (Fig 45)

The range of hammer stones, or sometimes anvils, is from massive blocks 3.25lbs in weight with extensive bruising at corners and edges, to selected beach-pebbles, 0.5lbs in weight with bruising at one point only. An average weight for the series is about 1.25lbs. For the most part, they are angular pieces, with their bruising, brought about by percussive use, at corners and upon edges, but also there are approximate spheroids, their shape owing much to continued use. Although quartz beach-pebbles and wave-worn blocks were used, the series appears to be based upon pieces presumably taken from a chosen vein in a particular locality.

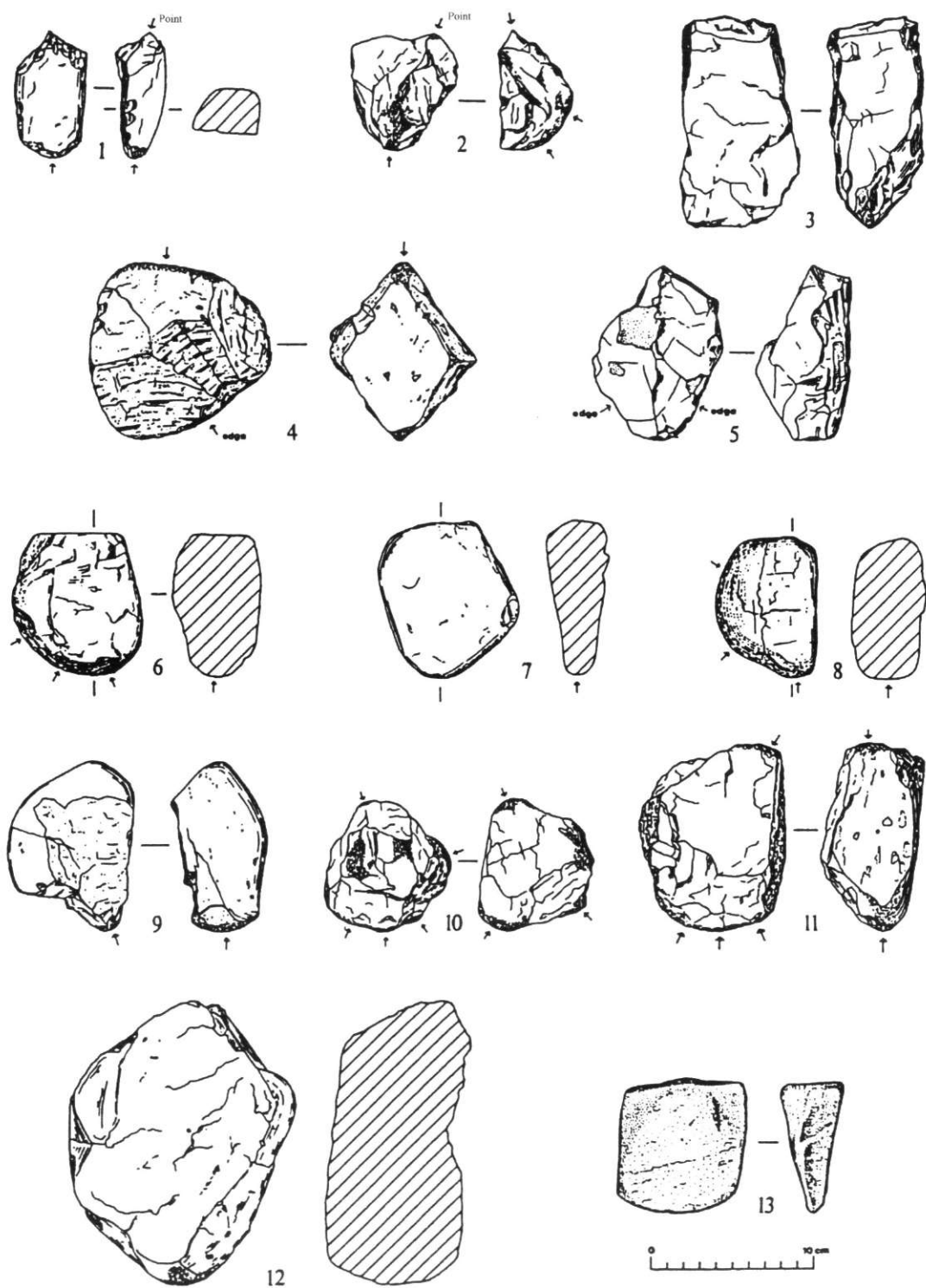


Fig 45 Quartz artifacts, some multi-purpose; 1, 2, 4, 6 - 13 bear traces of percussive use; 3 - 5 are choppers; 2 is a point

Choppers (Fig 45)

It would seem that the elongated beach-pebble with a bifacially flaked chopper-end, found in 1950, was exceptional, for the four other examples which include the end of a split massive beach-pebble, are no more than flakes from pebble-quartz, used and discarded.

Points (Fig 45)

Two of these are flat, beach-worn, pieces which have been flaked upon opposing sides to form blunt points, both of which display use-gloss. Another is a long piece broken from a thin vein. The removal of a single flake using one of the vein-surfaces as a striking platform, produced a long pyramidal point, which is bruised and glossed. The fourth example is a thin cordiform, flake, weathered and iron-stained. Its thick butt has been given an obtuse form by vertical flaking, while the cordiform has been produced by unifacial retouch from the pitted reverse surface, which culminates in a shallow, fine, point. The retouch is bruised and the point, as well as an expanse of the end, is glossed.

Scrapers

These are hollow scrapers formed by the retouch of the sharp edges of pieces which are the residue of a smash technique. Hollow scrapers of various sizes were made and, presumably, discarded after specific use, for, while they display use-gloss it is not excessive. The shoulders of the concave scraper edges have been used as points and they are considerably glossed. The shoulders of the two points made from tabular beach-worn pieces, could also have been used as hollow scrapers.

Flakes

The pieces considered as flakes are fragments smashed from larger pieces and which display no overt signs of use neither as points nor scrapers.

Beach-pebbles

Two beach-pebbles, one much worn and approximately pyramidal, and the other almost rectangular and tabular, display traces neither of bruising nor of flaking. If not potential raw material, discarded, their smooth condition could point to their having been collected for smoothing or burnishing (Hodges, 1964, 31, 74).

Featureless nodules

As they bear no signs of either bruising or flaking they could represent raw material collected for use.

Burnt pieces

A reddened flake and a piece of blackened vein quartz were found.

General considerations

Quartz hammer stones and beach-pebbles were regularly used by the inhabitants of the Early Phase structures in Halangy Porth (Ashbee, 1983, 27). They are the most numerous form found on Halangy Down. A flaked nodule and flakes were encountered at Nornour and considered together with the flint industry (Miles, 1978, 91). Selected pieces can be considerably heavier than flint or granite of the same size. It is hard (Mohs Scale 7) and could be particularly suited for weighty chopping tools. Indeed, its use on Scilly may, in part, account for the near absence of heavy tools. Often it is difficult to define fundamental fracture and flaking upon quartz tools and this, combined with an incidence of pieces degraded from veins, can lead to scepticism regarding form and function (Berridge & Roberts, 1986, 13).

Comparison can be made with the quartz-based industries that have been encountered in areas of Scotland where reliable flint was absent (Lacaille, 1954, *passim*; Mercer, 1971, 10; 1972, 9). Despite on occasions unpredictable fracture (Rosenfeld, 1965, 44), sophisticated tool combinations were produced. It was also a feature of earlier prehistory in Scandinavia where a wide variety of

forms were effectively used (Clark, 1975, *passim*). In such industries the counterparts of the Scillonian material (Ashbee, 1974, 235) can be seen (eg. Lacaille, 1954, Figs 130, 132, 133).

5.16 Beach-Pebbles

Ten (10) much worn granite beach-pebbles were found, which augmented the fifteen (15) collected in 1950 (Ashbee, 1955, 197). With the exception of one flat, ovoid example, 1.75ins long and 0.185ins in thickness, found in the limpet shell midden, which had been deposited in the dismantled S entrance to B, all were from the soil accumulation covering the various building remnants. Six (6) all slightly larger and heavier than that from the midden, are flat discoids or ovoids. Two more, one large, i.e. 4ins long, 3ins in breadth and 0.875ins in thickness, are flat and rectilinear. A further discoid is 2.5ins in diameter and 0.5ins in thickness.

Beach-pebbles of discoid, ovoid and tabular form were regularly used, for abrasive and other purposes, by the people of the Early Phase settlement in Halangy Porth (Ashbee, 1983, 27). The practice was also observed at Porth Godrevy, Gwithian, on the Cornish mainland (Fowler, 1962, 58). Pebbles showing few or no signs of use for any particular purpose have been regularly recorded from contexts in Cornwall, comparable with Halangy Down. At Chûn Castle (Leeds, 1926, 222) it was said that "*Beach-pebbles of sizes suitable for sling-stones were constantly met with. These must have been brought up from the shore*". Pebbles were "...found in scores in the houses" at Chysauster (Hencken, 1933b, 270) and a good number were noted at Porthmeor (Hirst, 1937b). More than two hundred (200) beach-pebbles are recorded from Carn Euny (Christie, 1978, 388). Pebbles have also been found in near-coastal hillforts such as Dinas Powys (Alcock, 1963, 163) and Dinorben (Gardner & Savory, 1964, 179). It is possible, as has been said by various writers, that some of these pebbles were slingstones (Wheeler, 1943, 49) but, nonetheless, collection, and incidental use, for other appropriate purposes accounts for their regular incidence.

5.17 Whetstones

Ten (10) fine-grained granite beach-pebbles (Fig 46), thin, elongated, ovate or roughly rectangular, displayed localised and regular elongated, burnished, and sometimes finely striated areas, suggesting that they had been used as whetstones, presumably for iron blades. Six (6) had been broken so that only halves remained, although two joining halves were found. One broken half had been used after it had been broken. All had rounded edges which, although smooth, had not been used for whetting. A beach-pebble whetstone was found on Nornour (Dudley, 1967, 25, Fig 10, 52).

Another whetstone (Halangy Down 1231; Fig 46, 1) however, had been part of a fashioned example made from a micaceous schist or even sandstone. The part is 4ins in length, 0.725ins in thickness, necked and with above the neck, an ovate head. This remnant suggests that the stone, now 1in in breadth at the head end, 1.25ins in breadth at the broken extremity, either had convex sides or that, when originally made, its distal end was about 0.375ins broad. Thus the distal end could have duplicated the surviving *head* or was no more than a blank, cut-off, termination.

The broken piece displays obverse and reverse sides. On the obverse side the ovate head is flattened and, on the reverse, rounded, presenting, therefore, an almost anthropomorphic appearance. On the obverse side, the neck has been emphasised by a deep cut, possibly made with a metal tool, since it is straight and even. The shoulders are symmetrical and concave, having been formed by a peck technique, while the reverse, also necked by pecking, is shallow, almost flat-bottomed, and had been finished by friction. There are ferruginous stains within the shoulder grooves upon each side of the head. The carefully squared edges have had their arrises evenly removed and are rounded, displaying the weathered remnants of a high degree of burnishing, this from manufacture, not use. The broad, functional, obverse and reverse surfaces display oblique patterning which appears to be a characteristic of the stone from which the whetstone was fashioned. On the reverse face this patterning may have been enhanced by shallow channeling, although each face bears a complexity of short, oblique, incisions caused by considerable use.

A partially end-perforated tapering whetstone, more than 5ins in length and 1.5ins in breadth, made from a fine-grained sandstone, was found at Nornour (Butcher, 1978, 92, Fig 39, 2) is comparable in a general sense. However, it is not easy to find convincing counterparts for this

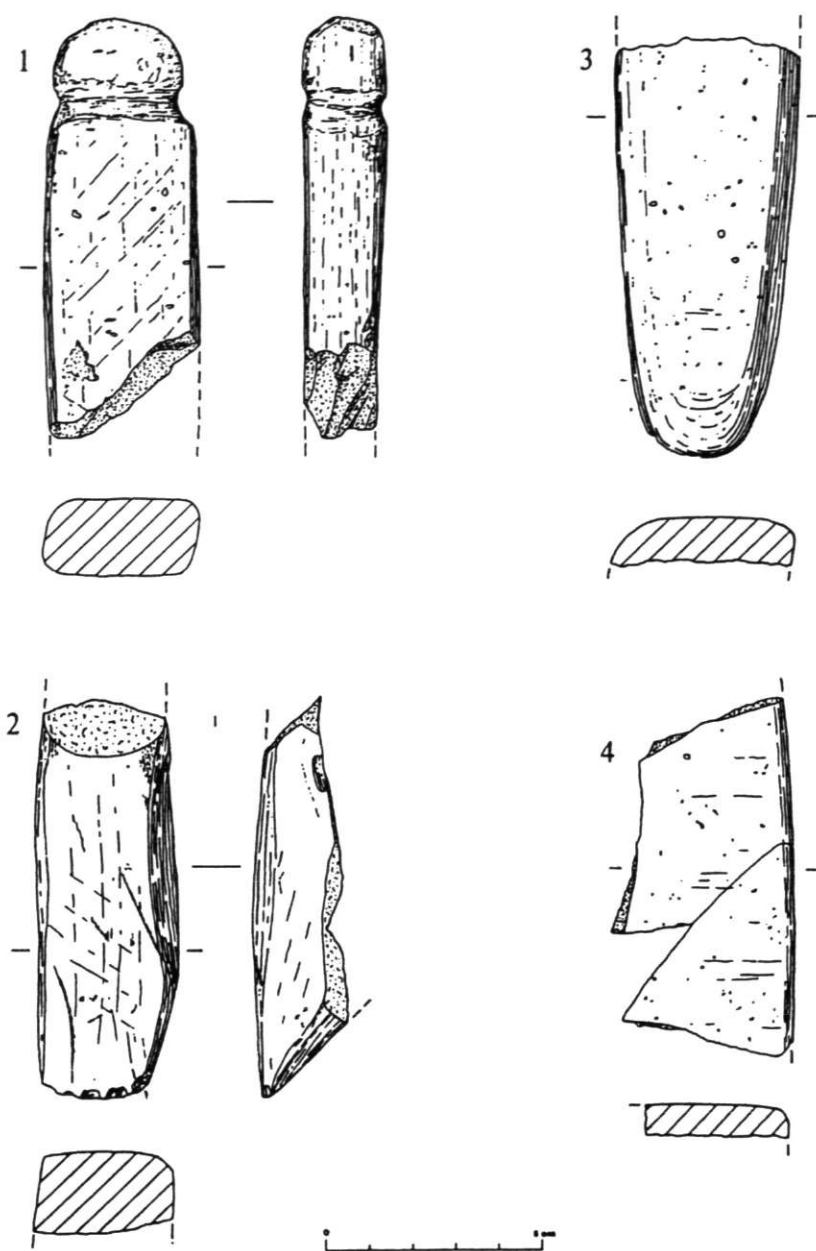


Fig 46 1, a fashioned hone; 2 - 4, fragments of broken elongated, sea-worn beach stones used for sharpening purposes ($\frac{1}{2}$)

seemingly anthropomorphic part of a whetstone. If not merely utilised pebbles, whetstones are frequently perforated for suspension (Wedlake, 1958, 245; Cunliffe, 1971, 153; Evison, 1975; Cunliffe, 1987, 171). This, sophisticated in a Scillonian context, could be compared with the stones which have modified tops for metal mounts from Northern Ireland (Bruce-Mitford, 1978, Fig 266). It may be, however, that it is no more than a modification to accommodate a thong.

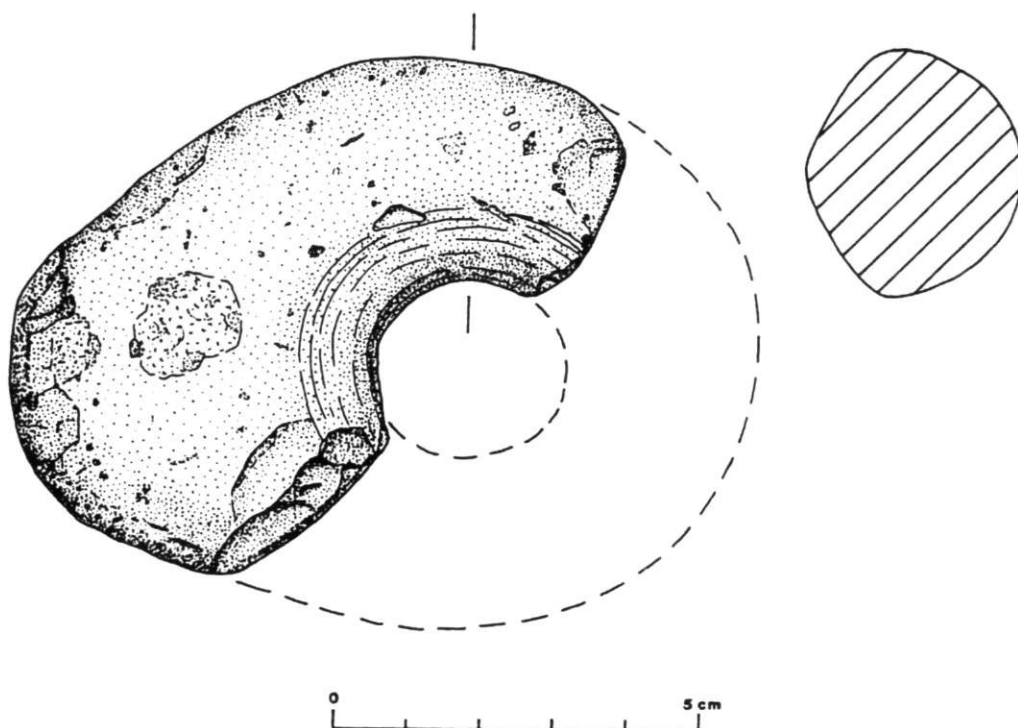


Fig 47 *Reused, bruised, half of a perforated pebble-hammer (actual size)*

5.18 Perforated Pebble-Hammer (Fig 47)

Half of what was originally a near-circular perforated pebble-hammer was found in the topsoil of the cultivation terrace north of G. It had been used as a hammer-stone, as is shown by its considerable battering and partial reshaping. This remnant is 3.725ins in length, 1.25ins in thickness and, before breaking, 3.5ins in diameter. The eccentric hour-glass perforation is 1.725ins in diameter at each surface and the constriction, from the piercing process, is 1in. One surface is flat and the other convex, reflecting perhaps the character of the parent pebble, and they have originally been smoothed by abrasion. The flat surface retains much of this smoothing but the convex side is pitted and a concentrated patch points, perhaps, to use as an anvil. It is of quartzite or silicified sandstone, the parent pebble having been brought, presumably as an erratic, to Scilly by glacial processes (Mitchell & Orme, 1967; Thomas, 1985, 88-90).

On Scilly, the allegedly adze-like, hour-glass perforated pebble-hammer from Bryher (Hencken, 1932, 67, Fig 18, F) is comparable, as is a similar implement found at English Island Carn, St. Martin's. The small perforated granite *disc* from Nornour (Butcher, 1978, 92, Fig 39, 4) is not dissimilar. The discoidal, fine-grained granite pebble, thought to have an incomplete perforation, found at Porth Cressa (Ashbee, 1955, 22, Fig 8, 13) belongs, however, to the cupped-pebble series (Roe, 1985). Many pebble-hammers are clearly Mesolithic (Rankine, 1949; Lacaille, 1954, 166-7, Fig 61; Clark, 1975, 112, Fig 14, 1, 2), but the form persisted into later times (Roe, 1979). A number from Cornwall are known, but they are mostly of uncertain context (Wymer, 1977, XII, 36-47; Berridge & Roberts, 1986, 19).

5.19 Stone equipment, light and heavy (Fig 48)

Elongated beach-pebbles

Almost two-hundred (200) elongated, worn, beach-pebbles displaying battering at one, or both ends, and, now and again, evidence of localised abrasion, were recovered from the topsoil in and

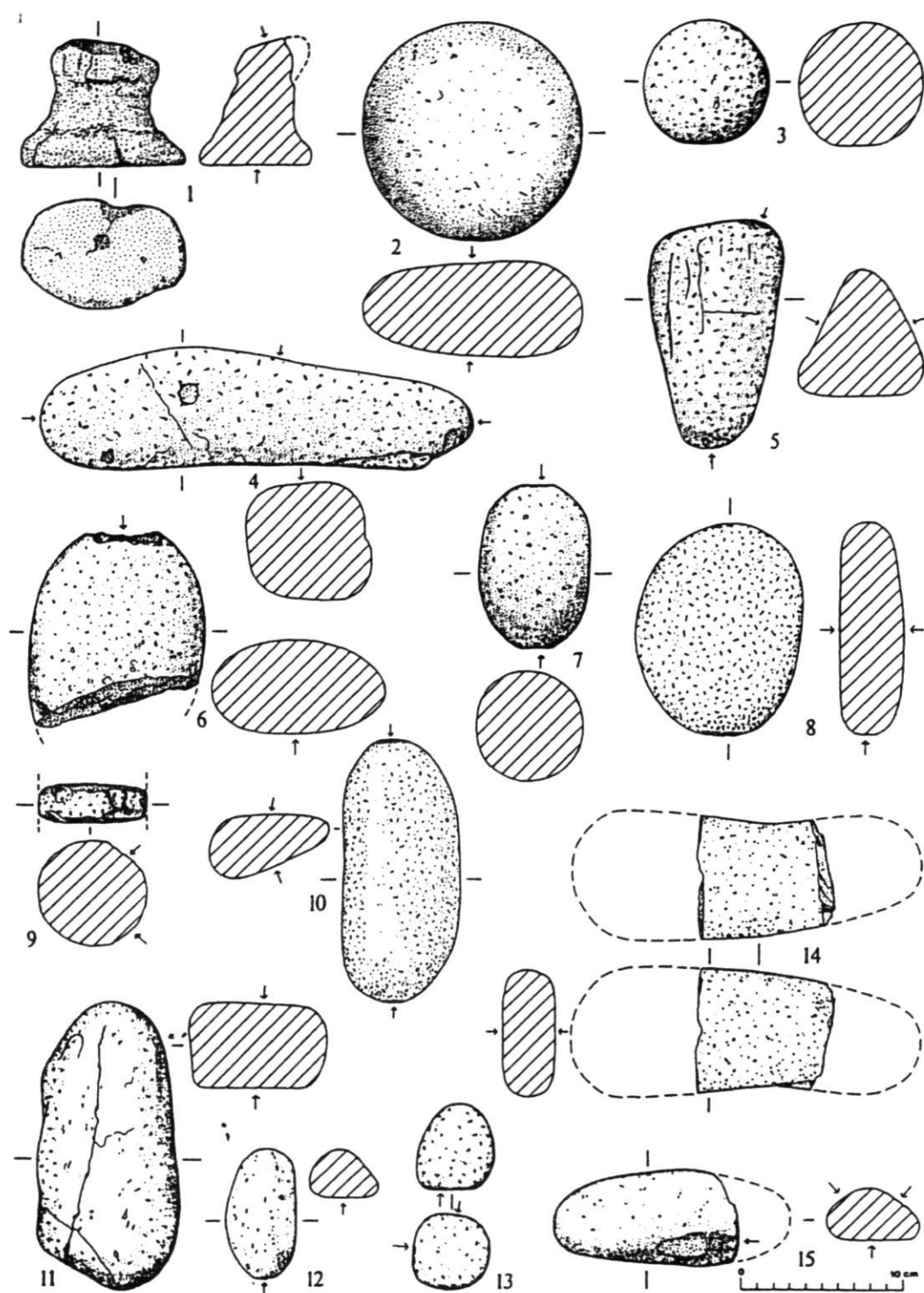


Fig 48 Utilised elongated, discoid and spheroid granite beach-pebbles. Solid arrows indicate points of percussion, open arrows denote abrasion. 1, heavily weathered, may be a fashioned abrasive tool

adjacent to the various buildings and, in numbers, used with earth as infill between wall-faces. Unlike Halangy Porth, where numerous examples of this kind of selected and utilised beach stone were found (Ashbee, 1983, 27, 35, Figs 12, 13), few discoid, spheroid or tabular examples were encountered. The Halangy Down series can be resolved into two categories, large and small. *Large*, elongated examples are about 6ins long with a medial diameter of 2.5 to 3ins and an average weight of about 1lb 12oz. Some are as light as 1lb and one or two weighed as much as 3lbs. Many were broken, either an end is missing or they have divided at a middle point. Bruising is frequently no more than localised, and was sometimes difficult to differentiate from the bruising present on similar stones on nearby storm-beaches, or an end or ends are entirely bruised, pitted and crushed. It is the flattened examples that show signs of surface abrasions such as might have come about, had they been used as saddle-quern riders. *Small*, elongated pebbles are 3.5 to 4ins long with medial diameter of about 1.75ins and an average weight of about 7oz. A greater number were broken and one, a broken, tabular pebble of schist or hard, metamorphosed sandstone had been used as a hone. Also to be included in the group is the broken half of the bifacially perforated pebble-hammer, weighing 8oz, which displays, besides incidental edge battering, a massively pitted, much reduced, heavier end. For the most part, examples with an excess of natural beach-polish have been selected and long, narrow pebbles, of near-circular medial section, preferred.

Generally the heavier percussion-marked beach-pebbles were less heavy on Halangy Down than their counterparts in Halangy Porth (Ashbee, 1983, 27). Because of the limpet-shell middens it is not unreasonable to suppose that they were used for limpet collection. Their like were used by other coastal communities where limpets were collected for fish-bait and have been termed limpet-hammers (Breuil, 1922, 268, Fig 4; Lacaille, 1954, *passim*; Jacobi, 1979, 77, Fig 19). As on Scilly, their use continued into Iron Age, Roman and more recent times (Young, 1953, 102). Detaching a limpet from a rock entails a single blow otherwise it clings and a further blow only smashes the shell.

Uses other than limpet collection are probable, particularly for heavier pebbles. Severe end-battering and pitting have been brought about by the pulverisation of grit for tempering potter's clay and less damage when cereals, beans, fish and their bones, and animal bones (Mitchell, 1880, 129) were pounded in bowl-querns. Building construction could also have demanded the use of seemingly substantial hammer-stones and numbers were found, seemingly discarded, in the infills between wall-faces.

It is tempting to see the smaller, lighter often excessively end-battered, beach-pebbles as also limpet hammers for there are variations of size (Lacaille, 1954, *passim*). Many, however, especially those of fine-grained granite, and other rocks, particularly when there are signs of abrasive use upon them, may have been tools for other, more generalised tasks. Woodworking and its appropriate finishing are possibilities and, although quartz and quartzite hammer-stones are ideal for flint-working (Knowles, 1944), many of the smaller elongated pebbles, to judge from the characteristics of Scillonian flint industries, could also have been so used.

The square granite mould (Fig 49)

Halangy Down 1460.

A fragment, 6ins in length and almost the same in breadth, although of truncated triangular form, 2.5ins thick, of polished fine-grained granite (Pl 31). A squared, indented, edge survives, the others are from breakage and, when complete it was presumably quadrangular. The carefully fashioned indent suggests that this piece may remain from a negative, which was surmounted by a positive component, thus creating a closed casting matrix. Upon its face side it bears a small incised circle, 1.5ins in diameter, and the arcs of two larger concentric circles, 16.5 and 10ins in diameter respectively. The small circle is incised to a depth of 0.108ins, the incision being 0.125ins wide. The outer, and thus larger, of the concentric circles is a vertically sided groove 0.25ins in depth and 0.25ins in width, and the inner 0.2ins in depth and 0.25ins in width. To accommodate such circles, two large concentric and, perhaps, four small ones at the corners, the quadrangular slab would have had sides about 18ins in length. There could well have been smaller circles within the two larger of which only arcs have survived.

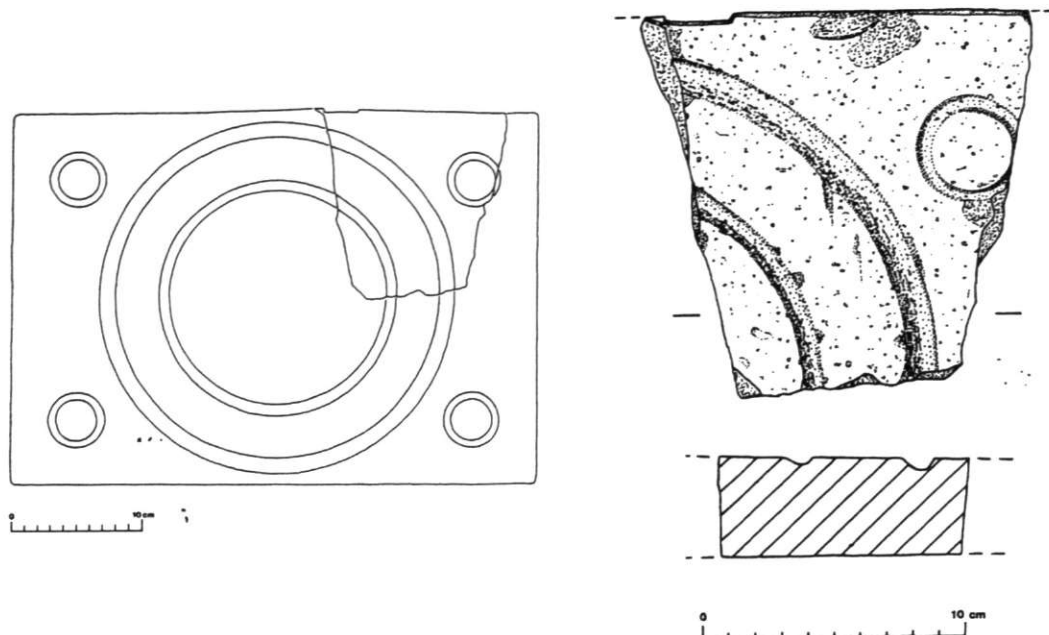


Fig 49 Fragment of a granite mould used for casting ?pewter dishes (see Pl 31)

Because of temperatures, the original mould, of which only this fragment has survived, could have been used for the casting of pewter, an alloy of tin and lead (Tylecote, 1962, 67-71), dishes. The incised concentric circle formed the support rings and, in the absence of accommodation for a rim, edging with fireclay during casting is possible, the products being rectangular dishes, of lanx character, the smaller circles being for corner strengthening rather than ornament. Rims are normally cast as an integral part of circular Romano-British pewter dishes (Peal, 1967, 24, Fig 2). It is possible, therefore, that the sharp edge which would have resulted from casting in this quadrangular Scillonian mould was either turned over or bound.

The discovery of this fragment and its presumptive use for casting pewter dishes raises once again the problem of tin resources on Scilly. Long ago Hencken (1932, 167) observed that only minute workings had ever been found and that the islands could never have been a source of supply for the ancient world, a view endorsed, following a further evaluation, by Charles Thomas (1985, 149-51). Nonetheless, slender tin resources exist and a plano-convex ingot (as well as a piece of cassiterite, together with some tin corrosion products) have been found on St. Martin's (Tylecote, 1966, 33; Penhallurick, 1986, 121, Fig 47), in a context comparable with Halangy Down. A few metalliferous veins and lodes are known on the islands (Mumford, 1967, 48) and, as Borlase (1756, 29) remarked, some might have been found on sea-shores. Thus collection, smelting and the occasional casting of utensils, such as are attested by the Halangy Down mould fragment, could have been undertaken.

A greisen-granite mould, in two parts, for casting circular pewter dishes, was found at St. Just in Penwith, Cornwall, during the eighteenth century, and was given by William Borlase to the University of Oxford, where it is now in the Ashmolean Museum (Brown, 1970). He illustrated them in section (Borlase, 1769, Pl XXV; Ashbee, 1979b), believing them to be bowls. Not dissimilar moulds of local stone, including one for an oval dish have been found at Camerton in Somerset, associated with the remains of a furnace (Wedlake, 1958, 82-93). A further series of such moulds and another furnace, were encountered during the excavation of the Shrine of Apollo at Nettleton, in Wiltshire (Wedlake, 1982, 68-74, Pls XXXVIII, XXXIX). Further local stone moulds, also for

circular dishes and comparable with the Halangy Down fragment, were unearthed from a Romano-British context at Lansdown near Bath, at the beginning of the century (Bush, 1908; Peal, 1967, 20). Pieces of similar disc-moulds of Bath stone came to light at Silchester and several may have been used simultaneously (Boon, 1974, Fig 40, 4; Blagg & Read, 1977). These Somerset moulds denote an area of production, employing lead from the Mendips, with which Cornwall and Scilly had connections.

Heavy stone equipment, an introduction

Numbers of, presumably selected, pieces of granite, small and large, which bore dish- or cup-marks, pieces of, and entire, saddle-, trough-, and saucer-querns, pieces of, and intact stones of rotary querns, as well as substantial riders and mullers, came to light during the excavations. Some had been built into walls but most were among stone-breaker's debris. Several, particularly if intact and readily recognisable as artifacts, were in past time collected as curiosities and sometimes garden ornaments. Various querns, saddle and rotary, all sadly unprovenanced but possibly from Halangy Porth or Halangy Down were concentrated, early in the century, by E.N.V. Moyle, in his garden at Rocky Hill, St. Mary's (Thomas, 1985, 245). His house has vanished but the garden, and collection, remain (1978). The similar collection, again without provenance, made by Alexander Gibson (Arlott *et al.*, 1972, 11-14) has been incorporated into the flower-beds of Hughtown's Parade Garden (Mumford, 1967, 139), where it was deposited by the Isles of Scilly Museum. Five (5) saddle-querns, among other stone objects, are preserved on the terrace of Seaways, Porthloo. Two (2) of these may be from Halangy Porth (Hencken, 1932, 30; Ashbee, 1953-4, 77) but others could have been collected from Halangy Down, as the adjacent bulb-gardens were part of the land holding attached to that house (Gray, 1972).

The heavy stone equipment comprises discrete groups: there are the post-socket and pivot-stones, fashioned for structural purposes, the cup-marked and perforated stones which may have been integral to rotary devices, and secondly, the pieces of querns, saddle-, trough- and rotary, together with various riders and mullers. It was notable that pieces of deep troughs and bowls, such as were found on Nornour (Dudley, 1967, 5; Ashbee, 1974, 122, Pl 10a; Butcher, 1978, 93, Pl 1, Fig 40) and at Little Bay (Neal, 1983, 49, Fig 3) were absent from the assemblage. Examples may have been collected for, as well as serving as garden ornaments, they had, until recently, practical uses.

Post-socket stone (Fig 50, 1)

In 1950, the removal of the rubble choking A, the large, oval chamber of the courtyard house, brought to light a roughly triangular granite slab, 1ft 7ins broad at its base, 1ft 10ins from base to apex and 5ins thick. It had at the centre of the less irregular face a circular cavity 6ins in diameter, 1in deep, with vertical sides, which had been fashioned by a combined pecking and crushing technique.

Similar dished slabs have been found at Chysauster (Hencken, 1933b, 276), Porthmeor (Hirst, 1937b, 37), Goldherring (Guthrie, 1969, 37) and Carn Euny (Christie, 1978, 366, 387). At Chysauster, seven (7) were found in three instances *in situ* in main rooms, and the soft granite slabs were deemed unsuitable for querns or mortars. In the absence of post-holes they were thought to have served as post-sockets. At Carn Euny, however, patterns of post-holes were encountered and it seems that such stones may have had a domestic rather than a structural role (Christie, 1978, 387). A rectilinear block with a regular circular cavity, which was found on the shore of the Neck of Samson in 1969, where it had fallen from the remains of an early stone-built structure, is closely comparable with that from Halangy Down (Ashbee, 1974, 104, Pl 8C).

Structural pivot-stones (Fig 50, 2)

A long stone (HD 100), of square section, 7ins by 7ins bearing a cup-mark 2ins in diameter, and some 1ft 6ins long with a pointed distal end, was found set vertically in the ground on the E, internal, side of the S entrance to the rectangular annexe to C (Fig 15). When found, there were signs of wear from rotary, or part rotary, motion within this cavity in the square top of the stone. It would appear that a wooden door may have been hinged by means of a vertical member, which turned in this stone at its bottom and in a corresponding cavity in a stone lintel.

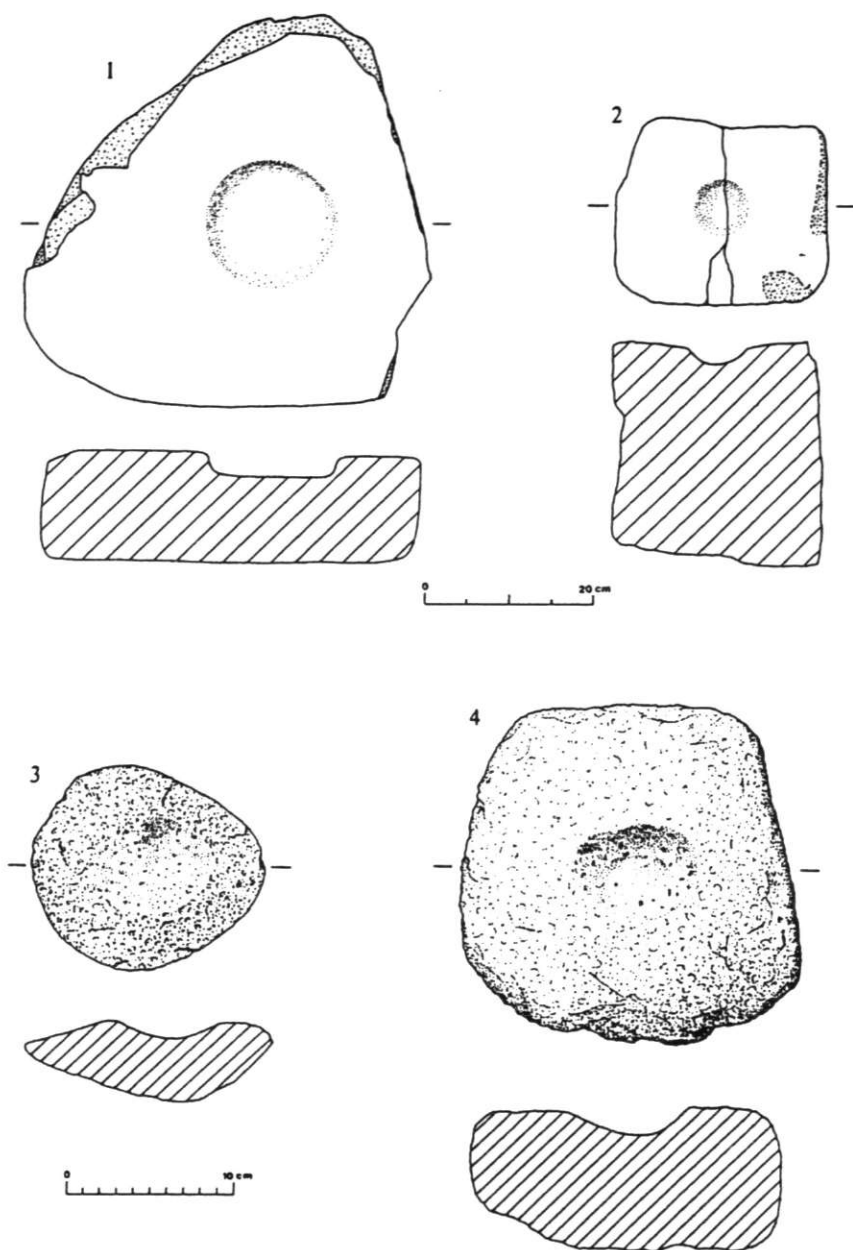


Fig 50 Stone structural devices: 1, post-socket stone; 2, entrance pivot-stone; 3, 4, flat cup-marked stones

Three further pivot-stones of the same elongated kind as that described above were found, although not *in situ*. One (HD 1) was amongst stone-breaker's rubble, another (HD L) was in the rubble infill of D, the circular chamber of the courtyard house, and a third (HD VII) amongst surface rubble adjacent to B. A broken piece of a pivot-stone (HD VI), perhaps from Halangy Porth, had been built into the S wall of C, and another broken piece (HD VIII) was amongst surface rubble. Besides Scilly (Neal, 1983, 60, Fig 9, D), pivot stones have been recognised at a number of Cornish mainland sites, for example Goldherring (Guthrie, 1969, 37).

Entrance jamb-stone

A broken, perforated, fire-reddened, rectilinear slab, 2ft 11ins by 1ft 9ins, and some 5ins in thickness, found in the sub-floor make-up of B, may be an entrance jamb-stone, from an earlier building phase, which could have housed a sliding door-bar (Pl 15).

Flat cup-marked stones (Fig 50, 3, 4)

Seven (7) flat or cushion-shaped stones (HD XLV, XLVI, LVI, LVII, G, from lower terrace wall and surface), their average size being about 10ins long, 5ins wide and 3ins thick, were found to have dish-shaped cup-marks, 2ins in diameter and approximately 0.75ins deep. They are, for the most part, weathered, and were found among discarded stone-rubble with the exception of one which had been built into the wall of the lower cultivation terrace. The cup of one (HD XLVI), which was not as deeply weathered as the remainder, had traces of horizontal striations, such as could have come about from the wear associated with rotary motion.

Such cup-marked stones could have had various uses. One is that of fire-making, employing a bow-drill (Thomas, 1985, 114, Ill. 48). Another could have been to house the vertical spindle of a rotary quern which, via a perforated lower stone, allowed adjustment of the upper stone, and thus graduated grinding (Curwen, 1937, 144; Ashbee, 1974, 238). Such spindles were sometimes stone tipped (Mitchell, 1880, 127, Fig 96) but, notwithstanding, no evidence of such a usage has, as yet been found on Scilly.

Saddle-querns (Fig 51, 1, 2)

Four (4) true saddle-querns, on which a bolster-shaped *rider* stone is pushed to and fro upon an elongated, convex, lower stone, of fine-grained granite and of average size were found, one broken (HD IV) and three intact (HD V, LXXXI), weathered and among rubble in circumstances that suggested use for building. One large example (Pl 32) had been built into the footings of the lower, W, wall of B (Pl 13) and, when found, it was seen to have retained its highly polished, indeed glossy, working surface which, after exposure, rapidly weathered. These presumably remained from the earlier period of occupation in Halangy Porth, where substantial examples have been found (Ashbee 1983, 31). They have also been found directly associated with Early Phase, now submerged, hut remains and small walled fields off Bar Point (Fowler & Thomas, 1979, 188, Fig 7, Pl XIX), within what may have been a rectangular house in Pentle Bay, Tresco (Thomas, 1985, 123, Ill. 53) and at Little Bay, St. Martin's (Neal, 1983, 61, Fig 10). This last may be of a later period. Generally, in mainland southern England, saddle-querns were replaced by rotary-querns during the Iron Age (Curwen, 1937, 137; Wainwright, 1979, 186-7), but this does not preclude their continuing use for specific purposes on Scilly.

Trough- and saucer-querns (Figs 52, 53)

Whereas saddle-querns have an elongated, concave surface usually higher at one end, another form encountered on Halangy Down and elsewhere on Scilly (Fowler & Thomas, 1979, 188, Pl XIX), best termed the trough-quern. In this the concave, grinding surface has been sunk into a suitable block of granite, giving the effect of an elongated, rectangular, trough. Such a sunken surface could not have been the effect of wear and therefore, presumably there was appropriate fashioning by in-cutting. With a suitable upper stone, the function of a saddle-quern can be fulfilled with great efficiency as the commodity being ground can neither spill nor spread.

Saucer-querns have a long, shallow, oval depression and their use would have entailed a bun-like upper stone which could move in any direction. Indeed, they are, essentially, sophisticated granite versions of, for example the grain-rubbers employed on Windmill Hill (Smith, 1965, 121-3, Fig 52, S16-18).

A rectangular trough-quern (Pl 34), some 2ft 6ins by 2ft and about 5ins in thickness, was found among stones discarded at the foot of the N ramp to Halangy Porth (Pl 6), by nineteenth century stone-robbers. Its counterpart, a massive saucer-quern (Pl 33), with an elongated, egg-shaped cavity, about 3ft in length, 1ft 9ins in breadth and 1ft thick, was found upon its side, among stone rubble, on the E interior side of the N entrance to B. It may have been discarded and built into the wall of this chamber from whence it was removed by the stone-robbers. Because of their considerable size,

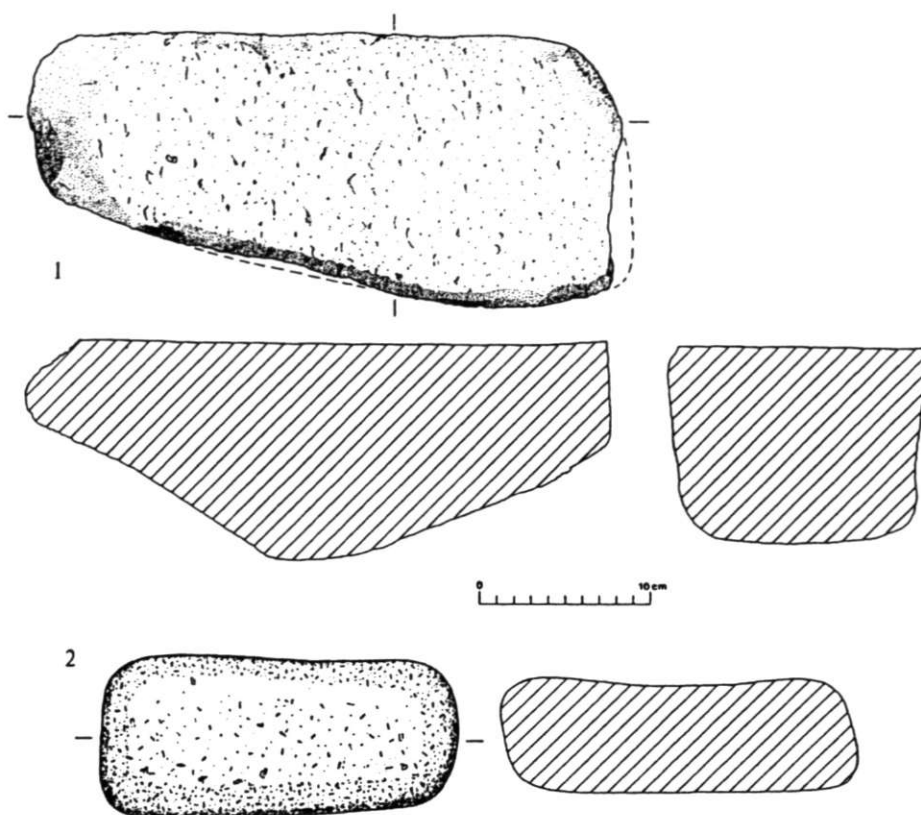


Fig 51 Saddle-querns: 1, fashioned from a selected granite block; 2, a utilised beach slab

these querns were left *in situ*. Pieces of four (4) other saucer-querns of more modest size (HD XXIX, XLVII, LXXI, LXXIV) were found unstratified and among the stone rubble masking the lower slope structures.

Mortar (Fig 52, 2)

The broken half of a mortar, which had been about 1ft 1ins in diameter and 1ft from top to base on one side and 7ins on the other, was found amongst rubble masking the lowermost cultivation terrace, which flanks the lower slope buildings on their W side. Its interior was in the form of an inverted cone 9ins in diameter at the top and a mere 2ins at the bottom, which was only 2ins thick. This interior, although weathered suggested prolonged use and progressive wear, which, at the top, extended to the periphery. In practice, such a mortar, comparable with those in use in remote areas of Britain a century ago (Mitchell, 1880, 44, Fig 33) would have demanded, for practical use, graduated pestles, which the storm beaches would have readily provided.

Rotary-querns (Figs 54, 55)

The lower stones of two (2) granite rotary-querns (Fig 54, 2-5), which approximate to Curwen's (1937, 143, Figs 17-21) southern English mainland forms, were found, and pieces of two (2) upper stones, a piece of a pot-quern (Fig 55, 6, 7) (Curwen, 1937, 149, Fig 41) and six (6) indeterminate fragments. Alec Gray's partial excavation of the large oval chamber (A) of the courtyard house (Fig 3, No.7), undertaken in 1935, brought the first to light, and, in his words: *'The only covering stone of the lower drain which remained in place, proved to be the lower stone of a beehive quern in excellent preservation. It would seem that the stone had been discarded because, owing to wear, there was poor contact with the upper stone'*. This lower stone, shallow, bevelled, and 1ft 4ins in

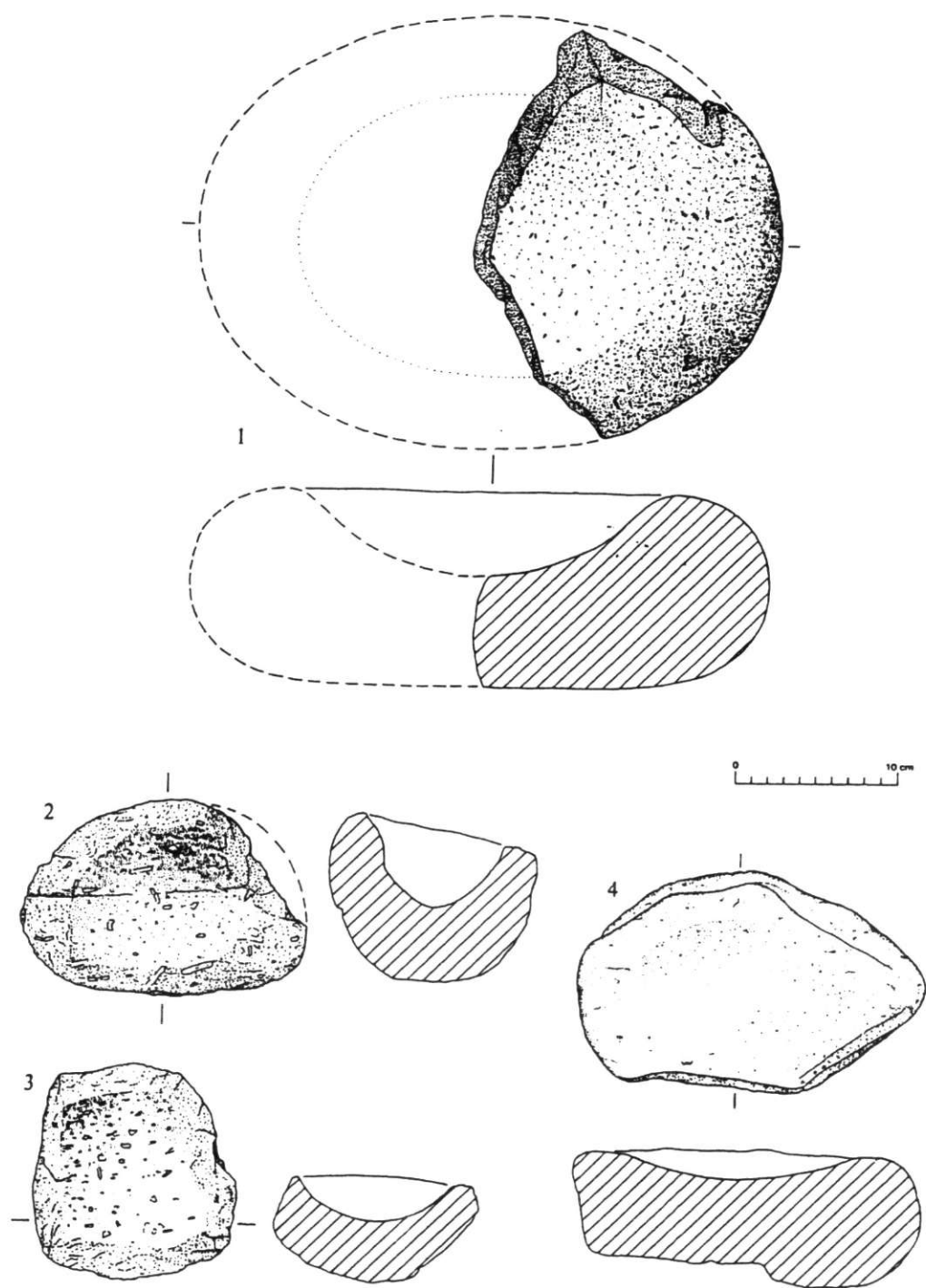


Fig 52 Saucer-querns: 1, from a beach boulder; 3, 4, from selected pieces. 2, a mortar

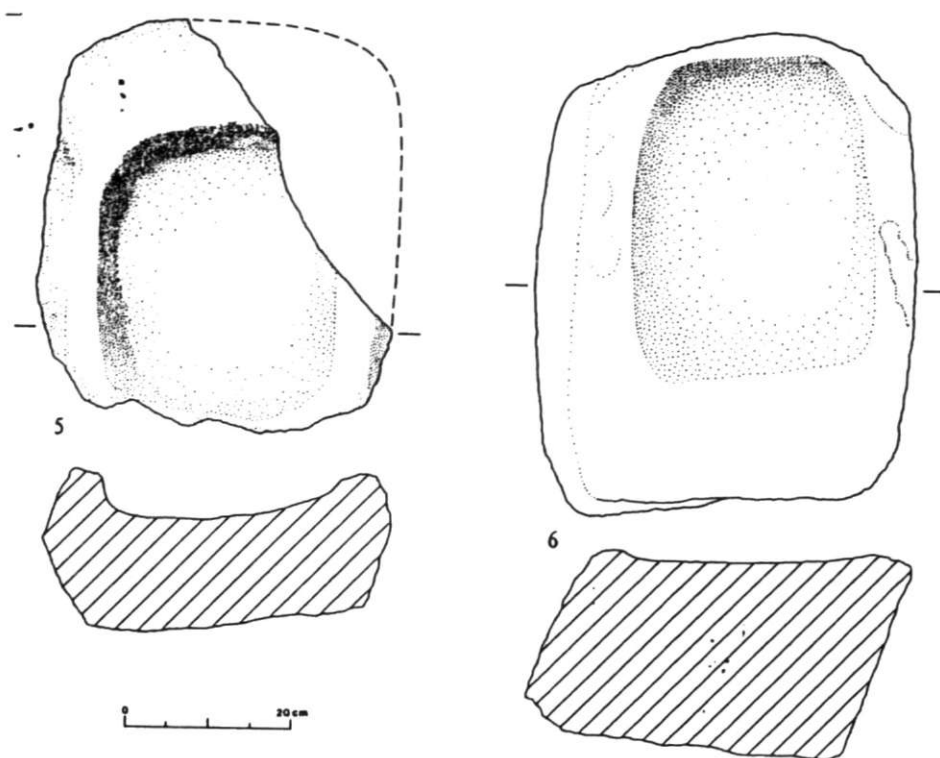


Fig 53 Rectangular trough-querns: 1, 2, fashioned from selected granite blocks

diameter, was seen (and photographed) in 1950, by the present writer on the terrace of Seaways, Porthloo, at that time the residence of Mrs. K. Birkenshaw, now that of Mr D. May. The second lower stone (HD 2), of much the same dimensions as that used as a drain cover, came from amongst the stone rubble within the rectangular annexe to C. A piece of a further lower stone, with a peripheral flange (HD IV), would appear to be a Scillonian version of what has been defined as a pot-quern (Curwen, 1937, 150). The upper stone of such a quern would revolve within the flange and the ground grain would emerge via a side cavity. It was found in rubble adjacent to the midden within the S corridor entrance of B and a further piece (HD XIV), which fitted on to it was in the rubble masking the SW area of C. As Curwen (1937, 150) so presciently indicated, such querns are an Iron Age and Roman product of the quarries of the Middle Rhineland, i.e. the Eifel (Röder, 1958, Abb.1). Presumably the model was considered to convey advantages and was therefore copied in granite (Fig 54, 1).

A much weathered part of an upper stone of a beehive form (HD LXXVII) had been used, together with other pieces of granite of much the same size, to block the entrance to the aedicule of B, while a peripheral fragment (HD C) of a similar, angular, upper stone, was among surface rubble in this area. The working surface of this piece has what appears to be a remnant of concentric grooving. Five (5) more pieces of rotary querns were found among the concentrations of stone-breakers' rubble (HD 4, 126, LXXVIII, LXXIX, CI). All were too small for precise identification as to quern form.

Upper stones for saddle-, trough- and saucer-querns.

During the course of the excavations, eighteen (18) complete, or broken, flat, ovate, substantial granite beach pebbles, all bearing upon their edges and faces overt signs of abrasion and smoothing, which would suggest their use as upper stones for saddle-trough- and saucer-querns (HD XVI, XXII, XLII, XLIII XLIV, XLVIII, LXXVIII, LXXXIII LXXXVIII, LXXXIX, XC, XCI, XCII,

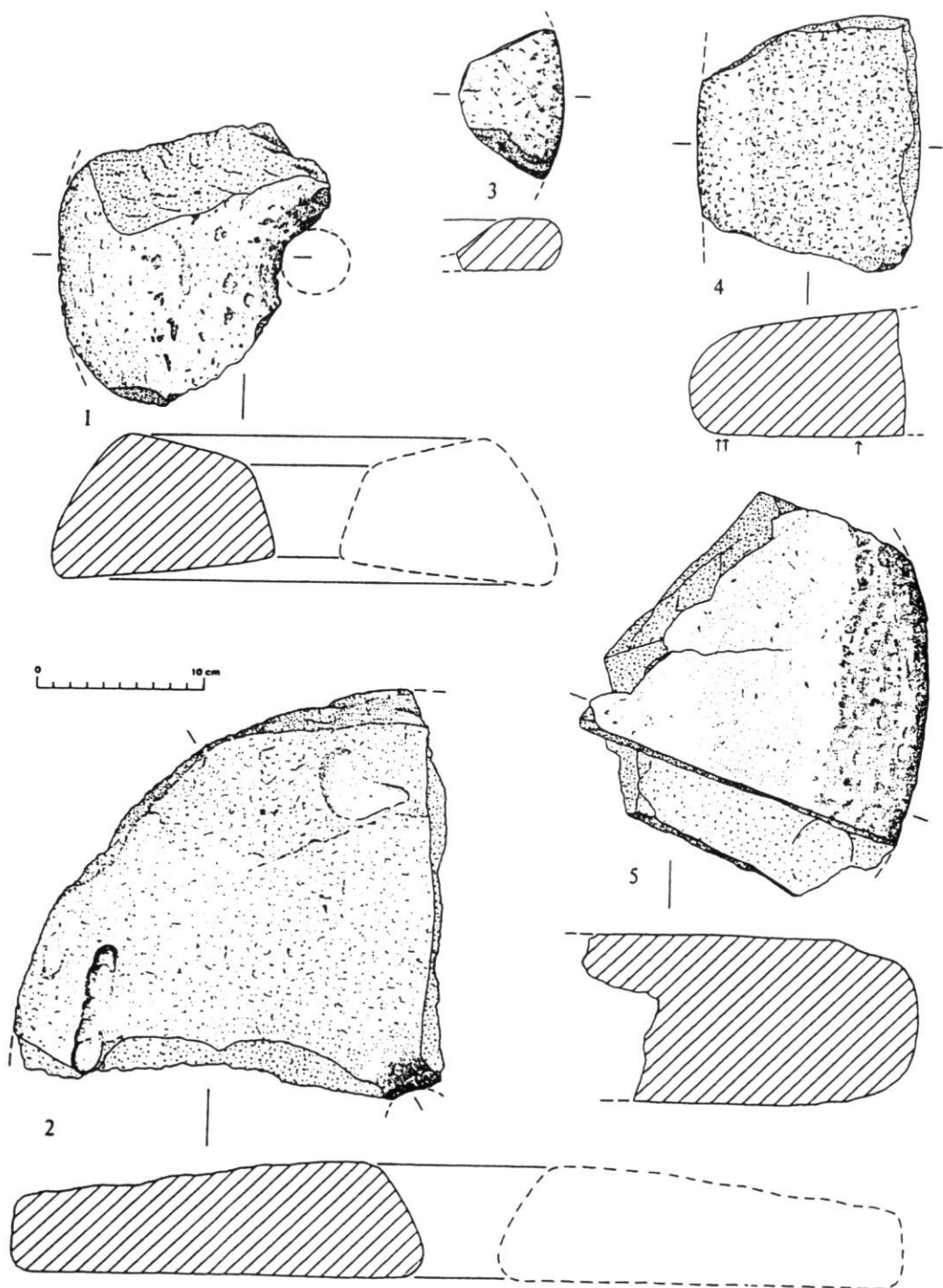


Fig 54 1, an upper-stone beehive quern fragment; 2 - 5 lower-stone fragments of approximate southern English rotary form

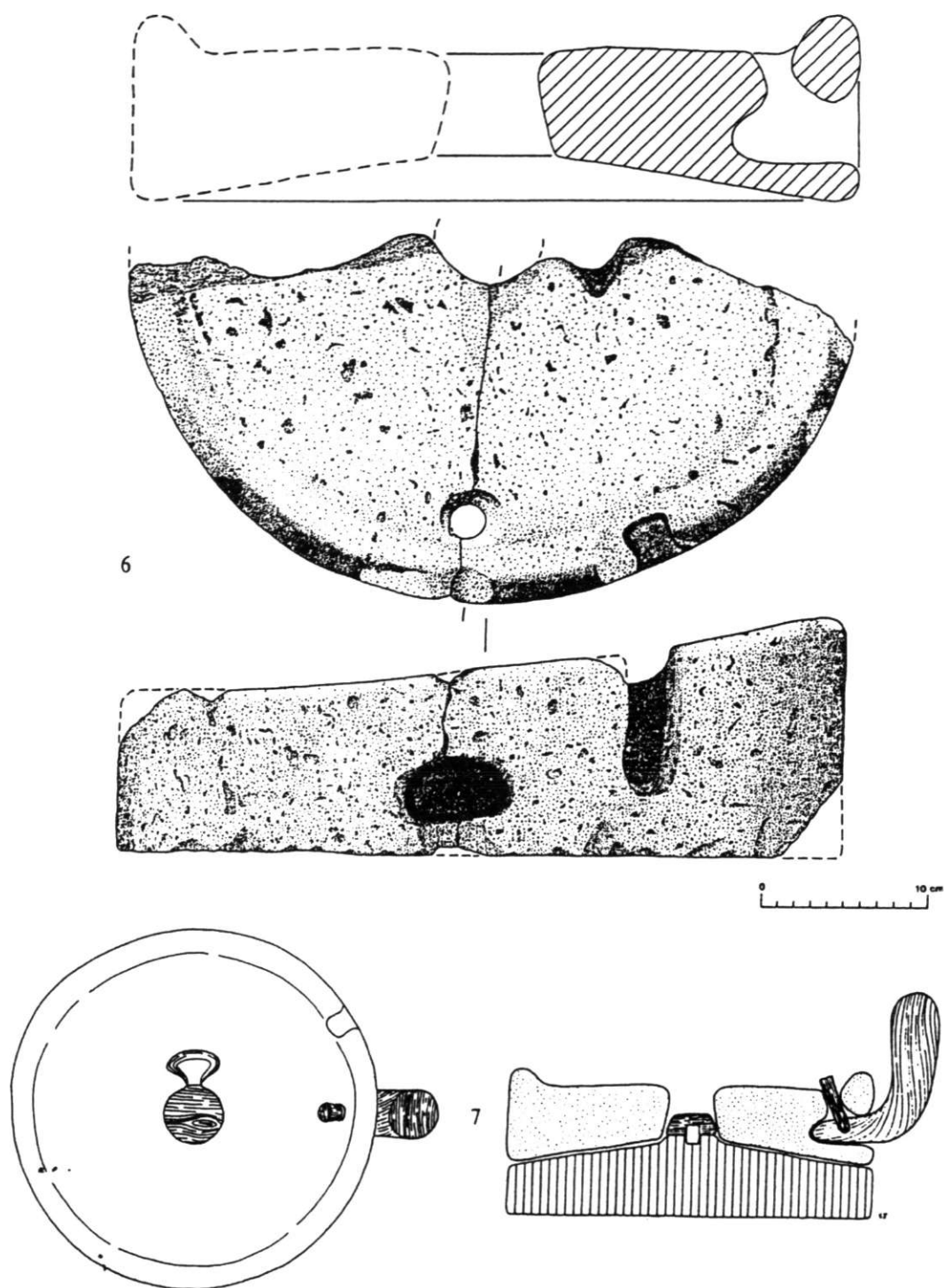


Fig 55 6, pot-quern upper-stone and 7, a reconstruction

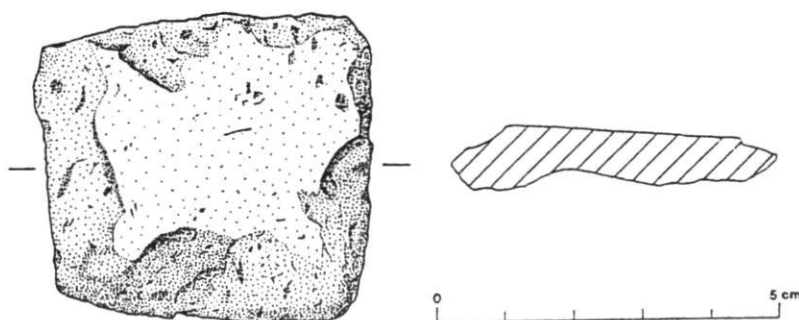


Fig 56 *Fashioned rectangular granite slab, possibly a coarse cleaver*

XCIII, XCVI, CIV, CXII, no no.). Their average size is 7ins long, about 5ins in breadth and 2ins thick. Five (5) are smaller and bun-shaped, a form suitable for the saucer querns. Several have end-battering, pointing to use, when discarded, as pounders.

On Scilly, a patent saddle-quern upper stone was found in the chamber of the cairn excavated on Samson in 1930 (Hencken, 1933a, 27, Fig 13) and comparable examples came to light in Halangy Porth (Ashbee, 1983, 27, Fig 12, 1-5). Three were noted at Nornour (Butcher, 1978, 92, Fig 39, 3; 94, Fig 41, 7, 8) and a number were mentioned as from Little Bay, St.Martin's (Neal, 1983, 59). Rubbers which could have served the saucer-querns were found at Carn Euny on the Cornish mainland (Christie, 1978, 388), as well as at Castle Gotha (Saunders & Harris, 1982, 130) and Trethellan (Nowakowski, 1991, 141). Here, unlike those on Scilly, the stones had been subjected to prolonged, intensive use as was shown by their flattened surfaces.

The incidence of saddle-quern upper stones and saucer quern rubbing stones, not always recognised on Iron Age sites (eg Wainwright, 1979, 93) is normally considered as emphasising the place of corn-growing in the subsistence economy. Nonetheless, it should not be overlooked that on Scilly, and also in Cornwall, commodities other than corn could have been processed by use of saddle-, trough- and saucer-querns, which may explain the variations of wear to be seen upon ostensible upper-stones.

Pounder (Pl 35)

A massive rectilinear block of fine-grained granite, 1ft 3ins in length, 1ft in breadth and 5ins thick, with percussion-rounded ends and sides, was found amongst the lower slope surface rubble. Each face had been carefully flattened by flaking. Its weight is of the order of 251bs. Pounding in mortars, with a heavy, hammer-mounted pestle, was seen on Foula, Shetland, early in the century (Curwen, 1937, 134, Pl 1). This weighty example could have been used with two hands for pounding and would also have been efficacious for especial grinding within a suitable saucer-quern.

Fashioned rectangular slab (Fig 56)

A rectangular slab of fine-grained granite, precisely fashioned by percussion, which removed flakes on each side to form sharp edges. A flat surface remains and its reverse shows that the piece had been struck from a larger slab. Its edges are for the most part unbruised, although it could have been used to chop any firm substance that did not require a keen edge. When found among the cobbles of the courtyard of the courtyard house its flat surface was uppermost.

This piece (HD LVII) can be compared with the crude stone chopping tools used during the last century on the Shetland Islands, Orkney and St.Kilda (Mitchell, 1880, 133). Incidental chopping tools of slate were regularly encountered at Jarlishof (Hamilton, 1956) while at Skara Brae (Childe, 1951, 114) knives were made by splitting the local flagstone pebbles. Although flint was available on Scilly, material suitable for heavy cutting tools was at a premium. Thus the extensive use of quartz and incidental heavy granite tools such as this example. Sharp, flaked, pieces of fine-grained granite may have been widely used in ancient Scilly but, unlike this piece, their crudity has inhibited recognition.

6.0 THE ENVIRONMENTAL MATERIAL: DESCRIPTIONS & COMPARISONS

6.1 Introduction

Environmental material, apart from that recovered from particular limpet shell middens, was largely unstratified, and thus subject to contamination. Rabbit bones were frequent as, until recently, Scilly was rabbit infested. Some pieces of gorse (*Ulex* sp.) charcoal were presumably remains from the periodic burning that took place on the hillslope down the years.

When material was associated with undisturbed features, and thus stratified, this is indicated in the accounts and tables below by reference to the main midden in structure B (Figs 11, 13, 14) and that against its northeast exterior corner (Figs 11, 17). There was also the undisturbed area between the upper exterior wall face of B and the lower exterior wall face of A, which was coded as a black dot. These colour codes were also used to distinguish stratified from unstratified material. The numbers cited relate to the site archive (Museum of the Royal Institution of Cornwall, Truro).

6.2 The Bird Bones, by Alison Locker

A total of 105 bird bones were recovered, of which 35 were from the 3rd century midden deposits and 70 from the disturbed levels.

The following were identified; great northern diver (*Gavia immer*), shag (*Phalacrocorax aristotellus*), cormorant (*Phalacrocorax carbo*), cf. brent goose (*Branta bernicla*), goose (Anserinae), mallard (*Anas platyrhynchos*), cf. partridge (*Perdix perdix*), cf. pheasant/fowl, coot (*Fulica atra*), lapwing (*Vanellus vanellus*), woodcock (*Scolopax rusticola*), snipe (*Gallinago gallinago*), herring/lesser black backed gull (*Larus argentatus/Larus fuscus*), great black backed gull (*Larus marinus*), great auk (*Alca impennis*), barn owl (*Tyto alba*), song thrush (*Turdus philomelos*), thrush indet. (*Turdus* sp.), sparrow indet. (*Passer* sp.) and crow (*Corvus corone*). Measurements follow Jones *et al.*, 1978.

The summary table below shows the species found in each midden deposit, tables 1-3 show the species found in each context of the sealed midden deposits.

Species	'Red'	'Blue'	'Black'	Disturbed	Total
Great Northern Diver	0	0	0	2	2
Shag	0	1	2	2	5
Cormorant	0	1	0	3	4
Cormorant/Auk	0	0	0	2	2
cf. Brent Goose	0	0	0	2	2
Goose	2	0	0	0	2
Mallard	0	1	0	0	1
cf. Partridge	0	0	0	2	2
cf. Pheasant/Fowl	0	0	0	2	2
cf. Coot	0	2	0	2	4
Lapwing	0	0	0	1	1
Woodcock	1	0	0	0	1
Snipe	1	0	0	1	2
Herring/L B B Gull	0	0	0	1	1
Great B B Gull	0	0	0	1	1
Great Auk	0	0	1	14	15
Barn Owl	0	0	0	12	12
Song thrush	0	0	0	1	1
Thrush	0	0	0	1	1
Sparrow	0	0	0	1	1
Crow	0	1	0	0	1
Indeterminate	10	7	5	20	42
Total	14	13	8	70	105

Both marine and land based species are represented; of the latter all are likely to have been eaten except for the barn owl, of which the bones are from one individual. There was some evidence of butchery; cut marks were seen on an immature galliform scapula and also on a coot femur, both from disturbed deposits. A few indeterminate long bone shafts also showed cut marks.

Domestic Fowl (*Gallus* sp. domestic) was identified from Nornour in the 2nd century BC (Turk, 1978, 102) and St Martins in the 2nd century AD (Turk, 1983, 74), but there were no fowl at Halangy Down apart from the possible galliform scapula mentioned above.

The most interesting of the seabirds are the finds of great auk, identified from both sealed and disturbed deposits; the bones are seen in Plate 36. The largest of the auks and flightless, it stood at around 50cms. Vulnerable to exploitation it became extinct in around 1844 as a result of egg predation, and the use of its meat by sailors both fresh and salted for ships stores. Later it was caught for its feathers (Halliday, 1978, 73).

The great auk has been identified from other coastal sites including prehistoric sites in Scotland, as well as sites in Ireland, Denmark, Iceland and the New England coast of North America (Serjeantson, 1988, 214). Although the great auk spent much of its time in the water, where it was difficult to catch, in the spring it came ashore to nest, laying a single egg and it was at this time that great numbers were captured.

The Scillies are not recorded as a former breeding site, so it is a matter of speculation whether these bones are from birds caught at sea or on land. The nearest breeding ground is the Calf of Man (Fisher & Lockley, 1954, 66), but the main breeding sites were at St Kilda and Papa Westray.

Only one bone of great auk, a broken tibiotarsus, came from undisturbed deposits (975). In the disturbed midden a broken left humerus (733), showing some rodent gnawing, was a visual and metrical match with a right humerus from 797, which also contained a pair of ulnae, a radius, a right coracoid and the articular end of a scapula. A vertebral body and a long bone shaft may also belong to this same bird, though not positively identified as great auk.

A broken left femur, a left humerus and left scapula (556) all showed slight porosity although the metrical data shows they were close to or at full size. It has been suggested that young great auks may have left their "breeding skerries very early, perhaps like the razorbill, without either primary or secondary wing feathers, not much more than a fortnight after hatching and probably swam with their parents many hundreds of miles before fledging" (Fisher & Lockley, 1954, 66). The great auk bones may be the remains of visiting birds or traded goods, not supportive evidence for the Scillies as a former breeding site.

Both shags and cormorants nest in the Scillies and have been identified from other sites, including Nornour (Turk, 1971, 86), Porth Killier and St Agnes (Turk, 1991; Locker, 1997). Turk has suggested that these birds may have been taken for oil or trained for fishing as they are today in parts of the Far East. In Stronsay in the Orkney Islands cormorants were buried in the ground for 24 hours before eating to tenderise them and reduce the flavour of fish (Fenton, 1978, 516). Other methods to improve their taste and texture also centred round on burial and some delay before eating. Shag was identified from a medieval pit at Lower Town, St Martin's (Locker, 1997) and would have had similar eating qualities to cormorant.

The most common methods of cookery for great auk, cormorant and gulls were roasting and stewing, while unplucked birds, their feathers smeared with clay, could have been cooked in fire embers (Wilson, 1973, 113). Eggs were collected and stored in ash, a practice known from the Western Scottish Islands until the 17th century. They were found as deposits in chambers within the walls of aisled round houses and in underground chambers in Cornwall and Ireland (Wilson, 1973, 137). The consumption of seabirds and their eggs is also well documented in historic times from the Scottish Islands and Fenton (1978) describes salted and smoked seafoal eaten in the winter, the same species being eaten fresh in summer.

The great northern diver is a winter visitor to British shores, breeding farther north in Iceland. It was identified from the articular end of a coracoid, cut in two places and a skull from 662.

The historical exploitation of seabirds as a fresh and stored food resource on other islands suggests that they would have been a valuable resource at Halangy Down, while the land based birds give evidence of seasonal fowling activities for species including ducks, geese, snipe and

woodcock, and opportunistic exploitation of other species. The birds and fish added variety to the beef, lamb and pork supplied by farming.

Acknowledgements.

I would like to thank Dale Serjeantson (Faunal Remains Unit, University of Southampton) for help and use of reference material for the great auk remains. Thanks are also due to Dave Webb for the photograph (Pl 36).

Table 1: Birds from the 'red' midden deposit

Species	211	214	265	266	338	540	650	779	Total
Goose	0	0	0	0	0	1	1	0	2
Woodcock	1	0	0	0	0	0	0	0	1
Snipe	0	0	0	0	1	0	0	0	1
Indeterminate	3	1	2	1	0	0	2	1	10
Total	4	1	2	1	1	1	3	1	14

Table 2: Birds from the 'blue' midden deposits

Species	722	753	891	903	921	925	926	Total
Shag	1	0	0	0	0	0	0	1
Cormorant	0	0	0	0	0	1	0	1
Mallard	0	0	0	0	1	0	0	1
c.f. Coot	0	0	0	0	2	0	0	2
Crow	0	0	0	1	0	0	0	1
Indeterminate	0	2	1	0	3	0	1	7
Total	1	2	1	1	6	1	1	13

Table 3: Birds from the 'black' midden deposits

Species	945	975	Total
Shag	1	1	2
Great Auk	0	1	1
Indeterminate	1	4	5
Total	2	6	8

6.3 The Fish Bones, by Alison Locker

A small collection of fish bones were recovered by hand and therefore biased in favour of the larger species. Of the 339 identified to species or group level only 38 were from the well stratified 3rd century AD limpet midden deposits. The remaining 301 bones were from deposits that had suffered from later disturbance.

The following species were identified: elasmobranch indet., conger eel (*Conger conger*), cod (*Gadus morhua*), Gadidae, whiting (*Merlangus merlangus*), pollack (*Pollachius pollachius*), black sea bream (*Spondylusoma cantharus*), red sea bream (*Pagellus bogaraveo*), sea bream indet., (*Sparidae*), Ballan Wrasse (*Labrus bergylta*), mackerel (*Scomber scombrus*) and flatfish indet.

The summary table below shows the fish species found in the midden deposits; tables 1 and 2 show the species found in the separate contexts of the well stratified deposits.

Species	'red'	'blue'	Disturbed	Total
Elasmobranch	1	0	1	2
Conger eel	2	0	1	3
Cod	0	0	10	10
Gadidae	0	0	10	10
Whiting	5	0	1	6
Pollack	1	0	1	2
Black sea bream	1	0	0	1
Red sea bream	1	0	2	3
Sea bream	0	1	41	42
Ballan Wrasse	8	0	184	192
Wrasse	16	0	45	61
Mackerel	1	1	4	6
Flatfish	0	0	1	1
Total	36	2	301	339

Ballan Wrasse dominate the assemblage. The fin rays and vertebrae that could only be positively identified as wrasse are also likely to be from this species. The robust and distinctive lower pharyngeal teeth, whose shape has made them known as the 'ballan cross' and were carried by sailors to prevent drowning, were numerous. These were measured to estimate the size of the fish in a similar manner to the reconstruction of the total length of corkwing wrasse (*Crenilabrus melops*) from Quanterness, Orkney by Wheeler (1979, 147; Fig 57).

The figure shows one large specimen of 51cms in length; the maximum size for Ballan Wrasse is 60 cms. The remainder range from 22 to 41cms, of small to average size. Young wrasse are found in rock pools and adults in the intertidal zone where they could have been caught, possibly in the now submerged fish traps postulated by Dr Turk (Turk, 1984, 76). Ballan Wrasse favour rocky coasts where they can feed on molluscs, particularly mussels (Wheeler, 1978, 278). Wrasse can also be caught on lines from the shore or from a boat. Sea breams, small sharks and rays (elasmobranchii) and conger eels could also have been part of this fishery, the latter being caught both on lines and in traps.

The gadid group, cod, whiting and pollack, can be caught seasonally inshore on lines. Mackerel also come into shallower waters seasonally in large shoals. The range of species and their seasonal movements suggest that they could all have been caught within the coastal waters off the island and there was no need to venture into deep water, i.e. the coastal fishery by line or net described by Ashbee (1982,13).

The sample is biased in favour of larger fish since no sieving was carried out, but the assemblage is comparable to that found at Little Bay, St. Martin's (Locker, 1983), Lower Town, St. Martin's (Locker, 1997), Nornour (Turk, 1983), Porth Killier, St. Agnes (Turk, 1991; Locker, 1997), indicating a consistent exploitation of fish species from the prehistoric period to medieval times in these islands.

The fish were all recovered from limpet middens and Townsend (1967) has demonstrated that limpets eaten in quantity have a protein value as human food. However more recently these shellfish were considered in the Orkney and Shetland islands as human food only for the poor or during hard times. Their main use was as fish bait, parboiled and chewed before being put on the hook and as ground bait (Fenton, 1978, 533). They may have been used for a similar purpose at Halangy Down as suggested by Ashbee (1983, 34).

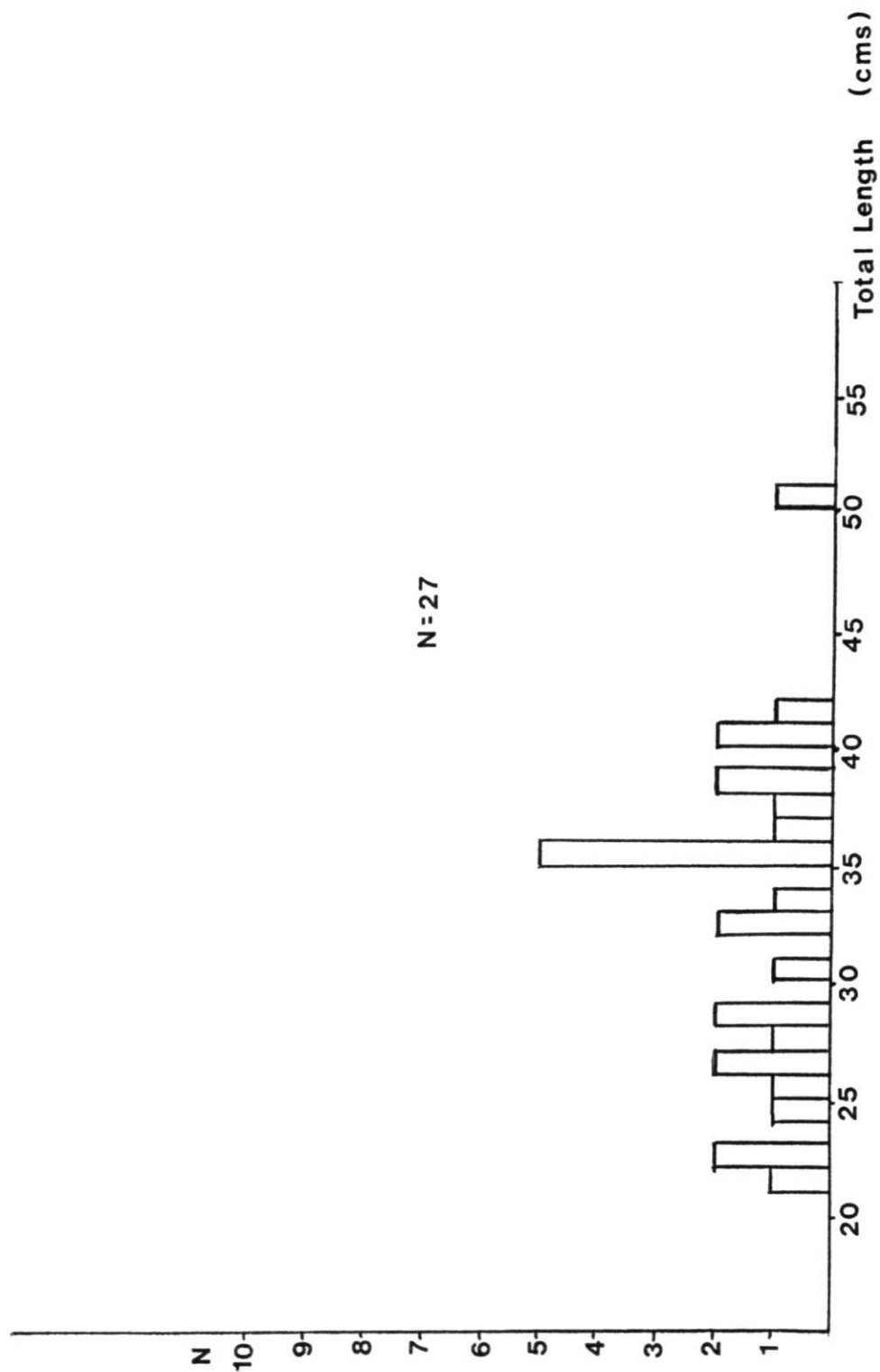


Fig 57 Estimated total lengths for Ballan Wrasse

Table 1: Fish bones by anatomy from the 'red' midden deposits

Species	214	265	318	338	631	650	653	754	758	778	779	786	940	1402	1406	Total
Elasmobranch	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Conger eel	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
Whiting	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5
Pollack	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Black S Bream	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Red S Bream	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Ballan Wrasse	3	1	0	0	0	0	0	1	0	0	1	0	0	1	1	8
Wrasse	0	0	1	0	0	0	2	4	0	0	0	8	1	0	0	16
Mackerel	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	3	1	1	1	1	1	2	5	1	1	2	13	1	2	1	36

Table 2: Fish bones by anatomy from the 'blue' midden deposits

Species	926	945	Total
Sea Bream	1	0	1
Mackerel	0	1	1
Total	1	1	2

6.4 The Mammal Bones, by Alison Locker

Most of the bones recovered were from midden deposits disturbed in the 19th century. Of the 3,142 large mammal bones, determinate and indeterminate, only 30% were from well stratified levels dated to the 3rd century AD.

The following species were identified; cattle (*Bos* sp. domestic), horse (*Equus* sp. domestic), sheep (*Ovis* sp. domestic), pig (*Sus* sp. domestic), red deer (*Cervus elaphus*), cat (*Felis* sp. domestic) and rabbit (*Oryctolagus cuniculus*).

The stratified midden deposits were colour coded and the bones in each level as well as the disturbed material are summarised below:

	Red	Yellow	Black	Blue	Green	Disturbed	Total
Cattle	24	2	48	28	0	287	389
Horse	1 ?	0	0	0	0	4	5
Sheep	67	0	38	37	0	354	496
Pig	31	0	13	11	0	103	158
Red deer	0	0	0	0	0	1	1
Cattle sized	36	0	40	33	0	233	342
Sheep sized	33	0	11	38	0	137	219
Cat	33	0	1	0	0	7	41
Rabbit	134	0	10	11	0	57	212
Indeterminate	107	1	68	77	1	1025	1279
Total	466	3	229	235	1	2208	3142

Even in the well stratified midden levels the presence of rabbit indicates recent disturbance; in the 'red' midden deposits 29% of all bones were rabbit. The indeterminate bone, 40% of the whole assemblage, was classified on the basis of its fragmentary condition.

The total numbers of bones in each species by context are shown in tables 1-5, with most of the well stratified material in three midden deposits; red, black, and blue. Tables 6-8 show the

distribution of species by anatomy in these three areas; no deliberate selectivity was observed.

In the disturbed levels a possible piece of cetacean bone was recognised, as well as some small mammal bones which included field vole (*Microtus agrestis*) and Pallas' vole (*Microtus oeconomus*). The latter is not found in the rest of the British Isles, but has been identified from other sites in the Scillies including Nornour (Turk, 1971, 85). Two frog bones (*Rana* sp.) were present and a human first phalanx from the left hand was also found in the disturbed deposits. Measurements were taken according to Jones *et al.*, 1978.

Cattle and sheep are the dominant species, with pig evident in many levels. Red deer was identified from a single broken distal end of a left tibia in context 1085, a disturbed level. Horse was represented by vertebrae and two fragments of radius. The only evidence for the exploitation of marine mammals was one featureless and porous bone fragment thought to be cetacean.

This mammalian assemblage is very similar to that at Little Bay (Locker, 1983, 66) where there was no evidence for exploitation of marine mammals in a small assemblage. In contrast, grey seal (*Halichoerus grypus*) was the second most commonly occurring species after sheep at Nornour (Turk, 1971, 84), with some seal bones being made into tools. Dr Turk has suggested that the burnt bones of the upper body of grey seal at Nornour may represent the melting of blubber for oil. At Halangy Down the only source of oil would have been from the sea birds that were caught.

There was also evidence for red deer at Nornour, from both antler and bone. However the single bone from Halangy Down does not add any evidence to the debate as to whether the islands supported a population of red deer, or that live individuals were brought over from the mainland in boats. There are strong arguments favouring the transportation of deer by man (Serjeantson, 1990, 11) to provide an extra food resource to domestic animals and antler as a raw material. The islands are some 27 miles from the mainland which seems too great a distance for accidental introduction.

Cattle

The cattle bones were very fragmentary, precluding many measurements. Tables 7-8 show the presence of many loose teeth, which had preserved better than mandibles.

Similarly evidence of ageing was difficult to quantify, only two mandibles retaining a sufficient number of teeth. These were from fully adult animals with all teeth in wear. A maxilla showing the second molar erupting and a radius unfused both proximally and distally suggested an animal of less than a year (Silver, 1963, 255).

The cattle remains were largely from adult animals, for which the astragalus measurements (see measurement archive) compare well with those from Nornour (Turk, 1971, 81). There were no horn cores present, but equally no evidence that the cattle were hornless.

Butchery was intensive, with long bones split for marrow extraction and the articular ends chopped. Cut marks were widely visible, evidence of both skinning and filleting. The astragali showed a number of cut marks where the hocks had been cut through.

A long bone shaft fragment, possibly a femur about 10cms long, from context 806, showed evidence of polishing and shaping at one end and has been described as a 'limpet scoop'.

Sheep

No goats were identified on metrical or morphological criteria and it is assumed that only sheep are present. There is evidence that the sheep were horned, from a single horn core and a skull fragment with the horn base and no evidence for hornless sheep.

Sheep bones were more complete than cattle and consequently more measurements could be taken including some estimates of stature (after Teichert, 1975). Figure 58 shows two radii and eleven metacarpals ranging from 49-53cms withers height and two metatarsals at 54 and 55cms. From Nornour three withers heights of 53, 54 and 55cms were calculated (Turk, 1971, 82) and from the 2nd-8th century midden at Tēan two at 51cms (Turk, 1968, 76), all fitting within the range for Halangy Down.

Comparing these with withers heights from Gorhambury Villa (Locker, 1990, 209), where the range of 57-63cms (n = 6) is representative of the size of sheep in S E England at this period, the

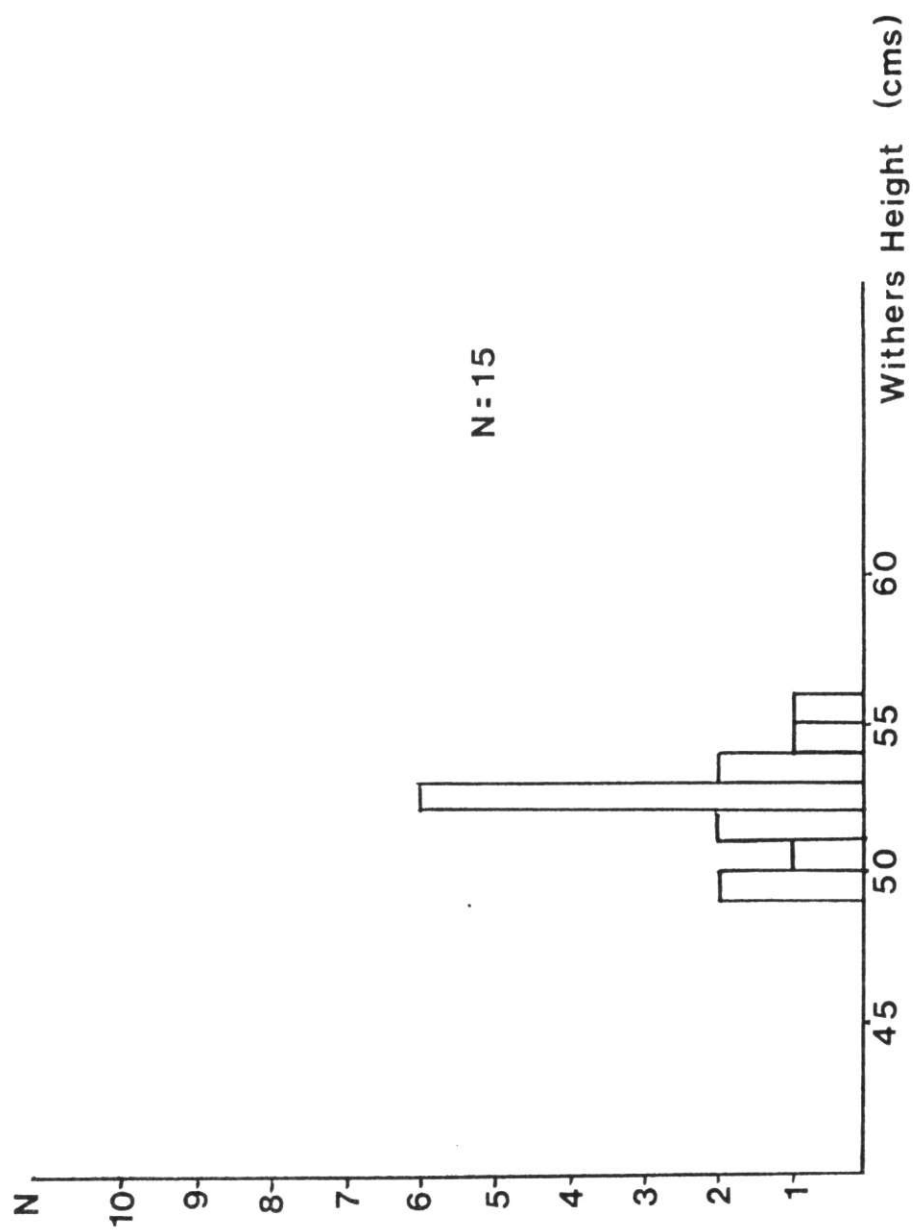


Fig 58 Heights of sheep's withers

sheep from the island sites are smaller than those on the mainland. However there is no evidence for island dwarfing.

Metrical comparisons were made with modern 'primitive' breeds, Soay, Shetland and South Ronaldsay sheep, all native, small, slender, horned breeds from Scottish Islands. The withers heights all compared well with the range from Halangy Down and comparative data on conformation was calculated from the 'relative shaft slenderness' (Armitage, 1984, 139), where the minimum shaft breadth is divided by the total length and multiplied by 100 (Fig 58).

Metacarpals and metatarsals were the most complete bones from the archaeological assemblage. The index and withers heights are shown below;

		Shaft Slenderness		Withers heights
Metacarpals	Halangy Down	9.5 -	11.4 (n=11)	49-53cms
	Soay		9.9	54.6
	Shetland		12.0	48.9
	North Ronaldsay		10.9	55.1
Metatarsals	Halangy Down	7.7 -	8.1 (n=2)	
	Soay		7.8	
	Shetland		9.3	
	North Ronaldsay		8.3	

Both visually and metrically the Shetland appears a sturdier breed than the Soay and the North Ronaldsay and this is supported by the shaft slenderness index. The Halangy Down sheep show more affinity in conformation to the Soay and the North Ronaldsay sheep.

Lambs were represented by immature porous bones. These neonates were typified by axially unfused metapodials. Identified mainly from limb fragments, soil conditions may not have favoured the preservation of delicate rib, vertebrae or skull fragments. Deposit 660 contained the remains of at least three lambs, where the metapodials were axially fused, but the proximal ends remained unfused and porous. Evidence for the fusion time of the proximal end is scarce. Silver (1963) suggests it is before birth, so these bones could be from still born or new born lambs. Although some of the bones were broken there was no evidence of butchery and they may be natural fatalities.

The fragmentation of mature sheep bones was not as intensive as cattle but there was clear evidence of butchery in many cases. Tables 7-8 show skull and associated bones to be rare. Some vertebrae had been chopped laterally and many broken ribs showed cut marks. Limb bones had been split and also showed cut marks on the shaft. The limb extremities, the metapodials and phalanges were more complete, as can be seen in the metrical data, having little value for meat. There is no selectivity favouring particular parts of the body as at Nornour, where the forelimb was well represented (Turk, 1971, 82).

The midshaft and distal end of a tibia from 627 showed some polish on the broken shaft and may be from a broken point. This, with the 'limpet scoop' mentioned above, is the only evidence for bone working from the site.

Pig

Pig occurred consistently throughout the midden deposits, forming 5% of the total sample of mammal bones. Many of the fragments are from immature individuals and ages range from piglets through to mature adults. There is no metrical evidence to suggest that these pigs are particularly small, or have unusually large feet, as suggested by Dr Turk for Nornour (Turk, 1978, 100).

One shoulder height, estimated from a complete humerus in 650, was 67cms (Teichert 1966/69), while some incomplete humeri were more robust and may represent larger individuals. At T'ean the pig measurements showed a wide range; one animal was 57cms at the shoulder, which Dr Turk has described as a very short legged race, while a radius gave a height of 65cms, comparable with Halangy Down.

Hall and Clutton-Brock (1989, 203) describe two types of native domestic pig found in Britain up until the 18th century. One was 'a very small, dark-coloured pig with prick ears found principally in the Highlands and Islands of Scotland'. These lived almost wild, apparently left to forage on hills and moorland; on the seashore they scavenged for shellfish and other food. The smaller pigs identified at Tëan may have been akin to this almost feral race. The small size of the islands would have been conducive to a similarly free range enjoyed by the pigs described above.

Butchery marks were apparent on pig bones of all age groups and on all parts of the carcass. Skulls showed chop marks and cut marks around the condyles. Knife cuts across humerus shafts were common as well as on the proximal end of the ulna. Pigs are usually represented by a wide age range as they have a high fecundity rate and their main uses are for meat, breeding and manuring.

Cat

Most of the cat bones are from the 'red' midden group, particularly context 265, where all the bones are likely to be from a single animal. The limb bones from 266 may also be from the same animal, which is fully mature with slight exostoses visible on the distal end of the right femur. No skinning marks were evident on any of the bones.

Wild and domestic cats can be separated on metrical data, including the length of the first molar (Kratovich, 1973). The measurements of a cat mandible from context 214 are shown below with the range for wild and domestic cat and show that the Halangy Down mandible lies within the upper range for domestic cat.

Length of the first lower molar	Halangy Down	7.3mm
	Domestic cat	5.7-8.0mm
	Wild cat	7.4-9.8mm

Cat has not been identified from other sites in the Scillies. The earliest cat remains in a domestic context on the mainland are the late Iron Age kittens from Gussage All Saints (Harcourt, 1979), but cat has been regularly found on Roman sites, including Exeter, Gadebridge and Latimer Roman Villa (Maltby, 1979), Gorhambury (Locker, 1990) and Lullingstone Villa (Toynbee, 1973). If red deer could have been transported from the mainland by boat cats would have been easier passengers, possibly contained in closed baskets or hide bags. Serjeantson (1990, 14) cites domestic cats as a late introduction to the Outer Hebrides, no bones as yet predating the first millennium AD. They also appear to be a late introduction to the Scillies.

Conclusions

The level of indeterminate material, 41%, is a reflection of the fragmentary nature of the bone. Of the identified bones, excluding rabbit, cattle and cattle sized are 44%, sheep and sheep sized 43% and pig 10%. The mammal remains, apart from a single cetacean bone, give no indication that the site is situated on a small island and close to abundant marine resources, though the remains of sea birds, marine fish and shellfish show exploitation of the shoreline and the sea.

The mammal remains from Halangy Porth, the earlier settlement subsequently abandoned (Gray in Ashbee, 1983, 39) were few and included cattle, horse, sheep, red deer, ?deer and seal, but no pig. The field systems and settlement described by Ashbee (1986, 205) overlying the ancient terraces associated with Halangy Porth suggest a well established agricultural settlement in which cattle and sheep predominated and pigs were kept at pannage. Cattle would have provided most traction and transport, as horse bones were few both here and at other sites and are not present at all before the Roman period (Thomas, 1985, 85). Red deer and cat may have been brought over to the island by boat, but there was no evidence of dog, which was also absent from Halangy Porth and Nornour. A few bones, possibly from the same animal, were found on Tëan.

Acknowledgements.

I would like to thank Dale Serjeantson and Kate Clark (Faunal Remains Unit, University of Southampton) for discussion and use of reference material; also Caroline Grigson (Institute of Archaeology, University College London), for her comments.

Table 1: Mammals from the 'red' midden deposits

Context	Cattle	Horse	Sheep	Pig	Catt S	She S	Cat	Rabbit	Indet	Total
186	0	0	2	1	0	0	0	0	0	3
193	1	0	0	0	0	0	0	0	0	1
211	1	0	6	3	5	3	0	2	10	30
212	1	0	2	0	0	0	0	0	0	3
214	0	0	0	0	0	0	4	126	3	133
215	1	0	0	0	2	0	0	4	0	7
258	0	0	0	0	0	1*	0	0	0	1
261	0	0	0	0	0	3*	0	0	0	3
265	0	0	1	3	3	0	25	2	43	77
266	5	0	0	2	0	3	4	0	6	20
273	2	0	4	0	0	0	0	0	0	6
274	0	0	0	1	0	0	0	0	0	1
303	0	0	0	1	0	1	0	0	2	4
304	0	0	1	0	0	0	0	0	0	1
308	0	0	0	1	0	0	0	0	0	1
318	2	0	0	0	0	1	0	0	0	3
328	0	1?	3	0	3	0	0	0	0	7
329	0	0	1	0	0	1	0	0	4	6
338	0	0	2	1	0	0	0	0	14	17
540	0	0	2	2	0	1	0	0	4	9
541	0	0	1*	0	0	0	0	0	0	1
631	0	0	0	4	10	0	0	0	0	14
634	0	0	0	0	0	1*	0	0	0	1
650	10	0	25	10	12	14	0	0	20	91
706	0	0	0	1	0	4	0	0	0	5
776	0	0	0	0	0	0	0	0	1*	1
779	1	0	17	1	1	0	0	0	0	20

Total 24 1? 67 31 36 33 33 134 107 466

Catt S = Cattle sized

She S = Sheep sized

* = burnt

Table 2: Mammals from the 'yellow' midden deposits

Context	Cattle	Indet	Total
284	1	0	1
285	0	1	1
Total	1	1	2

Table 3: Mammals from the 'black' midden deposits

Context	Cattle	Sheep	Pig	Catt S	She S	Cat	Rabbit	Indet	Total
349	1	2	2	1	0	0	2	2	10
350	0	7	1	2	0	0	5	0	15
945	7	3	3	5	1	0	0	12	31
946	0	1	2	8	0	0	0	0	11
952	5	5	0	5	2	0	0	6	23
953	3	0	1	0	0	0	0	0	4

954	0	0	0	1	0	0	0	0	1
955	0	1	0	0	0	0	0	0	1
967	2	4	1	5	0	0	0	0	12
968	5	3	0	0	0	1	0	0	9
970	0	0	0	0	0	0	1	0	1
973	5	3	0	4	0	0	0	12	24
975	0	1	0	0	0	0	2	0	3
976	1	0	0	0	0	0	0	0	1
977	11	6	0	5	4	0	0	20	46
978	6	0	0	0	0	0	0	0	6
980	0	0	2	3	0	0	0	15	20
981	2	1	1	1	2	0	0	0	7
982	0	1 *	0	0	0	0	0	0	1
987	0	0	0	0	2	0	0	1	3
Total	48	38	13	40	11	1	10	68	229

Table 4: Mammals from the 'blue' midden deposits

Context	Cattle	Sheep	Pig	Catt S	She S	Rabbit	Indet	Total
341	0	0	0	1	0	0	1	2
347	1	0	0	0	0	0	0	1
373	0	1	0	0	12	0	0	13
407	2	0	0	0	0	0	0	2
442	0	0	0	0	2	0	0	2
524	0	0	0	5	0	0	0	5
525	5	0	0	0	0	6	0	11
678	1	3	5	0	2	0	4	15
722	0	1	0	0	1	0	0	2
726	0	1	0	0	0	0	0	1
753	3	6	1	0	6	0	2	18
851	1	0	0	0	0	0	0	1
856	3	0	0	2	0	2	2	9
857	1	2	0	0	2	0	2	7
861	2	2	1	2	0	2	3	12
872	0	1	0	0	0	0	0	1
886	0	0	0	1	0	0	0	1
888	0	0	0	0	4	0	0	4
891	1	3	0	7	3	0	20	34
900	3	1	0	5	1	0	12	22
903	1	3	2	5	3	0	10	24
910	0	3	0	0	0	0	0	3
913	0	0	0	0	1	0	0	1
920	0	1	0	0	0	0	0	1
921	0	1	0	0	1	1	0	3
922	1	0	0	0	0	0	0	1
923	0	1	0	0	0	0	6	7
924	2	0	0	0	0	0	0	2
925	0	0	1	0	0	0	0	1
926	1	7	1	5	0	0	15	29
Total	28	37	11	33	38	11	77	235

Table 5: Mammals from the ‘green’ midden deposits

Context	Indet	Total
1095	1	1

Table 6: Mammal bones by anatomy from ‘red’ midden deposits

Anatomy	Cattle	Horse	Sheep	Pig	Catt S	She S	Cat	Rabbit	Total
Skull frag	3	0	1	12	2	0	3	0	21
Tooth	9	0	9	2	0	0	0	0	20
Mandible	0	0	2	1	0	0	1	7	11
Maxilla	0	0	0	1	0	0	0	1	2
Atlas	0	0	2	1	0	0	1	0	4
Axis	1	0	1	0	0	0	1	0	3
Vertebrae	0	1 ?	2	0	1	6	10	10	30
Scapula	1	0	1	1	2	2	1	3	11
Humerus	1	0	3	4	0	0	1	5	14
Radius	0	0	5	0	0	2	1	7	15
Ulna	0	0	0	1	0	0	1	2	4
Metacarpal	1	0	10	0	0	0	0	0	11
Pelvis	1	0	1	1	0	0	2	4	9
Femur	1	0	2	0	0	0	2	4	9
Tibia	0	0	6	1	0	0	2	3	12
Calcaneum	0	0	3	0	0	0	2	2	7
Astragalus	1	0	0	0	0	0	0	0	1
Metatarsal	2	0	5	3	0	0	4	8	22
1st phalanx	1	0	2	0	0	2	0	1	6
2nd phalanx	0	0	1	1	0	0	0	0	2
3rd phalanx	0	0	1	1	0	0	0	0	2
Rib fragment	0	0	1	1	2	14	0	7	25
Long bone frag	0	0	0	0	14	15	0	0	29
Total	22	1	58	31	21	41	32	64	270

Table 7: Mammal bones by anatomy from ‘black’ midden deposits

Anatomy	Cattle	Sheep	Pig	Catt S	She S	Cat	Rabbit	Total
Skull frag	0	0	1	1	0	0	0	2
Tooth	22	4	3	0	0	1	0	30
Mandible	3	0	0	0	0	0	1	4
Maxilla	0	0	1	0	0	0	0	1
Axis	1	1	0	0	0	0	0	2
Vertebrae	7	4	0	6	0	0	1	18
Scapula	0	1	1	0	0	0	1	3
Humerus	1	1	3	0	0	0	1	6
Radius	0	3	0	1	0	0	1	5
Ulna	1	1	1	0	0	0	2	5
Metacarpal	1	3	0	0	0	0	0	4
Pelvis	1	1	1	0	0	0	0	3
Femur	2	3	1	0	0	0	1	7

Tibia	1	4	0	0	0	0	0	5
Calcaneum	1	2	0	0	0	0	0	3
Astragalus	2	1	0	0	0	0	0	3
Talus/Navicular	3	0	0	0	0	0	0	3
Metatarsal	2	5	0	2	2	0	0	11
1st Phalanx	5	1	0	0	0	0	0	6
2nd Phalanx	1	1	0	0	0	0	0	2
3rd Phalanx	2	0	0	0	0	0	0	2
Rib	0	0	0	2	2	0	2	6
Long bone frag	0	0	0	11	6	0	0	17
Total	56	36	12	23	10	1	10	148

Table 8: Mammal bones by anatomy from 'blue' midden deposits

Anatomy	Cattle	Sheep	Pig	Catt S	She S	Rabbit	Total
Skull frag	1	1	2	3	0	3	10
Tooth	12	8	0	0	0	0	20
Mandible	1	3	0	1	0	1	6
Maxilla	0	0	0	0	0	2	2
Atlas	1	0	0	0	0	0	1
Axis	0	1	0	0	0	0	1
Vertebrae	0	4	0	1	1	0	6
Scapula	1	0	0	0	0	0	1
Humerus	1	4	1	0	0	1	7
Radius	1	4	1	0	1	0	7
Ulna	3	0	1	0	0	1	5
Metacarpal	0	4	0	0	0	0	4
Pelvis	0	2	3	0	0	0	5
Femur	1	0	0	1	1	2	5
Tibia	1	1	1	0	0	1	4
Calcaneum	0	1	0	0	0	0	1
Astragalus	0	1	0	0	0	0	1
Talus/Navicular	3	1	0	0	0	0	4
Metatarsal	2	0	0	0	1	0	3
1st Phalanx	1	2	0	1	0	1	5
2nd Phalanx	1	0	1	0	0	0	2
Rib	0	0	0	3	6	0	9
Long bone frag	0	0	0	8	12	0	20
Total	30	37	10	18	22	12	129

6.5 The Marine and Non-Marine Molluscs, by Alison Locker

A small number of marine mollusc shells were found in the limpet shell middens or close by, as were a few shells of non-marine molluscs. They are as follows: -

1972	2 snails (<i>Cepaea</i> sp. probably <i>nemoralis</i>) dark lipped banded snail
1966	5 topshells
	1 flat periwinkle (<i>Littorina littoralis</i>)
	2 rough periwinkles (<i>Littorina rudis</i>)
	3 common periwinkles (<i>Littorina littorea</i>)

	1 <i>Cepaea</i> fragment
	1 ?oyster fragment
972	cf. 3 common necklace shells (<i>Natica alderi</i>)
884	1 flat periwinkle
	1 rough periwinkle
	1 common periwinkle
	1 <i>Cepaea</i> sp.
	1 indet. Periwinkle
801	2 <i>Cepaea</i> sp.
724	1 <i>Cepaea</i> sp.
747	1 <i>Cepaea</i> sp.
859	1 flat periwinkle
	1 small snail indet.
755	3 common/garden snail (<i>Helix aspersa</i>)
	1 <i>Cepaea</i> sp.
907	1 broken snail, indet.

6.6 The pieces of charcoal, by Rowena Gale

Introduction

Excavations at Halangy Down yielded 121 charcoal samples from contexts associated with the huts and their environs. A total of 580 charcoal fragments were examined for species identification. The dating of the charcoal is insecure since recent disturbance of the site by stone-robbers and clearance of local scrub had confused the sequence of some samples. Several pieces considered coeval with the settlement were assessed for C14 dating.

Materials and methods

The structural condition of the charcoal varied from friable to fairly firm-textured. Samples 1708 and 1768 were too degraded to obtain identifications and samples 1560, 1561 and 1769 contained insufficient diagnostic information to enable more than tentative identifications of some fragments. Most fragments in the remaining samples measured >2mm in the transverse axis and some exceeded 10mm. Fragments measuring <2mm were not examined since this can be time-consuming and is often unrewarding. The fragments were prepared for examination by fracturing to expose fresh surfaces in the transverse, tangential longitudinal and radial longitudinal planes and mounted in washed sand. Where a quantity of fragments was included within a single sample the pieces were examined with a X20 hand-lens and sorted into groups based on the anatomical features visible on the transverse surfaces: representative fragments were selected from each group for detailed examination at high magnification. The fragments were examined using an epi-illuminating light-microscope at magnifications of up to X400. The anatomical structure was matched to authenticated reference material.

Fragments from samples where more than one taxon was identified were isolated in tin foil and individually labelled. Where possible the relative maturity (*i.e.* stem, sapwood or heartwood) of each fragment was noted.

Results

A list of the sample numbers and contexts and the genera identified is given in Section 8.6 below. The genera identified included: ? *Alnus* sp. (alder); *Corylus* sp. (hazel); *Quercus* sp. (oak); *Salix* sp. (willow)/ *Populus* sp. (poplar); *Sambucus* sp. (elder); *Ulex* sp. (gorse); *Cytisus* sp. (broom); *Larix* sp. (larch)/ *Picea* sp. (spruce); *Pseudotsuga* sp. (douglas fir). The artefactual and environmental implications of these findings are considered below.

Ulex stem was present in 96 contexts (see 8.6) and was the dominant genus throughout. The fragments appeared to be from stems that were fairly narrow in diameter and rarely exceeded 15 mm. *Ulex* and *Cytisus* are closely related and anatomically rather similar. The thick-walled gelatinous

fibres and diffuse porous arrangement of the vessels present in most samples suggested *Ulex* rather than *Cytisus*. *Ulex* thrives on acidic or poor soils and can grow rapidly forming dense impenetrable thickets. *Cytisus* often grows in association with *Ulex*. Nowadays *Ulex* is common on St. Mary's and its clearance from the area around the site during the recent centuries may have contaminated some contexts. Nonetheless, it was present in samples 496, 553, 628, 761, 909, 916, 1093, 1257, 1334, 1352, 1457 and 1551 which are fairly confidently considered to be ancient. Traditionally *Ulex* has been used for a wide range of purposes, particularly in areas where wood from other sources was scarce, for example, in parts of Ireland where it was taken into cultivation (Lucas, 1960). The stems have been used as battens to support thatch on buildings and the branches, used whole, as thatching material or chopped to pack land drains. Crushed stems have provided fodder for livestock and the alkali-rich ashes used for bleaching or washing. The stems make a fast-burning fuel and have been used in ovens and kilns, for example, at Oxford where *Ulex* and *Pteridium* (bracken) were found in the kitchen area of a Saxon priory (Lambrick, 1985). Although *Ulex* was ubiquitous at Halangy Down it was associated with hearths or ovens in samples 628, 876, 1093, 1257, 1317 and 1551. In sample 1551 it was mixed with *Quercus* and *Corylus*.

Quercus occurred in 41 samples (see 8.6). Stem material appeared to be more common than heartwood but the small dimensions and/or degraded structural condition of many fragments prevented the assessment of maturity. *Quercus* produces probably the most versatile of all European timbers and its durability and strength has proved ideal for many purposes including construction work, components of agricultural tools and domestic items (Edlin, 1949). It makes excellent firewood and charcoal with a high thermal capacity and is well suited for use in industrial kilns. *Quercus* was found in a wide range of contexts at Halangy Down (including sample 1551 from a hearth area). The common occurrence of stem wood in many of the samples may suggest the use of coppice wood, but any deductions based on the fragmented material available would be invalid.

Larix/Picea was identified in 14 samples and since neither genus is native in Britain the presence of this charcoal at Halangy Down is of note. It is not possible to distinguish *Larix* from *Picea* using anatomical methods. The samples (see 8.6) mostly related to Hut G or associated areas (sample 1751 was the only exception - from drain F area), suggesting that the fragments may have originated from a common source. It is possible that these represent modern deposits. *L. decidua* and *P. abies* are indigenous in the Balkans, Russia and the Alps to Scandinavia. The first was introduced into cultivation in Britain in c. 1620 and *P. abies* in c. 1500 (Mitchell, 1974). Interestingly, *Larix* was identified by Keepax and Morgan from charcoal from Nornour (1978, 98) a site contemporaneous with Halangy Down. If these charcoal deposits at Halangy Down are ancient their derivation from driftwood should be considered. As a natural phenomenon, it is just feasible that marine currents could have carried logs of North American species across the Atlantic. However it is unlikely that European species would have drifted from their homelands. The Scilly Isles are notoriously dangerous areas for shipping and a more plausible explanation lies in the debris from shipwrecks. Both *Larix* and *Picea* have been used for ship-building; *Larix* is particularly durable when wet and was used in the Mediterranean in antiquity (Stevenson, 1920; Meiggs, 1982). Other artifactual uses of both timbers in Europe have included the manufacture of tubs and casks (Meiggs 1982; Wagenfuhr *et al.*, 1989). Such items may have been used to contain imported foods or liquids. *Larix* was also used to make writing tablets, examples of which have been found in Roman London (Milne, 1985).

Coniferous wood was identified in samples 1079, 1560 and 1687. The condition of sample 1079 was too degraded to identify further. Sample 1560 included a fragment with very dense structure. The absence of resin canals and spiral thickening on the tracheids allowed the elimination of *Larix*, *Picea*, *Pinus* (pine) and *Taxus* (yew) but it was not possible to identify the piece positively. Charcoal from sample 1560 was identified as *Pseudotsuga*. The anatomical structure of this timber includes vertical and horizontal resin canals lined with up to 6 epithelial cells and tracheids with prominent spiral thickenings. This combination of characters is not seen in other conifers. *Pseudotsuga* is native in the western montane regions of North America and the Far East. The American species were discovered in the 18th century and introduced into commerce in the 19th century (Stevenson, 1920). Mature heights of 92m have been recorded for these trees and they have been much in

demand for ships' masts and spars. Ships' debris would therefore appear to be a possible source for the sample from Halangy Down. It is extremely improbable that this fragment could be more than a couple of centuries old. It is worth mentioning that this sample, in common with the fragments of *Larix / Picea*, was associated with hut G. By implication, the fragments of *Larix / Picea* may also be spurious in a Romano-British context.

Other genera (with native species in Britain) identified from the site included *Sambucus*, *Corylus*, *Salix / Populus* and possibly *Alnus*. The first two are generally shrubby growing in open areas or marginal woodland although *Corylus* also grows as understorey with *Quercus* or in mixed woodland. *Salix* and *Populus* are closely related and difficult to separate using anatomical methods. *Salix* species thrive in damp situations and while some species form tall trees, a few are shrubby. *Populus* species are non-woodland trees often growing in well-drained meadows. *Alnus glutinosa* is a moisture-loving species, growing either as a tree or, when on marshy ground, as a shrub sometimes forming *Alnus* carr with *Salix*.

Samples selected for C14 dating.

Samples (marked with an asterisk in Section 8.6) were pre-selected for dating pending observations on maturity. Samples 496, 628, 761, 909, 916, 1093, 1334, 1352 included stem material of *Ulex* and should therefore produce accurate results. Sample 1693 comprised *Salix / Populus*. It was not possible to establish whether or not these fragments arose from juvenile growth but, since they relate to Hut G, a positive date for this context would be pertinent. Sample 667 included 1 fragment, unidentified but possibly bark and in very poor condition. The structure was distorted and partially vitrified. This sample would probably be less suited to the dating process than the *Ulex* samples.

7.0 GENERAL CONSIDERATIONS

7.1 Halangy Down before its buildings

Essentially, the buildings stand upon, and utilise, serried stone-faced terraces, bracketed between considerable lynchets, also revetted, at the top and bottom of the hillslope. If, as seems likely, the initial Scillonian chambered cairns (the entrance-graves), of which Bant's Carn (St. Mary's 2; Ashbee, 1976) is one of the more substantial examples, are of local Mesolithic origin (Ashbee, 1982), the first lynchets on Halangy Down must be ancient, and perhaps among some of the first of their kind. This is because the Bant's Carn stands upon the upper, substantial, lynchet (Thomas, 1985, 113, ill.47b), while its counterpart, Halangy Lower (St. Mary's 2a) at the foot of the hill, is partially buried beneath the bottom one (Fig 6). Other ruined examples (Fig 4) similarly stood upon lynchets.

The steep slope is undoubtedly the reason for the survival of Halangy Down's ancient terraced fields, for those in more favourable situations have been obliterated by recent agricultural activities. Indeed, there are tenuous traces on the high, level, area to the NE of the system, and it is suspected that many massive stone walls, separating fields still in use, are, as in Cornwall, of considerable antiquity (Crawford, 1936; Darvill, 1987, 187).

Slope cultivation in Scilly, as elsewhere (Topping, 1989, 173), firmly prehistoric, has, in later times been considered as denoting a lack of land (Taylor, 1975, 92). Such a shortfall could scarcely have obtained at this early stage, before even the inroads of marine transgression (Thomas, 1985, 17-64), for the initial Early Phase Scillonians had seemingly unlocked the potentialities of their unique environment and established a long lasting, little changing, mode of life (Ashbee, 1974, 279-94; 1982, 13-4). There is however, the possibility that soil deterioration might have occasioned such a departure and the chambered cairns have been seen as *fana*, for the alleviation of erosion and loss of fertility, when they are intimately associated with field systems (Ashbee, 1976, 19-24).

It must be observed in passing that the terraced fields, and thus the houses, on Halangy Down, are preceded by the deep channel, a feature which stands apart from the various building-stance incuts. This was a natural feature, the result of fluvial downcutting, presumably during a vanished hydrological regime. Although before the massive abstraction from the St. Mary's aquifer there was a small spring emerging from a split rock just below the crest of the hillslope, it could, even after heavy rainfall, hardly have carved such a channel. Moreover, there is upon the higher ground no trace of a stream, such as that which ran from the spring-fed pond adjacent to Watermill Lane and descended, via Lenteverne Well, to Watermill Cove on the E side of St. Mary's, from which the channel could have been fed. Thus there is the inherent possibility that this is a late glacial melt-water channel (Scourse, 1986, 18-28, Fig 13). As has been observed, some of its infill is patently artificial. Despite this, it drew ground-water, even as it does today, making complicated drainage systems necessary when the houses were built.

A degree of uncertainty attends the nature of the terraces on Halangy Down. Were they formed by lyncheting, the ploughing of strip-fields causing the downward movement of soil and the formation of scarps which, as they waxed in height, were faced with stones, or was there from the outset deliberate terracing? Some of the stones may well, in the first instance, have come from the fields but where they survive, and particularly where they have been built over, terrace revetment has frequently involved the use, and thus the transport from various sources, of enormous blocks of stone, for the most part of a much greater size than those employed in the avowedly megalithic chambered cairns. Thus an especial intention, such as developed garden cultivation (Murphy, 1983), as distinct from the normally conceived functions of ancient fields which are elusive, despite the claims of cereal cultivation (Piggott, 1981, 52; Fowler, 1981, 162) is possible.

Halangy Down's chambered cairns were prominent; the imposing Bant's Carn (St. Mary's 2) at the crest of the hillslope and the two lesser ruined examples standing upon terrace edges, and one at the bottom of the slope, all but overwhelmed by soil (St. Mary's 2a). This last may have preceded the terraced fields or been set up during their use-life. If not raised as a response to soil erosion and fertility loss (Ashbee, 1976, 19-24), they could have been dedicatory *fana*, designed to ensure the fruitfulness of the prestigious, massively constructed, terraces, which had initially involved an

unprecedented expenditure of labour, comparable with many mainland public works (Renfrew, 1973, 547-9). At the same time their presence would have been a continuing testimony to territorial divisions and ancestral rights upon land and in the sea.

Although the essentials of the beliefs embodied in the Halangy Down, and for that matter, other Scillonian *fana*, may evade us, prescriptive elements are, nonetheless, to be seen. The siting and spacing, at the top, bottom, and elsewhere, upon the field system, already an established domain, could have been subject to special considerations, as was the circularity of the structures, the long chambers of which are prefaced by a portal. In this respect the Bant's Carn (St. Mary's 2) is exceptional because of its size and solidity (Fig 5; Pl 4). Although four cremation burials were found in its chamber, its contents, like that of many other *fana* (Ashbee, 1976, 24-5), were mostly occupation soil with broken pottery. Like the sitings, this indicates a further link with the fields and, because of formalistic burial, possible adjuration of a chthonic principle. With the effluxion of time the beliefs they may have embodied were superseded but the edifices were retained.

The continuance of the chambered cairns throughout the use-life of the settlement built upon Halangy Down's ancient fields, indicates the enduring significance attached to them. They were neither interfered with nor was their stone taken for field boundaries or house construction. Indeed, they cannot have been other than integral parts of a timeless, especial, although functional, supportive landscape. This is because of the balanced pattern of life, sustained by recourse to land and sea, maintained since Mesolithic times (Ashbee, 1982). Substantially, the beliefs that led to the *fana*, those chambered cairns integral to these dimensions, may have endured for more than three millennia, twice as long as Christianity.

7.2 Scilly's sanding and the move to Halangy Down

Scilly's sanding, and its accompaniment, marine transgression, was an irregular process. There were rising sea levels and sanding during prehistoric and Roman times, but, despite local inroads, a substantial island, with ancillary entities, still survived at the end of this period. However, contrary to earlier suppositions, there were massive onslaughts from the eleventh century onwards and, substantially, the present archipelago was in being by the sixteenth century (Thomas, 1985, 17-34). This fragmentation coincides, in fair detail, with the pattern of storms, floods and sandings which, from the eleventh to the sixteenth centuries, beset the South Wales coast, as well as other parts of Britain (Higgins, 1933, 65; Brooks, 1949, 372). It is thought to have resulted from abnormal weather or tidal conditions, which found expression in surges. At the same time it should not be overlooked that there is an unstable continental margin to the west of Britain (Everard, 1980, 12). Thus, particularly in Scilly, as has been exemplified (Thomas, 1985, 48-52), there would have been immediate, intense, erosional encroachments, with enduring consequences, exacerbated by the downward terrestrial trends. At every stage there would have been shores and flats, comparable with those still to be seen by Samson and St. Martin's, exposed at low tide. Winds would rapidly dry the sand and dunes would have formed. The early dune patterns, such as would have mantled the central lowland, and of which the level *machair* area at the foot of Halangy Down is a remnant, have been almost all submerged and redeposited. Present-day duning reflects contemporary topography.

To complement the evidence of early Scillonian sanding, blown sand was already present on parts of the South Wales coast by later prehistoric times. Indeed, in the extreme west of Pembrokeshire it was thought to be post-Neolithic, reaching its present position, in the low coastal areas, by the Bronze Age. The sanding of higher levels, and places further up the Bristol Channel where there is still movement, is a more recent phenomenon (Higgins, 1933, 60-7; North, 1955, 7-9, Fig 25). In Jersey, blown sand had shrouded a chambered cairn prior to the sixth century BC (Hawkes, 1939, 33). On the north coast of Cornwall the dunes (towans) along the Hayle river are 200ft wide and at Perranporth they are 200ft in height. Sand overwhelmed the church of St. Piran at an early date, and has buried other churches and settlements (Hencken, 1932, 259). The Iron Age cemetery at Harlyn Bay (Whimster, 1977) was beneath almost 15ft of blown sand, while sanding had put an end to the post-Roman hamlet at Mawgan Porth (Bruce-Mitford, 1956; 1997). Collections of Mesolithic, Iron Age and Mediaeval material show something of the progression of coastal sanding between Newquay and Perranporth (Harding, 1950), while sand covered ancient tillage at Gwithian (Megaw, Thomas & Wailes, 1961, Fig 24; Fowler & Thomas,

1962) and, by the sixteenth century, the early village and churches (Thomas, 1964).

In broad terms, Scilly's sanding, a result of submergence and ultimate separation, was an uncommon formulation of the processes which changed Britain's western coasts, modestly in later prehistoric times and considerably during the more recent Middle Ages. Scilly was exceptional in its isolated position at the continental margin and because its fundamental granite eminences were surrounded by softer, friable, far from sea-resistant, low land. Downward land movement together with rising sea-levels, sometimes surge augmented, magnified and intensified erosional encroachment. Wind-borne sand could, therefore, from the first have incommoded and threatened parts of the environment, human settlement and activity.

Scilly's southwestern flank (Fig 1), with its central lowland area, would have been bordered by sand, blown inland by on-shore winds. Rising sea-level and erosion destroyed and reshaped this relentless sanding as the present-day islands came almost into being (Thomas, 1985, 17-63). Although particulars of Scilly's sand dunes are given by Barrow (1906, 30-1) and Lousley (1971, Fig 2, 12-3) their nature has not been studied in detail. Their dynamic was amply demonstrated when, in 1834, crops and houses were invaded (Lousley, 1971, 12). The blown sand blanketing the level area at the foot of Halangy Down remains from the system which brought about the covering of much of the erstwhile central lowland area, caused the abandonment of the Early Phase settlement exposed in Halangy Porth, burying the remnants, and ultimately reached the northwesterly high land of what is now St. Mary's.

Halangy Porth was sanded by Roman times as cist-graves of Porth Cressa type (Ashbee, 1979a, 74-6) have been found dug into the level slope-bottom sand-blanket. However, sand, moving more-or-less northwards, need not have covered the ancient fields at Bar Point until as late as 600-700 AD, since a post-Roman imported E-ware rim and lid (Thomas, 1981, 20) were found upon the tillage-scarred sub-sand surface (Ashbee, 1978). The examination of an area of the Bar Point field systems, deemed Iron Age, found charcoal in a lens of black, sandy, loam, which yielded the radiocarbon date HAR-3483 190 ± 70 BC, and littoral sand beneath N-S walls (Evans, 1983a, 22, 27).

Before the settlement in what is now Halangy Porth was finally abandoned, it was systematically demolished, down to the great foundation stones (Ashbee, 1983, Fig 5; Pls 2, 3), presumably to provide materials for the relocated structures. Indeed, Alec Gray's '*cobble pavements*' (Gray, 1972, 44) could well have been spreads of discarded wall-infill. Thus such stones as the long, worn, apparent threshold blocks, reused for roofing the entrance to the courtyard, the great cup-and-slot marked and perforated boulders, encountered beneath the floor of B, and the many saddle querns, whole and broken, found built into walls and foundations, could all, presumably, have been derived from this source. It might also be considered that the various uses made of the massive revetting of the cultivation terraces betoken an intimate acquaintance with them. Thereafter soil was tipped into the reduced structures and they became, it would seem, protected garden plots where beans were cultivated (Murphy, 1983). A radiocarbon date, HAR-1313 310 ± 90 bc, has been obtained from charcoal recovered from this source, which accords well with the pottery sequences of Halangy Porth and Down (end and beginning), besides the general progress, at that time, of Scilly's submergence and sanding.

7.3 The buildings on Halangy Down

From such fragments as it was possible to excavate, and as must be emphasised, had endured, it is likely that the initial buildings, which preceded the close-knit complex, were circular, echoing those abandoned, because of blown sand, in Halangy Porth (Ashbee, 1983, Figs 4,5). On Scilly comparison can also be made with a circular hut exposed on Par Beach, St. Martin's, in a situation normally covered at full tide (Ashbee, 1974, 180, Fig 39; Beagrie, 1989, 51) which was of a size commensurate with the smaller circular huts, which apparently preceded the larger. A circular hut, with an internal diameter of 17ft, was also a part of Nornour's eastern area, where it was late in the sequence (Butcher, 1978, 41). The larger Halangy Down circular hut, possibly as much as 35ft in diameter, with an internal diameter of about 25ft, may have been smaller but, notwithstanding, was comparable with some of the Stannon Down, Cornwall, series (Mercer, 1970). Here, Huts 1 and 6 were 43ft and 52ft, respectively, in external diameter, with internal diameters of 31ft and 32ft, while 3 and 4 were more modest and conformed to Scillonian sizes.

They were associated with fields and an early strip system. The circular huts at Bodrifty (Dudley, 1956) are also similar, for such circular houses, as on Scilly, are identical with those of the local Cornish Bronze Age (Quinnell, 1986, 117, Fig 2).

In the West Country most stone-built circular huts or houses had a long life which is thought to have begun at such sites as Dean Moor (Fox, 1957) and Trevisker (ApSimon & Greenfield, 1972). More recent excavation at Shaugh Moor, Dartmoor (Wainwright & Smith, 1980) has shown that such structures, here within an enclosure, sometimes progressively modified, and in use for a millennium, had a floruit and decline determined by the interplay of various complicated factors. On Scilly, as elsewhere in the southwest, an earlier origin is likely for circular huts with stone-faced earthen walls. Indeed, they have long been known, in their various forms, within the broader Mesolithic tradition (Clark, 1952, 170; 1975, 212; Engelstad, 1990) which has now emerged (Ashbee, 1982; Scaife, 1983; Ratcliffe, 1989, 33) as the basis of ancient Scillonian being.

Also prior to the building succession are the four oven bases (Figs 9, 10). These may represent the transference of activities from Halangy Porth, for, during the 1930s, Alec Gray (1972, 28, 36) detected *burned areas* beneath the modern fields behind the structures exposed in the cliff (Ashbee, 1983). An associated storage jar and a sherd with numerous grain impressions might indicate corn-drying. It must be stressed, however, that no trace of carbonised grain, some of which could have survived, was found either in or about the Halangy Down bases. Clay *hearths* were found in a hut, set in an early field system, at Perpitch, St.Martin's, excavated by B. H. St. J. O'Neil in 1951 (Ashbee, 1974, Fig 36; Beagrie, 1989, 52) while an oven base, of similar dimensions to the Halangy Down series, was encountered in the ditch of The Rumps, a promontory fort, near Wadebridge, on the Cornish mainland (Brooks, 1974, 16, Fig 1). Although it has for long been customary to consider oven bases as evidence of corn drying (Goodchild, 1943; Curwen, 1946, 101-4), there is also the possibility that they might have been for smoke or cooking ovens. (Childe, 1949, 83-4; Coles, 1973, 48). A small oven was found at Carloggas, Mawgan-in-Pydar (Threipland, 1956, 45), and a well-preserved example was encountered at Maiden Castle (Wheeler, 1943, 55, Fig 16). They are often found on Iron Age and Romano-British sites. Indeed, the amount of grain that could have been dried in a single firing, in such an oven, would have been minimal. Stone-built kilns, with appropriate draught controls, as have been identified in Scotland (Feacham, 1957, 45-50), could have been readily constructed on Scilly.

Halangy Down's ultimate succession of building remains, the lower slope sequence, the courtyard house and the northern detached structure, despite the damage they have sustained, can be seen as the result of progressive replacement, remodelling, extension and strengthening. They have factors in common and, although their use-life may have been almost a millennium, their intrinsic form and arrangement, as well as their particular constructional modes, were maintained. Oval chambers were the basis of the lower slope sequence and a feature of the courtyard house (Fig 8, F1, F2, B, C, A). Three, perhaps four, of these (B, C, A, G) had small roughly circular, even pentagonal, annexes attached to them. A chamber of the courtyard house (Figs 17, 20) was the only commodious circular structure. Cells, or aediculae, were a focal feature of the courtyard house's courtyard and of three oval chambers on the lower slope (F1, B, G). Slab-built hearths were found in two of the lower slope oval chambers (C, G) and the circular chamber of the courtyard house (D). The first two were eccentrically sited while the last was almost central.

The stone-faced earthen walls of Halangy Down's buildings were normally about 5ft in breadth, expanding at the entrances (Figs 11, 17). Of note in this respect are the N end of the upper wall of B, which oversailed remnants of F1 and F2, the S end of the lower wall of the oval chamber of the courtyard house (A) and the S end of the courtyard house's courtyard. This, in its final form, had been extended and strengthened, presumably to house a long, narrow, intramural recess. The 'corridor' entrance to the S side of B may be an amplified adaptation of this recurrent feature. Megalithic boulders, a feature of the hillside's cultivation terrace revetment, had been incorporated to support the NW corners of B and the oval chamber of the courtyard house (A). Of the lower slope structures, slab paving had partially survived in the entrances to B (N) and G. In the courtyard house paving at the entrances to the oval chamber (A), and to the courtyard, were largely intact while the steps from the courtyard leading to the circular chamber (D) had also survived. Any consideration

of Halangy Down's buildings must, however, take into account the probability that rebuilding and modification might have left little overt trace. The variations of constructional techniques observed among the building remains, block coursing involving the staggering of joints, panels formed by substantial blocks and boulders, the space between being filled with lighter work and, here and there, megalithic and near-megalithic blocks, usually to be related to the cultivation terraces, could be neither given a sequence nor related to any particular structure.

Ostensibly *sanded* floors were a feature of some, but not all, of Halangy Down's various structures. As detailed above (Section 3.2, pp. 17-8), the material used was sandy clay, from the rabb, which when redeposited dries hard, and is lasting and durable. Floor remains were associated with the first structures (Fig 9), although the areas cannot be readily associated with the circular hut's remaining masonry. The total demolition of the structure of which they were a part is to be suspected. Later, on the lower slope, the *sanded* floor remains within F1 were around its N side, partially in F2, and within the aedicule. No trace of such flooring remained with B and C, nor the rectangular attachment, although the small N circular chamber conjoined to C had a largely intact area which had survived. Within the courtyard house the N end of the large oval chamber (A) retained flooring, as did the N pentagonal adjunctive chamber, while there was a remnant adjacent to the entrance. The circular chamber (D) was completely floored beneath its internal partition and around its hearth. Within the northern detached structure (G), there was sandy flooring by the hearth, partial within its small circular chamber and, as in F1, complete in its aedicule. Seemingly partial *sanding* could remain from, and thus reflect, internal dispositions but, nonetheless, it might result from periodical repairs to worn areas.

Traces of a compound similar to, but finer than, the sandy floor material, were found between some of the stones of the oval chamber (A) and its smaller appendage, in the courtyard house and adhering to stones derived from its walls. It was initially thought of as mortar (Ashbee, 1955, 192). Such material has also been observed between the stones of cairn chambers and, during their excavation, in such quantities that rendering could be suspected (Ashbee, 1974, 99-101). Pieces of this material were found adhering to the N wall of C to a height of some 4ins. They did not appear to have been displaced floor fragments, for they were retained by a mass of white clay which almost enveloped the line of stones at this point. Although the remains are modest, if not minimal, the possibility that Halangy Down's stone-built house interiors and exteriors were rendered can be envisaged.

Slab-lined and covered water-channels or drains were a feature of the lower slope structures B, where they ran out through the lower wall, F1 and of chambers A,D, the aedicule, and entrance to the courtyard house, as well as the detached house G. Although they were considered, at the outset, as adjuncts of a water-supply system (Hirst, 1937a, 85; Ashbee, 1955, 192-5), it is clear that on Halangy Down they were designed to alleviate an endemic ground-water problem. This is because of the hillslope siting of the houses and the impermeability of the rabb which causes sheet ground-water flow at the base of the soil profile. During heavy rain such slab-drains as had been excavated rapidly filled with water, and flowed, despite the demands made upon the St. Mary's aquifer. In contrast the Nornour buildings, sited at the foot of a rocky outcrop (Butcher, 1978), upon what, at a time of lower sea-level (Thomas, 1985, 17-34), may have only been a modest eminence, employed no drains of any consequence. At Chysauster (Hencken, 1933b), drains comparable with those of Halangy Down, were found, for example, in Houses 5 and 7. It is on a SW facing hillslope, of the Penwith granite area, more than 500ft above sea-level. In contrast, Carn Euny, also upon a granite hillslope and just within the 500ft contour, employed covered gullies, and stone linings were rare (Christie, 1978, 386). Water supply via stone-lined and -covered drains would normally involve collection in appropriate pits or even cisterns which, apart from shallow declivities, have not been encountered on Halangy Down. Here the only drain which patently terminates within a structure is that issuing from the courtyard house's courtyard aedicule (Fig 18). At Skara Brae, however, the function of rather more massive drains is thought to be the conduct of effluent away from the inhabited area (Childe, 1931, 19; Clarke & Sharples, 1985, 65).

Apart from the slab of granite, in which a regular circular depression had been pecked, the function of which may have been to house the butt of a roof support (Ashbee, 1955, 193), no direct

evidence of roofing was found on Halangy Down. Moreover, despite the shallow soil-mantle within some houses, there was no trace of post-holes. Such *post-stones*, as they have been termed, were found *in situ* at Chysauster (Hencken, 1933b, 277) and Porthmeor (Hirst, 1937b, 87). However, at Carn Euny (Christie, 1978, 387), there was evidence of post-holes, and hollowed slabs, which could have been roof-supports, were thought to have had some other use. It is possible that, at the outset, roofing timbers, or even suitable whale bones (Clark, 1947; 1989, 87-109), were brought up from Halangy Porth. Because of the decline of Scilly's woodlands (Thomas, 1985, 69-76; 111-8) this might have been necessary and could have been in service for a long period, being transferred when structures were rebuilt and modified.

In general, Halangy Down's thick, stone-faced, earthen walls at appropriate heights, leaving a headroom of about 5ft, could have carried roofing spars pitched from their inner edges. The larger oval huts and chambers would have needed two internal supports, their smaller circular adjuncts could have been covered without inside support, as could the circular chamber of the courtyard house, while the aediculae were corbelled. Indeed, the courtyard house's circular chamber had a near-central hearth while the intact floor displayed no evidence of the employment of a support. Had the courtyard been roofed, the lower external wall-face would have stood to a height of some 16ft to provide sufficient headroom. It would have undoubtedly have needed the reinforcement for which there is evidence. The roofing spars could have carried a thatch of straw or reeds, which would have been available from low-lying, marshy areas (Scaife, 1983, 35), although turf can also be envisaged. Ropes or netting, of straw or reeds, weighted by perforated stones, could have held the roofing materials in position. Although nothing that could be specifically designated a roofing weight was found during the excavations, it must not be forgotten that perforated, and other unusual, stones have for more than a century been collected with zeal to ornament Scillonian gardens. About the wall-top, there would have been a platform with room for a man to walk and work during the periodic repair or renewal of the roof-cover. Such systems could have had much in common with the stone architecture and heather-rope secured thatched roofs of the *Black Houses*, a feature of the Hebrides into the third decade of this century (Curwen, 1938).

Doors, fixed at the bottom into a pivot-stone, such as was found *in situ* on the E uphill, internal, side of the S entrance into C's rectangular extension (Pl.18) and at the top, presumably, into a lintel, were a feature of Halangy Down's houses. Examples of similar pivot-stones were found during the excavation of Nornour's buildings (Butcher, 1978, 42, 47). Indeed, a similar system of pivoting for doors and gates survived into Devonshire's recent past (Worth, 1981, 356). At Skara Brae (Childe, 1931, 12-4) access doors to the not wholly dissimilar stone-built houses were secured by a bar which slid into wall-sockets close by the jambstones.

Oval huts and houses, commensurate with those on Halangy Down, occur regularly on the Cornish mainland (Quinnell, 1986, Figs 3, 4, 5) and are associated with courtyard houses (Christie, 1973, Fig.2). Nevertheless, as has been stressed, the regular, repetitive, pattern of oval chamber, smaller adjunctive chamber and aedicule, lack convincing counterparts, although at Porthmeor (Hirst, 1937b) and Chysauster (Hencken, 1933b) one or two oval chambers, associated with courtyard houses, have smaller, oval, chambers attached to them. It could also be contended that the *aediculae* are the counterparts of the small cells and chambers which characterise courtyard houses, a conclusion excluded by their numbers and variety.

It is not possible, either upon Scilly or the Cornish mainland, to find precise counterparts for Halangy Down's distinct house plan, a uniform oval chamber, with small adjunct and aedicule, but nonetheless at Nornour, and at Carn Euny and Chysauster (Butcher 1978; Christie, 1978; Hencken, 1933b), broadly similar structural details, principles and arrangements can be seen. Nornour and Carn Euny are both close-knit aggregations of buildings resulting from progressive alteration and reconstruction. A compelling need to site each dwelling as close as possible to its neighbour appears as paramount. Although conjoined chambers were a feature of Nornour, courtyard house principles were absent. At Carn Euny such houses comprised the major part of the cluster. By way of contrast, at Chysauster (Hencken, 1933b, Pl LXXII) they stood at a short distance, one from another, in two rows. They also stand singly at Mulfra Vean (Hirst, 1937a, 96, Fig 1; Thomas, 1963). Some sixty courtyard houses altogether are known from Penwith (Todd, 1987, 171). Nonetheless, in distant,

unrelated, places, and at various times, there have been imperative reasons for the combination of huts and ancillary structures, the basis of the courtyard house. Good examples are the homesteads of Wales (Hogg, 1966, 34, Fig 3) the conjoined *clochauns* (drystone huts) of the Dingle Peninsula, in Western Ireland (Cuppige, *et al.*, 1986, 384) and the Later Bronze Age settlement at Jarlshof, on the far distant Shetland Islands (Hamilton, 1956, 18-39). Halangy Down's courtyard house is the deliberate modification and extension of an oval chamber, with a smaller adjunct and aedicule, similar to others on the hillslope. Presumably it owes its form to the Penwith series. In the light of the pottery and other pieces from the site, their possible prestige and Roman relationship, the inspiration could have come from Penwith.

Indication of domestic occupation are the hearths, in the oval house C, in G, the detached N house and the circular chamber (D) of the courtyard house. Of internal fittings other than the hearths only meagre traces remain. Some slabs at floor level on the N side of C could denote an erstwhile bench, as could the masonry which cut off a chord of the E side of the courtyard house's circular chamber (D). As only a fragment of the sanded floor had survived in the remnant of the small adjunctive chamber of C, and none elsewhere, it was not possible to see traces of internal depositions such as might have been denoted by foot-wear and patching. The fragments of floor remaining within F, the demolished oval house at the N end of the lower slope line, and the detached N house G, where there was a sanded floor remnant adjacent to the hearth and in the adjunctive chamber, where it was worn and patched with earth, may show something of such considerations although they are too indistinct to permit interpretation. By comparison, the intact sanded floor of the courtyard house's circular chamber (D) could point to wooden equipment and a short use-life. However, a sanded floor could have been completely relaid, an undertaking which would not have left overt traces. There was a massively worn and broken floor within the oval chamber (A) of the courtyard house, which was at the outset an oval house, with adjunctive chamber and aedicule, the courtyard element being an extension. This might point to its conversion from a dwelling to industrial use, or perhaps to stall cattle. Indeed, the courtyard's cobble patching and entrance paving could ensue from their passage.

Apart from their uniform size and shape, the adjunctive chambers were characterised by their intact, unworn, sanded floors although nothing was found in them which could point to their function. The space within the oval houses is not large and thus their interiors would have been organised according to a traditional specification, which could be denoted by their size, shape and appearances. Commodity storage is a possibility, for, at least on Halangy Down, pits were not found in the vicinity of the houses. Recourse which was only occasional, for removal and restocking, could account for the lack of overt wear of the sanded floors. There is also the possibility that these small chambers, about 10ft in diameter and within the thickness of the stone-faced earthen walls, comparable with, but more commodious than, the *crùbhe* or wall-beds of the cellular stone-built houses of the Hebrides, used into the recent past (Mitchell, 1880, 66; Curwen, 1938, 269) could have been used in a similar way. Each example on Halangy Down was so contrived as to be away from or above, a potentially damp area and thus could have fulfilled either of these functions. While the opposing niches within the entrance to the courtyard house can be envisaged as for equipment storage, a functional explanation for the *aediculae*, their character and siting, cannot be readily propounded. They are of uniform size and, with the exception of the abandoned walled-off example at the S end of the oval chamber (A) of the courtyard house, were all upon the E, uphill, side of the structures that they served. Two had been given sanded floors, which were unworn, and one an earthen, while that within the courtyard of the courtyard house was floored with stone slabs which covered an emergent water channel, a positive water-source. Within their particular houses they were clearly a focal feature, a characteristic which was emphasised by the provision of a balanced facade, for that within the courtyard house's courtyard, which concentrated its essential qualities. As it is manifest that the Halangy Down houses were occupied, and probably remodelled, in Romano-Scillonian times, it seems possible that the *aediculae* may have been domestic shrines, *lararia*, housing appropriate figures, and family mementos. Their sophisticated equivalents have been encountered within the remains of Britain's Roman buildings and elsewhere within the Roman world (Boon, 1983). Not only had extra emphasis been given to the aedicule within the courtyard

house's courtyard, bronze brooches (Webster, 1986, 132) were found (Section 5.2, pp. 67-70) in the deep earthen floor make-up in front of that which is a focal feature of the massive uphill wall of House B and they could remain from a votive deposit appositely interred, a customary practice (Frere, 1960, 9; 1972, 57-60). The corbelled Halangy Down *aediculae* could have held suitably sized figures of wood or stone (Coles, 1990; Ashbee & Thomas, 1990) or Roman usages could have been followed and an array of figurines, such as the pipe-clay series found on Nornour (Jenkins, 1967; Webster, 1986, 60), upon befitting plinths, could have been the mode. Indeed, it is not impossible that Nornour's numerous bronze brooches and other objects, found with the pipe-clay figurines as well as archaic miniature vessels (Dudley, 1967), once thought to have been offerings at a shrine (Ashbee, 1974, 221-43) and subsequently the spoils of a shipwreck (Fulford, 1989), were supplies destined for Romano-Scillonian domestic or other shrines and deposits.

Although cuts and channels in the rabb may remain from activities on the hillslope before the establishment of the terraced fields, the first buildings thereupon were set up in about 350-250 BC, when blown sand made the houses in Halangy Porth uninhabitable. These were partially dismantled and their stone reused. Oval houses succeeded the circular and these were progressively demolished and reconstructed. Adjunctive chambers and the *aediculae* were added. A lower slope house (C) was given a rectangular extension and, in about 150-250 AD, an upper slope oval house (A) was the basis of the creation of a courtyard house, the only example beyond the Cornish mainland, by modification and extension. Hearths denote three occupied houses which might have involved a social group no larger than an extended family. The small, broken, pieces of pottery and the fragmentary nature of most of the other objects recovered during the excavation, show that everything of value had been removed from the houses before their final abandonment. Small pieces of Samian ware and the piece of a sophisticated mould for casting metal dishes show that Romano-Scillonian life on Halangy Down may not have been without a veneer of civilisation. Grass-marked pieces of pottery show that occupation, albeit upon a reduced scale, may have continued to 600-700 AD.

7.4 The environmental material

Charcoal (*Fraxinus* sp., ash, and *Ulex* sp., gorse) was found in A, the large oval chamber of the courtyard house, during the initial investigation in 1950 and it was observed, with the absence of pieces of bone in mind, that '*Whether or not sheep or cattle were raised are problems for future excavation*'. The nature of the hillslope soils, podsolisation in progress, was also noted (Ashbee, 1955). In the event an investigation into soil pollen in the vicinity of Halangy Down was undertaken (Dimbleby *et al.*, 1981, 139-42) and it was felt that there were indications that St. Mary's had a cover of deciduous woodland although Halangy Down had been treeless. This led to more intensive work which has established something of the vegetational history of Scilly (Scaife, 1983).

The work upon the broken, fragmentary, bone samples, of birds, fish and animals, has been informative and largely confirmatory of the present writer's notions of an ancient Scillonian subsistence economy with an intrinsic, Mesolithic, marine basis to which a Neolithic land-based dimension, agriculture and animal husbandry, has been added (Ashbee, 1982, 13-4; 1986, 195). There were, however, no overt traces of the intensive production of oil from marine creatures, as attested by the great quantities of sooted pottery found in Halangy Porth (Ashbee, 1983, 34-5).

Halangy Down's bird bones were from a range of species and the pattern that emerged was, as in earlier times, of the exploitation of sea-birds together with the incidental use of other species. There is also the possibility that sea-birds were an export from Scilly to mainland Roman towns such as Exeter or even beyond. Of particular note are the bones of the now extinct Great Auk (*Alca impennis*) the first from the southwest. Although agile at sea, it did not fly and was thus easily taken while it hatched its single egg. It was also considered good to eat despite its fishy-flavoured flesh, while its oils and feathers were of value. Such factors ensured its extinction (Ritchie, 1920, 142-4). Besides Scandinavia and Scotland, its remains have been found, in post-glacial sites, on the eastern coast of Ireland and as far south as Brittany (Clark, 1948a, 130, Fig 3), a distribution reminiscent of those monuments directly comparable with Scilly's chambered cairns.

Although, as has been stressed, the fish bones from Halangy Down are few in number, the species reflect rocky shore fishing by line or net. This, a convenient mode, would not necessarily have

precluded fishing further afield from boats (Ashbee, 1983, 34-5).

It has emerged from the examination of the mammal bones that cattle, sheep and pigs were the dominant species. Their fragmentary bones bore butchery marks and had often been smashed presumably for marrow extraction. Only one piece of red deer bone was identified and this might have been brought from the mainland for industrial use because of its essential strength and gracile form. Thus Halangy Down's mammal bones can throw little light upon the problem of an erstwhile Scillonian deer population (Thomas, 1985, 78) which remains a possibility. Of particular interest are the bones of a cat found in the midden accumulation at the S end of B. It has been observed that they bore no marks which might suggest that the animal was killed for its pelt. These bones are the first of their kind from Scilly, if not from the West Country. Although it has been observed that the Halangy Down cat may have been a domestic animal, Zeuner (1963, 388) was of the view that it would not be possible to distinguish it from a European wild cat (*Felis silvestris* L.) with certainty from the details of the skeleton. Context, however, might be more significant than osteological characteristics. At Windmill Hill (Smith, 1965, 143-5) cat remains, with those of other similarly sized fauna, were considered wild, as were the Glastonbury Iron Age 'lake-dwelling' cats associated with the bones of other small wild carnivores (Dobson, 1931, 111). Iron Age cat remains from Gussage All Saints were, because of their immaturity, considered as probably domestic (Harcourt, 1979, 154). A cat's ulna was noted as being from the Period I (Pre-Roman) key-deposits at Camulodunum (Jackson, 1947, 352). The series from Silchester (Boon, 1974, 252) cannot be other than domestic, indeed, their paw-marks were found upon tiles, where the creatures had walked when they were laid out before firing. Cats have been thought of as a Roman introduction and at Silchester they had house mice as prey.

As has been observed in the specialist report (p. 128), the presence of *Larix* sp. (larch) or *Picea* sp. (spruce) is of note as neither are native to Britain, whereas their pollen grains are dissimilar, larch tracheids are almost identical with those of spruce. Spruce was used for roofing a late Neolithic structure at Stanydale, in Shetland (Calder, 1950, 192) and, although the excavator was sceptical, it has been claimed that it crossed the Atlantic in quantity as driftwood (Clarke & Sharples, 1985, 72), a contention modestly supported by, for example, the wooden handle from a waterlogged midden at Skara Brae (Clarke, 1976, 244). With such circumstances in mind, the presence of spruce on Scilly need not be surprising. On the other hand, it should not be overlooked that larch is also a source of tinted tannin for leather and also resin (Dimbleby, 1967, 51-2). Thus a source in the Mediterranean lands is also a possibility. What was considered as probably larch charcoal was encountered on Nornour (Keepax & Morgan, 1978) and was also thought to have been from driftwood.

As at the outset, gorse charcoal was present in quantity, for Scilly has for long been dominated by tracts of furze or gorse (*Ulex* sp.) heathland, although there is some evidence of the survival of woodland (Thomas, 1985, 73-6). Thus the occurrence of such species as oak (*Quercus* sp.), hazel (*Corylus* sp.) and alder (*Alnus* sp.), is neither out of keeping with the surviving woodland species of Scilly (Thomas, 1985, 76, Tab. 3) nor, for example, with the charcoal recorded from Nornour (Butcher, 1978, 98).

7.5 The limpet-shell middens

The shells of marine molluscs from Scillonian middens - a good number, ancient and recent, are known (Ratcliffe, 1989, 70) - are almost exclusively from limpets. An extensive limpet-shell midden was for long exposed in Halangy Porth, where it was associated with the Early Phase circular huts, which preceded the settlement on Halangy Down (Ashbee, 1983, 5-7, Fig 2). On Halangy Down, excavation disclosed a larger midden of about 110,000 shells, which had been deposited in the disused E corridor entrance to B (pp. 37-8, Figs 11,13,14), and a smaller of about 8000 shells, heaped against the NE exterior of its uphill wall. A study was undertaken (Townsend, 1967) as it was thought at the time that they were used as a foodstuff, a source of protein. Subsequently, it has emerged that an extravagant number of limpets (31,360) is needed to supply the calorific equivalent of a red deer carcass (Bailey, 1978, 39). Thus, despite the claims of Scillonian tradition (Grigson, 1948, 34) they

were, in economic terms, more effective as bait for line-fishing.

Limpets can be collected rapidly; a container of about half a cubic foot would suffice as bait for a day, were an average multi-line system, from a small boat, employed. The end-battered granite beach-pebbles, a very considerable number of which were found during the course of excavation, would, presumably, have been the tools employed for detaching limpets from rocks with a single, sweeping, blow. If this is not precisely delivered, the limpet clings and a further blow crushes the shell. These elongated, end-battered, beach-pebbles have their counterparts in the limpet-hammers regularly found upon Scottish Obanian sites (Lacaille, 1954, 216). It was found that the Scillonian midden samples consisted mainly of small shells, an indication of either excessive collection when they were gathered too frequently for them to grow, or that they were from the lower parts of the tidal range (Mellars, 1978, 388-9). Regular collection and discard of the empty shells could have brought about the amassment of the large accumulation in about two years. Broken bones and bone scraps besides fish scales and bones, and bones of small mammals, were also present. During the use-life of Halangy Down, these accumulations must have been periodically cleared and used upon fields as a fertiliser. Indeed, the observation of decaying limpet shells in the deep soil of the terraces is evidence of this practice.

Fishing has always formed an essential part of the Scillonian economy (Heath, 1750, 44; Borlase, 1756, 41; Matthews, 1960, 22; Vyvyan, 1960, 106-12; Mumford, 1967, 99-102; Gill, 1975, 107-9) and it should not be thought that earlier inhabitants were inefficient in the exploitation of this resource (cf. Section 6.3). Indeed, in her consideration of the Halangy Down limpets, Margaret Townsend indicates that they would have been far more effective when used as fish bait than as a foodstuff. Because of the substantial residued and sooted of potsherds from Halangy Porth, which yielded traces of the oils and fats that characterise marine fauna (Evans, 1983), it was thought that the essentially coastal buildings could have housed a marine oil industry (Ashbee, 1983, 34-5). The accumulation of limpet shells encountered on Halangy Down may betoken continuing fishing but few sherds displayed anything more than the slightest traces of any residues. Indeed, fishing may have been no more than a component of the integrated framework of food-production enterprises that sustained early Scillonians (Ashbee, 1982, 13-4).

Although Heath and Borlase, writing in the eighteenth century, detail the kinds of fish to be obtained on Scilly, they do not mention how they were caught. Spring and Summer were the fishing seasons and catches were cleaned, sun-dried and sometimes exported to the Cornish mainland. However, Robert Maybee, the Scillonian poet (Isles of Scilly Museum Pub. 9, 1,3) recalls, from the early nineteenth century, seine-netting and what could only have been line fishing, specifically from particular rocks around Penninis. This appears to have been a recognised, long-standing, procedure and it was apparently invariably productive. Penninis and other parts of particularly the eastern granite cliffs of St. Mary's give access to deep water, for they are the coastline of the original Scillonian island. Thus the fishing practices recalled by Maybee may have continued from early times. Only the rock-stance would have changed because of submergence by rising sea-levels. Line fishing from rocks, using limpet bait, was an ancient and regular feature of Scotland's rocky northern coasts (Clarke, 1976, 244), a comparable environment to Scilly, thus Maybee's graphic account may well depict ancient practices. Like seine-netting, already current in Mesolithic times (Clark, 1948, 56), line fishing, with limpet bait, would also have been effective when undertaken from boats. Direct evidence of ancient Scillonian craft is lacking but they could hardly have been other than wood-framed and hide-covered for, except at the outset of human occupation, Scilly's woodland could not have supplied trunks of a calibre suitable for monoxylous craft (Thomas, 1985, 69-76). The axes and adzes necessary for their fashioning are absent from the ancient Scillonian tool combinations. Like the currachs still used on Ireland's western coasts, wood-framed and hide-covered craft would have been light of weight, have combined shallow draught with remarkable load-carrying capacities, and could have put in to any inlet or beach.

Although the oil-producing industrial activity, a feature of the earlier Halangy Porth remains, does not appear to have been continued after the move to Halangy Down, the limpet-shell middens show the continuance of fishing, as may the many other Scillonian shell accumulations.

The appearance on Halangy Down of Roman brooches, Gaulish Samian wares and other pottery, points to the possibility of the export of sea-fish, perhaps dried, to Roman Britain and Gaul where it would have probably been prized in the towns (Boon, 1974, 261).

7.6 The supportive landscape

Site territories or catchment areas, indicated by circles of 1km radius, were envisaged for Halangy Down's predecessor in Halangy Porth. There are similar remains close by Bar Point (Ashbee, 1983, 32, Fig 15), which appeared to be related. Both were no more than 1km from a shore and have access to high and low land. Indeed the territorial unity of these early phase sites is implied by the striking architectural similarities displayed by the Bant's Carn and Innisidgen chambered cairns (Ashbee, 1980, 54). As there are no signs of successors to the early sites by Bar Point, it is reasonable to suppose that the plantation on Halangy Down ensured the continuing use of fields, already ancient, and lands impaired by sand and the inroads of the sea.

In the train of the re-establishment there were adjustments to the fields in the immediate vicinity, involving superpositions and intakes (Ashbee, 1983, 10; Thomas, 1985, 112, ill.146). As far as can be seen the ancient, arable, terraced strips, and their remainders, on Halangy Down, as well as those on Carn Morval Down, behind Pendrathen, and at Innisidgen, remained in use. The investigation of a buried soil at Innisidgen disclosed primary truncation, besides blown sand, an indication of arable land use (Dimbleby, 1977). All in all, there may have been a move away from the Mesolithic components of the earlier subsistence economy, although limpet-shell middens betoken the continuation of fishing (Ashbee, 1982, 13).

On the plateau, at the top of Halangy Down, there are indications of an erstwhile system beneath, and blending with, the present-day pattern. This, apart from the modifications for daffodil cultivation (Gill, 1975, 75-84), could have emerged in even later prehistoric antiquity. O.G.S. Crawford may have had this possibility in mind when he observed that the field walls, one of which he saw being built, were made-up in exactly the same way as those he saw on Samson Flats (Crawford, 1927, 7; Fowler, 1981, 185, Fig 50). Later, he showed the antiquity of surviving stone-walled fields and boundaries on the Cornish mainland, in the vicinity of Zennor (Crawford, 1936; Thomas, 1978, 11). Only patient and detailed field investigation can unravel what is undoubtedly an intricate pattern.

Walls and huts, component parts of Halangy Down's supportive landscape, can be seen upon the shores of Bar Point, where they had been disposed upon erstwhile low land and subsequently smothered by sand or submerged. They radiated from the highest point of the north-facing bluff (Evans, 1983a, 10, Fig 3). A length of walling with adjacent hut-bases, massive saddle-querns, and an offset, running in a NW direction has been examined and surveyed (Fowler & Thomas, 1979, 178, Fig 7, Pl XIXb). The incomplete nature of these, and similar submerged Scillonian field-wall remains, may point to partial demolition, presumably because of blown sand, and the use of the stone elsewhere.

Field walls exposed in the sand-pit at Bar Point (Evans, 1983a, 9, Fig 2) pointed towards the sea-truncated wall and scarred surface located and examined in 1977 (Ashbee, 1978). A sea-surge (Thomas, 1985, 48-52) could have deposited the worn rubble which covered the ancient soil. The post-Roman E-ware rim and lid found upon it points to this event as having taken place between 600-700 AD. As today, the blown sand, borne largely by the SW prevailing winds, may have been aberrant, with a considerable accumulation against facing walls and less beyond them. It should not be overlooked that a soil had developed, or had been fostered, upon an advanced accumulation. Indeed, as upon the sanding at the foot of Halangy Down (Ashbee, 1983, 32), an equivalent of *machair* soils (Ranwell, 1977) could have emerged before the area was finally abandoned.

In the event, the field-walls exposed by sand removal were excavated during 1979 and 1980. Four field boundaries emerged besides a bank and ditch, perhaps a territorial demarcation. Animal tracks and vehicle ruts had survived from uses as a trackway before the final sand-mantling. Pollen analysis, stratigraphy and soil studies indicated a system of some antiquity (Evans, 1983a). The notion that Halangy Down continued earlier traditions, supported by much the same territory, is thus reinforced.

It is manifest that sand and sea, by about the eighth or ninth centuries AD, have hazarded Halangy Down's supportive territory to the extent that radical modifications and adjustments were necessary to restore the balance between man and his resources which must account for the longevity of settlement there and nearby. There was, at about the time when grass-marked pottery was in use, an abandonment of the inhabited buildings and a move to another location close by. The new houses may have survived to have been seen and listed as one of the *Tenements* on St. Mary's, by William Borlase in the eighteenth century (1756, 33).

During the excavation, evidence of the wider subsistence and immediate farming practices which involved the fields, was collected. Querns, complete and broken, indicate the continuance of triturable crops and the weathered, fragmentary, bones, and scraps, of the kinds of animals maintained. Only modest numbers of the small beasts (Turk, 1978, 99; Thomas, 1985, 81-6) could have been enclosed in the diminutive fields. Fodder, perhaps even seaweed, heath and furze, could have supplemented grazing. The greater Scillonian land-mass could have allowed, if not transhumance, a measure of following mature pasture, perhaps communally. Grassland pastures (Dimbleby, 1977) can support many more animals than can the same area of woodland browsing. Indeed, the hut circles associated with distant enclosures (Fowler & Thomas, 1979, 178, Fig 7) could be the remains of summer shielings, while the associated massive saddle-querns could have been used for bruising and preparing fodder.

Cattle, sheep, semi-domesticated pigs, possibly adapted to marshy conditions, were Halangy Down's domesticated animals, as well as horses. Hoof-prints associated with vehicle-ruts were found in the final ancient surface at Bar Point (Evans, 1983a, 23-5, Fig 12). For practicable purposes, it can be assumed that the long terraced fields were, from the outset, for crops and the rectangular fields and enclosures animal husbandry. Nonetheless, as at Bar Point, these could also be enlisted for tillage. Clearly, circumstances determined their use.

7.7 Material culture and change

In the main, the remnants of the material culture of the inhabitants of Halangy Down reflect the sequence of their structures although, it must be stressed, there are few, if any, direct associations. Moreover, its paucity and fragmentary character is in accordance with what comes to pass when buildings are progressively modified and abandoned: things functional, or of value, are removed and only the inutile left behind. The general character of what remains, particularly the elongated bruised stones, large and small, indicates, as do the limpet-shell middens, exploitation of the resources of the sea, while the querns, particularly the rotary examples, show that the crops grown upon the fields of the supportive territory, were processed for consumption (Ashbee, 1982, 13-4). Indeed, despite the various things that came to Scilly in Roman times, which must for a while have given the unique island situation a sophisticated veneer, there could have been few real changes in the way of life, a conclusion that emerges from other dimensions of the settlement.

The earliest stage is illustrated by material which is indistinguishable from the fragments found in Halangy Porth (Ashbee, 1983). Pieces of pottery reflect this, as do flint waste and artifacts, the quartz hammer-stones and chopping tools, the polishing, rubbing and hammer-stones made of granite, and the saddle-querns, found in pieces or built into walls. Iron Age pottery appears, but otherwise nothing distinctive as elsewhere. It must not be overlooked that some bronze and iron artifacts must have been used, for there was local preparation and presumably manufacture, as is shown by the quantities of iron slag that came to light. Because of reforging and reuse, however, nothing survived.

During what are best termed Romano-Scillonian times, a group of bronze brooches formed a votive deposit, while scraps of this metal show that various pieces made therefrom may have been in use. The wheel-made pottery appears to be from mainland sources. There are Rhenish beaker sherds and scraps of stylish Samian ware, denoting, perhaps, an enthusiastic, but perhaps partial, acceptance of the Roman raj. This was buttressed by the local production of metal tableware, as is shown by the precise granite mould, and even by the adoption and local production of rotary querns

copying mainland Roman forms. Post-Roman times, to the end of the occupation of Halangy Down, are marked only by the distinctive, localised, grass-marked pottery in some quantity. Apart from this, there are no other indications in the various dimensions of material culture of the passage of almost half a millennium.

PLATES



Plate 1 Halangy Down and Porth from the air; the excavated building remains and ancient fields are on the hill-slope while the site of the largely sea destroyed earlier settlement is in the left foreground, adjacent to the prominent right-angled hedge junction (Photograph; University of Cambridge Committee for Aerial Photography)



Plate 2 The structure remnant cleared and photographed by Alexander Gibson, c. 1900

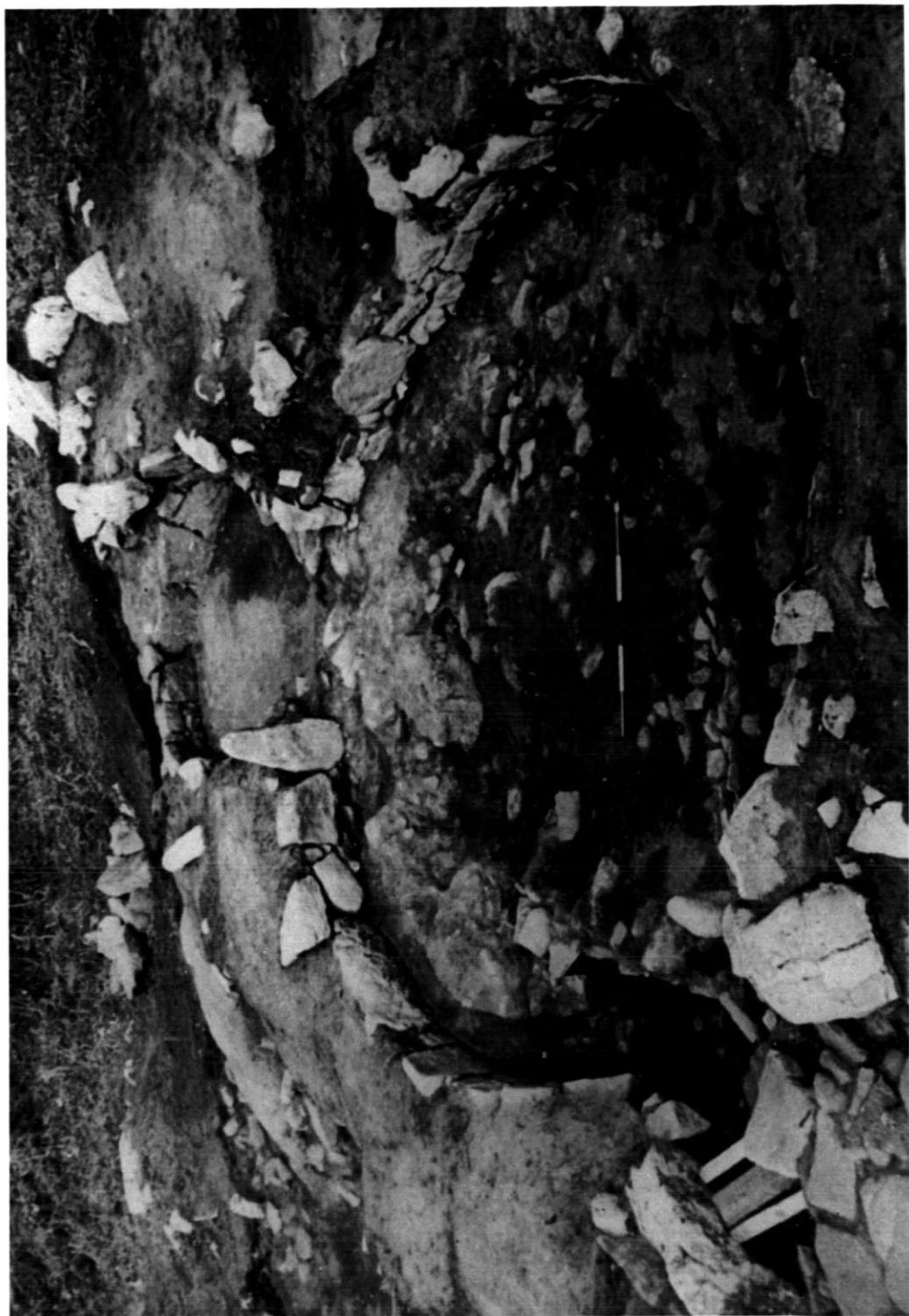


Plate 3 *The large oval chamber (A) of the courtyard house, excavated in 1950*

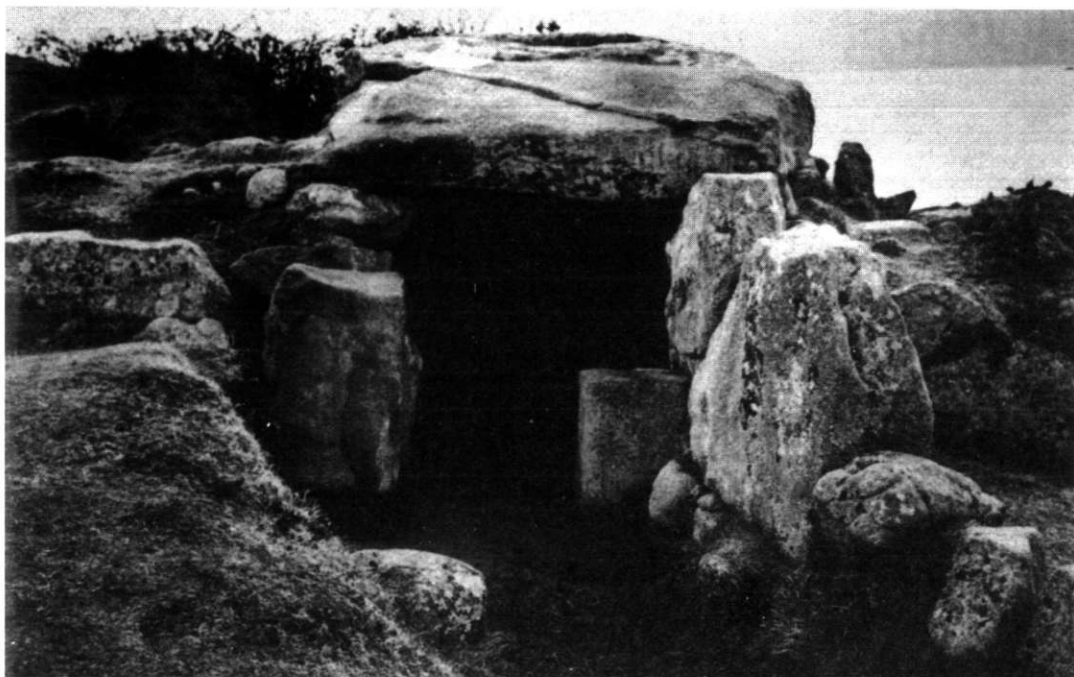


Plate 4 *The Bant's Carn chambered cairn, on the crest of Halangy Down, which dominated the settlement (After restoration in 1970)*



Plate 5 *A Porth Cressa type cist remnant exposed in the cliff at the S end of Halangy Porth*



Plate 6 *The ramp at the S end of Halangy Porth, cut to facilitate the loading of barges with stone from Halangy Down's buildings*



Plate 7 *The deep channel beneath B, from N. A section of limpet shell midden can be seen in the background*

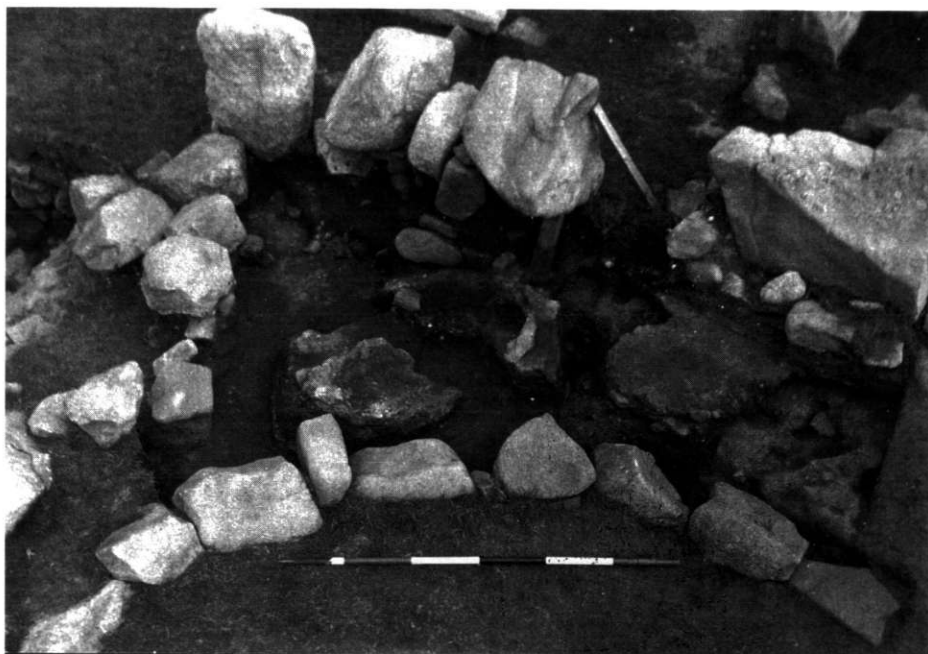


Plate 8 *The oven bases exposed between B and C, which have been intruded upon by the incut for the inner wall-face of C*

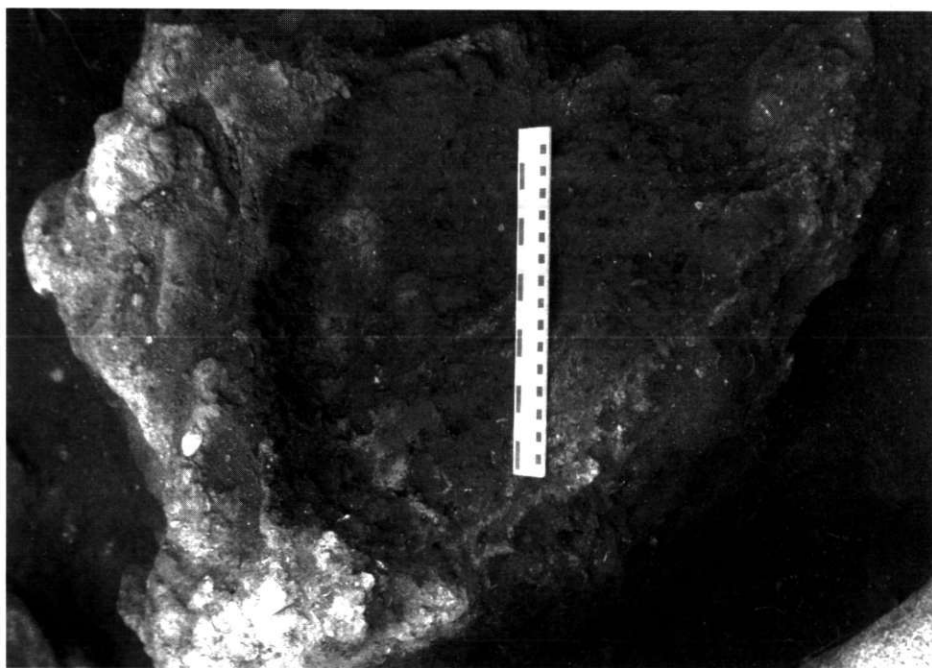


Plate 9 *The best preserved oven base showing the smoothed, blackened, interior, and the rise of the side*



Plate 10 *The uphill, E, end of F1 and F2, showing the aedicule (right foreground) and the standing jambstone of the N entrance into F2*



Plate 11 *The aedicule built within the SE, uphill, wall of F1 against a remnant of an earlier phase*



Plate 12 *The partially excavated interior of B from W. Two slabs flank the entrance to the, then unexcavated, aedicule in the upper wall. The deep channel has its infill bared and the drain area is in the foreground*

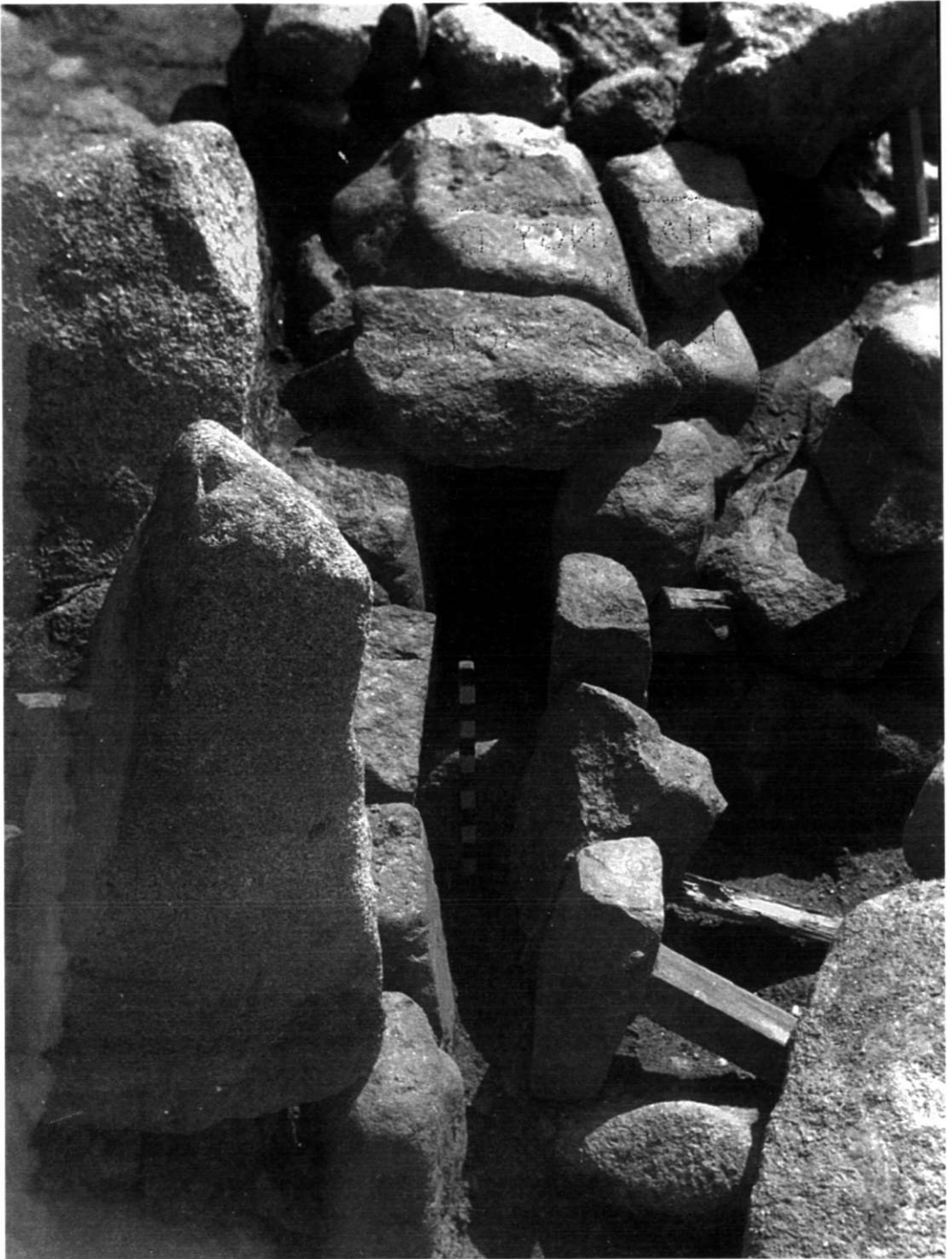


Plate 13 *The central drain-outfall and the saddle-quern which were within and beneath the lower, W, wall of B*



Plate 14 *The cup- and slot-marked stone in the sub-floor make-up of B*

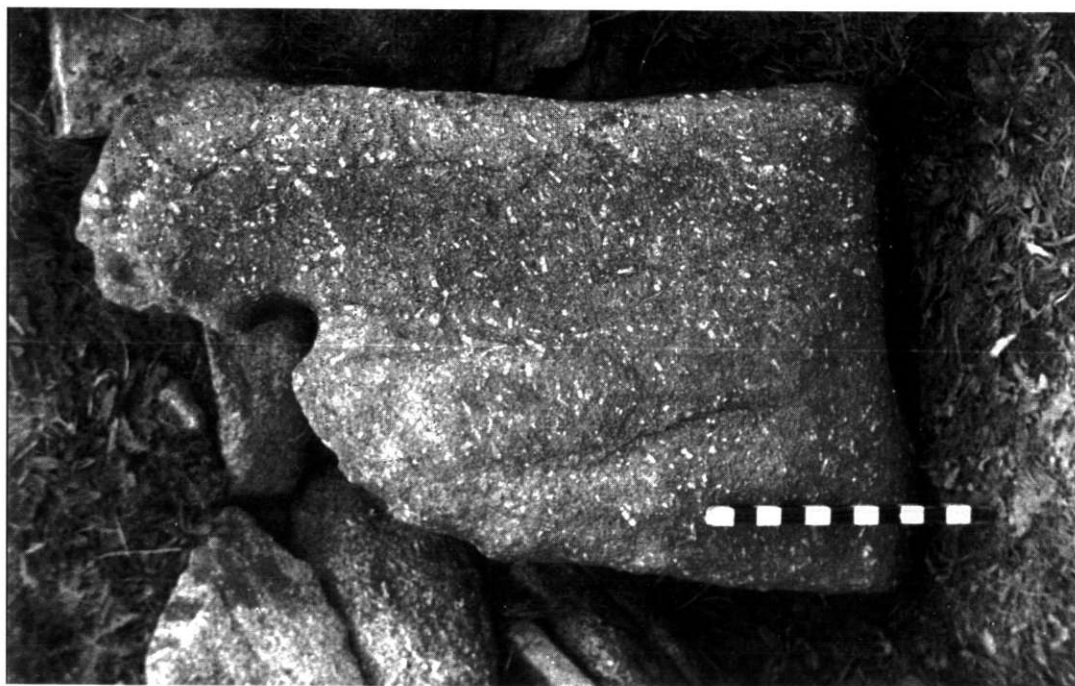


Plate 15 *The perforated, partially broken, reddened slab from the sub-floor make-up of B*



Plate 16 *The boulder-bounded limpet-shell midden in and above the S corridor entrance to B*



Plate 17a *The fallen, long stone found within C*



Plate 17b *The device on the flat face of the stone*

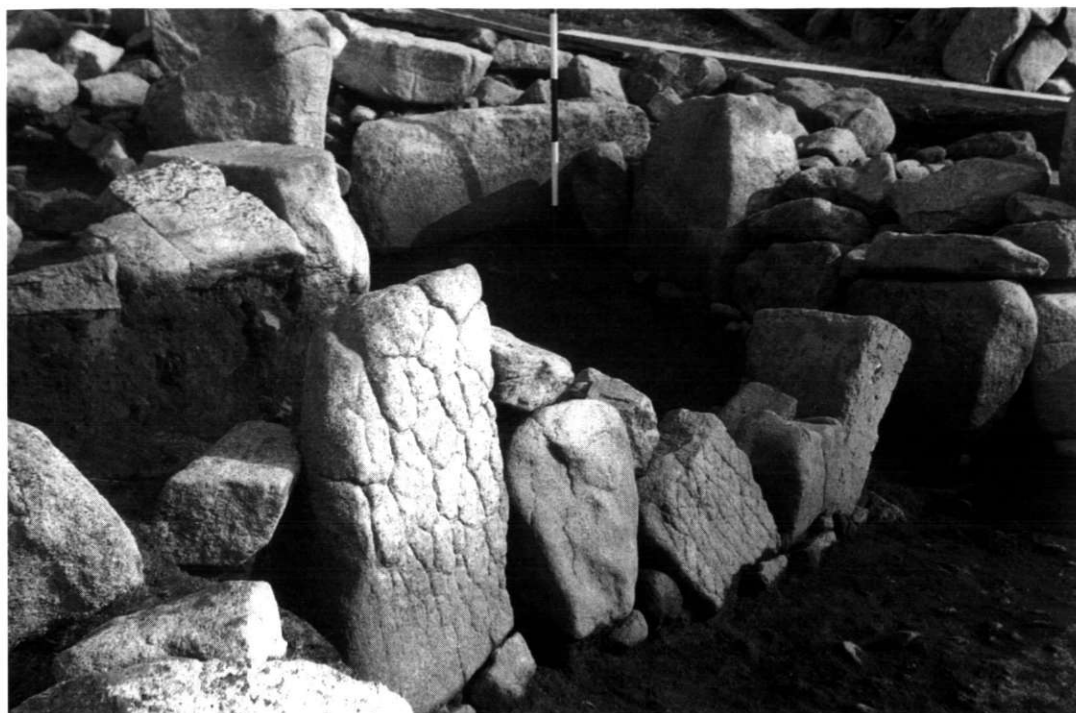


Plate 18a *The interior megalithic wall of the rectangular annexe to C*

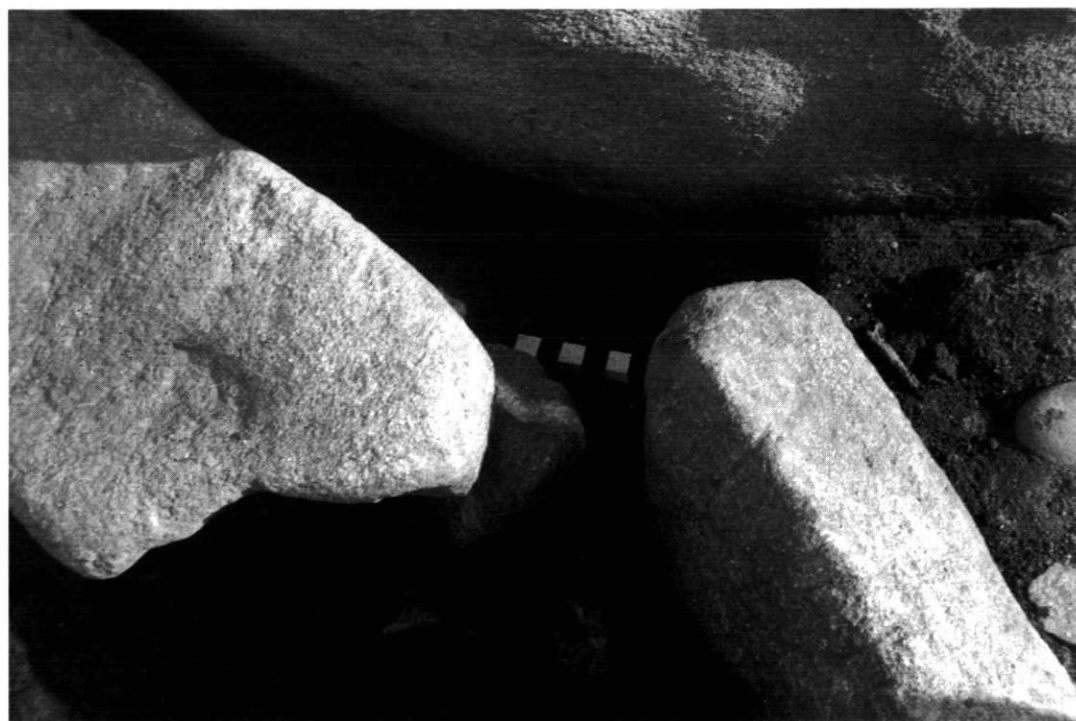


Plate 18b *The S entrance and pivot-stone of the rectangular annexe to C*



Plate 19a *The walled-off aedicule at the S end of A, the oval chamber of the courtyard house*



Plate 19b *The aedicule which is the focus of the courtyard of the courtyard house*



Plate 20 *The chordal stone arrangement on the E, uphill, side of the circular chamber, D, of the courtyard house*



Plate 21 *The steps into the circular chamber D, from the courtyard. The massive jambstone is on the N side*



Plate 22 *Stone-robbing: the lower, W. outer face of the wall of the courtyard, showing the systematic removal of stone*



Plate 23 *The entrance to the small intramural chamber on the N side of the corridor entrance into the courtyard of the courtyard house*



Plate 24 *The corridor entrance into the courtyard of the courtyard house, from S*



Plate 25 *The dismantled, abandoned, chamber, with its cobbled floor, adjacent to D, the circular chamber of the courtyard house*



Plate 26 *The lower, W robbed, reinforced wall of G (foreground) and the small circular chamber (background)*



Plate 27 The megalithic foundation stones of the robbed NE terrace- and field walls. From SW



Plate 28 Bar Point; the sand-blanketed field wall



Plate 29 Bar Point: traces of tillage (foreground) beneath sea-surge debris



Plate 30 *Brooches, see Fig 33, 1 (rt); 2 (lft)*

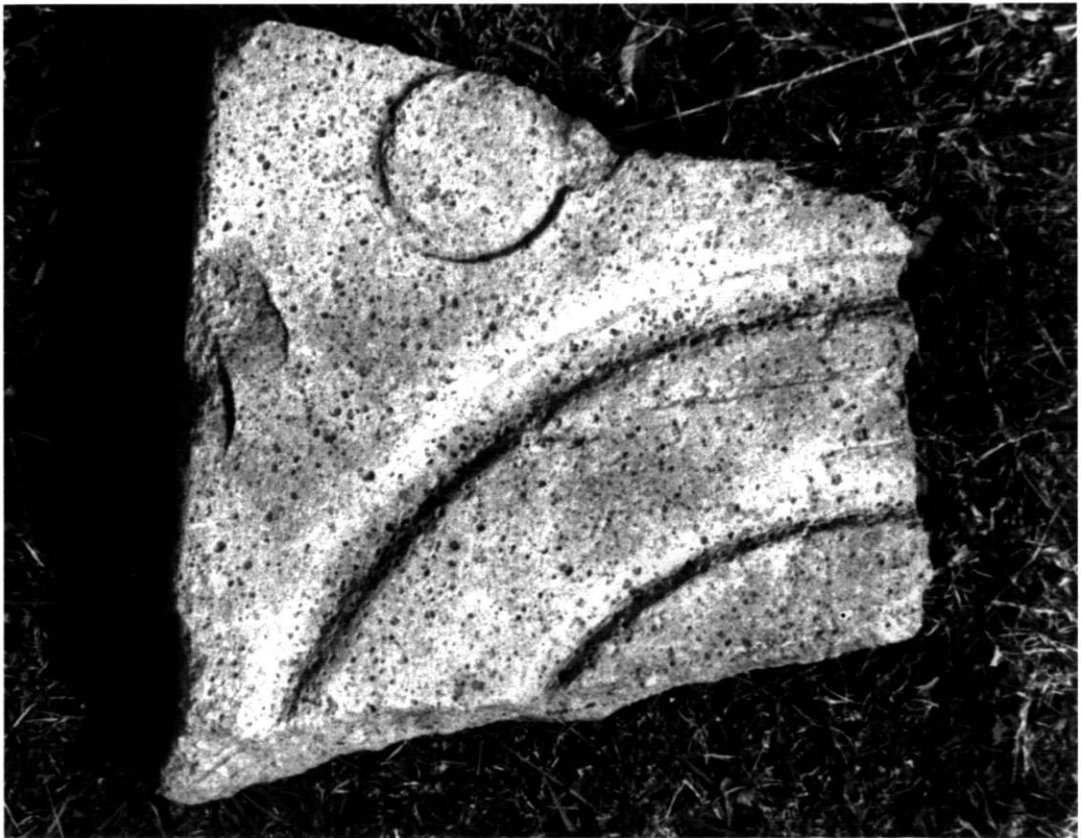


Plate 31 *Piece of an open granite mould for casting pewter dishes (see Fig 49)*



Plate 32 *The massive saddle quern found in the lower wall of B*



Plate 33 *The elongated bowl-quern found in the NE corner of B*



Plate 34 A rectangular bowl-quern found, among stones from Halangy Down's buildings, at the foot of the loading ramp at the S end of Halangy Porth



Plate 35 A heavy double ended, carefully fashioned, pounder found in rubble adjacent to B



Plate 36 *The Great Auk bones from the limpet shell midden at the S end of B*



Plate 37 The lowermost retaining wall of the field system during excavation and before conservation. The small stones are from the cores of demolished walls

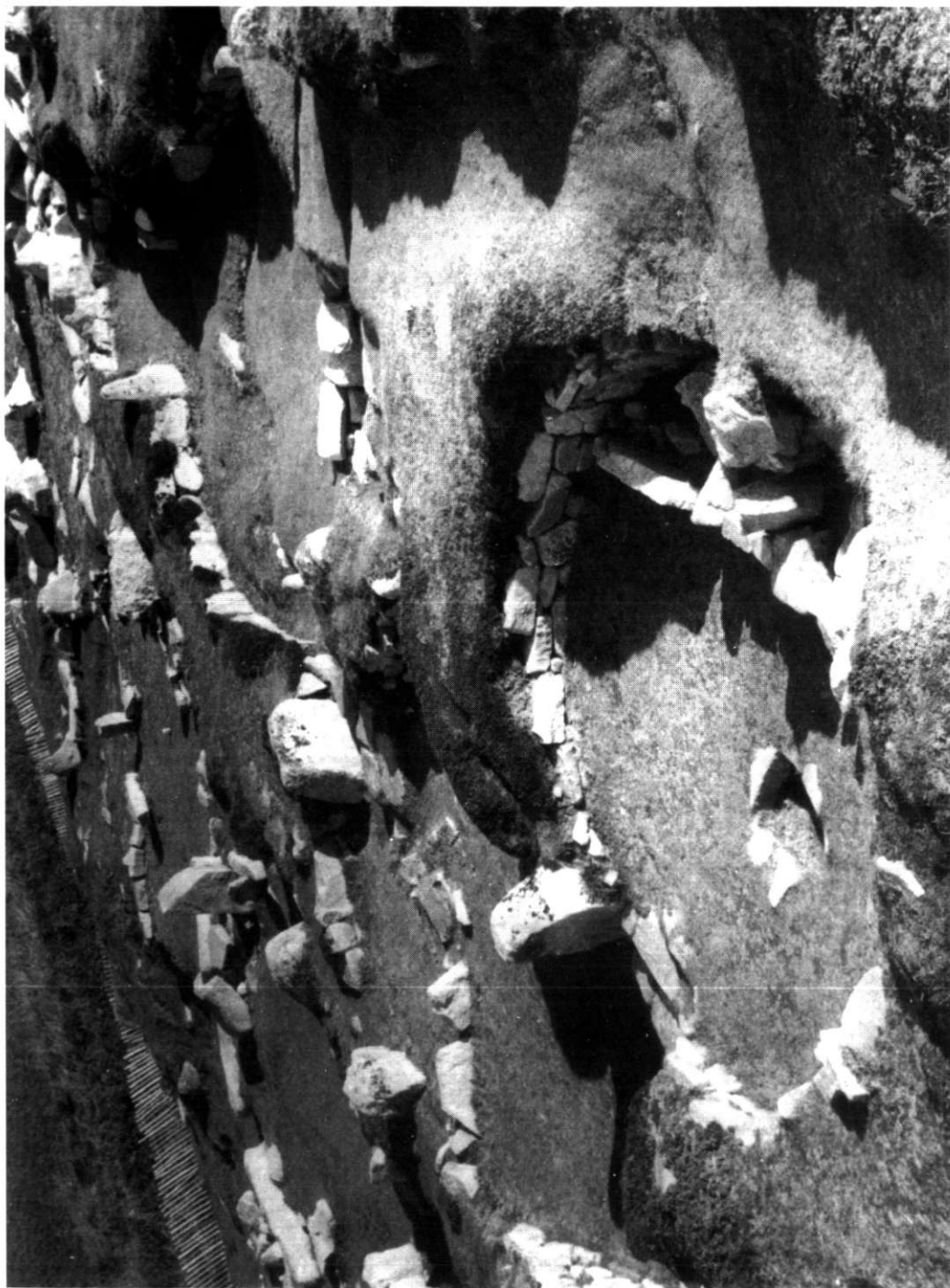


Plate 38 *The grassed, conserved, site from the SE*

8.0 ADDENDA AND ESPECIAL STUDIES

8.1 Alec Gray's 1935 excavation

Alec Gray's account of his excavation, in 1935, of the large chamber (A) of the courtyard house (Gray, 1972, 22-5) was as follows:-

No. 1 Halangy Down

Now I had formed my own conclusions on these remains several years before Dr. Hencken's book (Hencken 1932) was published; then, in 1935, I was able to do a little digging on the site and was able to prove my opinions entirely right. The 'tiny round huts', 'insignificant and unsubstantial' proved, on investigation, to be part of a considerable and very solid Romo-British (sic) village, which has no connection with the passage grave above it, or the midden below, which is the rubbish heap of an entirely separate settlement which will be described in its proper place.

It is difficult to give any description of the village as a whole, as the site is so overgrown with gorse, brambles, etc.; or to ascertain with any degree of accuracy the limits of the settlement. In its present state, it consists as far as can be seen of the foundations of several huts, a number of ancient walls and terraces, and many very large stones scattered about: apparently at random. Some of these stones are of great size, one I measured being over nine feet long and three feet square. Much of the village has been destroyed in recent years, as large quantities of stone have been removed for various purposes; in several places hollows can be seen which obviously once contained huts, though no stone now remains in them.

Up the hill in a south-easterly direction, the remains extend to within about a hundred yards of the big passage grave (Bant's Carn, St. Mary's 2), while down the hill to the north-west, they are terminated by the track which connects Toll's Par with the road, from Telegraph to Pendrithen. North-east the remains extend to a considerable distance along the face of the hill, the last visible remains being a terrace or embankment, of which more later. Along the face of the hill to the south-west, the remains end at a modern wall which runs part of the way down the hillside.

The confines of the settlement in this south-western direction seem fairly certain for this reason. A few years ago, in order to obtain peat and soil for dressing some neighbouring fields, I assisted in removing the top soil over a considerable area near the foot of the hill just south-west of the visible limits of the settlement. Although we were within thirty yards of a collection of ancient walls, terraces etc., and although we shifted several tons of soil and cleared the ground to the sub-soil, not one fragment of pottery, worked flint or other ancient object was found.

The south-west end of the village is marked fairly exactly by a line drawn from Bant's Carn passage grave to the eastern end of Toll's Par, and beyond this line the only remain is a massive embankment or revetment, continuing along the side of the hill in a south-westerly direction and rising as it does so. For a considerable distance it forms the upper bank of the track which leads from Toll's Par to the Golf Links and Telegraph. Towards its lower end, the track falls more steeply than the embankment, which latter leaves it to be lost in the undergrowth, while at the upper end, the reverse occurs, for a steep rise in the track causes the embankment to cross it and once more be lost downland on the track's lower side. No obvious reason presents itself to account for the construction of this extensive embankment or terrace, as the land above seems valueless and has certainly never been cleared or broken.

Although the site is so overgrown, it is possible to trace among the walls and terraces several sorts of structures, some of which were round, some oval, and some had at least one end which was rectangular. The walls of one small hut, circular, and about twelve feet in diameter with a doorway facing west, are easy to find, and a few yards to the south-west of it lies the large oval hut.

Before I partially cleared this building in 1935, it was completely buried, the exposed corner of one stone being the only indication that anything of interest lay beneath the soil. I think it fairly certain that another, probably similar, building lies buried a few yards further to the south-west.

As will be seen from the plan (Fig 3), the structure I cleared proved to be an oval hut circle, and I do not propose to describe it in great detail, as it clearly resembles similar huts uncovered at Porthmeor etc., and seems to present no important local features.

Before building was commenced, it seems that a heavy retaining wall was built on the lower side, and the ground then levelled with earth. This necessitated a deep drain being laid to carry off the water which would otherwise have accumulated behind the wall and beneath one side of the floor of the hut, and both the lower and the upper domestic drain presented the same curious feature which was noticed at Porthmeor. They seemed to start from no-where and to peter out in the soil at their lower end.

An inexplicable feature of the filling of the hut was the number of large blocks of granite it contained. These were in all sorts of positions and at all depths, and were much too large to have fallen from the walls or to have formed part of a partition. There were traces of hearths close to the wall at two places: these contained ash and burnt earth but nothing else, and were just hollows in natural ram.

I must note that I shall use the Scillonian word 'ram' to describe the decomposed granite which forms the sub-soil in Scilly, and is also known as 'rab' 'head' and 'limon'.

The position of the entrance to the hut can be seen on the plan, but it seems not unlikely that another entrance existed opposite that which still survives. Here, there is a gap in the walling, and a long stone which was lying close at hand may well have been one of the gate posts. If there was an entrance, however, at this point, it is evident that the upper drain must have ended right in the middle of it, a messy arrangement, but one which can be paralleled at Porthmeor.

The only large stone of any interest which was found, was a slab of granite, more or less square, having across the centre of one of its edges a deep groove, obviously made by friction. The stone was not *in situ*, and its use is obscure.

The only covering stone of the lower drain which remained in place, proved to be the lower stone of a beehive quern in excellent preservation. It would seem that the stone had been discarded because owing to wear, there was poor contact with the upper stone. Since the quern stone covered the lower drain which presumably was laid when the hut was built, it looks as though it must be older than the hut: in other words, that the hut cannot have been one of the first to have been built in the settlement, or if it was, that the stone must have been carried from some earlier village.

The number of objects found within the hut was small, but of such a nature as to establish its date within certain broad limits. The filling was much disturbed, and this disturbance had probably taken place in ancient times. There were no definite floor levels or stratification, so it was impossible to tell how long it was occupied. Several fragments of iron were found, the most important being an object some 10 cm. long which looks as though it might have been part of a knife, while others seemed to have been in the form of a disc an inch or so in diameter, with sometimes a stalk or shank in the centre, and were perhaps studs of some kind. Owing to the humid climate, all ancient iron objects in Scilly are so badly corroded as to be little more than lumps of rust.

Pottery was very scarce, and apart from a few small sherds of rough hand-made ware, was confined to two rim fragments, both probably from the same pot, though found some distance apart. They are wheel-made and quite distinctive, having a shallow groove running round the flat upper face of the rim.

A few worked flints were found, the most interesting of which had a small notch carefully chipped out on one edge, and may have been used for smoothing arrow-shafts, etc.

What was probably a hone, made of sand-stone from the local glacial deposits and several granite rubbing stones were also found, and at the beginning of the upper drain was a collection of six lumps of unworked flint, all an inch or so in diameter.

This completes the list of objects found, and I think there is little more I need say here about this site.

I do not think that here, or elsewhere in Scilly, the true courtyard houses of the Cornish Mainland are likely to be found. The structure just described seems to be a typical hut circle, and I am inclined to think that it represents the living quarters of some of the inhabitants of the village, while in the smaller circular huts we have their sleeping apartments.

It is worth noting that there is, built into the hedge on the north side of Pungies Lane, about four hundred yards from Telegraph, a square block of stone approximately 92cm. x 66cm. in the centre of which is a circular depression 20cm. in diameter and 6cm. deep. This closely resembles the stone

basins found at Chysauster etc., and may well have come from the site just described.

The date of St. Mary's No.1 would seem to be about the same as that of similar sites on the Cornish Mainland; and it should be described as Romo-British (sic).

Mr. Alec Gray's Key to Fig 3, p. 15

1. Upright stone, not *in situ*, but probably jamb of another door in adjacent gap in walling
2. Large stone with groove across the top; not *in situ*.
3. Iron point, and pot rim.
4. Fragment of coarse pottery.
5. Sandstone sharpener (?).
6. Six flint pebbles.
7. Bottom stone of beehive quern.
8. Pot rim.
9. Flint with notch hollowed out.

8.2 Dates of Excavations on Halangy Down

- 1) 1935, work by Alec Gray
- 2) 1950, 26 June - 4 September
- 3) 1964, 23 March - 11 April
1965, 12 April - 1 May
1966, 4 April - 23 April
1967, 20 March - 8 April
1968, 8 April - 27 April
1969, 31 March - 23 April
1970, 25 March - 18 April (Excavation and restoration of elements of the Bant's
Carn, St. Mary's 2, chambered cairn)
1971, 29 March - 17 April
1972, 3 April - 22 April
- 4) 1975, 17 March - 4 April
1976, 31 March - 21 April (Halangy Porth excavations)
1977, 5 April - 23 April (Bar Point excavations)
1978, 10 April - 17 April (Fieldwork only)

8.3 Halangy Down, the Soil Pollen, by Geoffrey W. Dimbleby (cf. Dimbleby *et al.*, 1981, 139-42)

The settlement on Halangy Down was excavated from 1964 to 1977. No clearly defined palaeosols could be found beneath any of the structures on this site from which soil pollen profiles might have been studied. Samples immediately overlying some of the structures did prove to be pollen-rich but of course they could not relate to contemporary land use. The only point worth making about them is that they were virtually devoid of the pollen of woody species; *Gramineae* and *Pteridium* predominated, with varying amounts of *Calluna* and a strong suite of ruderals.

In the hope of obtaining a soil pollen profile that might cover the period of occupation of the Halangy site, a series of samples was taken in the marine cliff lying some 150 yards downslope from the site. The cliff section showed about four feet of unconsolidated deposits, possibly hillwash, overlying a ten foot depth of unmodified 'head'. (At this date, 1966, records were made in imperial, not metric units).

Contiguous samples at one inch intervals were taken through the unconsolidated deposits at the top, and also in a loamy layer, possibly a weathered soil, immediately beneath the 'head'. This latter proved to be devoid of pollen and need not be mentioned further

The pollen diagram obtained from the upper layers (excluding a few 'casuals') based on total pollen plus fern spores, is shown (Fig 59), and alongside it the stratification of the deposit.

Interpretation

The most striking feature of this pollen profile is the virtual absence of tree pollen. This means that there is no means of dating the different layers by tree species. The only date indicator is a piece of 14th century pottery found at ten inch depth, in the surface layer of loose grey sand. This probably implies, though it does not prove, that the layer below this in the profile is of earlier date.

The pollen diagram falls into five distinct layers, indicated by horizontal lines across the diagram. The topmost layer, only two inches deep, is characterised by a high proportion of grass pollen, and particularly of the group described in the diagram as *Varia-Miscellaneous*. These are pollen types which could not be identified (though well preserved) and probably represent aliens associated with the present use of the land for commercial flower growing. The pollen of *Pittosporum*, an introduced evergreen shrub used today as a windbreak, was found only in these two samples.

From two to nine inches, the profile is dominated by grass, *Liguliflorae* and ruderal pollen, together with abundant bracken spores. The fact that the main curves show distinct trends implies that pollen is being carried down into this layer, so that despite the loose nature of this material it had not been added to in recent times but had developed a stable surface from which a sequence of pollen spectra has developed.

This is in marked contrast to the underlying layer, in which the pollen is evenly distributed both in frequency and percentage. It would be reasonable to regard this as a layer of accumulating top soil, probably hillwash from the fields above. The pollen suite is poor in species and is largely dominated by *Liguliflorae* and bracken. As both of these pollen types are relatively resistant to decay, we may be seeing here the relic of a richer assemblage. At 23 inches, a sudden change occurs, marked by higher percentages of grass pollen and much less bracken. The most conspicuous feature, however, is the sudden increase in the pollen of *Cruciferae*, of a type which could not be identified for certain, but had a close resemblance to *Cakile maritima* (sea rocket). The grains are smaller than modern specimens, but this is commonly so with pollen preserved in mineral sediments. The *Cruciferae*, of course, include crop plants such as cabbage or charlock, so the significance of this pollen type must remain in doubt. However, I know of no parallel for high concentrations of the pollen of this family, which is entomophilous, and its presence must mean the presence of quantities of flowering material. Possible explanations are that either a flowering crop was being grown as a green manure or that local coastal vegetation was being brought on to the fields for the same purpose.

Whatever the explanation, the distribution of this pollen type in this layer suggests that at 23 inches there is an old surface subsequently buried under hillwash. This layer itself, however, is clearly not a primary soil, for at 31 inches another apparent surface appears, also showing high values of *Cruciferae* pollen but characterised by a new pollen type, so far not identified. Re-examination of this pollen type suggests that it is also a crucifer, possibly *Cochlearia anglica* (scurvy-grass), another coastal plant. However, it clearly distinguishes the lowest of the five layers. This has all the indications of a pollen profile developed in a soil *in situ*, which is confirmed by the description of the lowest two layers. It seems unlikely that this soil was covered by deposits from close by, for the samples above it give mirror images of the pollen curves, especially the *Cruciferae* and the *Varia-Type A*.

It is apparent that though this level of 29 to 36 inches is the lowest polleniferous horizon, there is no greater representation of tree pollen in it than in any of the layers above. In this sense, it contrasts with the Normour profile which is both somewhat earlier and on a small island. However, the bog evidence from Higher Moors and the palaeosol evidence from Innisidgen, neither of which is more than a mile from Halangy Down, clearly establish the previous presence of woodland in this area of St. Mary's. It therefore has to be assumed that Halangy Down itself was once wooded. Though it is not possible with certainty to equate the lowest buried levels of the cliff face pollen profile with the Iron Age occupation above, in the absence of any other archaeological settlements in the vicinity this would be a likely explanation. If so, not only were the environs treeless at this time but apparently all traces of a primary soil have disappeared, presumably by hillwash or wind erosion. It will be remembered that the palaeosol at Innisidgen itself held evidence of truncation of the primary soil profile and the superimposition of blown sand associated with agricultural land use.

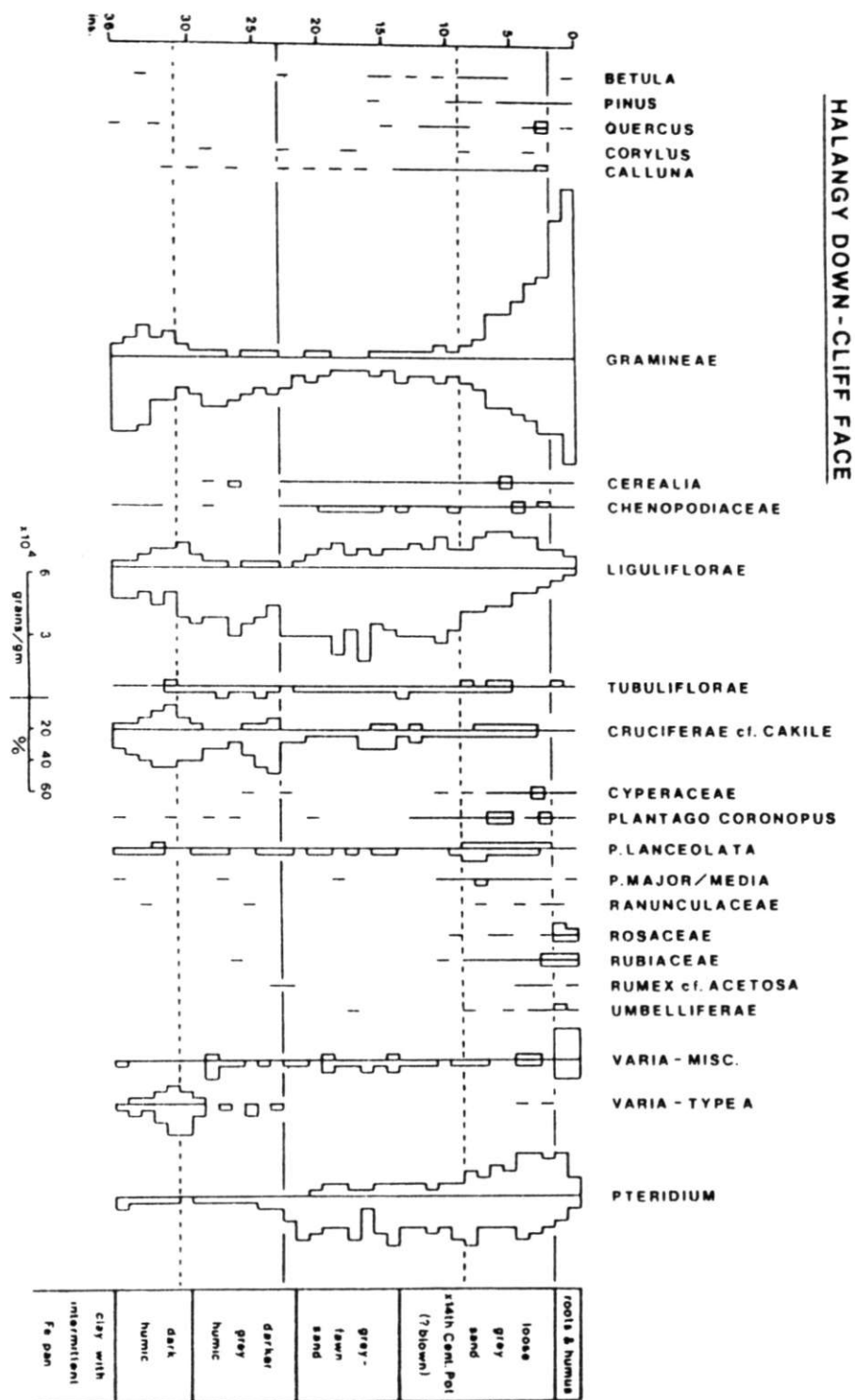


Fig 59 G. W. Dimbleby's pollen diagram, after Dimbleby *et al.*, 1981, Fig 5

Conclusion

It is impossible to base a detailed interpretation of the vegetational history of the Isles of Scilly on the few investigations so far made, but even from what has been done one or two general conclusions can be drawn. There is now clear evidence that the large island of St. Mary's had a cover of deciduous woodland sufficiently continuous in canopy to exclude light-demanding herbs. The Nornour pollen analysis indicates greater influence of trees in the lower layers, but it remains an open question whether this was due to tree growth on this small island itself or whether it was a reflection of the conditions on adjacent larger islands.

On the Cornish mainland deforestation started in earnest in the Bronze Age (Dimbleby, 1963; 1971) and if this were the case on the Isles of Scilly, it would agree with the signs of a modified landscape during and after the occupation of the site on Nornour. The pollen profile from Higher Moors provides clear evidence of an extensive clearance which could correlate with such occupation, and the evidence of clearance found in buried soil at Innisidgen could also be associated with this phase. In the absence of time markers in any of the pollen diagrams, certainty about dates will have to await the radiocarbon dates from the Higher Moors peat profile.

If the evidence of agriculture at Halangy Down can be attributed to the adjacent Iron Age settlement, that area of St. Mary's was completely treeless by that time. There is evidence both from this site and from Nornour that prehistoric agriculture was leading to soil movement both by hillwash and by wind erosion. If there is an exposure effect on such off-shore islands it may express itself not so much in the nature of the primary vegetation as in site deterioration following the disruption of the original woodland cover by prehistoric agriculture and through its continuing use.

8.4 Conservation and Preservation

As an *Ancient Village*, the sequence of house remains on Halangy Down, together with the Bant's *Carn Burial Chamber* (St. Mary's 2), were, in 1948, placed in the guardianship of the Ministry of Works by the Duchy of Cornwall (O'Neil, 1949, 3). After the site passed into state care it was necessary, as elsewhere in Britain (Thompson, 1981, 52-6), to make comprehensible the patently ruined fern and furze enshrouded structures. This could only be realised by progressive clearance and, thereafter, excavation. Because of this objective, destruction had to be minimal, unlike an undertaking concerned exclusively with earthen features. Therefore a proportion of the evidence for the proffered sequence is no longer visible because of back-filling or has been ascertained as lying beneath walls and other features which could not be dismantled without jeopardising particular structures.

In general, site conservation (Pl 38) proceeded hand-in-hand with the excavation programme. Excavated areas were backfilled with soil and seeded, while tops of walls, newly exposed, were turfed. Where necessary, masonry was secured (back-pinned) with galvanised metal ties and concrete while isolated pieces of walling, surviving from earlier phases, were supported with turves. Drains, except when their cover- or side-stones coincided with a surface, were earthed over. Entrance paving was reinstated while stones such as that observed by Alec Gray in 1935 (Gray, 1972) and found fallen in 1950, were stood back in position whenever there was an indication of their original stance. Stones which had been partially smashed by stone-robbers were, when in a wall or when large, earthfast and prominent, left in position as were areas of the small stones, used originally for intramural packing, which had been dumped upon the lower cultivation terraces. Hearths (in C, D and G) were made fast while massive granite artifacts, such as querns and stones bearing features, were replaced *in situ*. However, smaller objects, such as the pivot-stone, found in place at the S entrance to C's rectangular annexe were removed (to the Isles of Scilly Museum) because of their vulnerability. Continual endeavours were made to restrain the, latterly, Department of the Environment's workmen from capriciously inserting into walls blocks of granite where gaps presented themselves, for it emerged that this was their practice when work was carried out without archaeological supervision. Indeed, the kerb of the principal chambered cairn on Porth Hellick Down (St. Mary's 1) has been considerably augmented.

During excavation, great stones, such as the cup- and slot-marked boulder found beneath the floor of B, were moved and replaced. The replacement of the fallen cover- and jamb-stone (Hencken,

1932, 22) of the Bant's Carn chambered cairn (St. Mary's 2) was also undertaken in 1970 (Ashbee, 1976, 12-4). Fortunately, it had been planned by George Bonsor, at the beginning of the century, before the dislodgement (Ashbee, 1980, 56-7). Enlarged copies of the accurate, detailed illustrations, made from his drawings, guided the undertaking.

Although a Guardianship site, the assemblage of early house remains on Halangy Down has been, and is, because of its situation, particularly vulnerable to visitor pressures and the depredations of those who loot ancient sites, employing electric metal detectors. Visitor pressure and its deleterious effect upon the ecology and amenity of Scilly was already a problem when Professor P.A. Jewell (1969) undertook his classic survey. Coastal localities were seen as especially at risk and visitor pressures are now (1992) more than double those of the 1960s. Because of their utilisation of earlier terraced fields, the essential approaches to the site's interior were lateral, and thus it was thought that appropriate access paths would develop. Sadly, this did not take place and, within a decade, paths down the hillside were displaying excessive wear. The fragile soil had been bared, rainwater run-off had eroded gullies, and there were deposits of wash within the courtyard house. In addition, picnicing on the site had involved the removal of stones from walls, to construct windbreaks, while fires had been lit against some features. Metal detector users had not appreciated (in 1977 and 1978) that the site had been excavated and consolidated. Thus metal survey points had been dug from the ground and metal ties taken from the rear of various stones in consolidated walls, causing damage and very considerable displacement. Indeed, at this time, devices were available in Hughtown and visitors were exhorted to employ their time on Scilly searching for *treasure*. At the time of writing, the use of such devices is forbidden upon Duchy of Cornwall lands and those lands leased to the Isles of Scilly Environmental Trust. Their unauthorised use upon ancient sites is an offence. Nonetheless clandestine employment continues; a situation almost impossible to police. The issues involved appear recondite to the generality.

Although Halangy Down's house remains and the chambered cairn (St. Mary's 2) at the crest of the hillslope, have for long been guardianship (in English Heritage parlance *maintained* or *in care*) monuments, the associated ancient fields upon either side of the currently conserved strip are not. Thus, for example, a Decca Navigation System Maintenance Group hacked a drain-outfall from the hillcrest to the shore, replacing the discharge of crude sewage into the area. In addition, there has been unsympathetic tree planting, by the tenant of an adjoining Duchy of Cornwall holding, upon hitherto open land at the foot of the hill, coupled with the levelling (in Scillonian terms *breaking*) of a considerable area of ancient field close by the access trackway. Access to the chambered cairn (St. Mary's 2a), partially covered by the lowest cultivation terrace retaining wall (Figs. 4,6), which is at the margin of a modern field, and the monument could be in danger of destruction.

Needless to say, all of the field system associated with the Halangy Down site, including that part within tenanted land, should be scheduled and maintained. At the same time protection should be extended to other, later, monuments in the vicinity, such as kelp-pits, Civil War batteries and breastworks, and the c.1900 gun emplacement which occasioned the razing of much of the original Bant's Carn, the rocky outcrop N of the site. Halangy Down, not to mention the Isles of Scilly, warrants continuing archaeological management. This means that an appropriately qualified person should be domiciled upon Scilly to supervise and undertake the relevant tasks and at the same time monitor Scilly's continually changing archaeological situation.

8.5 Measurement Archive for the Mammal and Bird bones, by Alison Locker

After Jones *et al.*, 1978

The von den Driesch (1976) measurement equivalent is also shown (in letters) where applicable.

All measurements are in mm except for Withers Heights which are in cms.

R/L = Right or Left

Cattle

Scapula

Context	Ld 1	SLC 2	3	GLP 4	BG 5	LG 6	R/L
407	-	44.2	19.5	-	-	-	R
408	-	-	-	54.0	35.0	44.2	L

Humerus

	GLI 1	CLC 2	Bp 3	4	BT 5	6	Bd 7	R/L
292	-	-	-	-	59.5	63.0	61.2	L
945	-	-	-	-	68.9	-	76.2	R

Radius

	GL 1	Bp 2	3	4	5	Bd 6	7	BFp 8	BFd 9	LP 10	R/L
278	-	62.8	-	-	-	-	-	-	-	-	L

Metacarpal

	Gl 1	Bp 2	Dp 3	SD 4	5	Bd 6	7	8	9	10	11	12	R/L
764	-	-	-	-	-	51.0	21.0	26.2	18.8	-	25.0	23.8	R

Femur

	GL 1	GLC 2	Bd 3	4	5	6	SD 7	8	DC 9	Bp 10	R/L
421	-	-	64.8	-	-	95.7	-	-	-	-	R
922	-	-	75.0	33.2	32.2	107.5	-	-	-	-	L

Tibia

	GL 1	2	Bp 3	4	SD 5	6	Bd 7	Dd 8	L1 9
757	-	-	-	-	-	-	58.8	5.05	-
856	-	-	-	-	-	-	51.8	42.0	-

Astragalus

	LmT 1	2	3	4	5	GB 6	GH 7	BFd 8	R/L
277	51.7	35.2	34.0	-	-	-	-	-	L
390	54.8	41.0	49.0	38.0	39.2	2.42	-	-	L
797	56.5	44.2	32.0	-	-	-	-	-	L
981	58.0	44.5	53.5	42.0	40.0	26.0	-	-	R
1332	-	-	52.4	-	-	-	-	-	R

Metatarsal

	GL	Bp	Dp	SD		Bd								R/L
	1	2	3	4	5	6	7	8	9	10	11	12		
364	-	39.5	37.2	-	-	-	-	-	-	-	-	-	-	L

*Sheep
Scapula*

	Ld	SLC		GLP	BG	LG	HS	DHA		
Context	1	2	3	4	5	6	7	8	R/L	
329	-	15.2	8.2	-	-	-	-	-	R	
450	-	11.0	6.8	-	-	-	-	-	L	
790	-	12.9	7.8	-	15.0	-	-	-	L	
1401	-	16.2	8.2	-	-	-	-	-	R	

Humerus

	GLI	GLC	Bp		BT		Bd	SD	GL	LT	
	1	2	3	4	5	6	7	8	9	10	R/L
211	-	-	-	-	-	17.0	21.7	8.8	-	-	L
350	-	-	-	-	24.8	18.5	25.4	-	-	-	R
408	-	-	-	-	24.8	18.5	21.8	11.5	-	-	R
430	-	-	-	-	24.0	18.2	25.5	-	-	-	L
636	-	-	-	-	22.8	16.2	24.0	-	-	-	R
891	-	-	-	-	24.5	16.8	26.0	-	-	-	R

Radius

	GL	Bp				Bd		BFp	BFd	LP		
	1	2	3	4	5	6	7	8	9	10	R/L	WH
328	129.0	27.0	14.2	12.7	7.5	24.7	15.0	25.2	23.2	-	L	51.6
450	133.2	26.2	14.0	13.8	8.0	23.4	-	26.2	21.9	-	L	53.2
891	-	26.0	12.8	13.2	7.2	-	-	24.5	-	-	L	
973	-	-	-	-	-	25.0	15.8	21.2	-	-	R	
1244	-	24.5	12.8	13.0	8.2	-	-	-	-	-	L	
1282	-	25.7	12.2	-	-	-	-	-	-	-	L	
1497	-	-	-	14.2	-	-	-	-	-	-	?	

Femur

	GL	GLC	Bd				SD		DC	Bp	
	1	2	3	4	5	6	7	8	9	10	R/L
186	-	-	-	-	-	-	-	-	17.5	-	?
390	-	-	-	-	-	-	-	-	-	36.2	R

Tibia

	GL		Bp		SD		Bd	Dd	
	1	2	3	4	5	6	7	8	R/L
370	-	-	-	-	-	-	21.5	17.8	R
389	-	-	35.9	-	-	-	-	-	R
470	-	-	-	-	-	-	21.5	17.0	R
499	-	-	-	-	-	-	25.5	19.2	?
627	-	-	34.2	34.0	-	-	-	-	L

Astragalus

	LmT					GB	GH	BFd	R/L
	1	2	3	4	5				
356	24.5	20.5	23.8	17.2	16.0	11.3	-	-	L
413	-	-	-	15.8	-	-	-	-	L
785	25.0	19.0	24.2	-	-	-	-	-	L
802	23.9	19.5	23.2	16.7	14.5	11.2	-	-	L
813	23.5	19.0	23.4	17.2	15.3	10.9	-	-	R
926	25.4	20.0	23.5	-	-	-	-	-	R
945	24.5	19.5	23.2	-	-	-	-	-	L

Metacarpal

	GL	Bp	Dp	SD	Bd									DD	DFB	R/L	WH
	1	2	3	4	5	6	7	8	9	10	11	12	13	14			
349	107.7	19.7	14.0	10.8	9.2	21.3	9.7	12.9	-	-	9.9	-	8.0	19.9	R	52.1	
364	-	20.5	14.0	-	-	-	-	-	-	-	-	-	-	-	R		
394	106.2	19.5	13.7	10.5	-	-	-	-	-	-	-	-	-	-	L	51.4	
432	107.0	20.2	14.0	11.0	9.0	21.7	9.5	13.0	8.2	12.5	9.9	9.7	8.2	-	L	51.7	
488	106.5	20.8	12.5	10.5	8.9	21.5	10.0	0.	9.0	13.2	10.2	9.8	-	-	R	51.5	
540	106.5	20.5	14.0	12.2	9.0	21.9	9.8	13.2	-	-	-	-	-	-	L	51.5	
614	-	20.0	14.0	-	-	-	-	-	-	-	-	-	-	-	L		
650	-	18.8	13.8	10.8	9.2	-	-	-	-	-	-	-	-	-	R		
672	101.0	18.2	12.9	11.0	8.2	20.5	9.0	12.9	8.0	11.8	9.8	9.0	-	-	R	48.8	
967	109.3	20.0	-	10.5	9.2	21.2	9.0	13.0	8.2	12.8	9.9	9.8	-	-	R	52.7	
1222	100.5	19.5	14.3	10.7	8.5	20.0	-	-	-	-	-	-	-	-	R	48.6	
1222	102.5	-	-	9.8	8.5	20.6	9.5	13.5	8.5	13.0	9.2	9.5	-	-	L	49.6	
1223	-	19.2	12.5	-	-	-	-	-	-	-	-	-	-	-	R		
1262	107.0	20.1	14.0	11.5	9.3	-	-	-	-	-	-	-	-	-	L	51.7	
1401	104.8	19.8	14.0	11.2	9.0	21.2	8.9	12.9	8.0	12.5	10.0	9.7	8.0	20.1	L	50.7	
1523	-	18.2	-	10.0	-	-	-	-	-	-	-	-	-	-	L		

Metatarsal

	GL	Bp	Dp	SD	Bd									DD	DFB	R/L	WH
	1	2	3	4	5	6	7	8	9	10	11	12	13	14			
390	-	-	-	-	-	-	9.0	14.0	8.8	13.0	9.0	8.9	-	-	L		
421	122.5	18.2	17.0	9.5	9.3	21.2	9.5	14.2	9.2	13.2	10.0	9.0	8.2	-	R	55.2	
432	-	17.2	17.0	-	-	-	-	-	-	-	-	-	-	-	L		
614	-	18.0	17.9	-	-	-	-	-	-	-	-	-	-	-	R		
660	120.0	18.3	-	9.8	9.5	21.0	9.0	14.2	8.7	13.8	9.8	9.2	8.0	20.0	R	54.1	
728	-	16.2	15.9	-	-	-	-	-	-	-	-	-	-	-	L		
977	-	18.4	18.5	-	-	-	-	-	-	-	-	-	-	-	R		
173	-	-	-	10.0	8.9	-	-	-	-	-	-	-	-	-	?		

Pig

Scapula

Context	Ld	SLC	GLP		BG	LG	HS	DHA	R/L
	1	2	3	4	5	6	7	8	
275	-	19.9	-	-	-	-	-	-	R
650	-	18.2	10.8	31.2	22.8	12.8	-	-	R

Humerus

	GLI 1	GLC 2	Bp 3	4	BT 5	6	Bd 7	SD 8	GL 9	LT 10	R/L	WH
186	-	-	-	-	31.0	35.0	35.7	-	-	-	L	
540	-	-	-	-	-	-	31.0	-	-	-	L	
650	165	154	40.0	50.9	23.8	25.0	25.5	14.2	165.0	-	L	66.8
785	-	-	-	-	29.7	27.0	37.0	-	-	26.5	R	
967	-	-	-	-	29.3	26.5	34.5	-	-	-	R	

Tibia

	GL 1	2	Bp 3	4	SD 5	6	Bd 7	Dd 8	R/L
810	-	-	-	-	-	-	29.0	23.8	L

Astragalus

	LmT 1	2	3	4	5	GB 6	GH 7	BFd 8	R/L
459	33.8	30.2	34.2	-	-	-	-	-	L
494	37.2	32.2	37.2	-	-	-	-	-	R

Horse*Radius*

Context	GL 1	Bp 2	3	4	5	Bd 6	7	BFp 8	BFd 9	LP 10	R/L
1717	-	-	-	-	-	60.5	-	-	-	-	L
1736	-	69.2	36.5	-	-	-	-	-	-	-	L

Red Deer*Tibia*

Context	GL 1	2	Bp 3	4	Sd 5	6	Bd 7	Dd 8	R/L
1085	-	-	-	-	-	-	43.2	35.0	L

Cat*Humerus*

Context	GLI 1	GLC 2	Bp 3	4	BT 5	6	Bd 7	SD 8	GL 9	LT 10	R/L
214	-	-	14.0	17.5	-	-	-	-	-	-	?
266	-	-	-	-	-	-	-	-	87.0	-	L

Femur

	GL 1	GLC 2	Bd 3	4	5	6	SD 7	8	DC 9	Bp 10	R/L
266	95.5	-	-	-	-	-	-	-	-	-	R

Tibia

	GL 1	2	Bp 3	4	SD 5	6	Bd 7	Dd 8	R/L
214	-	-	-	-	-	-	12.0	-	L
265	-	-	-	-	-	-	11.8	-	L

Great Northern Diver*Coracoid*

	GL	LM	Bb	BF	
Context	1	2	3	4	R/L

583	-	-	17.2	-	R
-----	---	---	------	---	---

Shag*Femur*

	GL	Bp	Bd	SC	LM	Dp	Dd	
Context	1	2	3	4	5	6	7	R/L

390	-	14.0	-	7.0	-	-	-	R
-----	---	------	---	-----	---	---	---	---

Tibiotarsus

	Gl	Dip	Bd	SC	La	Dd	BP	
	1	2	3	4	5	6	7	R/L

558	106.0	17.0	12.2	7.2	97.8	10.0	-	L
-----	-------	------	------	-----	------	------	---	---

Tarsometatarsus

	GL	Bp	Bd		SC	
	1	2	3	4	5	R/L

722	61.5	12.2	-	-	6.2	R
-----	------	------	---	---	-----	---

Cormorant*Humerus*

	GL	Bp	Bd	DC	
Context	1	2	3	4	R/L

733	-	-	13.0	-	L
-----	---	---	------	---	---

cf. Brent Goose*Carpometacarpus*

	GL	L	Bp	Did
Context	1	2	3	4

659	64.0	-	-	-
-----	------	---	---	---

Mallard*Humerus*

	GL	Bp	Bd	SC	
Context	1	2	3	4	R/L

440	-	-	13.0	-	?
-----	---	---	------	---	---

Femur

	GL	Bp	Bd	SC	LM	Dp	Dd	
	1	2	3	4	5	6	7	R/L

921	-	-	9.5	3.2	-	-	-	L
-----	---	---	-----	-----	---	---	---	---

Coot*Femur*

	GL	Bp	Bd	SC	LM	Dp	Dd	
Context	1	2	3	4	5	6	7	R/L

1364	-	-	10.2	4.5	-	-	-	R
------	---	---	------	-----	---	---	---	---

Tarsometatarsus

	GL	Bp	Bd		SC	
	1	2	3	4	5	R/L
580	61.9	9.9	10.0	-	4.0	L

Lapwing*Tarsometatarsus.*

	GL	Bp	Bd		SC	
Context	1	2	3	4	5	R/L
840	43.3	5.5	6.0	-	2.5	L

Woodcock*Humerus*

	Gl	Bp	Bd	SC	
Context	1	2	3	4	R/L
211	57.0	-	10.2	4.8	L

Snipe*Humerus*

	Gl	Bp	Bd	SC	
Context	1	2	3	4	R/L
338	39.5	9.9	7.0	2.5	R
453	39.5	9.5	6.5	2.8	L

Herring Gull/Lesser Black Backed Gull*Ulna*

	Gl		Bp	SC	Did	
Context	1	2	3	4	5	R/L
489	140.2	5.2	13.0	6.5	-	L

Radius

	GL	Bd	SC	
	1	2	3	R/L
489	135.5	8.0	3.9	L

Great Black Backed Gull*Coracoid*

	GL	LM	Bb	BF	
Context	1	2	3	4	R/L
785	60.2	59.8	-	19.0	L

Great Auk*Coracoid*

	GL	LM	Bb	BF	
Context	1	2	3	4	R/L
797	67.0	64.0	24.0	23.2	R

Scapula

	GL 1	DiC 2	R/L
556	-	11.1	L
797	-	17.2	?

Humerus

	Gl 1	Bp 2	Bd 3	SC 4	R/L
556	-	25.5	-	10.3	L
733	-	25.5	-	12.0	L
797	102.2	24.2	16.2	13.0	R

Ulna

	Gl 1		Bp 3	SC 4	Did 5	R/L
797	56.9	8.2	10.2	4.2	9.2	L

Radius

	GL 1	Bd 2	SC 3	R/L
797	55.2	6.2	-	R

Femur

	GL 1	Bp 2	Bd 3	BC 4	LM 5	Dp 6	Dd 7	R/L
556	-	13.5	-	-	-	9.9	-	L

Tibiotarsus

	GL 1	Dip 2	Bd 3	SC 4	La 5	Dd 6	Bp 7	R/L
975	-	21.5	-	-	-	-	14.0	R

Barn Owl*Humerus*

Context	GL 1	Bp 2	Bd 3	SC 4	R/L
1403	85.0	15.0	13.5	5.5	R

Ulna

	GL 1		Bp 3	SC 4	Did 5	R/L
1403	-	-	8.8	-	-	R
1403	-	-	-	-	6.7	?

Carpometacarpus

	GL 1	L 2	Bp 3	Did 4		5	R/L
1403	44.5	-	9.5	7.0	6.2		L

Tibiotarsus

	GL	Dip	Bd	SC	La	Dd	Bp	
	1	2	3	4	5	6	7	R/L
1403	-	10.3	9.8	4.2	-	9.2	9.5	R

Song Thrush*Ulna*

	GL		Bp	SC	Did	
Context	1	2	3	4	5	R/L
818	32.2	2.5	4.2	2.0	4.0	R

Crow*Humerus*

	GL	Bp	Bd	SC	
Context	1	2	3	4	R/L
903	-	-	17.2	-	?

8.6 The pieces of charcoal, genera and locations, by Rowena Gale

The genera are identified in relation to sample and context.

The number of fragments identified in each context is indicated.

Abbreviations:

Aln = *Alnus* sp., alder

Cor = *Corylus* sp., hazel

Quer = *Quercus* sp., oak

Salic = family Salicaceae, which includes *Salix* sp., willow and *Populus* sp., poplar. It is not possible to distinguish *Salix* from *Populus* using anatomical methods.

Sam = *Sambucus* sp., elder

Ul = *Ulex* sp., gorse

Cyt = *Cytisus* sp., broom

Pic/Lar = *Picea* sp., spruce/ *Larix* sp., larch. It is not possible to separate between these genera using anatomical methods.

Con = conifer: *Pseu* = *Pseudotsuga* sp., douglas fir

s = stem

sp = sapwood

h = heartwood

? = tentative identification

* = samples selected for C14 dating

+ = ? uncontaminated samples.

CONTEXT

IDENTIFICATION

	<i>Aln</i>	<i>Cor</i>	<i>Quer</i>	Salic	<i>Sam</i>	<i>Ul</i>	<i>Cyt</i>	<i>Pic/Lar</i>	Con
323	-	-	-	-	-	3	-	-	-
400	-	-	-	-	-	-	1	-	-
438	-	-	-	-	-	2	-	-	-
445	-	-	-	-	-	1	-	-	-
467	-	-	-	-	-	1	-	-	-

CONTEXT		IDENTIFICATION							
	<i>Aln</i>	<i>Cor</i>	<i>Quer</i>	<i>Salic</i>	<i>Sam</i>	<i>Ul</i>	<i>Cyt</i>	<i>Pic/Lar</i>	<i>Con</i>
477	-	-	-	-	-	2	-	-	-
496*+	-	-	-	-	-	1	-	-	-
545	-	-	-	-	-	1	-	-	-
546	-	-	-	-	-	1	-	-	-
553*+	-	-	-	-	-	2	-	-	-
569	-	-	1	-	-	11	-	-	-
574	-	-	-	-	-	3	-	-	-
604	-	-	-	-	-	2	-	-	-
610	-	-	-	-	-	3	-	-	-
615	-	-	-	-	-	3	-	-	-
628*+	-	-	-	-	-	4	-	-	-
645	-	-	-	-	-	5	-	-	-
649	-	-	-	-	-	2	-	-	-
663	-	-	-	-	-	19	-	-	-
667*+									
670	-	-	-	-	-	2	-	-	-
725	-	-	-	-	-	4	-	-	-
755	-	-	-	-	-	1	-	-	-
761*+	-	-	-	-	-	1	-	-	-
789	-	-	-	-	-	2	-	-	-
794	-	-	-	-	-	6	-	-	-
799	-	-	-	-	-	13	-	-	-
812	-	-	-	-	-	2	-	-	-
827	-	-	-	-	-	1	-	-	-
876	-	-	-	-	-	1	-	-	-
879	-	-	1h	-	-	1	-	-	-
893	-	-	-	-	-	2	-	-	-
909*+	-	-	-	-	-	1	-	-	-

CONTEXT	IDENTIFICATION								
	<i>Aln</i>	<i>Cor</i>	<i>Quer</i>	<i>Salic</i>	<i>Sam</i>	<i>Ul</i>	<i>Cyt</i>	<i>Pic/Lar</i>	<i>Con</i>
916*+	-	-	-	-	-	3	-	-	-
957	-	-	-	-	-	1	-	-	-
963	-	-	-	-	-	1	-	-	-
971	-	-	-	-	-	1	-	-	-
990	-	-	-	-	-	3	-	-	-
991	-	-	-	-	-	4	-	-	-
999	-	-	-	-	-	2	-	-	-
1004	-	-	-	-	-	6	-	-	-
1015	-	-	-	-	-	1	-	-	-
1018	-	-	-	-	-	3	-	-	-
1019	-	-	-	-	-	4	-	-	-
1020	-	-	-	-	-	3	-	-	-
1033	-	-	-	-	-	4	-	-	-
1040	-	-	-	-	-	1	-	-	-
1042	-	-	-	-	-	1	-	-	-
1052	-	-	-	-	-	3	-	-	-
1076	-	-	-	-	-	3	-	-	-
1079	-	-	-	-	-	2	-	-	1
1084	-	-	-	-	-	1	-	-	-
1087	-	-	-	-	-	1	-	-	-
1093*+	-	-	-	-	-	4	-	-	-
1113	-	-	-	-	-	3	-	-	-
1118	-	-	-	-	-	2	-	-	-
1128	-	-	-	-	-	3	-	-	-
1141	-	-	3	-	-	5	-	-	-
1153	-	-	-	-	-	1	-	-	-
1208	-	-	-	-	-	1	-	-	-
1221	-	-	-	-	-	3	-	-	-
1235	-	-	-	-	-	1	-	-	-
1257+	-	-	-	-	-	6	-	-	-
1285	-	-	-	-	-	2	-	-	-

CONTEXT	IDENTIFICATION								
	<i>Aln</i>	<i>Cor</i>	<i>Quer</i>	<i>Salic</i>	<i>Sam</i>	<i>Ul</i>	<i>Cyt</i>	<i>Pic/Lar</i>	<i>Con</i>
1298	-	-	-	-	-	1	-	-	-
1304	-	-	4s	-	-	-	-	-	-
1312	-	-	-	-	-	2	-	-	-
1317	-	-	-	-	-	2	-	-	-
1334*+	-	-	-	-	-	4	-	-	-
1344	-	-	4s	-	-	-	-	-	-
1349	-	-	3s	-	-	-	-	-	-
1352*+	-	-	-	-	-	10	-	-	-
1354	-	-	-	-	-	1	-	-	-
1356	-	-	1s	-	-	-	-	-	-
1371	-	-	1s	-	-	3	-	1	-
1382	-	-	-	-	-	1	-	-	-
1418	-	-	6h	-	3	-	-	-	-
1433	-	-	-	-	-	3	-	-	-
1457*+	-	-	-	-	-	4	-	-	-
1468	-	-	-	-	-	4	-	-	-
1471	-	-	7sp	-	-	3	-	-	-
1514	-	-	24h+sp	-	-	-	-	-	-
1528	-	-	-	-	-	1	-	-	-
1551+	-	1	63	-	-	3	-	-	-
1560	-	-	3	-	-	1	-	?5	1
1561	-	11s+sp	-	-	?1	2	-	3	-
1562	?1	-	1s	-	-	-	-	-	-
1575	-	-	1s	-	-	-	-	-	-
1579	-	-	3	-	-	-	-	1	-
1583	-	-	10	-	-	4	-	7	-

CONTEXT	IDENTIFICATION								
	<i>Aln</i>	<i>Cor</i>	<i>Quer</i>	<i>Salic</i>	<i>Sam</i>	<i>Ul</i>	<i>Cyt</i>	<i>Pic/Lar</i>	<i>Con</i>
1594+	-	-	2	-	-	-	-	-	-
1595	-	-	1s	-	-	5	-	5	-
1597	-	-	3	-	-	3	-	1	-
1607	-	1	18	2	-	8	-	8	-
1613	-	-	2	-	-	-	-	-	-
1615	-	-	-	-	-	-	-	2	-
1618	-	-	2s	-	-	-	-	-	-
1621	-	5	14	-	-	1	-	2	-
1623	-	-	1s	-	-	-	-	-	-
1638	-	-	1	-	-	2	-	-	-
1639	-	-	1	-	-	-	-	3	-
1651	-	-	10	-	-	2	-	-	-
1652	-	-	2s	1	-	1	-	-	-
1666	-	1	2	-	-	-	-	-	-
1674	-	-	2s	1	-	-	-	-	-
1687	-	-	1	-	-	3	-	-	1 <i>Pseu</i>
1693*	-	-	-	6	-	-	-	-	-
1706	-	-	1	-	-	-	-	-	-
1708	-	-	-	-	-	-	-	-	-
1714	-	-	-	-	-	1	-	-	-
1745	-	-	-	-	-	1	-	-	-
1748+	-	-	1	-	-	1	-	-	-
1749	-	-	4s	-	-	8	-	-	-
1751	-	-	1s	-	-	-	-	1	-
1760	-	-	-	-	-	-	-	1	-
1763	-	-	4	-	-	-	-	4	-
1765	-	-	3	-	-	-	-	-	-
1766	-	1	4s	-	-	2	-	-	-
1768	-	-	-	-	-	-	-	-	-
1769	-	-	-	-	-	?1	-	-	-
1773	-	-	9	-	-	-	-	-	-

Bibliography

Alcock, L, 1963, *Dinas Powys, an Iron Age, Dark Age and Early Mediaeval Settlement in Glamorgan*, Cardiff

ApSimon, A M and Greenfield, E, 1972, 'The Excavation of Bronze Age and Iron Age Settlements at Trevisker, St.Eval, Cornwall', *Proc Prehist Soc* **38**, 302-81

Arlott, J, Cowan, R and Gibson, F, 1972, *Island Camera. The Isles of Scilly in the photography of the Gibson family*, Newton Abbot

Armitage, P, 1984, 'The Faunal Remains, in A Thompson *et al.*, 1984, 131-43

Ashbee, P, 1952-3, 'Two Stone Cists on St. Mary's, Isles of Scilly', *Proc West Cornwall Field Club* **1**, 28-31

Ashbee, P, 1953-4, 'Fieldwork in the Isles of Scilly, 1950', *Proc West Cornwall Field Club* **1**, 76-7

Ashbee, P, 1954, 'The Excavation of a Cist-grave Cemetery and Associated Structures near Hughtown, St. Mary's, Isles of Scilly, 1949-50', *Archaeol J* **111**, 1-25

Ashbee, P, 1955, 'Excavation of a Homestead of the Roman Era at Halangy Down, St.Mary's, Isles of Scilly, 1950', *Antiq J* **35**, 187-98

Ashbee, P, 1958, 'The Excavation of Tregulland Burrow, Treneglos Parish, Cornwall', *Antiq J* **38**, 174-96

Ashbee, P, 1965, 'Excavations at Halangy Down, St.Mary's, Isles of Scilly, 1964. Interim Report', *Cornish Archaeol* **4**, 36-40

Ashbee, P, 1966, 'Excavations at Halangy Down, St.Mary's, Isles of Scilly, 1965 and 1966', *Cornish Archaeol* **5**, 20-7

Ashbee, P, 1968, 'Excavations at Halangy Down, St.Mary's, Isles of Scilly, 1967 and 1968', *Cornish Archaeol* **7**, 24-32

Ashbee, P, 1970, 'Excavations at Halangy Down, St.Mary's, Isles of Scilly, 1969-70', *Cornish Archaeol* **9**, 69-76

Ashbee, P, 1973, 'Culture and Change in the Isles of Scilly', in C. Renfrew (ed), *The Explanation of Culture Change: Models in Prehistory*, London, 521-5

Ashbee, P, 1974, *Ancient Scilly*, Newton Abbot

Ashbee, P, 1976, 'Bant's Carn, St. Mary's, Isles of Scilly: An Entrance Grave Restored and Reconsidered', *Cornish Archaeol* **15**, 11-26

Ashbee, P, 1978, 'Excavations at Bar Point, St. Mary's, Isles of Scilly 1977', *Cornish Archaeol* **17**, 134

Ashbee, P, 1979a, 'The Porth Cressa Cist-Graves, St. Mary's, Isles of Scilly: a Postscript', *Cornish Archaeol* **18**, 61-80

- Ashbee, P, 1979b, 'William Borlase and archaeological illustration, a Note', *Cornish Archaeol* **18**, 138-40
- Ashbee, P, 1980, 'George Bonsor: an archaeological pioneer from Spain on Scilly', *Cornish Studies* **8**, 53-62
- Ashbee, P, 1982, 'Mesolithic Megaliths? The Scillonian Entrance Graves: A New View', *Cornish Archaeol* **21**, 3-22
- Ashbee, P, 1983, 'Halangy Porth, St. Mary's, Isles of Scilly, Excavations 1975-76', *Cornish Archaeol* **22**, 3-46
- Ashbee, P, 1986, 'Ancient Scilly: retrospect, aspect and prospect', *Cornish Archaeol* **25**, 186-219
- Ashbee, P, 1988, 'Halangy Porth, St. Mary's, Isles of Scilly', [Radiocarbon date], *Cornish Archaeol* **27**, 213
- Ashbee, P and Thomas, C, 1990, 'Scilly's statue-menhir rediscovered', *Antiquity* **64**, 571-5
- Atkinson, R J C, 1957, 'Worms and Weathering', *Antiquity* **31**, 219-33
- Avery, M, 1972, *Some aspects of the Iron Age in South-West Britain*, D.Phil.Thesis (Unpub.), University of Oxford
- Bailey, G N, 1978, 'Shell middens as indicators of postglacial economies: a territorial perspective', *The Early Post-glacial Settlement of Northern Europe*, in P Mellars (ed), London, 37-63
- Barrow, G, 1906, *The Geology of the Isles of Scilly*, Mem Geol Survey UK (Eng & Wales), London
- Beagrie, N, 1989, 'Excavations by Bryan and Helen O'Neil on the Isles of Scilly', in M. Bowden, D. Mackay and P. Topping (eds), *From Cornwall to Caithness: Some Aspects of British Field Archaeology*, Papers presented to Norman V. Quinnell, BAR Brit Ser **209**, Oxford, 49-54
- Beck, H C, 1927, 'Classification and nomenclature of Beads and Pendants', *Archaeologia* **77**, 1-76
- Beck, H C, 1930, 'A note on certain agate beads', *Antiq J* **X**, 149-51
- Bender, B and Caillaud, R, 1986, *The Archaeology of Brittany, Normandy and the Channel Islands*, London
- Berridge, P and Roberts, A, 1986, 'The Mesolithic Period in Cornwall', *Cornish Archaeol* **25**, 7-34
- Blagg, T C and Read, S, 1977, 'The Roman Pewter-Moulds from Silchester', *Antiq J* **57**, 270-6
- Boon, G C, 1974, *Silchester, the Roman Town of Calleva*, Newton Abbot
- Boon, G C, 1983, 'Some Romano-British Domestic Shrines and their Inhabitants', in B Hartley and J Wachter (eds), *Rome and her Northern Provinces: Papers presented to Sheppard Frere, Gloucester*, 33-55
- Borlase, W, 1756, *Observations on the Ancient and Present State of the Islands of Scilly*, Oxford
- Borlase, W, 1769, *Antiquities Historical and Monumental of the County of Cornwall*, London

- Brailsford, J W, 1962, *Hod Hill, I. Antiquities from Hod Hill in the Durden Collection*, London
- Breuil, H, 1922, 'Observations on the Pre-Neolithic Industries of Scotland', *Proc Soc Antiq Scot* **56**, 261-81
- Brooks, C E P, 1949, *Climate through the Ages*, London
- Brooks, R T, 1974, 'The Excavation of the Rumps Cliff Castle, St. Minver, Cornwall', *Cornish Archaeol* **13**, 5-50
- Brown, P D C, 1970, 'A Roman Pewter Mould from St. Just in Penwith, Cornwall', *Cornish Archaeol* **9**, 107-10
- Bruce-Mitford, R L S, 1956, 'A Dark Age Settlement at Mawgan Porth, Cornwall', in R L S Bruce-Mitford (ed), *Recent Archaeological Excavations in Britain*, London, 167-96
- Bruce-Mitford, R L S, 1978, *The Sutton Hoo Ship-Burial* **2**, London
- Bruce-Mitford, R L S, 1997, *Mawgan Porth: A settlement of the late Saxon period on the north Cornish coast*, Archaeol Rep (NS) **13**, English Heritage, London
- Bush, T S, 1908, 'Explorations at the north end of Lansdown', *Proc Soc Antiq Lond* **XXII**, 34-8
- Bushe-Fox, J P, 1926, *First Report on the Excavation of the Roman Fort at Richborough, Kent*, Rep Res Committee Soc Antiq Lond **V1**, Oxford
- Butcher, S A, 1978, 'Excavations at Nornour, Isles of Scilly, 1969-73: the Pre-Roman Settlement', *Cornish Archaeol* **17**, 29-112
- Calder, C S T, 1950, 'Excavation of a Neolithic Temple at Stanydale', *Proc Soc Antiq Scot*, **84**, 185-205
- Carlyon, P M, 1982, 'A Romano-British Site at Kilhallon, Tywardreath: Excavation in 1975', *Cornish Archaeol* **21**, 155-70
- Carlyon, P M, 1987, 'Finds from the Earthwork at Carvossa, Probus', *Cornish Archaeol* **26**, 103-41
- Childe, V G, 1931, *Skara Brae: A Pictish Village in Orkney*, London
- Childe, V G, 1949, 'Neolithic House - Types in Temperate Europe', *Proc Prehist Soc* **15**, 77-86
- Christie, P M L, 1978, 'The excavation of an Iron Age souterrain and settlement at Carn Euny, Sancreed, Cornwall', *Proc Prehist Soc* **44**, 309-433
- Christie, P M L, 1985, 'Barrows on the north Cornish coast: Wartime excavations by Croft Andrew 1939-1944', *Cornish Archaeol* **24**, 23-121
- Clark, J G D, 1932, 'The date of the plano-convex flint-knife in England and Wales', *Antiq J* **12**, 158-62
- Clark, J G D, 1947, 'Whales as an Economic Factor in Prehistoric Europe', *Antiquity* **21**, 84-104
- Clark, J G D, 1948a, 'Fowling in prehistoric Europe', *Antiquity* **22**, 116-30
- Clark, J G D, 1948b, 'The development of fishing in prehistoric Europe', *Antiq J* **28**, 45-85

- Clark, J G D, 1952, *Prehistoric Europe: The Economic Basis*, London
- Clark, J G D, 1975, *The Earlier Stone Age Settlement of Scandinavia*, Cambridge
- Clark, J G D, 1989, *Economic Prehistory*, Cambridge
- Clarke, D V, 1976, 'Excavations at Skara Brae, A Summary Account', C Burgess and R Miket (eds), *Settlement and Economy in the Third and Second Millennia B.C.*, BAR **33**, Oxford, 233-50
- Clarke, D V, Cowie, T G and Foxon, A, 1985, *Symbols of Power at the Time of Stonehenge*, Edinburgh.
- Clarke, D V and Sharples, N, 1985, 'Settlements and Subsistence in the Third Millennium BC', in C Renfrew (ed), *The Prehistory of Orkney*, Edinburgh, 54-82
- Clifford, E M, 1961, *Bagendon: A Belgic Oppidum, A record of the excavation of 1954-56*, Cambridge
- Coles, B, 1990, 'Anthropomorphic wooden figurines from Britain and Ireland', *Proc Prehist Soc* **56**, 315-33
- Coles, J, 1973, *Archaeology by Experiment*, London
- Collingwood, R G, 1930, *The Archaeology of Roman Britain*, London
- Corcoran, J X W P, 1952, 'Tankards and tankard handles of the British Early Iron Age', *Proc Prehist Soc* **18**, 85-102
- Cornwall, I W, 1958, *Soils for the Archaeologist*, London
- Crawford, O G S, 1927, 'Lyonesse', *Antiquity* **1**, 5-14
- Crawford, O G S, 1936, 'The Work of Giants', *Antiquity* **10**, 162-74
- Crofts, C B, 1955, 'Maen Castle, Sennen: the Excavation of an Early Iron Age Promontory Fort', *Proc West Cornwall Field Club* (NS) **I**, 98-115
- Crowfoot, G M, 1954, 'Textiles, Basketry and Mats', in C Singer, E J Holmyard and A R Hall (eds), *A History of Technology*, Oxford, 413-51
- Cunliffe, B W, 1971, *Excavations at Fishbourne, 1961-69, II: The Finds*, Rep Res Committee Soc Antiq Lond **XXVII**, London
- Cunliffe, B W, 1987, *Hengistbury Head, Dorset, I*, Oxford University Committee for Archaeol Monograph **13**, Oxford
- Cunliffe, B W, 1991. *Iron Age Communities in Britain*, London
- Cunnington, M E and Goddard, E H, 1934, *Catalogue of Antiquities in the Museum of the Wiltshire Archaeological & Natural History Society at Devizes, Part II*, Devizes
- Cuppige, J et al., 1986, *Archaeological Survey of the Dingle Peninsula*, Ballyferrier
- Curwen, E C, 1937, 'Querns', *Antiquity* **11**, 133-51

- Curwen, E C, 1938, 'The Hebrides: A Cultural Backwater', *Antiquity* **12**, 261-89
- Curwen, E C, 1946, *Plough and Pasture*, London
- Darvill, T, 1987, *Prehistoric Britain*, London
- Déchelette, J, 1914, *Manuel D'Archéologie II: Archéologie Celtiques ou Protohistorique*, Paris
- Dimbleby, G W, 1963, 'Pollen analyses from two Cornish Barrows', *J Roy Inst Cornwall* (NS) **4**, 364-75
- Dimbleby, G W, 1967, *Plants and Archaeology*, London
- Dimbleby, G W, 1971, 'Pollen Analysis', in H and T J Miles, 1971, 26-7
- Dimbleby, G W, 1977, 'A buried soil at Innisidgen, St.Mary's, Isles of Scilly', *Cornish Studies* **4/5**, 5-10
- Dimbleby, G W, Greig, J R A and Scaife, R G, 1981, 'Vegetational History of the Isles of Scilly', in D Brothwell and G W Dimbleby (eds), *Environmental Aspects of Coasts and Islands*, BAR Int Ser **94**, 127-44
- Dobson, D P, 1931, *The Archaeology of Somerset*, London
- Dowie, H G, 1928-9, 'Recent Archaeological Additions to the Museum', *Torquay Nat. Hist. Soc. Trans and Proc* **5**, 243-4
- Driesch, A von den, 1976, 'A guide to the measurement of animal bones from archaeological sites', *Peabody Mus Bull*, Harvard University, Cambridge, Mass
- Dudley, D, 1956, 'An Excavation at Bodrifty, Mulfra Hill, near Penzance, Cornwall', *Archaeol J* **113**, 1-32
- Dudley, D, 1960-1, 'Some Cist-Graves in Poynter's Garden, St. Mary's, Isles of Scilly', *Proc West Cornwall Field Club* **II**, 221-31
- Dudley, D, 1967, 'Excavations on Nor'nour in the Isles of Scilly, 1962-6', *Archaeol J* **124**, 1-64
- Edlin, H L, 1949, *Forestry and Woodland Life*, London
- Elsdon, S M, 1978, 'The Pottery', in P M L Christie, 1978, 396-423
- Engelstad, E, 1990, 'Mesolithic House Sites in Arctic Norway', in C Bonsall (ed), *The Mesolithic in Europe: Papers Presented at the Third International Symposium, Edinburgh, 1985*, Edinburgh, 331-7
- Evans, J, 1881, *The Ancient Bronze Implements, Weapons and Ornaments of Great Britain and Ireland*, London
- Evans, J, 1983, 'The examination of residues on sherds of pottery from Halangy Porth', *Cornish Archaeol* **22**, 37
- Evans, J G, 1983a, 'Excavations at Bar Point, St. Mary's, Isles of Scilly, 1979-80', *Cornish Studies* **11**, 7-32
- Everard, C E, 1980, 'On Sea-Level Changes, Archaeology and Coastal Change', *Soc Antiq Lond Occ Paper* (NS), **I**, London, 1-23

- Evison, V I, 1975, 'Pagan Saxon Whetstones', *Antiq. J* **55**, 70-85
- Feachem, R W, 1957, 'Castlehill Wood Dun, Stirlingshire', *Proc Soc Antiq Scot* **90**, 24-51
- Fenton, A, 1978, *The Northern Isles: Orkney and Shetland*, Edinburgh
- Fisher, J and Lockley, R M, 1954, *An Introduction to the Sea Birds of the North Atlantic*, London
- Forbes, R J, 1956, *Studies in Ancient Technology*, Leiden
- Fowler, P J, 1962, 'A Native Homestead of the Roman Period at Porth Godrevy, Gwithian', *Cornish Archaeol* **1**, 17-60
- Fowler, P J, 1981, 'Later Prehistory', in S Piggott (ed), *The Agrarian History of England and Wales, I:I, Prehistory*, Cambridge, 63-298
- Fowler, P J and Evans, J G, 1967, 'Plough-marks, lynchets and early fields', *Antiquity* **41**, 289-301
- Fowler, P J and Thomas, A C, 1962, 'Arable Fields of the Pre-Norman Period at Gwithian', *Cornish Archaeol* **1**, 61-84
- Fowler, P J and Thomas C, 1979, 'Lyonesse Revisited: the Early Walls of Scilly', *Antiquity* **53**, 175-89
- Fox, A, 1957, 'Excavations on Dean Moor, in the Avon valley, 1954-56, The Late Bronze Age Settlement', *Trans Devon Assoc* **89**, 18-77
- Fox, A and Ravenhill, W L D, 1969, 'Excavation of a rectilinear earthwork at Trevinnick, St.Kew, 1968', *Cornish Archaeol* **8**, 89-97
- Frere, S S, 1960, 'Excavations at Verulamium, 1959: fifth interim report', *Antiq J* **40**, 1-24
- Frere, S S, 1972, *Verulamium Excavations I*, Rep Res Committee Soc Antiq Lond, **28**, London
- Fulford, M, 1989, 'A Roman Shipwreck off Nornour, Isles of Scilly' *Britannia* **20**, 245-9
- Gardner, W and Savory, H N, 1964 [and 1971], *Dinorben, a Hill-Fort occupied in Early Iron Age and Roman Times, Excavations 1912-69* Cardiff
- Gill, C, 1975, *The Isles of Scilly*, Newton Abbot
- Goodchild, R G, 1943, 'T-shaped Corn-drying Ovens in Roman Britain', *Antiq J* **23**, 148-53
- Gordon, A S R, 1940, 'The excavation of Gurnard's Head, an Iron Age cliff castle in Western Cornwall', *Archaeol J* **97**, 96-111
- Gray, A, 1972, 'Prehistoric Habitation Sites on the Isles of Scilly' (ed P Ashbee), *Cornish Archaeol* **11**, 19-49

Grigson, G, 1948, *The Scilly Isles*, London

Guido, M, 1967, 'The Glass Beads from Nor'nour, Isles of Scilly', in D Dudley, 1967, 26-7

Guido, M, 1978, *The Glass Beads of the Prehistoric and Roman Periods in Britain and Ireland*, Rep Res Committee Soc Antiq Lond **XXXV**, London

Guthrie, A, 1969, 'Excavation of a Settlement at Goldherring, Sancreed, 1958-61', *Cornish Archaeol* **8**, 5-39

Hall, S J G and Clutton-Brock, J, 1989, *Two Hundred Years of British Farm Livestock*, London

Halliday, T, 1978, *Vanishing Birds*, London.

Hamilton, J R C, 1956, *Excavations at Jarlshof, Shetland*, Min Works Archaeol Rep **1**, Edinburgh

Harcourt, R, 1979, 'The Animal Bones', in G J Wainwright, 1979, 150-60

Harding, J R, 1950, 'Prehistoric Sites on the North Cornish Coast between Newquay and Perranporth', *Antiq J* **30**, 156-69

Hawkes, C F C and Hull, M R, 1947, *Camulodunum, First Report on the Excavations at Colchester, 1930-1939*, Rep Res Committee Soc Antiq Lond **XIV**, Oxford

Hawkes, J, 1939, *The Archaeology of the Channel Islands: II, The Bailiwick of Jersey*, Jersey

Heath, R, 1750, *A Natural and Historical Account of the Islands of Scilly*, London

Hencken, H O'Neill, 1932, *The Archaeology of Cornwall and Scilly*, London

Hencken, H O'Neill, 1933a, 'Notes on the Megalithic Monuments in the Isles of Scilly', *Antiq J* **13**, 13-29

Hencken, H O'Neill, 1933b, 'An Excavation by H M Office of Works at Chysauster, Cornwall, 1931', *Archaeologia* **83**, 237-84

Henshall, A S, 1950, 'Textiles and Weaving Appliances in Prehistoric Britain', *Proc Prehist Soc* **16**, 130-62

Higgins, L S, 1933, 'An Investigation into the Problem of the Sand Dune Areas on the South Wales Coast', *Archaeol Camb* **88**, 26-67

Hirst, F C, 1937a, 'Courtyard House Sites in West Cornwall', *J Brit Archaeol Assoc* (3rd Ser) **2**, 71-97

Hirst, F C, 1937b, 'Excavations at Porthmeor, Cornwall, 1933, 1934 & 1935', *J Roy Inst Cornwall* **24**, Appendix II

Hodges, H, 1964, *Artifacts, an Introduction to Early Materials and Technology*, London

Hoernes, M, 1925, *Urgeschichte der Bildenden Kunst in Europa*, Wien

Hogg, A H A, 1966, 'Native Settlement in Wales', in C Thomas (ed), *Rural Settlement in Roman Britain*, CBA Res Rep **7**, 28-38

- Hughes, M J, 1972, 'A technical study of opaque red glass of the Iron Age in Britain', *Proc Prehist Soc* **38**, 98-107
- Hull, M R, 1961, 'The Brooches at Bagendon', in E M Clifford, 1961, 167-85
- Hull, M R, 1967, 'The Nor'nour Brooches', in D Dudley, 1967, 28-64
- Inglis-Jones, E, 1969, *Augustus Smith of Scilly*, London
- Jackson, J W, 1947, 'Animal Remains', in C F C Hawkes and M R Hull, 1947, 350-5
- Jacobi, R M, 1979, 'Early Flandrian Hunters in the South West', *Proc Devon Archaeol Soc* **37**, 48-93
- Jenkins, F, 1967, 'Romano-Gaulish Clay Figurines', in D Dudley, 1967, 19-21
- Jewell, P, 1969, *The Impact of Tourism on the Ecology and Amenity of the Isles of Scilly*, University College, London
- Jones, R T, Wall, S M, Locker, A M, Coy, J and Maltby, M, 1978, *Computer Based Osteometry*, Data Capture User Manual, Ancient Mon Lab Rep, **3342**, London
- Keepax, C A and Morgan, G, 1978, 'Charcoal', in S A Butcher, 1978, 98
- Kendrick, T D, 1928, *The Archaeology of the Channel Islands: I: The Bailiwick of Guernsey*, London
- Kendrick, T D, 1950, *British Antiquity*, London
- King, C J, 1932, *A Concise Guide to the Scilly Isles*, Hughtown
- Knowles, F H S, 1944, *The Manufacture of a Flint Arrowhead by Quartzite Hammerstone*, Occ Papers on Technology **I**, Oxford
- Kratochvil, Z, 1973, 'Schadelkrititien der wild-und Hauskatze', *Acta Scientiarum Naturalium* (NS 10), **VII**
- Lacaille, A D, 1954, *The Stone Age in Scotland*, Oxford
- Lambrick, G, 1985, 'Further excavations of the second site of the Dominican Priory, Oxford', *Oxoniensia* **50**, 131-208
- Lawson, A J, 1975, 'Shale and Jet Objects from Silchester', *Archaeologia* **105**, 241-75
- Leeds, E T, 1926, 'Excavations at Chûn Castle, in Penwith, Cornwall', *Archaeologia* **76**, 205-40
- Lethbridge, T C, 1931, *Recent Excavations in Anglo-Saxon Cemeteries in Cambridgeshire and Suffolk*, Cambridge
- Locker, A, 1983, 'The Bones', in D S Neal, 1983, 66-70
- Locker, A, 1990, 'The Mammal, Bird and Fish bones', in D S Neal, A Wardle and J Hunn (eds), *Excavation of the Iron Age, Roman and Mediaeval Settlement at Gorhambury, St. Alban's*, Archaeol Rep **14**, English Heritage, London, 205-12

Locker, A, 1997, in J Ratcliffe, *British Telecom Trenching on St Martin's, Isles of Scilly, Summer 1992: The Results of the Archaeological Watching Brief*, Cornwall Archaeological Unit, Unpublished

Locker, A, 1997, *The Mammal, Bird and Fish Bones from Excavations at Porth Killier 1996*, Coastal Protection Scheme, St Agnes, Isles of Scilly. Unpublished

Lousley, J E, 1971, *Flora of the Isles of Scilly*, Newton Abbot

Lucas, A T, 1960, *Furze, a survey and history of its use in Ireland*, Dublin

MacGregor, A, 1974, 'The Broch of Burrian, North Ronaldsay, Orkney', *Proc Soc Antiq Scot* **105**, 63-118

Maltby, M, 1979, *The Animal Bones from Exeter, 1971-5*, Exeter Archaeol Rep 2, University of Sheffield

Matthews, G F, 1960, *The Isles of Scilly*, London

Megaw, J V S, Thomas, A C and Wailes, B, 1960-61, 'The Bronze Age Settlement at Gwithian, Cornwall, Preliminary report on the evidence for early agriculture', *Proc West Cornwall Field Club* **2**, 200-15

Meiggs, R, 1982, *Trees and Timber in the Ancient Mediterranean World*, Oxford

Mellars, P, 1978, 'Excavation and economic analysis of Mesolithic shell middens on the Island of Oronsay (Inner Hebrides)', in P Mellars (ed), *The Early Postglacial Settlement of Northern Europe*, London, 371-96

Mercer, R, 1970, 'The Excavation of a Bronze Age Hut-circle Settlement, Stannon Down', *Cornish Archaeol* **9**, 17-46

Mercer, J, 1971, 'A Regression-time Stone-worker's Camp, 33ft OD, Lussa River, Isle of Jura', *Proc Soc Antiq Scot* **103**, 1-32

Mercer, J, 1972, 'Microlithic and Bronze Age Camps, 75-26ft OD, N Carn, Isle of Jura', *Proc Soc Antiq Scot* **104**, 1-22

Miles, H, 1978, 'The Flints', in S A Butcher, 1978, 87-91

Miles, H, and T J, 1971, 'Excavations on Longstone Downs, St. Stephen-in-Brannel and St. Mewan,' *Cornish Archaeol* **10**, 5-28

Milne, G, 1985, *The Port of Roman London*, London

Mitchell, A, 1880, *The Past in the Present: what is Civilisation?*, Edinburgh

Mitchell, A, 1974, *A Field Guide to the Trees of Britain and Northern Europe*, London

Mitchell, G F and Orme, A R, 1967, 'The Pleistocene Deposits of the Isles of Scilly', *Quart J Geol Soc Lond* **123**, 59-92

Mortimer, M, 1985, 'Beady Pool', *Scillonian Mag* **221**, 163-4

- Mumford, C, 1967, *Portrait of the Isles of Scilly*, London
- Murphy, P, 1983, 'Carbonised seeds', in P Ashbee, 1983, 37-8
- Neal, D S, 1983, 'Excavation on a Settlement at Little Bay, St. Martin's, Isles of Scilly', *Cornish Archaeol* **22**, 47-80
- North, T W, 1850, *A Week in the Isles of Scilly*, Penzance
- North, F J, 1955, *The Evolution of the Bristol Channel*, Cardiff
- Nowakowski, J A, 1991, 'Trethellan Farm: the excavation of a lowland Bronze Age settlement and Iron Age cemetery', *Cornish Archaeol* **30**, 5-242
- O'Neil, B H St J, 1949, *Ancient Monuments of the Isles of Scilly*, London 1948
- O'Neil, B H St J, 1952, 'The Excavation of Knackyboy Cairn, St. Martin's, Isles of Scilly, *Antiq J* **32**, 21-34
- Padel, O J, 1985, 'Cornish Place-Name Elements', *English Place-Name Society*, LVI / LVII, Nottingham
- Peacock, D P S, 1969, 'A contribution to the study of Glastonbury Ware from south-western Britain', *Antiq J* **49**, 41-61
- Peal, C A, 1967, 'Romano-British Pewter Plates and Dishes', *Proc Camb Ant Soc* **60**, 19-37
- Pearse Chope, R, 1967, *Early Tours in Devon and Cornwall*, Newton Abbot
- Penhallurick, R D, 1986, *Tin in Antiquity*, The Institute of Metals, London
- Philp, B, 1989, *The Roman House with Bacchic Murals at Dover*, Fifth Res Rep, Kent Monograph Ser, Dover
- Piggott, S, 1954, *The Neolithic Cultures of the British Isles*, Cambridge
- Piggott, S, 1981, 'Early Prehistory', in S Piggott (ed), *The Agrarian History of England and Wales, 1.1, Prehistory*, Cambridge, 1 - 59
- Price, J, 1976, 'Glass', in D Strong and D Brown (eds), *Roman Crafts*, London, 111-25
- Quinnell, H, 1986, 'Cornwall during the Iron Age and the Roman Period', *Cornish Archaeol* **25**, 111-34
- Radford, C A R, 1951, 'Report on the Excavations at Castle Dore', *J Roy Inst Cornwall* (NS) **1**, Appendix, 1-119
- Rankine, W F, 1949, 'Stone "Maceheads" with Mesolithic Associations from South-Eastern England', *Proc Prehist Soc* **15**, 70-6
- Ranwell, D S (ed), 1977, *Sand Dune Machair 2, Report on meeting at the University of Aberdeen, 24-25 September 1975*, Institute Terrestrial Ecology, Norwich

- Ratcliffe, J, 1989, *The Archaeology of Scilly, An assessment of the resource and recommendations for the future*, Truro and London
- Renfrew, C, 1973, 'Monuments, mobilisation and social organisation in Neolithic Wessex', in C Renfrew (ed), *The Explanation of Culture Change: Models in Prehistory*, London, 539-58
- Ritchie, J, 1920, *The influence of Men on Animal Life in Scotland*, Cambridge
- Röder, J, 1958, Antike Steinbrüche in der Vordereifel; *Neue Ausgrabungen in Deutschland*, Berlin, 268-85
- Roe, F E S, 1979, 'Typology of stone implements with shaftholes', in T H. Clough and W A Cummins (eds), *Stone Axe Studies*, CBA Res Rep, **23**, 23-48
- Roe, F E S, 1985, 'Report on the Cupped Pebble', in P M L Christie, 1985, 56-9
- Rosenfeld, A, 1965, *The Inorganic Materials of Antiquity*, London
- Saunders, A and Harris, D, 1982, 'Excavation at Castle Gotha, St.Austell', *Cornish Archaeol* **21**, 109-53
- Scaife, R G, 1981, *Vegetational History of the Isles of Scilly: II, Radiocarbon dating and interpretation of Higher Moors, St.Mary's*, DOE Ancient Monuments Lab Rep, **3500**
- Scaife, R G, 1983, 'A History of Flandrian Vegetation in the Isles of Scilly: Palynological Investigations of Higher Moors and Lower Moors Peat Mires, St.Mary's', *Cornish Studies* **11**, 33-47
- Scarre, C, 1984, *Ancient France*, Edinburgh
- Schwieso, J, 1976, 'Excavations at Threemilestone Round, Kenwyn, Truro', *Cornish Archaeol* **15**, 51-67
- Scilly Museum, 1973. *Robert Maybee, the Scillonian Poet*, Hughtown
- Scourse, J D (ed) 1986, *The Isles of Scilly*, Field Guide Quatern Res Assoc, Coventry
- Serjeantson, D, 1988, 'Archaeological and ethnographic evidence for seabird exploitation in Scotland', *Archaeozoologia* **2** (1-2), 209-24
- Serjeantson, D, 1990. 'The Introduction of Mammals to the Outer Hebrides and the role of Boats in stock management', *Anthropozoologica* **13**, 7-18
- Shorter, A H, Ravenhill, W L D and Gregory, K J, 1969, *Southwest England*, London
- Silver, I A , 1963, 'The Ageing of Domestic Animals', in D Brothwell and E Higgs (eds), *Science in Archaeology*, London, 250-68
- Smith, I F, 1965, *Windmill Hill and Avebury, Excavations by Alexander Keiller, 1925-1939*, Oxford
- Smith, R A, 1937, *The Sturge Collection*, London
- Stevenson, W, 1920, *Trees of Commerce*, London
- Sumner, H, 1927, *Excavations in New Forest Roman Pottery Sites*, London
- Taylor, C, 1975, *Fields in the English Landscape*, London

- Teichert, M, 1966/69, 'Osteometrische Untersuchungen zur Berechnung der Widerristhöhe bei vor und frühgeschichtlichen Schweinen', *Habil-Schr, Halle-Wittenberg; Kuhn-Archiv, Halle-Wittenberg* **83**, 237-92
- Teichert, M, 1975, 'Osteometrische Untersuchungen zur Berechnung der Widerristhöhe bei Schafen', *Archaeological Studies*, Amsterdam, 51-69
- Thomas, C, 1959, 'Imported pottery in dark-age western Britain', *Medieval Archaeol* **3**, 89-111
- Thomas, C, 1963, 'Trial Excavations at Mulfra Vean, 1954', *Cornish Archaeol* **2**, 23-8
- Thomas, C, 1964, *Gwithian, Notes on the Church, Parish and St. Gothian's Chapel*, Redruth.
- Thomas, C, 1968, 'Grass-marked pottery in Cornwall', in J M Coles and D D A Simpson (eds), *Studies in Ancient Europe: Essays presented to Stuart Piggott*, Leicester, 311-31
- Thomas, C, 1975, 'Recent Fieldwork in the Isles of Scilly', *Cornish Archaeol* **14**, 87-94
- Thomas, C, 1978, 'Types and Distributions of Pre-Norman Fields in Cornwall and Scilly', in H C Bowen and P J Fowler (eds), *Early Land Allotment in the British Isles*, BAR, **48**, Oxford, 7-15
- Thomas, C, 1979, 'An Archaic Place-Name Element from the Isles of Scilly', *Bull Board Celt Stud* **28**, 229-33
- Thomas, C, 1981, *A Provisional List of Imported Pottery in Post-Roman Western Britain and Ireland*, Inst Cornish Stud Sp Rep **7**
- Thomas, C, 1985, *Exploration of a Drowned Landscape: Archaeology and History of the Isles of Scilly*, London
- Thomas, C, 1986, *Celtic Britain*, London
- Thompson, A, Grew, F and Schofield, J, 1984, 'Excavations at Aldgate', *Post Medieval Archaeol* **18**, 1-148
- Thompson, M W, 1981, *Ruins, Their Preservation and Display*, London
- Threipland, L Murray, 1956, 'An Excavation at St. Mawgan-in-Pydar, North Cornwall', *Archaeol J*, **113**, 33-81
- Todd, M, 1987, *The South-West to AD 1000*, London
- Topping, P, 1989, 'Early Cultivation in Northumberland and the Borders', *Proc Prehist Soc* **55**, 161-79
- Townsend, M, 1967, 'The Common Limpet (*Patella vulgata*) as a source of protein', *Folia Biologica* **15**, No3, 343-51
- Toulmin Smith, L (ed), 1907, *The Itinerary of John Leland in or about the years 1535-1543, Parts I to III*, London
- Toynbee, J M C, 1973, *Animals in Roman Life and Art*, London

- Troutbeck, J A, 1794, *A Survey of the Scilly Islands*, Sherborne
- Turk, F A, 1968, 'Notes on Cornish Mammals in Prehistoric and Historic Times, 1', *Cornish Archaeol* **7**, 73-9
- Turk, F A, 1971, 'Notes on Cornish Mammals in Prehistoric and Historic Times, 4', *Cornish Archaeol* **10**, 79-91
- Turk, F A, 1978, 'The Animal Remains from Nornour', in S A Butcher, 1978, 99-103
- Turk, F A, 1983, 'A Study of the Vertebrate Remains from May's Hill, St.Martin's', *Cornish Studies* **11**, 69-78
- Turk F A, 1991, *Register of bones identified in samples from the Isles of Scilly, Porth Killier, St Agnes*, Unpublished.
- Tylecote, R F, 1962, *Metallurgy in Archaeology*, London
- Tylecote, R F, 1966, 'The History of the Tin Industry in Cornwall', *Cornish Archaeol* **5**, 30-3
- Varndell, G, 1983, 'A polished-edge flint knife found near Coverack, St.Keverne', *Cornish Archaeol* **22**, 117
- Vyvyan, C C, 1953, *The Scilly Isles*, London
- Wagenfuhr, R, Weiss, B und Gühne, A, 1989, 'Holzartenbestimmungen an hölzernen Gegenständen von Ausgrabungen in Sächsischen Raum', *Holztechnologie* **30**, 96-7
- Wainwright, G J, 1979, *Gussage All Saints: An Iron Age Settlement in Dorset*, Dept Env Archaeol Rep **10**, London
- Wainwright, G J and Smith, K, 1980, 'The Shaugh Moor project: second report - the enclosure', *Proc Prehist Soc* **46**, 65-122
- Webster, G, 1986, *The British Celts and their Gods under Rome*, London
- Wedlake, W J, 1958, *Excavations at Camerton, Somerset*, Camerton Excavation Club
- Wedlake, W J, 1982, *The Excavation of the Shrine of Apollo at Nettleton, Wiltshire, 1956-1971*, Rep Res Committee Soc Antiq Lond **40**, London
- Wheeler, A, 1978, *Key to the Fishes of Northern Europe*, London
- Wheeler A, 1979, 'The Fish Bones', in C Renfrew, *Investigations in Orkney*, Rep Res Committee Soc Antiq Lond **38**, London, 144-9.
- Wheeler, R E M, 1943, *Maiden Castle, Dorset*, Rep Res Committee Soc Antiq Lond, **12**, Oxford
- Wheeler, Sir Mortimer, 1954, *Archaeology from the Earth*, London
- Wheeler, R E M and Wheeler, T V, 1932, *Report on the Excavation of the Prehistoric, Roman and Post-Roman Site in Lydney Park, Gloucestershire*, Rep Res Committee Soc Antiq Lond **9**, Oxford

- Whimster, R, 1977, 'Harlyn Bay Reconsidered: the Excavations of 1900-1905 in the light of recent work', *Cornish Archaeol* **16**, 60-88
- Whimster, R, 1981, *Burial Practices in Iron Age Britain: A Discussion and Gazetteer of the Evidence c.700 BC-AD 43*, BAR Brit Ser **90**, Oxford
- Williams, D F, 1976, 'Petrology of the Pottery', in J Schwieso, 1976, 63-4
- Wiliams, D. F, 1978, 'Petrological Analysis of the Pottery', in P M L Christie, 1978, 405-23
- Wilson, C. A, 1973, *Food and Drink in Britain*, London
- Worth, R Hansford, 1981 [1953], *Dartmoor*, (G M Spooner and F S Russell eds), Newton Abbot
- Wymer, J J, 1977, *Gazetteer of Mesolithic Sites in England and Wales*, CBA Res Rep **22**, Norwich
- Young, A, 1953, 'An Aisled Farmhouse at Allasdale, Isle of Barra', *Proc Soc Antiq Scot*, **87**, 80-105
- Zeuner, F E, 1963, *A History of Domesticated Animals*, London
- Zürn, H, 1970, *Hallstattforschungen in Nord Württemberg*, Veröffentlichungen des Staatlichen Amtes für Denkmalpflege, Stuttgart, Reihe A, Heft **16**, Stuttgart

THE SOCIETY'S AREA CORRESPONDENTS 1996

PENWITH	Ms A. Hathway, Caer Bran Farm, Higher Grumbla, Sancreed, Penzance. Tel: (01736) 786124
KERRIER	Mrs M. F. Hunt, Higher Polcoverack, Coverack, Helston. Tel: (01326) 280434
CARNMARTH	Mr M. Tangye, Penolva, Trefusis Terrace, Redruth. Tel: (01209) 214016
POWDER	Mr H. L. Douch, 2 Enys Road, Truro. Tel: (01872) 272120
PYDAR	Mr S. V. Hebdige, 14 Bay View Terrace, Newquay. Tel: (01637) 874216
ST AUSTELL	Mrs V. Brokenshire, 5 Cannis Road, Tregonissey, St Austell. Tel: (01726) 73110
BODMIN	Rev F. B. J. Coombes, 5 Valley View, Bodmin. Tel: (01208) 73036
TRIGG MINOR	Miss D. J. Andrew, The Hazard, Widemouth Bay, Bude. Tel: (01288) 361291
WEST WIVELSHIRE (LISKEARD)	Miss M. A. Morris, Clover Cottage, St Ive, Liskeard. Tel: (01579) 83157
WEST WIVELSHIRE (BODMIN MOOR)	Mrs M. Lovelock, Park Farm, St Neot. Tel: (01579) 20644
EAST WIVELSHIRE	Mr G. F. Walford, 92 Sunnybanks, Hatt, Saltash. Tel: (01752) 842730
TRIGG MAJOR	Vacant
STRATTON	Mr. R. M. Heard, 4 The Square, Kilkhampton, Bude. Tel: (01288) 882294
SCILLY	Mr F. S. Ottery, 2 Porthcressa Terrace, Hugh Town, St Mary's. Tel: (01720) 422638

Publications Sub-committee 1996

<i>Ex-Officio:</i>	President, Joint Secretaries, Treasurer, Editors
<i>Convenor:</i>	Editors
<i>Appointed:</i>	P. C. Herring, Miss M. Y. Morgan, Miss J. Nowakowski, Mrs H. Quinnell, H. L. Douch, N. D. Johnson

Executive Sub-committee 1996

<i>Ex-Officio:</i>	President, Joint Secretaries, Treasurer
<i>Convenor:</i>	Any one of the above
<i>Appointed:</i>	Miss D. G. Harris, H. L. Douch, N. D. Johnson

Historic Towns and Buildings Sub-committee 1996

<i>Ex-Officio:</i>	President, Joint Secretaries, Treasurer
<i>Convenor:</i>	Any one of the above

Projects Sub-committee 1996

<i>Ex-Officio:</i>	President, Joint Secretaries, Treasurer
<i>Appointed:</i>	M. O. Avent, T. Blackman, Mrs V. Brokenshire, H. L. Douch, A. W. Farrell, Mrs C. Gaskell-Brown, Miss D. G. Harris, S. Hartgroves, P. C. Herring, A. Mercer, Miss J. Nowakowski, N. V. Quinnell, P. Rose, N. Thomas, P. Lowndes, Mrs T. Lowndes, Ms J. Wood, I. Rowe

The Publications Sub-committee is authorised by the Society's 1961 constitution and is responsible to the General Committee and to the Annual General Meeting for all matters concerned with the Society's journal and other publications. The various sub-committees have been appointed by the General Committee to assume responsibility for different aspects of the Society's work in Cornwall and Scilly.

