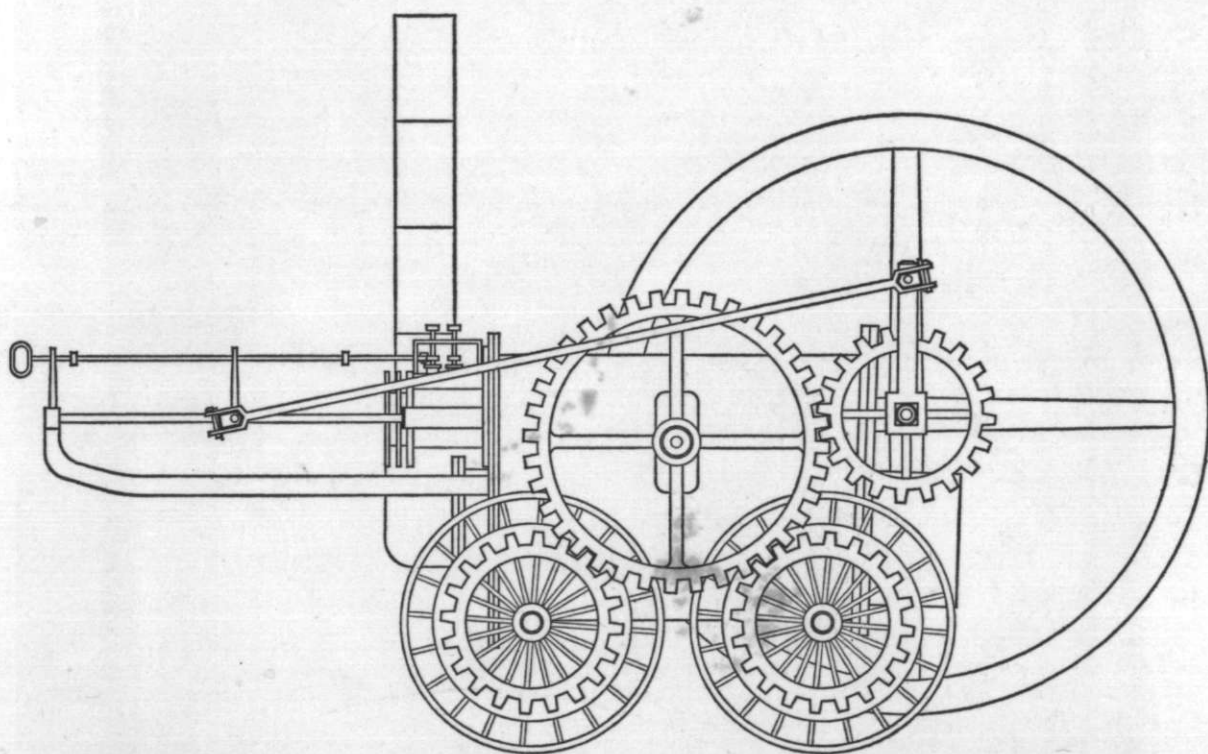


No.10 1971

CORNISH ARCHAEOLOGY



HENDHYSCANS KERNOW

COVER: *Richard Trevithick's 1803 tram locomotive* (redrawn from the Science Museum original by J. P. Stengelhofen).

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MEMBERSHIP OF THE SOCIETY is open to all individuals or groups interested in the history and material culture of Cornwall and the Isles of Scilly (persons under 16 being admitted at the discretion of the General Committee). The annual subscription (£2.00, or £1.00 for persons under 18 and for full-time students under 23) is payable each January 1st, and entitles members to receive a free copy of this, the Society's annual journal, the thrice-yearly Newsletter, and notification of all activities. At least one excavation is held annually, and the A.G.M. normally takes place in the Spring. Enquiries about membership should be sent to the Hon. Secretary; requests for any publication of the Society or of the former West Cornwall Field Club should be sent to Miss M. Buckingham, 12 Treverbyn Road, Padstow.

Price to non-members: £2.50

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OUR COVER PICTURE (kindly drawn out for us by Mr. J. P. Stengelhofen) is, as most Cornishmen will or should recognise at once, Richard Trevithick's 1803 engine—the one known from a Science Museum drawing, not actually by Trevithick, not actually the famous engine built at Penydarren, but allegedly a second engine; the drawing is sometimes attributed to a Mr. John Llewellyn. This machine had the distinction of featuring on a special Post Office hand-stamp, used at Camborne on April 10th 1971, in the commemorations of the bicentenary (1771-1971) of the Great Inventor's birth. The celebrations, organised by our sister-body, the Trevithick Society (see *Cornish Archaeology*, 9 (1970), 82), and organised with great skill and thoroughness, included exhibitions, a traction engine parade, a flood of articles in the local press, and a commemorative service in Truro Cathedral. The Post Office, only too keen to issue special stamps for almost any occasion, non-occasions included, declined to notice the father of British Rail officially; but their terror of according Cornwall any form of philatelic recognition hardly needs stressing.

Why Trevithick? Because this cover symbolises, not just 1971, but the Society's involvement in the field of industrial archaeology. Your Editor would welcome contributions in this direction, if only to reflect the amount of work carried out by members on the C.B.A.'s national index of industrial monuments, and (one can now add) the Society's alternative role as a conservationist body when the major industrial monuments of Cornwall are threatened. There have been some notable disasters in recent months—the castellated engine-house stack of Carn Camborne ('Camborne Beacon'), and several other fine engine-houses, improperly and hastily dynamited by developers the moment that attempts to preserve them were bruited. This need not happen and it is partly our fault if it does happen.

This apart, 1971 was a year of normal progress; despite the doubled annual subscription, membership has more than regained its old level, and continues to rise (to around 600, of all classes). The season at Carn Brea, part of a campaign to be continued in 1972, makes it abundantly clear that this really is a major neolithic settlement of enormous importance—the pottery and flints alone will occupy our Director (and his wife) during every free evening until about 1980 or so—and that the Society is justified in having chosen this. Other field activities, most of them chronicled below, fill out this picture. The appearance of Miss Russell's *West Penwith Survey* (details, p. 110 below) marks a horizon, and sets a standard, in the Parochial Checklist programme, which continues under the oversight of Mr. Peter Sheppard.

If one has to offer any reflection as we reach the decennial milestone—for our Society was, in a way, re-founded in 1961—it would be to point to a curious, un-Cornish, phenomenon. Ten or fifteen years ago, the officers and General Committee members were committed to a policy of archaeological unification. They were determined to stamp out, or at any rate to control, illicit and unrecorded digging (especially holiday digging); to discourage splinter-groups, which would be numerically too weak to

publish; and to make the Society in every sense an all-Cornwall body. The bugbears of that era were the threats to found new, parochial, archaeological societies in places like Penryn, and much time and effort was expended in countering this separatism. Not only does it seem years since any such threat arose, but today most of us would probably dismiss the idea as too fatuous to contemplate. The scheme of Area Correspondents, the territorial representation on the committees, the editorial policy of trying to reflect all parts of Cornwall and Scilly over the years in these pages, and the Society's excursions, do truly seem to have resulted in an organisation which can claim to be a county body. Students of the Cornish social scene will know how rarely this happens, and perhaps we can, in 1971, take a little quiet pride at having fulfilled this aim so painlessly.

Personalities seldom figure at any length in our Journal, but in the last year so much has happened that it is well worth recording some of the highlights. On April 20th 1972, our former President and now Vice-President, Dr. C. A. Raleigh Radford, received the Gold Medal of the Society of Antiquaries—the highest honour in British archaeology—and we offer our delighted congratulations at this event. Your Editor's former chair of archaeology at the University of Leicester has been filled (from October 1972) by a long-standing member and contributor to these pages, Mr. J. V. S. Megaw; we welcome his return from Australia, and send our felicitations to him; as indeed we do to two other members and contributors, Dr. Frank Turk and Mr. Peter Fowler, both of whom have now been elevated to Readerships (in Natural History and Oriental Art, and Archaeology, respectively) while remaining on the extra-mural strengths of the Universities of Exeter and Bristol. The new Institute of Cornish Studies, directed by your Editor since January 1972, and still awaiting its move to Trevenson House in the autumn, has appointed five research fellows; among them are Dr. Turk (as a part-time Senior Research Fellow (Natural Sciences)), and our industrial archaeologist and press officer Mr. John Stengelhofen, who becomes an English China Clays Research Fellow with special responsibility for the Bodmin Moor project.

Excavations on Longstone Downs, St. Stephen-in-Brannel and St. Mewan

HENRIETTA MILES, B.A. and TREVOR J. MILES

The Long Stone was shown to have replaced an earlier standing stone which in turn had replaced a post. There were no datable finds. Cocksbarrow, a low flat-topped round barrow, consisted of two cairn rings covered by a turf stack beneath a ring of yellow clay around the edge of its flat top. A single cremation accompanied by a horn ladle was in a central pit. The outer cairn ring had replaced a double, irregular ring of posts. A linear bank was possibly a medieval boundary.

THE EXCAVATION OF three sites on Longstone Downs, the Long Stone (SW 98385614), Cocksbarrow (SW 98505630) and a linear bank (SW 98405635 to SW 98315615), took place in May and June 1970. The sites were on the St. Austell kaolinised granite and were to be destroyed by china clay working. The Long Stone was on the parish boundary between St. Stephen-in-Brannel and St. Mewan. It was scheduled as an Ancient Monument in St. Stephen-in-Brannel. The linear bank was in St. Stephen-in-Brannel; and Cocksbarrow was mostly in St. Mewan, but partly in St. Stephen-in-Brannel and St. Austell Urban. The boundaries of these parishes met at Stone C (fig. 4) on the South West edge of the barrow (fig. 1).

Permission for the excavation was given by English Clays Lovering Pochin, who generously provided machinery and accommodation. The excavation was directed for the then Ministry of Public Building and Works, now Department of the Environment, and the Cornwall Archaeological Society, by Henrietta Miles of the Department of Extra-Mural Studies, University of Exeter. The Ministry made a grant which covered the cost of an assistant supervisor and six professional excavators for a month. Valuable assistance was received from members of the Cornwall Archaeological Society and extra-mural students of the University of Exeter.

The Longstone Downs form the second highest eminence of the St. Austell granite. Cocksbarrow is situated on the highest point of the Downs at 990 ft. O.D. Hensbarrow, about a mile to the North East of Cocksbarrow, crowns the highest point of the granite at 1027 ft. O.D. The vegetation of the Downs consists of rough turf with much heath, bilberry and gorse. There are no trees. The surface has almost everywhere been disturbed by the movement of heavy machinery used in china clay working. The granite of the Longstone Downs has been almost completely kaolinised (Barton, 1964, 116) and is being rapidly extracted as china clay. The surface of the Downs has an occasional piece of weathered granite moorstone protruding through the turf. The granite is mainly a white, coarse-grained variety, but some pieces have finer crystals and a bluish colour. The subsoil beneath the turf was composed of a gravelly rab surrounding irregular pieces of granite, very like the subsoil on solid granite. The rab passed into a slightly gritty, bright yellow clay at a depth of about three feet which in turn passed, at about twenty to thirty feet, to white china clay.

The archaeology of the St. Austell granite has been neglected, but the recent compilation of parochial check-lists by Sheppard (1970) has revealed a large number of

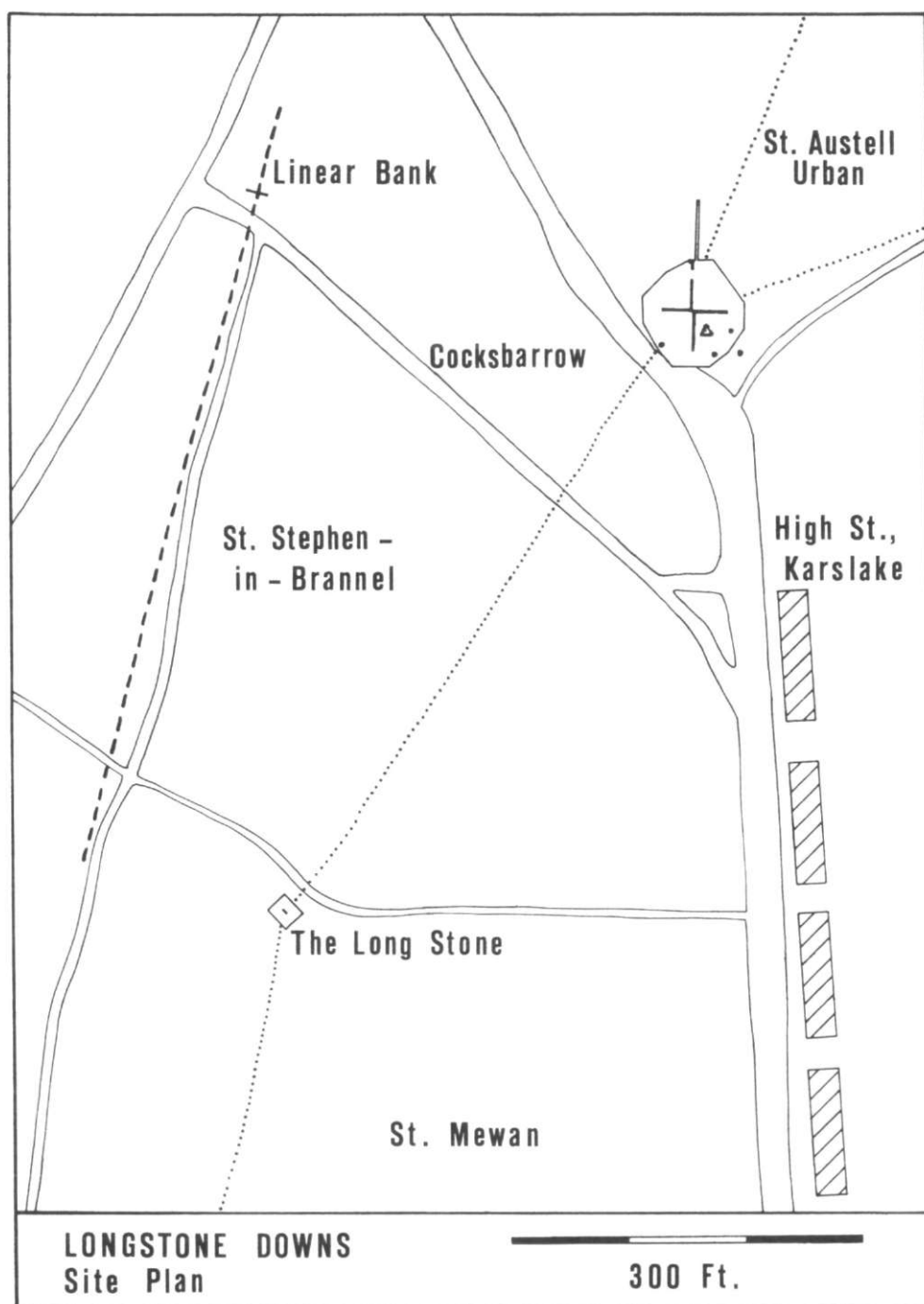


Fig. 1
Longstone Downs—site plan

sites, mainly barrows. Several barrows which were opened in the eighteenth and nineteenth centuries produced cremation burials and urns which are now lost (W. C. Borlase, 1872, 152). The Rogers Portfolio (Rogers, pre-1880) lists finds of bronze spearheads from streamworks at Loath-to-Depart and elsewhere (unspecified) in Roche parish, and an object described as a gold fibula, perhaps a dress fastener, from a streamworks in St. Stephen-in-Brannel. There appear to be no hut-circles on the St. Austell granite.

The finds have been lodged at the Museum of the Royal Institution of Cornwall at Truro.

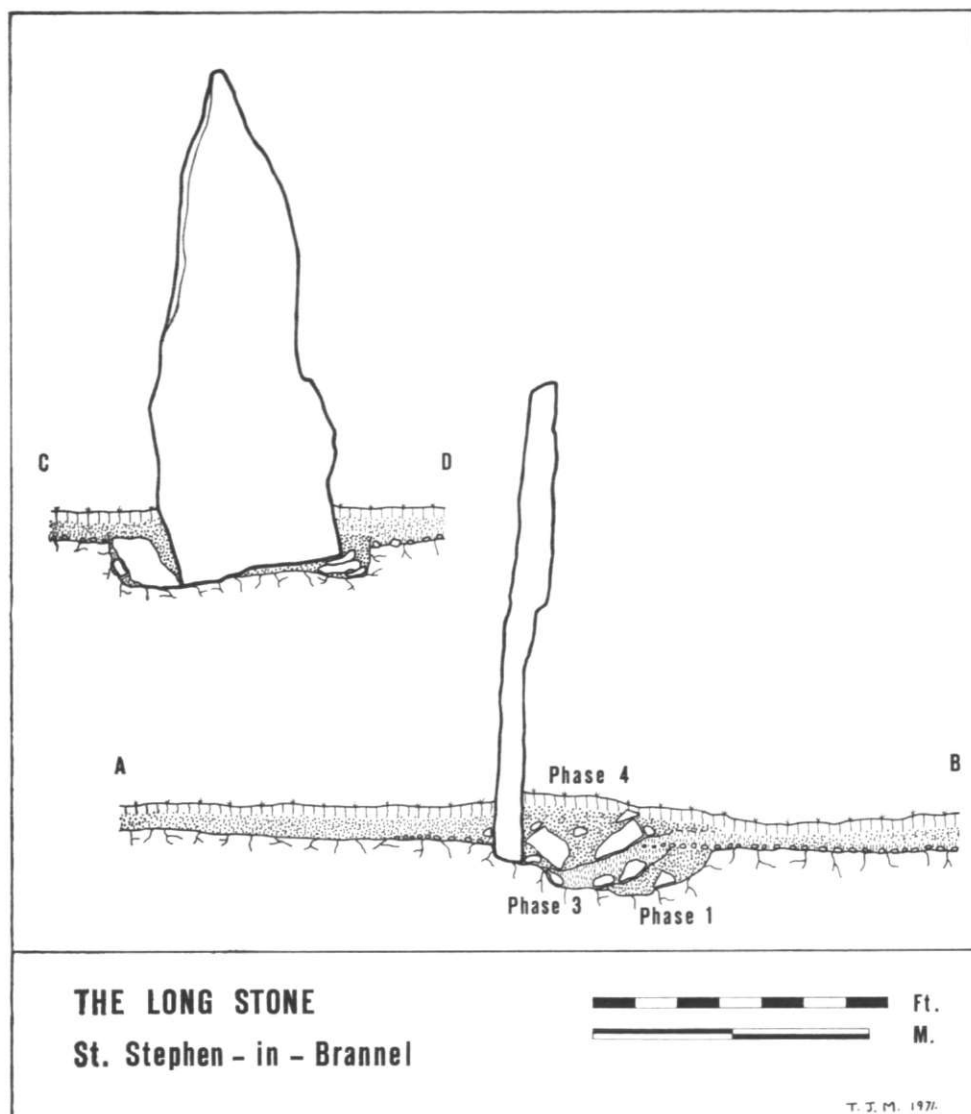


Fig. 2
The Long Stone—profiles and sections

The Long Stone (Figs. 2 and 3)

The Long Stone was a slab of granite standing 10 ft. 3 in. high from the modern turf. Its site was to be covered by a dump of china clay waste. The total length of the slab is 11 ft. 6 in.; its maximum width is 4 ft. 6 in.; its thickness is 7 in., and it weighs 2 tons 15 cwt. The upper parts of both faces on their NW edge have been worked, so that this edge of the Stone is formed by two adjoining chamfers. This working has accentuated the pointed shape of the stone. On the flat SW face were cut initials, none earlier in style than the eighteenth century, including 'AJN' and 'JL' in an eighteenth century style. The NE face was irregular; it increased in thickness about 4 ft. 6 in. from the ground and overhung its base by about 4 in. The Stone leaned to the north east by about 8 in. Around its base was a slight mound. The Stone was of the coarse-grained white granite most common on the Downs, and had presumably lain on the surface before erection as one face (SW) was weathered smooth, and the other was very little weathered. There is no reason to suppose that the slab had been brought any distance, although no slabs of this size have been noticed lying on the surface of the Downs today.

The Long Stone is listed as Menhir No. 1 in the St. Stephen-in-Brannel check-list, where references to it are given, and also as No. 1 in the St. Mewan list (Sheppard, 1970). These references include a description of the Stone in 1660 as 'Menevagar'. The mound around its base is listed as Barrow No. 4 in the St. Stephen list and as No. 6 in the St. Mewan list. The Long Stone has been used as a Boundary Stone between St. Stephen-in-Brannel and St. Mewan parishes. The parish boundary changes alignment at the Stone. The inhabitants of High Street, Karslake, tell of an attempt to remove the Stone using two horses, and of the digging of a hole by its base. These events are supposed to have happened a long time ago, and are probably fictitious as no modern hole was found. Folklore concerning the impossibility of removal is often connected with megalithic sites (Grinsell, 1953, 80).

The Stone has been re-erected on a green at Holmleigh Crescent, St. Dennis Road, Roche (SW 986601).

The excavation

An area 20 ft. by 24 ft. around the Stone was completely excavated, at first in two parts, leaving a 3 ft. wide baulk NE—SW across it to support the Stone. As the Stone had been erected in a shallow pit it was necessary to remove it. A mobile crane lifted the Stone vertically without disturbing any archaeological layers. The central baulk was then halved to provide a section through the centre of the Stone's base and setting, and finally the remainder of the baulk was removed. Trenches 3 ft. wide and 30 ft. long, dug mechanically at right angles to each side of the excavated area, revealed nothing.

The excavated area was covered by a thin layer of turf containing nineteenth century pottery over a layer of dark soil and stones. Beneath these a sequence of features was revealed. These are described from the most recent, working backwards.

Phase 4

The Long Stone had an irregular base which had been set, at its deepest point, 2 ft. 1 in. into the ground. A small pit had been dug in which to erect it; the SW face of the Stone was set against the side of this pit. Both ends of the Stone were wedged with smaller stones (Pl. I) and the pit filled with more stones and a mixture of rab and black soil which had been piled above the top of the pit to form a small mound around the base of the Stone (Pl. I). This mound extended beyond the edges of the pit.

Five feet to the south of the Long Stone a small pit had been cut 6 in. into the rab. It contained a number of small granite slabs set on edge, possibly packing for two small posts. The soil in this pit was hard-packed, black and gritty. This feature can be assigned to Phase 4, as it had not been disturbed by the stripping of turf and topsoil which had caused a slight hollow in Phase 3.

Phase 3

The pit in which the Long Stone was erected had been dug through the edge of an earlier pit slightly to its north-east. This earlier pit also originally contained a standing stone. An irregular, sharply defined depression 1 ft. by 1 ft. 6 in. across survived in its bottom with a number of large packing stones around it. On the South these had been disturbed by the digging of the Long Stone pit. These stones were all slightly rounded and of fine-grained bluish granite. These were the only pieces of this granite found in the Long Stone excavation and would appear to have been deliberately gathered, because of their colour, from the surface of the Downs. These packing stones were set in a soil far more humic than that in the pit in which the Long Stone had stood. The shape and clarity of the impression in the bottom of the pit suggested that a stone rather than a post had caused it.

Around the edge of this pit was an area cobbled with small, angular, granite lumps with their upper surfaces worn smooth (Pl. I). The area was irregular, forming an approximate rectangle symmetrical to the Phase 3 stone. Some of the packing stones in

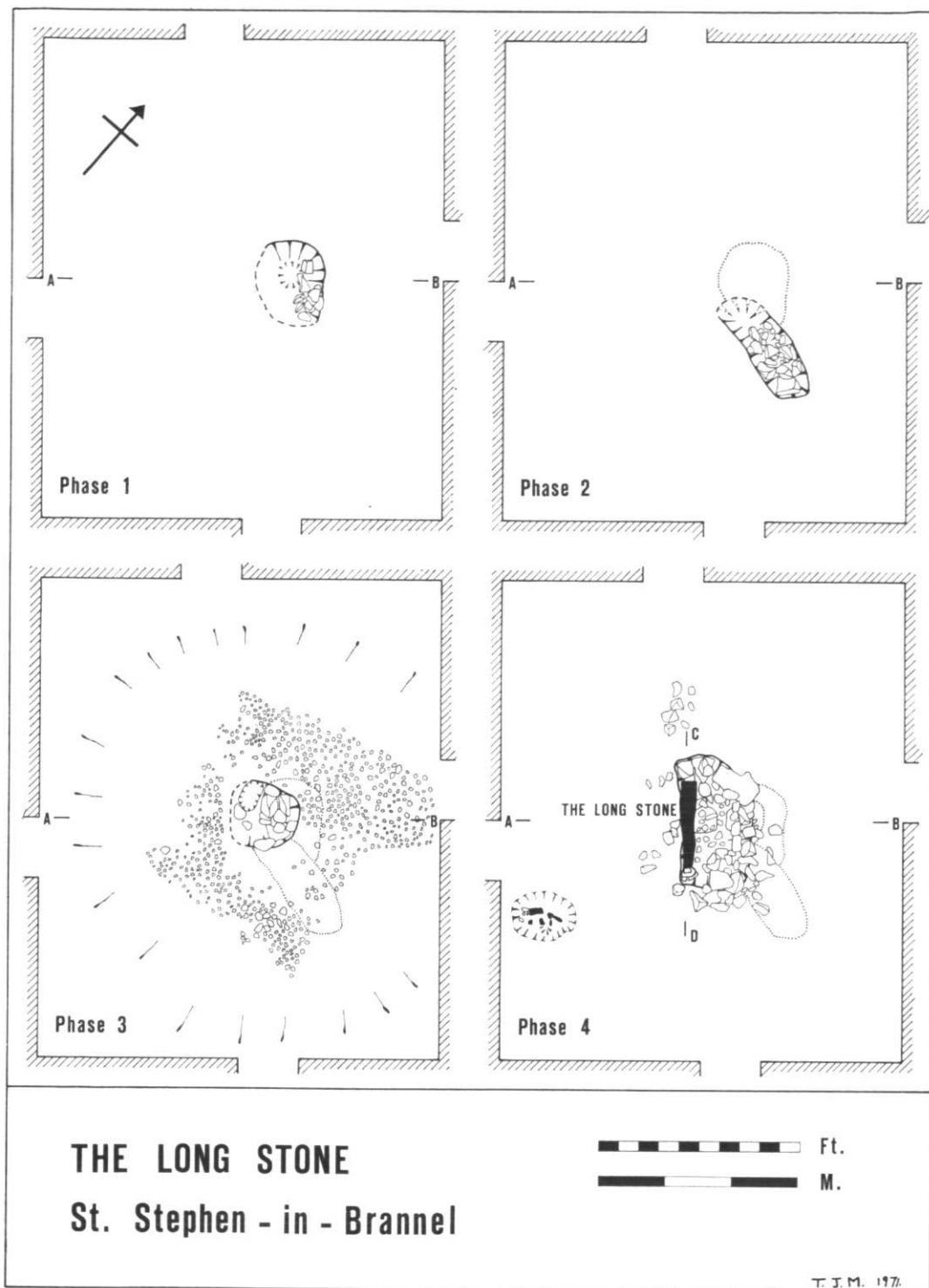


Fig. 3
The Long Stone—plans of Phases 1 to 4

the pit projected above the level of this cobbled area. The granite cobbles had been placed directly on the surface of the rab. A slight hollow, larger than the cobbled area, indicated the area over which the turf and topsoil had first been removed. A layer of soil 2 in. thick had accumulated on top of the cobbles before the mound of soil and stones, projecting above and beyond the pit in which the Long Stone was set, was put in position.

Phase 2

The pit for the Phase 3 stone had been cut into a pit 6 ft. long, 2 ft. 3 in. wide, dug 1 ft. deep in the rab. On the bottom and sides of this pit were lumps of granite beneath a filling of black, rather gritty soil. This pit was sealed by the Phase 3 cobbled area. Scattered through its fill were nine small white quartzite pebbles.

Phase 1

The earliest feature was a pit, probably originally 3 ft. 6 in. by 4 ft. across and dug 1 ft. 2 in. into the rab. This had been cut by features of Phases 2 and 3, but the surviving part showed that this pit had also been dug to hold an upright. On its north-east, undamaged, side some packing stones survived set in fine black soil. On the bottom of the pit was a faint circular impression about 1 in. deep and 1 ft. in diameter. The rounded shape of this impression, and the fact that it was fainter and shallower than that in the bottom of the Phase 3 pit, suggest that the upright was a post rather than a stone. One small quartzite pebble was found in the pit.

The finds (Pl. I)

Nine small, water-worn white pebbles of quartzite, polished as though by much handling, were found in the Phase 2 pit, and one in the Phase 1 pit. These pebbles could have been found in a river gravel but a marine beach is a more likely source.

Discussion

The excavation at the St. Stephen-in-Brannel Long Stone has shown that a post and two stones were erected in succession on the site. This suggests continuity in religious practices on the site over a long period. The post erected in Phase 1 might have lasted thirty or fifty years. The Phase 2 pit must have been dug while the Phase 1 post was still standing as once the post had been removed it would have been difficult to locate the site with exactitude. The Phase 3 stone stood for a long time. The granite lumps used to form a surface around it were worn smooth on their upper side. The soil on top of the cobbles suggests a period of comparative neglect before the Long Stone was set up. The Long Stone was erected soon after the removal of its predecessor before the exact site was forgotten. Altogether the site may have been used for several hundred years.

Menhirs are usually assumed to have been connected with prehistoric ritual and magical practices. They may also have marked boundaries or meeting places. It is unlikely that menhirs were erected primarily to commemorate deceased persons. Many menhir excavations have produced no evidence of human burials. Their sites were presumably regarded as sacred and therefore used on occasion as burial places, but the burial of human remains was a subsidiary, non-essential feature. Menhirs which survive are situated mostly on high ground but rarely on the highest points. They are frequently sited, as was the Long Stone, just below the summit of a hill. The Old Man, on Gugh, Isles of Scilly, and the standing stone at Merrivale on Dartmoor are also sited in this way.

No definite parallel is known for the post of Phase 1, although it would be almost impossible to locate the sites of single standing posts; they may have been common. The Maen-Llwyd Stone at Llanstephan, Carmarthenshire was erected subsequently to the digging of a pit (Lewis, 1965, 262 & Fig. 1). Although the excavator does not suggest it, it seems from the drawing that this pit may have held an earlier stone or post. A post is perhaps more likely as no impression was noted in the bottom of the pit.

There may have been a burial at the foot of the Phase 1 post. The shape and size of the Phase 2 pit suggest an inhumation grave. The stones found on the bottom and sides may have been laid over a body. The acid soil would have dissolved all traces of unburnt bone. Cremated bone would have survived, as the cremation buried in similar soil conditions under Cocksbarrow had been preserved. Cremations are frequently found near the bases of menhirs. One was found in a cist by the base of the menhir at Try, Gulval (Russell & Pool, 1964). No inhumation burials in this position have been recorded. Inhumations have been found at the bases of stones in the Circle and Avenue at Avebury (Smith, 1964, 209). Two pits of suitable size for inhumation burials were found associated with menhirs by W. C. Borlase (1872, 22-4). At Trewern in Madron a pit 6 ft. 6 in. long, 2 ft. 9 in. wide and 4 ft. 6 in. deep contained only black soil; at Higher Drift in Sancreed a pit of similar size had probably been immediately back-filled. Both were situated between pairs of menhirs. Neither contained bone; either this had decayed, or the pits had some unknown purpose and the Phase 2 pit may have been dug with similar intent.

The small white pebbles in the Phase 2 pit and in the packing of the Phase 1 post are paralleled by those found with a cremation in the cist by the Try menhir (Russell & Pool, 1964, 16), and that found at the base of a menhir at Pickwell Manor, Georgeham, North Devon (Tyler, 1930, 70). Similar pebbles have been found in some Cornish barrows, for example in the Lousey Barrow at St. Juliot (Andrews, 1946, 41); two were found in Cocksbarrow. Their purpose was obviously magical. These pebbles are frequently found associated with burials and their presence in the Phase 2 pit might strengthen its interpretation as a grave.

When the Phase 3 stone replaced the post, great care was taken in its erection. Bluish granite lumps from the surface of the Downs (rather than the more common grey/white lumps) were selected to pack around its base, and the surface around it was carefully set with small pieces of granite. This cobbled area can be compared to that around the Ffos-y-maen stone at Llanpumpsaint, Carmarthenshire, a stone with which nothing datable was found (Lewis, 1965, 260). There also appears to have been paving around a group of three standing stones at Letterston, Pems. (Lewis, *ibidem*). The area cobbled at Ffos-y-maen was roughly rectangular, as the the Long Stone, but the menhir was set diagonally to it. In Cornwall the Northern circle at the Hurlers had been cobbled with pieces of granite (see note, *Proc. Prehist. Soc.*, IV (1938), 319).

The Phase 4 Long Stone was larger than the Phase 3 stone, and the careful wedging of its base in a shallow pit suggests great skill in handling and erecting heavy stones. The dressing of the NW edge was done before erection as no waste was found. The St. Breock Beacon Long Stone had had part of its top cut to produce a shoulder (Saunders, 1959, 195).

No parallel is known for the suggested sequence of a post and two standing stones, or indeed for two stones in succession on the same site. At the Rhos-y-Clegryn standing stone at St. Nicholas, Pembrokeshire, two smaller pillar stones had been erected in a pit which cut the foundation pit of the main stone; all three then stood together (Lewis, 1965, 256). Many menhir excavations were undertaken many years ago and it is probable that details of sequence have been missed.

No phase of the Long Stone site can be dated with certainty. Every date given to a menhir by associated finds has been within the Bronze Age. The menhir at Try, Gulval, had been erected just before the burial of a handled beaker with a cremation in a cist (Russell & Pool, 1964, 17), at some early date in the Bronze Age. Other menhirs have been loosely associated with urns described as Middle Bronze Age (see list in Russell & Pool, 1964) but in no case can it be shown that the burial of the urn was contemporary with the erection of the menhir. The majority of menhir excavations in Cornwall have produced no datable finds. It is not possible to say how late the practice of erecting menhirs continued in Cornwall, as the only evidence for assigning the erection of any to

the Late Bronze Age rests on their association with urns which have been described as Late Bronze Age, and the ascription of any funerary urns to this period would be regarded today as impossible of proof. It is likely therefore that the Long Stone itself was set up sometime within the Early or Middle Bronze Age, most probably in the former, the period conventionally dated 1650-1400 BC. The use of timber—and it must be stressed that at the Long Stone this was not proven, but rests only upon the excavators' opinion—connects the site with ritual sites of the Later Neolithic. Henge monuments such as Arminghall, Norfolk; Durrington Walls, Wilts.; and Mount Pleasant, Dorset, have timber structures within them. Excavations of stone circles have produced evidence for long periods of use and have revealed sequences in which settings of stone replaced those of timber. The recent excavation at Croft Moraig, Perthshire (Piggott & Simpson, 1971) showed two successive phases of stone settings replacing a primary one of posts. The first setting at the Sanctuary, Wilts., also appears to have been of timber, while later structures on the site were of stone and mixed timber and stone (Smith, 1964, 244). Dates within the third millennium B.C. have been suggested for the timber phases at both Croft Moraig and the Sanctuary. It is generally assumed that the practice of erecting stones, either singly or in settings, originated or was closely associated with the users of Beaker pottery. The single stone associated with the first phase at Stonehenge, the Hele Stone, was probably erected some time in the third millennium B.C. It is just possible that the original post on the Long Stone site was erected before the beginning of the Bronze Age. The origins of the practice of erecting single standing stones may lie, with those of almost all the ritual structures of the Bronze Age, in the Later Neolithic.

Cocksbarrow (Figs. 4-8)

Cocksbarrow appeared before excavation as an irregular low mound, 70 ft. across and 1 ft. 6 in. high, with a slight bank around the perimeter of its flat top. There was no surrounding ditch. The South edge had been recently damaged by the encroachment of a road. Just east of the centre was a pit with mounds of upcast, obviously dug some time ago. Four stones projected from the turf on or beside the barrow. The most northerly proved to be a moorstone. Stone A was an undressed block of granite standing 2 ft. 9 in. above the turf. It had been set in a shallow pit which had hardly disturbed the structure of the barrow. Stone B was an upright granite block 2 ft. 6 in. high, dressed roughly rectangular, with a letter M cut on its south face and an E on its north, both in an eighteenth century style. Its shallow pit had done little damage to the barrow. Stone C was of roughly squared granite 3 ft. 6 in. tall, marking the junction of St. Stephen-in-Brannel, St. Mewan and St. Austell Urban parishes. The 1965 2½ in. O.S. map shows a spot height of 922 ft. O.D. nearby, to which the zero contour on Fig. 4 has been approximately equated.

Cocksbarrow has been listed as No. 3 in the St. Stephen-in-Brannel check-list, and as No. 1 in St. Mewan (Sheppard, 1970). The St. Stephen-in-Brannel list includes references to the barrow as Cocksbarrow or Coxbarrow, and also as Ninestones. The 'Cocks' element does not appear to have a Cornish root (Gover). The name is almost certainly English and comparatively modern, perhaps a play on the name Hensbarrow (Cornish *hen*, 'old'), that of the prominent barrow a mile to the north-east of Cocksbarrow.

The excavation

The four base pegs, NW, SW, SE and NE, used for the contour survey, were retained throughout the excavation. Trenches 6 ft. wide were dug by hand along the west side of the NE quadrant and the east side of the SW quadrant. These trenches enabled the basic structure of the barrow to be understood. The topsoil, and the turf stack which

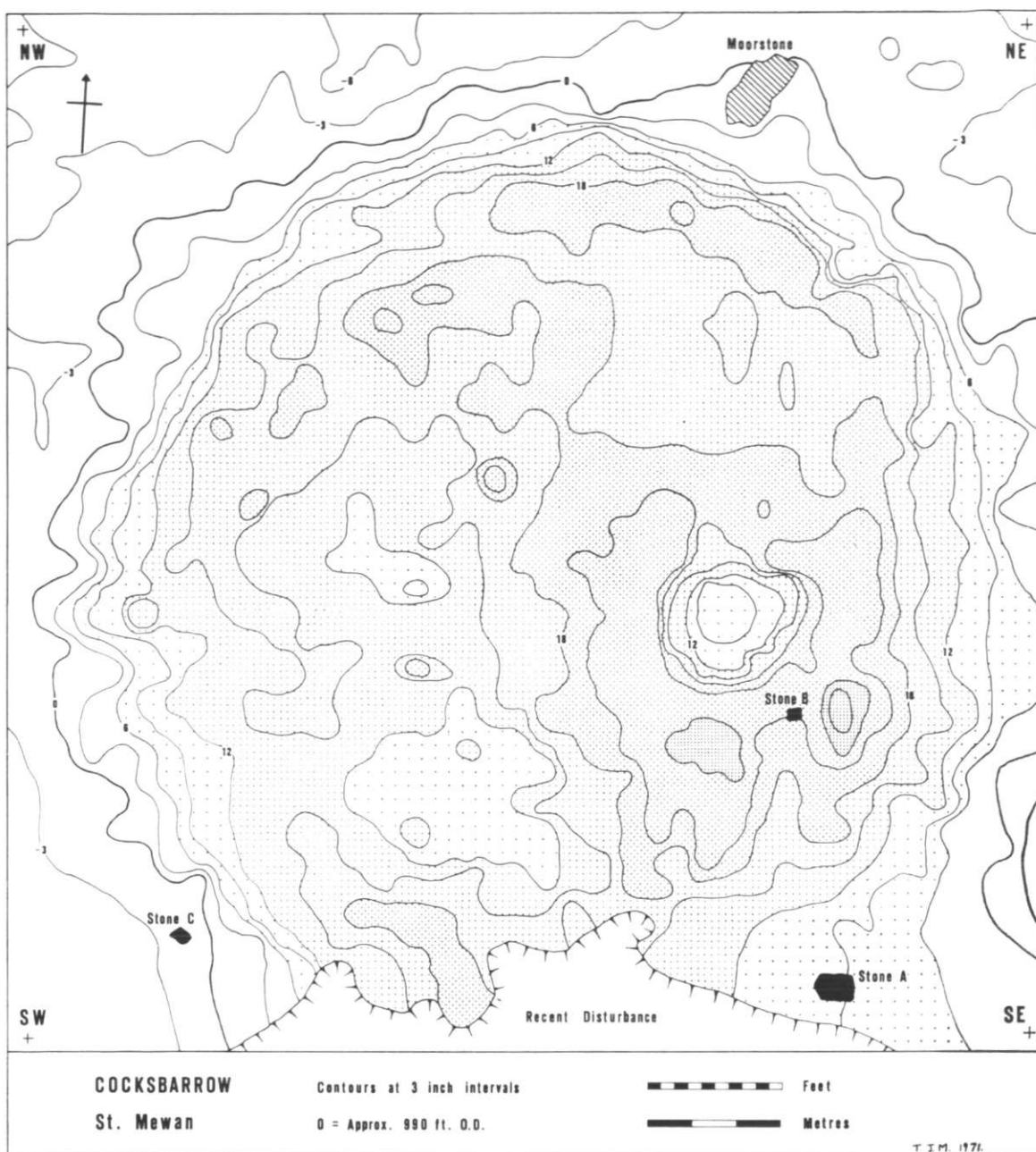


Fig. 4
Cocksbarrow—contour plan

formed most of the mound, were then removed by the arm of a mechanical excavator, care being taken that the machine did not run over the area already cleared. Each cut made by the bucket of the machine was guided by an archaeologist accustomed to the techniques of mechanical archaeological excavation. Any secondary burials would have been noticed. The only loss may have been a few flints from the turf stack; a small loss when set against the halving of the cost of the excavation due to the use of the machine. A trench 3 ft. wide, continuing the line of the west face of the NE quadrant for a further fifty feet to the north, was dug to the top of the rab by the machine, but revealed no features.

The barrow structure

The barrow was composite, covering a single cremation burial and preceded by a double ring of posts. The mound consisted of a double cairn ring covered by a turf stack capped by a ring of yellow clay.

The buried turf line

The original turf of the Downs had not been removed by the builders of the barrow. It survived everywhere beneath the barrow as a compressed fine black layer about 2 in. thick, with many moorstones protruding through it. Professor G. W. Dimbleby (Appendix 2) suggests that before the building of the barrow the site was covered by grass and heather within a clearing. Flints 5, 8 and 13 were in the buried turf.

The post circles

An irregular double ring of posts was erected on the site of the barrow. The size and spacing of the post-holes was uneven, in part conditioned by the numerous moorstones in the subsoil. The post-holes ranged in size from 4 to 20 in. across and 6 to 18 in. in depth below the old ground surface. There were 89 post-holes altogether in the two circles, which were so irregular and out of true that the post-holes could not always be divided with certainty between the two. There were about 46 posts in the inner ring and about 43 in the outer ring. The diameters were approximately 65 and 68 ft. with their centres in the position later occupied by the burial pit. An entrance 20 ft. wide through both rings faced south-east. The fill of the post-holes consisted of a fine black soil, very similar to the buried turf line; some had packing stones of moorstone lumps but post pipes were not detected. One post-hole in the SW quadrant was double and others were so close together that some may have been replacements. Certain posts, E, F, H, J, K, L (Fig. 5), were definitely sealed beneath stones of the outer cairn ring. D and G were sealed by patches of yellow clay beneath the cairn ring. All the other posts could have been standing when the outer cairn ring was constructed. Some stones of this cairn ring had certainly been laid around standing posts. The posts had been withdrawn before the turf stack and yellow clay capping ring were put in position. Where the yellow clay lay above post-holes it was continuous, and where the remains of the turf stack were removed manually from above post-holes the turves were uninterrupted. Three post-holes, A, B, C and a stake-hole (Fig. 5) were not part of the post circles. They lay just within the inner circle and were all about 1 ft. deep. Their fill was similar to that of the post-holes in the circles; A and C contained packing stones. B was sealed by the stones of the outer cairn ring. The yellow clay capping was continuous over these features. Flints 11 and 12 were found in post-holes in the NW quadrant and a white pebble, 22, was in the same post-hole as Flint 11.

The ritual pits

Three pits, X, Y, Z (Figs. 5 & 6) had not held posts. Pits X and Z formed a rough line with the burial pit running NW-SE. Pit X, 3 ft. across and 1 ft. 11 in. deep below the buried turf was filled with a mixture of fine black soil and rab. It contained only one piece of moorstone set at a steep angle, surrounded entirely by the soft soil fill and evidently not a packing stone. Pit Y, 1 ft. across and 8 in. deep below the buried turf, had a similar soil fill. Pit Z, 2 ft. across and 1 ft. 8 in. deep below the buried turf, was filled with broken pieces of white quartzite and fine black soil. A large post-hole in the outer circle had been dug out of line to avoid Z. Pits X and Y were probably contemporary with Z; all three pits were sealed by the turf stack.

The cairn rings (Fig. 6)

Two roughly circular concentric cairn rings had been constructed on the buried turf surface beneath the barrow. The inner ring, about 24 ft. across, consisted for most of its circumference of single stones which had been set at an angle, sloping inwards and supported by turves under their outer edges (section, Fig. 7). There was an entrance 4 ft. wide to the NE flanked by the two largest stones of the ring. The outer cairn ring, about

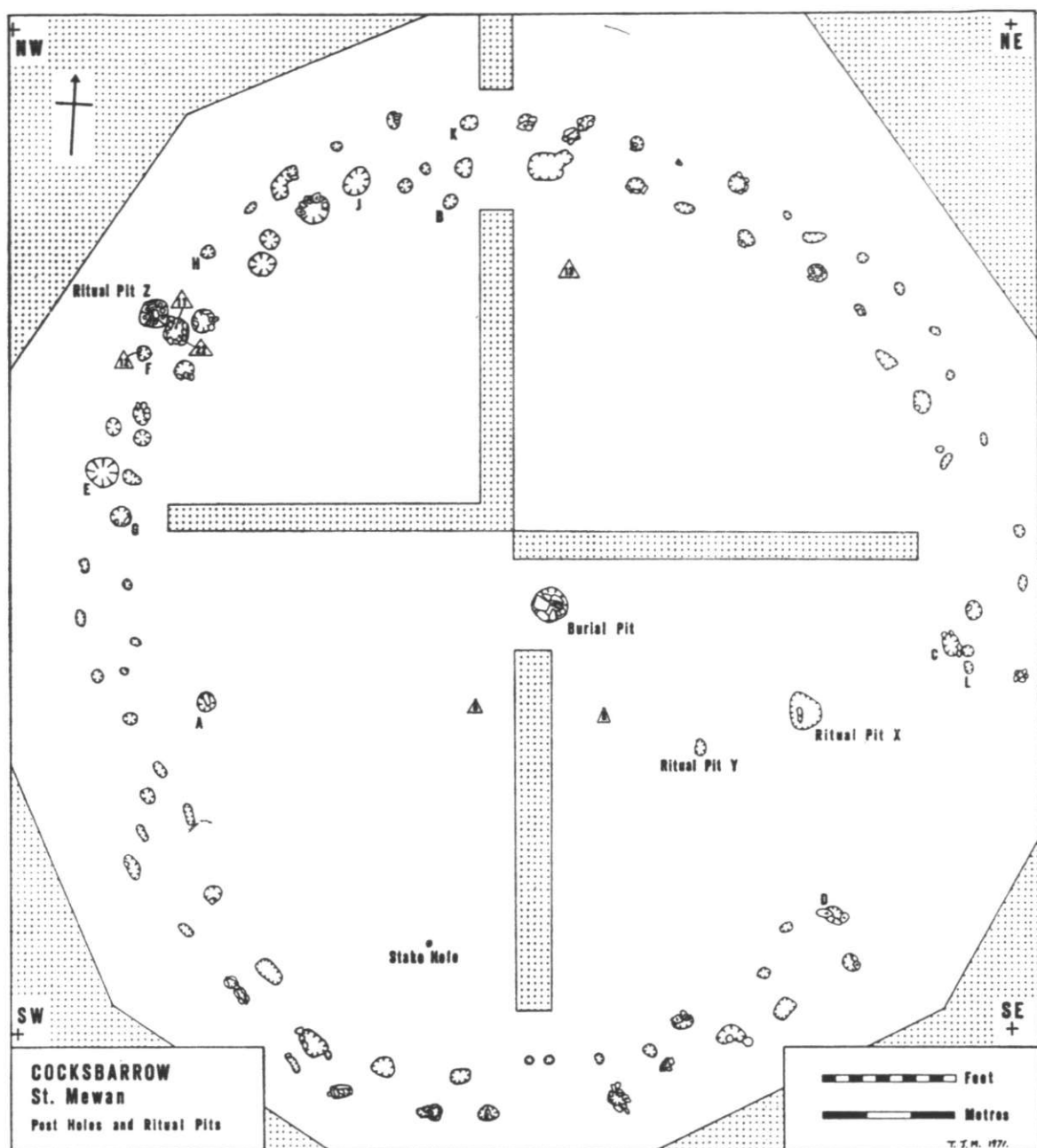


Fig. 5
Cocksbarrow—post circles (flint and pebble find-spots in triangles)

65 ft. across, had been constructed in the space occupied by the double post circles. A few posts had been withdrawn before the ring was constructed, but the majority were probably still in place. The spacing of the stones in this ring was irregular and in parts of the NE and SW quadrants the stones were sparse. The outer edge of the ring was untidy. In places the inner edge had been carefully constructed to form a smooth curve, and had perhaps been put in position after some of the turves in the turf stack had been laid. The construction of the outer cairn ring was most careful in the NW quadrant.

There was an entrance 7 ft. across through the outer ring in the SE quadrant. Each side of this entrance was formed by a line of three large stones. The south side coincided with the south side of the entrance through the post circles. In the entrance through the

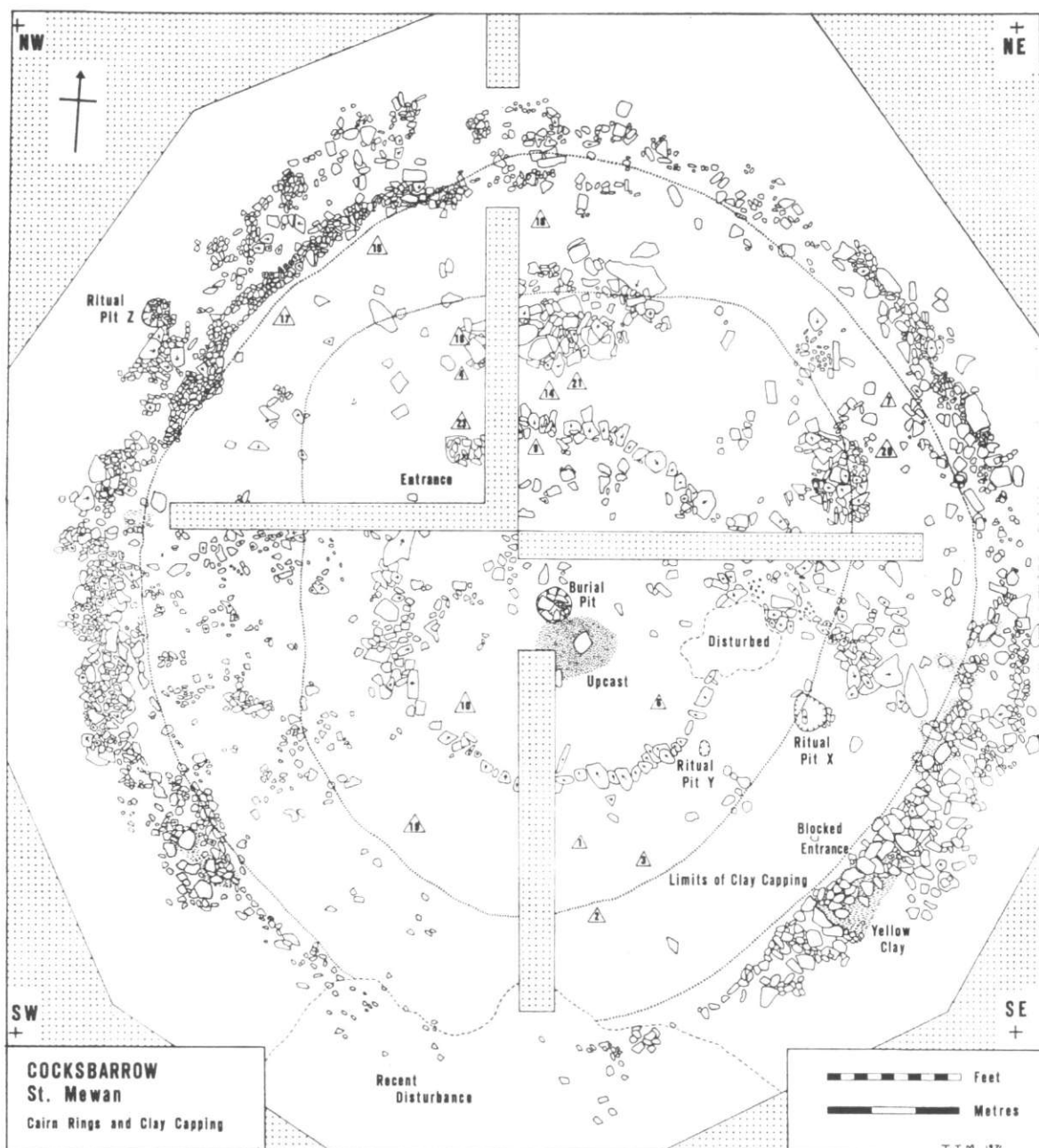


Fig. 6
Cocksbarrow—cairn rings. Tiny arrows indicate dip of stones; flint and pebble find-spots in triangles

cairn ring, between the lines of stones, a layer of yellow clay similar to that in the capping ring, had been spread 3 in. thick on the buried turf. A small fire had been burnt on this clay. The entrance was blocked by regular walling of small moorstones resting on the yellow clay. Elsewhere in the SE and SW quadrants small patches of this clay were found beneath the outer cairn ring.

Between the two cairn rings was an irregular spread of stones. This consisted of two distinct heaps in the NE quadrant, a rough line of stones joining the inner and outer cairn rings in the SE quadrant, and a general scatter elsewhere, mainly in the SW quadrant. Other stones were scattered on the buried turf surface within the inner cairn ring.

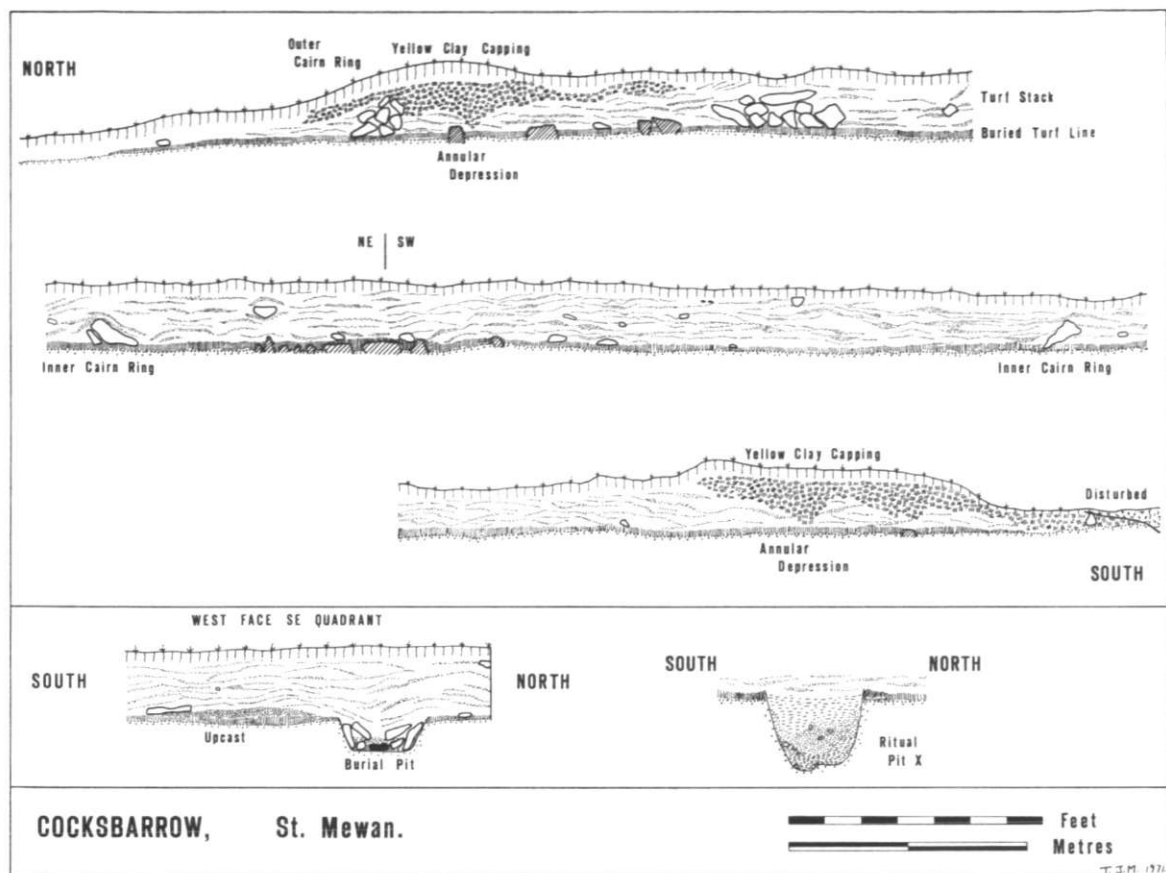


Fig. 7
Cocksbarrow—sections

The burial pit

The only burial in the barrow was a cremation buried in a pit almost exactly central to the post circles and cairn rings. This pit had been dug 2 ft. 6 in. across and 1 ft. 4 in. deep into the rab. It had a flat bottom and sloping sides. Pieces of moorstone selected for their slab-like shape lined the pit. The cremation had been placed on the bottom of the pit and formed a compact mass, suggesting that it had been buried in a bag (Pl. II). In the upper surface of the cremation was a triangular hollow $\frac{3}{4}$ in. deep and $1\frac{1}{2}$ in. across, filled with black soil, formed probably by some decayed object. The bones were clean, unmixed with any charcoal or ash. Dr. Ian Cornwall (Appendix I) states that they represent only part of the remains of one individual, and that nothing definite can be said regarding age or sex. A horn ladle (Fig. 8 and Pl. III) rested on $\frac{3}{4}$ in. of very peaty soil black (probably a turf) beside the cremation and was covered by a similar thickness of the same material. Further slab-shaped pieces of granite were pitched in at a steep angle over the burial. The fill of the pit over the cremation and the ladle consisted of about 3 in. of black soil which had filtered in around the stones, and above this were air-spaces between the slab-shaped stones. There was marked sagging of individual turves over the burial pit. The upcast from the pit rested directly on the buried turf line to the South East and was fresh and unweathered when the turf stack was constructed over it.

The turf stack (Pl. II)

The major part of the barrow mound was a stack of turves cut from a surface similar to that buried beneath the barrow; lines of grit from the underlying rab adhered to their

bases. These turves had all been placed with their roots upwards. In most of the stack the lines of grit made the divisions between individual turves distinct. The stack was about nine turves high and the individual turves had compressed to about 2 in. thick. At least one layer of turves had been placed beneath the stones of the inner cairn ring but no other signs were noted which might indicate construction over an extended period. The turf stack had been laid about nine turves thick over the inner cairn ring, covering the interior of the barrow as far as the outer cairn ring, and a few turves were laid over the outer cairn ring although the stones of this projected through in places. The turf stack had been constructed with an annular depression running around the top of the barrow a few feet within the outer cairn ring and approximately concentric to it. The turf stack and depression were irregular, as were all parts of the barrow. On the south side the depression was some way within the outer cairn ring. The annular depression had subsequently been filled by the clay of the capping ring, and could be seen clearly on all four sections (see section, Fig. 7). Taking the diameter of the stack as 70 ft. and the average number of superimposed turves as eight (to allow for the space taken by the cairn rings and capping), the area of turf used can be calculated as 3192 sq. yds.

The yellow clay capping ring

An irregular ring of yellow clay had been placed around the top of the barrow, filling and spreading beyond the annular depression in the top of the turf stack. Its outer edge corresponded approximately with the inner edge of the outer cairn ring, but overlapped this in places. The clay is the same as that found at a depth of about 3 to 30 ft. in the kaolinised granite on Longstone Downs.

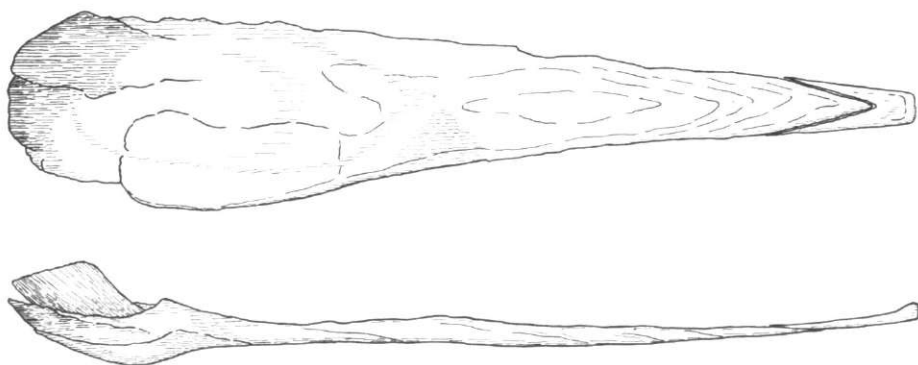


Fig. 8
Cocksbarrow—Horn Ladle from burial pit (scale: one-half actual size)

FINDS

Horn (Fig. 8, Pl. III)

A horn ladle was found in the burial pit, resting on a turf beside the cremation. The ladle lay flat, with the inner side of the bowl upwards. It is 238 mm. long, with a maximum width on the bowl of 48 mm. Its thickness decreases from 5 mm. at the top of the handle, which forms a slight knob, to 1 mm. on the outer edge of the bowl. Although the object is described as a ladle it does not have a hemispherical bowl and a distinct handle; the width of the handle increases regularly to include the bowl, which is merely the broad end of the horn bent upward to form a scoop. On discovery the ladle was dark brown and resembled well-preserved wood. Its preservation was due to stable soil conditions. The burial pit had been permanently damp and the ladle had been covered with turf which had developed into a peaty soil. This had excluded air and prevented bacterial decay.

Horns are part of the skin of certain animals such as oxen. The material of which they are formed, keratin, is laid down in layers around bone lumps which protrude from the skull. Horn can be removed from its bony core by soaking it in water for about six weeks. This rots the membrane attaching the horn to the core. Horn can be temporarily made flexible by heating; most conveniently by boiling it in water for about half an hour. After cooling it becomes stiff again (Tomlinson, 1852).

The major part of the Cocksbarrow ladle is formed from one horn. After removal of the core the complete horn was pressed flat. The broader part was then bent to form the bowl. Both the pressing and the bending could only have been carried out after the horn had been softened. The edges of the bowl were probably trimmed, although as the edges are thin and friable this is not certain. A sharp flint would have been adequate to do this. The knob on the end of the handle has been made from the solid tip of another horn. No traces of any resin which might have held it in place have been detected. If the knob were softened and the pointed end of the main part of the ladle left hard, the latter could have been wedged into a prepared socket in the knob. The end of the knob has been trimmed; two slight facets are present on its squared end. Because of its slightly imperfect state of preservation it is not possible to see whether the ladle was much used before deposition in the barrow.

The horn has been identified as bovid by Dr. Juliet Jewell (Juliet Clutton-Brock), of the British Museum (Natural History), who states that it is sufficiently small to be from a Bronze Age domestic ox.

Horn objects survive rarely in prehistoric contexts. The only object from Britain comparable to the ladle is that described as 'a spoon or ladle of horn' found in a cist at Broomend of Inverurie, Aberdeenshire (Anderson, 1886, 76 and fig. 89). This ladle with an overall length of $11\frac{1}{2}$ in. had a distinct hemispherical bowl and a handle which, when the ladle was found, was bent back almost double and hooked over the rim of a Bell Beaker. The excavators considered that the bending of the handle was due to pressure from the soil but this is unlikely in view of the position in which, according to the drawing, it was found. It seems that the Inverurie ladle had also been shaped by heating and bending and by trimming with a sharp edge. From Denmark a ladle dating within the period 1300 to 1000 B.C., and very similar in shape to the probable original form of that from Inverurie has been found at Stortiden (Bronsted, 1939, 60). Spoons or ladles made of various materials were probably common in Britain from the Neolithic onwards. Pottery spoons have been found in the Sun Hole cave on Mendip and at the Hassocks in Sussex. A pottery spoon from Glenluce, Wigtownshire was associated with Beaker material (Piggott, 1954, 75), while several Iron Age wooden ladles were found at Glastonbury (Bulleid & Gray, 1911, 315).

Horn was also used in the Bronze Age for dagger hilts. Examples have been found at Ashgrove, Fife, with a beaker inhumation, at Wabister, Rousay, Orkney (Henshall, 1964) and probably also at Garton Slack, Yorks. (Mortimer, 1905, 231). The methods of heating and shaping horn were clearly understood in the Bronze Age and horn objects may have been in common use although so few survive.

Flint (Fig. 9)

Twenty-one struck flakes and artefacts were found, mostly in the turf stack. All the flint was from pebbles, presumably brought from the Cornish coast. Every artefact or utilised piece is illustrated with the exception of two broken blade segments from the turf stack similar to 11. Only two unused fragments were found (21, 22). It is not possible to say whether the flints were deliberately deposited, were brought to the site in the turves, or were lost during the construction of the mound. The presence of two parallel-sided blades actually in the old turf line beneath the barrow suggests some may have been brought in turves. The plano-convex knife 12, found in a post-hole in the NW quadrant, may have been deliberately deposited. The broken, unused blade 11, from a

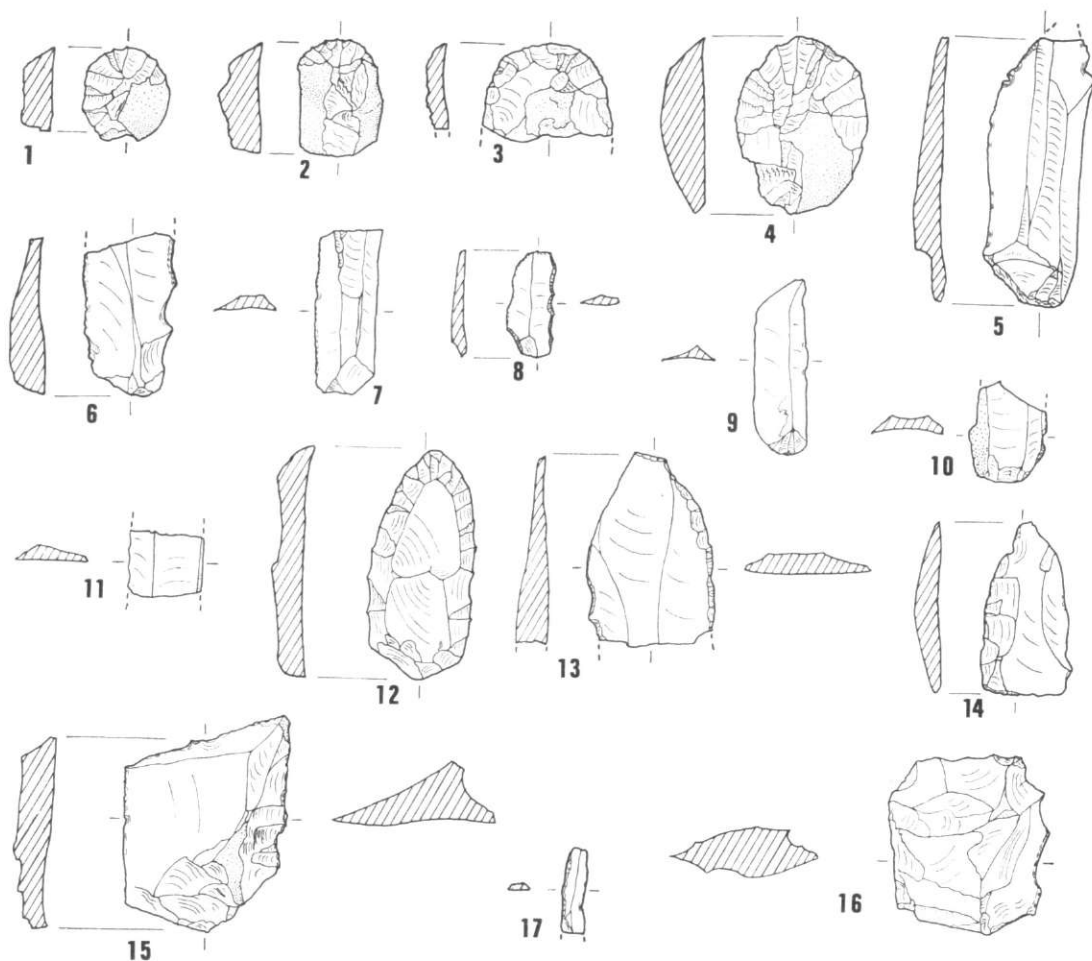


Fig. 9
Flints from Cocksbarrow (scale: two-thirds)

post-hole in the NW quadrant, may also have been deliberately deposited and perhaps deliberately broken.

The artefacts are four small scrapers, two plano-convex knives and several narrow, parallel-sided blades, some broken, with traces of wear on one or both edges. There is also a triangular flake with blunting along one edge, and two comparatively large irregular flakes on which traces of wear suggest their use as *ad hoc* knives. The range of types is paralleled by the assemblage from Stannon on Bodmin Moor (Mercer, 1970, 31). That site was dated on ceramic evidence to c. 1200 B.C. Both groups contain flint types which are accepted as Bronze Age, but it is not known how late in the Bronze Age any of the types continued in use. The only flint from Cocksbarrow which need not be Bronze Age is the microlithic blade 17. This may be a Mesolithic artefact brought to the site in a turf but the Stannon assemblage was considered to be the 'end of a long development associated basically with a surviving Mesolithic/Secondary Neolithic tradition' (Mercer, 1970, 31), and the small thumbnail scrapers from Cocksbarrow might equally be considered Mesolithic in tradition, although their size is surely conditioned by the size of flint pebble available. No definite association of a microlith like 17 can be adduced for the full Bronze Age. The plano-convex knife 12 can be paralleled by finds in barrows at Tregulland (Ashbee, 1958, 187 and Fig. 7, 4) and Carvinack (Dudley, 1964, 436). A parallel-sided blade was also found at Tregulland. The quantity of flint found in Cornish

barrows varies. Some barrows, for example Crig-a-Mennis, Perranzabuloe (Christie, 1960) and Higher Draynes, St. Neot (Wainwright, 1965) produced none; others such as Tregulland and Carvinack, a few pieces. Occasionally rather more may be found as at Cocksbarrow, Glendorgal (Dudley, 1962, 16) and Otterham (Dudley, 1961, 76) where the assemblage is very similar to Cocksbarrow. The practice of deliberately depositing flint occurs occasionally, for example the arrowheads with the satellite burial at Tregulland and perhaps the plano-convex knife and broken blade from Cocksbarrow. Otherwise the occurrence of flints would appear to depend on their presence in the material used to build the barrow mound, which will depend on the soil having been brought, either deliberately or by chance, from the vicinity of a settlement. It is not possible to prove the contemporaneity of the flint at Cocksbarrow with the construction of the barrow, apart from the deliberately deposited pieces.

1. Thumbnail scraper. Turf stack. SE quadrant.
2. Small end scraper. Turf stack. SE quadrant.
3. Scraper; broken. Turf stack. SE quadrant.
4. Scraper; heavily fire-crackled. Among stones between cairn rings. NW quadrant.
5. Parallel-sided blade; end chipped off; slight traces of wear along both edges. Buried turf beneath the barrow. SE quadrant.
6. Parallel-sided blade; broken. Turf stack. SE quadrant.
7. Parallel-sided blade; broken; heavy use along one edge, slight use along the other. Turf stack. NE quadrant.
8. Small blade; blunted along one edge, traces of use along the other. Buried turf beneath the barrow. SW quadrant.
9. Parallel-sided blade; facettled butt; slight traces of use along one edge. Turf stack. NE quadrant.
10. Parallel-sided blade; broken; blunting along one edge. Turf stack. SW quadrant.
11. Segment of parallel-sided blade; no traces of use. Post-hole. NW quadrant.
12. Plano-convex knife. Post-hole. NW quadrant.
13. Part of a crude plano-convex knife. Buried turf beneath the barrow. NE quadrant.
14. Small knife; blunting along one edge; traces of use along the other. Turf stack. NE quadrant.
15. Rough flake with traces of use on three edges. Turf stack. NW quadrant.
16. Irregular flake of poor quality flint; traces of use on one edge. Among stones between cairn rings. NW quadrant.
17. Microlithic blade with blunting along one edge. Turf stack. NW quadrant.
18. (not illus.) Segment of a parallel-sided blade similar to 11. Turf stack. NE quadrant.
19. (not illus.) Segment of a parallel-sided blade similar to 11. Turf stack. SW quadrant.
- 20 & 21. (not illus.) Rough chips. Unutilised. Turf stack. NE quadrant.

White pebbles

One small, water-worn, polished white pebble of quartzite, 22, was found in a post-hole, and another, 23, in the turf stack, both in the NW quadrant. These pebbles were similar to those in the Phase 2 pit at the Long Stone, and probably also had been brought from the coast.

DISCUSSION

Cocksbarrow is one of a scatter of barrows on the St. Austell granite. These barrows were described by W. C. Borlase as numbering about twenty (1872, 185). Sheppard's work on check-lists for the area is revealing that there are many more than twenty (1970, and personal comment). The distribution is irregular and the distances between the barrows are too great for them to be described as an area cemetery, at least according to the criteria recently proposed for Wiltshire (Fleming, 1971, 142). Yet even allowing for the chances of survival, the relative frequency of barrows on the granite compared to that on the surrounding lower country is marked, and it may be suggested

that the granite outcrop served as a cemetery for the surrounding countryside.

The appearance of the barrow before excavation, a circular mound with a flat top 70 ft. in diameter and 1 ft. 6 in. high, was similar to that of several barrows in its vicinity, for example a barrow on Watch Hill (No. 12 in the St. Stephen-in-Brannel check-list, Sheppard, 1970) and a barrow at SW 99135745 in Roche. Excavation has shown that Cocksbarrow has been little eroded, and the only significant alteration to its shape since its construction has been due to settlement of the turf stack. Even if the turf has compressed to a half of its original thickness, Cocksbarrow would only have been three feet high originally. The slight bank around its top reflects the clay capping ring which has not compressed as much as the turf (contour plan, Fig. 4). The barrow originally had a level top and the others in the area which are similar may have also suffered little erosion and originally had level tops. Low barrows are common in the South West, especially in North Devon (Grinsell, 1970, 97). Now that Cocksbarrow has been shown to have been constructed as a low flat-topped mound, it is reasonable to suggest that some other barrows were constructed to this pattern. The shape is distinctive and has little in common with the classic bowl barrow. Continued description of these barrows as bowl barrows tends to conceal their special nature. Perhaps the term 'plate' barrow could usefully be adopted for the type. W. C. Borlase distinguished this type of barrow as 'flat barrows' and remarked on their presence in the St. Austell area (1872, 119). The term 'plate' is preferable to 'flat' as the latter may also be used to describe the condition of eroded barrows. Although a few bell and disc barrows have now been recognised in Cornwall (Ashbee, 1956, 133), it is doubtful whether these Wessex barrow types were ever of much importance in the barrow-building traditions of the County. Because of the emphasis in barrow studies on the recognised 'fancy' barrow types (bell, disc, saucer, pond) and an uncritical ascription of all other barrows as bowl barrows, and because of the relationship between the former groups and the glamour of Wessex Culture objects, there has been a tendency to regard all areas without a concentration of 'fancy' barrows as being of lesser interest and importance. The specialised form of Cocksbarrow is not entirely the result of the materials available locally; a similar mound could have been constructed on Wessex chalkland. It is a specialised form apparently evolved in the South West, and as deserving of the description 'fancy' as any bell or disc barrow. Perhaps one of the reasons for the rarity of 'fancy' barrows in the South West is the presence of distinct barrow types which took the place of bell and disc barrows. Cornwall may be seen therefore as not merely lying on the periphery of important barrow-building areas, but as having a strong and distinct barrow-building tradition of its own, which precluded the use, except occasionally, of bell and disc barrows.

Cocksbarrow is the fifth barrow in Cornwall for which post or stake circles have been recorded. The others are Tregulland (Ashbee, 1958), Davidstow (Croft Andrews, 1946), Otterham (Dudley, 1961) and Carvinack (Dudley, 1964). No post or stake circles are recorded for Devon. The other Cornish circles are dissimilar in post size and plan to those at Cocksbarrow and none have entrances. Any stake-hole for a central marking-out peg has been removed by the burial pit (shown on Fig. 5 for this reason). Eight posts were not standing when the outer cairn ring was constructed, although this appeared to have been placed around the remainder of the posts. All the posts in the circles, and posts A to C, may have been erected at one time, and some of the posts (D to L, Fig. 5) had been removed or had decayed before the outer cairn ring had been put in position. It could be that the majority of the posts were set up at the same time as the outer cairn ring and posts D to L represent an earlier phase. In either case there had been some setting of posts on the site before the burial took place and the barrow mound was constructed.

Three ritual pits forming a rough line were found beneath Cocksbarrow. Pits either empty or with traces of organic matter are common features of barrows. Z with its

broken white quartzite lumps relates to a magical tradition as widespread as the digging of ritual pits, that of incorporating white stones within barrows. Cornish examples include the Carvinack barrow (Dudley, 1964) which incorporated several cairns of white quartzite, and the Trevellas barrow near Perranporth which included white quartzite with a cremation (Croft Andrews, 1946). Grinsell quotes instances of white stones being put in graves in the Highlands during the nineteenth century (1953, 44).

The cairn rings were very irregular, reflecting the irregularity of the post circles. The inner ring had an entrance on its North West and its stones sloped inwards having been placed against a layer of turves. The outer ring had an entrance on the opposite side to that through the inner ring. This coincided with the South side of the entrance through the post circles. The cairn ring at Tregulland had an entrance on its South. At Cocksbarrow these entrances and the rough line of stones which join the rings just north of the outer entrance define an approach to the central area passing south of and clockwise around the inner ring. The entrance through the outer ring was carefully blocked over a yellow clay threshold on which a fire had been burnt. If this blocking is regarded as a special sealing of the outer entrance before the construction of the turf stack, the rings may be interpreted as boundaries defining a sacred area. The emphasis on enclosure and the definition of sacred areas has been traced from the Later Neolithic henge monument tradition to the outer banks of disc and similar barrows. This emphasis can be seen to be equally important at Cocksbarrow which did not suggest any hengi-form influences in its outward appearance, and may also be regarded as an element of continuity from the Neolithic into the Bronze Age.

A turf stack is a common feature of Cornish barrows (e.g., Tregulland, Liskey and Carvinack). At Cocksbarrow all the turves had been laid flat, except where they passed over the cairn rings, whereas at such barrows as Tregulland the turves sloped upwards towards the barrow centre to found a rounded mound. When the Cocksbarrow turf stack was completed the shape of the barrow resembled an irregular saucer barrow, with a central low mound surrounded by the annular depression, the outer cairn ring thinly covered with turf taking the place of a saucer barrow's outer bank. This saucer barrow appearance only lasted until the yellow clay capping ring filled the annular depression and levelled the top of the barrow. The precise source of this clay is uncertain as the barrow had no ditch. The choice of bright yellow clay is in accordance with the common Bronze Age practice of dressing the surface of a barrow with a coloured material to render its appearance more striking. The surface of the Carvinack barrow was finished with white quartzite lumps (Dudley, 1964, 419).

The arrangement of the features beneath the turf stack suggests that Cocksbarrow was laid out on some kind of alignment or axis roughly NW-SE. The features concerned are the entrance through the post circles, the entrances through the cairn rings, the central burial pit and the ritual pits. The post-holes which predate the outer cairn ring, D to L, may also be connected with this alignment. D and L lie on either side of the entrance through the post circles, and five of the remainder are grouped in a rough line across the other end of the axis. The features do not form any exact line but their grouping, approximately NW-SE, suggest that this alignment had some significance for the builders. The question of axis is more usually discussed in connection with stone circles and henge monuments. If the alignment of features at Cocksbarrow is more than a coincidence there might be a link between the barrow and these groups of structures. A link has already been suggested between the enclosure aspect of the cairn rings and henge monuments.

By comparison with other barrows excavated in Cornwall Cocksbarrow appears simple and unusual in its single burial. Some of the barrows dug by Croft Andrews (1946) may have been equally simple, with only a single burial, perhaps Nancekuke, and Treligga Site 7. At Otterham, Tregulland, and Glendorgal (Dudley, 1962) there were probably central burials all now disturbed and robbed, but apart from Otterham which

had been half removed before excavation, these barrows had other burials. The Liskey barrow (Christie, 1960) and Carvinack both had features in their centres, but in neither was there any evidence for an actual central burial. Carvinack had several burials off-centre. The Cocksbarrow cremation was probably buried in a bag. Unurned cremations are quite common in Cornwall, occurring for example at both Carvinack and Tregulland.

Cocksbarrow produced few finds and this is in keeping with the simplicity of the structure and single burial. The Broomend of Inverurie ladle is the only other ladle or spoon recorded in a barrow. It is usually supposed that objects buried in barrows were intended for use by the deceased in some after life but the ladle appears too mundane to have been singled out unless magical properties were attributed to it. It may be that objects were buried because they had acquired a special sanctity from use during ceremonies and so could not be left above ground to become defiled. Alternatively, objects used in ceremonies may have acquired some special magical property which might benefit the deceased person in an after life. Ceremonial uses for the ladle might have included the collection of bones from the funeral pyre and the mixing and pouring of special broths and brews used in ceremonial and libations.

The cremated bones represent only a part of one individual. When this occurs it is possible that the burial is not the primary reason for building the barrow. It may have been a magical or ritual structure built for purposes other than burial, and the bones deposited in it either as a sacrifice or to enable the dead person to benefit from the special magic of the barrow. The Six Wells 271' barrow in Glamorgan was regarded by Fox as a structure not built primarily for a burial; he considered that the cremation in a cist well away from the centre had been buried to take advantage of a specially sacred area (Fox, 1959, 173). It is often assumed that barrows were monuments raised in honour of deceased individuals in the way that Homeric heroes raised mounds in honour of their dead. For Cornwall at least this assumption needs careful examination as only a minority of barrows have central burials consisting of all the cremated bones of an individual. The concept of the 'ritual' barrow was discussed by Christie in connection with the Liskey barrow where no burial was found (1960, 89), and where she concluded that the barrow was a cenotaph. The Carvinack barrow had no central burial. Three barrows on Davidstow Moor have been regarded as 'ritual', that is without burials, by Croft Andrews (1946). The practice of constructing round barrows of Bronze Age type was adopted late in Cornwall. The whole concept of barrow construction may have been altered or become misunderstood before it became common in Cornwall. If barrows in Cornwall were to be regarded as ritual structures in their own right with burials taking a secondary or incidental place, it might be easier to understand all those barrows which have only token or partial burials, burials outside their central areas, or no burials at all.

Cocksbarrow cannot be dated at all closely. The type of vegetation in the area revealed by the pollen analysis may indicate a 'somewhat late date in the Bronze Age' (Appendix 2). The only British comparandum for the horn ladle, that from Broomend of Inverurie, Aberdeenshire, was associated with a Bell Beaker, but it is probable that both ladles are chance survivors of a type of object that was common throughout the Bronze Age. It would not be wise to regard both ladles as being of the same date. The two groups of flints which can be most closely compared with those from Cocksbarrow are those from Stannon and from Otterham. The former site may have been occupied about 1200 B.C. (Mercer, 1970, 38); the date assigned to the latter was 'Early or Middle Bronze Age' (Dudley, 1961, 62). The presence of a cremation burial may indicate that Cocksbarrow does not belong to the earlier part of the Early Bronze Age, although the clear-cut division of Wessex I and II, the former phase mainly with inhumations and the latter mainly with cremations, has recently been questioned (Coles & Taylor, 1971). The irregularity of all parts suggests that the barrow was built at a time when the original purpose behind certain features of the layout had become misunderstood, at a date

rather late in the period when barrows were built. The possibility that the barrow was constructed during the thirteenth or twelfth centuries B.C. is merely a suggestion based on the points considered and cannot be proven.

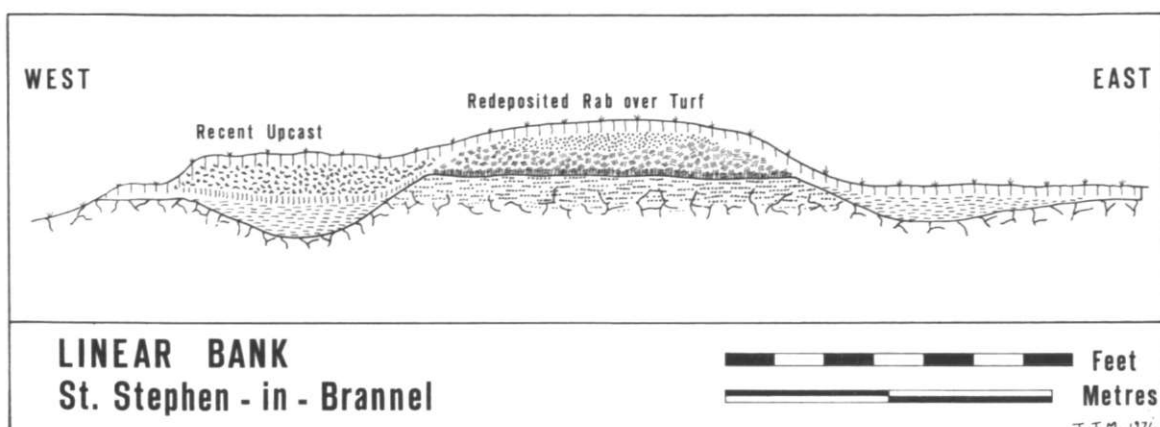


Fig. 10
Longstone Downs—Linear Bank (section)

The linear bank (Fig. 10)

A bank 8 ft. wide and about 1 ft. 6 in. high was traced north to south across the Longstone Downs for about 650 ft. At either end it had been cut away by modern disturbances. This bank is probably the feature referred to by Richard Thomas in a letter to the *West Briton* on 23rd January 1852 'near which [the Long Stone] is an ancient raised way about 12 ft. wide with a ditch on either side.'

A section of this bank was examined where it had been cut by a recent track. The bank was formed by turves underlying a layer of rab taken from shallow ditches on either side. These ditches, only 1 ft. to 1 ft. 6 in. deep, were filled with a black gritty soil. The surface beneath the bank was several inches higher than the present surface on either side of it, which suggests that considerable erosion of the surface of this part of the Downs has taken place since the construction of the bank. Nothing was found with which to date the bank. Its structure makes its interpretation as a road impossible. It was presumably a boundary bank, although it does not correspond with the present parish boundary or with any recorded estate boundary. The form of the bank is comparable to that between the parishes of Gwithian and Camborne (Thomas, 1964, 53-4 and Fig. 16) which was constructed at some date between the twelfth and sixteenth centuries.

ACKNOWLEDGEMENTS

The authors would like to thank English Clays Lovering Pochin for granting permission for the excavation, and for providing machinery and accommodation, and especially Mr. J. E. G. Vivian of their Estates Department; Mr. P. T. F. Trudgian, who acted as assistant director, Mrs. E. Thompson, Misses P. Best, A. Broome, P. Carlyon, P. Downham and L. Wasley, Messrs. N. Kerr, J. McKiernan, C. Marley and D. Weiner and others who gave their help; Mr. P. Sheppard for drawing the sites to our notice and providing references and information; Dr. I. Cornwall for reporting on the cremation; Professor G. W. Dimbleby for reporting on the pollen; Dr. Juliet Jewell for commenting on the horn ladle; Dr. I. H. Longworth for arranging the examination and conservation of the horn ladle at the British Museum; and Mrs. W. Aldridge, for assistance with the editing of the report.

University of Exeter

APPENDIX I

The Cremation

by

Dr. Ian Cornwall

This collection, embedded in a mass of dark, humic, clayey soil, resisted the water-jet and was disaggregated by standing overnight in slightly alkaline hydrogen peroxide before sieving and washing as before.

Some larger fragments were preserved, mainly of skull-bones and long-bone shafts, among which the following were recognised:-

Fragments of the shaft of the tibia and of the proximal articular surfaces; the trochlea of an ulna; an inch-long piece of the shaft of a radius; a fragment of a maxilla with parts of the buccal alveoli of a molar; two pieces of shafts of metapodials and the distal articular surface of a metapodial; part of a small phalanx.

The last items were fully ossified and so suggest an adult individual. There were no duplicates detected which might have suggested the presence of more than a single individual. The collection, as recovered, certainly does not represent a complete skeleton, but a large quantity of crumbs, passing the 0.6 mm. sieve, was lost during washing. More may have dissolved away completely over the years in such an acid, peaty matrix.

Conclusion: probably only one human individual, adult. No indications as to the sex.

APPENDIX II

Pollen analysis

by

Professor G. W. Dimbleby

The sample analysed came from the old turf line. It proved to be very rich in finely divided charcoal, much of which appeared to be derived from bracken (*Pteridium aquilinum*). The sample was very rich in pollen, leaving no doubt that this was in fact a soil surface.

Pollen Spectrum

The analysis was as follows:

	<i>Count</i>	<i>Per cent of total pollen</i>
Alnus (alder)	19	6.7
Betula (birch)	2	0.7
Pinus (pine)	1	0.4
Quercus (oak)	20	7.1
—	—	—
Total tree pollen	42	
—	—	—
Corylus (hazel)	69	24.5
Calluna (heather)	45	16.0
Graminicae (grasses)	81	28.7
Compositae		
Liguliflorae	5	1.8
Tubuliflorae	4	1.4
Cyperaceae	1	0.4
Plantago lanceolata (ribwort)	3	1.1
Potentilla	5	1.8

Ranunculaceae	+	+
Rubiaceae	2	0.7
Rumex	4	1.4
Varia	4	1.4
Dryopteris type	2	0.7
Polypodium (polypody)	3	1.1
Pteridium (bracken)	12	4.3
	<hr/> 282 <hr/>	

Sphagnum

DISCUSSION

This analysis should be considered in conjunction with the paper 'Pollen analyses from two Cornish barrows' (Dimpleby, 1963). Comparison will show that this analysis matches almost exactly that for the buried turf in the barrow at Wilsey Down, and this in turn was shown to have close affinities to the one at Crig-a-mennis.

The spectrum represents a landscape in which the forest has been driven back, though it is still represented in the alder and oak counts. Hazel is important as a species of cleared ground, or perhaps of a regeneration succession, but in the main the local vegetation is a grass heath comprising grass and heather as the main components. This vegetation probably occurs in a clearing, but there is no indication that it was being used for arable farming. Nor, incidentally, is there strong indication of pastoralism; ribwort plantain is only locally represented, but this is not unexpected on a site where heather has achieved some importance. Clearly the soil is distinctly acid, and the vegetation of the open ground seems well on the way to heath or moorland.

The absence of critical species in the tree pollen precludes any reliable estimate of date, but the analysis is in accordance with a Bronze Age date, especially when other analyses from this region are taken in comparison. The alder/oak ratio might indicate a somewhat late date in this period.

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Bussow Bronze Age Village and its Last Inhabitants

RICHARD JOHN NOALL

(*Editor's note.* This paper, written by the late Richard John Noall of St. Ives, an old-style local antiquary and collector, came into my possession some time ago. It was apparently read at a St. Ives Old Cornwall Society outing on 14th September, 1929. As a record of an episode all too common in Cornwall in the past, and not unknown today, it would be worth publishing; it also gives an unusually detailed, and presumably reliable, account of a site which has of course totally disappeared. Unfortunately the location 'at Bussow' is too vague to allow even an approximate grid reference being given, which is why no reference to this can be included in Miss Russell's *West Penwith Survey*. I have printed this just as it stands, with a few explanatory notes for non-local readers at the end.)

IN THE SUMMER of 1910 or 1912, two stone cleavers, Messrs. Wearne and Pearse, were removing some hedges at Bussow, near St. Ives. I strolled up to have a look if there was anything interesting about, as I often do. Among the rubbish I was pleased to see there was a small part of an urn. I showed it to Mr. Wearne—explaining what it was, and asked him if he had noticed anything more like it while taking down the hedge. He said he had not. That was all I found out at the time. Before leaving I explained that it was a fragment of an ancient urn in which the ashes of the burnt body of some chieftain had been buried, probably about three thousand years ago; and if he could find a whole 'bussa'¹ like it, it would be worth a sovereign or two; and that he must save up every bit he could find, or any hand-worked stone, or anything peculiar, and I would be glad to pay him well for it.

He smiled very knowingly on me, as if it was too funny for words; but when I mentioned about paying, I knew, by his look, that he would take care of what he found if it wasn't too much trouble.

A few days after, I called again and was glad to see that he had saved out some rubbing stones and sleek stones.² He told me he had put some more aside but the farmer must have taken them away. I don't know what became of them.

Two or three days after this, I had word that I must come up for they believed that they had found the hut where the old people lived. I was very busy repairing a dwelling house at the time and could not go until the next day. In the meanwhile they had a horse and cart pulling the stone to a crusher to be broken up for road mending. Against the time I arrived the walls had been carted away.

I was very disappointed, but was somewhat reconciled at first by finding many pieces of an urn, and a few pieces of others. I also noticed the remains of a large rather circular hollow-topped rock; the large circular top gradually deepened towards the centre, until it must have had the appearance of a shallow basin of a large fountain. About a third had been split off and removed.

I begged that what remained might be spared, as, no doubt, it was the very rock on which the funeral pyre had been.

In the first place the top of this rock may have been naturally weathered to a concave surface; then the natives found it an admirable place in which to break and bruise up their tin bowls—that is, alluvial nodules or fragments of stream tin found in the neighbouring rivers and moors. They did this with hammer stones—greenstone bullies.³ This naturally deepened the hollow. And so, when the chieftain died, they found it an excellent place on which to burn the body and collect the ashes for the urn. It had served a double purpose, and as the late Mr. Thurstan Peter said, 'Time and circumstances did not always permit of an extraordinary preparation for the funeral ceremony; sometimes an elaborate urn was provided, and sometimes only the wife's bussa was to be had'.

A large pile of earth was thrown up by the digging out of the hedge, or dry-stone wall.

I had permission of the farmer to search it through. In it, after working a day or two, I found a great number of pieces of urns, many of them very small, with a few larger pieces, most of them showing signs of recent fracture as if they had been recently broken up by the pick and shovel and thrown out carelessly with the earth and rubbish.

Some days later in the next higher field I saw them digging out the foundation of a round hut: in the bottom of which, down on the rab turned face downwards, they found a nice saddle quern, which the farmer had.

A little later, removing a very wide hedge or bank, they came to the remains of other huts, with querns and rubbing-stones on the floors.

I begged that the huts might be spared, but the farmer wanted to sell the stone for 2/6d. a load for the crusher, and the stone-cutters wanted to make 3/6d. a day for removing them; so I was powerless.

A little further back they dug into two perfectly formed bee-hive huts, with their roofs beautifully built in dome fashion, with selected stone.

It was then that my heart was pained indeed to see them destroyed. I felt that there was a sort of mysterious atmosphere about. I was made to feel that I was allowed to come only on sufferance and it was only by paying handsomely for any little thing that I was allowed to have, that I could hold my rather precarious footing.

I remember well that one of the doorways had a side post about 4 ft. high. The inside of the chambers was covered by a beautiful moss, which shone with a weird phosphorescent light. On the side towards the hill was dug up the bones of a horse. I have since wondered if it was the skeleton of a horse of the early type which, I believe, had a different number of teeth to the horse of the present day.

Some of the querns and pounders were carelessly carted away and broken up. They had got tired of finding only such things and tired of me poking around and hindering them in their work.

In the end the farmer appropriated whatever he thought was worth anything, and the stonecutters getting nothing for theirs—just recklessly chucked them away that nobody should have them, as the farmer's carter was always keeping his eye on things.

After the hedges and banks had all been removed I told the farmer that if in any way I had been a cause of bother or hindrance to him, I should be glad to make amends and show my appreciation of any courtesy he had shown in troubling to notice or preserve anything, by doing a little work on his farm. So with a tubbal⁴ I spent some time in bringing in a piece of ground that had never been cultivated before: and I can tell you it was a hard and tough job.

Authorities tell me, by judging from the pottery and other things, that it must have been a Bronze Age village. They seem to have been still using stone weapons—witness the large flint arrow-head and polished greenstone celt. There were no rotary querns, only saddle ones.

That they worked for the tin there is no doubt, as samples of alluvial tin, for which

they no doubt searched far in the streams and moors, were found in the barrow. Then there is the little barrel for a pommel of a sword or dagger—or it may be a spindle whorl, made of smelted tin.

The village or cluster of huts was built on the sunny slope of the hill for drainage and sunshine, and to be out of the danger of the winter floods that often raged in the valley. It may also have been under the protection of a hill-fort that no doubt overlooked it from Rosewall Hill nearby.

I have only found since that the earnestness and haste with which the well-built cist and urns were shovelled out and those most interesting relics of antiquity cleared away from Bussow and our neighbourhood was because of the hope of finding crocks of gold, and the fear that if they did not remove the stone as quickly as possible, some authority might stop them.

We none of us know what interesting bits of antiquity and relics of the very early and long forgotten inhabitants of our countryside, that apparently old hedges, furze-grown mounds, or the decaying vegetation of each succeeding season is hiding away from us.

But it strikes me as a great pity that, after they had been, as it were, almost miraculously preserved for us for over two thousand years, they should be destroyed, when they do come to light, for a few paltry shillings.

Hellesvean, St. Ives

1 'Bussa' = any earthenware pan or large vessel.

2 'Sleek stones' = slick-stones, or cobblers' lap-stones, often confused with highly-polished saddle-quern mullers.

3 'Bullies' = pebbles, rounded lumps of any stone.

4 'Tubbal' = Eng. twybill, two-bill, a double-ended agricultural tool.

Reviews

DONALD R. RAWE. **Padstow's Obby Oss and May Day Festivities.** Lodenek Press, Padstow. Pp. 24, illus. 13. ISBN 0 902899 03 3. £0.30. (1971).

The Lodenek Press, run by Mr. Rawe, from 14-16 Market Street, Padstow (address for orders) is producing in fairly rapid succession a number of works, locally lithographed and modestly priced. These deal with specific aspects of Cornish life, are written by Cornish students and experts, and make a major contribution to the cultural scene. Mr. Rawe, himself an author and dramatist, gives us what he calls 'a detailed account . . . for popular reading' of one of the most important surviving *fêtes folkloriques* in western Europe. As a Padstow man, he has been able to draw extensively upon local traditions and memories, though it is clear that he has not overlooked the

necessary research in the direction of earlier published accounts. The whole complex festival, in which the distinction between so many names—Old Oss, Wee Oss, Blue Oss or Blue Ribbon Oss, Red Oss, Peace Oss, and so on—has seldom been clear, even to Padstonians, is described clearly and authoritatively against a chronological background. With Hall and Plunkett's essential account of the changing music (*Ethnic*, summer 1959), and the first-hand rapportage by Stephen Fuller in past issues of the *Padstow Echo*, we do now have a pretty full documentation. Mr. Rawe includes a number of technical details and a well-chosen range of photographs to support textual points. His book is a lively and responsible offering, which will be warmly welcomed by all students of the Cornish past and of European folklore and folk-music. We must congratulate him, and the Lodenek Press, on so auspicious a start.

Gwithian

A.C.T.

'One Barrow' or Two ?

PETER SHEPPARD

COMPILING A CHECK-LIST of antiquities can resemble a dig. The search may prove fruitless or material may be slight and suffer from repeated use. Sometimes the finds are rich; often there is a puzzle and an effort must be made to find all the pieces and fit them together so that they make sense. Such a puzzle has occurred with the references to some barrows in St. Austell parish and has been investigated by laying out a grid (like a pottery grid!) with the references and their dates on one line and the various details on the other.

A large area near the Holmbush roundabout in St. Austell was once called Gwallon Downs and contained at least twenty barrows¹, surely one of the largest barrow cemeteries in Cornwall, until its ultimate enclosure in 1801 when several, if not all, of them were destroyed. (Their destruction presents a separate problem which remains to be solved.) The area is now partly built over. In 1740 there had been some excavations in this barrow field, and during the destructions (*circa* 1800) certain features were noted and finds were made. By 1872 the references and remains were in such a mess that W. Copeland Borlase wrote² 'It is much to be regretted that the records of the exploration of these barrows have been so greatly confused together and mislaid, and that the pottery having passed through so many hands, has not been properly labelled. Several fragments of other urns probably found in the same vicinity and deposited at Truro by Canon Rogers and Mr. Mayers, have thus been rendered completely useless.' The recent research has shown that all is not lost.

The problems posed in this note concern the identity of a large isolated barrow excavated in 1740³ which was in later times named as 'One Barrow'. Was this a correct identification and where was 'One Barrow'?

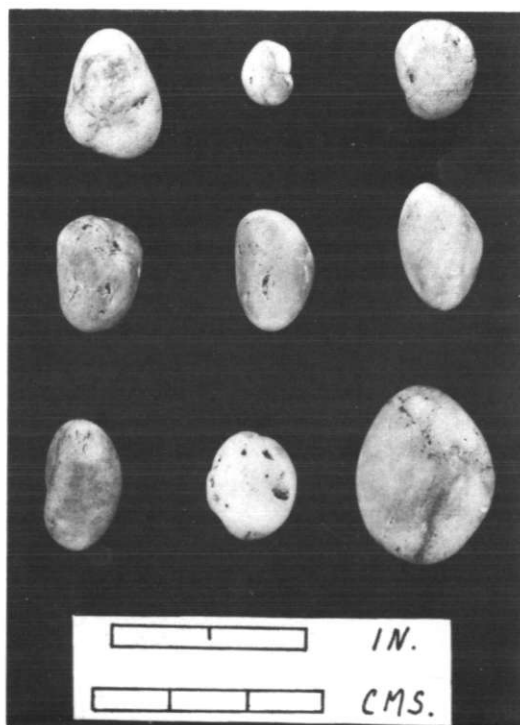
Most references repeat that the barrows were two, three, even seven, in a straight line; now and then only one or two by themselves. Luckily copies made from earlier maps survive showing the positions. Fifteen of the barrows are shown on a plan copied in 1847 from a survey made in 1793⁴. These sites can easily be transferred to a modern O.S. 6 inch map. An earlier map was made by a Lt. Mitchel for the Admiralty and, although the original has not yet been traced, a small reproduction exists showing which barrows were excavated,⁵ and this in turn can be related to the barrows on the 1847 copy. The two barrows which present the problems are described in the original report notes quoted by Blight, 'Sometimes also the single ones seem to regard, in respect of their position a greater number as is observable in number IV where the urn was found and number V on the same Down.' IV seems to be a barrow related on the modern map to SX 03305224. Barrow V fits another at SX 03095227.



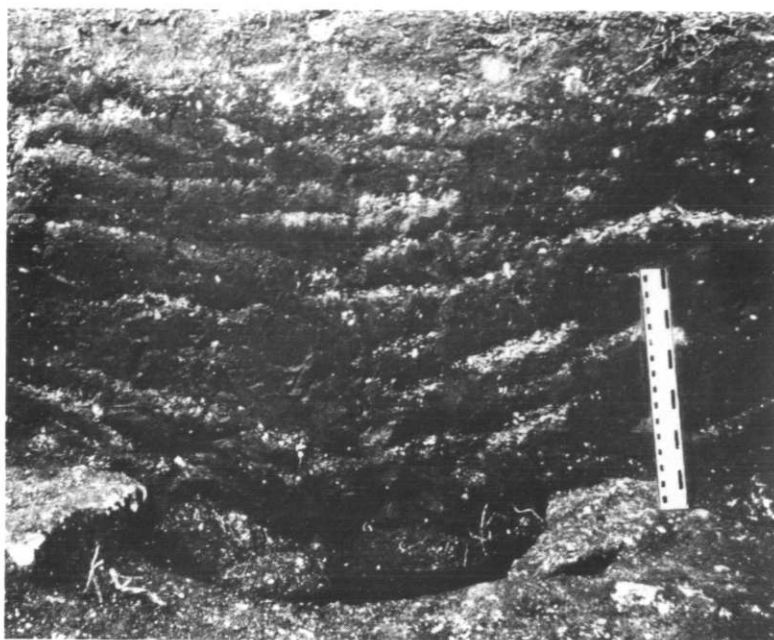
(a) *The Long Stone; Phase 4 mound overlying Phase 3 pavement. From N.E. (Copyright: authors).*



(b) *The Long Stone; wedging beneath S.E. end. (Copyright: authors).*



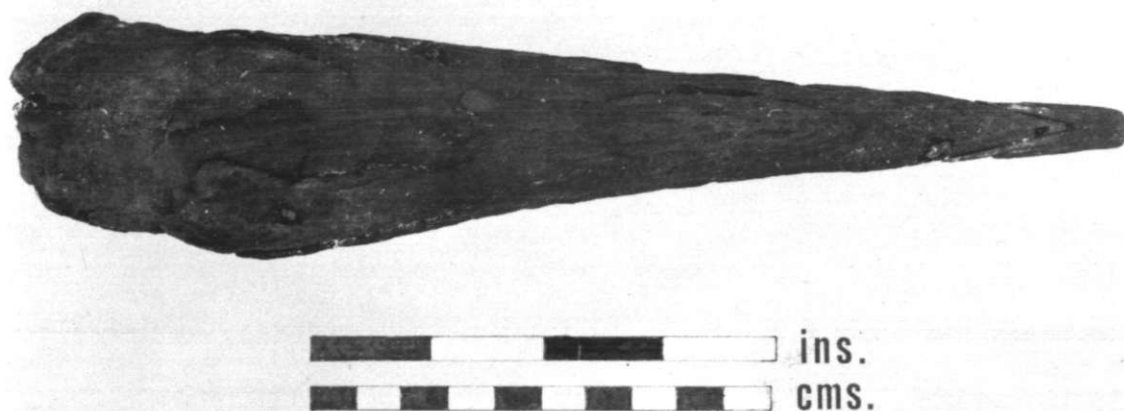
(c) *The Long Stone; 'magical' pebbles from the Phase 2 pit. (Copyright: authors).*



(a) *Cocksbarrow; turves in turf stack sagging over burial pit (Copyright: authors).*



(b) *Cocksbarrow; cremation and horn ladle in pit. (Copyright: authors).*



(a) Cocksbarrow; horn ladle, front and side views. (Copyright: authors).



(b) Cocksbarrow; horn ladle, detail of handle. (Copyright: authors).

The relevant details of the excavation carried out by Stephen Williams are summarized as follows⁶. The dig was carried out by six tin miners employed by Williams and an 'ingenious gentleman of St. Austle'. They had hitherto found no urn and decided to try this barrow because it looked different from the others. 'Its circumference appeared to have a very large circle of stones round it without any ditch or fossa'; also because of its situation. First, they dug a passage through an outer circle of stones 5 ft. wide and 2 ft. high. After passing through an unspecified distance of earth they reached an inner circle of stones 3 ft. wide and 3 ft. high, then more earth, until, at the centre of the barrow, 'an oblong square pit of the depth of 1½ ft. and breadth 2 ft. and length 5 ft.; in the bottom appeared a black greasy matter . . . about 1 inch thick; the pit was not covered or defended by any stones.' Continuing the search for an urn, they examined the outer circle of stones and on the inside of it struck 'a great flat stone about 5 ft. broad and 1 ft. thick, under which, when lifted up, we found two other thin flat stones and under them a smaller flat stone which covered an urn which also stood upon another flat stone in a small pit, deeper than the circle of stones and carefully wedged in as well as supported with many small stones round it'. The urn was illustrated and measurements given⁷; fragments of it are kept at the County Museum in Truro. It had four lugs, which have not survived. The best way to identify the remaining sherds is to look for the loops on the bottom line of decoration. This direction is necessary because in 1801 'One Barrow' was levelled by a workman when the Downs were enclosed, and another urn was found with decoration very similar to the first except that the bottom line is a zig-zag; the remaining sherds from this urn are mixed with those of the first urn. The mixture is complicated by the following note.⁸ 'There are also in the museum fragments of an urn presented by Rev. Canon Rogers and stated to have come from the same barrow ('One Barrow'). It was given to the Canon by the late Reverend R. Hennah, vicar of St. Austle, who received it from his uncle. It had four small handles'. Was this in fact from the same barrow? This note was a hundred years after the excavation. Fortunately the demolition of 'One Barrow' is noted in some detail. 'An ingenious correspondent' was well acquainted with the man who dug up the barrow and discovered the second urn.⁹ From an account by Whitaker¹⁰ it seems that this was not barrow IV. As the workman came near the centre of the barrow he found a variety of slates, ranged erect in an enclosure nearly square. The stones were about 1½ ft. high, with little stones carefully placed in the crevices at the joints, and then covered over with 'rubbish'. The top of the enclosure was level and resting on it was a square stone about 20 inches in diameter. Inside was a cremated burial. The barrow rose about 10 ft. above all, being 'perfect in its parts both above and below'.

Later references are omitted from this exposition since they add nothing except for the discussion of the pottery.¹¹ That barrow IV was not 'One Barrow' is further indicated when we search for the site of the latter.

The workman demolishing 'One Barrow' carefully re-built the remains of the cist into the hedge which he was making alongside and placed in it the calcined remains he had found. It is probable that the hedge adjoining barrow IV was already in existence at this time, formed when the road was made to Charlestown in 1791. The hedge adjoining barrow V is the more likely to have been built during the 1801 enclosure. Its position fits the description of 'One Barrow' given by Samuel Drew¹², who was a local man, when he wrote that 'the ground on which the barrow rested was somewhat elevated, but the ascent was easy, and the prospect which this barrow afforded was very extensive'.

The field-work in this district has not yet been completed, but the writer already has a good knowledge of the locality. This essay has only mentioned the Gwallon Downs barrow cemetery and is not exhaustive on the topic of the two burial mounds discussed here. It does, however, illustrate the searching of old descriptions and, hopefully, the solution of a double paradox.

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Reviews

LESLIE GRINSELL. **Discovering Regional Archaeology—South Western England.** *Shire Publications, Tring* (1970). Pp. 64, pls. 31, figs. 4. ISBN 0 8526 3106 5. £0.30

This handy little series of booklets—in this case devoted to Cornwall, Devon and Somerset—benefits enormously from the care and skill devoted to the compilation by experienced field-archaeologists. Our member Mr. Grinsell, as one might expect, has the walker or cyclist as much in mind as the twentieth-century motorist. The entries all bear six-figure grid references, the 1-in. O.S. sheet number, concise directions for access keyed to A and B road numbers, and distances from roads. Simple, if helpful, details; but how rarely included, and even more rarely (as, of course, here) in correct forms. The excellent photographs, not acknowledged, reflect a further aspect of the author's skill.

In so short a compass, selection is the keynote. One hundred and twenty-five sites and monuments are included, in a rough geographical sequence rather than in chronological classes, and one must admire the patience and care expended in choosing them. Virtually all the show-pieces, and beyond them, a wise sample of important and typical sites, find a place. In every case the text is factual and concise. For so modest a price, this is an admirable production, and we must congratulate both author and publisher.

A.C.T.

(LADY) AILEEN FOX. **Exeter in Roman Times.** *University of Exeter* (1971). Pp. 20, pls. 8, figs. 4. £0.30.

This handy and elegant guide is linked to the current series of excavations on Roman and medieval sites in the City, and can be obtained on site during actual excavations, or from the University's Registry (Northcote House, Exeter EX4 4QJ, postage extra (3p)).

Lady Fox, whose *Roman Exeter* (1952) first discussed the nature of, and the problems surrounding our knowledge of, Isca Dumnoniorum, here brings the story up to date. Since 1952 there have been many important discoveries, notably the South Gate complex, and the city plan (p. 8) tells a very much more detailed story. Lady Fox dismisses, rightly on present evidence, the suggestion that any pre-Roman fortification occupied the site. Attention is drawn to perhaps the major historical problem, the end of Roman Exeter; what happened in the late 4th century, and beyond? Archaeology as yet provides no reason to suppose a continued town life; a growing body of analogy from the towns and cities of Roman Britain might be thought to suggest that continuity *was* probable. We cannot tell at the moment. There is a useful Bibliography (p. 18), and a list of sites to visit (p. 20), and in view of the success of this first edition, we are assured that constant and revised re-issues will be available. In line with the new Excavation Unit at work in Exeter, a guide-book of this calibre is timely and appropriate, and the City is indeed fortunate that Lady Fox was able to provide it.

A.C.T.

The Use of Nearest Neighbour Analysis

IAN HODDER

IN THE 1970 EDITION of *Cornish Archaeology*, R. M. Newcomb applied some geographical concepts to the distribution pattern of hill forts and cliff castles in West Penwith.¹ In that article, such concepts appeared relevant partly because the initial application of Nearest Neighbour Analysis as outlined by Clark and Evans² indicated a non-random pattern of settlement. Although this technique is certainly of great potential value in the study of archaeological distribution patterns, it must be applied with care.

1. The formula for the nearest neighbour statistic R is given by Newcomb as $R = (\Sigma r/N) (2\sqrt{N/A})$. N/A in this formula represents the density of the observed distribution (ρ). However, as Clark and Evans have pointed out, 'computation of ρ on the basis of $N-1$ rather than N is theoretically proper, but with large samples the difference in results is negligible.'² The West Penwith sample of 21 points is quite small, and so the difference in results may be considerable.

2. The total area of West Penwith, thus including a considerable length of coastline, was used in the analysis. Clark and Evans have noted that 'the presence of a boundary beyond which measurements cannot be made will tend to make the value of $\Sigma r/N$ greater than would be obtained if an infinite area were involved. For this reason it will be desirable, whenever possible, to select an area for investigation that lies well within the total area covered by the entire population.'² My own experiments, with randomly generated distributions, have shown that this type of error can be very great.³

3. A statistical test of significance was applied by Newcomb to the results of his Nearest Neighbour Analysis. In reference to this it should be noted that 'when N is small, somewhat greater accuracy in this test of significance may be obtained by use of the Pearson type III distribution than by use of the normal curve. . . . When N is large, say over 100, the difference in results is negligible.'²

The R value obtained by Newcomb was 1.36, indicating a marked departure from randomness (the R value for a random distribution is 1.00 according to the formula), and a tendency towards uniform spacing. If a recalculation is made using the formula as corrected for small samples, and only considering an area $1\frac{1}{4}$ kms. within the boundaries of West Penwith, then an R value of 1.063 is obtained. Using the Pearson type III distribution, the chance of a greater departure from a random distribution of the same density in a series of randomly generated tests is high—67.3%. This result, very different from that obtained by Newcomb, indicates that there is no inter-site relationship between the surviving hill forts and cliff castles of West Penwith that can be observed by this type of analysis. Distorting factors such as differential survival and changes through time cannot therefore be ruled out, so that the relevance of geographical concepts or models to this distribution pattern must be doubted.

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Comments on 'The Use of Nearest Neighbour Analysis'

ROBERT M. NEWCOMB, PH.D.

IT SEEMS TO ME that growing out of Mr. Hodder's critique of our nearest neighbours and West Penwith hill forts there emerge two points of value which I should like to stress.

Nearest neighbour analysis, an obscure enough quantitative technique, has in common with other such techniques the quality of being endlessly tinkered with and being susceptible to such handling. As Mr. Hodder states, one may debate sample sizes, for instance. One may well attempt to define the area of study differently as he does with his somewhat unclear "area $1\frac{1}{4}$ kms. within the boundaries of West Penwith". One may take issue with Clark and Evans in their usage of the factor of 2 in their formula for nearest neighbour and suggest a more suitable constant of 1.67 as Cottam and Curtis have done. One may give up entirely on this particular method and try closest individual method, or random pairs method or point-centred quarter method as suggested in Greig-Smith. In my own case it has recently been entirely possible, on the basis of Thompson's 1956 article, to fly off into the abstract blue and come forth with a second nearest neighbour value of 1.36 and a third nearest neighbour value of 1.33 for these West Penwith hill forts.

What such flexibility proves, to me at any rate, is that it is great fun to stretch our conceptual wings. Secondly, it is nearly time for someone to sit down to the task of a definitive study of this particular quantifying method. The year and a half that I have spent puttering with the method convinces me of the necessary wisdom of the latter point.

My second main point reaches to the centre of the entire matter of the meaning of the nearest neighbour statistic. Upon reading Kariel's fine article I was struck by his point that R stretching from a value of 0.0 to 2.1491 is a mere unidimensional scale. What is needed for studies in settlement geography at any rate is at least a two dimensional scale which he supplies. The concept of randomness is entirely foreign to something as consciously evolved as are real human settlement patterns. Answers to questions about settlement pattern beginnings and developments begin with the concrete and perhaps can press forward to the theoretical model. The reverse procedure is a questionable approach.

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Earthworks in the Parish of Illogan

MICHAEL TANGYE

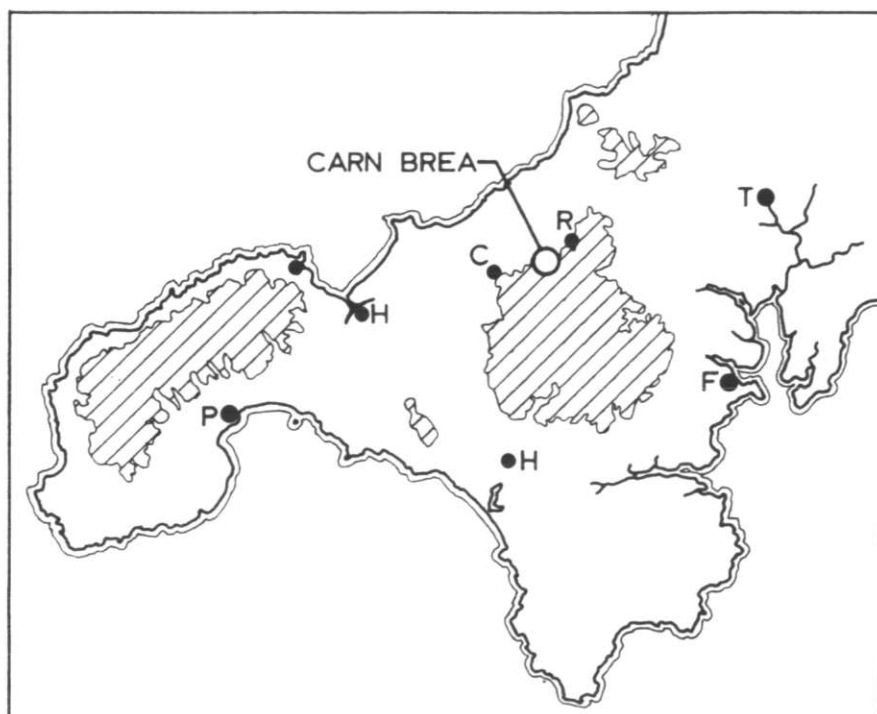


Fig. 11
Illogan and Carn Brea—general location in west Cornwall.
C = Camborne, R = Redruth

THE PARISH OF ILLOGAN, 8639 acres in extent, lies within the Eastern division of the Hundred of Penwith, and is bounded on the north by a coastal belt of high cliff land stretching from Reskajeage Downs (in the west) to Porthtowan, and to the bound with the parish of St. Agnes. From this belt, valleys once rich with alluvial tin run inland, roughly north-south, through a former marine plateau which rarely exceeds 300 ft. O.D. On the south of the parish, however, the ground rises suddenly from this comparatively level area to form the huge hill of Carn Brea, some 700 ft. O.D., and spanning practically the width of the parish from east to west. The southern bound of Illogan adjoins the parish of Wendron; the eastern, that of Redruth, and the western, Camborne. Virtually the whole of Illogan was the scene of mining activity (for tin and copper) during the 18th and 19th centuries. (See fig. 11.)

The parish is of course noted for the fortified settlement at Carn Brea (Mercer, 1970), one of the largest in south-west Britain. For the last three centuries, it has produced a wealth of artefacts ranging from the Neolithic to the Victorian periods. In 1895 (Peter, 1896), and again in the current campaign, excavation has revealed areas of Neolithic activity on the eastern slopes. The whole summit is strongly fortified with ramparts of granite boulders and earth which, at places on the southern slope, are fronted by huge ditches. On the site now occupied by the monument (erected 1836) can be traced the remains of an oval fortification known as 'The Old Castle' (Borlase, 1754). The shape was originally determined, perhaps, by the fall of the ground and by the positions of large granite outcrops which were incorporated into the single rampart.

On the lower ground, between Carn Brea and the north coast, were a number of smaller fortified sites, situated, as has been noted elsewhere (Thomas, 1958, 33), between the 200 ft. and 300 ft. contours. Examples of nearly all types of fortification are found, ranging from cliff-castles (or promontory forts), presumably of the Early Iron Age, to the more common 'rounds' or enclosed homesteads of the Romano-British period. Almost all the surviving examples lie in this northern section of the parish, an area to some extent spared from the destruction wrought by intensive mining because of its conservation by the Basset family of Tehidy, as a game reserve until the nineteenth century. In one part of this area, one may find, in just over a square mile, evidence of no less than five fortified sites, four of which still show remains. With the exception of Carn Brea, there is no evidence of similar features on the high ground in the southern part of the parish. The lack of any early estate maps for this part, and the dearth of meaningful field-names on the Tithe Apportionment map, denies us further information. Again with the exception of Carn Brea, none of the fortified sites in Illogan has been excavated.

Counting Carn Brea itself as no. 1, these sites are described and illustrated below as nos. 2 to 12, and the numbers are repeated on the location map (fig. 12).

2 *Cook's Kitchen*

SW 66354087: between 300 ft. and 400 ft.: Doidge *Plan of Tehidy 1737*; *Cornish Archaeol.* 5 (1966), 71 (= no. 4).

Richard Thomas noted a small round to the north of the hamlet of Brea. It was high on the eastern side of the deep valley dividing the parishes of Illogan and Camborne. 'A little North of Cook's Kitchen Mine are the remains of a circular entrenchment, $\frac{3}{4}$ acre.' These can perhaps be identified with *Bree Gere and Ryse*, 1516.¹ Doidge, in his 1737 map, shows three fields at the site discussed, *Gullangare*, *Great Gullangare*, and *Wheal an gare*. The first two, as at Nance, may be a corruption of *gun an ger* ('downland of the round, or *ker*'), while the third, a mining venture, takes its name from the proximity to the round. Lying as it did in an area saturated to the extreme with mining activity, the round as such no longer exists, although traces of the western rampart were noted by Charles Thomas as late as the 1940s.

3 *Roscroggan—Mount Whistle* (fig. 13)

SW 64604225: on the 250 ft. contour: James Mills' *Map of Roscroggan 1806*; *T.A. map*, no. 895.

A small round was situated at Roscroggan, on the slope of the hill overlooking the valley and stream which here forms the bound between Camborne and Illogan. A map of Roscroggan drawn in 1806 by James Mills shows field no. 7, 'Western Round', and

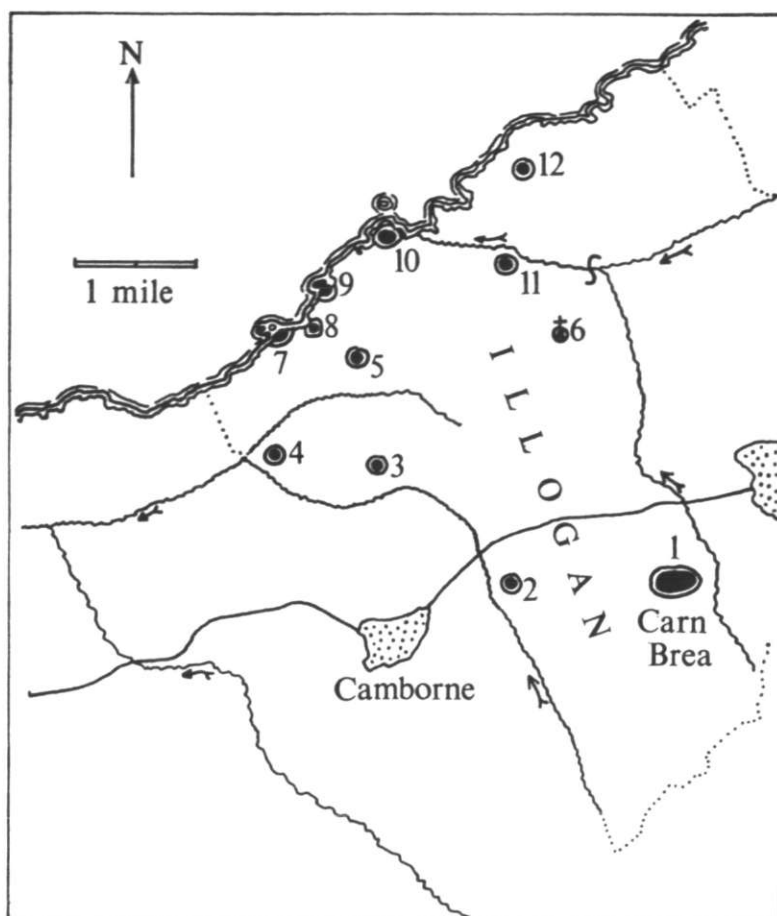


Fig. 12
Illogan earthworks—location sketch map; see text for description of monuments numbered here

no. 8, 'Round'. It appears from the map that the earthwork had by then been absorbed into enclosed or cultivated land, while retaining its basic shape, either with the original banks or with substituted field-hedges. At some time after the Tithe Apportionment survey in 1840, the fields here were enlarged and consolidated, resulting in the final destruction of the round, though faint traces are still just visible. The place-name Roscroggan (*Rescroggan*, 1634) contains the words *res*, 'ford', and *crogen*, '(limpet-) shell' (Thomas, 1967, 192). The ford in question is now represented by the small road-bridge over the stream about a quarter-mile west of and below the round. Does the name perhaps imply the discovery of an associated midden?

4 Magor (fig. 14)

SW 633425: just below 200 ft. contour: James Mills' *Map of Roscroggan 1806*: *Cornish Archaeol.* 6 (1967), 95 (no. 6).

On the Mills map, two fields are shown, situated about 200 yards north-west of the site of the Romano-British villa at Magor (O'Neil, 1934): no. 4, 'Park Round', and no. 11, 'Round'. Their situation, on the north-facing hill slope overlooking the junction of two small valleys, and the use of the word 'round', as at Roscroggan, suggested to the

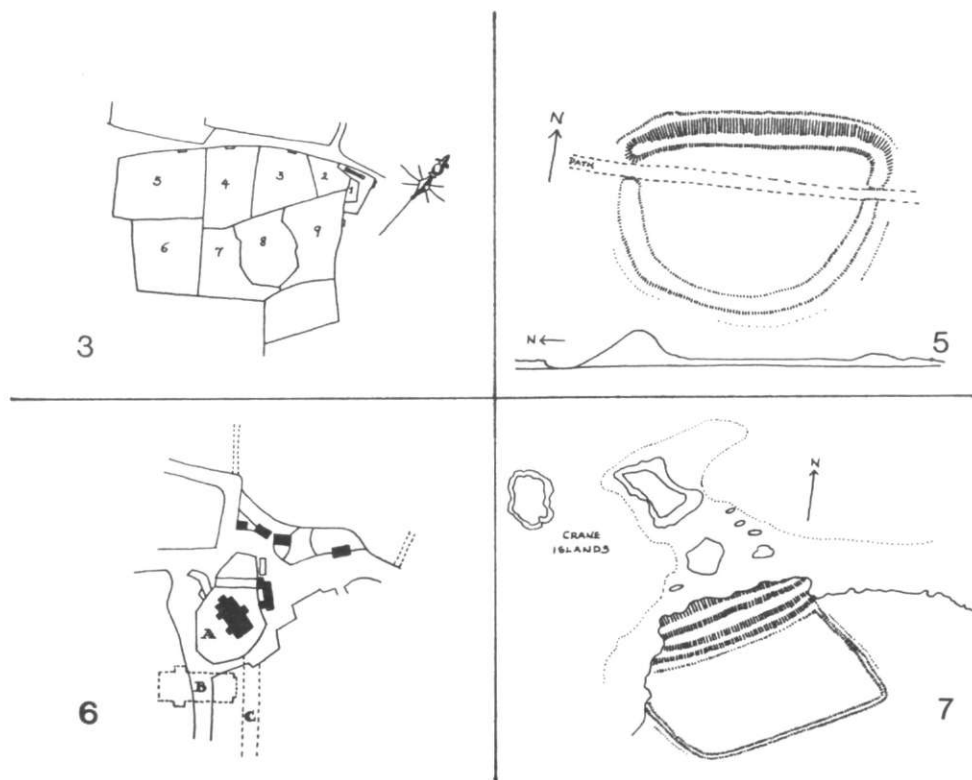


Fig. 13

Illogan earthworks—3: Roscroggan (after Mills, 1806). 5: Tehidy Woods. 6: Illogan churchyard (after Rd. Thomas, correcting Law, 1795—A, old church within its 'lan', B, approx. position of present church, C, ditto, present road). 7: Crane Castle

writer that these names referred to some ploughed-out earthwork. This theory has now been verified by our member Mr. J. Thomas of Illogan, who has since noticed on the wartime aerial photographic cover the clear, if ploughed-out, shape of a circular earthwork at the exact location of the 1806 field no. 11.

We have here yet another example of one round being sited at less than half a mile from another (Roscroggan, no. 3 above). What is more important is its proximity to the site of the Magor villa. Here, in 1931, ploughing revealed portions of a tessellated floor; the resulting excavations (O'Neil, 1934) showed that the villa, perhaps of local design and construction, was in use in the middle of the 2nd century A.D. It is difficult to believe that the nearby round, one of a class of monuments known to have been in use at the same period, is not in some fashion linked to the villa.

There is a further point of interest here. A site which has never been identified is the lost 'Combe Castelle' noted by John Leland in the mid-16th century. Leland's comments² were:

'Combe Castelle, *ubi tamen loci vestigia*: and Pencombe a little foreland, about a mile upper than Kenor on Severn. Basset hath a right goodly lordship caullid Treheddy by this Cumb. There cummith a good brooke down by Combe.'

Some of these places can be located. The 'little foreland' by Pencombe or Pencobben (*Pencom*, 1580) is probably, as Charles Henderson saw, Navax Point in Gwithian, and is about a mile nearer 'Severn' (the Bristol Channel) than 'Kenor', or Conerton, approximately Gwithian churchtown (Thomas, 1964a, 3-5). The 'coombe' by which 'Treheddy', or Tehidy, stands, and down which the good brook still comes, must be the

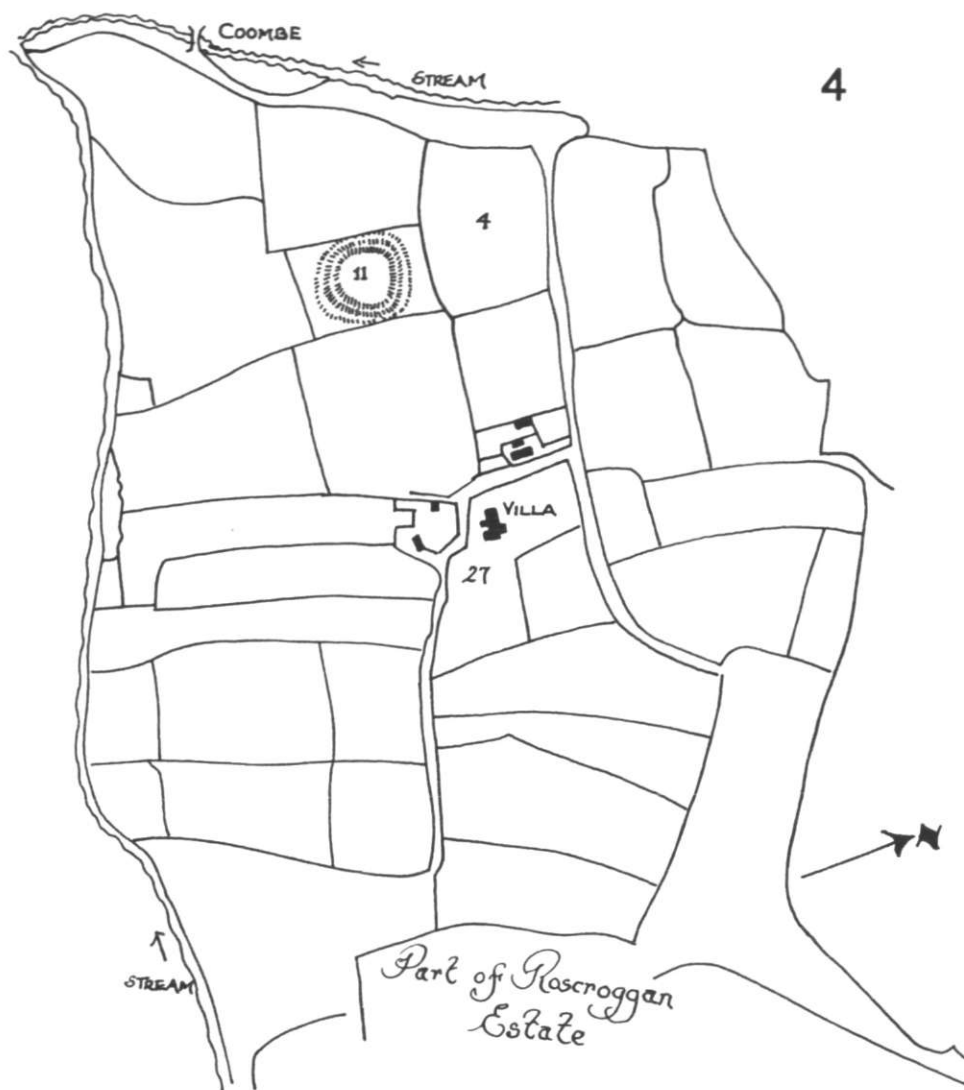


Fig. 14
 Illogan earthworks—4: Magor (after Mills, 1825). The round, and site of Roman villa, added: numbered fields are 4, 'Park Round', 11, 'Round', and 27, 'Chapel Field'

tributary valley arising in Tehidy grounds, running down the north side of Magor, and joining the larger Red River valley just west of the sketch-map shown in fig. 14. The place-name 'Coombe' still survives, as Henderson pointed out; it refers to the valley section immediately north of, and below, the round at Magor. The alternative local name of 'Bell Lake' suggests a still older *cum helyk*, 'coombe of the willows', corrupted as elsewhere in Cornwall to 'Combella', either element of this name being used separately (cf. Thomas, 1967, 10, 98). The late B. H. St. J. O'Neil (1934) suggested tentatively that the apparent medieval extension found at the west end of the Magor villa—still to be fully excavated—represents Leland's 'Combe Castelle'. However, the new evidence of an actual, and separate, round argues strongly in favour of the latter being what Leland meant, and of which he could write *ubi tamen loci vestigia*—'where however there are traces of the place'. Less probably, we must note the existence of two other rounds, *Ker Rescasek* and the Trevoryan round, lower down the Red River valley towards its outfall at Godrevy (Thomas, 1964b, 40-1). There is also the possibility, in

view of Leland's other uncertainties in his Cornish section, that the 'coombe' in question was the deep valley, at some remote stage in the past estuarine, at Portreath, the other side of Tehidy, and that the 'castelle' was the large and prominently positioned Early Iron Age camp or fort at Nance, above Portreath.

5 *Tehidy Woods* (fig. 13)

SW 644438: just above 250 ft. contour: Doidge *Plan of Tehidy 1737; Cornish Archaeol.* 5 (1966), 71 (no. 3).

This unusual earthwork, discovered by the writer in the course of field-work for the Illogan parochial check-list, has a single vallum with an outer ditch and is approximately D-shaped. It lies within woodland, on the summit of gently-rising ground about midway between the former Tehidy Mansion (which lay on lower ground to the south) and the north cliffs at Reskajeage and Carvannel Downs.

Doidge, in his 1737 map, shows two fields here as 'Little Parkangear', and 'Great Parkangear' (*parc an ger*, 'enclosed field of the round or *ker*'). At one time these lay within the Tehidy deer-park. The Tehidy Account Book contains the following entry:

'1785. Payments on account of the new Deer Park. Aug. 12th. George Rowe and Prtnrs. for repairing hedges in Park-an-geer. 42 perches.'

Its greatly ruined state today can be attributed to the ploughing and scattering of the banks when these fields were under cultivation during the 18th century, prior to their absorption into the later Tehidy plantation.

Surveying the site is made difficult by the presence of trees and undergrowth. To the north lies a most impressive bank, built of stone and earth, 60 yards long lying NW-SE. This feature is of fairly uniform height, the outer face of the slope being 17 ft. from base to summit. The external ditch here is 8 ft. wide at the bottom, and still 2 to 3 ft. below surrounding ground level. Both bank and ditch are practically straight, having only the slightest curvature. At its SE end the bank turns through a right angle, but here ploughing has reduced it to a mere 2 ft. above the ground level, while the ditch is barely discernible. The NW end of the rampart turns sharply through an angle of 22 degrees. The earthwork is traversed east-west by a path through the present woods, and the resulting section of the bank at this point shows it to be about 40 ft. across at its base. The overall circumference of the earthwork is about 210 yards, the north-south diameter being 44 yards and the east-west diameter 39 yards. The interior area is higher than the surrounding ground level outside.

This round lies only half a mile south of Crane Castle (described below, no. 7). It is perhaps possible that it was constructed as a successor to Crane Castle.

6 *Illogan Churchyard* (fig. 13)

SW 67124398: just above 250 ft. contour; *Cornish Archaeol.* 5 (1966), 72.

The old parish church of Illogan, of which only the 14th-century tower now remains, once stood in the centre of a circular *lan*, or enclosed burial-ground of curvilinear outline, around which the road passed completely. This is shown on A. Law's *Maps and Particulars of the Manor of Nancekuke* . . . (1795, corrected to 1820 by Richard Thomas of Falmouth), an 1820 copy of which I am grateful to Mr. F. L. Harris of Redruth for allowing me to use. Though subsequent extensions of the churchyard have destroyed this feature, its shape can still be traced by changes in the levels of the burial-ground, and in the curving of the road and wall at the eastern section of the churchyard.

Although no place-name with the usual *Lan*- prefix exists here, one may assume that the original earthwork was constructed at an early date. Its general situation, just above the 250 ft. contour, suggests the further possibility that it may initially have been a

small 'round', adapted (as was Merther-Uny, Wendron) as a Christian cemetery in the pre-Norman period.

7 *Crane Castle* (fig. 13)

SW 63504405: on the 250 ft. contour at cliff edge; W. Borlase, *Antiquities of Cornwall* (1754); for numerous other refs. see *Cornish Archaeol.* 5 (1966), 71 (no. 1).

This well-documented cliff castle of the Early Iron Age, at Reskajeage Downs, though now much eroded, represents the most imposing instance of a bank and ditch of all the lesser Illogan earthworks. Early references to the site, which lay within the Manor of Tehidy, are found in connection with disputes about the right of wreck cast upon the shore at 'Castelle Cliff' in 1635³. The name *Crane* is probably a corruption of Cornish *car (ker) hen*, 'old fort, abandoned fort'. It is now found, not only as the name of the cliff castle, but of a large rock, Crane Island, which lies in the sea immediately below. This, with the tumble surrounding it, is obviously a segment of the promontory which once jutted out into the sea at this point.

Dr. William Borlase provides us with a typically accurate description, which shows that the condition of the earthwork has not greatly deteriorated since the 18th century.

'The remains of one are very remarkable, about half a mile N.W. of Tehidy, the seat of Francis Basset Esq. They stand now on the very brim of the cliff and much more than what is now standing is fallen with the cliff into the sea. This entrenchment consisted of two ditches and consequently two vallums. The inner and principal ditch next the cliff is now but ninety paces long and twelve feet wide at the bottom, which being very even, and full of grass is generally called the Bowling Green; it runs east and west at each extremity ending in an inaccessible cliff, enclosing formerly a cape of land which ran into the North Sea, and its Northern point turning around to the West formed a pool where vessels might have had some shelter whilst this cape remained entire.'

Its measurements today (1971) are: outer ditch, 5 ft. deep, 6 ft. wide, 260 ft. long. Outer bank, width across base 42 ft., height from base about 10 ft., 280 ft. long. Inner ditch, the 'Bowling Green'. 6 ft. wide at base; inner bank, total height measured up the slope, 23 ft., and 233 ft. long. (The banks appear to consist of both earth and stone.)

To the south, extending outwards from the fortification, can be discerned a large rectangular enclosure (fig. 13), its north side being formed by the outer line of defences of the cliff castle. The earth banks of this enclosure stand, on average, 2 to 3 ft. above the ground level, and in places are as much as 12 ft. wide across their bases. A shallow ditch can be seen, at intervals, on the outside of the banks; this might prove to be continuous. Heavy undergrowth (furze and heather) prevents necessary closer observation.

The eastern bank of this enclosure, in all 224 ft. long, terminates at the extreme east end of the outer ditch of the cliff castle, and here is the only break in its continuity—a gap of 20 ft. where the ditch is missing. The southern bank is 342 ft. long. The bank on the west side, 156 ft. in length, ends abruptly at the cliff edge—where it can be seen in section—and here it is 138 ft. from the present westernmost corner of the cliff castle's outer bank. This would imply, perhaps, that it was once connected to the western end of the outer ditch—see fig. 13 again—and that it has, together with the promontory and much of the defences, fallen into the sea in historic times. In what way this hitherto-unrecorded external enclosure is connected, chronologically and culturally, with the cliff castle itself must remain a matter of conjecture. Nor is the date of the cliff castle certain, save by a general analogy to very similar earthworks of known Iron Age date, though a piece of pottery of Early Iron Age SW 'B' type was allegedly once found on the site (Thomas, 1958, 16).

8 *Carvannel Downs—unclassified earthwork*

SW 63874410; about the 200 ft. contour; *Cornish Archaeol.* 5 (1966), 71.

In his survey of the antiquities of Illogan in 1851, Richard Thomas, of Falmouth, noticed two unusual little earthworks situated 'about a quarter-mile east' of Crane Castle (no. 7 above).

'... Near the cliff are two rectangular mounds or barrows in a hollow, each is encompassed by a bank. One is 65 ft. long by 55 ft. broad, and the other 45 ft. by 45 ft.'

One of these curious structures, probably the larger, still survives; situated on sloping uncultivated ground, just outside the fields of Carvannel farm, and in a hollow by the cliff edge. All that remain are the three unbroken sides of a square or rectangular earthwork, presumably Richard Thomas's encompassing banks. The fourth side would appear to have been destroyed by a track which now passes just outside the field-hedges and is used by farm vehicles. The banks are roughly 3 ft. high and 18 ft. wide at the base. The east bank runs along the summit of a locally steep-sided hollow, the upper slope of which actually constitutes its outer side. The present lengths of the three banks are: west, 45 ft., east, 84 ft., and north, 84 ft. If, as Richard Thomas claimed, a mound was situated within the bounds of these banks, nothing of it now remains.

The second of the two structures was probably destroyed by cultivation during this century, or by the activity of an adjoining shallow cliff-edge quarry a short distance to the west.

9 *Carvannel Downs*

SW 641447: above the 200 ft. contour on cliff edge; *Cornish Archaeol.* 6 (1967), 111; 5 (1966), 71 (no. 3).

Roughly half a mile east from Crane Castle (no. 7 above) is a small cove called Porthcadjack or Porthcadjack. On its western side are two large detached rock masses at sea-level, the outer one, Samphire Island, being separated at low water from the inner one by an 8 ft. channel. These masses represent the remnants of a collapsed local promontory which, as at Crane Castle, has been eroded by sea action. Across the neck of what remains of the promontory, which now juts out at a right angle from the cliff, Mr. R. B. Warner has noted a small counterscarp bank. The interior slopes sharply down to the east, and despite heavy grass cover, exhibits in certain lights a few roughly circular hollow areas.

The place-name *Carvannel* may aptly be considered here. At present it applies to a farm inland from the last three earthworks discussed here, and to the relevant stretch of cliff-land (*Carvannel Downs*). Older forms show that this is Cornish *car* or *ker*, 'fort, earthwork', and a word *banal* (collective plur. form; singulative form *banallen*), meaning the wild Broom, *planta genista*. The reference may be, as Charles Henderson thought, to specific vegetational overgrowth of some deserted earthwork. In origin, this name could refer either to the vestigial promontory fort just discussed (no. 9); or to Crane Castle (no. 7); or to the earthwork in Tehidy Woods (no. 5), which is most like the class of construction usually implied by the Cornish word *ker*, *car*. All three lie within a half-mile of Carvannel farm.

10 *Tregea Hill* (fig. 15)

SW 64754530 to SW 64904525: *Cornish Archaeol.* 5 (1966), 71 (no. 2); 6 (1967), 111.

At the west side of Portreath cove stands Tregea Hill, a section of high, dome-shaped cliff land jutting out into the sea. The position of Gull Rock, an isolated rock island

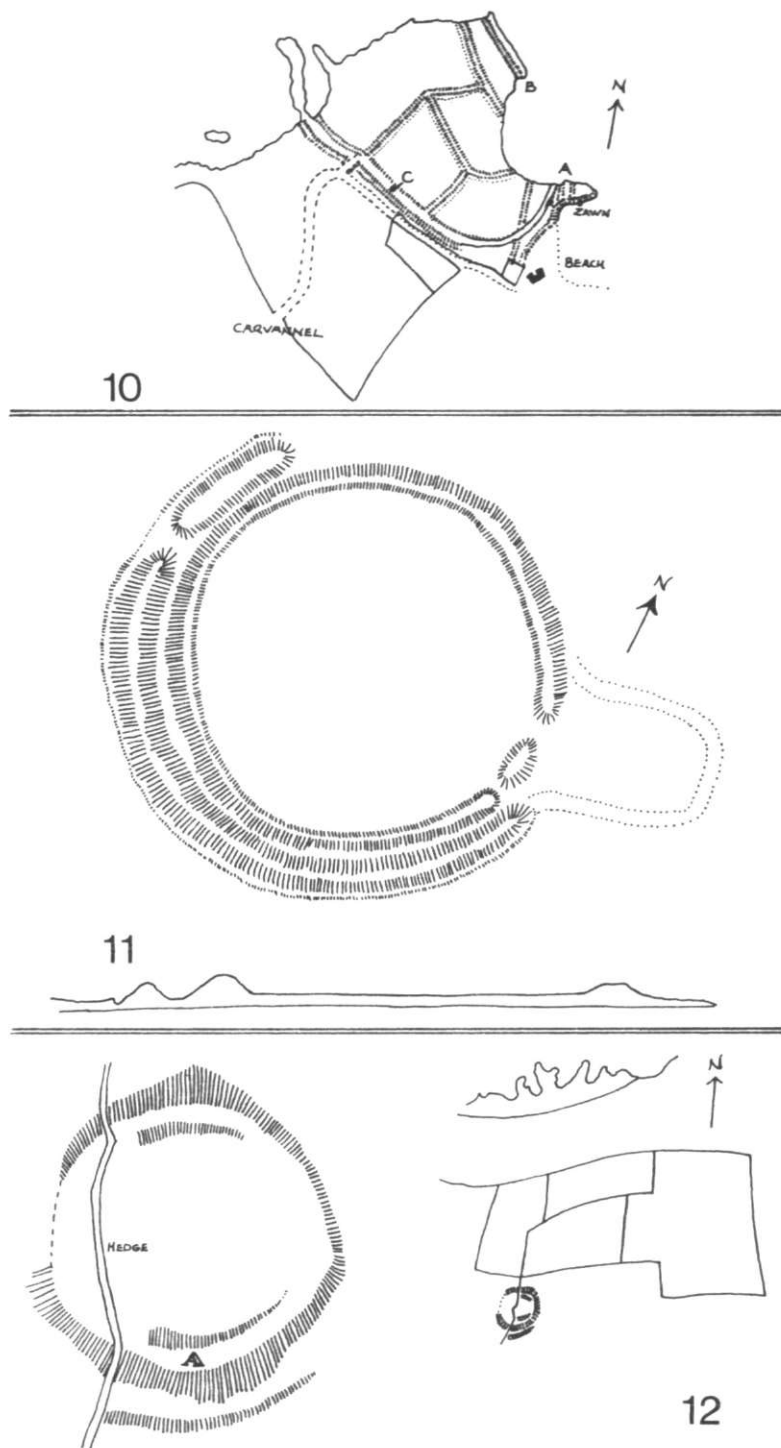


Fig. 15

Illogan earthworks—10: Tregae Hill (see text for explanation of letters). 11: Nance. 12: Great Nancekuke (after Henderson, 1916)

off the shore, and the intervening ledge (Flat Rocks) in the sea, suggest that here there was once a considerable promontory which, as at Crane Castle, has suffered erosion.

The earliest forms of the name *Tregea* are found with reference to the nearby inland tenement of the same name—*Trege* 1342, *Tregee* 1530—meaning ‘homestead of the bank, or hedge’ (Cornish *ke*). This name might refer to a low bank which passes around the perimeter of Tregea Hill. Although its dimensions are such as to suggest, not a defensive purpose, but that of a hedge or boundary, it might be classed as a cliff castle.

Along the whole length of the hill on its landward side, in a natural gully formed at its foot, is a ditch ascending from the cove below and ending on the cliff edge above. Today, this cutting is used as a footpath to the cliff-top. In the 18th and 19th centuries, it represented the main route from the farm of Carvannel (which lies some distance west of here) to Portreath, and one wonders if it was originally a hollow way. Above this is a low earthen bank, about 2 ft. 6 in. high, and 5 ft. wide across its base, which passes around the complete perimeter of the hill, ending again at the cliff edge, immediately above the collapsed sea-cavern or ‘zawn’ on the west side of Portreath beach (marked ‘A’ on fig. 15). Beyond this, cliff-falls have taken a large semi-circular bite back into the hill. Across the resulting gap of about 100 yards, the bank can be seen continuing on the very steep and dangerously accessible grass-covered cliff-slope, now only a few feet from the cliff edge (marked ‘B’ on fig. 15). This suggests that the circuit of the bank was, at one time, continuous.

Above this, on the top of the slope, is another bank with a ditch on the inner side. This is linked with a series of large, field-like areas which cover the entire hill, their boundaries formed by earth banks, fronted by slight ditches, of proportions similar to those of the bank which passes around the perimeter. These ‘field banks’ can also be discovered, at times, ending at the cliff edges, where they can be seen in section. The lower or downhill bound of these ‘fields’ is formed by the main perimeter bank.

Cut into the circumference of the steep hillside is a grass-covered track of unknown age (marked ‘C’ on fig. 15), linked at its west end to the route to Carvannel farm. This track also ends abruptly at the cliff edge, above the caverns previously mentioned. It is possible that it may originally have led to a whim, derrick, or pulley apparatus set up on the cliff, by which means seaweed, sand, or stone could have been raised for the use of Carvannel farm; such instances are not unknown on this whole stretch of coast.

11 *Nance* (fig. 15)

SW 66424495; just below 200 ft. contour; marked as ‘Camp’ on O.S. maps; for other refs. see *Cornish Archaeol.* 5 (1966), 71 (no. 2), to which add Tangye (1968), 24.

This, the best example of a ‘round’ in the parish, is situated on a high spur of land at Nance Farm (*nans*, ‘valley’) at the junction of two valleys. Various MSS sources of the 18th and 19th centuries show that the field in which it lies was called *Goon-an-geare* ‘downland of the fort’; later spellings are *Gullen Gear*, followed by *Golden Gear*, and the present name is merely, ‘The Rounds’. Local tradition claims this earthwork as ‘Roman’, and tells of a great battle having been fought there.

The earthwork is circular, and bivallate, having two clear ditches. It shows traces of having formerly possessed a feature rare in west Cornwall, a dependent enclosure. This can be discerned at the south-east side as a slight change in ground-level, most pronounced after the cutting of corn. When under plough, the orange clay soil of the presumed foundations of the enclosure bank contrasts sharply with the soil all around it. A cattle-track through the defences, where this dependent feature adjoins the earthwork proper, might indicate the original entrance.

The 'round' is complete, save where a section of the outer bank and ditch on the north-north-east side, if it existed, has been removed. The external circumference of the main earthwork is 370 paces, of the interior 250 paces, and the internal diameter 80 paces. The dependent enclosure is 37 paces long and 23 paces wide.

For a parallel to the dependent enclosure, one might look to Castle Dore, near Fowey (parish of Golant), a large univallate earthwork with a similar appendage. The Early Iron Age date of the fort itself presumably applies to this extension, and may be an indication that the Nance earthwork, like the cliff castles, is among the earlier of the Illogan sites.

12 Great Nancekuke (fig. 15)

SW 66654610: between 200 and 250 ft. contours; Basset *Plan of Nancekuke* (18th cent., County Record Office, Truro), field no. 188, 'Geer'; shown on O.S. 1-in., 1813 survey; *Cornish Archaeol.* 5 (1966), 71 (no. 1).

This small earthwork is assumed to have been destroyed or severely damaged in the 1939-45 war, during the construction of the former R.A.F. station at Nancekuke. The site now lies within the restricted area of the Ministry of Defence establishment. Fortunately this round was visited and described in 1916 by Charles Henderson.

'On the other side of the valley [from Nance] is the hamlet of Great Nancekuke, and between it and the cliffs, a distance of about a half mile, are the scanty remains of a small earthwork. It stands in a field and has been greatly ploughed down, though its outline can still be traced. The interior was raised artificially to make a level space and hence, though the enclosing rampart has been quite ploughed away, a terrace still marks its site. This terrace is still further emphasized by a shallow depression around it—all that is left of the encircling fosse. As will be seen on the plan (fig. 15), a hedge intersects the camp on the west side, and the shape is oval, 65 yards by 45 yards, not circular. At 'A' the terrace is quite 5 ft. in height.'

Other clues in the Nancekuke area

Various Basset MSS records of the 17th and 18th century mention the place-name 'Todden Kere Common' at Nancekuke, where we seem to have the late Cornish *todn ker*, 'grassland (by) the fort'. This may refer to Great Nancekuke, or possibly to another earthwork long since destroyed. There are possible hints here. The area immediately inland from the little cove named 'Sally Bottoms' or 'Fiddlers Bottoms' is labelled 'Carcloose' (*car or ker?*) on the 18th-century Plan of Nancekuke.

Discussion

It will be noticed that, as in most of West Cornwall outside the granite uplands, the majority of the rounds in this large parish are situated around the 200 to 250 ft. contours. The sitings chosen for these distinctive enclosures are almost invariably on the gentle slopes of the numerous valleys intersecting these former marine plateaux, sometimes (where these are available) placed on slight spurs, and overlooking the fords and crossings of the streams. The positions chosen are such as to obtain the fullest possible views of the approaches up the valleys, and of the surrounding terrain. Were these rounds sited on the summit of the high ground, not only would the valleys be unobserved, but each round would be visible on the skyline from a considerable distance. There appears to be some defensive purpose detectable here, with the added advantage of a certain amount of shelter from prevailing winds.

Nearly all the rounds are found in the vicinity of existing farms of known medieval age, and the recently-compiled check-lists for parishes in the Eastern Division of the Hundred of Penwith (Illogan, Gwinear, Gwithian, Redruth, Camborne, and others

awaiting publication) show clearly that the density of rounds is such that every suitable slope, above a valley, between the 200 and 250 ft. contours, must now be suspect. This density, and the proximity to the older farms, would also support the hypothesis that the rounds, if not indeed enclosed farms themselves, served in the later Iron Age as stock enclosures where animals could be herded at night in safety from wolves and predators. A continuation of the round-constructing tradition may exist in the remarkable medieval 'Hundred Pound' (of *Conerton* or *Penwith*) at *Gwithian*, which itself closely resembles a conventional round in size, shape, and construction (*Cornish Archaeol.* 4 (1965), 75).

Given the size and numbers of these earthworks there arises the question of the manpower available to construct them. One would suggest that such large undertakings imply communal efforts, and that, if there is a defensive purpose here, a common enemy was involved. These, and other speculations, stress the need for much more information; let us hope that some of the answers will lie in the future archaeology of such sites.

ACKNOWLEDGEMENTS

I wish to thank Mr. F. L. Harris, of *Redruth*, for the loan of various manuscript *Tehidy Estate* (*Basset*) books, which have proved invaluable in preparing this paper. I also thank the Council of the Royal Institution of Cornwall, *Truro*, and the Curator, Mr. H. L. Douch, for access to the various *Henderson* manuscripts in their care.

Redruth

NOTES

- 1 This form was noted by Charles Henderson; see his MS volumes of collected transcripts of *Cornish deeds*, vol. 8, f.122, at Royal Institution of Cornwall, *Truro*.
- 2 *The Itinerary of John Leland*, ed. Lucy Toulmin Smith (5 vols., London 1907), vol. i, p. 183; earlier and less accurate transcripts of this passage have *tunc* instead of *tamen*.
- 3 Earlier still (1530) *Castle Cliffe*: Henderson MS (see n. 1 *supra*) vol. 8, f.165. See also Thomas C., 'Coast and Cliff names of *Gwithian* and the North Cliffs', *Journ. Roy. Inst. Cornwall, n.s., V.i* (1965), 18, for the identification.

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(a) *Tresmorn, from the east: R.A.F. St. Mawgan. (Crown copyright reserved.)*



(b) *Corner oven in cobwalled House B (G. Beresford).*



(c) *Blacksmith's forge (Guy Beresford).*



Stone House 1 in Croft 1

(Charles Woolf).



(Charles Woolf).

Higher Tresmorn

Castle Dore—a Reappraisal of the Post-Roman Structures

PHILIP RAHTZ, M.A., F.S.A.

IT IS NOW two decades since Dr. C. A. Raleigh Radford published his full report on Castle Dore, which he excavated in 1936 and 1937 (Radford 1951); in a recent book he reviewed the post-Roman evidence (Radford 1968, 94-100). The site was a pre-Roman Iron Age hillfort; structures of this date were found, but there were also post-Roman structures, identified as those of the sixth century palace of King Cynvawr or Mark of Cornwall. The recent widespread interest in the dark ages in the west underlines the need for a reappraisal of the post-Roman phase of Castle Dore. The discovery of a fifth or sixth century hall at South Cadbury (Alcock, 1970) makes it desirable to have a new plan of the Castle Dore buildings, and of their position in relation to the defences.

The data for such plans is in the original Castle Dore report, together with explicit interpretations of the structures; but Radford did not publish any plans which realised these interpretations in graphic form. This paper attempts to incorporate Radford's ideas in drawings which can easily be compared with those of other dark age buildings currently being discovered, and to provide a summary of the evidence for the benefit of students, conveniently separated from the Iron Age evidence, which comprises the bulk of the published report. Little re-interpretation is attempted, nor any comparisons made between Castle Dore and other sites. I have not hesitated to quote Dr. Radford at length, using his own words without parentheses.

The historical background

The identification of the site with *Lancien*, the palace of King Mark, depends on historical, topographical and linguistic evidence (Radford 1951, 96) localising the romance of *Tristan and Iseult* in the Castle Dore district, the name surviving in that of a farm, Lantyne or Lantian, two miles away. Furthermore, only a mile away is an inscribed stone of the sixth century (Radford 1951, 117-119); this is seven feet high and bears the Latin inscription DRUSTAVS HIC IACIT/CVNOMORI FILIVS in two lines running vertically downwards. (DRUSTANVS in Radford 1968, 96). *Drustaus* or *Drustanus* is equated with 'Tristan' and *Cunomorus* with Cynvawr, king of Dumnonia, who died in the second quarter of the sixth century (Radford 1968, 96); he is equated with Mark in a ninth century tradition (Radford 1951, Appendix III, 117-119; and 1968, 94-98). Even if this equation cannot be maintained, Radford considers that Castle Dore was occupied as a chieftain's residence whose 'identification as the court or *llys* of Cynvawr can hardly be avoided' (1968, 100).

Radford suggests (1951, 119) that the stone was a memorial stone set up above the grave of the prince in the old family cemetery alongside the road, leading to his residence, *Lancien*.

The Economic and Topographical Context

Castle Dore is on the road to Fowey, a 'trans-peninsular route linking the southern harbours with those on and around the estuary of the Camel on the north coast' (Radford 1951, 6). The importance of this road is discussed by Radford (1951, 6). From Fowey it ran north to the great Celtic monastery at Bodmin, (?) *Dinurrin*, a ninth century seat of a Celtic bishop; the line of the road is marked by crosses dating between 800 and 1100. Castle Dore is so placed as to control this road (Radford 1951, 6-7).

The Dating Evidence

It is unfortunate that there was so little archaeological dating evidence to support the attribution of the period IV (post-Roman) structures to the sixth century.¹ The period IV structures are different in character from those of the Iron Age (see below), and are also in places stratigraphically later, with evidence of a considerable time-lapse between the two.

This last point suggests a Roman or later date; the former seems to be ruled out by the total lack of Roman artefacts, so a post-Roman date seems proven. The only finds which can be related to period IV are two sherds and two or three abraded scraps which did not seem to be Iron Age. The two sherds were as follows: (Radford 1951, 94 and fig. 18, now fig. 18).

- M1. Shallow bowl with curved side and flange. Gritty rather friable brown ware with washed grey surface. Wheel made. Found in hillfort interior, hole no. 48 of Hut 6 (an Iron Age context). Radford compares this sherd to imported Mediterranean ware of class A in *form*, but not in fabric.
- M2. Neck of jar with fine edged rim. Hard fine grey ware without grit. Wheel made. Found in hill-fort interior, unstratified. Radford does not suggest any parallel to this sherd, but is certain it is not Iron Age. There were also some beads which were probably post-Roman.²

The only later find, apart from relics of the Civil War, was a twelfth century rim (M.3) (fig. 18, Radford 1951; now in fig. 18) of hard red sandy ware, found at the base of a disturbed area in the gate, on the surface of the natural shillet.

The absence of Mediterranean imports of defined types is surprising if the site was indeed occupied in the sixth century. Such pottery has been found on so many sites now, and especially in Cornwall, that its absence might be taken as evidence that period IV did not begin until such pottery was no longer finding its way into Britain, in the seventh century or later. Indeed period IV is virtually aceramic, though Radford points out that soil conditions and long continued ploughing may have destroyed most of the sherds in the latest levels (1951, 61).

The site (fig. 16)

The site is a hillfort with two roughly circular defences, diverging to the east where there is an outer enclosure. The banks are of shillet revetted with turf. The inner bank is earth and stone 24 ft. wide, and up to 7 ft. high. Outside this is a ditch 22 ft. wide, now 4 ft. deep (12 ft. as dug). The entrance is 30 ft. wide; its width and the rounded bank ends are due to ploughing.

The outer bank is 35 to 40 ft. wide and c. 6 ft. high, with an outer ditch 22 ft. wide and c. 5 ft. deep (12 ft. as dug). The outer entrance is 25 ft. wide. There was also formerly an outwork beyond the outer gate, possibly an enclosure for cultivation (Radford 1951, 5), hay, or stock (1968, 98).

The fort, while giving extensive views towards Par Bay, is not on a hill-top, but protected from prevailing south-westerly winds.

Stratification

The interior has been ploughed; this has destroyed most floor-levels, and in places eroded the natural shillet. The only post-Roman floor-levels were in Hut 2 and a spread of rough cobbling in the northern part of the site, which was not fully uncovered. Some period IV structures were stratigraphically separated from Iron Age levels. The rampart had slid, over its revetment, and a new turf line had accumulated before Hut 1 was built (Radford 1951, 17). A similar layer of fallen rampart material was covered

CASTLE DORE *The Post-Roman Structures*

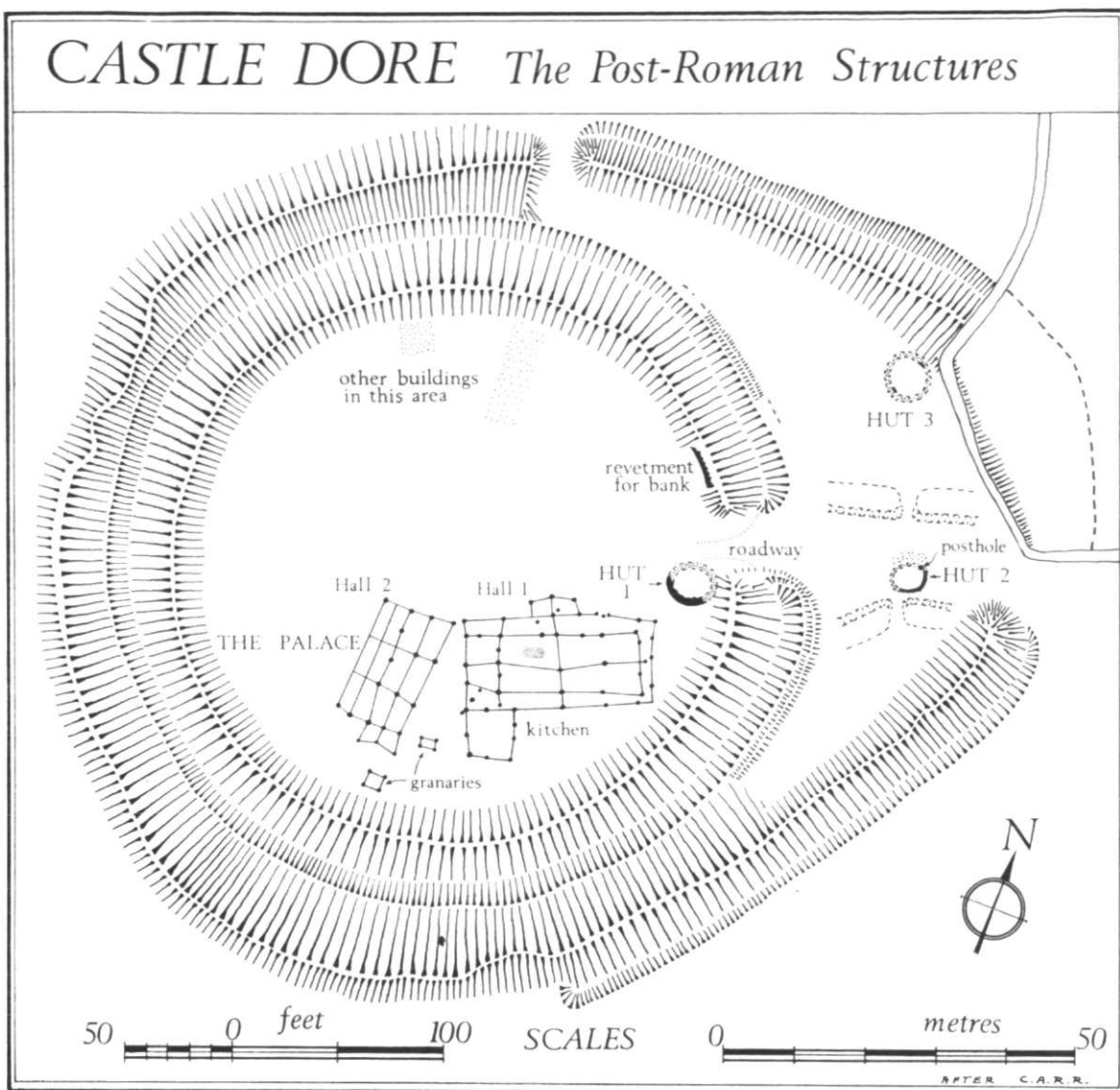


Fig. 16
Castle Dore: site plan (after Radford)

by a thick turf line on which was erected in one place at least the post-Roman revetment behind the crest of the rampart (Radford 1951, 18) (see below). In the interior, the period IV postholes were distinguished by being stone-lined and in some cases these cut Iron Age holes (Radford 1951, 37); while the 'hearth' of Hall 1 was at a 'high' level. The rough paving in the north part of the site sealed Iron Age levels.

THE STRUCTURES

The defences

The only place where evidence of post-Roman reconstruction of the defences was found was in a cutting 38 ft. north of the gate. Here, on a turf line sealing collapsed rampart material, was a levelling layer of earth and stones, which sloped gradually up the bank to a small revetment which ran in a curve along the rampart about four feet below and behind the present crest (fig. 16); it was only a few inches high, of shillet roughly laid horizontally without mortar (Radford 1951, 18).

Radford suggests (1968, 99) that this may be tentatively interpreted as the rearward toe of a bank with an internal slope leading up to a level fighting-platform retained by a more substantial facing of timber and dry-stone, of which all trace has disappeared.

The roadway

The latest phase of the roadway through the gate was probably post-Roman; it comprised rough paving 2 ft. 6 ins. above the level of the subsoil (Radford 1951, 25).

The huts

Three huts were found (nos. 1-3 on fig. 16). *No. 1* was oval, 24 × 18 ft.; it was just inside the gate passage on the south side. Its floor-level was set partly on the bank and partly to the south-west on material which had slipped from the ramparts and been levelled off. The low stone walls were only a base for the floor revetment; they were found only on the south and west sides, the bank to north and east providing sufficient revetment. Radford suggested (1951, 21) originally that the super-structure was of perishable material, but in 1968 (99) interpreted Hut 1 as merely an oval platform, possibly the base of a look-out.

No. 2 was in the outer enclosure on the south side of the roadway; it was set into a layer of clay and stones laid down in the Iron Age over an earlier hollow way. Like no. 1 it was oval and of similar size. The south wall was of large stones, with a fair inner face surviving to a height of 15 ins.; the line of the north wall could be traced only by noting the edge of the occupation layer marking the hut floor. Ten ft. from the south wall was a posthole 1 ft. in diameter and 18 ins. deep, on the edge of the occupation layer. This was probably the door post of the hut, which would have faced on to the road. In front of the hut was a thin levelling layer with many stones laid flat on the surface (Radford 1951, 27).

No. 3 was found in the outer enclosure in Trench 5, set into the bank as was hut no. 1. No plan of this was published, but it was said to be 17 ft. from wall to wall (SSW-NNE), the NNE wall standing to a height of over 2 ft. against the rampart; this is a different arrangement to that of hut no. 1 in that the best-preserved wall was that on the bank side. The hut had a partly-paved floor on which were found two substantial sherds of Iron Age pottery (Radford 1951, 44). The huts are interpreted as lodges for porters to watch the gateways (Radford 1951, 66).

The palace

Over 200 post-holes were found in the cuttings (fig. 17) made in this part of the interior; a series of these was isolated by Radford as being different from the rest, because they were stone-lined, and not associated with Iron Age hut floors; some cut Iron Age post-holes. They were interpreted as two halls, a kitchen and two granaries; Radford's plan (reproduced here as fig. 18: his 1951 pl. XIII, opp. 95) has been re-drawn, using the information on depth and filling set out in his appendices (1951, 112-116). Radford did not think the depths were significant, but depended on the solidity of the shillet, base stones being used where the shillet was soft (1951, 34); he considered (1968, 100) that the timbers in the holes were mostly squared and averaged 10-14 ins. in diameter.

Hall I was 90 × 40 ft., based on forty post-holes, with a hearth. Radford discusses the implications of the plan (1951, 61). Four transverse lines supported four main roof supports, while the longitudinal lines show that the hall was aisled. The aisle was returned along the east end (Radford 1968, 99). The central row supported a direct ridge support. The irregular spacing and crooked alignments imply the use of ill-shaped horizontal timbers. The projection on the north side is interpreted as a porch with its own gable set at right angles to the main roof (Radford 1951, 62). There is some evidence



Castle Dore Palace ~ Extent of Excavation

Fig. 17

Castle Dore: area of 1936-37 excavations, showing post-holes

of rebuilding (1951, 64). Radford (1968, 100) compares the plan with that of the great hall of Tara (1968, ill. 68).

The Kitchen was 24 ft. square, with a gable at right angles to the main structure; it was so interpreted in 1951 both because of its position in relation to Hall I and because of supporting literary evidence (Radford 1951, 65); in 1968 (99) Radford refers to it merely as a rectangular annexe.

Hall II was 65 × 35 ft., of similar construction to Hall I (Radford 1951, 65); it was nearer to the summit of the enclosure, and separated from Hall I by a space interpreted by Radford as a passage (1968, 100).

The two granaries were identified as such by comparison with similar structures at Little Woodbury and Rotherley, of Iron Age or Roman date. Granary 2 was 7 × 5 ft., with substantial weight-carrying posts; Granary 3 was possibly 7 × 7 ft. (Radford 1951, 65-66).

Other buildings were located on the north side of the interior in trenches dug there; there were large post-holes of similar type to those of the buildings described above, associated with rough paving. No details or plan of these were published by Radford (1951, 38), though he suggested in 1968 (100) that a building there was of similar type to Halls I and II.

Conclusion. In spite of the lack of secure dating evidence, and the badly-damaged remains of the structures, the post-Roman complex at Castle Dore remains one of the very few sites of this period where building plans have been recovered, and the most impressive 'palace' in the west. It is hoped that this paper will serve to make it better known, and that it will form a convenient basis for any future discussion or re-interpretation.

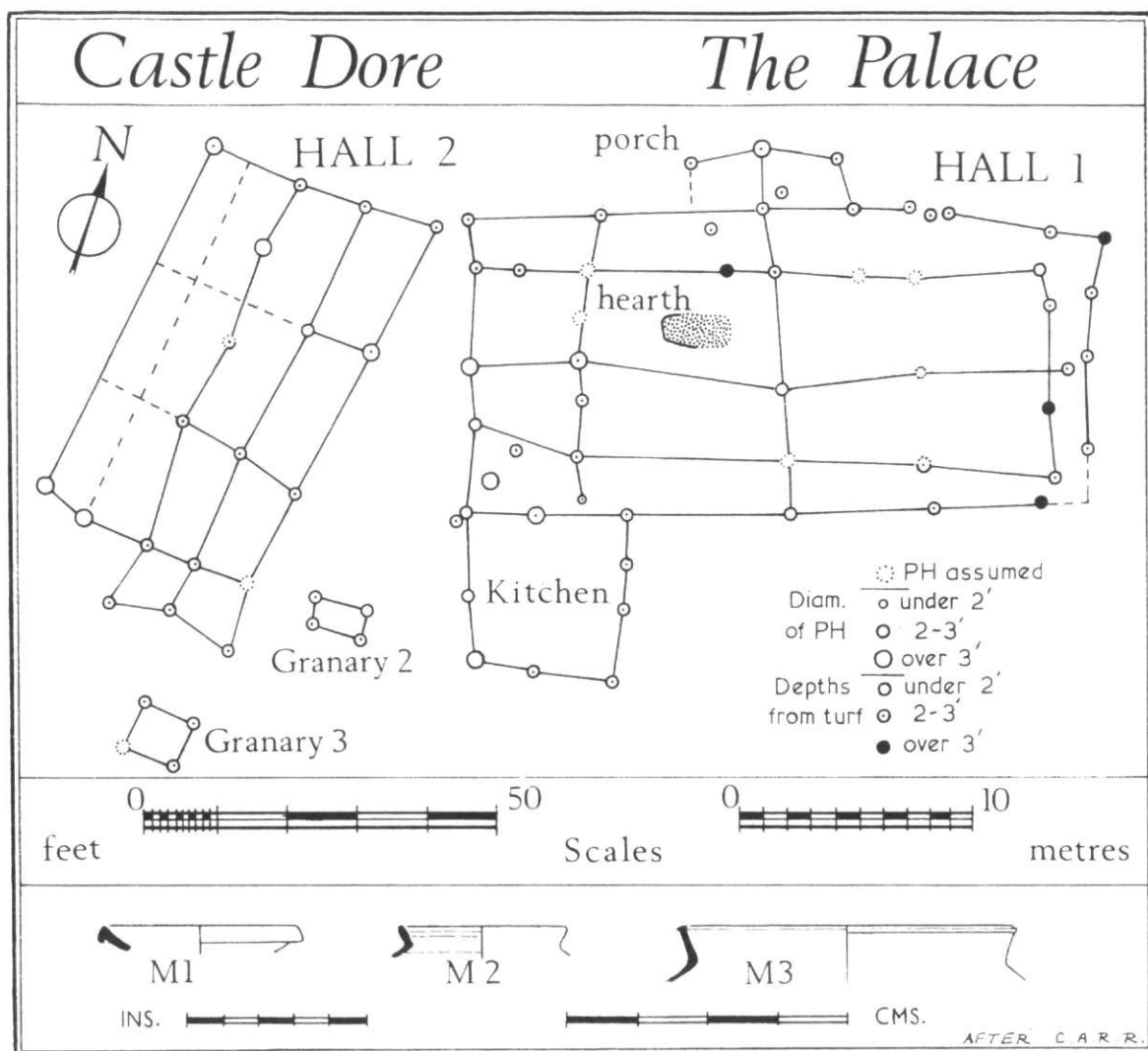


Fig. 18
(Above) Post-Roman structures, redrawn (after Radford):
(Below) pottery (see p. 50 above)

NOTES

- 1 Radford does not indeed limit the post-Roman occupation to this century; he places its outside limits as 5th to 8th centuries (1951, 61 and 96) and suggests that it is unlikely to have survived Saxon political domination in the 9th century. By the 12th century the site served as a quarry (1951, 96), and in the 15th century William of Worcester speaks of 'Castle Dirford, destroyed, a villa near Golant'. It was also defended by the Parliamentarians on the 31st of August, 1644; they held it from 11 a.m. till dark, when Colonel Weare's regiment broke in through the eastern gap, the gate of the hillfort (1951, 97).
- 2 See Radford 1951, 61; in the finds section the only bead for which post-Roman parallels were drawn was (in Radford 1951) fig. 8, no. 4 (p. 69), an opaque yellow one compared to those from Saxon graves, found unstratified in the interior; other beads described could be post-Roman.

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Tresmorn, St. Gennys

GUY BERESFORD

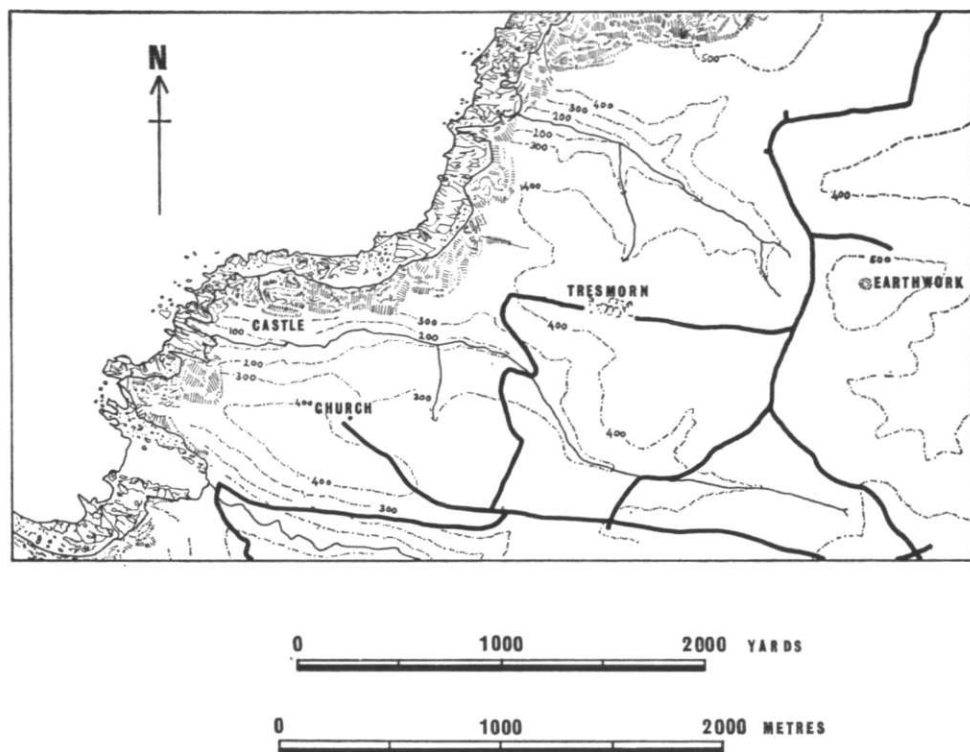


Fig. 19

Tresmorn: location (based upon the relevant sheet with the sanction of the Controller of H.M. Stationery Office: Crown Copyright)

TRESMORN IS, TO-DAY, a shrunken medieval village, situated on the coastal uplands of North Cornwall. The hamlet consists of two farmsteads of medieval origin, known as Higher and Lower Tresmorn, and the earthworks of the medieval crofts, which lie between them. Excavation of three crofts revealed a long sequence of houses, dating, probably, from the 10th to the 14th century, and built during four structural periods. The existence of the earliest houses was indicated by post-holes, gullies and hearths, but the remains were scanty, providing insufficient information to determine their character. In the second period, there was a long sequence of super-imposed houses, built with turf walls with an inner facing of wattle and daub. No trace of the turf walls remained, but their alignment was designated by lines of stake-holes of the wattle facing. It was not possible to determine the precise lay-out of all the structures. The later turf houses were each divided into a living room and a small byre. The third structural phase was effected in the late 12th, or early 13th, century, when the houses were built of cob. Two of these were excavated in Croft 4; their lay-out was similar to those constructed at the end of the previous period. The cob walls were replaced by stone in the last period of occupation. The extant buildings of Higher and Lower Tresmorn reveal an interesting development of the Cornishman's house, during the late medieval period and the time of the 'Great Rebuild'.

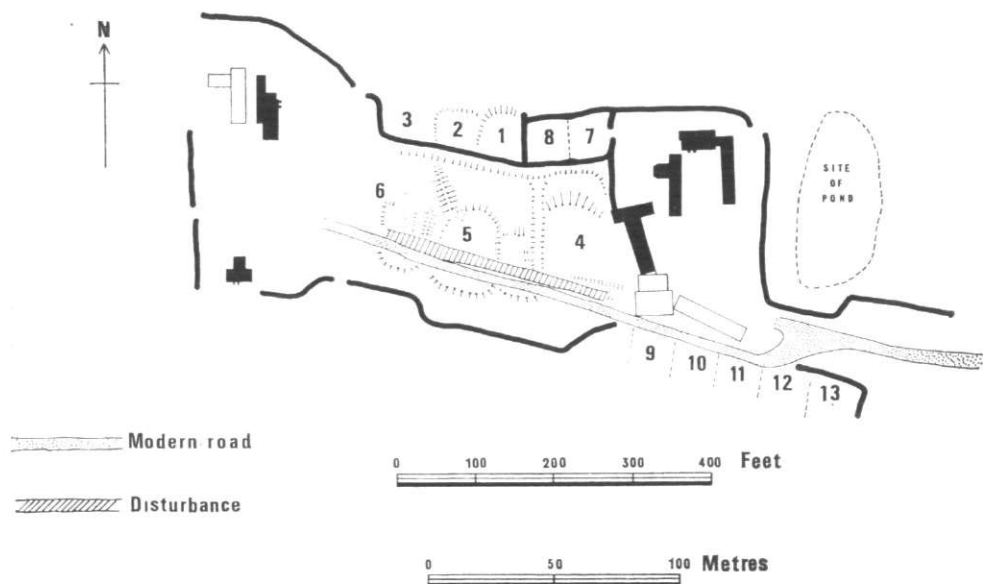


Fig. 20
The medieval settlement of Tresmorn

Tresmorn, Cornwall, lies in close No. 1838 on the 25" Ordnance Survey map (NGR SX161977). The position is shown in fig. 1. The hamlet is in the parish of St. Gennys, which is within the Deanery of Trigg Major and the Hundred of Lesnewth¹. The parish is bounded on the north by Poundstock, on the east by Jacobstow and Warbstow, on the south by Otterham and St. Juliatt and on the west by the sea. The parish varies in height from 731 ft. (at High Cliff) to sea level. The subsoil is mostly shale, giving way to bands of clay, overlying massive and schistose varieties of Dunstone². The land must always have provided good pasture, and there is a plentiful supply of spring water. The parish, exposed to the full fury of the Atlantic gales, is intersected by deep valleys—sometimes well wooded—running down to the sea. Tresmorn, like other early settlements in Cornwall, is on a high ridge between two such valleys³, and is, approximately, 420 ft. above sea level (pl.IV). The ridge runs eastward from an Iron Age cliff castle to a small hill fort at Trengayor, approximately three quarters of a mile to the east of Tresmorn.

More stable conditions, during the post-Roman period, led to an increase in settlements outside the fortified sites. Although excavation at Tresmorn did not reveal continuous occupation from this period, there is no reason to believe that there was not such occupation, as the earlier buildings would have been obliterated by later development. Trethin, in Advent, and Treithick in Altarnun⁴, are other examples of homesteads, of possible Celtic origin, in close proximity to prehistoric earthworks. The name 'Tresmorn' is one of the multifarious Celtic *tre(f)* place names⁵, originating mostly before the English settlements in East Cornwall. The date of the conquest of East Cornwall is uncertain, but it is unlikely to have been accomplished before the beginning of the 9th century⁶. The eastern limitation of Celtic place names may be clearly seen on the 1-in. Ordnance Survey map.

The earthworks of the medieval settlement had been damaged by the construction of farm roads and by ploughing, and they were partially covered by dense scrub. It was not until the accidental finding of some 13th-century pottery in 1961 that the medieval origin of the site was appreciated. A trial trench was dug across Croft A during that summer, but excavation was not resumed until the summer of 1964. During that year and the three succeeding ones, three crofts were completely excavated. The soil was replaced after excavation.

It was not possible to determine the exact size of the early settlement; the earthworks, in places, were somewhat nebulous, and it is probable that some crofts, in close proximity to the extant farmsteads, would have been destroyed by the construction of buildings and yards. Other crofts, situated further away, may have been obliterated by ploughing. There are, however, the remains of fifteen crofts, most of which were on opposing sides of the sunken village street, running between Higher and Lower Tresmorn. Their positions are shown in fig. 20. The crofts are unusually small, being little more than 45 ft. square. As in other sites⁷, the crofts were bounded by earth banks, some of which are still maintained as field and garden boundaries. Their excavation revealed that they were originally constructed in the 13th century, when worsening weather conditions necessitated the digging of deeper boundary ditches to keep the crofts dry⁸. The remains of the earlier boundaries were not apparent.

EXCAVATION

Crofts 1, 2 and 4 were completely excavated (figs. 21 & 22). Four structural periods were recognized. The positions of the earlier timber houses in Croft 4 were defined by hearths, post-holes and gullies, but the remains were scanty, many features having been effaced by later development. There was insufficient evidence to determine the character of these early structures. There followed a long sequence of turf walled buildings. It would seem that, at this date, building timber had become scarce, owing to the exposed position of the site and/or the increasing population⁹. Although there was stone, readily available on the cliffs, without the necessity of quarrying, it was not utilized until the 13th century¹⁰.

PERIOD 2: TURF WALLED HOUSES

Evidence of turf walled houses was found in the centres of the three crofts. In Crofts 1 and 2, the remains had been so extensively damaged by the construction of later buildings that the delineation of any one structure was not possible. The later houses in Croft 4 were sited at the side of the road. There, the remains of a sequence of eight superimposed turf walled houses, built on different alignments, survived.

No remains of the turf walls were found, but their existence was indicated by the lines of stake-holes of the wattle work, which faced the inner sides of the walls. It is probable that the walls were 5 ft. thick, similar to those in a house, excavated at Hound Tor, where a section of the original wall had survived¹¹. The stake-holes, approximately 3 ins. in diameter and 4 ins. deep, were set about 8 ins. apart.

It was not possible to interpret all the stake-holes with accuracy, or to determine the exact order in which the turf houses had been built, but the interpretation set out in the figures and the text would seem to be the most probable. All measurements are internal.
Phase 2: Turf walled house A (fig. 23, no. 1)

House A was built on an east/west alignment. It was not possible to determine its length, as the eastern end had been destroyed by the construction of later turf houses. The remaining stake-holes indicated that it had been, at least, 14 ft. long and 10 ft. wide. At the western end of the house, the shale gave way to a band of rock, through which a narrow trench had been cut to hold the stakes. The entrance was in the north wall and there were two hearths.

Turf walled houses B, C and D (fig. 23, nos. 2-4)

Houses B, C and D, built on an east/west axis, were superimposed. It was not possible to determine the layout of the individual structures. They were, approximately, 10 ft. wide and 28 ft. long. One of the houses, possibly the last, was divided into two rooms, with a hearth in one of them.

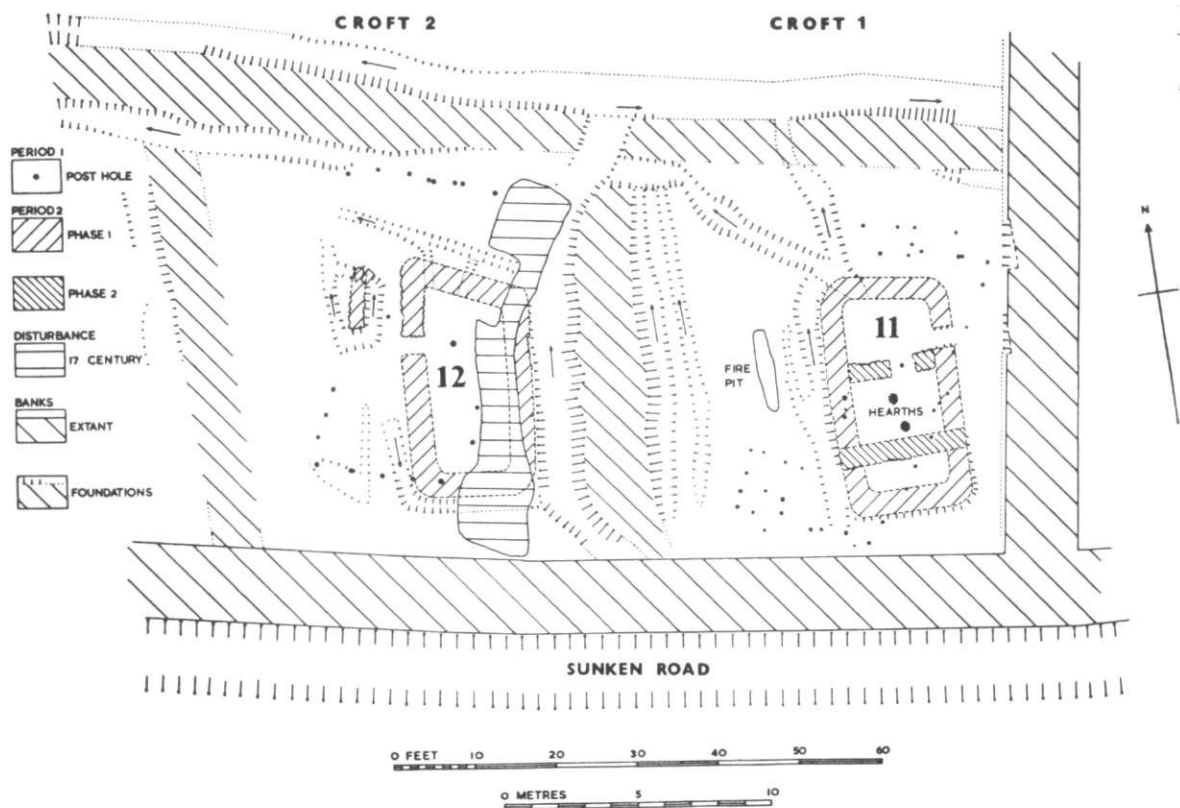


Fig. 21
Tresmorn: plans of Crofts 1 and 2

Turf walled house E (fig. 23, no. 5)

House E was built on a north/south alignment. Excavation did not reveal the southern end of the house; the shale had given way to a band of clay, in which the stake-holes could not be identified. The house was 10 ft. wide and, at least, 25 ft. long. It was divided into a byre, having a central drain, and a living room, in which there was a hearth.

Turf walled houses F and G (fig. 23, nos. 6-7)

Houses F and G were superimposed and were built on a north/south alignment. House F was 8 ft. wide and 16 ft. long. House G, 22 ft. long and 9 ft. wide, was divided into two rooms. Both houses had been extensively damaged by the later construction of another building.

Turf walled house H (fig. 23, no. 8)

House H, built on a north/south axis, was 25 ft. long and 10 ft. wide. It was divided into a living room, in which there was a hearth, and a byre.

PERIOD 3: COB WALLED HOUSES

At the end of the 12th century, it would seem that the once plentiful supply of turf had been exhausted by an increase in the population and/or the cultivation of the land. Cob—unbaked clay—was substituted for turf, in the construction of the walls. The recent excavations at Hound Tor¹² and Trewold¹³ have shown a similar change from turf, but differing from Tresmorn, in that, there, the change was to stone. Stone walls were not found at Tresmorn until later in the 13th century.

The cob walls were 2 ft. 9 ins. thick and probably contained chopped straw as a reinforcement. The walls, unlike those of the 16th and 17th centuries, were built without

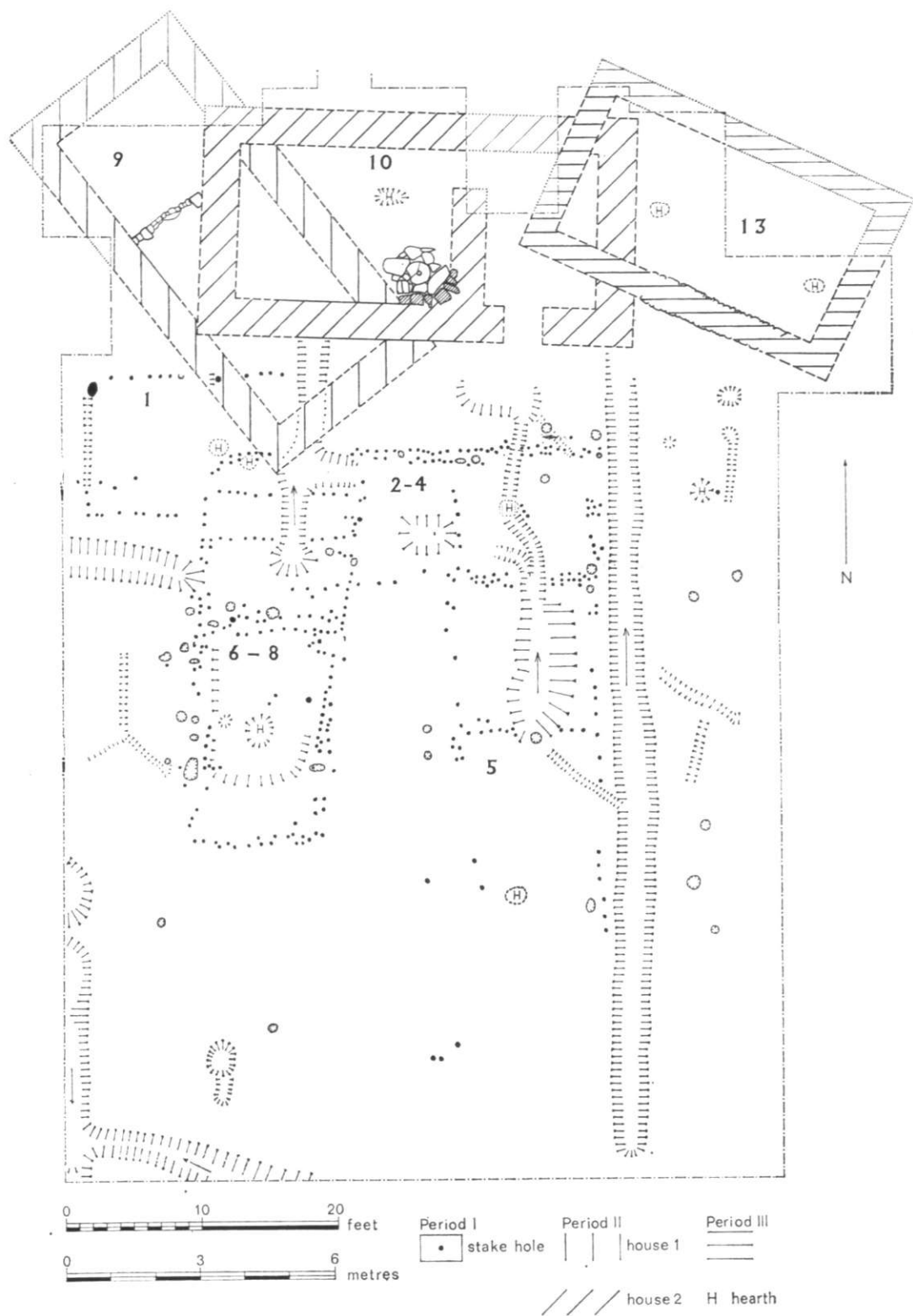


Fig. 22
Tresmorn: plan of Croft 4

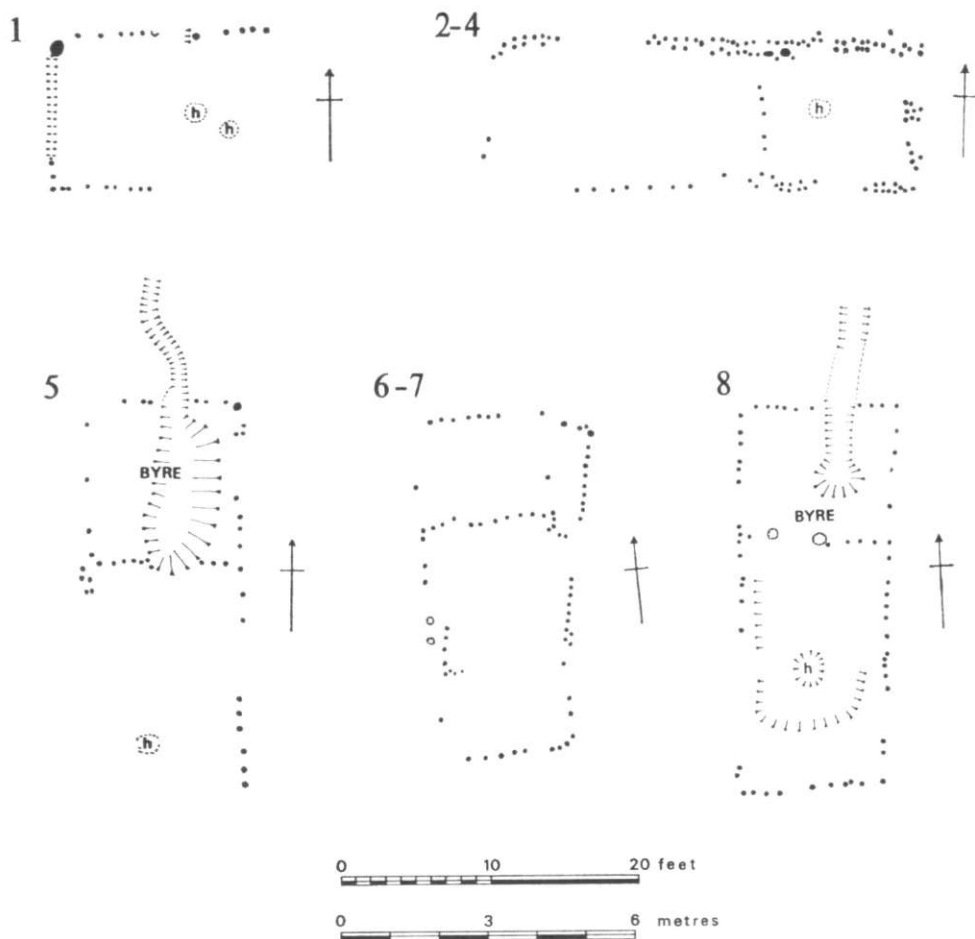


Fig. 23
Tresmorn: plans of turf walled houses. 1, house A; 2-4, houses B, C and D; 5, house E; 6-7, houses F and G; 8, house H

stone foundation sills. They were identified by sections which had survived, in places, to a height of 9 ins. The thickness of the walls, and the obvious shortage of building timber in the coastal regions of north Cornwall, preclude an interpretation that the walls found were sills of timber houses; compare those excavated at Barn Road, Norwich¹⁴. Recent excavation at the manor site at Wintringham, Huntingdon, revealed that the hall was built on clay sills in the late 13th century.

The remains of two cob walled houses were found in Croft 4. It is probable that there were similar houses in Crofts 1 and 2, but there no remains were found. In all probability, they were destroyed by the construction of a stone house during the last occupational period.

Cob walled house A (fig. 24, no. 9)

The earliest cob walled house, 26 ft. long and 10 ft. wide, was built on a north-west/south-east alignment. Only 6 ft. of the inner side of the south-west wall had survived; the plan of the house was delineated by the spread of occupational material and the foundation stones of the screen, by which it was divided into two rooms. Two opposing doors, on the lower side of the screen, gave access to the house. There was nothing to indicate the purpose of the lower room. It was not a byre; there was no drain and the floor showed no signs of wear.

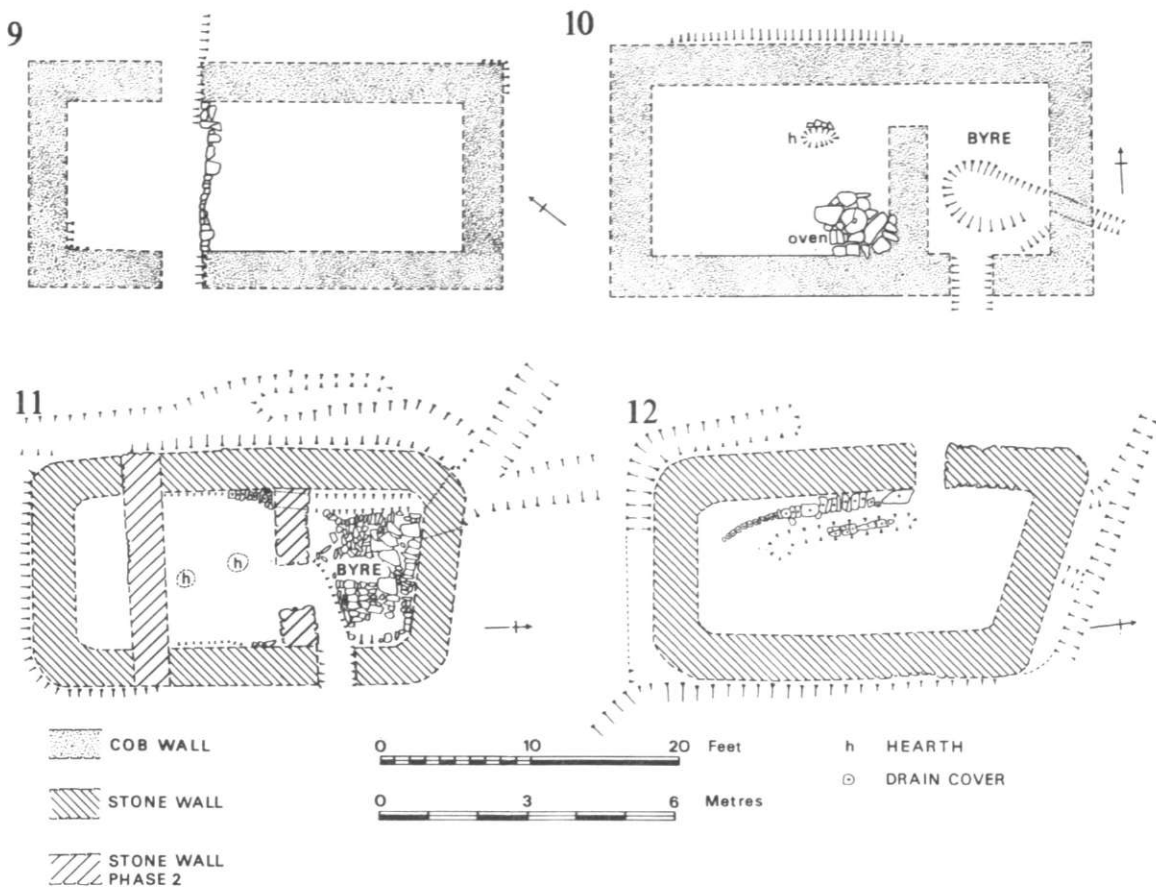


Fig. 24

Tresmorn: plans of cob (9, 10) and stone (11, 12) walled houses. 9, house A (Croit 4); 10, house B (Croit 4); 11, house 1 (Croit 1); 12, house 2 (Croit 2)

Cob walled house B (fig. 24, no. 10)

The remains of the second cob walled house, in Croit 4, were substantial, although they had been slightly damaged, when a pole, carrying electric cables, was erected in the year 1956. The house, built on an east/west alignment, was 26 ft. long and 11 ft. 6 ins. wide. It was divided by a cob wall into a living room and a byre. The south wall of the living room, 3 ft. 9 ins. thick, was clearly defined; it stood to a height of 9 ins. throughout most of its length. The positions of the other walls were determined, to a large extent, by the spread of the fallen chimney-hood and by thousands of limpet shells, spread over the floor of the living room and the byre. Access to the house was gained through a door in the side wall of the byre.

There was a stone oven (plate IV) in the south-eastern corner of the living room. Its floor consisted of a quern-stone, surrounded by other flat stones. Before the walls of the house fell, the larger stones from the sides of the oven, apart from a few which were protected by the cob walls, were robbed; those discarded were spread over the corner of the room. A very considerable quantity of wood ash, trodden into the floor, was found in proximity to the oven. A similar corner oven of this period was found at Seacourt, Berkshire¹⁵.

The living room was heated by a central fire, over which there had been a wattle and daub chimney-hood. The constant removal of ash from the fire had worn a depression in the shale, 3 ft. long, 18 ins. wide and 5 ins. deep. There was a stone hearth back.

The centre of the floor of the byre showed considerable signs of wear; it was worn to a depth of 12 ins. below the foundations of the walls. An attempt had been made to level the floor, by throwing in a few loose stones. A drain led the effluent through the wall.

PERIOD 4: STONE WALLED HOUSES

In the middle of the 13th century, the peasants began to utilize the abundant supply of building stone, readily obtainable from the cliffs, with which to build the walls of small but substantial houses. The reason for the change at this date is not certain, but it is probable that they were seeking more permanent structures. The life of a cob house was somewhat short. The peasants followed the then general tendency in highland areas and built in stone.

Much of the stone had been robbed, but sufficient remained to determine the character of the houses and the construction of their walls. The latter were approximately 2 ft. 9 ins. thick. Their width refutes any suggestion that they were the stone sills of timber houses. The inner and outer sides of the walls were faced with small, well matched, stones; the intervening space was packed tightly with shale, top soil or surplus stones.

The remains of a stone house were found in each of the excavated crofts.

Stone house 1, Croft 1 (fig. 24, no. 11 and plate IV)

This house provided one of the best house plans at Tresmorn. The outer walls had been robbed almost completely but their positions were clearly defined by the wear of the floor, the internal drains and the eaves-ditches. The house, built on a north/south alignment, was originally 23 ft. long and 10 ft. 6 ins. wide, but the upper end was shortened by 6 ft. some time before desertion. The house was divided into a living room and a byre by a stone partition 2 ft. 6 ins. wide. The partition was not an original feature of the house; it was built after the floor levels had fallen considerably by the constant removal of domestic debris. Access to the house was through a door in the east wall of the byre.

The living room contained two hearths. A stone-covered drain against the west side of this room ran through the partition and into the byre. The wear of the floor, after the drain had been laid, caused the inner side of the stone covers to fall slightly, giving them the appearance of skirting stones. Presumably their purpose was to carry away water, which had seeped through the wall. Similar drains have been recorded at Dinas Nodd-fa¹⁶, in Wales and at Berry Court¹⁷ in Cornwall. Both these areas have heavy rainfalls.

The centre of the floor of the byre had been eroded to a depth of 18 ins. by the feet of animals and the removal of dung, but during the last years of occupation the floor had been carefully levelled with stones set in shale.

Smith's Forge (fig. 25 and plate IV)

A blacksmith's forge was found, 5 ft. to the west of the house. The pit, shaped somewhat like a bath, was 9 ft. long at the top, and 5 ft. long at the bottom. It was 2 ft. wide and 3 ft. deep. The sides had been extensively reddened by frequent fires, and the bottom of the pit contained much wood ash. A considerable quantity of such ash and smithing slag was found in the upper filling of the boundary ditch, between Crofts 1 and 2, indicating that the pit was associated with the house.

Stone house 2, Croft 2 (fig. 24, no. 12)

The stone house was built on a north/south alignment; it was 21 ft. 6 ins. long and 10 ft. wide. It was sited on the east side of the croft against the boundary ditch. The house had been extensively damaged in the 17th century, when a trench was dug through it to provide turf and soil to rebuild the banks of Croft 1, so that it could be used as a garden. The construction of the house was similar to that of Stone House 1, the positions of the walls being largely determined by the eaves trenches and by an internal drain

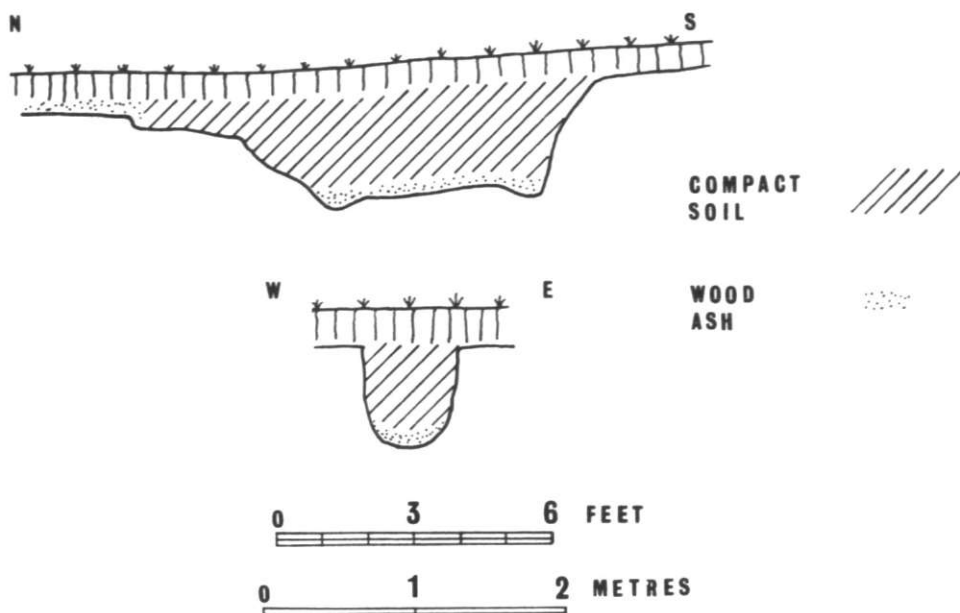


Fig. 25
Tresmorn: sections of Forge, Croft 1 (see plan, fig. 21)

running along the inner side of the west wall. There was no evidence to suggest that there was a byre, or that the house was divided into two rooms. The animals may have been housed in the out-building to the west of the house, the size of which was indeterminate. Its stone foundations were 18 ins. thick, indicating that they were sills for a timber structure.

Stone house 3, Croft 4 (fig. 22, '13')

The south-east end of the house had been severely damaged by modern drainage from the out-buildings of Higher Tresmorn. The house was 11 ft. wide, but owing to disturbance the length could not be determined with accuracy. The remaining features indicated that the house was, at least, 20 ft. long. The position of the doors could not be ascertained and no internal features could be recognised, except for two hearths and a stone covered drain.

Byres, roofs, windows and doors of excavated houses

The centres of the byre floors had been scoured away by the feet of animals and by the removal of dung; the sides and corners were protected, to some extent, by the fatness of the animals. These floors were in sharp contrast to the smooth trodden floors of the living rooms. The small size of the byres indicated that they housed milk sheep and goats, both of which were kept in considerable numbers in Cornwall¹⁸. Drains were associated with all the byres.

There was no archaeological evidence to indicate the nature of the roof coverings; it would seem likely that turf or thatch, with straw or rushes, was used. A few drilled roofing slates, quarried in the Trevalga¹⁹ area, were found on the floors of the houses of the last structural period; they had probably been placed round the smoke outlets, for reasons of safety. Roofing tiles, found at Goltho in Lincolnshire²⁰ and at numerous other sites, were evidently used for the same purpose. The quantity of slates recovered was so small that it could not be suggested that the roofs had been covered with them, making every allowance for the fact that slates may have been robbed at the date of desertion.

Slit windows, cut in solid blocks of greenstone, are often found in medieval houses in North Cornwall²¹. Fragments of this stone, probably quarried between Trevalga and Warbstow, were found associated with the remains of the houses of the last structural phase. It would seem probable that these fragments emanated from the windows. Many surviving examples of this type of window have only one slit, but one (now displaced) at Dizzard contains four slits, cut in one block.

In most of the houses, where the position of the doors could be determined, the entrance was through a single door in the side wall of the byre. Similar doorways have been recorded on Dartmoor²². The position of the doors was indicated either by a break in the wall or by wear in the shale. It is probable that the doors were hung on jambs, set into a rebate in the wall, or hinged on pivot-stones.

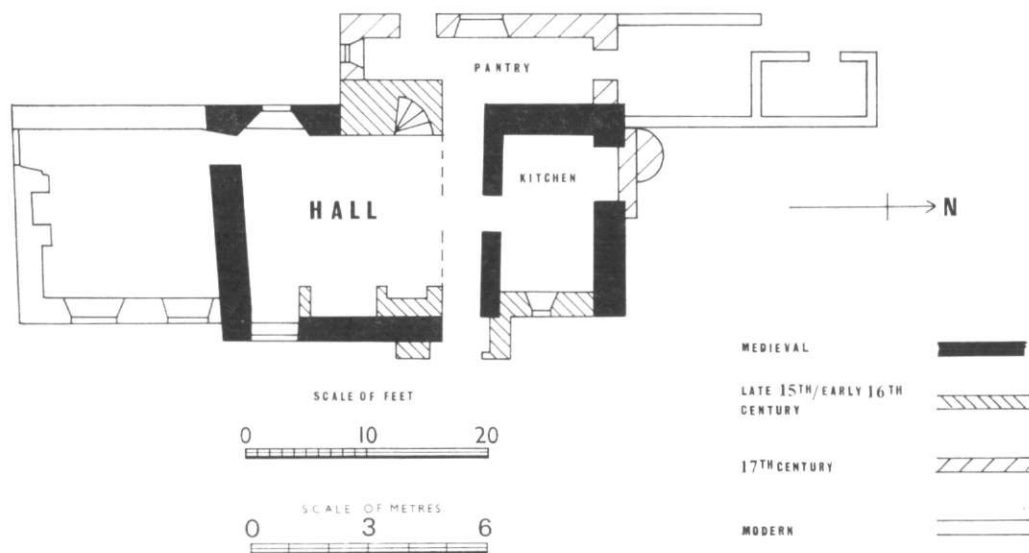


Fig. 26
Plan of Lower Tresmorn

STANDING BUILDINGS

There are many houses of medieval origin in North Cornwall which are still standing. Some are still inhabited, while others are used as barns or cow sheds²³. There are at Tresmorn, three buildings which fall into this category.

Lower Tresmorn (fig. 26)

Lower Tresmorn is an example of a small Cornish hall house of the late 15th or early 16th century, probably built into a shell of an earlier house, to which no date can be attributed. It is a two-roomed house: a hall 16 ft. long by 14 ft. wide and a kitchen, separated by a cross-passage. The house is not so sophisticated as the well known 'Old Post Office' at Tintagel, but it is comparable with the old cottage in Trebarwith²⁴. As at Trethin and Tumrose²⁵, the hall and kitchen were chambered over at an early date. A stone newel stair, set in a square turret, was butted against the back of the house, to give access to the upper chamber, which must have been somewhat unsophisticated—the wall plate was only 3 ft. above the floor. (The roof was raised to its present height in or about 1920.) As in other small houses in Cornwall²⁶, there is a heavy chimney stack on the outside of the hall wall, with a window set by its side. The fireplace consists of a massive square-headed granite lintel, set on jambs of the same stone. The door, leading from the passage to the kitchen, had a four-centred ogee-headed lintel, the appearance

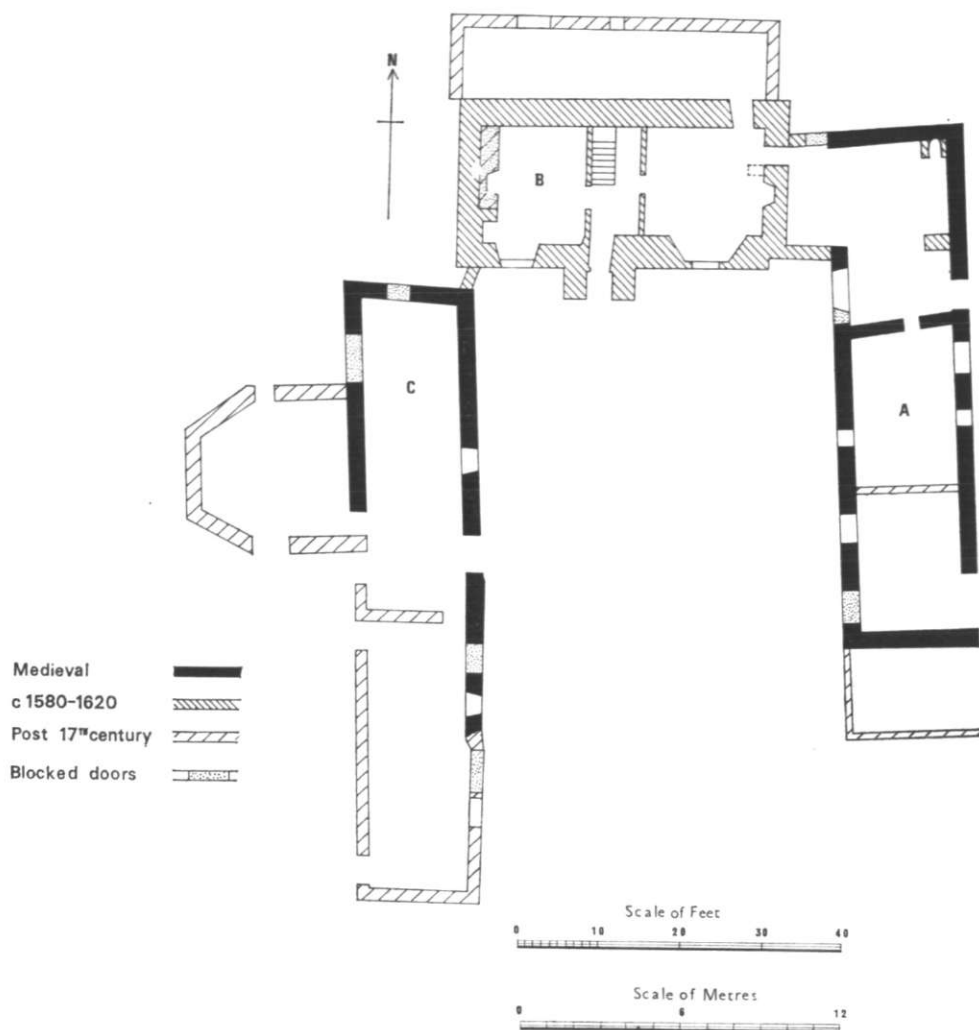


Fig. 27
Plan of Higher Tresmorn

and construction of which closely resembled those at the 15th-century Church House at Poundstock. There were similar door heads above the entrance to the stair and the door from the hall to the passage.

The early stone walls (marked in black on the plan) were built on a sill, 3 ft. thick and 15 ins. high, constructed with well selected stones, about 15 ins. wide and 20 ins. long. The walls, 2 ft. 6 ins. thick, were faced with small rubble stones and were packed with rubble and clay. Similar walls were recorded at the excavation at Mawgan Porth²⁷.

Higher Tresmorn (fig. 27 and plate VI)

Structures A and C—the latter being situated 44 ft. further west—are both medieval buildings. Their southern ends were built into the hill, creating an appearance of their having been in origin platform houses. Since their erection, much soil has been eroded from the farm yard at their upper ends. Structure A is 60 ft. long and 12 ft. 5 ins. wide. It was in all probability a three-roomed long-house, comparable with that at Treworld²⁹. It now consists of a fuel store, dairy and kitchen. The walls have been extensively repaired and in places rendered with cement. It has been impossible therefore to determine, with any degree of accuracy, the original positions of the doors. It is probable that

the cross passage was on the lower side of the living room wall. Structure C was 11 ft. 6 ins. wide. Considerable alterations and repairs to the building made the ascertainment of its original length impossible. It was certainly more than 40 ft. long.

A building, typical of a Cornish yeoman's house, was added to the lower end of structure A, seemingly between the years 1580 and 1620. It contained a dining-room and a parlour, divided by a stair and a passage. These rooms were chambered over. The original building A was used as a service wing. A similar development was carried out at Dizzard³⁰.

CONCLUSION

Cornish farms tend to be small, and are often found grouped together in small hamlets, consisting of two or three farmsteads. They tend to take the name of the hamlet and are differentiated by the prefix 'Higher', 'Lower' or 'Middle'. Some of these settlements are small manors, a number of which are, probably, of Celtic origin³¹. One hundred and four of such manors are recorded in the Domesday Book, out of a total of three hundred and forty manors for Cornwall³². St. Gennys, a parish of 5,486 acres, comprised nine manors³³, six of which had two plough-lands or less. It would seem certain, from the configuration of the land and the size of the population, that Tresmorn was part of the manor of *Sanguinas* (St. Gennys). The Domesday survey³⁴ shows that *Sanguinas* was the largest of the manors, having ten ploughlands. Join held this of the Count of Mortain, having in demesne half a virgate and one plough; the villeins had the remaining land and two ploughs. Join had two villeins, eight bordars and three serfs. The principal areas of settlement were Tresmorn and a site adjacent to St. Gennys Church. Churchtown is the only surviving farm at the Church site, but the remains of a medieval settlement may still be seen a little to the south-east of the Church. Evidence of medieval occupation is found in many small hamlets in Cornwall. The cause of the decline in population is uncertain. Agricultural prosperity was relatively good from the Norman conquest, until the Black Death in 1348; during that period, desertion would be due to local and non-recurrent conditions³⁵. Excavation at Tresmorn has shown that the settlement may not have been depopulated until the middle of the 14th century. The Black Death was severe in Devon and Cornwall³⁶; it may have been responsible for the decline of this hamlet and many others in the area.

Most of the pottery found at Tresmorn is of the 13th, or early 14th century, but there is some which is definitely of the late 12th century. As no pottery was found associated with the turf walled houses, the inference is that the change from turf to cob occurred in the second half of the 12th century. There is no archaeological evidence of the life of a turf walled house. They must have been reasonably substantial structures, and, if well maintained, they may have endured for twenty or thirty years. The remains of at least eight superimposed houses were found in Croft 4; it would therefore seem possible that the earliest recognizable turf building was erected in or about the middle of the 10th century. There is insufficient evidence to indicate any date for the construction of the earlier timber buildings. The maximum life of a cob walled house, built without stone footings and without adequate protection from the roof, would be not more than 25 years; if damp be allowed to enter, cob quickly disintegrates. If it be kept dry, the walls will last for many centuries³⁷. The stone houses, built in the middle of the 13th century, were permanent structures and would last for more than a hundred years: indeed, there are many houses of this period still standing, although much altered and repaired³⁸.

Turf walled houses have been recorded in Scandinavia³⁹, the Orkneys⁴⁰, the Shetlands⁴¹, Wales⁴², Dartmoor⁴³ and other sites in Cornwall^{44,45,46}. Excavation in the county at Trewortha⁴⁷, Garrow⁴⁸, Mawgan Porth⁴⁹, Crane Godrevy⁵⁰, Vendown⁵¹ and Treworld⁵² has shown that the living rooms and byres were under a common roof,

divided by a passage or partition. Cornwall, in the medieval period, was principally pastoral, and straw for bedding was relatively scarce. The housing of cattle in byres was more economical than keeping them in yards. Recent excavations at Goltho⁵³ in Lincolnshire and Barton Blount⁵⁴ in Derbyshire—both arable sites, where straw was plentiful—revealed that the animals were kept in yards. This still persists⁵⁵.

A recent survey of a hundred dwellings on Dartmoor⁵⁶ showed that the houses varied from 18ft to 80ft in length and from 9ft to 15 ft. in width. A similar variation in the size of the houses was found at Tresmorn, indicating great differences in the wealth of the peasants. The excavated houses were approximately 23 ft. long and 10 ft. wide, while Structure A⁵⁷ was 60 ft. long, 12 ft. 6 ins. wide. Similarly, in the late medieval period, it is interesting to compare the long house (Structure A) at Higher Tresmorn, where the family and the animals lived under a common roof, to the small Hall house at Lower Tresmorn, where the stock would have been housed in a separate building.

Acknowledgements

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Rolvenden, Kent

THE FINDS

Pottery (Figs. 28 to 32)

No pottery was found associated with the turf-walled houses, but approximately 3,000 sherds, dating from the 12th century to the 14th century, were found with the houses of the last two structural periods. Most of the sherds were in a very abraded condition and somewhat fragmentary; it was only possible to reconstruct the profile of one vessel. Most of the sherds were of cooking pots and considerably blackened by soot. There were also remains of 5 cisterns and 10 jugs.

The pottery was wheel-thrown, but many of the rims were considerably distorted, being oval rather than round, making it difficult to determine the true diameter of the vessels.⁵⁸ The irregularities may have been due to the poor quality of the clay, and/or its preparation. Most of the pots were poorly fired. They were buff or reddish brown; the cores were grey. The fabric contained much grit and mica; the texture resembled sandpaper. The pottery closely resembled that found at Beere, North Tawton, which has been fully discussed⁵⁹.

Some of the pots were decorated with straight or wavy incised lines; others had frilled strips, applied to the bodies of the vessels. On some, strips ran vertically down from the base of the rim; on others they ran round the girth of the pot. A few cooking pots had the strip applied to the base of the rim. Some thumb pressed bases were found. No medieval glazed ware was found.

Cisterns (Fig. 28)

The remains of five cisterns, identified by their bungs, were found on the site. It was only possible to determine the profile of one of them.

1: The cistern was found at the foot of the south boundary bank of Croft 1. The grey fabric is moderately hard and is decorated by straight lines, incised round the vessel. The rim and the upper part of the vessel were considerably distorted, being oval rather than truly circular. The profile is comparable to the 13th century pitcher, found at Beere, North Tawton⁶⁰ and to that found at Barry Island, Glamorgan⁶¹. The vessel probably contained cider⁶². The cistern may also be compared with that found at Benthams, South Devon⁶³.

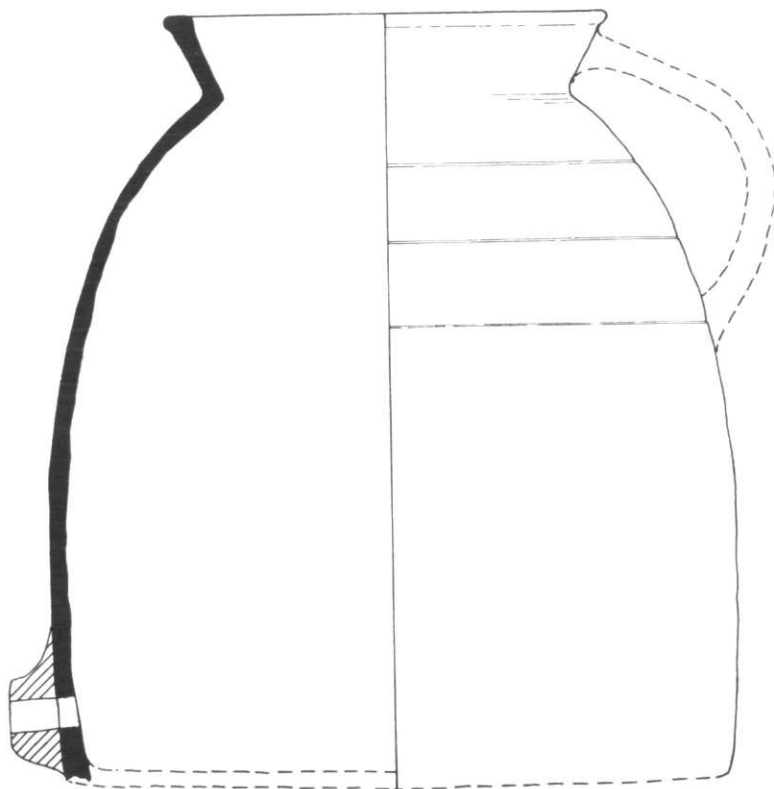
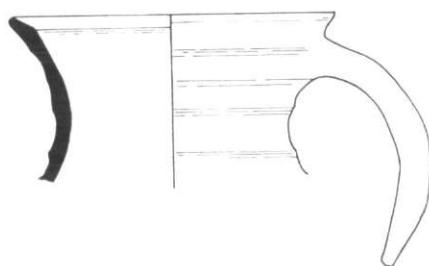
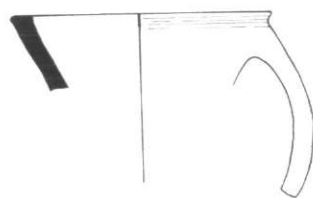
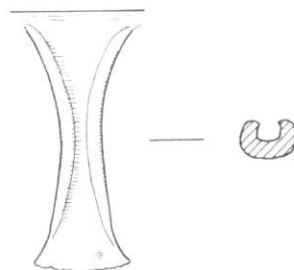


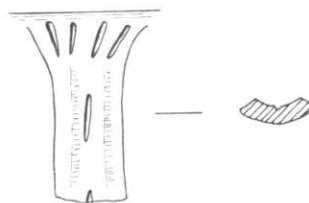
Fig. 28 Tresmorn: pottery cistern (scale: two-fifths)



2



3



4



Fig. 29 Tresmorn: jugs (scale: one-third)

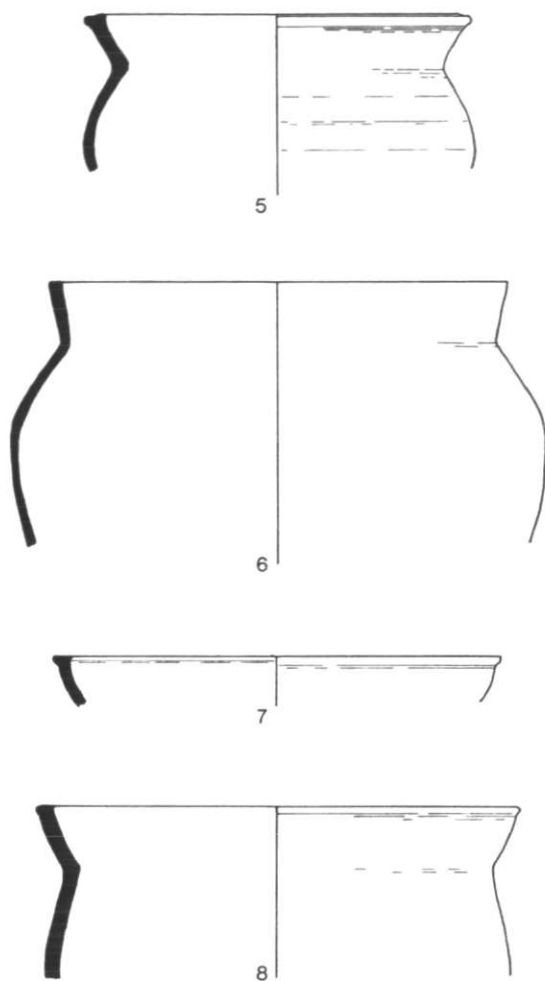


Fig. 30
Tresmorn: cooking pots (scale: one-third)

Jugs (Fig. 29)

The remains of 10 jugs were found—13th-century in character—but no complete profile could be deduced. They had wide strap handles, some of which bore prod and slash marks on their backs. A few base sherds were thumb pressed.

2: The handle and rim of the jug were found in the boundary ditch between Crofts 1 and 2. The buff coloured fabric had no grey core. Rilling was well defined on the neck of the jug. The edge of the strap handle curled outwards.

3: The handle and rim were found in a small pit in Croft 12, when a ditch was cut to carry a land drain, in the summer of 1961. It was somewhat abraded. The fabric was buff coloured and contained no grey core. The strap handle had a slash marked back.

4: The jug handle and rim were found with the cistern at the foot of the south boundary bank of Croft 1. The buff coloured fabric had a grey core.

Cooking Pots (Figs. 30 and 31)

5: The pot rim was found in the upper filling of the boundary ditch between Crofts 1 & 2. It had probably been incorporated in the fill of the boundary bank and had slipped into the ditch, when the bank fell, after desertion. It had a reddish brown surface, the outer side being blackened by soot. The simple rim flange is comparable to the 12th century pot found at Beere, North Tawton⁶⁴, and to those found at Exeter⁶⁵.

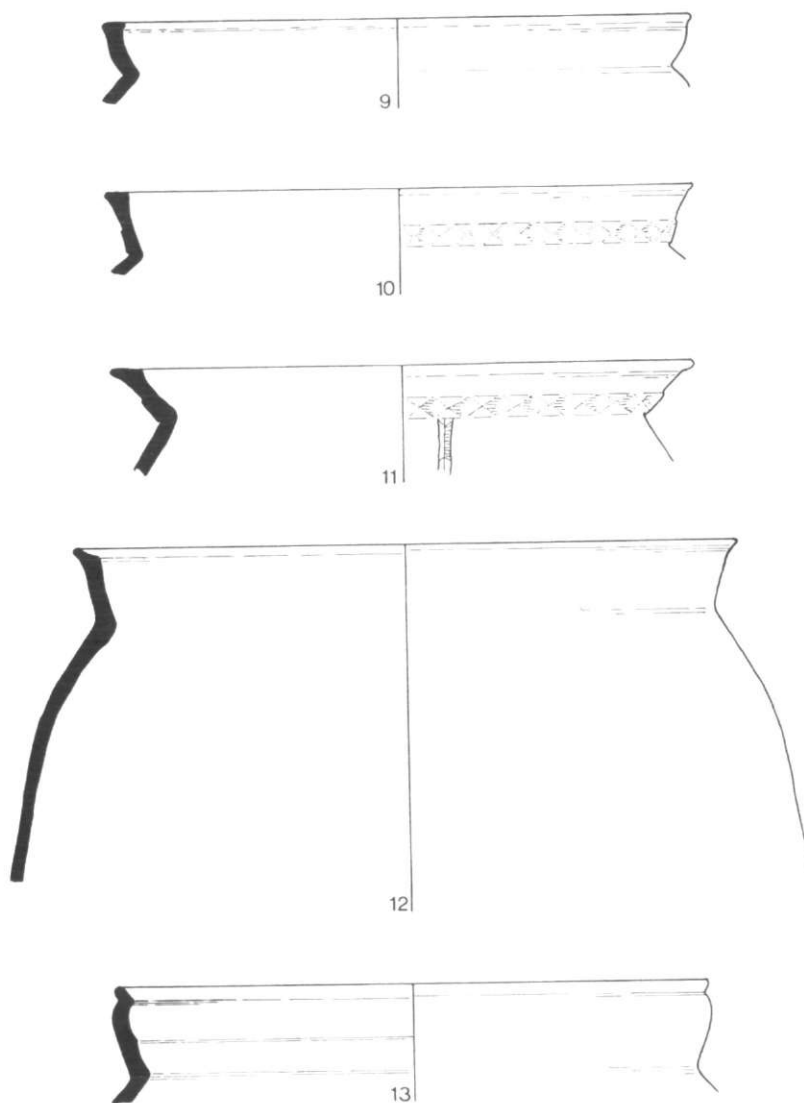


Fig. 31
Tresmorn: cooking pots (scale: one-third)

6: The cooking pot was found in Croft 2 on the shale. The simple flange was of the 12th century type similar to No. 5. The fabric is brown and has a grey core.

7: The pot rim was found under the north boundary bank of Croft 1. The simple flat topped flange is of the 12th century type; the fabric is buff coloured and has a grey core.

8 & 9: The pot rims were found at the foot of the west boundary bank of Croft 1. The fabric is orange in colour and has a grey core. The rims are slightly more developed than those of the 12th century.

10: The rim was found amongst many sherds, indiscriminately thrown north-eastwards through the door of a house of the last period of occupation in Croft 1. The rim was decorated by a band of clay, with fingernail markings, applied above the rim shoulder angle. The fabric is similar to that in numbers 8 & 9. Compare pots 32-34 at Beere, North Tawton⁶⁴.

11: The rim was found in the boundary ditch between Crofts 1 & 2. An applied strip decorated the rim, similar to that in number 10; another frilled strip ran vertically down the side of the pot. The fabric was grey and hard.

12: A large cooking pot was found in the top soil, in Croft 1. The fabric was fairly hard and had a grey core. It was comparable with many west country cooking pots.

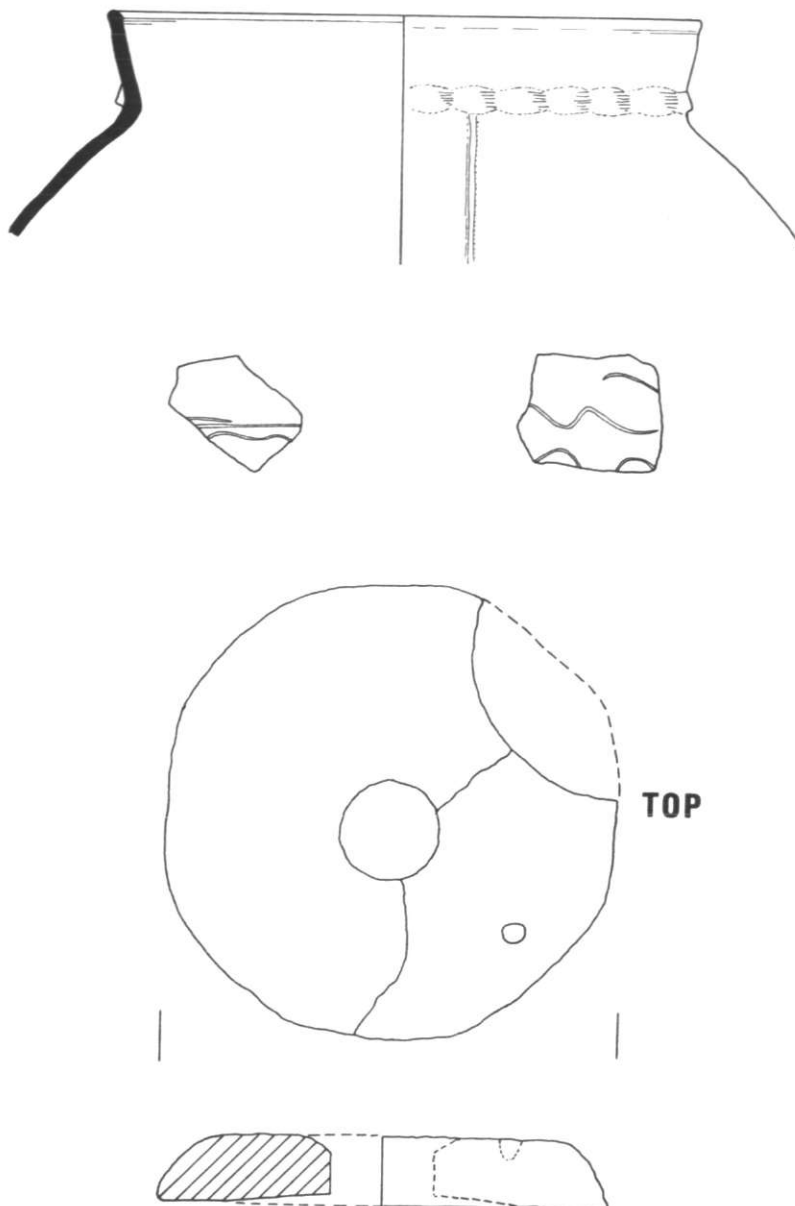


Fig. 32 Tresmorn: late sherds 14 (rim), 15, 16 (one-third), and granite rotary quern (scale: one-ninth)

13 & 14: The rim, number 13, was found with sherds, numbers 10 and 14, on the floor of the house of the last structural period in Croft 2. Both rims are well developed and are comparable to those found at Berry Court, Cornwall, to which a mid 14th century date has been ascribed. (No. 14: Fig. 32.)

15 & 16: Two sherds, decorated with incised wavy lines, were found in the top soil in Croft 1, outside the door of a house of the last structural phase (Fig. 32).

Stone Objects

These included many unworked flints, anvil stones, fragments of dressed greenstone and a roughly-trimmed, granite rotary quern (Fig. 32).

Comparative Pottery

Many rims, bases and decorated sherds, excavated at Tresmorn, and not illustrated in this paper, closely resemble those found at Beere⁶⁷. The pottery may also be compared with that found at Garrow⁶⁸, Trewortha⁶⁹, Treworld⁷⁰ and Vendown⁷¹ in Cornwall and at other sites in the South West of England⁷². The early pottery, shown in numbers 5, 6 and 7, closely resembles the sherd (no. 9) found at Beere⁷³ and the 12th century pottery found at Exeter⁷⁴. Pots, with more developed rims, can be compared with those found at Berry Court, Jacobstow, where they were associated with two casting counters, imitating the gold Chaise of Edward III and Philip VI, circa 1330-1360.

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Zennor Quoit Preserv'd

OUR FOURTH SPECIMEN of megalithic verse, taken from a longer epic poem by Charles Taylor Stephens, returns to Zennor Quoit. We are grateful to Mr. Peter Pool, who presents it, and who has contributed appropriate notes.

A farmer had more bone than brain;
 He 'neath the quoit bestowed much pain
 To make a cattle shed.
 In vain men told him he might spare
 Himself the toil, and said 'twas there
 The Piskies made their bed.

Till Master to the rescue flew,
 And begged the farmer not to do
 That horrid sacrilege:

Then for a crown the man declared
The quoit by him should be revered;
And to the nearest hedge

He fixed his shed: but horse and ass
Refuse to shelter in that place,
So now 'tis overgrown
With rank and noxious deadly weeds,
And from their buds in clouds the seeds
All o'er his farm are blown,

To fall, with ever with'ring brand,
And render desolate his land
Who would the quoit defile.

(From *The Chief of Barat-Anac*, 1862: Charles Taylor Stephens)

This cautionary tale recounts how in 1861 Zennor Quoit narrowly escaped destruction; more details are given in an extract from the *Cornish Telegraph* of 4th September 1861:—

A farmer had removed a part of one of the upright pillars, and drilled a hole into the slanting quoit, in order to erect a cattle-shed, when news of the vandalism reached the ears of the Rev. W. Borlase, Vicar of Zennor, and for 5s. the work of destruction was stayed, the Vicar having thus strengthened the legend that the quoit cannot be removed.

The 'Rev. W. Borlase' referred to was William Borlase, Vicar of Zennor from 1852 until his death in 1888, and a great-grandson of his namesake, Dr. William Borlase the antiquary. At some date after 1754, when Dr. Borlase in his *Antiquities of Cornwall* illustrated the quoit with capstone *in situ*, the western supporting stone broke and the capstone slipped to its present position. J. O. Halliwell in 1861 (*Rambles in Western Cornwall*, p. 137) said that this collapse had happened 'some years ago', and it seems likely that it was due to natural causes; certainly it had no connection with the events described in the poem, traces of which however remain in drill-holes in the stones of the quoit, the partial destruction of one of the eastern portal stones, and the ruins of a shed nearby. The later history of the monument is described by Prof. Charles Thomas and Dr. Bernard Wailes in an appendix to the excavation report on the nearby Sperris Quoit (*CA* 6 (1967), 15).

Charles Taylor Stephens, who died at St. Ives in 1863, was a shoemaker and for some years rural postman from St. Ives to Zennor; he was also employed by Robert Hunt in the collection of folk-tales from the Zennor area. *The Chief of Barat-Anac* was published in 1862, the author describing it as 'solely an effort to live by the fruits of his own industry' after 11 years of sickness and privation. In the poem the postman-narrator falls asleep while seeking Zennor Quoit in a mist, and in a dream beholds the nine muses and a prehistoric chieftain accompanied by a host of followers. After hearing sundry songs and proclamations forming the greater part of the poem, the narrator awakes and makes his way to Zennor Churchtown, where the Vicar's maid tells him of the recent escape of the quoit as printed above.

While the poetic talent displayed is perhaps not high, the extract here published gives what is probably an accurate account of the saving of our most famous Cornish megalith by one of the timeliest investments of 5s. that can ever have been made.

P. A. S. POOL

A Mid-17th Century Merchant Ship-wreck near Mullion, Cornwall: interim report

P. W. J. McBRIDE, RICHARD LARN and ROY DAVIS
(*Ferdinand Research Group*)

APPROXIMATELY HALF A MILE to the north of Mullion Cove, on the western coast of the Lizard peninsula, in south-west Cornwall, lies a one-mile stretch of sheer cliffs, notorious for the number of sailing ship wrecks they have claimed over the last three centuries. Known as Angrouse Cliffs, it was from their heights that Marconi transmitted his first trans-Atlantic radio message.

In May 1969, Peter McBride, a Royal Naval Sub-Lieutenant, undertook to search the area for wreck sites, having first carried out considerable preliminary research into local records. During this month he discovered the remains of the *Boyne*, a 690-ton iron hulled barque, wrecked in 1873. This was quickly followed by the location of the *Jonkheer Meester Van de Putterstock*, a Dutch East Indiaman wrecked in March 1867, whilst carrying a valuable cargo of sugar, coffee, spices and Banca tin, valued at £50,000. During early June, whilst undertaking an inshore and hence a shallow search, using only mask and snorkel, he rounded a small rock promontory within fifty yards of the *Boyne* wreck site, and came upon a scattered collection of pointed iron objects lying in 25 ft. of water. In conditions of excellent visibility, a number of surface dives identified at least two of the objects as cannon, one of which was so eroded that the bore had been laid bare, leaving a cannon ball gleaming in the breach.

The following day, McBride revisited the site with a boat and full diving equipment, accompanied by Richard Larn, an experienced underwater archaeologist and Chief Petty Officer diver in the Royal Navy. During this preliminary inspection, a large number of underwater photographs were taken, every cannon closely examined, and within minutes both divers appreciated that this was a find of considerable importance. The most fortunate and important find to date was made by Larn on his first dive, namely a silver medallion commemorating the coronation of Ferdinand IV, crowned King of Bohemia and the Romans in 1653, since this gave an immediate indication of the age of the wreck. The exposed cannon balls in the breeches of several cannon gave the immediate visual appearance of being brass; this was a peculiar phenomenon caused by some electrolytic action between the iron shot and the vast number of brass artefacts, especially hand-made pins, in the area.

Once the extent and archaeological value of the site was realised, the 'Ferdinand Research Group' was formed, its name being taken from the medallion since the wreck was still unidentified. Finally, Roy Davis, an electrical engineer from Bodmin, and a very experienced diver, was invited to become the third member of the group, and it was decided that a full and proper archaeological survey must be undertaken, to be followed by a planned excavation. The discovery was kept confidential in order to prevent unwanted 'treasure hunters' from visiting the site, and an immediate application was submitted for a Crown Estate lease of the seabed. The initial application was

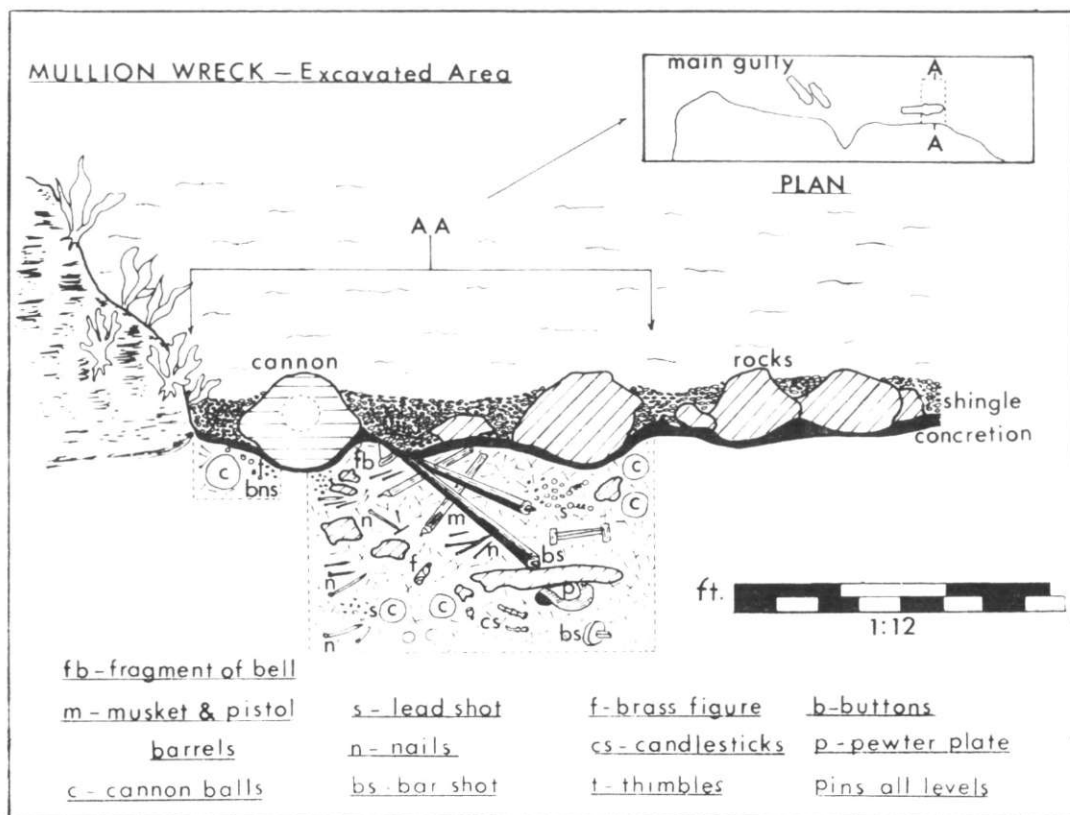


Fig. 33
Plan and section of the wreck site

rejected, but with the full support of the Committee for Nautical Archaeology, a lease was finally granted and signed on 1st November, 1969.

Work first commenced on the site in July 1969, but was governed and dictated by various factors. Being very shallow and open to the prevailing south-west wind, a ground swell is present more often than not, severely restricting work on the shallow end of the site. Sewage from a local outfall is not only physically unpleasant, but increases in volume during the holiday season, reducing visibility underwater to almost nil on some days. These conditions mean that on windy or rough days the site is difficult, and on fine calm days, visibility is very poor. In addition, the entire site is covered in a layer of shingle, which varies in depth from day to day, often completely burying whole cannon, and undoing the previous day's work. Attempts to construct a barrier from rocks, and then wire netting, have not been successful, and it must be accepted that one can seldom return to a hole dug the previous day and resume work without first relocating the hole, and digging out large masses of shingle. Finally, heavy concretion lies beneath the shingle, from within which every artefact has to be wrested using hand tools. (See Section, Fig. 33.)

A theodolite survey of the main features of the site and the cliff contour at sea level has been carried out. In addition, a datum line survey of the seaward two-thirds of the wreck has been completed. This was achieved by using fixed underwater triangulation points, which enabled a detailed plan of the site to be completed, on which has been superimposed a grid. This ensures that all finds and areas excavated can be accurately plotted.

To date, twenty-three iron cannon have been found, but it is possible that one or two others exist, either buried deep in shingle, or 'concreted' into the seabed beneath other finds. All are badly worn by shingle movement, since the wreck is contained in a shingley, steep-sided gully, at the base of sheer cliffs in a rock-strewn inlet known as Pol Glas. The main gully, lying in an almost east/west direction, contains sixteen cannon in four distinct clusters. This gully is approximately 110 ft. in length, the depth of water ranging from 6 ft. at the shore end to 25 ft. at the seaward end, at low spring tides. Two subsidiary gullies converge into the main one, and contain the remainder of the cannon, the maximum width of the site at this point being 50 ft. No firm conclusion has yet been reached as to which was the bow or the stern section of the wreck. Artefacts recovered from the surface strata suggest that constant sea and shingle movement have relocated them repeatedly, and all but the heaviest objects have suffered damage in the process.

Two boat-shaped lead ingots, similar to those recently found on two Armada wrecks, have been recovered, plus a bronze breech block and fragments of pewter, all from the centre section of the site. The ingots weigh 298 lbs each, measuring 34 by 10 inches, but unfortunately are devoid of all casting marks, presumably obliterated by shingle action over the centuries. A local reference has recently been uncovered to salvage of brass guns, pewter and other valuable items of cargo from the site in 1744, so that at one time the armament was considerably greater than twenty-three iron cannon found to date.

One of the commonest and most interesting finds has been the number of hand-made, brass, pins. These are in profusion in the concretion, and are found over the entire site at all depths, suggesting that part of her cargo was a great number of casks full of them. These are of the 'spiral wound head' type, ranging from 0.875 ins. to 2.5 ins long. At present these could be considered either an export or an import cargo, since during the early part of the 17th century many complaints were made regarding the quality of imported French pins, whilst as early as 1638 they were being exported from Bristol in large numbers.

Another common find has been fragments of circular copper 'cakes' or 'flakes', again found in large numbers over the entire site. It has been possible, by reconstruction, to establish that these were of two distinct sizes, either 15 inches or 21 inches in diameter, and from the number of fragments it would appear that these too were cargo. A chemical analysis of the copper has been unable to determine the country of origin.

The major excavation has been limited to one area of the site (see fig. 33), from which came a profusion of musket and pistol barrels, identified by Mr. Colin Carpenter of Plymouth as having been manufactured during the mid-17th century. This can be established by the shape of the slim tang at the rear of the breech, and while the indentation of the makers' proof marks can still be seen, it is illegible. From the same area came the coronation medallion already mentioned; also a pewter plate, 8.75 inches in diameter. This was folded completely in half by sea action, which, although frustrating, gave protection to the crest on the rim. This shows a crowned rose bearing the initials *H.B.*, whilst on the underside is the pewterer's mark of an angel with outspread wings, protecting the initials *H.B.* These marks would lead one to imagine the plate readily identifiable. However, considerable research in this country and abroad has produced no record of this particular mark. A number of brass buttons, and one of pewter or lead, have been found, all bearing the same rose motif as the plate, but their significance remains unknown. Other artefacts include a perfect figure of a Saint, cast in brass, 2 inches tall; a piece of bronze bell; several iron knife blades; a carpenter gouge; brass thimbles; candlesticks; and a vast range of hand wrought, iron nails. These vary from 2.5 inches to 9.0 inches in length, and again their numbers suggest cargo since all appear unused.

Four distinct sizes of lead shot have been raised, varying from 0.4 ins. to 1.18 inches in diameter, plus iron shot ranging from 1.75 ins. to 5.25 inches, the heaviest being 22 lbs. Of great interest are two unusual items, the design of which suggest they are shot. They consist of lead balls linked by heavy gauge brass wire in a coil. These are in two sizes, one linked by a single strand, the other by three twisted together. Whilst these might be thought to be a type of early small calibre 'bar' shot, opening out in flight and producing a flailing action, the stiffness of the brass wire suggests this would be impossible. Certainly, these are unique artefacts, or so we are led to believe, and the Tower of London authorities have expressed great interest in them.

An attempt to conserve the smaller iron objects has been made by repeated freshwater washing, baking dry and then 'potting' in a plastic resin. Most other objects have been returned to the site after photographs and sketches were made, since the sheer bulk of them all presents problems. All these have been recorded in a 'Finds Book', and when retained, declared to the Receiver of the wreck.

Few conclusions have been reached, and at this stage it would be unwise to offer opinions as to the ship's nationality or name. The only certainty is that it was an armed merchantman. A number of clay pipe bowls bearing the manufacturer's initials *E.B.* are thought by Mr. Adrian Oswald, to be the work of Edward Battle, a Freeman of Bristol in 1660, which would suggest she called at Bristol, or that the ship was English.

Since the site lies within the bounds of the ancient Winnianton Manor, it is thought that the missing Manor Court Rolls or records of the Vice Admirals of Cornwall and Devon for the period should provide a definite indication of identity.

Recent research has produced details of two wrecks, the dates and general locations of which, roughly correspond with those of the site. The first and most likely lead was found in *Bibliotheca Cornubiensis* (Boase and Courtney), as follows:

Penrose, John, of Manaccan

Papers relating to the loss of the French ship *San Salvador* near the Lizard and John Penrose's rights to a fifteenth part of all wrecks on his Manor, 1669. M.S.S. J. J. Rogers at Penrose.

At this time Penrose owned a large estate which included Winnianton. Further letters in the *Calendar of State Papers* refer to this same wreck as a 'Dane', a 'Hamburger' and finally in more detail 'a Dutch ship of 500 tons laden with masts deals and provisions for the French king's fleet'.

The second lead is a reference to the loss of a Genoese ship of 800 tons, 48 guns and a reputed value of £100,000, lost on the Lizard in 1667. In neither case do any papers refer to the exact location of the wreck.

It is hoped to continue both research and excavation in 1971.

ACKNOWLEDGEMENTS

We wish gratefully to acknowledge the generous assistance afforded by the following: The Keeper of Coins & Medals, British Museum, and L. A. Brown, Esq., of Messrs. Seaby's (the medal); B. W. Bathe Esq., Science Museum, J. N. Taylor, F.M.A., Gloucester City Museums, and K. McDonald Esq., Norwood, S.E. (pins); the Master Armourer, Tower of London Armoury, and A. C. Carpenter Esq., Plymouth (arms and ammunition); D. Ellis, Esq., Messrs Sotheby's, and Dr. L. Viet, Nuremberg Museum (pewter plate); Professor Scott Simpson (Univ. of Exeter) and Professor Honeycombe (Trinity Hall, Cambridge), for analysis of the pewter; Adrian Oswald, F.S.A. (the clay pipes); S. A. Opie, Esq., Duchy of Cornwall Record Office, Cmdr. J. Rogers of Penrose, Helston, and the staff of Helston Public Library (documentary research); H. L. Douch Esq. and the staff of the Royal Institution of Cornwall, Miss Joan Du Plat Taylor, Lt. Cdr. Alan Bax (Fort Bovisand), and Miss A. Croome (Committee for Nautical Archaeology), for advice and general assistance with our numerous queries.

Notes on Cornish Mammals in Prehistoric and Historic Times: 4

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A Report on the Animal Remains from Nornour, Isles of Scilly

THIS ISSUE OF THE present series of notes is given up to what amounts to an interim report on the bone remains from the last two seasons' excavations on Nornour, Isles of Scilly. A previous paper of the author's¹ has dealt with the bones discovered during the excavations conducted by Miss Dorothy Dudley from 1962 to 1966² and a general account of the site and of the excavations which recovered the material on which the present report is based was published by Miss Sarnia Butcher last year³. The context in which these bones were found appears to be that of the pre-Roman Iron age and an entirely provisional dating suggests that they might correctly be placed soon after 250 B.C.—a chronology of some significance for at least one species. In the period between this and my last report on the bones of this site another paper has appeared dealing with various species recovered from the midden material by hand sorting about one cubic foot of the black granular earth⁴. The joint authors, Handford and Pernetta, deal mostly with the vole *Microtus oeconomus* and the significance of its occurrence in the islands but give additional records of several species previously noted and a new record of the Scilly shrew, *Crocidura suaveolens*, as well as some bird species not on previous lists. These will be noticed, in passing, in the present paper.

OX

This species is much more common in this material than it was in that excavated by Miss Dudley from 1962 to 1966; indeed, a glance over the register of bones shows that it was present in almost as many of the numbered bags as the sheep. Assuming that both lots of material are of roughly the same age, the explanation of this discrepancy is very uncertain. In the bones from the midden on Tean, dating from the 2nd to 8th centuries A.D.⁵, the Ox was also much commoner than in Miss Dudley's pre-Roman Iron Age material from Nornour. One was tempted to see this as an increase in the numbers of the species in Scilly and a shift, during those centuries, in the general pattern of animal husbandry: the present material obviously casts considerable doubt on such an explanation. However, further deduction must await a firmer dating of these bones as, indeed, of the whole Nornour complex.

Few bones unfortunately allow of measurement. The majority of the long bones

show some signs of having been split into two longitudinally, presumably to extract the marrow and, for this reason, as well as for the fact that only a few bones survive in a form from which any reconstruction of the living animal can be made, we are still partly ignorant of what the breed would have been like. Certainly it was horned, for a few fragments of horn-cores survive and equally certainly it was very much smaller than modern cattle. Even so, a few bones such as the radius show measurements, the magnitude of which in some specimens is not greatly below many modern breeds. The size of the teeth and a few fragments of mandible and maxilla suggest that it had a disproportionately large head, whilst vertebral fragments suggest a small body with possibly slim, underdeveloped hind-quarters. The knees were abnormally large in mature animals—possibly more so in the bulls than the cows—and certainly disproportionately so to the hocks. Horn-cores suggest that the horns had a variable curvature and were often small but could indeed develop great length and considerable curvature⁶ as shown by fragments from the midden on the S.W. of House I.

The remains, taken as a whole, appear to come from animals of all ages and there is no evidence of young calves having been slaughtered, as in the case of the lambs, to avoid taking them through the winter. One or two bones, indeed, seemed to come from animals of considerable age and this suggests that these cattle were kept very much as in former times in the Hebrides. Youatt (l.c. see note 6) says of these: 'In the spring all the cattle are in poor condition . . . sea-weed boiled with husks of grain and a little meal . . . are then employed to support them, and in many places the cattle during the winter and spring regularly betake themselves to the sea-shore at ebb-tide to feed upon the fuci'. In the milder Scillies and especially in view of the variety and amount of mammalian life the islands then supported, it seems very likely that a similar practice would have been followed. This small, tough, unimproved breed—probably few mature individuals would have weighed above four hundredweight⁷—would have been pre-eminently suited to such rude husbandry⁸. Perhaps the most nearly related surviving breeds were the ancient oxen of Shetland⁹ and Orkney—somewhat ill-shapen like the latter and, maybe, a little larger than the former. It was undoubtedly a variant of the widespread stock of the 'Celtic ox' found at all Iron Age sites both British and Continental and the most distinguishing osteological feature that I can find for the Scillonian breed, from the bone fragments available, is that the frontal bone had a very small supra-orbital foramen and a supra-orbital fossa deeper, and more sharply defined, than seems to be figured for any other known breed ancient or modern. However, as this is a character totally unrecorded for many races of oxen its diagnostic value must remain extremely tentative.

Measurements of Ox bones

Teeth Length: M₁: 25.5, 37.5. M₂: 28.0, 29.5. M₃: 33.0, 36.0, 38.5 (average of three for this tooth in modern oxen gave 40.0)

M¹: 27.0. M²: 26.0. M³: 30.

Humerus max. distal ep. 53.0, 73.0.

Ulna width ant. art. surface 33.5.

Radius max. ant. prox. surf. 64.5. Max. distal art. 63.5.

Metatarsal prox. max. 51.5. distal max. 56.0 (prox. 38.0).

Phalanx I Length 56.0. prox. width 30.0. distal 19.5.

„ 29.0 „ 21.0 „ 16.0

Phalanx III Length 41.5 prox. — distal 29.0

„ 62.0 „ — —

Scapho-cuboid max. width 43.0mm. max. height 44.0 mm.

„ „ 49.5mm. „ „ 33.0 mm.

<i>Astragalus</i>	Length	51.5 max.	prox.	32.0 max.	distal	—
"	54.0	"	"	36.0	"	34.0
"	59.0	"	"	38.0	"	36.0

GOAT

For sources used in distinguishing sheep and goat bones see footnote 1 to part 3 of these notes. As previously all bones not identifiable as goat are treated as 'sheep'. As in the material from the earlier excavations the remains of this animal are extremely few. Numbers must have been very few throughout this period and all the evidence points to a small unimproved breed of scrub goat possibly semi-feral.

Mandible Length of tooth row 49.0 mm. without M_3 . Length Pm_2 9.5 mm. M_2 15.0 mm. Depth mandible ant. to P_2 17.5 mm. depth ant. to Pm_1 14.0mm. (M_3 not yet erupted. Age of animal about 1 year 3 months.)

A fragment of a mandible, a broken prox. piece of an ulna and a distal fragment of humerus are the sole remains of the species.

Humerus Max. width distal condyle 27.0 mm.

SHEEP

Although, as in the previous Nornour report (Turk.l.c), the bones of this species are the most numerous yet because of their fragmentary condition they add little to the description of this species previously given (Turk, 1968). Yet a further small characteristic can be added. A fragment of the orbital rim of the malar bone shows that the orbit itself was produced to a somewhat abnormal extent and the whole region very well marked. However, the tentative suggestion put forward in that report that a larger breed may be present is more firmly attested by certain of the remains now available. A metacarpal and a metatarsal of a juvenile animal (both bones lacking epiphyses) were of somewhat deer-like facies, slim and elegant and of a length equal to those of many modern breeds. There is now evidence therefore for an abnormally short-legged Turbary type sheep and for a much larger, longer and slender legged breed. Possibly also, there is further evidence that this breed might have carried much longer, backward curved, heavy horns as remains of such cores were found in the lower midden material infilling the passage between the complex of Houses I and II and House III. In the basal section these horn cores are almost completely D-shaped whereas all the horn cores of the smaller and much more common Turbary type sheep are obscurely triangular but approximating to a broad ovoid shape at the base¹⁰.

A further matter of considerable interest must claim attention: this has come to light by employing the method of least numbers¹¹. The least numbers¹² of animals that could be represented by the girdle and limb bones present are as follows:—

	Mandible	14 Individuals	} All bones from animals of all ages are counted equally for this purpose. If one excepts very young animals the femora and tibiae would represent still smaller numbers proportionately.
Fore-Limb	Scapula	9 "	
	Humerus	15 "	
	Radius	15 "	
	Metacarpals	23 "	
Hind-Limb	Pelvic bones	2 "	
	Femur	8 "	
	Tibia	8 "	
	Metatarsals	14 "	

Assuming that the local conditions did not favour the differential preservation of one lot of bones compared with another, and not a single fact is known contrary to

such an assumption, then this startling difference in numbers of the hind as compared with the fore-limb can only mean that the 'leg of mutton' (or lamb), in modern butchery terms, was frequently traded or gifted away outside the community—the metatarsals mostly being detached first—whereas the 'shoulder of mutton' was usually kept for home consumption. Obviously it is unlikely that this practice would have taken place among the islanders themselves because (a) it seems reasonable to assume that in such a confined geographical area all the inhabitants would keep the same animals and have a nearly identical economy, and (b) if this did take place for any reason of ritual or social exchange one should expect to find the bones of the hind-limbs of the sheep with nearly equal frequency in the midden material or among the infilling of the huts. As far as is known the sheep unlike the ox, boar and dog had no ritual significance for the Celtic people¹³ and on this account alone there seems no particular reason why the best cut of the mutton should have been used for such purposes. Accordingly, we appear to be left with only one explanation, namely, that it was given or traded to visitors from overseas¹⁴.

Sheep bones were certainly used for the making of implements. A distal part of a juvenile tibia and the proximal part of a radius had been cut across obliquely and worked to a point to form awl-like instruments. Of more delicate work was a pierced disc of bone cut from a sheep's scapula—probably an immature animal. It had an average diameter of 44.0mm with a minimum thickness of 2.2mm. A somewhat similar disc which appeared to have also been cut from a scapula was found at Jarlshof¹⁵, another wheel-house culture site.

Measurements of Sheep bones

Teeth: Length: Pm₃ 21.0 (as large as modern breeds) M₁ 11.5 (very old animal).
M₃ 20.0mm. M¹ 10.5 M² 14.0, M³ 14.5.

Mandible: Total length: 149.0mm. Length of tooth row 67.5mm.
" " 149.0mm. " " " " 63.0mm. (mod. 68.0mm)
Length of condyle to symphysis 155.0. Height of ramus ant. to Pm₁ 16.0.
Ant. of M₃ 29.0. Post to M₃ 33.0.
(An animal of at least 2 years 9 months had only Pm₁₋₃ and M₁ erupted.
In this instance the length of tooth row was 47.0. Depth of jaw ant. to
Pm₁ 6.5, ant. to M₁ 18.5).

Scapula: Length of glenoid cavity 26—24—23.

<i>Humerus:</i> Length	—	prox. end	—	distal end	25.0
	—		—		24.5
	126		30		26.5
	—		—		23.0
	—		—		27.5
	—		—		25.5

Radius None could be measured for length.
Prox. width Distal width 24.75

26.5	—
24.0	—
—	22.5
24.5	25.0
23.5	—

<i>Femur</i> Max. across head and greater trochanter	40.0mm.
Length 153.5	— Distal width 34.0
— Trans —	30.5
— diam. prox.	
— extremity	34.0
— 40.5	—

Tibia None could be measured for length.

		Prox. width	37.0	Distal width	28.5	
		" "	37.0	" "	25.0	
		" "	37.0	" "	24.5	
<i>Astragalus</i>	Length	26.5	Prox. width	18.5	Distal width	16.5
		26.0		19.0		18.5
		25.0		—		—
		25.0		—		—
		27.0		18.0		17.5
		26.5		19.0		18.0
		26.0		17.0		16.5

Calcaneum Length 52.5 — 48.5 — 48.0 — 41.0 — 47.0 — 53.0 — 55.0.

Metacarpal Length less epiphyses 110.0mm } (large as modern breed) with
Length less epiphyses 111.0mm } Distal width 22.0

Metatarsal Length 121.5. Prox. width 17.0. Distal width 20.0.
Length less ep. 114 juv.

PIG

The remains of this species are as rare as that described in my earlier report. From site D (East) came part of the squamous portion of the occipital with the nuchal crest and an abaxial metacarpal. The general impression one gains from the former is of a very small breed (? dwarf island race) of a type not to be distinguished from the wild swine. The abaxial metacarpal is only 34mm. long: this should be compared with that of a modern domestic breed which I have been able to measure and which has a length of 66mm. Also from site D (East) came a single Phalanx II without epiphyses and representing a very young animal, correspondingly small. It still seems best, at present, to consider the Nornour pig as a semi-feral animal as suggested in my former paper (Turk 1967).

HORSE

This species did not occur in the material from the earlier excavation carried out by Miss Dudley but the last two years work have revealed a very few remains which, although they prove the undoubted presence of this animal do not, in fact, allow it to be characterized except in the most general terms. Two very damaged rib fragments, a small fragment of the maxilla and another of the mandible as well as a few teeth are all that represent it. It was small, to judge by the teeth no bigger than a medium sized ass and the enamel pattern of the teeth is much simplified and reduced. Pm³ has the protocone well developed but approaching a true circular shape whilst the metaconule is so reduced as to be almost absent. The protoconule on the other hand is well developed into a pendant, smoothly rounded lobe. The parastyle is rather poorly developed, pointed and strongly embayed. The pre-fossette and post-fossette have an obliquely placed, small super-numerary fossette developed between them. Other teeth have extremely simple enamel patterns and the single individual seems to have been relatively young. All the remains of the horse came from the eastern section of the midden on Site D.

Measurements of Teeth Pm³ 31 × 26 M¹ 22.5 × 24.5 and 21.0 × 23.5 M² 26 × 16
M³ 20.5 × 20.0 Pm² 18 × 13 M² 28.0 × 0.0 M³ 36.5 × 15.5.

RED DEER (*Cervus elaphus*)

Handford and Pernetta (*loc. cit.*) found 'six incisors and two foot bones' of this species and in my earlier paper on the bones from the Nornour site (Turk, 1968), I recorded fragments of the tines of this species and some minute fragments of other bones tentatively ascribed to the Red Deer and a smaller species. From Site E Strip 5 came several fragments of Red Deer Antler but unfortunately these were too small to

allow of reconstruction of the whole, however a basal fragment with the burr or coronet showed a maximum diameter at the base of 50mm. The only comparative material I have to hand is a 13-pointer which had a maximum diameter of the burr of 66mm. It is notable that the antler fragments so far seen do not suggest very good development such as one might find in true woodland and maybe argue for an animal existing in open scrub. Also from Site E strip 1/2 (suggesting that it may have been part of the same animal as the antlers) was a piece of the proximal end of a metacarpal (max. width 41.5mm.) which was found together with a number of burnt broken bones which may, or may not, have been deer bones. Still another isolated burr came from the East of Site D. This was smaller measuring only 46mm. in max. diameter, it therefore seems reasonable to assume that, at least, two animals are represented. Finally, at the east end of the midden was found a small fragment of a cervine long bone which had been cut across by Man.

ROE DEER (*Capreolus capreolus*)

There is growing evidence that another species of deer is present in Scilly. As I have already published a note on this¹⁶ it need not be repeated now. Those bones, discovered by Mr. Alec Gray in 1935 at Halangy, St. Mary's, included some which the British Museum expert at that time (? W. P. Pyecraft) reported to be 'a small species of deer, probably Roe'. Mr Gray tells me that the pottery suggested a Middle Bronze Age context. From the Nornour site come several remains which are almost certainly of this species. A metatarsal bone, without epiphyses, was referred to the Roe. It is long and slim with lateral flattening and deep grooves on the anterior and posterior faces. The total length without the epiphyses measured 150.5mm, with the proximal extremity 34mm. wide and the distal 35mm. It is probably reasonable to assume that, with epiphyses this bone was, overall, between 150 and 165mm.; since it was obviously immature this would compare with the length given by Hué¹⁷ for the same bone, namely, 185mm. From the S.W. exterior of House I in the Midden material came the distal fragment of another metapodial (believed metatarsal). This too had no epiphysis and gave a distal width of 32mm. and, in general characteristics, agreed well with Roe. There are two other fragments of bone, more tentatively assigned to this species, which came from the East End of the midden on Site D. Dense and heavy, they are parts of the shaft of what is probably a tibia. One fragment has been cut across and the other appears to have been crushed with a blow from a stone like many of the bones of other species, presumably to extract the marrow.

A few other bone fragments believed to be those of Deer because they are whitish, very dense, exceptionally heavy and slim, have been retained for further study. There is now firm evidence for the Red Deer in Scilly in the Bronze to Romano-British periods and almost certain evidence of the Roe. Handford and Pernetta (*l.c.*) believe these could only have been introduced into the islands by Man but I shall hope to examine the whole question of these insular deer in a later paper. What is certain is that we are not dealing here with the mere importation of antlers for tools but with whole animals both adult and young.

GREY SEAL (*Halichoerus grypus*)

Bones of this species are slightly more common than those of the Ox and only a little less common than the Sheep bones, occurring in over three quarters of all the sample bags. Individuals of all ages are represented although adult males, so far as could be ascertained, are rare. Several of the long bones show signs of having been cut, a very few have been worked into tools—especially radii which are made into awl-like implements—and the great majority of the rest have been crushed. No facial and very few anterior cranial bones have been found and this, I believe, supports the suggestion made in my former paper that the animals were slaughtered by aiming blows at the forehead

of the seal. Many bullae have been recovered and almost all of these show evidence of having been fired as do most scapular fragments and the cervical vertebrae. The neck and shoulders of the Grey Seal, especially those of the adult male, are covered with large accumulations of blubber and it therefore seems certain that this region of the body was roughly separated from the rest and the fat melted down to give the inhabitants their supplies of oil. Judging by the abundance of the seal remains great quantities of oil, both from this source and from certain of the sea birds, must have been available to the inhabitants for lighting the interiors of the huts.

WHALES

Against the exterior of House I were found a fragment of a mandible with 5 teeth, part of a vertebra, fragments of ribs and a digit. These appear referable to the Common Dolphin (*Delphinus delphis*) a species only slightly rarer than the Porpoise at the present time in these seas. From Strip 1 on Site E came the posterior part of the cranium, five metacarpals and a tooth of a Cetacean. These were not such as to make a specific identification possible but, again, they could have belonged to the Dolphin. During the 1969 excavations a fragment of a Cetacean vertebra was recovered from the midden by the S.W. exterior of House I and from the Upper midden came part of the right occipital and condyle and part of the basioccipital bone of a whale. The former did not agree completely with a similar fragment of a Risso's Dolphin which I picked up on a beach on The Gugh, Scilly, many years ago but the similarities are such as to lead one to think that these remains too belong either to the Common Dolphin or to Risso's Dolphin.

Cetacean remains are not at all common at this site and it is difficult to believe that Whales were ever systematically hunted by the inhabitants; it would appear rather that these bones result from chance strandings such as still take place in the islands. No doubt all such carcasses were rendered down for oil.

PALLAS'S VOLE (*Microtus oeconomus*)

This is apparently the vole referred to in my former paper on Nornour as *M. arvalis*. Mr. Ian Linn made that identification in the absence of mandibles and made a reservation then, that it might, just possibly, be the present continental species. Handford and Pernetta (*loc. cit.*) found no less than six left and 12 right mandibles together with associated palates and numerous limb bones and upper incisors. At this time I had also discovered five mandibles among the bones excavated by Miss Butcher in 1969 and had independently come to the conclusion that the vole was indeed *M. oeconomus*. The species is one quite unlooked for at such a period in these islands and Handford and Pernetta believe that it was introduced by Man in early post-glacial times—a conclusion to which I have some reservations preventing immediate agreement. Mr. Linn and I plan to make this the subject of a joint publication in the near future.

LONG-TAILED FIELD MOUSE (*Apodemus sylvaticus*) and SCILLY ISLAND WHITE-TOOTHED SHREW (*Crocidura suaveolens cassiteridum*) are both recorded by Handford and Pernetta as occurring in the material they examined. They are mentioned in passing merely to make the faunal list complete for this site. I myself have never found remains of either species among the bones submitted to me from Nornour. It is difficult to be certain that these are contemporaneous with the Iron Age A context of the other remains for they might indeed be later intrusions in these soils. The Wood Mouse makes underground runs on occasion and it is possible that, like the Red-Toothed shrews, the Scilly Shrew may have made use of such runs as well as those of the Vole.

BIRDS

Bird bones are present in unusual quantities at almost all parts of the site. It has not been possible as yet to identify all of them, partly because many are too fragmentary and partly because I have not had access to a sufficient range of comparative material. However, most have been retained for further study. Because of the considerable importance which attaches to many of these records those that have been identified with reasonable certainty are given here.

? RAVEN (*Corvus corax*)

A skull fragment from Site E seems referable to this species although the identification is not certain¹⁸. It also occurred in the previous Nornour excavations (Turk *loc. cit.*).

? SKYLARK (*Alauda arvensis*)

A humerus and other fragments of bone were tentatively identified as this species. Handford and Pernetta (*loc. cit.*) had a similar provisional identification of two femora.

CORMORANT (*Phalacrocorax carbo*)

From the West End of the Midden came a femur of this species and from Site E a fragment of the occipital portion of the skull. It is difficult to believe that these birds could have been eaten and they would provide only limited quantities of oil. It is possible that they were trained for fishing.

GANNET (*Sula bassana*)

In the upper filling of House III was a Tarso-metatarsus of this species and from the upper midden of the Passage came the head of a femur which seems to be that of the Gannet and fragments of other bones which may belong to this species. The paucity of the remains does not argue a gannetry in the area although such are known to have existed in former times in Cornwall and the S.W. generally. Unlike the position at some Scottish pre-Roman and later sites where the inhabitants seem to have relied largely on this species for supplies of oil, those of Scilly appear to have had to make more use of other sea birds, particularly the Razorbill¹⁹.

GOOSE (*Anser sp.*)

The distal fragment of an ulna and the head of a humerus are referable to that of a Goose but no certain identification could be made of the species nor whether it was indeed wild or domestic. It is worth noting in passing that several large avian ulnas are found which appear to have been split across obliquely and sharpened to a point, perhaps thus serving as an awl.

DUCK (? *Glaucionetta clangula*)

A broken tibio-tarsus from the upper midden was doubtfully identified as Golden-eye but may have been another species of duck of similar size.

WHITE STORK (*Ciconia ciconia*)

The distal end of a tarso-metatarsus was so identified with 'reasonable certainty' by Handford and Pernetta (*loc. cit.*). I have a fragment of a humerus from Site E that, with some small reservation, is also to be ascribed to this species; at least, I can find no other west European bird species that it resembles.

? KNOT

A humerus and part of a tibio-tarsus of a small wader, perhaps this species, were found in the upper infilling of House III. Among the bird bones not yet identified several seem to belong to other species of Waders which, as a group, make up in number of bones the second most numerous group of avian remains. Handford and Pernetta record a wader the size of an Avocet.

RAZORBILL (*Alca torda*)

Certainly the commonest of all bird species found at this site. Many hundreds must have nested on the low cliffs of Scilly in the early centuries B.C. and doubtless it was

more common than the Guillemot that usually prefers higher cliffs. Like that species it no doubt provided the inhabitants with meat, feathers and oil and eggs (see Turk 1968).

GUILLEMOT (*Uria aalge*)

The remains of this bird are only a little less numerous than the foregoing. Two skull fragments were taken from the midden.

PUFFIN (*Fratercula arctica*)

This species has been by no means as commonly found in this material as in that from the earlier excavations on Nornour (see Note 2). A metacarpus was found with remains of several other bird species in the upper midden material infilling the passage. Handford and Pernetta record an ulna and fragments of radius. It is difficult to account for this discrepancy in numbers from the two excavations. It might be caused by some short-term fluctuation in the size of the breeding population. For further remarks on this species see Turk 1968.

SHEARWATER (*Puffinus puffinus*)

The posterior part of the skull of this species came from Site E together with fragments of other bones that almost certainly belong to the same individual. Another fragment of a skull—the top portion of a cranium—was found at Site D. Handford and Pernetta found several femora, coracoids and an ulna of this species. The Shearwater is seemingly very seldom found at pre-historic sites on the western European littoral. No doubt it occurred in considerable numbers, as it does today, and its presence in this material represents the exploitation of its chance abundance and accessibility in the immediate environment. It might well have provided much oil²⁰ but it is very doubtful if it was eaten.

PARTRIDGE (*Perdix perdix*)

A tarso-metatarsus of this species and bone fragments, probably belonging to the same individual, came from the upper filling of House III. It is not uncommon in European palaeolithic and some neolithic material but is to be accounted a rarity in an Iron Age context. It did not occur at Jarlshof but bred on the isle of Samson, Scilly, up to less than two decades ago; although Rodd²¹, quoting Borlase, rightly says that it seems to have been introduced there a little before 1752.

BLACK GROUSE (*Lyrurus tetrix*)

From the Eastern end of the Midden (Site D), in a pocket of black soil under small stones, was found the distal part of a humerus and the tibio-tarsus of this now rare species. It has become extinct on the Cornish mainland in recent years but was widespread in the county until the early 19th century. There are very few records of the species at any Iron Age sites throughout Europe and at Jarlshof it is not found until the Viking levels are reached. It seems probable—although this is impossible to substantiate from one individual only—that this bird might have bred in Scilly in former times. In Europe it frequents, for choice, marshy ground with rushes and scattered bushes, sphagnum covered moors and rocky outcrops surrounded by heather, all of which are extremely likely to have occurred in Scilly some two millennia ago.

DOMESTIC FOWL

In the upper midden of the Passage occurred the tarso-metatarsus of this species. The bone is seemingly almost identical with that figured by Dräger (fig. 16)²². That author compares the bones of the domestic fowl of Roman times at Magdalenberg in Austria with those described by Schweiger²³ from the La Tène *oppidum* at Manching and finds that, in the La Tène breeds, the secondary sex characteristics were much less strongly marked. It is not possible to base an assessment of this on one bone but it will be interesting to discover if further bone material favours an attribution to the later breeds or the earlier. It seems likely that, over a couple of centuries or so, a breed not

unlike a small gamecock was selected and stabilised by the La Tène peoples. At Jarlshof the domestic fowl does not appear until the early 9th century.

In addition to these species Handford and Pernetta include a firm record of the Song Thrush and a tentative one of the Wren.

FISH

Fish bones are commonly found throughout the Nornour site but a few of these have yet proved possible to identify. A fair degree of certainty appertains to those given below:

CONGER (*Conger vulgaris*)

Vertebrae of this species occur at three parts of the site and some seem to suggest large individuals. In British waters the conger is known to attain a length of at least 9 feet and weigh 160 lbs. The largest of those from Nornour might possibly represent 6 ft. specimens.

WRASSE (*Labrus sp.*)

Teeth of this fish and some vertebrae occur in the midden material but have not been much more frequently found than in the earlier excavations (Turk 1968). Since it is common on rocky shores the paucity of the remains suggests that the inhabitants did not rank it very high as a good fish.

LING (*Molva molva*)

This has been positively identified by comparison with recent bone material and is not uncommon at most parts of the site. Some very large specimens indeed seem to have been taken perhaps 5 to 6 ft. in length. It is still not uncommonly caught on long lines.

BASS (*Morone labrax*)

The vertebrae of this species are common in some samples and absent in others. Its presence undoubtedly marks the season May to August and I hope, in the near future, to undertake an analysis of associated bones to discover any evidence of seasonal variation in the diet of the inhabitants.

POLLACK (*Gadus pollachius*)

Vertebrae of this species are widely distributed on the site. I have seen none which suggest a size above 5 or 6 lbs.

HAKE (*Merluccius vulgaris*)

A clavicle of what is tentatively identified as this species is the only bone in the collection, so far as is known, which can be adduced as evidence of its use by the Iron Age population.²⁴

TURBOT (*Rhombus maximus*)

The species is represented by a dentary bone, numerous vertebrae and possibly other bones not yet certainly identified. It is fairly commonly found in shallow water (3 to 10 fathoms) and its presence here suggests, very definitely, that there must have been fairly extensively developed shallow sandy bays in Scilly during the Iron Age.

? PLAICE (*Pleuronectes platessa*)

A smaller flatfish believed, but not proven to be this species, occurs fairly frequently. The vertebrae match those of Plaice more closely than any other comparative material available to me. Specimens of this species do not seem to have been above 7 or 8 inches long, perhaps because the larger individuals move away to deeper waters in the summer.

One important conclusion may be drawn from these fish records; apart from the Hake, none are deep-water species. This might suggest that the inhabitants were not pre-eminently a sea-faring folk.

MOLLUSCA

My wife has kindly identified the shells found on the site. They are included here to give a complete inventory of the animal remains so far discovered.

GREAT SCALLOP (*Pecten maximus*)

This species has long been used for human food and, in places, for bait in fishing. Until quite recent times, the shells have been used in remote fishing communities as lamps²⁵. Moderately common on Nornour.

WARTY VENUS (*Venus verrucosa*)

It has been used up to the 19th century as food in the Island of Herm and in County Clare.

OYSTER (*Ostrea edulis*)

Found only from Strip 5 Site E. It does not now occur living in Scilly although single valves are occasionally washed up. Attempts were made to introduce it for cultivation in Scillonian waters in the last century but these proved unsuccessful.

STRAND SHELL (*Littorina littoralis*)

Not very commonly found in the material. One would suppose it too small to be eaten. Perhaps used for decoration.

THICK TOP SHELL (*Monodonta lineata*)

This is still eaten by Scillonians as a substitute for the edible periwinkle under which name it is often collected.

COMMON LIMPET (*Patella vulgata*)

The most plentiful of all shells in the midden, but not so commonly occurring as in the material from the earlier excavations on this site. Two of the shells, both badly abraded, may have belonged to the closely related species *P. aspera*.

Reskadinnick, Camborne

References

- 1 TURK, F. A., 'Report on the Animal Remains from Nornour', *Journ. Roy. Inst. Cornwall* (n.s.) V. 4 (1968).
- 2 DUDLEY, D., in *Archaeol. Journ.* 124 (1968), 1-64.
- 3 BUTCHER, S. A., 'Excavations at Nornour, Isles of Scilly 1969-1970: Interim Report', *Cornish Archaeol.* 9 (1970), 77-87.
- 4 PERNETTA, J. C. and HANDFORD, P. T., 'Mammalian and Avian Remains from possible Bronze Age deposits on Nornour, Isles of Scilly', *Journ. Zool.* (London 1970), 162, 534-540.
- 5 TURK, F. A., 'Notes on Cornish Mammals in Prehistoric and Historic Times: 1', *Cornish Archaeol.* 7 (1968), 73-79.
- 6 It is interesting that WILLIAM YOUATT (*Cattle: their breeds, management and disease*, London, 1833) describes a breed of small black aboriginal Irish cattle some of which had thick heads and necks and were generally somewhat deficient in the hind-quarters. The same author also describes a small black Cornish breed, still present in small numbers on the western moors of the county in his day. He says 'they are small, black, with horns rather short, very coarsely boned, with large offals, and rarely weighing more than three or four hundredweight. They bear an evident resemblance to the native breeds of Wales and Scotland'. This might well be a good enough general description of the pre-Roman Scilly breed for it is in keeping with such osteological characters as are known but, at the same time, the Scillonian breed of pre-historic times undoubtedly had certain likenesses to the old Welsh cattle in their lack of symmetry (suggested by some bone fragments) and the variability of the horns. They would, of course, have been much smaller than the Welsh breeds. In this connection see *British Breeds of Live Stock*, Min. Agr. and Fisheries (3rd. ed., 1920)
- 7 Welsh steers sometimes weighed over 15 cwt. and Dexters (a derivative of the small Kerry breed of Ireland) just over 8½ cwt.
- 8 YOUATT (*l.c. supra*) speaking of the Hebridean cattle quotes from a Mr. Garnet's *Tour through the Highlands*, written seemingly at the end of the 18th century, to the effect that, very often, the cows were brought into the huts of the crofters in winter and shared the stock of meal with them, 'while the cattle, thus sustained, are bled occasionally to form nourishment for the children after the mingled oatmeal and blood has been boiled and made into cakes'.

- 9 MISS M. I. PLATT in 'Report of the Animal Bones from Jarlshof' (in: J. R. C. Hamilton, *Excavations at Jarlshof, Shetland* (Edinburgh, 1956), 212-215) says that, at that site, 'From the earliest times a small ox was present resembling the typical Shetland ox of today together with a larger type'. If indeed, the fragments of rather disproportionately large radii recovered from the Nornour site are those of a different breed then the situation was identical with that at Jarlshof. However, I can find no other evidence of this and have treated all the bones as belonging to a single, reasonably homogeneous race. Dr. P. Jewell says ('Cattle from British Archaeological Sites' in MOURANT, A. E. and ZEUNER, F. E. *Man and Cattle*, Roy Anthropol. Inst. Symposium (1963), 80-91) 'It is important to realise, however, that cattle of a moderately large size persisted throughout the whole of this period and occur together with the Celtic Ox'. On an isolated island such as Scilly the position may well have been different. Nevertheless, until larger parts of the skull are available for study and more complete horn-cores and metapodials, little more can be safely said about the Scillonian ox of Iron Age times.
- 10 It is entirely possible that these cores are the posterior horns of a 4-horned breed of sheep or at least one in which 4-horned individuals occasionally occur. The Manx sheep, a breed known as the *loghtan* (? Manx *lugh-dhoan* ('mouse dark')) produces 4-horned rams, as may be seen in those living today at Creagneash. Our leading authority on the history of sheep breeds, Dr. M. L. Ryder, has stated ('Jacobs Sheep', *Newsletter* 63, Commonwealth Bureau of Animal Breeding and Genetics, Edinburgh 1969) that there is a tendency for all the short-tailed island sheep on the littoral of western Europe to have more than a single pair of horns. The probability of this applying to those of Scilly is therefore high. It is increased by the fact that the posterior horns are often goat-like and swept upward and backward, as are these. However, there are other skeletal remains giving evidence of a larger breed and these unusual horns might well have belonged to this, both by reason of size as of formation.

There is one, more remote, possibility, namely that the cross-section might suggest that they belonged to the goat. However, no cranial bones are attached to them and the horn characters given by Dr. I. W. Cornwall (*Bones for the Archaeologist*, London (1956), 73) for distinguishing these two species have not seemed to me very reliable in practice.
- 11 For a simple description of this method and of somewhat similar findings from a Saxon site at Whitehall, London, see Chaplin, R. E. 'The use of non-morphological criteria in the study of animal domestication from bones found on Archaeological Sites', pps. 231-245 of UCKO, J. and DIMBLEBY, G. W. *The domestication and exploitation of plants and animals* (London, Duckworth and Co., 1969).
- 12 It must be clearly understood that in such a context as this, the 'least number' is a pure abstraction and bears no relation to the *actual* numbers represented by the bones which were probably a very little less than double.
- 13 There was indeed an ancient Irish festival, *Imbolc*, believed to have marked the beginning of the ewe's lactation but this does not at all argue any particular supernatural status for the animal (see POWELL, T. G. E., *The Celts*, London, 1958).
- 14 As is well known there is good evidence of frequent trading between the Land's End/Scilly area and Marseilles in the fragment of a Periplus by Pytheas (circa 330 B.C.) and somewhat weaker evidence for a sea-borne trade between Cadiz and West Cornwall.
- 15 See HAMILTON, J. R. C., *Excavations at Jarlshof, Shetland*: Min. of Works Arch. Rep. No. 1, Edinburgh (1956), 71, Fig. 37, No. 7.
- 16 TURK, F. A. 'Notes on Cornish Mammals, No. 2', *Ann. Rep. Roy. Corn. Polytechnic Soc.*, 1960 (42-49).
- 17 HUÉ, E. *Musée Ostéologique*, 2 vols: Paris (1907), Librairie C. Reinwald, Schleicher Frères, Editeurs.
- 18 This is almost certainly not a species used for food. As is well known, the Raven was part of an Earth cult with the Celtic peoples and is associated with the god *Lug*. For much information about this bird as cult hero see Armstrong, E. A. *The Folklore of Birds* (Collins, London, 1958).
- 19 DR. J. R. RITCHIE (*Animal Life in Scotland*, Camb. Univ. Press, 1920), p. 171, says 'the inhabitants of the Bass rock in the beginning of the 19th century were accustomed to obtain 10 galls. Scots of oil drawn from the Solan'. A gallon Scots is 3.00651 of an imperial gallon. Again, on p. 146, 'No bird could well have been more useful to the St. Kildans than the Gannet or Solan Goose whose oil and feathers were of inestimable value, and whose carcasses to the number of over 20,000 were preserved annually for winter fare'. This illustrates the heavy reliance placed by such island communities on birds. Judging by the numerous avian remains from Nornour such a situation could only have been a little less developed there.
- 20 This community must have had an unusual abundance of animal oil available to them. The seal, chance strandings of whales and many of the seabirds recorded would have been constant sources

of supply. Mixed with a little sea-salt to make a more yellow flame it would no doubt have had considerable properties as an illuminant. It seems to me surprising that this small community found it necessary to produce so much; in the absence of any mining it would be likely that it was greatly in excess of their no doubt otherwise modest needs and one is led to hazard the guess that it may have been traded.

- 21 RODD, E. H., *The Birds of Cornwall and the Scilly Isles* (London, 1880). The point is, of course, that the species has maintained itself for over 200 years in the islands and there is therefore no reason to suppose it was not a breeding bird in Iron Age times.
- 22 DRÄGER, N. 'Tier Knochen funde aus der Stadt auf dem Magdalensberg bei Klagenfurt in Kärnten: 1. Die Vogel Knochen' (*Kärntner Museumsschriften*, 33; Klagenfurt, (1964) 7-54). During the Roman times at this Austrian site the remains of the Domestic Fowl made up 78.4% of all the bird bones and Dräger gives an excellent account of its variation and lists all continental records to the time of publication. The late Prof. F. E. Zeuner in *A History of Domesticated Animals* (London, 1963, 451) says 'It may be assumed that the British fowl had not had a long history when the Romans encountered it. Caesar mentioned expressly that the Britons would not eat it, and the finds made so far show that this bird was not common'. In fact, Caesar in his *Commentaries* says 'They (i.e. the Britons) do not regard it as lawful to eat the hare, cock or goose; however, they breed them for amusement and pleasure' (Book V, chap. XII). The word used in the text is *nefas*, which I take to mean here something like 'an impiety, an abomination or a sin'. If this is correct the bird may have had a cultic significance for the Iron Age people. If the tentative dating given for the Nornour site proves to be correct, then this occurrence of the Domestic Fowl in Scilly is certainly the earliest record of the species in the British Isles.
- 23 SCHWEIGER, W. *Zur Frühgeschichte des Haushuhns in Mitteleuropa* (Studien an vor und frühgeschichtlichen Tierresten Bayerns, 9: München, 1961). This contains the most extensive study yet made of Iron Age poultry. Although it deals with central european finds it has much that is relevant to Western Europe.
- 24 The Hake does not usually occur in the sites of coastal settlements in Northern and Western Europe until the early Middle Ages. It is a markedly deep-water species and its presence appears to mark the possession of remarkably sea-worthy craft and considerable navigational skills. There is nothing in the list of fish from Nornour (apart from one clavicle) to suggest that the inhabitants ventured far from the shore at all, indeed all the species could have been caught (but probably were not) from the shore.
- 25 LOVELL, M. S. *The Edible Mollusca of Great Britain and Ireland*, London, 1867. All the notes appended to the molluscs are from this work.

Reviews

CHARLES THOMAS. *Britain and Ireland in Early Christian Times, AD 400-800*. *Thames & Hudson* (1971). Pp. 144, illus. 110 (19 in colour). Cloth (ISBN 0 500 56002 1), £1.75; paper (ISBN 0 500 57002 7). £1.00.

This well-produced and copiously illustrated monograph is a rewritten and extended version of the similarly titled chapter in the volume 'The Dark Ages' published in 1965. In the ensuing five or six years further research into this period has now made Professor Thomas' authoritative and lucid account even more welcome and helpful. Indeed this book fills a lacuna that has existed virtually since E. T. Leeds published 'The Archaeology of the Anglo-Saxon Settlements' in 1913 and is in many ways comparable to it. Leeds demonstrated that there *was* an archaeology of the Teutonic Settlements to be studied, and he summarised the position to date. Thomas has shown in a masterly fashion that there *is* an archaeology of the Celtic West, and of the early Christian Church in Britain. By concentrating on certain selected topics and three main themes, 'migrations and settlements, the rise of Christianity, and the diversity of spoken and written languages', he has avoided the trap which so often catches researchers and writers of this period. The minutiae of typology, elaborate linguistic analysis and theological arguments are essential to scholarship but defeat their own ends in a book designed for the general as well as the school and university reader.

As a result the narrative flows easily and the illustrations, many from new sources, fit appropriately into the text. Many of the chapters contain original material, the result of Thomas' own researches in Cornwall and North Britain in particular, and it is especially pleasing to the specialist as well as the generally interested reader to have so much information in such a readable form, plus a sensible select bibliography.

Thus the sections dealing with the invaders and colonists range from the fairly well-documented Anglo-Saxon settlements to the linguistically attested migrations to Brittany, but Thomas here, as elsewhere, both points to the gaps in our archaeological and historical record and also suggests lines of research. The sections on Christianity will come as a surprise to many readers, and again it is apparent how much the author has achieved himself but how much still remains to be done. Professor Thomas' own survey of 'The Early Christian Archaeology of North Britain', also published in 1971, provides the basis and references for this section, and is equally warmly recommended.

Professor Thomas himself admits that there *is* a bias towards the north and west of Britain with a consequent lack of cover of the Anglo-Saxon story. Possibly this is actually how it happened and it is certainly refreshing to have discussion of inscribed tombstones from Cornwall, Pictish symbol stones, Christian cemeteries and imported Mediterranean pottery. But there have been parallel developments in Anglo-Saxon studies and perhaps space might have been found in Section 4 (Home and Hearth) for mention of the recently excavated early Teutonic villages in Eastern England, if only to emphasize how culturally the post-Roman world shared many elements.

A minor criticism is that several of the illustrations have been reproduced in too dark a tone so that detail is obscured, e.g. nos. 11 and 16. The coloured plates are on the whole reasonably true to the originals. The index is adequate if not comprehensive.

This book has not been easy to review, largely because the reviewer would like to have written it herself. One's admiration for the author increases, knowing the problems and pitfalls involved in the discussion of any aspect of the period. Nowhere is this better demonstrated than in the 'Excursus': Arthur and Mount Badon, p. 38-42. Professor Thomas disposes of current allusions to 'Arthur', and firmly assesses what little we do know of this early British leader. Thomas' attitude is characteristic and robust: a refreshing change from the woolly romanticism of sundry other publications on this period.

ELIZABETH FOWLER

Timbury

Excavation News 1970-1971

CARN BREA, ILLOGAN

Following the location in 1970 of the Neolithic occupation area on the easternmost of the three crests of Carn Brea, the primary object of the excavation in 1971 was to define the limits of this occupation and determine something further of its nature and date. Secondly, the failure in 1970 satisfactorily to date the ramparts surrounding the hill—although these have always been assumed to relate to the Iron Age—presented an obvious lacuna in our understanding. Thirdly, the tentative suggestion made in 1970, as a result of machine-stripping on the S.E. slope of the hill, that there might be very early cultivation on the hillside, had to be verified by further and more definitive evidence. (Cf. *Cornish Archaeol.* 9 (1970), 53-62.)

The fourth aim was to find out whether the wall surrounding the eastern summit and constructed of massive facing slabs packed by a heavy rubble core formed the delimitation of the Neolithic occupation area.

Site 'A1' in 1970 had shown that dense occupation, including structures, of Neolithic date was closely associated with this wall on the inside and that an area just outside the wall contained little Neolithic material. At one point the collapse of the wall had sealed unabraded Neolithic sherds.

Unfortunately the steepness of the hillside has meant that the wall has tended to collapse uniformly outwards, thus divorcing itself from the diagnostic stratigraphy of the Neolithic occupation. However, in 1971, one point was located where inward collapse had taken place. This had occurred at quite another part of the summit where a similar wall to that on Site 'A1' has been constructed between two natural outcrops of rock and thus completes the circuit of the wall. Here, on Site 'E', the inward collapse was found directly sealing unabraded Neolithic sherds and charcoal in what must have been an occupation deposit. This can only mean that the wall fell into disrepair while Neolithic material lay on the surface or in the turf in reasonably fresh condition. The implication must be that this wall is Neolithic in date.

the third side of the eastern summit in an attempt to affirm this proposed dating. At this point (Site 'D') the stratigraphy was very uninformative but the wall occurred with Neolithic occupation behind it. A very ruined stone-built feature appended to the back of the wall overlay post-holes containing Neolithic artefacts, however, and it must postdate these. A similar structure occurs on Site 'A' where a wall built up against the back of the enclosing wall directly overlies post-holes containing Neolithic artefacts.

This superimposition is absolutely direct with no intervening turf line of accumulation. Furthermore no diagnostic finds of any other prehistoric date than the Neolithic have been recovered from Sites 'A', 'E' or 'D'. At present we are working within the model of 2 phases of Neolithic activity within one cultural context, the later phase exhibiting the development of some stone-built features.

The rampart cutting undertaken to confirm the assumed Iron Age date for the massive ditches and banks which surround the whole hilltop did produce some Iron Age pottery but to a very large extent merely confirmed last year's tentative conclusion that the Iron Age fort on the hill was probably never occupied for any length of time and in all likelihood never completed. This probability would certainly accord with the fort's unique size and type in its area.

A further machine-cut area on the S.E. slope of the hill revealed more of the possible stone clearance encountered last year and also more of the layer of soil distributed over the whole hillside, disturbed and highly organic in composition and sitting directly on top of the natural. Unlike last year, very few artefacts were recovered from this buried soil. In 1970 and 1971 where artefacts were recovered from this soil they were all Neolithic in type. No confirmatory evidence above and beyond that of 1970 seems to have been forthcoming here and the situation remains that it is possible that the S.E. hill-slope of the site was cultivated in very early prehistoric times—perhaps by the people occupying the settlement site of Neolithic date on the eastern summit.

A further section across the wall was set out on

October 1971

ROGER MERCER

NORNOUR, ISLES OF SCILLY

Excavations were carried out in June and July 1971, mainly to the north and east of the site described in *Cornish Archaeol.* 9 (1970) 77-81 (SV 944148).

The remainder of House 5 (CA 9, fig. 24) has been cleared, revealing the furthest point of the curving north wall only 5 ft. beyond the excavation limit shown on last year's plan. There were no radial piers in this segment of the hut, but immediately north of the entrance passage a small semi-circular annexe had been added, and the rebuilding associated with this could have involved the removal of at least one pier. The annexe had a maximum diameter of 8 ft. and its eastern wall had collapsed and been replaced by roughly piled slabs. The 'floor' was the rough and sloping surface of the natural rock, and a shallow circular scoop in the centre of this showed slight traces of burning.

The northern wall of House 5 was of different construction from the rest of the building; it was only faced on the inside and was cut into earlier deposits and the rising natural surface behind.

Clearance of an area to the north revealed two more box-like hearths, formed of slabs of granite set on edge. No structures could be associated with them and the surface on which they were set was cut by the building of House 5. This surface was also traced across to the original site where it was found to underlie the eastern walls of the hut in Miss Dudley's area III B (*Archaeol. Journal*, 124; fig. 2).

Preliminary clearance of an area beyond the eastern end of the 1970 excavation appears to confirm that occupation ceases where the granite outcrops on this side.

The phases referred to are all associated with Iron Age pottery of the types described in CA 9, p. 79 and fig. 25, and it is hoped that finer chronological distinctions can be made from the large quantities of material now available.

On stratigraphical considerations it appears that the site shows a lengthy development, with House 5 and its annexe coming rather late in the sequence. No further work has been done on the structures labelled House 6 on last year's plan, but at present it appears that this may be the nucleus of the settlement.

As in 1970 there was a complete absence of Roman artefacts in the part of the site now being

excavated (i.e. to the east of the area of Roman occupation excavated by Miss Dudley).

August 1971

S. A. BUTCHER

SAMSON, ISLES OF SCILLY

A small excavation was undertaken in 1970-71 near the East Porth of Samson (SV 878128), at a point where the low sand cliff is vulnerable to the sea. This followed the report of finds on the shore by holiday-makers. We are most grateful to Mr. R. M. Stephenson of St. Mary's for reporting the site, to Lt. Cmdr. T. M. Dorrien-Smith and the Duchy of Cornwall for permission to excavate, and to Professor Charles Thomas for kindly agreeing to study the pottery.

The earliest feature was a cist-grave measuring 2 ft. by 3 ft. internally and formed of four massive blocks of granite set into a pit c. 7 ft. in diameter. The burial was in the crouched position but there were no grave goods. Two cremations in shallow pits c. 18 in. in diameter lay close by. There was evidence that between this and the next period of occupation the site had been scoured by marine action, followed by the deposition of sea-borne sand.

A rectangular timber building was set into this sand. Its walls were of wattle supported by posts at the corners and beside the entrance, where a threshold stone remained in position. The part excavated contained two hearths, edged in beach pebbles and with a diameter of c. 2 ft. 6 in. Although part of the building was inaccessible its measurements can be estimated as not more than 11 ft. long and not less than 8 ft. wide.

At a later date a small rectangular stone building was constructed some 7 ft. to the north. This had an internal measurement of 10 ft. 9 in. E-W; the south wall had been scoured away but the most likely position for this would give a width of 6 ft. 6 in. N-S. The walls as they survived consisted of single rows of granite slabs set on edge. There was an entrance passage-way, later blocked, in the north side and a stone bowl stood in the south-west corner.

In the occupation material outside the building was a large amount of grass-marked pottery. Discussion of this must wait until Charles Thomas has had an opportunity to study the whole group of material from the excavation. He very kindly examined the sherds from the first investigation of the site in 1970 and these give a range of Early Christian wares from the sixth century onwards.

It appears that the first timber building can be placed fairly early in this period, while pottery from the stone building is 'sixth or seventh century, or even later'.

Subsequently a further timber building was erected to the south and a number of graves were dug. The graves fall into two periods, the earlier having an edging of small granite slabs, the later with an additional kerb and a marker stone set at a high level. One of the earlier graves may be associated with the occupation of the stone building, but the later ones were cut into the sand which covers it. Crude stone walling at this upper level may be the boundary of the cemetery.

Further excavation of the features described was made impossible by the high dune of running sand which covers them and which may perhaps have accumulated over other buildings lying inland.

More than 200 ft. to the north of this site a stone-lined cellar was noticed in the cliff-face. It measured 15 by 9 ft. and was cut 5 ft. into the natural rock. It was filled with blown sand and the only internal feature was a furnace, also stone built, c. 4 ft. by 2 ft. and 3 ft. deep. There was no dating evidence and in the absence of any domestic or industrial refuse it is suggested that the building may have been used for smoking fish.

S. A. BUTCHER and D. S. NEAL

August 1971

LAUNCESTON CASTLE

Excavation, for the Department of the Environment, continued during 1971 in four areas of the castle. (a) The North Gate was found to belong to the 13th century, incorporating an earlier free-standing tower which had been built upon the bailey rampart. (b) A late building at the back of the South Gate was examined, and a cobbled roadway into the bailey was uncovered. (c) A further length of the secondary ditch beyond the foot of the motte was traced. The ditch filling was crossed by a 16th century wall, and there was evidence of a building on the ditch counterscarp. (d) In the south west corner of the bailey, a sequence of buildings was found built on and against various phases of the bailey rampart. East of the kitchen, which was examined in previous seasons, was a range of buildings probably belonging to a substantial and fairly well preserved residential block. This awaits further excavation.

There was a wide range of pottery found during the season, from 11th century bar-lug ware (over the first phase of the rampart) to post-medieval wares. Excavation of the castle, reported up to 1969 in *Cornish Archaeol.* 9 (1970), 83-92, will continue in 1972.

A. D. SAUNDERS

November 1971

BERRY COURT, JACOBSTOW

Continued excavation, on behalf of the Department of the Environment, revealed that the house was built round a court-yard, in four principal phases of construction, dating from the 12th century. Artefacts, found on the site (SX 294974), suggest that it was deserted in the middle of the 14th century.

The earliest building, situate on the east side of the court-yard, is an example of a first floor hall. The existence of the first floor is indicated by an outside stair and a line of three dressed pad stones, on which pillars had been placed, to support the bridging joist of the hall floor. It is 40 ft. 6 in. long and 20 ft. wide (all measurements are internal). The position of the hall fire-place is indicated by a projection, 8 ft. long and 3 ft. wide, towards the southern end of the east side wall. The original stair was replaced by another, at a slightly later date, during the second structural phase, when the solar and garde-robe were added at the northern end of the hall.

The third and principal building phase was effected in the first part of the 13th century, when the four sides of the court-yard were completed. On the north side, a ground floor hall (cf. *Cornish Archaeol.* 8 (1969), 106), with a cross-wing, consisting of two service rooms and a first floor chamber, was built 11 ft. 6 in. to the west of the solar. The intervening space, between the end of the hall and the solar, was roofed over, to form a small chamber. A pent-house kitchen was built against the west wall of the service wing, during the last period of occupation; it was used as a bake- and brew-house. Substantial remains of the ovens survive.

The buildings on the south side of the court-yard consist of a chapel, the gate-house and a store-room. An early 13th century lancet window head, found in the chapel, suggests that the south range was completed at a similar date to that of the ground floor hall. The chapel is 34 ft. long and 14 ft. 6 ins. wide. A green-stone step, 8 ft.

from the east wall, marks the position of the sanctuary. Stone seats were built against the west wall and against the north and south walls, to the west of the sanctuary step. A space between the seats, 7 ft. 6 ins. to the west of the step, indicated that the chapel was divided by a screen. The gatehouse, containing a draw-bridge well, was probably of 13th century origin; it was certainly built after the chapel. During the last period of occupation, the draw-bridge was replaced by a permanent bridge.

The buildings on the western side of the courtyard were rebuilt in the final phase, in the late 13th or early 14th century, when a single storey kitchen, 27 ft. long and 18 ft. wide, was built. A wide doorway in its north wall gives access to the service room; another, in the west wall, leads to the 13th century pantry. Shortly before the house

was deserted, a stone hearth, 12 ft. long and 6 ft. wide, was constructed against the wall at the southern end of the kitchen. It had a wattle and daub chimney-hood and replaced the earlier hearths in the centre of the kitchen. To the south of the kitchen, an entrance from the court-yard gives access to a passage, leading to a ground floor room and a garde-robe. A wide outside stair, with green-stone steps, leads to a first floor chamber and another garde-robe, above these rooms. The garde-robe and the construction of the stair indicate that the first-floor rooms were of considerable importance; probably, they were reserved for the use of visitors.

Further excavation is planned for the spring of 1972.

GUY BERESFORD

September 1971

Digest of Cornish Periodicals: 9. 1970-1971

THIS INSTALMENT covers the period from October 1970 to December 1971. The function of the Digest is to acquaint readers, notably those who for any reason do not have access to the original journals, with the various writings on the history and material culture of Cornwall, in all its aspects, appearing in contemporary periodical literature. Some material—in general only in the shape of items which fall under clearly defined headings—is also listed in the year's *Cumulative Index*. The omission of any issue, or issues, of any journal from this issue of the Digest means that such issues contained nothing of relevance to the Society's fields of interest.

Journal of the Royal Institution of Cornwall *New Series* vol. VI, pt. 2 (1970). Price on request from Curator, County Museum, River Street, Truro.

The second issue in the new format contains Canon Adams' presidential address on Theodore Palaeologus, descendant of the imperial Byzantines whose brass (1636) adorns Landulph church, and on some later Palaeologi in the area (p. 95); the welcome return of Dr. N. G. J. Pounds to the field of Cornish studies, with a paper on Taxation and Wealth in late medieval Cornwall (p. 154); and two more of H. L. Douch's welcome surveys, on Cornish goldsmiths (pp. 121-138), and (perhaps of even more relevance to archaeology in the field) on the tobacco trade and clay-pipe manufacture in Cornwall (pp. 139-153).

Transactions of the Royal Geological Society of Cornwall vol. XX, part 2 (for 1967-68), issued in 1970. Published by the Society from the R.G.S.C. Museum, St. John's Hall, Penzance: £1.50.

These venerable Transactions are not, as is sometimes overlooked, annual, and an issue is therefore all the more welcome. This particular instalment contains H. D. Hitchcock's interesting assessment of the origins of the surface relief in the area of Carnmenellis, Cornwall (pp. 152-162). The totals of membership—not stated, but deducible from the subscriptions in 1967 and 1968—and the obvious difficulties experienced in maintaining the Society which the accounts for these years reveal (pp. 90-93) may give some cause for worry: anyone who wishes to offer practical support should contact one or other of the officers (p. 84).

Devon and Cornwall Notes and Queries volume XXXI, part viii (Winter 1970): vol. XXXII, part i (Spring 1971), part ii (Autumn 1971), part iii (Winter 1971). Thrice yearly, subscription £1.50 per annum: non-subscribers 60 p. a part. Treasurer: Mr. N. Annett, 4 Pine Close, Broomhill, Tiverton, Devon. (Items below are cited by this journal's cumulative numbering, which begins afresh with each volume.)

DCNQ, now ably edited by Mrs. M. Rowe (51 West Garth Road, Exeter), continues to play an active part in south-western research, and its lack of Cornish contributions should spur Cornish writers to play a greater part themselves. It is good news that Mrs. Jackson's project of a Cumulative Index to the first 31 volumes proceeds apace and that 13 volumes have now in fact been indexed, for early issues contain much of great value and relevance, often overlooked. Professor Minchinton and J. W. Perkins continue their survey of Tidemills in Devon and Cornwall (XXXI, 173: XXXII, 1), and other items of Cornish interest, apart from queries (XXXI, 183), include Canon Adams' note on some north Cornish dedications and Christian sites (XXXII, 2) and a number of useful folklore notes from Cornwall by W. P. Authers.

Old Cornwall—Journal of the Federation of Old Cornwall Societies vol. VII no. 7 (Autumn 1970), no. 8 (Spring 1971), no. 9 (Autumn 1971). 18p. an issue post free from Mrs. P. A. S. Pool, Boscovean, Heamoor, Penzance.

Of these three issues, no. 7 is the Fiftieth Anniversary number of the Old Cornwall movement (the first Society was founded at St. Ives in 1920), and is very largely devoted to short accounts and reports from all the constituent Societies of today. No. 8 contains a shortened version of Charles Thomas' Anniversary address (at the 1970 winter Festival) on 'The Next Fifty Years', which tries to place the Federation's work, *inter alia*, in the context of Cornish archaeology, and a series of most interesting historical articles, which also characterise No. 9. In the latter, one should mention Alan Pearson's full account of William Pryce, M.D. (1735-1790, author of *Mineralogia Cornubiensis* and *Archaeologia Cornu-Britannica*, but until now hardly described at all as a person: and Edna Waters Coward's fascinating account of a West Cornwall husbandman in the early 19th century. Again, these are all first-class issues, at a ridiculously low price,

maintaining the very high standard of both content and presentation that we associate with our sister-journal.

Scillonian Magazine nos. 183 (Autumn 1970), 184 (Winter 1970/71), 185 (Spring 1971), 186 (Summer 1971), 187 (Autumn 1971). 30p. each copy, yearly subscription £1.20, from the proprietors, C. J. Mumford's, St. Mary's, Isles of Scilly.

Continuing, as always, to provide a very full social chronicle of life in Scilly, one might draw special attention in the five issues listed here to two letters of 1784 about a lime kiln (183, 218-9), more records of inter-island wades, relevant to sea-level problems. (183, 226-8), on the Isles of Scilly as an air-base in two world wars (184, 294-302), extracts of interest from parish registers, from 1742 (186, 103-5), and an account of Christmas, 1848, which saw numerous shipwrecks (187, 162-3). All issues contain news of the Museum, of gigs, natural history notes, and underwater activities—archaeological and treasure-hunting alike.

Journal of the Cornish Methodist Historical Association vol. III no. 6 (Oct. 1970), no. 7 (May 1971), and no. 8 (Oct. 1971). Annually to members against 15p. subscription: or prices on request from J. C. C. Probert, Esq., 1 Penventon Terrace, Redruth.

These issues see the tenth anniversary of this lively and responsible society, whose chronicle of specifically Methodist history in Cornwall is maintained at an impressive rate. Articles by Richard Potts, John Probert, and others adorn the pages, and Mr. Cowls' paper on Benjamin Carvosso in Tasmania (no. 7, 151) continues the record overseas. There is, as usual, much valuable statistical information, and no. 8 contains an Index to the entire third volume. Membership seems to be held at a good level, as it should be in view of what members get for the absurdly low subscription!

The Lizard—a magazine of field studies vol. IV no. 3 (1971). Price on request from the Editor, Mrs. M. C. Holden, Kernyk, Housel Bay, The Lizard, via Helston.

Apart from the usual contributions dealing with the world of the natural sciences, we note Mrs. Edith Dowson's careful and widely-ranging paper (illustrated by Mr. Roger Penhallurick) on flint finds from the Lizard (11-16), perhaps the

first survey of its kind; and news of activities in a number of spheres. *The Lizard* well represents the work of its parent body in their aim of promoting 'all aspects of field study' in what is rightly described as 'this unique peninsula'.

New Cornwall vol. 17 no. 1 (Winter 1970-71). 40 p. for 4 issues, by post from the Editors, Richard and Ann Jenkin, An Gernyk, Leedstown, Hayle.

This, the only issue to have appeared since the last *Digest* was compiled, contains a number of useful reviews and notes of interest on the Cornish scene.

Padstow Echo no. 23 (Sept. 1970), no. 24 (wrongly marked as '27') (December 1971). One year's postal subscription, 64p., from the new Editors, Padstow Echo, The Drang, Padstow.

It is good to see that this essentially local periodical is, after all, being maintained, and No. 23 is a moving memorial issue to the founder and previous editor, Stephen Fuller; the range and nature of the contributions speak for themselves. No. 24 clearly aims to continue the character of the *Echo*—a mixture of local history, local comment, and local record—and includes a good account of the wreck of the 'Jane Lowden' in 1865, by a survivor; the start of a most promising (alphabetic) series on local dialect by Christine Worth; and a chronicle of events. All admirers of the *Echo* will be delighted to see that it has reappeared.

The Cornish Review no. 16 (Winter 1970), no. 17 (Spring 1971), no. 18 (Summer 1971), and no. 19 (Winter 1971). Thrice yearly: by post, £1.00 annually from Cornish Review, The Old Sawmills, Golant, Fowey.

Plenty of meat in these four issues, as the editor, the seemingly indefatigable Denys Val Baker, continues to prise new poetry and prose from a fresh generation of Cornish writers, and at the same time to stimulate literary and local history. Where so much is relevant it is difficult to be selective and fair in commenting, but in no. 17 Roger Hale's account of the County Library service from 1925, and Donald Rawe's 'Rise and Fall of Crugmeer', are of special interest: in no. 18 Ithell Colquhoun's title 'Cornish Earth' conceals a paper of enormous value, a primary record of dialect words and phrases, and some folk-lore, which she has gathered in West Penwith; and in no. 19 P. A. S. Pool gives us a foretaste of his edition of the extremely detailed diary of James Stevens (1847-1918), farmer of Zennor and Sancreed.

Journal of the Camborne-Redruth Natural History Society vol. 2 pt. 3 (Sept. 1971). Issued free to members: details from the Hon. Sec., Mrs. M. Williams, Mount Pleasant, Tehidy, Camborne.

This large issue maintains a high standard, with papers devoted to specific topics in Cornish natural history and to current records. It is not perhaps realised how much work members of this Society, which welcomes new recruits, undertakes, nor that it could use some fresh support.

Cumulative Index of Cornish Archaeology

LIST NO. 19 OCTOBER 1970—DECEMBER 1971

THIS LIST includes material which appeared between 1st October 1970 and 31st December 1971, with occasional references to material previously overlooked. In all items which are not in themselves hard-cover books, nor form parts of journals or serials, the letters (PC) imply 'paper covers'. Numbers in brackets on right-hand sides of entries, thus (885), are cross-references to earlier entries in this Index. Any item bearing a number lower than 341 will be found in the similar Index instalments, annually, in *Proceedings of the West Cornwall Field Club* (nine issues, 1953 to 1961), the predecessor of *Cornish Archaeology*. The only new heading in the present list is 'Underwater Archaeology', now separated from the previous 'Maritime' class.

General

- 923 DOWSON, E. A. Lists of the antiquities of Kerrier, by parishes, 11: Mullion. 12: Landewednack. *CA* 9 (1970), 152-6.
- 924 FOWLER, P. J. Patterns of Archaeology, Archaeologists—Or Destruction? *Archaeol. Review* 5 (1971, for 1970), 3-4 and 25-6 (map).
- 925 HARLEY, J. B. The Ordnance Survey and the origins of official geological mapping in Devon and Cornwall. *Exeter Essays Geog.*, 105-124.
- 926 MILLWARD, R., and ROBINSON, A. South-West Peninsula. Macmillan, London, 1971.
- 927 RAVENHILL, W. L. D. The Missing Maps from John Norden's Survey of Cornwall. *Exeter Essays Geog.*, 93-104.
- 928 RUSSELL, V. West Penwith Survey (C.A.S. Parochial Check-List Survey, Monograph no. 1). Warne, for C.A.S., Truro, 1971 (PC)
- 929 SHEPPARD, P. Lists of the antiquities of Powder, by parishes, 9: St. Stephen-in-Brannel. 10: St. Mewan. *CA* 9 (1970), 144-152.
- 930 THOMAS, A. C. Lists of the antiquities of East Penwith, by parishes, 5: Camborne. *CA* 9 (1970), 136-144.
- 931 WOOLF, C. An Introduction to the Archaeology of Cornwall. Barton, Truro, 1970.

Quaternary

- 932 MITCHELL, G. F. The St. Erth Beds: an alternative explanation. *Proc. Geol. Assoc.* 76.4 (1965), 345-66.

Mesolithic

- 933 DOWSON, E. A. Flint finds from the Lizard. *Lizard IV.3* (1971), 11-16. (153)
- 934 PALMER, S. The Stone Age industries of the Isle of Portland, Dorset and the Utilisation of Portland Chert as Artifact Material in S. England (Cornish examples). *PPS* 36 (1970), 82-115.

Neolithic

- 935 ASHBEE, P. A. Problems of the Neolithic and Bronze Age in Cornwall. *CA* 9 (1970), 5-16. (270)
- (933) DOWSON, E. A. Flint finds from the Lizard. *Lizard IV.3* (1971), 11-16.

- 936 KEEN, L. and RADLEY, J. Report on the petrological identification of stone axes from Yorkshire (18, 19, map, Gps. I & III Cornish implements). *PPS* 37 (1971), 16-37. (385)
- 937 MERCER, R. The neolithic settlement on Carn Brea: preliminary report. *CA* 9 (1970), 53-62.
- 938 MERCER, R. Carn Brea, Illogan. *CAS Field Guide* 12. Earle, Redruth, 1970. (PC)

Bronze Age

- (935) ASHBEE, P. A. Problems of the Neolithic and Bronze Age in Cornwall. *CA* 9 (1970), 5-16.
- 939 BRANIGAN, K. Wessex and Mycenae: some evidence reviewed (refs. to Pelynt 'dagger'). *Wilts. Archaeol. Nat. Hist. Mag.* 65 B (1970), 89-107. (56, 116)
- 940 MERCER, R. The excavation of a Bronze Age hut-circle settlement, Stannon Down, St. Breward. *CA* 9 (1970), 17-46.
- 941 SAVORY, H. N. Note on 'cushion-mace' implement, Plas Tyno, Llandegla (of Cornish sheared epidiorite?). *Trans. Denbighs. Soc.* 18 (1969), 13-15.
- 942 SAVORY, H. N. A Flattened Pestle Mace from Glamorgan (Gp. I, Cornish provenance). *BBCS XXIV.i* (Nov. 1970), 98-101.
- 943 TAYLOR, J. J. Lunulae Reconsidered (three 'classical' Irish e.g.s, Cornwall). *PPS* 36 (1970), 38-81. (268)

Early Iron Age

- 944 CHRISTIE, P. M. Carn Euny: Sixth Interim Report on the 1969 Season. *CA* 9 (1970), 63-8. (576, 663, 694, 795, 876)
- 945 HARVEY, D. The double fort at Merthen, Constantine. *CA* 9 (1970), 103-6.
- 946 MEGAW, J. V. S. A Group of Later Iron Age collars or neck-rings from western Britain. *Prehist. Roman Studies*, 145-155. (695)
- (938) MERCER, R. The neolithic settlement on Carn Brea: preliminary report (refs. to EIA hill-fort). *CA* 9 (1970), 53-62.
- 947 NEWCOMB, R. M. The spatial distribution of hill-forts in west Penwith. *CA* 9 (1970), 47-52. (778)
- 948 TURK, F. A. Notes on Cornish Mammals, etc., 3: Iron Age material, Crane Godrevy, Gwithian. *CA* 9 (1970), 121-7. (882)

Roman and Native (-400)

- 949 BROWN, P. D. C. A Roman Pewter Mould from St. Just-in-Penwith, Cornwall. *CA* 9 (1970), 107-110.
- 950 DOUCH, H. L. and BEARD, S. W. Excavations at Carvossa, Probus, 1968-70; Preliminary Report. *CA* 9 (1970), 93-8.
- 951 FOX, (Lady) AILEEN, and RAVENHILL, W. L. D. Excavation of the Roman Fort at Tregear; Fourth Interim Report. *CA* 9 (1970), 99-102. (635, 697, 801)
- 952 JACKSON, K. H. Romano-British Names in the Antonine Itinerary. *Britannia* 1 (1970), 68-82 (ref. to Dumnonia). (954)
- 953 PEARCE, S. M. Late Roman Coinage in South West Britain. *Trans. Devon Assoc.* 102 (1970), 19-34.
- 954 RIVET, A. L. F. The British Section of the Antonine Itinerary. *Britannia* 1 (1970), 34-82. (952)
- 955 Notes on Cornwall (Roman Britain in 1969): Crane Godrevy, Tregear, Trebarveth, Nor'nour. *Britannia* 1 (1970), 297-8.

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- 956 THOMAS, A. C. The Early Christian Archaeology of North Britain. O.U.P., 1971 (numerous refs. to Cornish sites: see Indices).
- 957 THOMAS, A. C. Britain and Ireland in Early Christian Times, AD 400-800. Thames & Hudson, 1971 (esp. pp.62-70).
- 958 Notes on Crantock and Merther Uny. *Med. Arch.* 13 (1969), 230-1.

Medieval (1100-1500)

- 959 ADAMS, J. H. St. Docco, St. Kew and the Kelly Green Chapel, St. Tudy. *DCNQ XXXII.1* (1971), 7-8.
- 960 ELLIS, G. E. Index to Articles on Crosses in *Devon and Cornwall Notes and Queries*, vols. 24 to 31. The author, 1970. (PC)
- 961 HATCHER, J. Rural Economy and Society in the Duchy of Cornwall, 1300-1500. C.U.P., 1970.
- 962 HATCHER, J. Non-Manorialism in Medieval Cornwall. *Agric. Hist. Rev.* 18.1 (1970), 1-16.
- 963 HULL, P. L. William Worcester in Cornwall. *CA* 9 (1970), 115-120.
- 964 PEMBERTON-LONGMAN, J. Note on Cornish Cross at Eastbourne, Sussex. *OC* 7.7 (1970), 332; illus. *OC* 7.9 (1971), 402.

- 965 PEMBERTON-LONGMAN, J., and HENDERSON, M. A Missing Camborne Cross Found (Roskear cross). *OC* 7.7 (1970), 329-31.
- 966 POUNDS, N. J. G. Taxation and Wealth in Late Medieval Cornwall. *JRIC (n.s.) VI* (1971), 154-167.
- 967 SAUNDERS, A. D. Excavations at Launceston Castle, 1965-9: Interim Report. *CA* 9 (1970), 83-92. (528, 809)
- (948) TURK, F. A. Notes on Cornish Mammals, etc., 3: medieval material, Crane Godrevy, Gwithian. *CA* 9 (1970), 121-7.
- 968 Note on Bury (Berry) Court, Jacobstow. *Med. Arch.* 13 (1969), 268.
- 969 Notes on Launceston Castle (175) and Bury Court (189, with plan, fig. 65). *Med. Arch.* 14 (1970).

Post-medieval (1500-) and architectural

- 970 LANE-DAVIES, A. Holy Wells of Cornwall. Fed. Old Cornwall Soc., 1970. (PC)
- 971 MILES, T. J., and SAUNDERS, A. D. King Charles's Castle, Treco, Scilly. *Post-Med-Arch.* 4 (1970), 1-30.
- 972 WEAVER, M. E. Round Buttress Chimneys: a postscript. *CA* 9 (1970), 68. (897)
- 973 WILLIAMS, J. A. Cornish Tokens. Barton, Truro, 1970. (PC)

Industrial

- 974 ANTHONY, G. H. The Tavistock, Launceston and Princetown Railways. Oakwood Press, 1971.
- 975 BARTON, D. B. Essays in Cornish Mining History: 2. Barton, Truro, 1971. (827)
- 976 BLUNDEN, J. R. The redevelopment of the Cornish tin mining industry: its problems and prospects. *Exeter Essays Geog.*, 169-184.
- 977 BROWN, H. MILES. Cornish Clocks and Clockmakers. 2nd. rev. edn. David & Charles, Newton Abbot, 1970.
- 978 DOUCH, H. L. Cornish Goldsmiths. *JRIC (n.s.) VI* (1970), 121-138.
- 979 DOUCH, H. L. The Tobacco Trade and the Manufacture of Clay Pipes in Cornwall. *JRIC (n.s.) VI* (1970), 139-153.
- 980 MINCHINTON, W. E. and PERKINS, J. W. Tidemills in Devon and Cornwall. *DCNQ XXXI.8* (1970), 246-50, and *DCNQ XXXII.1* (1971), 1-7.

- 981 PEARSON, A., William Pryce, M.D. (1735-1790). *OC* 7.9 (1971), 388-396.
- 982 RULE, E. M. *et al.* An Underground Feature near Coverack Bridges, Helston. *CA* 9 (1970), 111-4.
- 983 RULE, J. G. Some social aspects of the Cornish Industrial Revolution. In: *Industry and Society in the South West*, ed. BURT, R.; *Exeter Papers in Economic History*, 3, Exeter, 1970, 71-106.
- 984 THOMAS, A. C. The Camborne Printing and Stationery Company. *Camborne Parish Mag.*, November 1971, 17-21.
- 985 WOODCOCK, LI. Richard Trevithick's First Steam-Locomotive Trial. *Camborne Parish Mag.*, November 1971, 9-15.
- 986 The Holiday Industry of Devon and Cornwall. Min. of Housing and Local Govt., for South West Economic Planning Council: HMSO, 1970 (ISBN 11 750089 5).
- 987 Note on the Cornish Water-Wheel Preservation Society. *CA* 9 (1970), 81-2.
- 988 Note on the Trevithick Society. *IA* 8.1 (1971), 94-5.
- 989 Note on the Prestongrange Beam Engine. E. Lothian (70-in. Harvey & Co., 1874, preserved). *IA* 7.4 (1970), 457-9.

Material Culture

- 990 COWARD, E. N. A West Cornwall Husbandman in the early 19th century. *OC* 7.9 (1971), 411-8.

Scilly

- 991 ASHBEE, P. A. Excavations at Halangy Down, St. Mary's, Scilly, 1969-70. *CA* 9 (1970), 69-76. (650, 723, 816)
- 992 BUTCHER, S. A. Excavations at Nor Nour, Scilly, 1969-70: interim report. *CA* 9 (1970), 77-80.
- 993 LARN, R. Cornish Shipwrecks: vol. 3, The Isles of Scilly. David & Charles, Newton Abbot, 1971.
- (1971) MILES, T. J. and SAUNDERS, A. D. King Charles's Castle, Treco, Scilly. *Post-Med. Arch.* 4 (1970), 1-30.
- 994 TANGYE, M. Scilly, 1801-1821. The author, Camborne, 1970. (PC)
- 995 The Isles of Scilly: an economic survey and report. South West Economic Planning Council (doc. 46059), Bristol, 1971. (PC)

Maritime

- 996 MARCH, Edgar J. Inshore Craft of Britain, in the days of sail and oar: vol. 2 (=south and west coasts). David & Charles, Newton Abbot, 1970.
- 997 NOALL, Cyril. Smuggling in Cornwall. Barton, Truro, 1971.
- 998 OLIVER, A. S. Boats and Boatbuilding in West Cornwall. Barton, Truro, 1971.
- 999 STEPHENS, W. B. The foreign trade of Plymouth and the Cornish ports in the early 17th century. *Trans. Devon Assoc.* 101 (1969), 125-137.
- 1000 Note on the 'Katie of Padstow' Preservation Society. *Mariner's Mirror* 56.4 (1970), 366.

Underwater archaeology

- 1001 BAX, Alan, and COWAN, Rex. JUNO 1782: an Underwater Survey, 4th-5th December 1970. Fort Bovisand, Plymouth, 1971. (PC)
- 1002 Ferdinand Research Group: Interim Report, Survey and Excavation of a mid-17th century wreck at Mullion, Cornwall. For the authors, dupl., 1970. (PC)

Cornish Language and Dialect

- 1003 BICE, Christopher. Lyver Lavarow Kernewek. Lodenek Press, Padstow, 1971. (PC)
- 1004 BICE, Christopher. Names for the Cornish. Lodenek Press, Padstow, 1971. (PC)
- 1005 ELLIS, P. Berresford. The Story of the Cornish Language. Barton, Truro (Tor Mark Press), 1971. (PC)
- 1006 GUYONVARCH, C. J. Vannetais *areih*, 'dispute', cornique *areth* (*AREKTU-). *Ogam* (Rennes) XX (1968), 378-9.
- 1007 HOOPER, E. G. R. and WHITE, G. P. Lyver Pysadow. Cornish Language Board, 1971. (PC)
- 1008 JACKSON, K. H. Old Cornish *odencolc* = *odyn galch*. *BBCS XXIII.ii* (May 1969), 116-7.
- 1009 NEUSS, Paula. Memorial Reconstruction in a Cornish Miracle Play. *Comparative Drama* (Western Michigan Univ.), V.2 (1971), 129-37.
- 1010 WAKELIN, M. F. and BARRY, M. V. The voicing of initial fricative consonants in present-day dialectal English. *Leeds Studies in England, n.s., II* (1968=1970), 47-64.

- 1011 WAKELIN, M. F. A dialect note: S.W. *Breakfast* in the Survey of English Dialects. *Orbis* (Louvain), *XIX.1* (1970), 47-8.
- 1012 WAKELIN, M. F. Welsh influence in the west of England: dialectal *tallet*. *Folk-Life* 8 (1970), 72-80.
- 1013 WILLIAMS, N. J. A. Three Middle Cornish Notes: RD 2093-8, Pascon 201, 2-3, Pascon 238. *BBCS XXIII.iv* (May 1970), 370-2.
- Local History**
- 1014 AIMABLE, J. C. The History of Penponds. The author, Penponds, 1970. (PC)
- 1015 AXFORD, E. C. Some Notes on St. Neot, Cornwall. Snell & Cowling, Liskeard, n.d. (1970?). (PC)
- 1016 BOOKER, Frank. The Story of Morwelham. Dartington Amenity Research Trust Publ. no. 2, Dartington, Totnes, 1970. (PC)
- 1017 (CARAH, J. Sims). The Carved Benches of Holy Trinity Church, Penponds (Camborne), 1929-34. Earle, Redruth, 1969 (repr. of 1934 original). (PC)
- 1018 HOSIER, F. A. Lawhitton (parish history). *OC* 7.8 (1971), 360-71.
- 1019 LATHAM, Bryan. Trebartha—the house by the stream. Hutchinson, London, 1971.
- 1020 PAYNTER, W. H. Looe, A History and Guide. The author, East Looe, 1970. (PC)
- 1021 PENDER, Nettie M. A Short History of Mousehole. Headland Press, Penzance, and the author, 1970. (PC)
- 1022 RAWE, Donald R. Padstow's Obby Oss and May Day Festivities. Lodenek Press, Padstow, 1971. (PC)
- 1023 WILLIAMS, Michael. Tintagel. Bossiney Books, 1971. (PC)

Abbreviations

CA	Cornish Archaeology
BBCS	Bulletin of the Board of Celtic Studies
DCNQ	Devon and Cornwall Notes and Queries
IA	Industrial Archaeology
JRIC	Journal of the Royal Institution of Cornwall
Med. Arch.	Medieval Archaeology
OC	Old Cornwall

Post-Med. Arch.	Post-Medieval Archaeology
PPS	Proceedings of the Prehistoric Society
Exeter Essays Geog.	Gregory, K. J. and Ravenhill, W. L. D., eds., <i>Exeter Essays in Geography in Honour of Arthur Davis</i> (Univ. of Exeter, Exeter, 1971)
Prehist. Roman Studies	G. de G. Sieveking, ed., <i>Prehistoric and Roman Studies</i> (British Museum, 1971).

Parochial Check-Lists of Antiquities

THIS INSTALMENT contains the eleventh list from the Hundred of Powder; a third list from Pydar, where work has now recommenced; and additions to three previous lists from Penwith (Eastern Division). The Society acknowledges with gratitude a subvention from the Department of the Environment in respect of the publication of these lists.

The following new Abbreviations should be added to the consolidated Lists of Abbreviations (*CA* 1 (1962), 107 ff., and *CA* 6 (1967), 82 ff.) and to the shorter lists published in *CA* 7, 8 and 9.

Early Tours	R. Pearse Chope, <i>Early Tours in Devon and Cornwall</i> (reprint, David & Charles 1967), cited by page
E.C.C.R.	<i>English China Clays Review</i> (defunct, house journal of English China Clays Ltd., St. Austell)
Hend. HP/R	Charles Henderson, MS. <i>History of the Parish of Roche</i> , at R.I.C., Truro.
Lane-Davies	A. Lane-Davies, <i>Holy Wells of Cornwall</i> (Earle, Redruth, for Fed. Old Cornwall Socs., 1970, cited by page)
Lewis P. Rly	M. J. T. Lewis, <i>The Pentewan Railway 1829-1918</i> (Barton, Truro, 1960)
Rowse, St. A	A. L. Rowse, <i>St. Austell—Church, Town, Parish</i> (Warne, St. Austell, 1960)
Thomas 1818 Map	Richard Thomas, MS <i>Map of Lands near Redruth shewing . . . manors & estates, with lodes, etc. . .</i> (Falmouth, 1818), penes Professor A. C. Thomas

HUNDRED OF POWDER

11: PARISH OF ROCHE (6440 acs.)

PETER SHEPPARD

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Barrows			
1 Hensbarrow	99685752	Yes	1284 Hyndesbergh, Gover 383; Norden; Essays 130; Thomas 45; Lake IV. 120; Gilbert P. H. III. 394; O.S.; Payne 13.89; E.C.C.R., Christmas '66
2 Hensbarrow Down	99135745	Yes	O.S. 1813; Thomas 44 (diam. 70 ft.)
3 Hensbarrow Down	99405794	Yes	Air photo
4 South-East area of parish	?		Crucheyd, Hend. MSS (26) 49; Hend. Top. III. 183; Payne 95
5 Bilberry	Ap. 019605		1270 Billibry, Hend. Top. III. 180; Gover 416; TA 1829-30 Burydown Pk; Payne 86
6 'Near the Parsonage'	Ap. 982598 ?		(Map ref. gives nearest streamworks); RCG 6.11.1835; Mines VIII. 54
7 Goss Moor	98216090	Yes	O.S. 'Tumulus'
8 Goss Moor	98196138	Yes	O.S. 'Tumulus'; Payne 13
'Holywell Barrow'			
9 Goss Moor	98116146	Yes	Air photo
10 Goss Moor	98056146	Yes	O.S. 'Tumulus'
11 Little Brynn	97736246		TA 989 Burrow Meadow
12 Belowda	97126248	Yes	'Damaged a few years ago'. Local inf.

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
13 Belowda	97156251	Yes	
14 Belowda Beacon	97146255	Yes	O.S. 1813; Thomas 45; 'Belowda Barrow' Thomas Survey (key)
15 'Crucbargus'	?		Hend. MSS (18) 70
Menhirs			
1 Penstras	Ap. 997620		Hend. MSS (26) 33; Hend. Top. III. 183; Payne 13
2 Penstras	Ap. 998621		As above
3 Tregonetha Downs	Ap. 960626		Gascoyne
(The Longstone, St. Stephen-in-Brannel No. 1, has been re-erected at 98676012 in Roche; CA 9 (1970) 128; Cornish Guardian 30.7.1970, 5.11.1970)			
Camps			
1 Pendeen	Ap. 960605		1303 Pendyn, Gover 418; Hend. Top. III. 180; Essays 118; Payne 90
2 Criggan	Ap. 013606		1250 Karegen, Hend. Top. III. 180; TA 1951 The Round, 1796 Rounds; Payne 88
3 'Woon on the Goss Moor'	?		JRIC XV.245
4 Little Brynn	98106266		TA 1070 Gold Dennis; Payne 89
Unclassified Earthworks			
1 Goss Moor	97346017	Yes	Enclosure, double banks of earth. Inner 38 ft.sq. Outer 58 ft.sq. ; Air photo
Round Fields			
1 Little Brynn	97806222		TA 1107 The Round
2 Little Brynn	98046212		TA 1101 The Rounds
3 Holywell	98426186		TA 1142 The Round; Payne 89
'Jews House'			
1 'Near the Parsonage'	Ap. 982598		(Map ref. gives nearest streamworks); RCG 6.11.1835; Mines VIII.54
Fields			
1 Tregoss	961606 to 972606	Yes	(Strips), O.S.; Local info.
2 Belowda	961615 to 972615	Yes	(Strips), O.S.
Lan			
1 Lantown	Ap. 983599		1244 Lantounan, Hend. Top. III. 180; TA 478 Lantowns; Payne 85.89
Chapels			
1 St. Michael's Roche Rock	99105960	Yes	Norden; 31st RRIC (1849) 54-5; H & D II. 548; Lysons II. 278; Pol. HC I.66; Pen. HS II.192; Lake IV. 119, 123; Gilbert H.S. II. 863; Gilbert P. H. III. 391-3, 397-9; JRIC IX 108. XV 246. (NS) III 59. 426; C.P.R.E. 62; Hend. HP/R: Hammond 301; Payne 49-52, 74; OC II 6 (1933) 19-21; Early Tours 199 (Pococke)
2 Tremodret	00326128		JRIC (NS) III 427; Hend. MSS (26) 23; Payne 23-4; Local info.
3 Tregonhay	Ap. 997604		JRIC (NS) III 427
4 Coldvreath	(See footnote below Holy Well 3).		JRIC (NS) III 427; Lake IV 120; Gilbert P. H. III. 394; Payne 15

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
5 Trebilcock	799246078		JRIC (NS) III 427; ? TA 1606 Hospital
6 Holy Well	Ap. 984616		JRIC (NS) III 427-8; Hend. HP/R; Lysons II. 278; Gilbert H. S. II 864; Gilbert P. H. III. 393; X.E. 86; Lake IV 120. 122; Kelly (1883) 1008; C.P.R.E. 61; OC II 6 (1933) 22; Payne 15; Lane-Davies 72
Holy Wells			
1 Holy Well	98506173	Yes	JRIC (NS) III 427; Lysons II. 278; Gilbert H. S. II 863; Pen. HS II 194; X.E. 86; Hammond 303; Couch 195; Dexter Fig. 59; OC II 6 (1933) 22; Payne 16; Lane-Davies 72
2 St. Gonnet's	99125951	?	O.S. 'St. Gomanda's Well (Site of); JRIC (NS) III 426; Gilbert P. H. III 397; Lake IV 119. 123; Couch 196; OC II 6 (1933) 22; Hammond 302; Payne 17-8
3 Coldvreath			Gilbert P. H. III 394; Lake IV. 120; ? TA 306-8 Well Fields; Local info.
(The site is probably a well at 98055815 in St. Stephen-in-Brannel parish)			
Crosses, Cross-sites			
1 Churchyard	98805977	Yes	Langdon 344-5; X.E. 19; Lake IV 122; Blight SB.2, p. 18; JRIC XV 245. (NS) III 428; VCH 429. 438; Baird; Dexter 103 Fig. 41; Payne 19; OC II 6 (1933) 23
2 Glebe ?	98735998	Yes	'Removed thither' Lake IV 122; Langdon 78; VCH 426; Hend. HP/R; Baird; JRIC (NS) III 428; Payne 19
3 Trerank	Ap. 986594		TA 134 Cross Park. 141, 394 Hr, Lwr. Crows Win; Payne 18
4 Trerank (As above ?)	Now at Rectory 98656000	Yes	VCH 430.434; Payne 19-20; JRIC (NS) III 428; Baird; Langdon/Hend.
5 Cross Hand	95736261	Yes	O.S. 'Cross'; (Parish boundary, St. Wenn entry) Baird; Payne 20
6 Coldvreath	Ap. 988585		TA 197.225 Crows Parks
7 Trebilcock	Ap. 992609		(Base) Payne 18
8 Tregonhay	Ap. 997604		(Base) As above
9 Trenower	Ap. 998613		(Base) As above
Pounds, Pound Fields			
1 Polskeys	Ap. 010607		TA 1741.1743.1781-2.1961 Pound Parks
2 Tremodret	00366139		TA 1525 Pound Meadow
3 Tregoss	96536054		TA 675-6 Poundridge Meadow
4 Tregarrick	98835985		'Manor Pound' OC IV 5 (1946) 145; TA 112a Pound
5 Colbiggan	00956337		TA 1335 Pound Close
Medieval and Later			
1 Tregarrick	99386008		1250 Tregarrek, Hend. Top. III 180; Payne 25.91; O.S. 'Tregarrick (Site of)'; Local info.
2 Tremodret	00416118		O.S. 'Manor House (Site of)'
3 Tremodret	Ap. 003612		Culver House, Hend. MSS (26) 17
4 Goss Moor	98106099	Yes	TA Map 'Workhouse'; TA 506 Poorhouse
Mills			
1 Brynn Mill	98246333	Yes	TA 1040 Brynn Mill; (Complete with machinery)

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
2 Tregoss Mill	97336008	Yes	TA 521a Pendean Mill; O.S. 'Tregoss Mill' O.S.
3 Gilley Mill	97805944		
4 Tremodret	00436120	Yes	Local info.
5 Tremodret	Ap. 010617		TA 1438-9 Tuck Mill; 1270 Melyndy Fullator, Hend. Top. III 183; Essays 207; Hend. MSS (26) 17, 39; Payne 92, 95
6 Tremodret	00456099	Yes	'Lower Town Mill' O.S. 1813; TA 1712 Mill; Hend. MSS (26) 9, 29; DD. CF. 2166 CRO
7 Carbis Mill	00205975	Yes	? 1233 Rosmelin, Hend. Top. III 180; TA 2078 Mill; O.S.; Payne 91
8 Coldvreath	98705837	Yes	Cornish Guardian 17.12. 1970
Industrial			
1 Carbis	00105960	Yes	O.S. 'Brick & Tile Works'; (Kilns, dries, machinery & water wheel); DD.CF.3874 CRO; Barton-Clay 188
2 Dyehouse	97955976		TA 467 Dyehouse; Payne 88
3 Belowda	97006214	Yes	Engine house, Ordish II 50
4 Little Brynn	98226233	Yes	Engine house
5 Royalton	97746180	Yes	Engine house
6 Woon	00935949		TA 2445-6 Stamping Mill; CF 3045 CRO
7 Hallelw	01445980		TA 2544 Stamping Mill
8 Station	99046149	Yes	Lime Kiln, O.S. 1881 25-in.
9 Bugle	01255915	Yes	Four-head stamps with 20 ft. diam. Water wheel. Local info.

PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
Miscellaneous Finds			
1 Camp 3	Flint, Leaf-shaped,		JRIC XV 245
	Arrow heads		
2 Barrow 6	Bronze Spear heads & Celts		As Barrow 6
3 'Loath-to-depart' Stream works	Bronze Spear heads		(Three drawings) JJR; A. Cwll. I. 6; Lysons ccxxv; Drawings Add. 9462 fol. 7b B.M.
4 Goss Moor	Shovel & Block Tin		H & D II 587; Pen HS 194; Lake IV 123; V.C.H.R. 39; Payne 56
5 Goss Moor	Iron tip of shovel	Truro	RIC Catalogue
6 'Jews' House 1	Coins & Block Tin		As 'Jews' House 1

(A penannular brooch, listed as from Roche, in Hencken 201, is from Lanivet: RIC Catalogue)

HUNDRED OF PYDAR

3: PARISH OF ST. BROKE (7462 acs.)

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Megalith			
1 Pawton	96586960	Yes	N.C. 24; Lukis 11, pls. 25, 26; A. Cwll II, 20; Crom.; C.P.R.E.; Hencken 48, 293
Barrows			
1 St. Broeke Downs	95726836	Yes	JRIC VII, 84, 141; C.P.R.E.; Hend. Top IV
2 St. Broeke Downs	95956874	Yes	Ditto
3 St. Broeke Downs	95976879	Yes	Ditto
4 St. Broeke Downs	96856837		(ploughed out)
5 St. Broeke Downs	97126837	Yes	As 1 above
6 St. Broeke Downs	97256838	Yes	Ditto
7 St. Broeke Downs	97356845	Yes	Ditto
8 St. Broeke Downs	97606821	Yes	Ditto
9 Hustyn Downs	99626800	Yes	Refs. as 1 to 8
10 Hustyn Downs	00056797	Yes	Ditto
11 Hustyn Gate	98626795	Yes	(not on OS 6.in)
12 Hustyn Farm			(ploughed out; JRIC VII, 141; Hencken 84)
Menhirs			
1 St. Broeke Beacon	96786831	Yes	Hend. Top IV; Hend. E. A., I. 46; C.P.R.E.; A. Cwll II, 20-21
2 St. Broeke Downs	97326825	Yes	As above
Early Christian			
1 Nanscowe, inscribed stone	96907080	Yes	Hend. Top IV; Hencken 222, 293; V.C.H. 419; 24 RRIC; JRIC IV (1872) 70; CIIC. I. 450
Medieval			
1 Whitecross cross	96457202	Yes	Blight SB.2, 73; Langdon 57
2 Bridge, Wadebridge	99107247	Yes	CBS, 115-9; over river Camel
3 Pawton (manor)	95917020		Hend. E.A., I. 47; Hencken 249-51
4 Culverhouse	98957164	Yes	TA 2333 Culvery; Essays, 213; C.P.R.E.
Chapels			
1 Wadebridge	99107245		St. Michael's, 1382; Hend. E. A., I. 48; CBS, 116
2 Hustyn	00456870		St. Katherine's, 1397; Hend. E. A., I. 49
3 Pengelly	99357040		St. Morgan', 1383; Hend. E. A., I. 51
4 Burlawne Eglos	99856995		Hend. E. A., I. 51; Hend. III. 118; JRIC (NS) II.3 (1955), 44-6; 'St. Bruerd' 1385; TA 1837 Chapel Hay
Manor Houses			
1 Trevorder	98707023	Yes	Hend. Top IV; Hend. III.118; R. Carew (ed. Halliday), 18
2 Treraven	99707128		TA 1837
3 Trevanion	98877161	Yes	Remains in garden of present house
Mills			
1 Hustyn		Yes	Grindstone
2 Penguean	96207348	Yes	Water-wheel
3 Wadebridge	98977224	Yes	Iron foundry
PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
Miscellaneous Finds and Sites			
1 Chapel no. 4	Carved stones	Field hedge at 99286990	JRIC (NS) II. 3 (1955), 45-6; 15th cent. ?
2 Chapel no. 4	Carved lintel	In parish church	(Excavated 1961)

HUNDRED OF PENWITH, EASTERN DIVISION ADDITIONS TO PREVIOUS LISTS

1: PARISH OF GWITHIAN (CA 4 (1965), 74)

CHARLES THOMAS

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Flint-working sites			
4 Godrevy Pond	58194281		Gwithian, site GP; PWCFC II.2 (1958), 9
5 Godrevy Cliff	58204225		Gwithian, site BZ
Settlements (Bronze Age)			
1 Godrevy Towans	586422		Trial cut, EBA/MBA sherds, ploughsoil; site GW. CA 3 (1964), 84
2 Wheal Emily	583417		Flints, bone, saddle-quern, surface finds; CA 6 (1967), 77
Rounds, Fortified Areas			
3 Tolzethan	595400	Yes?	Curve in hedge; air photos (found recently by O.S.)
Abandoned Medieval Settlements			
8 Hockins Pit	586416		Bar-lug pot, bones, etc.; house site ? CA 6 (1967), 77, 10th-11th cents.
Post-medieval			
7 Godrevy Green	58104295	Yes	Remains of midden, low cliff; 18th cent. ridge-tiles, bones, etc.
8 Gwithian Beach	584418 to 583419	Yes	Remains of 'Wheal Confidence' engine-house foundations, slag, pot., c. 1800-1830; CA 6 (1967) 77
9 Beach House	585421	Yes	Remains of arsenic flues
10 Rose-in-Valley	60774006	Yes	Arsenic works, stack
11 Rose-in-Valley	610401	Yes	Remains of arsenic works
Miscellaneous			
7 Churchtown	58634116	Yes	Arched doorway from Crane, Camborne, now in outbldg. at Churchtown House; from Camborne. CACT 65, fig. 12. H
8 Wheal Emily	583417	Finder, Truro	Roman coin, Tetricus, AD 267; CA 7 (1968), 107

3: PARISH OF ILLOGAN (CA 5 (1966), 70; CA 6 (1967), 95)

MICHAEL TANGYE

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Holy Wells			
1 Carn Brea Village	68994132	Yes	St. Euny's well; Blight SB, letter (of 1858), adjoins 'Park Holy Well'; Couch, 67; Lane-Davies 86; local tradition

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
2 Venton Raze ?	67424377	Yes	Name ? 1389 Fent en ras (Gover); OS 'Well'; Lane-Davies 86
Crosses			
10 Porthtowan	App. 693474		? ? Teh. Prop., 1757 'Wheal Growse adit adjoining Wm. Nancarrow's estate'
Pounds			
3 Treloweth	App. 66864166		Illogan vestry book 1844-86; 1846 'bottom of Treloweth lane', 'parish pound'; square walled compound
4 Tehidy			Tehidy presentments book 1756-94, penes F. L. Harris; 1756 'Pound of this manor at Tehidy'
Post-medieval and industrial			
16 Nance farm	66814431	Yes	Wheelpit & axle; power for distant threshing machine; millpool at 66784429
17 Menwinnion	645429	Yes	Brick granary supported by eight 4 ft. straddle stones
Mills			
9 Rayle farm	67574469	Yes	Illogan poor rate assessment bk, 18.6.1813 to Feb. 1823, Geo. Hocking, Great Mill part of Rayle; wheelpit & axle remain
10 Nance			TCP Par. Reg. 40, 1585 Eliz. w. of Thomas of Nance Mill (Bridge Mill?)
11 Feadon			Tehidy presentments book 1756-94; 1772 Saml. Phillips tenant of Feoden Mill, Nance

4: PARISH OF REDRUTH (CA 6 (1967), 90)

MICHAEL TANGYE

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Flint-working sites			
2 Sparnon Gate	68304445		Info. J. Thomas, Illogan
Rounds, Fortified Areas			
3 Old Portreath Road	68924302	?	Thomas 1818 Map (shows round); fieldwork,
4 Rayle Bottoms	68124387	Yes	Thomas 1818 Map; Law/Thomas; remains in curved field hedge C. Thomas, 1971
Lazar House			
1 Town			JRIC (NS) V.1 (1965), 94: 1307
Pounds			
2 Churchtown			Tehidy presentments book 1756-94, penes F. L. Harris; 6 Apr 1758 'Pound at Redruth Churchtown'
3 Treleigh			As above; 30 Aug. 1758 'Treleigh Pound'

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Mills			
8 Laity farm	67694490	Yes	Thomas 1818 Map, Laity Mill; axle hole remains in N. wall
9 Laity farm	67714488	Yes	Thomas 1818 Map; Valuation of Redruth 1775 'Saml. Phillips for his mills on Laity'; leat and wheelpit remain
Industrial			
18 West Tolgus	68544297	Yes	Traditional candle factory; long low bldg with round chimney; ? ? Redruth Poor Rate Bk 1803-11, 'Reuben Mager for Mrs. Vivians Candel House' (1806)
Miscellaneous			
1 Trefula	71334252		Beacon; various old maps; site of Parish Beacon on 600 ft. contour
2 Treleigh	70034442	Yes	Unidentif. structure, OS 6-in.; circular compound, earth banks, N. entrance; site of powder house? Treleigh Pound (no. 3 above)?

WEST PENWITH SURVEY

The first of the Society's special Parochial Check-list Survey Monographs, Miss Vivien Russell's *West Penwith Survey*, is now available. It contains all the published material for the fourteen parishes of the Land's End peninsula, with much additional matter, collated, revised and enlarged by Miss Russell, and presented under the major headings of classes of monument or site, sub-divided alphabetically under parishes. As a research document, it is designed not only for archaeologists, but for conservationists, anyone involved in any form of settlement-history or field study, educationalists, and all people interested in this incredibly rich archaeological region.

The book, in 'landscape format', measures $9\frac{3}{4}$ inches by $7\frac{1}{4}$ inches, with an attractive light-blue paper cover, and is printed by Messrs. Warne, the Society's printers. The 112 pages contain several thousand entries, but there is also a full explanatory introduction, with two maps—one showing the ecclesiastical and civil parishes, the other the physical setting—and a list of abbreviations.

Members of the Society (including institutional subscribers to *Cornish Archaeology*) may obtain copies at the reduced price of £2.00 each (£2.10 post free). Orders should be sent to the Editor,

Professor Charles Thomas,
Institute of Cornish Studies,
c/o Cornwall Technical College,
Redruth, Cornwall.

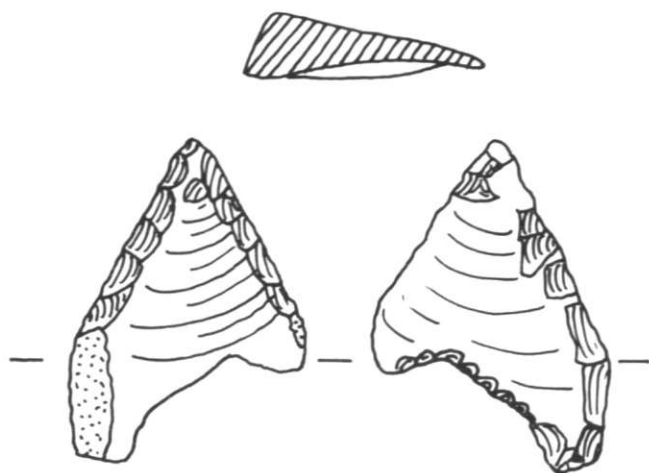


Fig. 34
Scale: actual size

FLINT ARROWHEAD FROM BRYHER, ISLES OF SCILLY

A collection of flint implements was recently presented to the Isles of Scilly Museum by Mr. Minett Smith of Gloucester. They were found on Bryher on a rocky beach locally known as "The Brow", which is covered at high tide.

The majority of the flints are typical Scillonian thumb-nail scrapers of various sizes and patterns. However, there was one atypical flint—an unsymmetrical arrowhead—almost exactly similar to that described as 'a transverse arrowhead of mesolithic or neolithic date' from Derbyshire,

pl. VI, 10, in Watson, W., *Flint Implements* (British Museum, 1950).

On consideration, a single-tanged arrowhead with one heavy wing would appear a very practical and penetrating hunting implement. The blade would presumably fly through the air in the vertical position with the heavy side acting as a keel. Since the ribs of birds and animals usually lie vertical to the side of the chest the chances of such an arrow being lethal would appear more favourable than with an equilateral arrowhead.

St. Mary's, Scilly
November 1970

P. Z. MACKENZIE

MEDIEVAL COIN HOARD FROM MAWNAN PARISH

During the summer of 1965 the writer was invited to examine four silver coins found in the garden of Cob Cottage at Carlidnack, Mawnan (SW 781291). They were discovered by chance in a flower bed situated on an earthen bank from which the stump of an old tree had been removed at an earlier date. Acting on behalf of the owner, Mrs. G. A. Atkinson, the writer reported the coins through the local police; they were not declared to be Treasure Trove and were then sent

to the British Museum for examination, where they were identified as sterling pennies of Edward I and II—

1. Class IVb (1300-1310)
Edward I-II EDWA R Berwick Mint
2. Class Xd (1302-10)
Edward I EDWA R London Mint
3. Class Xd (1302-10)
Edward EDWA R Canterbury
Mint
4. Class XIb
Edward II EDWAR R Canterbury
Mint

Situated approx. 150 ft. above Maenporth and commanding a view over Falmouth Bay, the hamlet of Carlidnack has, owing to post-war building development, become a suburb of Mawnan Smith. The place-name derives from the 'round', rightly described by Charles Henderson as 'the most perfect in the district'. The earliest recorded spellings were *Carlinick*, *Carlunyck* in 1397, *Kaerluniec* 1327. In 1707 the Will of George Barnacott, yeoman, refers to a tenement called *Carlinnack* and which appears to have

included the land upon which the coins were discovered.

In recording this unusual find the writer expresses thanks for the assistance given by the late Mrs. R. B. Goodden, to Mrs. G. A. Atkinson who presented the coins to Helston Museum, and to Mr. R. A. G. Carson, Department of Coins and Medals, British Museum, for the identification of the sterling pennies.

EDITH DOWSON

Mawnan

Reviews

V. M. & F. J. CHESHER. **The Cornishman's House—an introduction to the history of traditional domestic architecture in Cornwall.** D. B. Barton Ltd., Truro (1968). Pp. 142, pls. 22, figs. and plans 5. £1.60.

This book is a pioneer work. Understandably it is the first account of Cornish yeoman houses, for only in the last two decades has interest in vernacular architecture developed; it is also the first for any English county or region to be written by historians using the buildings themselves as historical evidence. Such pioneering is perhaps harder in Cornwall than elsewhere because of the extreme difficulty of dating buildings. There are several reasons for this: the intractable nature of granite restricted window and door mouldings to simple long-persisting forms; the time it took 'up-country' fashions in design to penetrate the county is uncertain and irregular; and there are few dated buildings compared with other stone districts.

Faced with this problem the authors have cast their book in a mould formed partly by recent archaeological excavations and partly by Dr. Hoskins' influential article, 'The Great Rebuilding of Rural England, 1570-1640' (*Past & Present*, Nov. 1953). The resulting text flows easily, the description needed to depict a house being interspersed with a narrative which illuminates the houses themselves through the men who built them, and their contents as recorded by probate inventories. The result is excellent, a pleasure to read and a pleasure to commend to everyone interested in Cornwall or in vernacular building generally.

Inevitably a pioneer work on houses which have hardly been touched on before raises prob-

lems of presentation, the chief one being to provide enough detail to establish securely the date range of a style or the form of any particular building. Thus it is not clear why a fireplace at Trewan (pl. II, p. 78) should not be contemporary with the date 1635 above it, for if, as the authors claim, the date-stone is later, the work to which it refers should be mentioned and the reason why the date was placed there conjectured. Things have been made far worse by poor printing of the blocks—a contrast to the pleasing typography—and in consequence the plates lack sharpness. An appendix, in smaller type than the main text, containing enough evidence to establish the development of each house and compressed to the utmost, might have solved the difficulty.

Lack of such evidence inclines the reader to question some of the conclusions. Since many of the dated buildings belong to the period 1640-1660, is it certain that the Great Rebuilding occurred in Cornwall before the Civil War? Would more detail on breaks of joint in masonry suggest that here, as elsewhere, the transition from long-house to residential farmhouse was a more protracted process than appears from the text? A better block of Carnsew, Mabe (p. 67) would have established whether there is a break of joint to the right of the door; if there is one the interpretation (pp. 46-7) would need to be changed.

It would be ungracious to emphasise these differences of opinion at the expense of an excellent book. It is for others to take up the research which Mr. and Mrs. Cheshier have begun so splendidly.

J. T. SMITH

R.C.H.M., London

List of Members of the Cornwall Archaeological Society

THIS LIST, last published in 1966 (*CA* 5 (1966), 92 ff.), is as correct as the Society's records allow up to November of 1971. It includes private members of the Society only. Names against which no date of joining appears are those of members (before 1961) of the old West Cornwall Field Club. In the margin, *H*=Honorary Members of the Society, and *J*=joint membership. We are particularly grateful to Miss Patricia Carlyon, Membership Secretary, for all her work in producing and checking this list; any member whose address is now wrongly listed is urged to write at once to Miss Carlyon, as all notices and publications are sent out by the Society and its printers on the basis of this list. Members who have not paid for 1971 are reminded that, under the rules, they are not entitled to receive this journal.

- | | |
|---------------|--|
| 1971 | ACKLAND, Miss N. A., Felsted, 25 Tower Park, Fowey. |
| 1961 | ADAMS, Canon J. H., Grove Cottage, St. Agnes. |
| 1971 | AINGER, J., 2 Glynn Road, Padstow. |
| 1969 | ALDIS, J. L. R., Chestnut Farm, Ponsanooth, Truro. |
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| 1963 | ALLEN, R. F., 6 Lyndhurst Gardens, London, N.W.3. |
| 1968 | AMES, Miss H. S., Rear Flat, 78 Bolingbroke Road, Coventry, Warwicks. |
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| 1967 | ANNESLEY, J. E. C., Bawden Farm, St. Agnes. |
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| 1968 | ASHBEE, P. A., M.A., F.S.A., The Old Rectory, Chedgrove, Norwich, NOR 2OW. |
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| 1968 | ASHTON, Mrs. H. R., Tregonning View, 36 Church Hill, Helston. |
| 1965 | ASTON, M. A., B.A., c/o Oxford City and County Museum, Fletcher's House, Woodstock, Oxon. |
| <i>J</i> 1971 | ATKINS, Miss R. A. & Miss E. E., The Craft Centre, St. George's Island, Looe. |
| 1966 | ATKINSON, Professor R. J. C., M.A., F.S.A., Department of Archaeology, University College, Cardiff, CF5 6AN. |
| 1965 | AVERY, M., B.A., Department of Archaeology, Queen's University, Belfast, BT7 1NN. |
| 1967 | AXFORD, E. C., Treneglos, St. Neot, Liskeard. |
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| 1971 | BAIN, C. M., Medwyn, 41 Carvoza Road, Truro. |
| 1968 | BAKER, K. F., Boskenna, 27 Higher King's Avenue, Exeter, EX4 6PJ. |
| 1967 | BALE, P. E., Tresco, Trelawney Road, Ponsanooth, Truro. |
| 1970 | BALL, Miss E. S., Trelowth Road, Polgooth, St. Austell. |
| 1965 | BARKER, P. A., M.A., F.S.A., 4 St. George's Square, Worcester. |
| 1968 | BARLOW, R. P., Hansdown Farm, Masbury, Wells, BA5 3HA, Somerset. |
| 1971 | BARRETT, Miss G. F., Department of Geography, Queen's University, Belfast, BT7 1NN. |
| 1962 | BARTON, Mrs. R. M., B.A., F.R.G.S., Still Waters, Olver Croft, Feock, Truro. |
| 1962 | BASS, A. H., Longstone House, Stratton, Bude. |

- J 1971 BAWDEN, Mrs. I. A. & Miss E. M., Helston Water, Bissoe, Truro.
 1962 BAWDEN-DAN, D., 19 Harrowes Mead, Edgware, Middlesex.
 1967 BAWDEN-DAN, Miss G. D., 19 Harrowes Mead, Edgware, Middlesex.
 1967 BEACH, Miss S., B.A., Borah Farm, St. Buryan, Penzance.
 1962 BEARD, S. W., 6 Godolphin Way, Newquay.
 1965 BECKERLEGGE, J. J., Little Keigwin, Mousehole, Penzance.
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