

No. 7 1968

CORNISH ARCHAEOLOGY



HENDHYSCANS KERNOW

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The Society's Area Correspondents, and all other standing Committees or Sub-Committees of the Society: *see inside back cover*.

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 (£1 or 10/- for full-time students and those under 21) is payable each January 1st, and entitles members to receive a free copy of this, the Society's annual journal, the annual printed Programme, 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 publications of the Society or of the former West Cornwall Field Club should be sent to Miss M. Buckingham, 12 Treverbyn Road, Padstow.

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Editorial

THE YEAR SINCE our last issue has been one of notable progress on all archaeological fronts in Cornwall and Scilly. Thanks to our Secretary's efforts, membership of all categories continues to increase; the Area Correspondent scheme has now been launched (p.3); the Society for Medieval Archaeology's Penzance meeting (p.62) was a resounding success; there seem to be more publications concerning the Cornish past than ever before (p.84); and we can report a very full season of excavations. The Society's main projects, Carvossa (in mid-Cornwall) and Merther-Uny (in west Cornwall), were designed to offer a much greater chance of participation for the numerous members who, particularly during the busy summer months, are unable to take long periods off, and this shift of emphasis appears to have met a real need. In addition, we have had work at Halangy Down, St. Mary's (Mr. Paul Ashbee); Carn Euny (Miss Russell and Mrs. Christie); two barrows and a chambered tomb (Miss Dudley); Lake's Pottery, Truro (Mr. and Mrs. William Lake); Perran Sands (Mr. Penna); Stannon, near Rough Tor (Mr. Roger Mercer); Berry Court (Mr. Beresford); and Launceston Castle (our President, Mr. Andrew Saunders). This widespread activity, ranging in time from the neolithic to the post-medieval, is symptomatic of the equally wide range of interests with which the Society now concerns itself. The fly in the ointment is the rising cost of both postage and printing. The former aspect, entirely outside our control and not always appreciated, hits heavily at any body like our own which must, annually, despatch over six hundred copies of a fairly weighty journal, to say nothing of the cost of circulars. The latter has long been controlled, to some extent, by our main printers, Messrs. Jock and Stuart Warne, whose continued interest and sympathy in the production of this journal has been a major contribution to the Society's work. But devaluation, and inevitable rises in the costs of both labour and material, are bound to affect even the most sympathetic of printers' estimates; and, with rising postal bills, your Committee sadly foresees the not-too-distant moment when the Society's annual outgoings exceed the annual income. Nor should it be forgotten that, owing to a series of fortunate arrangements and generous donations, we have not actually had to draw on Society funds at all this year in respect of excavations.

VERNACULAR ARCHITECTURE

Our members, Mr. and Mrs. Frank Chesher of Mullion, remind us that (hard on the heels of the Society for Medieval Archaeology at Penzance—see p.62) the Vernacular Architecture Group will be holding its annual Spring Conference in Cornwall in 1969, using Newquay as a base. The Cheshers are acting as local organisers and the dates will be April 15th to 19th. As most of the activity will consist of visits to houses which, being of 'vernacular' type, are necessarily rather small, it will not unfortunately be possible to make this an open Conference and it will have to be restricted to members of the V.A.G., many of whom will be unfamiliar with Cornish vernacular building. Those seriously interested should contact Mr. Chesher at Angrouse House, Mullion, near Helston.

THE SOCIETY'S AREA CORRESPONDENT SCHEME

Your Committee has long been aware of the need for some scheme which, in addition to a widely-based Committee membership, could provide the Society with locally-based representatives in all parts of Cornwall and Scilly. Much discussion and hard work has gone into the fulfilment of this idea, and it was eventually decided that a network based on the ecclesiastical Deaneries, which happen to be the only areas of the right size, would afford better cover than a system centred on towns (which would ignore large stretches of Cornwall) or on the Hundreds (which are uneven in extent). The scheme is now in operation, and a highly successful initial meeting was held at Truro on 31st July 1968, with the President in the chair. The following points emerged;

1. The need was stressed for names and addresses of A.C.'s (Area Correspondents) to be made widely known—e.g. through police stations, post offices, libraries and schools in their areas—so that reports of threats to sites or monuments, as well as of individual finds, could immediately be passed on.

2. It was felt that the scheme could be used to extend both the Parochial Check-list and Industrial Monuments surveys.

3. The value of closer contact with schools was emphasised; this could cover situations in which individual pupils bring in local finds (as they frequently do), and also when enthusiastic, but undesirable and unauthorised, excavations may be suggested.

4. The need for a greater number of public lectures, particularly during the winter—as single events or as courses—was felt; in such cases, A.C.'s would be able (co-operating with local Old Cornwall Societies) to advise on subjects and audience-appeal and make necessary local arrangements.

5. It was stressed that meetings were just as badly needed in the smaller villages as in the usual town centres (Truro, Penzance, etc.) and that this should not be overlooked.

6. The possibility of guided field walks or tours for members (as already organised by Mr. Axford in the St. Neot's area) was mentioned.

7. The compilation of further (area) Field Guides, on the lines of the Society's *Land's End* (no. 2) and *Newquay-Padstow* (no. 7) Guides was discussed, A.C.'s undertaking the necessary field-checking in appropriate areas.

8. There was felt to be a distinct need for guidance in reading-matter concerning Cornish archaeology and history (a frequent subject of enquiry), bearing in mind the resources of local public libraries.

Although it had initially been planned to hold a meeting of Area Correspondents annually, participants felt that their first meeting had been so helpful that they would prefer to meet twice a year; and a second meeting was arranged for the spring of 1969.

A list of Area Correspondents, with areas and addresses, appears on the inner back cover of this issue.

MEMBERSHIP LIST

A list of the names and addresses of all members, as complete as it was humanly possible for the Society's officers to compile it, appeared at the back of *Cornish Archaeology* 5 (1966). It was originally intended to repeat this at five-yearly intervals, but the Society's growth, and the constant requests from individual members for some form of up-to-date list on these lines, makes it desirable to shorten this interval. A fresh list will therefore be given with *Cornish Archaeology* 8 (1969), and will include all who have joined up to (approximately) August 1969. Will existing members, and any who have moved house (or have left any college, or University) since they first supplied Mrs. Nankivell with an address, please ensure that some permanent address for the despatch

of Society notices, and of course the annual journal, is supplied to Mrs. Nankivell as soon as possible? Any errors in the printed version in *CA* 5 (1966) should also be corrected. We still get a certain number of circulars and copies of *CA* returned each year, marked 'Gone Away' or 'Address Unknown', and there is nothing we can do to rectify this from our end.

OUR COVER

The cover drawing for this year depicts Halsetown, that extraordinary artificial settlement behind St. Ives created in the early 19th century by James Halse—solicitor, politician and mining adventurer—to house his workpeople; and to secure, under the 1832 property qualifications, their franchise in order to ensure his own return to Westminster. We show it, partly as a salute to the Vernacular Architecture Group in view of their planned 1969 meeting at Newquay, and partly because the artist, the late Peter Lanyon, drew it for this journal as an alternative to his other, more abstract, composition which formed the cover of *CA* 2 (1963). 'Here is a not very archaeological drawing. I have had a B cold and have had to do this with a temperature,' he wrote. 'If it is no good I will not take umbrage.' To those who know Halsetown it is of course a brilliant evocation of the settlement's character—semi-ruins and post-war restorations, cheek by jowl in Halse's geometric plots and wide rows—and it forms our own coda to the various Lanyon exhibitions of 1968.

THE SOCIETY'S MINOR PUBLICATIONS

A number of members have asked how they may obtain these. Your Committee regretfully decided, some years ago, that the functions of our Field Guides would be to inform the public, to make the Society's work more widely known, and to increase publication funds; and that it would not be feasible, in terms of either finance or practicability, to send free copies of all such Guides and pamphlets to all members. The Society has no real means of storing large quantities of unsold Guides, nor was it felt to be justifiable to tie up working capital in producing six or seven hundred extra copies of everything we publish. The following are however still available; prices are as originally fixed, but please include a 4d. stamp when ordering.

- | | |
|---|---------|
| 1 <i>Field Guide 2: Pool and Thomas, Land's End, 11 edn. (1966)</i> | 2s. 0d. |
| 2 <i>Field Guide 2: Pool and Thomas, Land's End, 12 edn. (1967)</i> | 2s. 6d. |
| 3 <i>Field Guide 7: Nankivell, Newquay-Padstow District (1962)</i> | 1s. 0d. |
| 4 <i>Field Guide 9: Brooks, The Rumps, St. Minver, 3 edn. (1967)</i> | 6d. |
| 5 <i>Field Guide 11: Thomas, Merther-Uny, Wendron (1968)</i> | 6d. |
| 6 <i>Special Guide: Thomas, Christian Sites in West Penwith (issued for the Soc. Med. Arch. conference at Penzance, 1968)</i> | 3s. 6d. |
| 7 <i>Special Bibliography No. 2: Early Christian Cornwall, selected references from 1933 to 1967 (6 pp. dupl.)</i> | 6d. |

Except for no. 3 (Newquay-Padstow), available from Miss M. Buckingham, 12 Treverbyn Road, Padstow, all items can be obtained from the Editor (Professor Charles Thomas, Dept. of Archaeology, The University, Leicester LE1 7RH).

Geographical Location Analysis and Iron Age Settlement in West Penwith¹

ROBERT M. NEWCOMB, PH.D.

IT IS TRITE but true to observe that methodological and conceptual innovations are characteristic today of science as a whole and of both archaeology and geography as discrete fields. Geographers are attempting to absorb what has been termed the Quantitative Revolution with its redefinition of disciplinary methods and goals.² Settlement geography, which is concerned with the facilities built by men in the process of occupying an area, has particular relevance to any investigation of past landscapes, so perhaps its new tools and insights are worth examining with reference to archaeological findings.³

Contemporary rural settlement is a complex amalgam of visible and invisible features. The physical setting of the land is the base upon which have developed the facilities for production and residence which in turn are bound to surrounding social and economic schemes. In order to understand a settlement complex, many types of data must be collected, digested and analysed according to some form of structured inquiry. When dealing with historic or prehistoric rural settlement, these considerations are still in force, but in addition there exists an additional limitation imposed by the veil of time. For the Iron Age period there are no local bureaucrats to interrogate and the bound volumes of governmental statistics are missing. In a way, therefore, the task of historical settlement analysis is more difficult, but the additional information provided by archaeological field work and excavation can compensate in part for the information of traditional type which we lack. Coming to this point of view *via* an archaeological persuasion, one begins with the excavation and subsequently comes forward to the settlement pattern itself in a manner so aptly described by Hirst and Judge.⁴

‘Excavations of habitations alone are never likely to reveal more than a limited amount of information. The wider issues of the communal life are also germane to an inquiry into chronology and they are apt to escape notice unless the excavations include not only habitation remains, but all others that may reasonably be assumed to be connected with each site.’

This exploratory study of prehistoric, rural, settlement will seek to apply the findings of two novel lines of investigation, the one based ideally in quantitative data and the other in qualitative analysis. Haggett’s book is a good introduction to modern quantified methods of location analysis as they are relevant to geographical investigations.⁵ By contrast more narrowly and deeply focused, Chisholm’s seminal thoughts on systems analysis can illumine the qualitative aspects of a prehistoric landscape.⁶

By providing a richness of archaeological data within a most accessible working area, West Penwith offers the investigator much raw material on prehistoric settlement and in particular that of the Iron Age. With the publication of parochial check-lists it is possible to compile a detailed map of settlement features in their areal distribution as illustrated by Figure 1.⁷ Here five features of rural settlement are depicted for a selected portion of Zennor and Madron parishes. This populous example illustrates the peculiar placement of the features with respect to terrain and drainage, and their apparent *ensemble*. Inasmuch as the site-lists do not discriminate among huts, hut circles or courtyard house villages, this finer degree of specification has not been attempted. Also relevant is the usual cautionary to the effect that such a map represents only finds actually made and interpreted as a result of field work and excavation. The

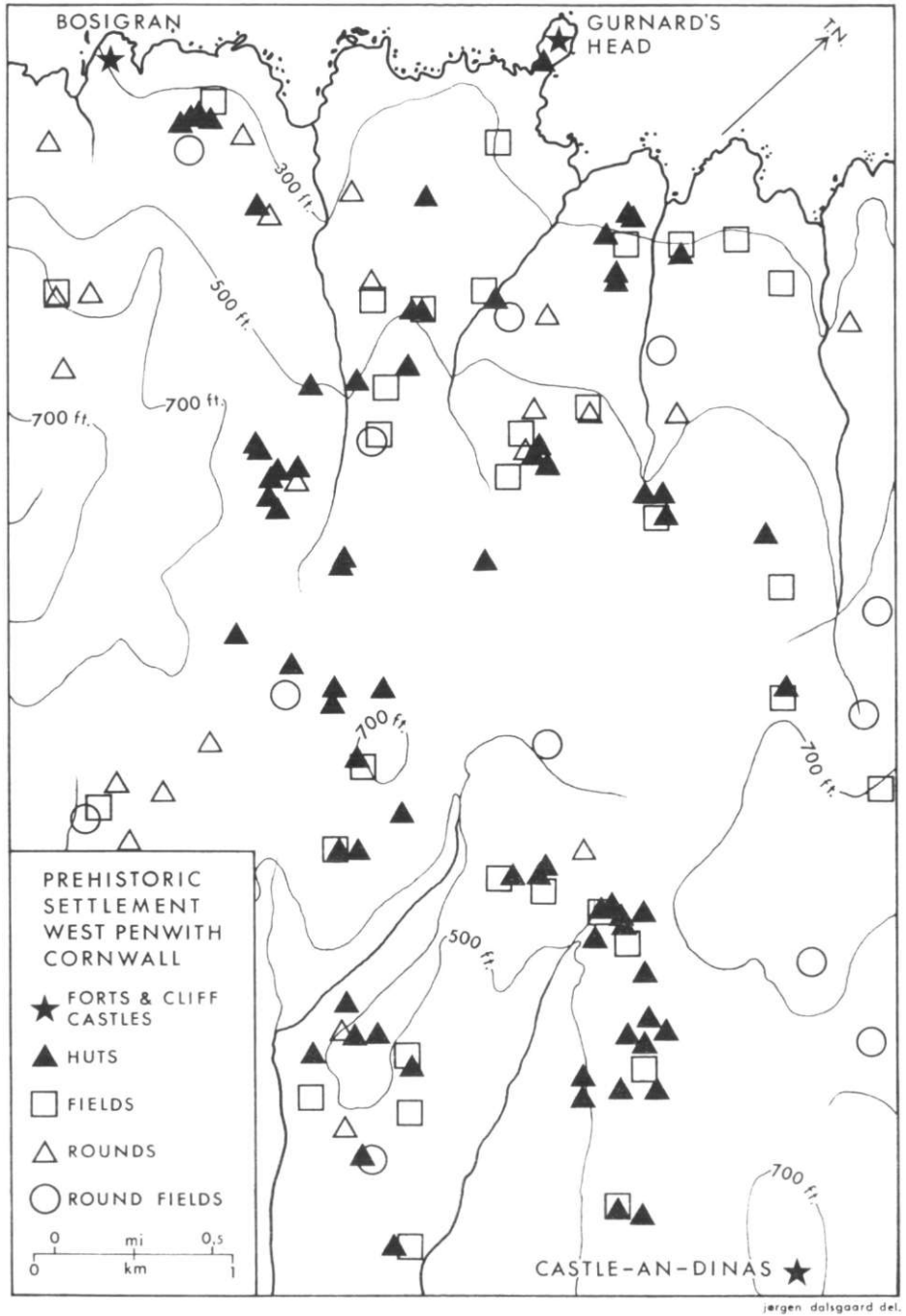


Fig. 1

Prehistoric settlement features in portions of Madron and Zennor parishes (Based upon the relevant Ordnance Survey maps with the sanction of the Controller of H.M. Stationery Office: Crown Copyright reserved)

known riches of the Penwith prehistoric scene bespeak much dedicated effort on the part of investigators over the years as well as many fortuitous accidents of preservation. Unrecognised or overlooked sites as well as the many possible ones which have been

obliterated through time are of course also absent. The investigator works, therefore, with something less than a 100 percent sample and with something less than a 100 percent certainty of correct identification and interpretation.

Three general attributes characterize these settlement features as mapped here. Their persistent longevity is a result of their massive construction in field stone; their remote, upland placement; and the subsequent history of Cornish land use, which has been of a type which produced less disruption and obliteration here than it did in stream terrace or alluvial situations. Secondly, relationships between form and function logically should have produced interconnections among some of the settlements relics in this particular area. Lastly, as is true of any settlement complex, the patterns which evolved on the granitic uplands of West Penwith were susceptible to evolutionary change in terms of both form and function. Such change could result in a higher level of structural complexity of settlement as succeeding developmental levels were reached. These structural changes could have been the product of innovations, inventions and introductions of technological and conceptual types which we normally reckon within our present culture as being the fruits of progress.

Is it possible at this late date to undertake a concrete discussion of the peculiarities of Iron Age settlement in West Penwith? There are five questions which ideally need answers if success in prehistorical, geographic location analysis is to be realized. First of all, the relative chronologies of the settlement features must be untangled. With respect to the area illustrated in Figure 1 this means identifying the huts and any associated fields which were in use during the Bronze Age only. By contrast, one assumes that the courtyard house villages, some of the associated field complexes, and the hill forts and cliff castles, co-existed in time and functioned together. Without complete excavation such crucial temporal discriminations cannot be achieved. The absence of these discriminations is one large difference between investigations of settlement in the past and those in the present, because it is possible to determine the functional co-existence in time of present-day features.

Secondly, an understanding of a settlement complex requires that information regarding its related cultural origins and affinities be available. 'Which folk with what cultural background inhabit and exploit a given piece of land' might be a suitable phrasing of this question. Once again the past differs from the present in that much if not all of this information is directly unavailable. It is a brash outsider indeed who would enter the archaeological lists seeking to illuminate the thorny patches of Iron Age cultural succession.⁸

Turning next to the livelihood patterns which can be assumed for the Iron Age in Western Cornwall, something more definite can be said about this vital category of geographic information. The conventional view is that these Iron Age upland dwellers were agriculturalists who depended upon field crops and domestic livestock.⁹ The possibility that tin streaming and tin processing also played a part in the local economy appears in the literature, but this supposition is questioned today because there is a lack of precise, demonstrable ties between settlement of this period and the exploitation of tin.¹⁰

Passing to the fourth and fifth questions one seeks information about both the social institutions then in force and the economic structure of the area as it operated in the Iron Age.¹¹ Obscure and difficult to reconstruct as these characteristics are, when one considers their high degree of importance to any understanding of a contemporary settlement pattern, their relevance to a full picture of the past becomes clear.

Although exciting interpretative possibilities are suggested by the gross distribution of settlement features in Figure 1, the absence of relatively complete statistics covering these five questions sets serious barriers in the path of any investigator who wishes to

apply the statistical techniques of location analysis. However, Haggett has discussed five characteristics of settlement structure which can provide a descriptive appreciation of the way whereby human occupation functions in a region.¹² These characteristics depend ideally for their full definition upon the types of raw data suggested in the preceding questions, but they are valuable for the qualitative spatial insights which they also promote.

Starting with Haggett's functioning *node*, one could select the hill fort, cliff castle or courtyard house village to represent the basic occupation unit or the central livelihood mechanism of the area. If an example from a contemporary landscape can clarify, then the farmstead or the nucleated agrarian village would represent a node, and today a good deal of statistical data could be assembled for either.

The *network* may be represented by lines of movement such as paths, roads or other concrete transportation routes. It is along the network that goods flow and influences are disseminated. Prehistoric West Penwith might have been served by Grundy's 'ancient highways', or one can study today's detailed topographic maps and sketch a portion of the skein of paths and trails which stemmed from an evaluation of terrain by acute, prehistoric eyes.¹³ The success of this method of network reconstruction when applied to northwestern Jutland, as an example, is impressive.¹⁴ However helpful the movement of items of material culture may be for network analysis, the intangible network traffic of cultural cargoes during prehistoric periods is much less approachable in retrospect.

Hierarchies of settlement features enter the picture next. The strong emphasis given to central places and the cascade of lesser but dependent elements is a key working concept in modern location analysis. The specialisation of a centre or the orientation of a settlement's structure as a result of the localisation of important resources are developments frequently encountered. In West Penwith the hill fort or the cliff castle might conceivably fill the role of the central place, and the habitation sites of various types with their associated lands could take secondary rôles. Alternatively, a profitable line of inquiry might suppose the courtyard house village to be the dominating agrarian feature. Thereafter, one could isolate its dependencies in the same way as the modern plantation and its tenancies are differentiated.

Within the context of the commercially oriented world of today, the *movements* of men, goods and influences back and forth along the lines of the network between nodes and peripheral elements of the hierarchy are essential constituents of locational study. Normally quantitative values are involved, but for the prehistoric period only slight beginnings are possible if we attempt to estimate the magnitude of crop and livestock yields or of human populations. One of the basic contributions made by archaeological study has been to demonstrate that movements of men, goods and ideas have in fact taken place. However, these estimates consist for the most part of qualitative statements only.

The last and most complex stage in Haggett's set is reached with a discussion of the existence, the nature and the magnitude of *surfaces of interaction*. If one takes the area of present-day West Penwith, it is feasible to compute its economic centre of gravity and to delimit on a map its sphere of influence by means of *isolines* or economic contours. Thereafter one can proceed, if one wishes, to analyse the economic structure of the area in order to learn whether it consists of a steady-state balance complete with self-regulating capabilities. It should also be possible to distinguish the inputs and outputs necessary to maintain West Penwith in its present economic form. If one were to select political or cultural factors with which to reckon, different surfaces could be drawn and perhaps a different picture of the functioning of this particular area would emerge. The premium placed upon quantified data in delimiting surfaces of interaction

is obvious, and when such an attempt is made with respect to a prehistoric landscape all one can hope for is intelligent speculation.

On the basis of the distributions depicted in Figure 1 we can select nodes, suppose networks, construct hierarchies and suggest movements. It is also feasible to delimit theoretical surfaces of interaction between the hill fort at Castle-an-Dinas and the cliff castles at Bosigran and Gurnard's Head. None of these projects can be carried very far toward quantified ends if we are limited basically by the acknowledged gaps in our information. However, the basic geometric properties of prehistoric settlement can be investigated profitably even though the double-edged mathematical tools are not always directly applicable.¹⁵ Even though the statistical determination of locational tendencies is seldom possible in a rigorous manner for the prehistoric scene, new channels of thought may result if one is aware that powerful quantifying tools exist and are used in the study of modern settlement.¹⁶

Turning next to applications of systems analysis in the study of prehistoric settlement, the emphasis shifts from quantified methods of description and mathematical statements of functions to qualitative formulations about a habitation complex. This is a shift from relatively unbiased statistical description to analysis predicated upon the use of a conceptual model which appears to accord with congeries of facts. The development of such conceptual outlines or models is increasingly thought to be a fitting and relevant working approach for fields concerned with happenings in the past.¹⁷

The chief peculiarity of systems analysis as a type of model building resides in the fact that the investigator conceives of his phenomena as being components of an integrated whole, a whole which operates with weighted objectives and with maximum compatibility of its discrete parts.¹⁸ A system may be described according to its operational environment which consists of people at work in a definite physical environment interpreted in terms of specified social, economic or political conventions. Within such an interlocking and interdependent structure, communication and the exchange of things and ideas are usually essential. Hence, a system as a unit feature is characterised by internal and external flows of so-called information which in reality may consist of products, people or policies.¹⁹ A system may contain subsidiary units, termed 'sub-systems' in a vocabulary which borrows heavily from its origins in engineering and applied psychology. Various decision-making procedures must be present to assist in the setting of system goals, to secure the control mechanisms essential for the pursuit of the goals and to support the organized effort which channels the system's energies toward these goals. The system can be studied in terms of its goals, its performance levels or degrees of efficiency, its operative time requirements or its degrees of functional reliability.

Systems are basically of two types, the closed example which is self-contained or the open one which interacts with other surrounding units. The latter type is more commonly encountered in settlement geography. In addition, one may speak of single systems which usually are simplified to the point that a straight-line flow of information and simple interactions are the rule. A multiple-system, on the other hand, consists of two or more systems which not only operate separately but also depend upon linked functions for completeness.

In the course of its performance over a period of time, an open system usually achieves a balance between its inputs and outputs of both energy and materials such as to promote a dynamic equilibrium. Self-regulatory features of various kinds may evolve in order to maintain the energy balance which is essential for continuing operation. There is also a tendency for the system to maintain its status or relative position in any hierarchy of systems as far as possible. Systems reach an optimum size with the passage of time, and they thereafter seek to sustain themselves at this magnitude. Lastly, the

open system behaves so that similar end results are produced regardless of the nature of the initial input conditions. This characteristic is referred to as equifinal behaviour or the replication of patterns regardless of the variety of the inputs. Within a geographical context, Philbrick's article views the modern complex region as a system which depends intimately upon a variety of external ties.²⁰

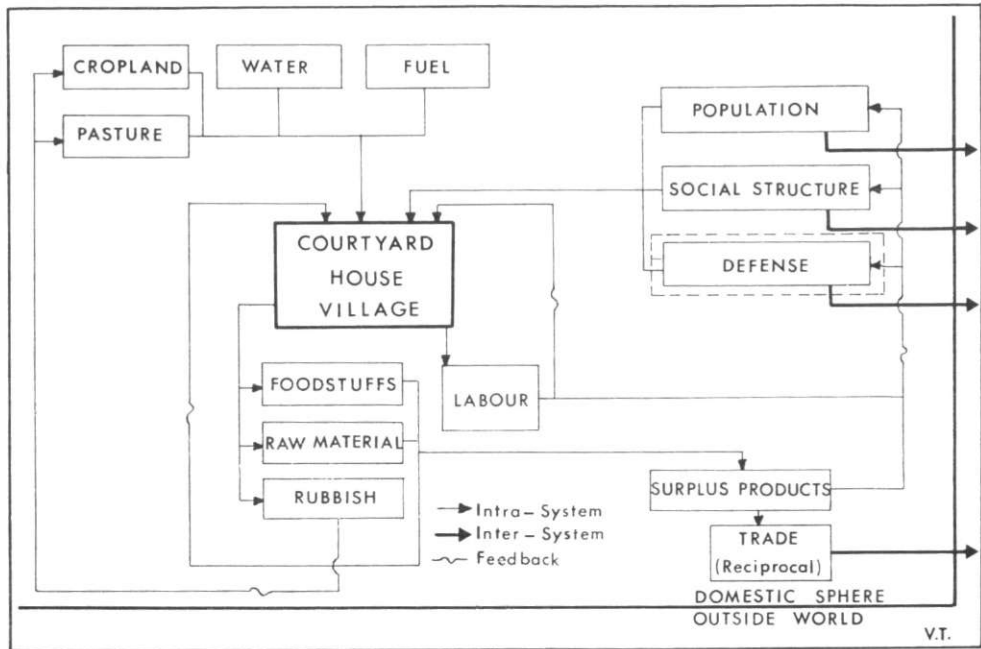


Fig. 2
A Systems Model of a Courtyard House Village

Employing Chisholm as a guide, the following two models of settlement systems have been produced (Figures 2 and 3).²¹ These theoretical diagrams of a system centred upon the courtyard house village and a second focussed upon the hill fort are intended to provide an initial estimate of the entire range of factors which were relevant to Iron Age settlement in West Penwith. By means of distinguishing between a domestic sphere and the outside world, a separation between internal and external relations can be made for both of these assumably open systems. These two spheres of relationship are further clarified by means of a line signature which differentiates between intra- and inter-system traffic. Furthermore, a distinction has been made between outputs from and inputs to the central unit, either the village or the hill fort, and the feedback links which provide operational symmetry to a system. Each of the two systems is considered to be a component of the other as suggested by the dashed line enclosures. Finally, it should be noted that these are but two of the entire family of settlement forms typical of West Penwith in the Iron Age.²² The aim here is not to exhaust the full range of possibilities but to test a concept.

The courtyard house village in Figure 2 is first of all a point of origin for a variety of outputs and a focus of many habitat and agricultural functions. It serves as an initial collection point for a range of productive resources, including water, fuel and the product of agricultural lands. By dint of collective effort, outputs of labour, foodstuffs, agricultural and other raw materials as well as rubbish are achieved. Of the outputs, a

portion is used in the maintenance of the village itself, but some undefined amount passes further along as a marketable surplus. The labour excess, it is suggested, could be absorbed in varieties of public works tied to social and defence requirements. The feedback loop from the rubbish heap to the fields is of course hypothetical, but such a link can be demonstrated from contemporary examples of subsistence agriculture.

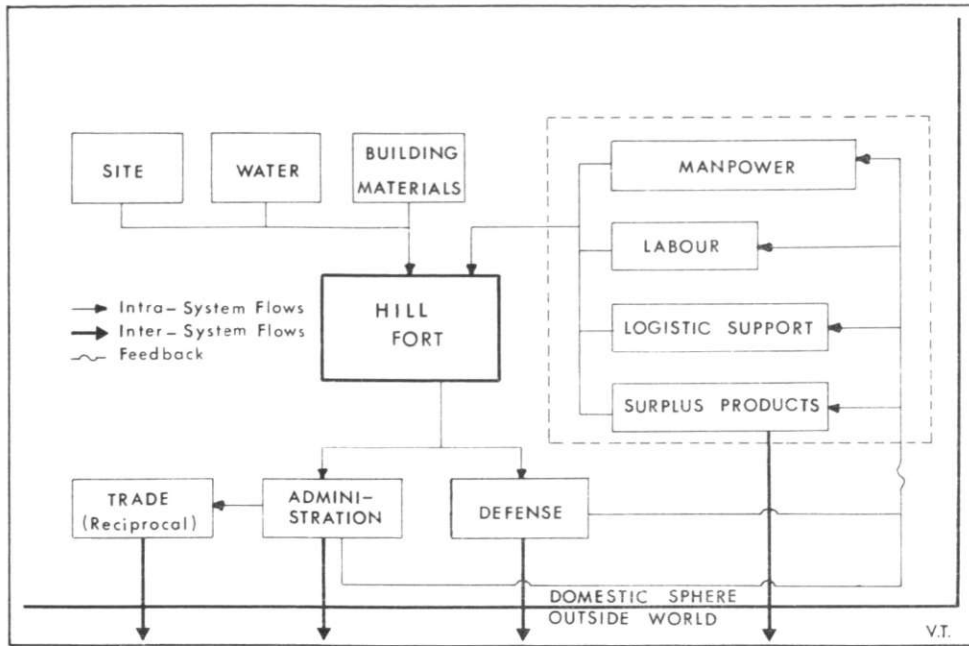


Fig. 3
A Systems Model of a Hill Fort

Functional ties to local Iron Age society as a whole can also be suggested when linkages from village to social structures, population pools and defence 'foreign policy' are drawn. The entire complex within the heavy solid line is the purview of the village proper. Any exchanges taking place therein are consequently termed intra-system whereas those linked to the outside world—in this case perhaps an adjacent village—constitute inter-system exchanges. It is assumed here that the village itself acts independently only with respect to trade which of course must be reciprocal or else the system would tend to run down. Social contacts, defence and population exchanges are viewed as being controlled by a power centre residing elsewhere than in the village—in the hill fort, for example.

Implicit but unspecified in this model of the village system are other important topics such as the existing land-holding pattern, the exact functional and control relationships with the hill fort and the impact of inhibitory forces such as disease or of stimulating ones such as technological innovations.²³ What appears here is the diagrammatic circulation of both tangible and intangible products in a manner such as to sustain what was a type of closed, corporate peasant community and to indicate the ties both to its physical and social environments.

Figure 3 depicts the system of the hill fort as a complement to Figure 2. If one assumes that Iron Age society in West Penwith had an agricultural base in the village, one can also suggest that the defensive role of the citadel was essential for the functioning

of that society. The hill fort is viewed as having been a central, decision-making force as well as an input collection and dispersal point. The human decisions made with respect to site selection in terms of topographic placement and the accessibility of water and building materials are indicated as being inputs to the fort. Social support, manpower, logistic contributions in terms of supplies and the influx of excess products are all considered to be logical inputs. These last have their source as products of the peasant community typified by the courtyard village system.

The hill fort is also regarded as being a central control point for all intra-system decision making of administrative, defensive and commercial varieties. Feedback to the peasant community is logical and consequently is indicated.

Beyond its self-sustaining roles the hill fort is pictured as having inter-system links shown by the heavier, arrowed lines which indicate the outflow of 'sphere of influence' energies, defensive activities and a good measure of the 'foreign' trade other than that amount carried forward by the village independently. It is pertinent here to acknowledge the active controversies regarding the organisational functions of the hill fort and the nature of its ties to the surrounding society, as well as to recognise the implications of these controversies for any evaluation of system operations and settlement-hill fort relationships. The lively discussions of Alcock and Jones suggest that the topic is most complicated, and it is clear that there remain annoying lacunae in our present knowledge sufficient as yet to obstruct full interpretation.²⁴

When one views the West Penwith settlements in the field or refers to Figure 3, one can appreciate the opinion that defensive requirements had to be met, and were met, while at the same time the community conducted its normal business as a livelihood system without crippling inconveniences. A balance between an optimum defensive site and the requirements for sufficient economic benefits from land and farmstead was apparently struck within the circumstances peculiar to Iron Age West Penwith.

These exploratory comments on the applicability of location analysis techniques and systems analysis investigations to the facts of prehistoric settlement in West Cornwall can be concluded with some suggestions for future study. A central consideration in the geography of settlement is the relationship which exists between the form of a habitation complex and its social and economic functions. Figure 1 suggests that hut complexes, fields, rounds and round fields characterised man's efforts to extract an agriculturally based living from this area in the Iron Age. Any relationships discovered to have existed among these several elements would illuminate this apparently characteristic pattern and would allow the sketching of a clearer picture regarding the functions of its settlement components. In studies of modern day settlement the relationship between farm production levels and the distance factor, as represented by the separation of habitations from fields, is deemed most important. The situation of fields and terraced areas in the immediate neighbourhood of the hut complexes is an apparent reflection of the modern, pragmatic pattern elsewhere. What can one suggest, however, regarding the more distant arable lands; was Iron Age husbandry a variety of in-field, out-field practice? A final question concerns the applicability here of the traditional distinction between dispersed and nucleated settlement forms. One could view the agricultural hinterland of a hill fort as an example of dispersed settlement. By contrast, if one were to study the hypothetical competition between adjacent forts, the question could be cast in terms of settlement nucleation or concentration about forts and cliff castles with less densely occupied reaches in between. A further attempt at analysis of the overall West Penwith pattern might stem from a definition of spheres of influence for dominant central places in terms of the situation of their dependent agrarian satellites.

What the geographer can contribute to a discussion of prehistoric settlement is illustrated by means of two concluding citations. Ravenhill has analysed settlement

distribution for Cornwall during later Celtic times in terms of population densities related to topographic situation.²⁵ At an earlier date Crawford, using some of the vocabulary of today's locational theorists, employed a distribution map in order to delimit seaport hinterland along the south coast of England during the Bronze Age.²⁶ For the investigator the mute data of the past propounds such a variety of difficult questions that he can ill afford to overlook even the most abstract of contemporary conceptual tools in his search for answers.

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AT LANYON QUIT

Our third offering in the field of megalithic poetry takes us back again to Lanyon Quoit, the subject of our first—C. V. Le Grice's *To a Fallen Cromlech* (CA 5 (1966), 16). Whereas Le Grice's poem, and Robert Stephen Hawker's in our last issue, were rescued from past obscurity, the present instance has been specially written for these pages by a distinguished living poet, Arthur Caddick. Mr. Caddick, a Yorkshireman, came to Cornwall many years since, and like C. V. Le Grice, will probably never leave us again. The Society is most grateful to him for this contribution.

Look not aloofly,
 Stranger, upon this Stone Age scene
 Nor let remoteness
 Disguise where living men have been
 In grief and laughter!
 Though all's now hushed and gaunt and harsh,
 You are standing where humanity once stood.
 These stones seal a cemetery
 Of your own flesh and blood.

Here lie our forebears,
 Though their memorials bear no name.
 How should we know them,
 If from the grave these tribesmen came?
 What was their language?
 No echo in the south-west wind
 Recalls one word one single warrior said.
 Ravaged granite stays to mark
 The lost unlettered dead.

Here lie their women,
 Some beside children who died young.
 The artless lullabies
 This Cornish hillside once heard sung,
 The mourners' dirges,
 Are as soundless to this world's ears
 As to the deaf-mute the lark up above.
 Cold silence holds their converse
 And all their songs of love.

14th September, 1968

ARTHUR CADDICK

A Greek Tin Trade with Cornwall?

LLOYD R. LAING, M.A., F.R.N.S.

THIRTY-SIX YEARS have elapsed since the publication of Professor Hugh Hencken's classic study of the Cornish tin trade, in his *Archaeology of Cornwall and Scilly*. Since that time, a considerable amount of evidence relating to the problem of the Greek tin trade with Britain has come to light. It is the object of this discussion to consider some of the evidence; and to consider as well to what extent it substantiates the suggestion that there was a flourishing trade conducted by the Greeks with Britain in the period from 300 B.C. to 50 B.C.

Except for the trade between the Wessex Culture and the Mycenaean world in the later second millenium B.C., which is adequately documented in the archaeological record, the nature of the archaeological evidence for Greek contact with Britain is essentially restrictive. Apart from two coins, none of the relevant finds comes from scientific excavations; and seldom do they come from contexts in which they are reputed to be associated with objects of prehistoric date, being for the most part stray finds uncovered during ploughing, building or river dredging. This immediately imposes restrictions on the limits of inference, for, although one or two finds seem to have been lost in antiquity, in nearly all cases it is probable that the objects in question are strays from collections of eighteenth-century or later date. Many of them—funerary *lekythoi*, lamps, sculptures—are objects which are by their very nature suspect, since they were not extensively traded in antiquity. The coins require more careful consideration, and to these we shall turn presently.

There are relatively few finds of Greek objects from the West Country. There are four Greek *lekythoi* of the fifth century B.C. from Halamanning, Penwith (Cornwall), which are suspect immediately since *lekythoi* were made for graves and never traded (Hencken, 1932, 178; Fox, 1964, 116). Investigation shows that they came from the collection of a man who bought some of his antiquities in London and failed to note the provenances of most of his items. Halamanning was in a locality he is known to have visited (Megaw, 1966, 43n.). The only other find of vessels from the South-West is worthy of more careful consideration. This is the discovery of three vessels in an artificial cave at Teignmouth, Devon. The first of these is an Attic drinking cup of bolsal shape, black glazed and dating from the second half of the fourth century B.C. The other two vessels seem to be of similar date. Nothing further is known of the discovery, but it seems unlikely that these represent a modern loss or a hoax—they were found in the last century at a time when the chronology of Greek pottery was not

sufficiently advanced for the pots to be dated, and accordingly the vessels could not have been selected in order to perpetrate a hoax because they were known to be more or less contemporary. Their precise provenance is uncertain, but it is probably East Mediterranean (*Fox, 1956, 216; Fox, 1964, 116*). However, they hardly stand on their own as evidence for a Greek tin trade; it is just possible that they were votive offerings of sailors blown off course.

There is one other find of a Greek vessel from Britain which is probably an ancient loss. This is an Attic Black Figure *kylix* from the Thames near Reading, which shows a naked reclining youth by the Pithos painter. There are parallels for the vessel from Al Mina, and a date in the late sixth century B.C. can be ascribed to it. It was acquired by Reading Museum before 1896, and was then said to have been dredged up from the river. This would seem to be verified by the lime deposit on it, characteristic of river finds from the Thames (*Boon, 1954, 178*). It is the sort of vessel that was traded in the late sixth century to the Celts of Hallstatt D on the Continent, and the circumstances of discovery are at least explicable, as it could represent an extension of the Marseilles—S.W. Germany trade to Britain, an extension hinted at by the Weybridge situla and the stray Italic-type brooches, which are mostly in keeping with a Hallstatt II horizon (Weybridge—*Dale, 1907, 464; brooches—Harden, 1950, 315-24, and Hawkes, 1961, 11, n.25*).

GREEK COIN FINDS

Apart from the objects, the archaeological evidence for the Greek tin trade takes the form of between two and three hundred coins, nearly all of them stray finds out of archaeological contexts. This coin evidence was studied in 1948 by the late Dr. J. G. Milne, who based his conclusions mainly on an early nineteenth century collection of dubious validity, the Rackett collection (*Milne, 1948*). Dr. Milne ultimately decided that the coins had come to Britain by way of two ports, one in Dorset (probably Poole), the other at Exeter, and suggested that they were brought by Carthaginian traders as scrap-metal. We cannot here consider the evidence in detail, but it must be emphasised that the Rackett collection is not reliable evidence, especially in view of the fact that since the death of the collector concerned few, if any, authenticated finds of Greek autonomous coins have been made in Dorset, and it seems suspicious that a collector could amass about a hundred finds of Greek coins from his own district in the space of six months, which is what he claimed to have done. We cannot doubt that the collector in question, who was a respected clergyman, was sincere in his belief that the coins were local finds; but without further evidence we cannot dismiss the possibility that he was the victim of a hoax. Dr. Milne's 'scrap-metal' theory must also be disregarded, since the arguments he put forward to support it cannot now be substantiated.

Turning to the other finds, Milne proposed that many were of coins which had come to Britain during the Iron Age, although in 1937 he had suggested that they were all Roman imports (*Milne, 1937, 133*). In 1948, no coin had been found stratified in an Early Iron Age context, though several in his list came from good Roman contexts. To substantiate his view, he pointed out that a third-century B.C. coin of Tauromenium had been found near the Early Iron Age site at Hamworthy, Poole, and he might have quoted the second-century coin from Sandy, found near the hillfort, the Carthaginian coin from the ramparts of the Caburn during the excavations there (*Curwen, 1954, 255; Spokes, 1927, 57*) or the coin of Cnidus from Selsey (*White, 1934, 41*). In addition, a coin of Micipisa of Numidia was found within the Iron Age fort at Carn Brea, Cornwall (*Hencken, 1932, 115*). Other finds of a similar nature have occurred since Milne wrote his paper, and a coin of Ptolemy V (204-181 B.C.) was found stratified with pottery of Iron Age Southern Second B at Winchester (*Cunliffe, 1965, 75*).

Many of the coins in Milne's list came from Roman contexts, which he had discussed in 1937, but chose to ignore in 1948. These included a fourth-century B.C. coin of Rhodes from a fourth-century A.D. hoard from Cobham, Surrey (*Chubb, 1936, 139*), one of Naples of the third century B.C. from the Well of Coventina, Carrawburgh (*Clayton, 1880, 45*), a Ptolemaic issue from Margidunum (*Milne, 1948, 38*) and two of Syracuse, again from Carrawburgh. There are others in his list from Richborough (see also *Bushe-Fox, 1926, 119*, and *Bushe-Fox, 1932, 195*), Acton Scott (a Roman villa), Caerwent, and Fishbourne. Apart from the finds known to Milne, Greek coins have been found at South Shields (*Collingwood Bruce, 1884, 271*), Brough (*Corder, 1935, 37*), Raedykes (unpublished), Dragonby, and Ancaster (*May, 1966, 9*).

Greek coins have been found in large numbers at Exeter, which was the second of Milne's two ports. The most important group of these, consisting of 110 coins, was found in 1810, reputedly while laying a sewer in Broadgate. During the following years (to 1838) 150 coins were found on a further five sites and all were eagerly accepted by Shortt, a keen collector, in a series of studies (*Shortt, 1841, 93-101*; *Shortt, 1837a, 450*; *Shortt, 1837b, 52*). A further find was made in 1878. In 1907, Haverfield and Macdonald re-assessed the finds, and examined the coins found in 1810. They claimed that as there were two nineteenth-century forgeries among them, the whole group had to be rejected as invalid, and cited numerous examples of hoaxes involving Greek coin finds (*Haverfield & Macdonald, 1907, 156-7*). At the time of their discovery, too, it might be added, they were believed to be a hoax, Akerman describing them as 'the very dross of a tenth rate collection'. Goodchild, on the evidence of the subsequent discoveries from Exeter, suggested that the bogus coins got in with the genuine finds at a later date (*Goodchild, 1937, 126*). Two Greek coins were found in the ruins of a Roman building during excavations at Exeter in 1931 at Smythen Street (*Montgomerie-Nielson & Montague, 1932, 141*; *Fox, 1952, 60*; *Fox, 1964, 160*).

We need not doubt that there have been some genuine finds of Greek coins from Exeter, but not the numbers supposed, and they can probably be explained as Roman imports. Apart from traders in the Roman period, there was probably an auxiliary force based at Exeter before the town grew up (*Dudley & Webster, 1965, 108*; *Webster, 1966, 41*; also *Fox, 1966, 46-51* against this). There have also been suggestions that the Second Legion was based there.

An explanation for the occurrence of Greek coins on Roman sites is easily found, since soldiers serving in Britain came from all parts of the Empire, and traders, too, may have brought coins here. Some coins might have been used as counters or even lucky charms (such as the attractive Ptolemaic bronzes).

Thus we can say with some confidence that some of the Greek coins from Britain are modern losses, some came here in Roman times, and a few very probably are Iron Age losses, as proved by the Winchester find.

A cursory glance at the list of finds from Britain shows that almost all could have come here quite easily after 350 B.C., and in fact most postdate 280 B.C. and could even have reached these shores as late as the first century B.C.

The distribution pattern is interesting, for apart from outliers it can be seen that the majority are grouped along the Thames, especially near its mouth, and along the south coast, with a concentration in the Isle of Wight and Hampshire. Their comparative rarity in the North and far inland is also noteworthy, and the specific distribution would suggest the pattern is worthy of some consideration as a whole, especially as it does not coincide with the distribution of collectors, who are just as abundant in the North of England as in the South. One could, assuming that a reasonable percentage of the finds are ancient losses, deduce that the coins came to Britain through two routes, firstly by way of the Thames and secondly through a port (or ports) on the Channel coast. The

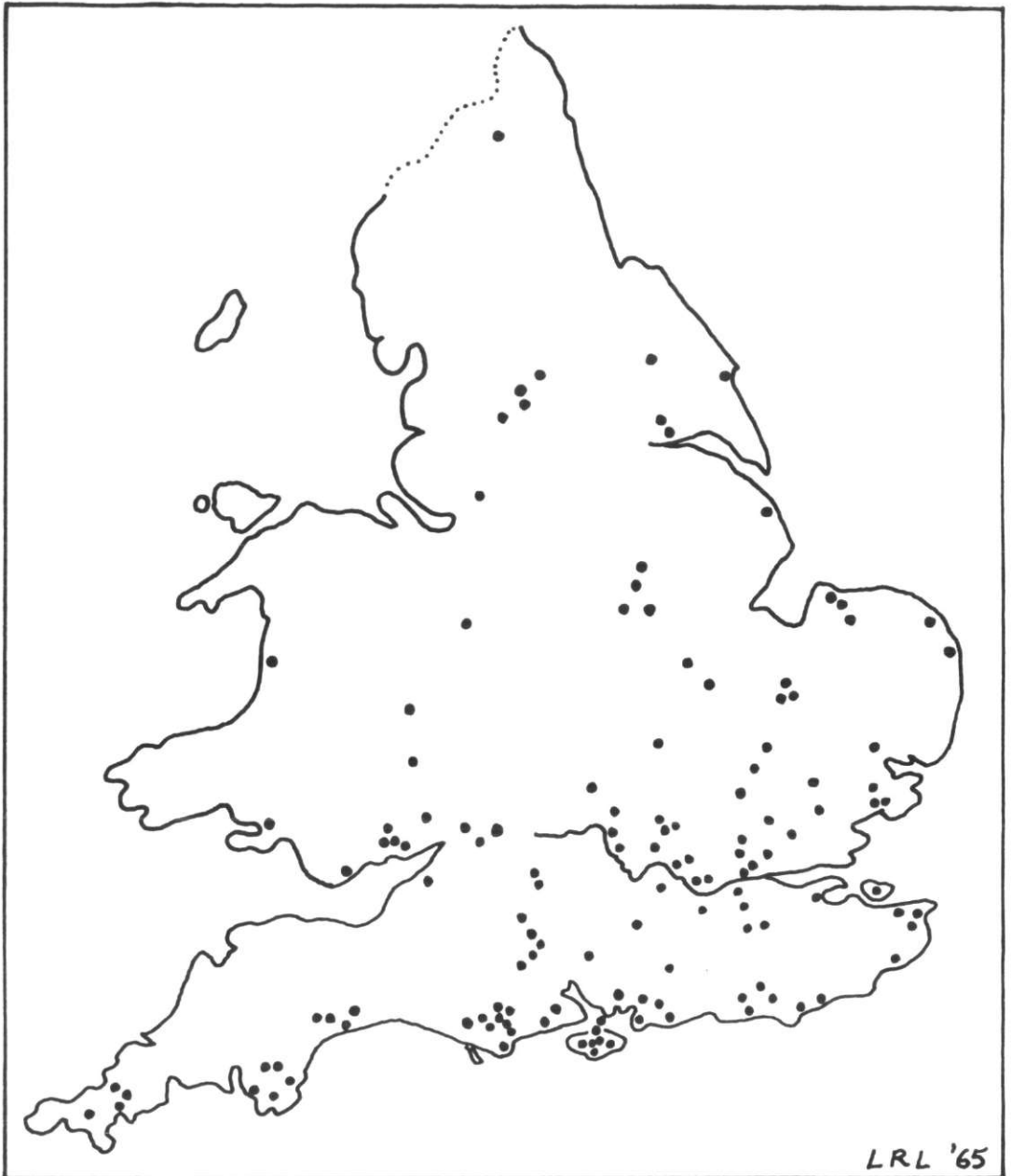


Fig. 4
Early Greek Coins in England and Wales

distribution coincides remarkably with that of finds of imported pottery in the pre-Roman Iron Age. Possibly there was a port on or near the Isle of Wight and another near London.

Presumably any trade for tin either by Greeks or Carthaginians was by way of middlemen, and it is interesting to note that the coins are not found abundantly in the areas where one might expect them to be particularly common, namely Cornwall and the Mendips. This could be explained by the fact that the middlemen who negotiated the trade gave the Cornish or Mendip streamers and miners other commodities, such

as grain, in exchange, which is particularly likely in the case of Cornwall where food produce was not as abundant as in some other parts of Britain. Nevertheless the fact is still curious.

One probable explanation for the coins is that they came as ornaments. There is a find of a Thessalonika tetradrachm from Drumburgh, Cumberland, with a hole for suspension pierced through it in antiquity (*Milne, 1948, 30*), and other pierced Greek coins are known. A parallel case would be the finds of single Roman coins in Prussia, where the most popular coins were orichalcum sestertii, put in graves for ornaments (*Wheeler, 1955, 40*). Greek coins in Britain would be a parallel to the faience beads traded by the Mycenaeans to the Wessex Culture chiefs, or the baubles traded in the nineteenth century and earlier to Africans in exchange for gold dust. They belong to the same category of imports as the coin ornament from Lexden (*Laver, 1927, 251*), or the imitations in terracotta of denarii of Tiberius, used as pendants in Kondapur, Hyderabad (*Wheeler, 1955, 181*).

THE TIN TRADE, ARCHAEOLOGY AND HISTORY

Hawkes and Smith suggested in 1957 that their 'Atlantic cauldrons' were traded along a tin-trade route to Britain (*Hawkes & Smith, 1957, 176*). But there is no good evidence for such a trade (the Marseilles-Vix-Heuneburg trade route was probably for Hallstatt iron) and the evidences of Herzprung shields (*Hencken, 1950, 125; Coles, 1965a, 374; Coles, 1962, 157*), and more recently and more dubiously that of Coles' 'Bull cult' based on the find of the horn and 'crotal' in the Dowris Hoard (*Coles, 1965b, 217*), point to some kind of trade linking Ireland, not Cornwall, with the Mediterranean.

If we rely on archaeological and literary evidence the tin trade cannot have started before the end of the fourth century B.C. at the earliest. The interest shown in the adventures of Pytheas suggests that Britain was not well known to the Greeks before the time of his voyage, since his account was treated with some scepticism. Britain (or more possibly Ireland?) was seemingly known however in the sixth century B.C., since it is referred to by Avienus, quoting in his *Ora Maritima* from the much earlier *Periplus*. It was then known as the Island of the Albiones (*Jackson, 1948, 54*). The vague reference of Herodotus to the Cassiterides could refer to a number of places.

We must take together the two main texts for the tin trade, that of Pliny (reporting the fourth-century historian, Timaeus) and that of Diodorus Siculus, describing Pytheas' voyage. Pliny says (*Nat. Hist.*, IV, 30, 104) 'The historian Timaeus said that the island of Ictis where tin is to be got is six days' sailing from Britain further inwards.' Here it is important to stress that *proveniat* really means 'is to be got', viz., 'is available for buying' not necessarily 'comes from'. Diodorus says (V, 22) 'In Britain the inhabitants of the promontory called Belerion are particularly friendly to strangers and have become civilized through contacts with merchants from foreign parts . . . They prepare the tin, working the ground in which it is produced very carefully . . . They beat the metal into masses shaped like astragali and carry it to a certain island lying off Britain called Ictis'. Diodorus goes on to describe the way in which Ictis was attached to the land by a natural causeway at ebb tide, along which their waggons travelled, and describes how the tin was carried to Gaul and thence by a thirty days' journey to the mouth of the Rhone. There is no reason to presume from Diodorus' account that *Ictis* was near the place where tin was worked, and indeed the passage would suggest the opposite. From Timaeus' account it becomes quite clear that this Ictis is in fact six days' sailing round the coast from the point at which the Greek sailor first arrives at the group of northern islands that is called Britain. The Pliny passage shows that Timaeus recognized that Belerion and Ictis were not the same, and correctly identified Ictis with the Isle of Wight. Diodorus shows that someone else, not Timaeus, had supposed that

Ictis and the island or peninsula called Belerion were one and the same, and called the former Ictis, leaving Belerion out. It must be remembered that the only eye-witness was Pytheas, and no doubt the two places had their own identity in his account.

If we identify the Isle of Wight as Ictis then the whole account becomes much clearer. The similarity between Ictis and *Vectis*, the Roman name for Wight, need not be stressed.

The coin evidence, for what it is worth, would support Wight as a likely candidate for Ictis. There is seemingly good evidence that Wight was connected to the mainland even in the Early Middle Ages, and that vehicles travelled across a joining causeway. (The late Dr. Colin MacFarquhar, who studied this question in his Ph.D. thesis on Diodorus, informed me of this; I have been unable to trace the references in medieval sources to waggons going across.) Clement Reid made a geological survey of the area and claimed that there was evidence, on geomorphological grounds, for such a land bridge, now eroded (*Reid, 1905, 281*). There is good evidence for the severe erosion of the South Coast since the time of the tin trade—witness the disappearance of Selsey—and some recent writers have argued that there has been extensive land sinkage, marine erosion, and growth of shingle banks in the last two millenia. Further large-scale dredging in Portsmouth harbour and Southampton water in recent times has resulted in major changes in the coastline and waterways (*Steers, 1946*).

Again, Wight is the most obvious place to land coming up the Seine, and as Villard has argued, fairly reasonably, the time given by the ancient writers for the journey from Marseilles or the mouth of the Rhone to Wight is exactly right, whereas a journey to St. Michael's Mount would take longer (*Villard, 1960, 157*).

We may now turn to the problem of the date of the tin trade. Numismatic evidence shows us that although Marseilles had a rich coinage and trade in the period 540-480 B.C. (*Laing, 1966, 5*), the period of the Auriol Hoard, the city only issued a limited coinage of obols until the mid-fifth century B.C., when a new coinage, also of obols, was struck. Possibly this may coincide with the period of Massaliote trade with the La Tène world, although the first major Massaliote coinage was not issued until the last years of the fifth century and early years of the fourth. About 390, there was a coinage of 'heavy drachms' of very fine style, which Rolland has suggested was struck as tribute-money to pay Catumandus to lead an attack on Marseilles (*Rolland 1935, 238*). From this time until the mid-fourth century, Marseilles was very weak, and only issued a limited coinage of obols. Not until the last years of the century do we see the first output of a huge coinage on a lighter Athenian standard, this time of tetrobols (*Rolland, 1936, 236*). This issue began shortly after the voyage of Pytheas. It seems justifiable to associate the coinage with a new boom in Massaliote prosperity, and possibly the opening of the tin trade. Clearly Pytheas was a pioneer, and a trade before the beginning of the third century B.C. seems impossible, as Ridgeway (*1890, 107*), Rice Holmes (*1907, 507*) and others suggested at the turn of the century, and as Cary stressed in 1924 in his excellent study of the historical question (*Cary, 1924, 176*). Cary drew attention to the fact that, after 300 B.C., pottery and lamps together with Hellenistic bronzes were spreading up the Rhone valley. He was confused by the fact that Massaliote 'light' tetrobols, according to contemporary thinking, were of fourth-century date. But these we have seen date from after 300 B.C., which brings them in line with the rest of the evidence. The sub-colony of Marseilles, Emporiae, was issuing a coinage of silver drachms from c. 250 (*Heiss, 1870, pl. I, 4*); and from 200 B.C., Emporiae, Rhoda and Marseilles began their huge output of bronze coins. It was just shortly before 200 B.C. that the Celts began following the Greek custom of coining (among the earliest Celtic coins being those dated by the Capitol Hoard to c. 200 B.C.) which were thus not as early as the prototypes, as Cary supposed.

Cary suggested that the trade lasted until about 60 B.C. (the time of the destruction of Corbilo), but thought it was of little importance thereafter, as Strabo visited Marseilles and made no mention of such a trade (*Cary, 1924, 177*).

We are left with the problem of routes, and the evidence for tin-working in Cornwall. The latter question was discussed at some length by Hencken (*1932, 163-67*) and little need be added, except to stress that the evidence for prehistoric tin-working in Cornwall is not very strong, and some tin ingots, once believed to be ancient, are now known to be medieval (*Tylecote, 1966*). The Falmouth ingot described by Hencken and numerous other writers could be Mycenaean, but could just as easily be an 'astragalos' or even a later ingot.

The question of routes is difficult. Probably there were several. There are three possible alternatives (apart of course from that of a sea route); the Seine-Rhone, the Loire-Rhone or the Garonne-Aude. It is very probable that the second was the oldest route (the Loire apparently was used as a trade route even in the Late Bronze Age—cf. *Giot, 1960, 173*), but that all three were employed. The Southern route was probably little used, for Greek coins are relatively scarce in the Languedoc except near the coast (*Blanchet, 1913, 318*). The northern route probably was in use in the Roman period (*Cary, 1924, 178*).

A few finds of Celtic coins in Britain may possibly be related to the tin trade. Coins of the *Namnetes*, a tribe which centred on the Loire valley round Nantes, occasionally turn up in Hampshire—they have been found at Hengistbury Head and at Swindon. The date of these pieces is about the same time as Allen's Gallo-Belgic A, i.e., towards the end of the second century B.C. (*Allen, 1961b, 119*).

Allen has suggested that two coin hoards from Cornwall may also be related. The first is the Paul Hoard, found near Penzance. This consisted of 43 copies of Massaliote tetrobols of 'Milan' and 'Scorpion' type, struck in the Milan and Ticino river area (*Allen, 1961a, 91-106*). With the exception of one from eastern France the finds of these coins are all concentrated in the southern foothills of the Alps and Po valley. The series is an important one for studying the origins of Celtic coinage, as these coins turn up, along with Republican Roman coins, in the Capitol Hoard just before 200 B.C. They also were in circulation well on into the first century B.C., or the early years A.D., as they occur with coins of Augustus and Tiberius. Derek Allen has suggested that the hoard was traded to Britain along the Tin Route from Marseilles, but such a theory hardly seems tenable, since no coins of this type have ever been found within a wide range of Marseilles. Probably we should see them as coming by way of the Alps into Germany, and thence to Britain by this route, though admittedly, it is not a very satisfactory explanation for this remarkable find.

A second hoard has been found at Penzance itself, consisting of one Belgic coin and a series of copies of bronze coins of Massalia, struck on the Swiss-French border. These, Allen maintains, 'are clear evidence in support of Diodorus Siculus' (*Allen, 1961b, 121*). But here again the coins, though imitating Massaliote ones, are not found in the neighbourhood of Marseilles, and are more likely to have come to Britain through Gallia Belgica as part of the trade between the native Celts of Belgic Gaul and Britain, a trade which we know existed and which is referred to at a slightly later date by Caesar.

Finally, it might be mentioned that other imitations of Massaliote coins have been found at Pevensey and Cirencester, but these, like the imitations from the hoards, are of no value in a study of the Greek tin trade with Cornwall.

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Abbreviations

<i>A.J.A.</i>	American Journal of Archaeology
<i>Arch. Ael.</i>	Archaeologia Aeliana
<i>J.H.S.</i>	Journal of Hellenic Studies
<i>J.R.S.</i>	Journal of Roman Studies
<i>N.C.</i>	Numismatic Chronicle
<i>P.P.S.</i>	Proceedings of the Prehistoric Society

Review

A. S. D. SMITH & R. MORTON NANCE, ed. E. G. RETALLACK HOOPER **Cornish Studies no. 2; Comments on Henry Lewis' Llawlyfr Cernyweg Canol. F'cap, 8 pp. dupl., July 1968; from An Lef Kernewek, 16 Trevu Road, Camborne, 2s. 0d.**

Students of medieval Cornwall in general, and the medieval Cornish dramas and their language in particular, will continue to be grateful to E. G. R. Hooper (Talek) for his periodical additions to the existing commentaries. 'Cornish Studies no. 1', issued in 1962, gave us A. S. D. Smith's invaluable notes on the text of *Gwreans an Bys*. The present offering makes public a series of emendations produced by Smith and Nance after the appearance of the 2nd edition (1946) of Henry Lewis' *Handbook of*

Middle Cornish (in Welsh), comments submitted, at some length, in Welsh and '. . . acknowledged, but never answered'. The points, indicated by page and line of Lewis' book, refer to (a) mistranslations of the various texts by Lewis, with necessary modification of grammatical and syntactical views, and, more important, (b) misreadings of imperfect editions of the texts by Lewis, corrected by Nance and Smith from their own near-exhaustive work on surviving MSS. This is a specialist world, but one which—particularly as it affects the reading, and meaning of obscure passages in the dramas—commands a steadily-increasing circle of followers. To these, as to all serious students of Middle Cornish, these notes are essential.

Gwithian

A.C.T.

Excavations at Halangy Down, St. Mary's Isles of Scilly, 1967 and 1968

PAUL ASHBEE, M.A., F.S.A.

INTRODUCTION

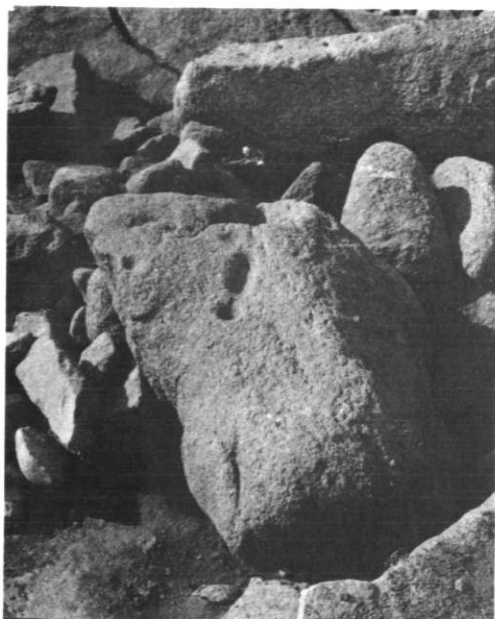
YET TWO MORE PERIODS of excavation have been undertaken at Halangy Down since those previously described in these pages (*Cornish Archaeology* 4 (1965), 36-40; 5 (1966), 20-27). The work during 1967 comprised examination of the lower half of what has been termed Hut B, together with a detailed exploration of its relationship with Hut C (*CA* 5 (1966), 23, fig. 2). The lower wall face of the extensive annexe attached to the 1950 'hut' was exposed while a section was cut into the make-up. At the same time traces of a massive retaining wall, set across the hill-slope below Hut C and the drain complex of Hut B, were detected. Below this was a boulder-blanketed terrace, bounded by yet another retaining wall, while the track, which borders the site at the bottom of Halangy Down, cuts through another terrace still. These show, clearly, how the complex of buildings was built on to and into the system of cultivation terraces recently exposed on the hillside. During 1968 the excavation of an area contiguous to the 1950 'hut' (*Ant. Journ.* XXXV (1955), 187-98) was the main objective. For here, progressive clearance of vegetation (*CA* 4 (1965), 36) had shown that further structures were conjoined and that this was not the simple oval 'hut' that had previously been supposed. Side by side with this operation, clearance and exposure of the massive lower bounding wall, discovered the previous year, was carried out.

THE 1967 AND 1968 EXCAVATIONS

During 1966 (*CA* 5 (1966), 22, Fig. 2) the interior of Hut B had been cleared of rubble, and make-up, to the rabb, exposing a deep channel. The use of the site by modern Scillonians as a source of stone had destroyed all traces of a floor; indeed, the sloping surface revealed by rubble removal was, at the lower limit, some two feet below a presumed level floor. Thus only the footings of the lower wall face remained, while the stone-covered drains, bracketed by larger boulders, point to this truncated area having carried a rectangular chamber, corresponding in size to the so-called blocked corridor entrance (*CA* 5 (1966), Plan, fig. 2).

Excavation, designed to expose in full the lower interior wall face of Hut B, disclosed, adjacent to the two giant corner 'grounders', and lying on the rabb with but a skin of compressed ancient soil beneath it, a great stone bearing a complexity of cup-marks (Plate I). This stone is a broad, naturally formed, irregular block, some 6 ft. in length, of flat lenticular section and about $3\frac{1}{2}$ tons in weight. Two lobar side projections, one broken in antiquity, would have given it a crude cruciform appearance. Its upper surface bears three unmistakable cup-marks; two, relatively shallow and about 2 ins. in diameter, and a third, deeper, 3 ins. in diameter which has a deep slot, some 3 ins. wide and 9 ins. long, contiguous to it. Close by it, a large burned rectangular block, with a perforation broken in antiquity, had previously come to light.

Cup-marked stones which do not seem to have functioned as pivot stones are preserved in various Scillonian gardens (*Proc. W. Cornwall F.C.* I.1 (1953), 77) while,



I *The cup-marked stone*



II *Lower terrace and bounding wall, before removal of displaced stone*



III *The massive bounding wall below Hut B*



IV *The 1968 'Hut' before removal of displaced stone*



V *The 1968 'Hut' interior, showing central setting and partition*



VI *Entrance and steps into the 1968 'Hut'*



VII *The small paved chamber and its entrance jamb-stones*



VIII *Main entrance to 'Courtyard' before removal of displaced stones*

during his excavation of a stone-built hut at English Island Carn, O'Neil (*Scillonian Magazine XXIV* (1949), 164-5) found a large stone with cup-markings at its base.

This year (1968) this great stone was lifted and it was possible to see more of its character. It is tapering and pointed, the cup-marks and slot being confined to the upper end. The seemingly weathered reverse side bore nothing positive except evidence of dressing of the thicker lower end. Its base is massive and flat-ended and of roughly oval section. The greater mass of its weight is concentrated here, as was more than apparent during the lifting operation! In the circumstances it seems reasonable to suppose that this great cup-marked stone is an erstwhile standing stone, of an earlier period of Scillonian prehistory, brought to the site and for some reason incorporated, motifs upwards, at the base of the floor of this hut interior.

Further work, during 1967, in the drain area below Hut B (*CA 5* (1966), Plan, fig. 2) shed more light upon the structural relationship with Hut C. It was found that footings of an outer wall-face of the small chamber at the northwestern corner of the latter hut ran into the drain area, the drains having been taken through it. At the same time the outer wall-face footings of Hut B, which continued from the end of the lower of the great corner grounders, had also been taken through the outer wall-face of Hut C's small chamber. Thus the conclusions regarding the relationship of these two entities, arrived at in 1966, must be reversed, for from what emerged it would seem that Hut B was structurally conjoined to a pre-existent Hut C.

Also during 1967, excavation was undertaken of the area below the buildings and above the track at the foot of the hill. Before the removal of soil, its terraced character was apparent, but whether or not this area carried buildings was not known. The lower great stones of a massive wall bounding, across the hillside, all the buildings detected as yet, were found. Below this was a spread of rubble (Plate II), comprising at the northwestern end a sea of smaller cobbles, considered to be wall-core stones spread and discarded by stone robbers. At the other end were larger stones including many considerable blocks, seemingly wrenched from the great wall and never taken away. Below this wall, and some 12 ft. distant from it, was yet another retaining wall built of large irregular blocks, loosely bonded. A further spread of rather uniform rubble masked this lower wall.

At this stage it was possible to see that there had been no buildings on this lower terrace and that it was part of the extensive terrace system which lies about the Halangy Down hut complex.

The upper wall must have formed the outer face of the downhill end of Hut C and its small chamber. Thus, here at least, to provide a minimum of 5 ft. 6 ins. headroom within, it must have been originally of the order of some 12 ft. to 14 ft. in exterior height. At the southern end of the site it was found to continue beneath the rectangular annexe of Hut C, which was examined in 1964 (*CA 4* (1965), 39). The lower, southwestern, corner of this had been built above and downhill from it.

This year (1968) the cobbles, which masked larger displaced stones, were in part removed and the length of the wall below Hut B was bared (Plate III). Two considerations emerged regarding its character. The massive wall which bounded Hut C terminates with a near right-angled corner and turns into the hill-slope to join the outer wall face of Hut C's small northwestern chamber. The other massive wall, continuing from it and bounding the 'drain area' downhill from Hut B is conjoined to this and has a markedly convex character. Whether this was ever more than a basic buttressing device, to sustain Hut B, is debatable. Whatever the relationships, the whole, when standing to its full and original height, must have had the effect of a series of stalwart 'bastions' when seen from below.

With the removal of blanketing rubble it was possible to excavate a part of the terrace.

The lowest wall retained an average of about two feet of dark loam which contained pockets of broken limpet shells, broken domestic animal bones and abraded sherds of pottery. This factor and the depth of soil point to a cultivation terrace. Indeed, there is a marked similarity to the terrace at Porth Cressa (*Arch. Journ. CXII* (1955), 5-7) which carried the cist-grave cemetery. Domestic rubbish had been put into the soil for purposes of fertilisation. The channel, detected beneath Hut B, was found to continue under the lower wall. Excavation of this would have affected the wall's stability.

Three other small tasks were carried out during the 1967 season. A cutting was made into the floor of Hut C, adjacent to its small supplementary chamber. It was seen that the sanded floor had been upon compact soil which was lying over large, uniform, cobble stones. These had been laid upon the original soil mantle of the hillside. Settlement had brought them, and the walls, into contact with the hard rabb subsoil. The northern entrance of Hut B, one jamb-stone of which still stands, was cleared in detail. It had been paved with slabs in a manner similar to that in the entrance to the 1950 'hut' while the footings of the wall-end of the uphill main wall were detected. During 1966 the lower face of the main wall of the annexe to the 1950 'hut' had been detected (*CA 5* (1966), Plan, Fig. 2) and a 'buttressing' terrace had been recognised. The puzzling feature, of one wall-face apparently closely masking another as far as the main entrance to the 1950 'hut' annexe, was visible. After excavation, the bottom courses of the true wall, the outer face of the main wall, remained. In front of this lay a line of uniform blocks, pulled from it and left by stone-robbers, in a curiously even way.

Besides the lower terrace clearance and the lifting of the cup-marked stone, referred to above, a small operation was carried out, during the 1968 season, in the restricted area between the northeast internal wall-face of Hut C and the lower wall-face of the blocked corridor 'entrance' to Hut B (*CA 5* (1966), Plan, Fig. 2). This area had been mantled by a midden which had been cleared to a raft of cobbles which appeared as a remnant of wall-core. These had soil and midden material beneath them and from thereabouts came quantities of pieces of amorphous fired clay which contained traces of organic reinforcement. Clearance of the cobbles and soil revealed a burned clay floor which was overlain by a thick ovate mass of these burned clay pieces among which were several stones. This feature was cut by the bedding shelf of the internal wall of Hut C and oversailed by the large stones of Hut B's corridor entrance.

This burned clay daub, pieces of which bear the imprint of straw or perhaps rushes, besides a considerable amount of grit, including quartz grains, differs from the burned clay, thought to be the remains of fired rendering (*CA 5* (1966), 26) previously found, notably in Hut C. These do not contain the imprint of reinforcement.

It seems likely, particularly in view of similar material found on Teän, that this burned clay 'floor' with the crushed ovate mass above and upon it, and in such a place as would suggest that it precedes the construction of the contiguous huts, must be the remains of a corn-drying oven. Similar traces, notably of a burned clay floor, associated with burned limpet shells, were noted beneath the northern extremity of the uphill wall of Hut B but here full examination of this phenomenon would have entailed the destruction of the wall (*CA 5* (1966), 24).

Burned areas detected by Mr. Alec Gray, during 1934 and 1935, in the area which is now the bulb garden behind the structures in the cliff of Halangy Porth, may point to corn-drying. Such a view would be supported by the large storage-pots, one of which was found in a pit. The presence of grain is shown by the numerous impressions in a large sherd from this earlier site (*CA 5* (1966), 21). This view is further reinforced by the clay hearths found in a hut, set in an early field system, at Perpitch, St. Martin's, excavated by the late B. H. St. J. O'Neil in 1951. This inferential evidence of early grain-drying in the Isles of Scilly is commensurate with the discovery of carbonised

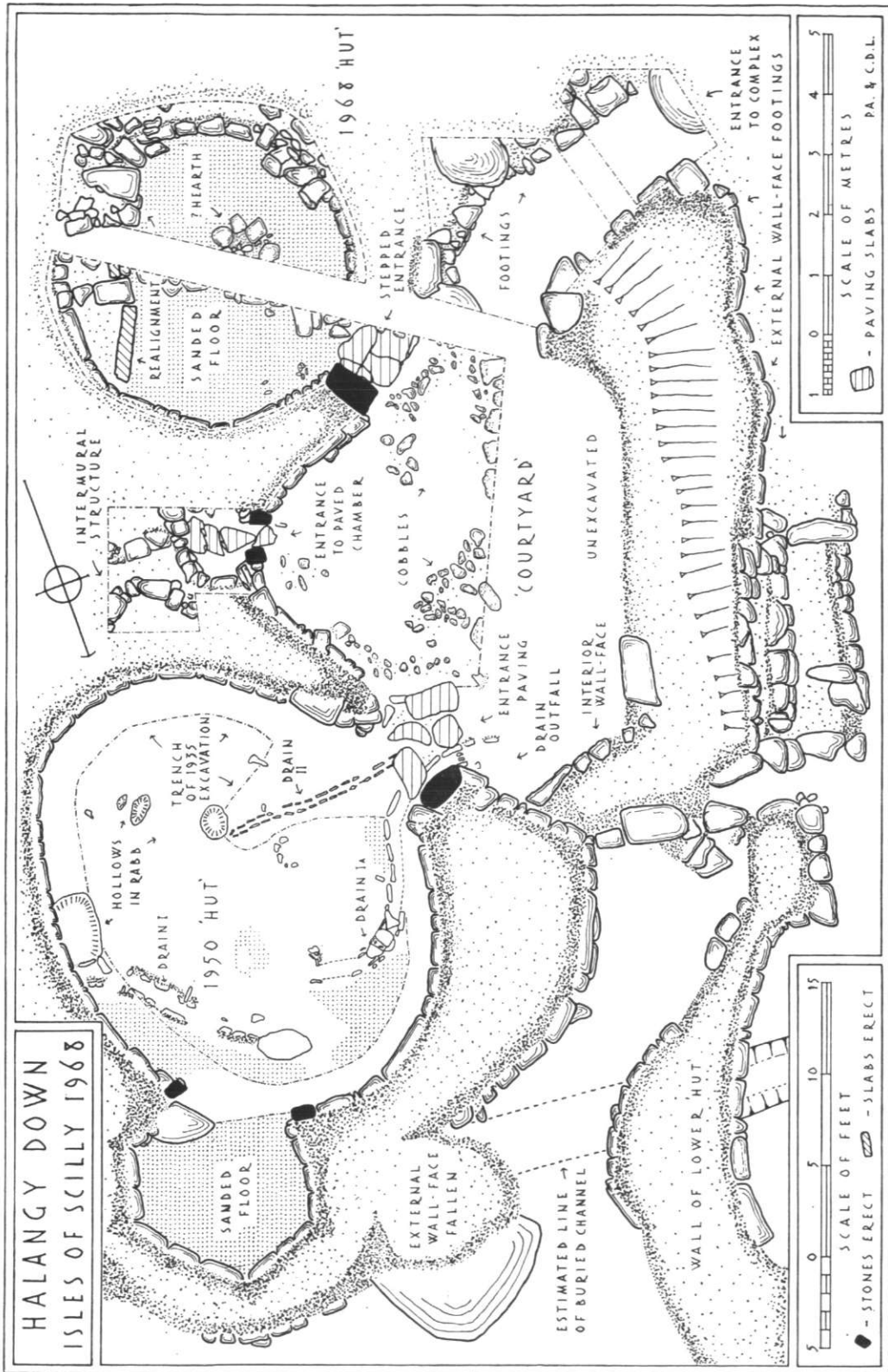


Fig. 5

grain at Itford Hill, Sussex (*PPS XXIII* (1957), 167-212), a site of the late Bronze Age of Southern Britain. The burnt flints, sooted soil, and burned clay fragments, found by Bersu at Little Woodbury (*PPS VI* (1940), 61-2), attest to the practice during the Southern British Iron Age. Romano-British T-shaped ovens were considered by Goodchild in 1943 (*Ant. Journ. XXIII* (1943), 148) while Curwen (*Plough & Pasture* (London, 1946), 101-4) has contributed a general account.

The main undertaking of the 1968 season was the excavation of structures conjoined to the 1950 'hut'. It emerged that the work in 1950 (*Ant. Journ. XXXV* (1955), 187-98) had disclosed only a part of what was a much larger and more complex unit, the discovery of the full extent and complexity of which remains as the object of further work.

In the account, cited above, it was emphasised that what had been revealed displayed affinities with the 'Courtyard House' concentration of West Penwith (*Ant. Journ. XXXV* (1955), 198; C. Thomas (ed.), *Rural Settlement in Roman Britain* (1966), 80 and Fig. 12). In 1955 it was thus described: "Oval rooms, a smaller opening from a larger, a massive entrance, a dished post-base retainer, entrance and extramural paving, tanks and drainage system, mode of construction upon a hillside, and finally siting, when considered all together might afford some grounds for suggesting a relationship with the 'Courtyard House' culture, best known at Chysauster and Porthmeor in western Cornwall." In the same paper attention was drawn to an 'annexe' (*Ant. Journ. XXXV* (1955), 189) which elaborated the entrance, to the wall-end of which it was attached by a straight joint. When, in 1964, clearance had allowed something of the character of the Halangy Down site to be seen, it was observed that a smaller and seemingly similar adjacent 'hut' opened on to the same extensive, roughly rectangular, platform, as did the 1950 'hut'. Traces of a southwestern-facing entrance were also apparent (*CA 4* (1965), 37, Fig. 12). Indeed, the view has long been held that the 1950 'hut' and the structures to the southwest of it, which were to be seen as conjoined and at the same level on the hillside, comprised a Courtyard House.

With the immediacies of the foregoing in mind, cuttings were, during the 1968 season, set out (Plan, fig. 5) to:

- (a) explore the 'hut' adjacent to the 1950 'hut'.
- (b) explore their relationship, and
- (c) examine the entrance to the roughly rectilinear 'annexe' or 'courtyard'.

With the stability of the walls as a primary consideration, two cuttings, with a central baulk, were set out to expose the interior of the 'hut'. Upon removal of the peaty turf mantle the tops of the walls were readily detectable. A further cutting, part of the scheme for the exploration of the relationship with the 1950 structure, bared the external features of the entrance.

The hut's interior was choked with stones (Plate IV), pulled from the walls by stone-robbers. Indeed, it could be seen now, against the northern side, that these displaced stones followed the curvature of the surviving wall. Clearance of these stones (Plate V) revealed a layer of dark loam, containing smaller stones. This loam covered a sanded floor which is of the same character as those encountered during the 1950 excavations (*Ant. Journ. XXXV* (1955), 192). In the middle of the 'hut' is a setting of worn tabular stones about an area of dark, seemingly sooted, soil. This may be a hearth; it is obscured by the baulk and will be examined during the next season. The sanded floor lies at a higher level than that of the 1950 structure and the paving of the 'annexe' or 'courtyard'. Access to it was gained by slabs set as steps (Plate VI). A massive entrance jamb-stone still stands on the northern side of this entrance.

The walls had been built of selected, tabular, blocks of granite. On the northeastern side they were carefully coursed and bonded. Extra stability was secured by the device

of alternating large boulders with 'panels' infilled with coursed work. As far as can be seen, the basal wall-stones are the more massive. On the southwestern side the wall was predominantly of large vertically-set blocks, three of which had fallen forward. These had to be stabilised during the work of excavation. On this side there is the possibility of rebuilding, and even a supplementary entrance, to be considered. Coursed work was present, adjacent to the downhill entrance and towards the uphill side.

The uphill side of this approximately circular structure had been cut off by a straight wall, parallel to the general slope of the hillside, cutting off an arc (Plan, Fig. 5). On one side there is a vertically-set slab, on the other massive coursed work. An entrance, at present beneath the baulk, leads through this to a further buried structure. From what can be seen at present, there appears to have been large scale reconstruction of the southeastern 'corner' coupled with the construction of a bin or 'keeping area', bounded by the vertically-set slab.

Excavation of the upper half of the annexe, or 'courtyard'—the roughly rectilinear area bounded on its lower side by a strong wall which butts the end of the lower wall of the 1950 structure (Plan, Fig. 5), upon which both 'huts' open—disclosed, linking them, a wall. This is concave in plan, with, at centre, worn jamb-stones denoting an entrance to yet another chamber. Adjacent to the 1950 structure's entrance the walling was of relatively large bonded tabular blocks. On the other side, there were two panels of straight-jointed masonry upon either side of a large upstanding rectangular block. The area thus enclosed was cleared of soil and an area of small stones at about the same level as the paving slabs at the entrance to the 1950 'hut', was exposed. These small, uniform-sized, stones are considered as cobbling, on account of the traces of wear that their upper surfaces and edges present.

This concave façade, with its central jamb-stones, gave into a small, roughly, circular chamber (Plan, Fig. 5). Its walls, of irregular bonded masonry, and standing almost 3 ft. in height, had upper interior oversailing courses still in position (Plate VII). In the unexcavated baulk, it was possible, owing to a convenient animal burrow, to see that one, or perhaps two, long covering slabs are still in position. It emerges that this small chamber, centrally placed in an imposing façade, was stone-roofed. On the floor were flat slabs, separated by small stones, set in a line and leading directly from entrance to rear wall. Indeed, it is possible that they continue beneath and beyond.

Between this stone-roofed 'cell' and the wall of the 1950 'hut' one side of a small intra-mural structure was located (Plan, Fig. 5). It has not been examined in detail, nor is its relationship to the complex as a whole as yet apparent.

The entrance to the 'annexe' or 'courtyard', which is at its southwest corner (Plan, Fig. 5), was examined in two parts, separated by a transverse baulk. Between the lower courses of the lining walls was a mass of stones (Plate VIII), again the debris of stone-robbing. Many tabular blocks were patently derived from the walls. Others, slabs, including one almost 6 ft. in length and much worn, were from torn-up steps or paving. At the proximal end of the long entrance 'corridor', selected large square blocks still remain. Others are at the distal end on the northern side. On the other side only the slab-built footings were found. A long angular stone found amongst the rubble indicates that this entrance corridor may have been roofed with a series of lintels.

It is not impossible that the entire 'annexe' or 'courtyard' was roofed. Presuming 5 ft. 6 ins. head room here, and in the 1950 'hut', the lower wall-face would thus have stood to a height of some 16 ft. The thick walls could have carried roofing spars pitched from their inner edges. These spars could have had a thatch of straw or reeds, held in position by straw or reed ropes or netting secured to weights. Indeed, many of the perforated stones, collected with zeal to ornament Scillonian gardens, would have admirably fulfilled this purpose. About the wall-top, there would have been a platform

leaving room for a man to walk and work during the periodic repair or renewal of the thatch. Such a system has much in common with the roofing, and stone architecture of the 'Black Houses' of the Hebrides (*Antiquity XII* (1938), 261-89).

FOOD REMAINS AND THE ECONOMY

During the course of excavation at Halangy Down evidence from food-remains has accumulated, and data regarding the economy, and its functioning, are emerging. Grain growing, and consumption, has for long been presumed on account of the terraced plots on the hillside and the querns or fragments thereof, saddle, bowl, and rotary. To these must be added the presumed corn-drying ovens. Side by side with grain growing there is the keeping of domestic animals, primarily cattle and pigs, together with sheep or goats. At the same time there are the quantities of limpet shells encountered in the main midden, found above the blocked corridor entrance of Hut B (*CA 5* (1966), 22, 26). It must be observed that this midden material found by excavation may be but part of stadial accumulations which were periodically removed and used for fertilisation.

It is an open question as to whether the terraced plots, still to be seen on the Halangy hill-slope, would have sufficed for a community. Using Bersu's (*PPS VI* (1940), 104-5) basic annual consumption-harvest figures for Little Woodbury, and the presumption of a similar-sized community in the Courtyard House, 5 to 7 acres would be involved, so if a fallow cycle is followed, they could be seen as fulfilling a good proportion of the demand. However, in such a circumstance yield could devolve upon the efficiency of shell, bone and organic rubbish fertilisation. If more than one house was occupied during the use-life of the site the extant fields would have been too few. Then greater demands would have been made upon other aspects of the economy.

The shells from Scillonian middens are almost exclusively limpets and the midden found below the 1950 structure contained some 110,000 (*CA 5* (1966), 26). It would appear from these numbers, and, indeed, the general evidence of their consumption during the earlier phase of occupation in Halangy Porth (*Ant. Journ. XIII* (1933), 17, Fig. 4), and elsewhere in Scilly (*Arch. Journ. CXXIV* (1967), 9), that they had an important place in supplying protein in the diet of the community. Miss Margaret Townsend, who worked on the site during the 1966 season, has undertaken a study of the Common Limpet (*Patella vulgata*) as a source of protein, with especial reference to those found in the Halangy Down midden (*Folia Biologica 15* (1967), 343-51). Her assessment of these small univalve conical-shaped shell-fish, which cling firmly to rocks, involved the investigation of a size-ranged series from a Welsh shore. It was found that the Scillonian midden samples consisted mainly of small shells and that there is an indication that they were gathered too frequently for them to grow to large size. For a concentration of very small limpets would indicate excessive collection, while the appearance of larger shells suggests either the end of a cycle when other food sources had been exploited or a new collection area.

From the number of shells collected it is possible to make a crude calculation of the amount of protein represented. It is not possible, however, to say how long the accumulation of some 110,000 shells took or how many people, for how long, such a number sustained. Notwithstanding, some light may possibly be thrown upon the problem by experimental methods involving collection to exhaustion in a given area. Another approach involving the analysis of limpet growth rings, which might indicate something of seasonal collection rates, has been suggested by Miss Townsend, who has observed how great would be the difficulties of such a pioneer study.

It may be asked why the Halangy Down Scillonians concentrated upon limpets; and why fish-bones and other mollusc shells occur only rarely? This could be explained by the fact that, once the mechanical nuances of limpet collection have been mastered,

they can be collected rapidly and thus are a bounty of protein for the expenditure of not too long a period of labour. Indeed, the end-battered granite beach-pebbles, a considerable number of which have been found during the course of the excavation, may have been the tools employed. These have their counterparts with other early communities which ate limpets (*Proc. Soc. Antiq. Scot. LVI* (1921-2) 265-71). The Scottish Azilian elongated end-battered beach-pebbles have been shown by experiments to be ideally fashioned for use as punches for detaching the limpets from the rocks (Atkinson, chap. 3 in S. Piggott (ed.) *The Prehistoric Peoples of Scotland*), a process entailing a single swift, sweeping blow. For, if this is not precisely delivered, the limpet clings and a further blow only crushes the shell.

The Halangy Down Scillonians may have used limpets in conjunction with other foodstuffs. Thus it is clearly impossible to know how many limpets constituted a meal or how frequently they were eaten. However, certain possibilities can be indicated. Actual consumption of animal protein is normally considered as 9 gms. per head per day, for the undernourished countries of the world, 36 for Europe and 66 in the United States of America. To supply protein on the ideal American standard to a family consisting of father, mother, a boy, a girl and an infant, 756 Scillonian midden limpets would be required daily. It is doubtful whether the limpet population, even of a considerable stretch of rocky shore, could support such daily demands for very long. The Food and Agriculture Organisation's target per capita protein consumption by the undernourished is 16 gms., the equivalent of 250 Scillonian limpets daily. This could possibly have been met, if the collecting area was fairly extensive. With the circumstances of Halangy Down's economy in mind, it would seem that limpet consumption was probably geared to the non-availability of other foodstuffs and modulated by the growth of limpets in specific areas. The small size of Scillonian limpet shells may well reflect controlled collecting circumstances. For communities which consumed, at appropriate times, limpets for a millenium and a half would doubtlessly have learned the lessons of over-exploitation of such a staple.

MATERIAL CULTURE

Sherds of pottery found during the 1967 operations continued the emergent pattern recorded in the previous report (*CA 5* (1966), 26). Numbers of flint and quartz implements in the form of scrapers, utilised scraps, points and trimmed pebbles, as well as granite-pebble, end-battered, hammer and rubbing stones continue to be found. It is becoming apparent that many of the juxtapositions of earlier and late sherds, namely those which recall the Iron Age wares of Bodrifty along with grass-marked material, have been brought about by sporadic 'turning over' of certain areas during the course of stone-robbing operations.

The excavation of the sanded floor of the chamber adjacent to the 1950 'hut' produced only a very small number of sherds of provincial Roman pottery, comparable to those found in 1950 (*Ant. Journ. XXXV* (1955), 194-5). Among the cobbles of the 'courtyard' were rim-sherds of a jar of reddish coarse ware bearing a band of incised undulating lines on the shoulder. In the short time available, counterparts have not as yet been located. A high-shouldered jar from a Romano-Belgic level at Maiden Castle (*Maiden Castle Report* (1943), Fig. 75, 232) bears such wavy bands incised round the shoulder.

CONCLUSIONS

Excavation of the lower area (*CA 5* (1966), 23, Fig. 2) has revealed the remains of two interbuilt structures. How far that one termed for convenience Hut B extends northwards, outside the excavated area, is problematical. Destruction has left little surface

trace. On the other hand the massive jamb-stone still standing might denote an exterior entrance. Were this so, the resulting entity would have been pronouncedly rectangular, but with rounded up-hill and down-hill walls, and even more rectangular appended chambers. The oval Hut C, with its circular ancillary chamber, once had a rectangular annexe, with its own rectangular appended chamber, added to it. Whether this can be considered as an entity is still uncertain. The broad wall on the southwestern side has the characteristics of an exterior arrangement, but again there is an element of presumption. In principle, though not precisely in plan, the close relationship of the two buildings recalls the arrangement of Hut No. 3 at Chysauster (*Archaeologia LXXXIII* (1933) 250, Fig. 4).

As an example of the courtyard house series, the unit explored during 1968 might appear to be the product of progressive building. For the substantial wall limiting the space which has been termed a 'courtyard' butts on to the end of the lower wall of the 1950 'hut'. However, the uphill structures do appear to be interjoined, although with stone architecture a rebuilding can often be far from obvious. No direct comparison can be made with any specific example within this hitherto localised series, for although all have characteristics in common they are peculiar in matters of dimensions and arrangement.

What does emerge, however, is that the buildings on Halangy Down, standing close-set on the slope and amidst their fields, do recall the essential features of those integrated clusters of courtyard houses in the Hundred of Penwith.

ACKNOWLEDGMENTS

Five excavation seasons have now been completed at Halangy Down, and I should like to tender my thanks to all who have helped; first and foremost to my wife who has taken the tedium of administration from me and has dealt with all matters concerned with the recording and care of finds.

During 1967 Mr. K. Wilson, and Mrs. Wilson, were to the fore in the moving of soil and the laying bare of the extensive lower terrace. This year Mr. C. D. Long has acted as Site Assistant, supported by Mr. T. Carney and Mr. N. Tonkin. Mrs. Tonkin gave sterling service in the finds hut.

An especial debt of gratitude is owed to Major R. MacLaren, Land Steward of the Duchy of Cornwall who, down the years, has done so much to provide the comfortable temporary accommodation of so many who have worked at Halangy Down.

As in earlier years, Mr. J. Treneary has given freely of his good counsels and intimate local knowledge while Mr. P. Z. Mackenzie has given aid and work in manifold ways.

Miss M. Townsend must be thanked for so kindly undertaking a study of the Common Limpet and for allowing her work to be freely drawn upon.

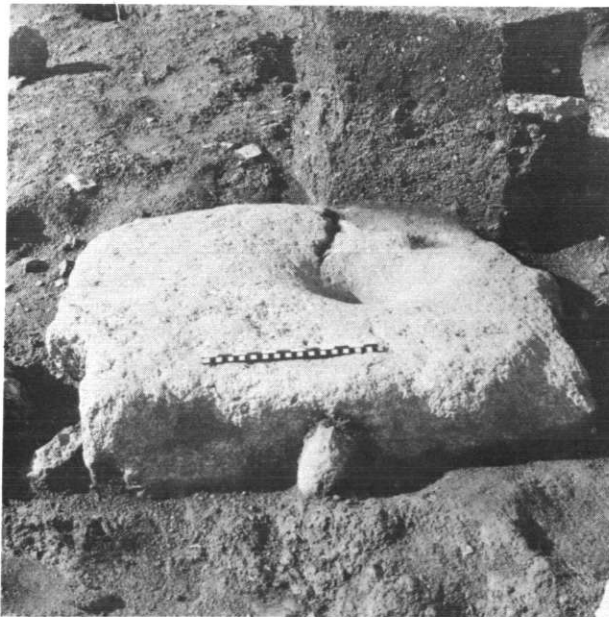
The Ministry of Public Building and Works has sponsored the excavation, which owes much to Mr. A. D. Saunders, Inspector of Ancient Monuments for England (and President of the Cornwall Archaeological Society) whose continued more-than-ordinary interest, support, ready help and advice has made so much possible. On St. Mary's, Mr. J. Semmens has at all times done much beyond the call of duty in smoothing the path of the enterprise as well as carrying out conservations and caring for that which has come to light. Thanks are also owed to Mr. A. C. Carpenter for the skilled and careful raising of the cup-marked stone.

During 1968 Halangy Down was visited by Mr. A. J. Taylor, Chief Inspector of Ancient Monuments, and Mr. T. A. Bailey, Senior Architect in charge of Ancient Monuments (England & Wales).

Chelsfield, Kent



I *Hut complex: Hut F, looking south-east*



II *Hut Complex: Hollowed stone in Hut E*



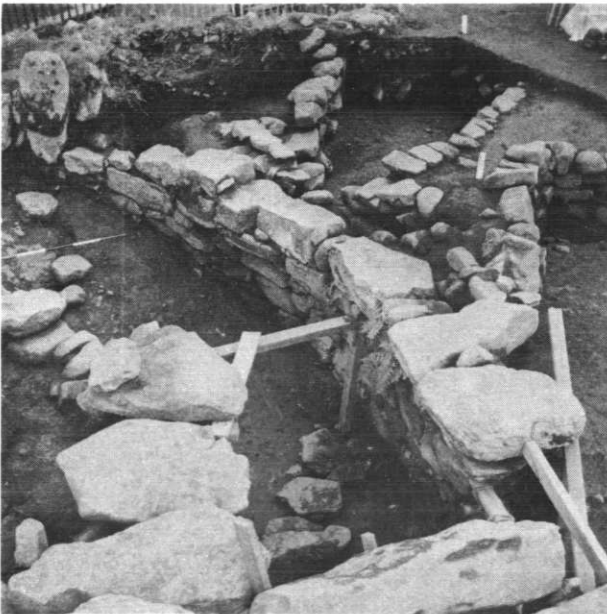
III *Fogou: Tipped capstone, supported on pier of stones—seen from East entrance*



IV *Fogou: Top of structure, south side, showing 19th century dumps, stone tumble, and double wall emerging on right*



V *Fogou: Curved gully at end of trench south of passage overlain by occupation material and upper double wall*



VI *Fogou: East entrance, showing south wall and structures beyond, after excavation*



VII *Fogou: East entrance, before removal of blocking*



VIII *Fogou: East entrance—after removal of blocking stones and excavation of drains*

Carn Euny: Interim Report on the 1967 Season

PATRICIA M. CHRISTIE

A FOURTH SEASON of excavations was carried out during July and August, 1967. On this occasion, the main effort was concentrated around the eastern part of the Fogou on both sides of the Long Passage. Further excavation also took place in the Hut Complex, where work originally started in 1964 (the examination of Hut A) had been continued north and west in 1965 and 1966 (cf *CA 6* (1967), 24-28.

HUT COMPLEX

The area already excavated was extended by means of five 10 ft. squares, in order to find the full extent of structures partly uncovered in 1966—Huts E, F and B.

Hut E: part of a curved wall on the west is believed to belong to an oval structure, 24 ft. across at the broadest point, of which the north and south walling is absent. The ditch which was found to bisect Hut A had also cut across Hut E, causing a great deal of damage to the original structures. In modern times, clearance of the site down to rab for a small daffodil garden, south of the ditch in Huts B and E, has added to the difficulties of excavation and interpretation in this area.

Numerous pits and post-holes were found, some of the latter being stone-lined. Of the many gullies of varying shapes and sizes which crossed and partly encircled the floor area, several may have belonged to a phase earlier than the Hut E structure. Traces of whiteish material, preserved best on the west side, were believed to be the remains of floors, and in places these overlaid the gullies and post-holes of the earlier phase.

Hut F: the wall partly uncovered in 1966 was found to be a double wall, 3 ft. 6 ins. wide, standing two courses high. Instead of continuing in a consistent curve to form a circular or oval enclosure, it proved to straighten out and run northward—where further excavation in another season will thus be necessary (Plate I). No trace of walling was found on the west or south, though this could well have been robbed out.

A complex of interconnecting gullies, some retaining their stone lids, was associated with the wall and led away downhill to the west. Pits and post-holes were associated with these gullies, and four stake-holes were found in one. A deposit of whitish floor material containing plain Iron Age pottery was found overlying the drain lids on the north, in front of the wall.

Hut B: excavation south of the ditch showed the occupation to have been completely destroyed by cultivation down to rab in the daffodil garden mentioned above.

Finds: A fair amount of pottery was found in the area excavated, the bulk of it from Hut E, where cordoned sherds occurred in a gully and several decorated sherds were found in the occupation material over the rab. An annular glass bead belonging to the Roman period and a clay spindle-whorl were associated with the remains of floors. A fine squared granite slab with a hollow—believed to be a grinding hollow rather than a post socket—was found in Hut E (Pl. II). As in previous years, parts of querns were also found.

Discussion: It is unlikely that a great deal more information can be recovered from this area in the present series of excavations, owing to limitations imposed by the site boundary on the south and other factors. It is clear that the damage to this part of the site, through clearance of stone and cultivation to the rab in places, is such that little of the original structures remain, while the various phases of occupation are mingled and found virtually at one level only—instances of sealed pits or gullies are exceedingly rare, and those associated with structures are rarer still.

The excavations this year have shown that the structure named Hut E, and probably Hut F as well, belong to the later phase of Iron Age occupation on the site, which continues into and probably to the end of the Roman period. It has already been suggested that these structures, together with Hut B, could represent the fragmentary remains of a Courtyard House, and the finds this year tend to support the theory. Unfortunately, owing to the damage already described to this part of the site, satisfactory structural evidence is still lacking.

THE FOGOU

Top of Structure (this is the area on both sides of the Long Passage, East Entrance passage and round the Corbelled Chamber):

The last remaining capstone at the eastern end of the Long Passage had tipped out of position at some time in the past—possibly when the miners blasted their way in at this point in the first half of the 19th century (Plate III). Eastwards from this capstone the passage is unroofed. In order to examine the structure more fully, and to prepare for consolidation, the ground on either side of the structure was excavated, to link up with the excavations north and south of the western part of the Long Passage made in previous years.

The first task this season was to remove the 5 ft. high dumps thrown out by W. C. Borlase's workmen in the mid-19th century (Plate IV). These consisted of large quantities of stone, from the Corbelled Chamber and the ruined East Entrance; fine brown earth cleared from the roofed part of the Long Passage; and black gritty soil containing Iron Age pottery from the floor of the Fogou itself. Under the dumps a thick, dark, stone-free layer was noted—the buried land surface of the 19th century.

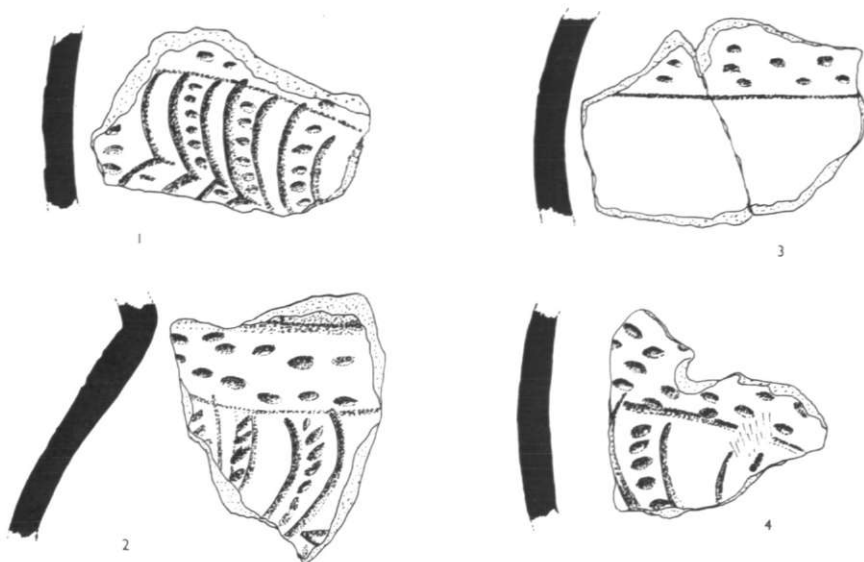


Fig. 6

*Carn Euny: Decorated Ware from the Fogou
Nos. 1, 2, 3, from East Entrance Passage: No. 4 from top
of structure (South side) in nineteenth-century dump
(Scale: one-third)*

On the south side, under this old land surface, was yet more stone, tumbled from ruined structures which abutted against the Fogou everywhere. Under this stone was a dark soil containing occupation material—in places over 1 ft. thick—which had accumulated over the primary occupation, with hearths, drains and post-holes, on the rab itself. Only one feature uncovered this year can definitely be associated with the building of the Fogou. This is a trench, 2 ft. 4 ins. wide at base and 1½ ft. to 2 ft. deep, with sloping sides, filled with redeposited buff-coloured rab. It runs from an opening in the south wall of the Long Passage below the displaced capstone (mentioned above) for a distance of 6 ft., and terminates at a small curved gully (Plate V).

The revetment wall on the south side of the Fogou, uncovered in 1966 was found to be continued by one standing stone. Beyond this its full extent could not be determined, owing to later building within the Iron Age, but on the evidence available it is not believed to have continued east of the trench described above.

Remains of later structures included a straight double wall built on the rab at right angles to the Long Passage. Above this, and separated from it by an occupation layer containing pottery and a hearth, was another double wall, standing 2-3 courses high. This upper wall (part of which was removed in excavation) continued the line of the monolithic boundary (?) wall found in 1965 which ran NW/SE and crossed over the roofed part of the Long Passage. A curved double wall, 5 courses high, was found to overlie primary occupation with stone covered drains and hearths. The inner face of this wall met a second wall, 3 courses high and straight, on the east, forming a sub-

rectangular enclosure 6 ft. wide, named Hut G. These structures—the curved double wall and Hut G—are seen in Plate VI beyond the south wall of the Fogou East Entrance passage.

On the north side of the East Entrance Passage part of a curved double wall was found with associated occupation material lying directly over the natural rab. This structure—Hut H—which could have been 24 ft. in diameter, would have been partly built over the (then roofed) Corbelled Chamber—the western and southern walls having subsequently collapsed into the Corbelled Chamber and the Long Passage when these lost their roofs. The pottery associated with this occupation was plain, but at a high level—in the disturbed earth and rubble over and behind the hut wall—were found two large sherds from Cordoned Ware vessels.

East Entrance: Work had been started in 1965 to clear the passage leading to the east end of the Fogou and a 6 ft. long section of this passage, from its junction with the entrance to the Corbelled Chamber, had been excavated in that year. It had been found that instead of sloping steeply upwards, as the surface level indicated, the deposit of dark black earth increased in thickness while the rab below ran almost flat. A drain covered with large flat stones ran from the south wall diagonally across the passage and passed under a large slab set on end in line with the east wall of the Entrance to the Corbelled Chamber. A black sticky layer, with charcoal and small stones, lay over the natural rab and a considerably quantity of sherds, including some coarse ware decorated with a distinctive pattern (Fig. 6), was found in this undisturbed basal layer. The deposits attained a maximum thickness of 3 ft. 6 ins., and at a height of between 1 ft. 3 ins. and 1 ft. 9 ins. above the natural rab were found the remains of two superimposed layers of flat paving stones, which coincide with the level of the top of the large slab set on end. This 'threshold' stone is now thought to be a later feature, placed with the paving stones—which may have been continuous over the whole passage—to facilitate access into the Fogou from the east when deposits had already accumulated over the rab.

The 1965 clearance of the passage had been halted at the point where the natural rab floor started to rise, and in 1967 the work was resumed. Considerable quantities of stone, including broken capstones, were cleared from the fill of the passage, and also from the north side, where the collapse both of the passage wall itself and of structures outside (Hut H) had completely obscured its true line. When cleared, a fine curve was revealed which matches that already observed in its upper courses on the south side. An upright stone marked the end of the north wall and, although smaller, matched the upright already visible on the south side. Large stones at the entrance, placed as steps to facilitate access in the 19th century, were removed, and no terminal stones of certain Iron Age date were found—indicating that the Fogou was open at that time and only blocked at a later date (Plate VII). East of these blocking stones a small area was excavated which contained a complex of pits and post-holes, some of which could relate to the Fogou.

The curved East Entrance passage was cleared to rab and found to be 16 ft. long from 'threshold' stone to the uprights at the entrance. The natural rab sloped sharply up from a point where the walls (particularly on the north side) cease to be corbelled inwards—the limit of the 1965 clearance. The black deposit decreased in thickness with this rise in the rab, and was virtually devoid of finds. A gully ran from a pit on the flat ground beyond the entrance, down the north side of the sloping passage, to connect with another drain (with some stone lids in position) running diagonally across the sloping rab from below the south upright (Plate VIII).

Apart from the Iron Age pottery found in the undisturbed part of the passage, finds were mostly from the area around and under the stones in the entrance, and included a quantity of glazed pottery, bottle glass, and modern china—as well as a few Iron Age sherds. The broken bulbar end of a large flint flake was found by the north upright.

Discussion: One of the most important factors to emerge from this season's work is undoubtedly the nature of the East Entrance. The steeply sloping rab floor, starting from the point where the walls cease to be so sharply corbelled, suggests that this ramp to the surface was never roofed. The span would have been considerably, if not impracticably, greater between the passage walls here, without the corbelling which is such a notable feature elsewhere in the construction of the Fogou. This factor, together with the discovery of the upright on the north side, lends weight to the view expressed by Borlase that this was the original entrance to the Fogou.

Another important discovery was the trench leading from the south wall of the Long Passage, opposite the entrance to the Corbelled Chamber. Although its purpose is obscure, this feature and the structure of the south wall of the passage at this point confirms what had been suspected for some time, namely that there were more than one, and probably several, phases of construction of the Fogou, though they may not necessarily have been separated by any appreciable lapse of time.

The black earth with its contained pottery, excavated in the passage in 1965, remains the only substantial accumulation anywhere over the floor of the Fogou which had been undisturbed over the centuries and is thus of special interest.

No new evidence was found in this season which would affect the tentative date of 2nd-1st century B.C. already suggested for the Fogou. The later structures built over and against the Fogou all appear, on the present evidence available, to belong to the local Iron Age but to fall within the first two or three centuries A.D. rather than before. More work is needed on both sides of the Fogou to trace the full extent of structures partly revealed this season.

Conservation: The capstone which had tipped out of position was supported on a pier of stones, believed to have been constructed at some point in the past to stop it falling (Plate III). In order to remove this pier and excavate back to the south wall of the passage, the capstone was temporarily supported in a timber cradle. Evidence was obtained through excavation as to its original position before tipping and it has now been returned to this position and conserved by means of a concrete lintel placed across the opening in the south wall.

The walls of the passage on both sides, east of the capstone, were in need of consolidation since the loss of roofing stones had impaired their stability. They have now been made secure by grouting and back-pinning where necessary.

NOTE

The writer is grateful to Professor Shotton of Birmingham University for noticing what proved to be the butt end only of a conical-butted axe among the various stone artifacts found during the 1966 season. The axe has been submitted to the Implement Petrology Survey and is identified as 'Greenstone, very near to Group I' (No. 1378, Corn. 290).

The axe was found among the stones and earth of the ruined double wall which may have enclosed a large area south of the Fogou. Its occurrence on the site (others are known from the area), together with flint implements found during every season at Carn Euny since 1964, is evidence of Neolithic activity in the neighbourhood.

The Rumps Cliff Castle, St. Minver: Third Interim Report on the 1967 Season

R. T. BROOKS (*Director*)

THE THIRD SEASON'S excavations took place during July and August, 1967. Work was terminated on the entrances through the innermost and middle ramparts. Hut remains behind them and in the interior were also examined. A brief general account is given below, which should be read in conjunction with the First and Second interim reports (see *CA 4* (1965), 24, and *CA 5* (1966), 4). The full account, with the conclusions reached and a description of the finds, will be given in a subsequent final report.

THE INNERMOST RAMPART

The series of post-holes flanking the western side of the entrance was exposed. These correspond closely to those on the eastern side, and give the width of the entrance as nine feet. Behind the rampart, and not connected with the entrance, a number of large and small post-holes illustrate how the vertical posts in a wall curving round to the back of the rampart may have been secured by horizontal or diagonal struts to smaller posts embedded in the slate and buried under the bank material.

It has previously been shown that the ditch does not extend across the causeway leading to the entrance. A section near its butt end was cleared, and at this point the ditch was 20 ft. across and 6 ft. 6 ins. deep. The infill was mainly of stones of considerable size, with little shillet rubble, and a number of sherds from a black burnished pot of a common form was found at surface level, attributable to a period after the rampart had ceased to be functional.

THE OCCUPATION BEHIND THE INNERMOST RAMPART

Some fifty major post-holes were found in a roughly circular area, which is partly cut into the slate ridge which forms the core of the bank. Some of them overlap, to form trefoil and quatrefoil patterns, and many have been re-cut. They are associated with a great number of small stake holes, of which some survive only in section in the sides of the larger holes. The southern edge of the area is defined by a curving bench in the slate; and in the gully below it, which is evidently for drainage, sherds from a large cordoned decorated vessel were found. Nearly parallel to this gully, and considered as of the same period of construction, an inner gully is interpreted as a foundation-slot for a wattle or wooden back wall. Post-holes are less numerous on the north-eastern side, where the slate surface is decayed, and this may have been the opening. No coherent plan can as yet be formulated but they centre on an oven which, however, is not an original feature. The occupation is considered to relate to a period after the rampart had gone out of use. Pottery and bone finds were scarce, having regard to the intensive use of the site indicated by the number of holes.

THE MIDDLE RAMPART

The gully or stockade trench recorded from the 1965 excavations (*CA 5* (1966), 6) has its counterpart west of the entrance, where there is also an association with post-holes which are clearly not connected with the later walls. The wall flanking the entrance in the final phase was exposed to the front of the rampart, and is a massive structure which describes a simple curve and then runs along the edge of the ditch from which it is separated by a narrow berm. The minimum width of the entrance is ten feet. The butt end of the rampart had been broadened by an extension at the rear when the original retaining wall and part of a living area had been covered by bank silt. A second area at the back of the rampart had also been partially covered over. This area had a well-preserved oven base, and the pattern of an insubstantial burnt roof was found in the form of charred remains on the floor. Neither area is considered to antedate the construction of the rampart to a significant extent; being outside the protection of the innermost rampart, both are likely to have been temporary huts used by the builders of the middle rampart. A quantity of pottery and bone, with a little bronze, was recovered from primary positions in these areas, and the hearths within them were associated with hammer stones of pillow lava.

THE INTERIOR

Two further hollows on the east side of the West Rump were examined. Both proved to be constructed ledges, and one produced the major part of a black burnished pot of a common form.

Other sections were dug in an area towards the base of the slope of the East Rump, on its south side, and here two large living areas were found. The remains of a wooden frame were found embedded in the surface of the slate in one area. This had, perforce, to be re-covered and awaits re-excavation when conservation aids will be available.

Despite its exposed position, The Rumps was an important settlement, for which much further evidence could be won, particularly from the areas in the lee of the two Rumps, and also by a complete stripping of the levelled area behind the innermost rampart (*CA 3* (1954), 27). On many parts of the site, however, the evidence will have been modified by weather action and material remains are likely to have shifted away from their original position.

ACKNOWLEDGMENTS

The Society is once more greatly indebted to the National Trust, and to Mr. Arland Kingston, the Area Agent, for permission to continue the excavation. The writer is also most appreciative of the action of the Trust in relieving him of the responsibility of the supervision of the backfill after the work had finished. Mr. Old again was kind enough to permit the use of one of his fields as a camp, the organisation of which was in the experienced hands of Mrs. Nankivell and Mr. Lingwood. Group-Captain Trudgian was the Assistant Director, and Mr. Petchey the Camp Commandant. Mr. Michael Avery kindly saw to much of the supervision of the work done in the interior, and Mr. John Stengelhofen was engaged in making the survey, which will be published with the final report. It was again a great pleasure to work with an enthusiastic and responsible group of volunteers; to each of these, as well as to those already named, the writer wishes to tender very sincere thanks.

Buckhurst Hill, Essex

Excavation of the Roman Fort at Tregear, Nanstallon: Third Interim Report

AILEEN FOX, M.A., F.S.A.

and

W. L. D. RAVENHILL, PH.D.

EXCAVATION OF THE Roman semi-permanent fort on Tregear Farm, Nanstallon, near Bodmin, Cornwall, was continued for a third and probably final season in September 1967, by kind permission of the owner, Mrs. Carnell. The work was directed by Lady (Aileen) Fox and Dr. W. Ravenhill and was carried out by students from the departments of History and Geography at Exeter University, from Newnham College, Cambridge and from the Institute of Archaeology, London, together with volunteers from the Cornwall and Devon Archaeological Societies, and the efficient paid labour of K. Symons and three other workmen. Financial support was given by Exeter University, the Haverfield Trust and the Society of Antiquaries to meet the costs of £450. As in 1966, some equipment was lent by the Ministry of Public Building and Works' Ancient Monuments branch, and by the Cornwall Archaeological Society. We were indebted to the Cadbury Excavation Committee for the loan of a soil conductivity meter.

This year the objectives were to investigate the timber buildings in the NE. quarter, of the fort, in the *praetentura*, and to complete the excavation of the *principia*, and of a workshop (*fabrica*) begun in 1966. The areas were uncovered in strips 6 feet wide down to the surface of the rocky sub-soil at a depth of 15 inches to 2 feet: stratification, as in previous years, was lacking.

THE PRAETENTURA

In the eastern half of the *praetentura*, the outline plan of two timber barracks was obtained; like those in the *retentura* found in 1965-6, they were aligned *per scamna*, with the long axis parallel to the *via principalis* and 11 feet apart: the gable ends to the *via praetoria* were noticeably well aligned. Barrack A was 24 ft. wide, facing on to the *via principalis*, and with an eave's drip channel on the north side. Officers' quarters were at the east end and nine double cubicles 24 by 9 ft. overall were indicated in the main body of the barrack with one larger one at the west end. An unworn *sestertius* of Nero of A.D. 64-6 was found on the side of a foundation trench at the east end, and indicates the construction date. A shallow pit full of burning probably dates from the demolition of the building. Barrack B was wider (28 ft.) and had larger double cubicles measuring 28 ft. by 11 ft. 9 in. overall. If it was entered in the customary manner through the smaller of the two compartments, this building faced north. Half a rotary quern, pieces of crucible and slag, and a small bronze weight inscribed S (*semis*, half oz.) were found beside a hearth at the west end. These finds were below the presumed floor level and so should ante-date the building.

The remaining space northwards to the ramparts was apparently devoid of buildings; only two isolated postholes were found in the three 6 ft.-wide cuttings.

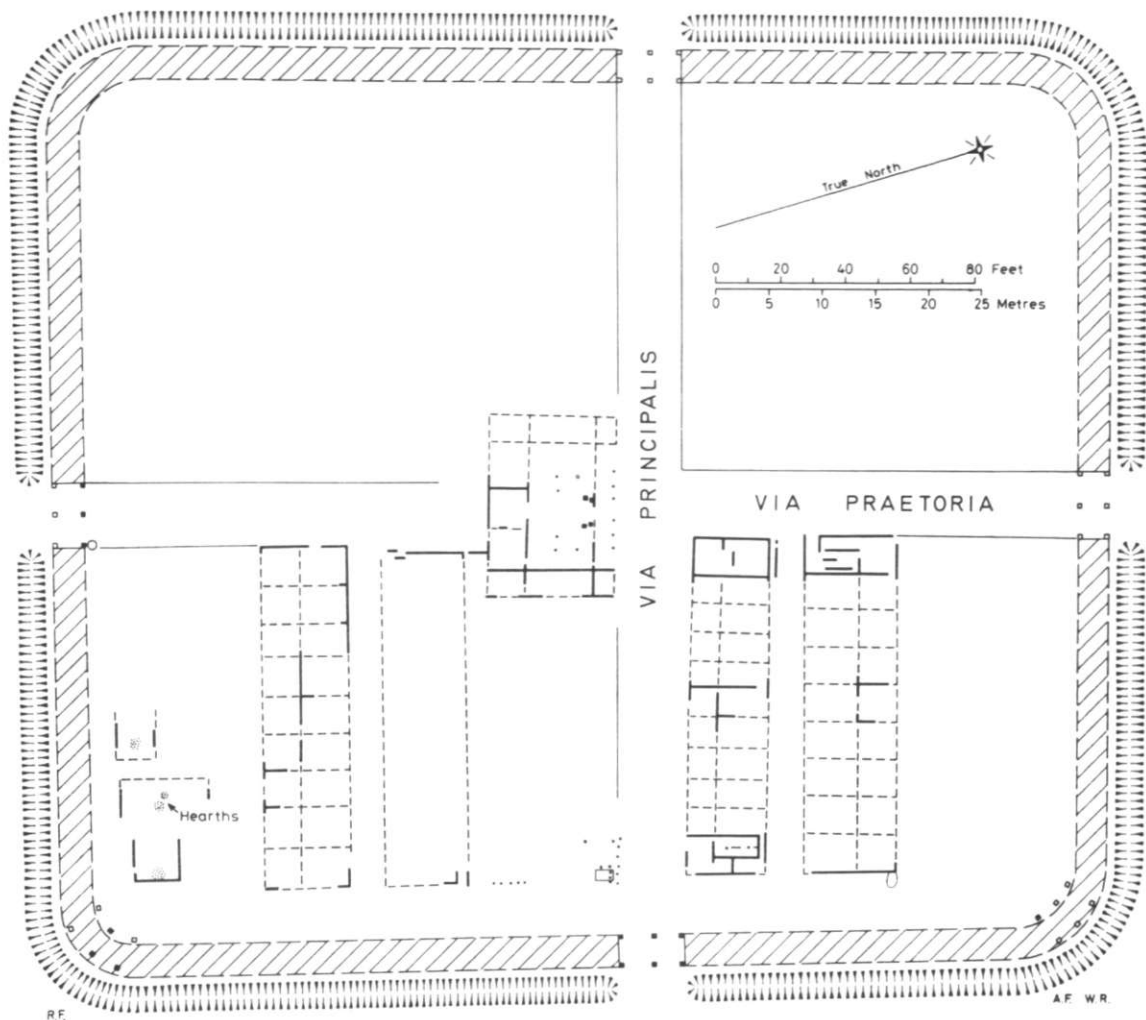


Fig. 7
 The Roman Fort at Tregear, Nanstallon; plan at the conclusion of
 the 1967 season

THE RETENTURA

Further investigation showed a similar space without barracks in the *retentura*: the workshop with the burnt floor and possible anvil base uncovered in 1966 proved to be only a small isolated structure 15 ft. by 13 ft. 6 in., containing a large hearth; there were two other slight irregular constructions lying to the west of it. Elsewhere there were only layers of trodden mud and stones overlying the old surface. Such a plan is unusual: we suggest that these open spaces on the margin of the fort were used to picket the horses of a mixed unit, instead of building permanent stables as at Valkenberg, Holland: it will be remembered that bronze harness rings were found in 1966 as well as in the 19th century. The small buildings with the hearths and burnt floors would be in place as smithies and workshops. Alternatively the free space may have resulted from a reduction in size of the garrison from that originally planned.

THE PRINCIPIA

The plan of Headquarters as finally elucidated was of a building measuring 58 ft. east to west by 40 ft. north to south. It had a covered colonnade 6 ft. wide on its northern side fronting on to the *via principalis*. The main gate was central, but inset behind the colonnade: its position was shown by two large post-pits, each containing two timber uprights on which double doors were hung and forming the door frame. A well metalled road went through the gate and across a narrow internal courtyard and ended at a line of deep postholes, which marked the front of the customary Cross Hall. This was a long narrow room 40 by 9 ft. with remains of three hearths on the floor, including one with an amphora base beside it found in 1966. There was a range of rooms behind the Cross Hall, and another set along the eastern side of the building: the corresponding arrangements on the western side could not be ascertained owing to the shallow soil. Although the internal plan of the building has the triple divisions normally apparent in a *principia*, the proportions are different from those in other first-century timber forts such as Hod Hill, Dorset, or Llystyn, Caern., and its interpretation must be regarded as tentative.

THE DEFENCES

Trenching established the inner edge of the ditch at the NE. angle, and also uncovered one large deep posthole, almost certainly belonging to a timber angle-tower like that previously found at the SE. angle in 1966. It was impossible to follow up this discovery because the ground had been deeply disturbed after the levelling of the Roman rampart, by later digging probably in search of tin. The amount of loose stones and dark turf soil in the spoil heaps suggested that the base of the tower had been revetted with stone.

SUMMARY

As a result of the three seasons' excavation it has been established that there was a semi-permanent, two acre Roman fort at Nanstallon, with a turf rampart and ditch, timber double gates and angle towers and well-made roads. In the eastern half of the fort the garrison, which probably included some cavalry, was housed in four barracks, leaving an open space behind the ramparts. In the centre was the small headquarters building, flanked on the east in all probability by the Commander's house (to which the latrine found in 1966 probably belonged). Finds indicate a date in the reign of Nero for the main layout, probably after A.D. 65 in the case of Barrack A, and continuing into early Flavian times. It is unlikely that the fort stood alone and it is obvious that others must be sought in the peninsula.

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The Excavation of Chapel Jane, Zennor

VIVIEN RUSSELL

and

P. A. S. POOL, M.A., F.S.A.

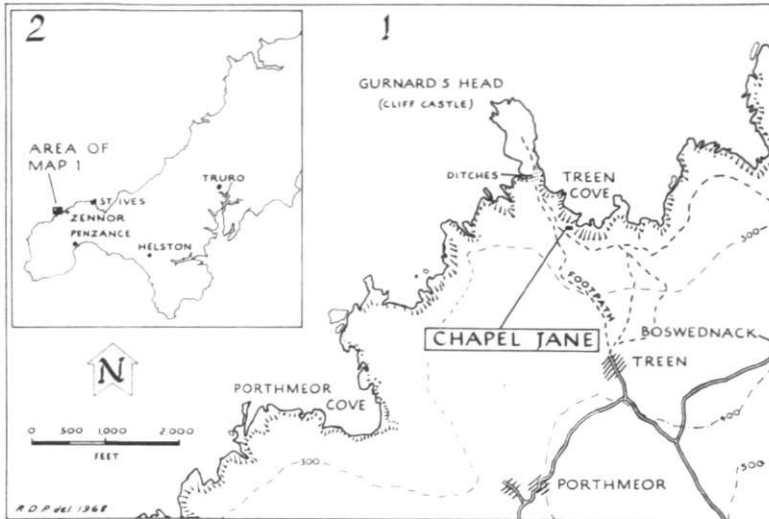


Fig. 8
Chapel Jane: Location Maps

SUMMARY

THE EXCAVATION HERE reported took place, under the direction of the first-named writer, intermittently between 1964 and 1966. The finds and records of the excavation will be deposited in the County Museum, Truro. The site is a rectangular stone building of two phases of construction; the first phase having a doorway in the approximate centre of the S. wall, and the second phase involving the blocking of this door and the addition of an extension on the W. of slightly greater width than the original building, with a doorway in the middle of the W. wall. The site has for over a century been believed by antiquaries to be the chapel known to have existed in this vicinity, and the evidence of the excavation supports this identification. The pottery found indicated dates of between c. 1100 and c. 1325, but other evidence suggested that use of the building continued at least until c. 1500.

THE SITE

The site (Nat. Grid SW 43433825) is on the extreme edge of the cliff at Treen Cove, Zennor, on the N. coast of the Land's End peninsula, about $1\frac{1}{4}$ miles W. of Zennor Church and 300 yards SE. of the ramparts of the excavated Iron Age cliff castle of Gurnard's Head (Gordon, 1941). The cliff here is a sheer drop of over 150 feet, and above

it is a steep grassy slope rising to a height of about 300 ft. above sea-level, where the land gradually flattens out on to the coastal shelf. The site occupies a level platform constructed by cutting into the slope and throwing the spoil downwards; the greater part of the building stands on the made ground so formed. On the S. and W. of the site, the grass slope rises steeply above it, and the oval-shaped cutting is very well defined, the section showing the natural subsoil rising in steps from the S. wall of the building. To the W. an overgrown stone wall descends the slope towards the site, but, on reaching it, turns N. towards the cliff on what may be the line of an older wall enclosing the site on the N. side, making with the cutting an oval enclosure about 35 ft. wide containing the site. No indication of any actual wall was found on the S. side, the stones shown in section being apparently natural hill-tumble. The NE. corner of the building stands on the extreme edge of the cliff, in a position where building operations would now be impossible, but the cliffs in this vicinity are subject to constant erosion, and when built the chapel would probably have been several yards from the cliff edge. Before excavation the site was almost invisible beneath a thicket of blackthorn.

On the cliff slope NW. of the site are a number of level areas with some resemblance to artificial habitation terraces; two of these were sectioned by Mr. A. Guthrie, but revealed no traces of habitation or structure, and are apparently of natural origin.

There is a trickle of surface water just below the cliff edge 18 ft. from the SE. corner of the chapel, which probably fed the well referred to by several authorities; no trace of structure now remains, possibly as a result of cliff erosion, and there is no evidence or record that such ever existed, or that the 'well' was ever more than a natural spring.

EARLIER REFERENCES TO THE SITE

No references to this site or to any chapel in the vicinity have been found in any ecclesiastical records, and the earliest reference is in the Penheleg MS. of 1580 (*Pool*, 1959, 189), recording evidence given in 1565 concerning a wreck in 1531 'at Senar Clyffe by Innyall Chappell within Reskymer's Manor named *Trethein*' (Treen). 'Innyall' is Cornish *ynyal*, wild, desolate, and it seems that the name was applied primarily to Gurnard's Head itself rather than to the chapel. The next reference is in the unpublished portion of the *History of Cornwall* of William Hals (1655-1737) which, as first quoted in print (*Gilbert*, 1838, IV 164), reads:- 'In this parish (Zennor) are the ruins of an old free chapel called Chapel Jane, that is, the narrow chapel', but reference to the MS. (*Hals*, f. 200 v.) reveals a name which could be read either as 'Jelne' or 'Idne', suggesting that confusion arose between this site and the chapel at Sennen Cove mentioned (but not named) by Dr. William Borlase (*Borlase Par. Mem.* 18) and called 'Chapel Idne' by later writers. If one assumes that the name given by Hals is in fact 'Idne' and belongs to the Zennor site, it may be a corruption of the earlier name 'Innyall' recorded by Penheleg. At Lanyon in Madron the same word *ynyal* occurs in a name found in 1670 (Rashleigh MSS., C.R.O., Truro) as 'Goone Agga Idniall' (Cornish *gun aswy ynyal*, down of the desolate gap), and in 1841 (Tithe Apportionment) as 'Nangidnall Croft', showing the same intrusive *d* as in 'Idne' which is characteristic of Late Cornish. The same change of this word is also found in the field name 'Begeledniall' (*begel ynyal*, desolate tump) at Keigwin in St. Just in 1686 (*Henderson Pen. Top.* 111).

In the nineteenth century, the site was frequently visited and noted by antiquaries. The most informative of their records is that of H. A. Crozier, who lived at Penzance c. 1840-50, and whose archaeological notes later came into the possession of J. T. Blight. Crozier's note on this site (*Penzance Misc.* 44 no. 10) reads as follows: 'Remains of the foundations of the wall of the chapel, exterior measurements 28 ft. by 13 ft. The wall 2½ ft. thick. In the NW. angle the altar stone lies measuring 4 ft. 4 ins. by 2 ft. 4 ins.

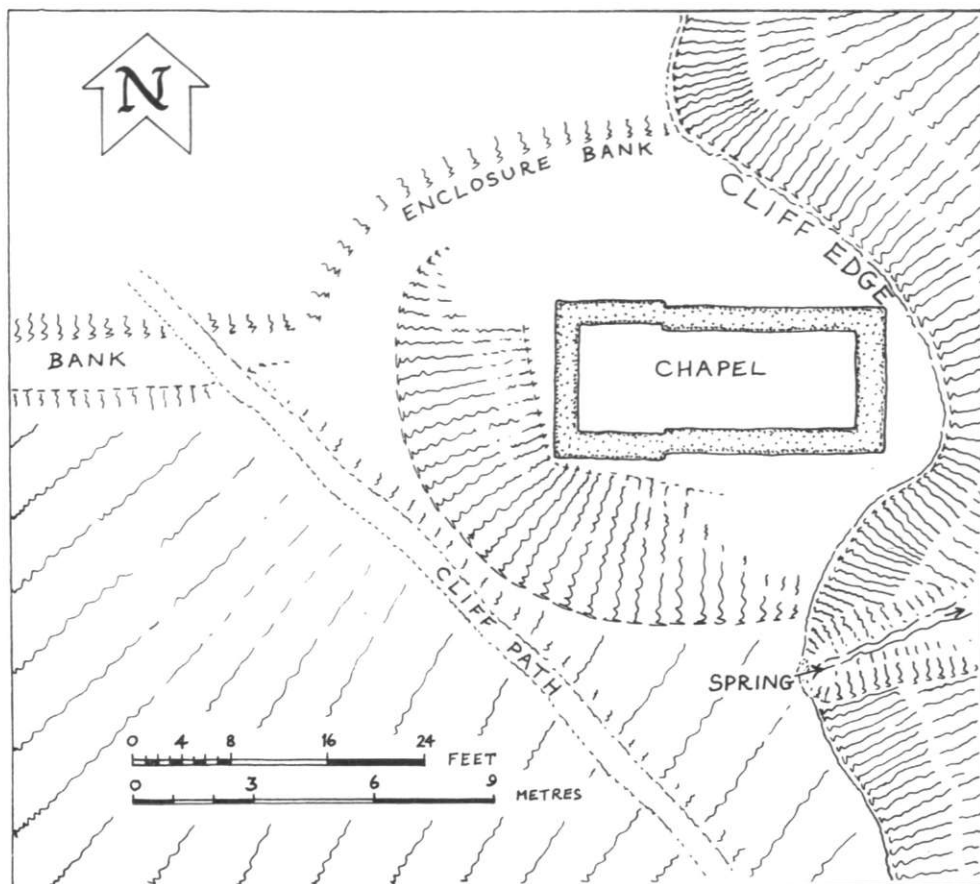


Fig. 9
Chapel Jane: sketch plan of setting

The well is about 20 ft. distant under the edge of the cliff.' This is especially interesting as giving the position of the altar mensa in the same unusual position where the writers found it, although an apparently later account (*Blight, 1858, 102*) refers to it as being 'preserved, evidently in its original position, at the E. end'.

In 1865 the site was visited by Penzance Natural History & Antiquarian Society, who found (*Penzance Rep. (1862-5), 43*) 'the merest rudiments of walls . . . all overgrown with sward . . . within them an altar stone'. The well was 'nothing more than a resting place for the rivulet which, just E. of the chapel, trickles down the face of the cliff.' It was stated that 'within living memory the elder inhabitants of the parish were in the habit of making a feast at this place on some saint's day . . . in the latter part of the summer', but the saint's name was forgotten. The site was becoming overgrown and difficult to find, and indeed when the same Society next visited Gurnard's Head in 1883 they could not find the chapel (*Penzance Rep. (1883-4), 311*). Ten years later it was stated (*Matthews, 1892, 38*) that 'at the E. end is a large slab, said by some to be the altar stone, under which according to tradition certain drowned mariners lie buried', and that at the beginning of the century it was 'still the custom to make a pilgrimage to this spot on the parochial feast-day'.

In the present century the site attracted little attention, being concealed by vegetation from most visitors until excavation, although it was located by F. C. Hirst in his antiquarian survey of Zennor (MSS. at Wayside Museum, Zennor), and has been regularly marked on O.S. maps. It is still known by the name 'Chapel Jane', apparently mis-copied by Davies Gilbert from Hals, and is therefore referred to as such in this report.

THE EXCAVATION

The interior of the building was totally excavated to below the lower floor level, but not cleared down the natural ground, as this would have involved removal of the made-up ground on which the greater part of the building stood (N.B.: the feature numbers in brackets, so—bench (8)—refer to the plan of the site, Fig. 10). The whole exterior of the S. wall was cleared, and cuttings were also made outside the other walls, but these were limited by the vicinity of the cliff edge and the need to impair the stability of the building as little as possible.

The earliest layer revealed was represented by an area of charcoal first seen in section in the E. and SE. sides of a pit (3). This was fully cleared except on the E. side where excavation was stopped 1 ft. 6 ins. from the 'grave' (4, see below) so as not to interfere with the latter's outline. The charcoal was here thinning out and did not appear in the W. side of the grave. This charcoal layer was a maximum of 1 in. thick and rested directly on the old soil, which itself showed little sign of burning; outside the charcoal area the old turf line showed well on the old soil. These layers sloped towards the E. much more steeply than the occupation layers above, and were covered first by pink shilletty make-up and above that by yellow clayey soil resembling natural, both shown as layer 7 and presumably obtained by digging away the hillside to the W. to level the platform. It is suggested that this charcoal layer represents a bonfire lit by the builders of the chapel on the then turf level before building operations commenced; no finds were made at this level.

The original (first phase) building was apparently a plain rectangle with its long axis E.-W., internal measurements a double square of 8 by 16 ft; near the E. end the N. wall deviates somewhat from rectangular form, probably owing to subsidence. It is constructed mainly of killas, the surface stone of the site, the blocks at the corners being largest and carefully cut. Some granite stones are used, but apparently without structural significance. The three surviving walls of this building average 2 ft. in width and are reasonably well preserved, rising to a maximum height of 3 ft. 8 ins. The S. wall is set directly on made ground without foundations, but off-set foundations were found where the E. and N. walls were examined, and outside the E. wall near the SE. corner was a large stone lying horizontally, presumably placed to improve the stability of the corner built on made ground. Two vertical breaks 4 ft. apart in the S. wall, best visible from the exterior, indicate the doorway of the first phase building, subsequently blocked. If one assumes the internal length of this building to have been 16 ft., the doorway would have been approximately central. Outside it two stones, one granite and one killas, are set as a door-step one course lower than the wall at either side. There is a recess in the centre of the inner face of the E. wall, about 3 ft. wide and 1 ft. deep, its bottom 9 ins. above the presumed floor level and extending upwards as far as the present height of the wall. The possible significance of the recess in relation to the altar is considered later. There is also an off-set course about 4 ins. wide along the inner side of this wall on the same level as the bottom of the recess.

The lowest occupation layer found (presumably to be identified with the first phase of the building) is represented by a well-trodden surface of made-up or natural ground with some charcoal including one large patch. Sherds were found in the layer of about

CHAPEL JANE

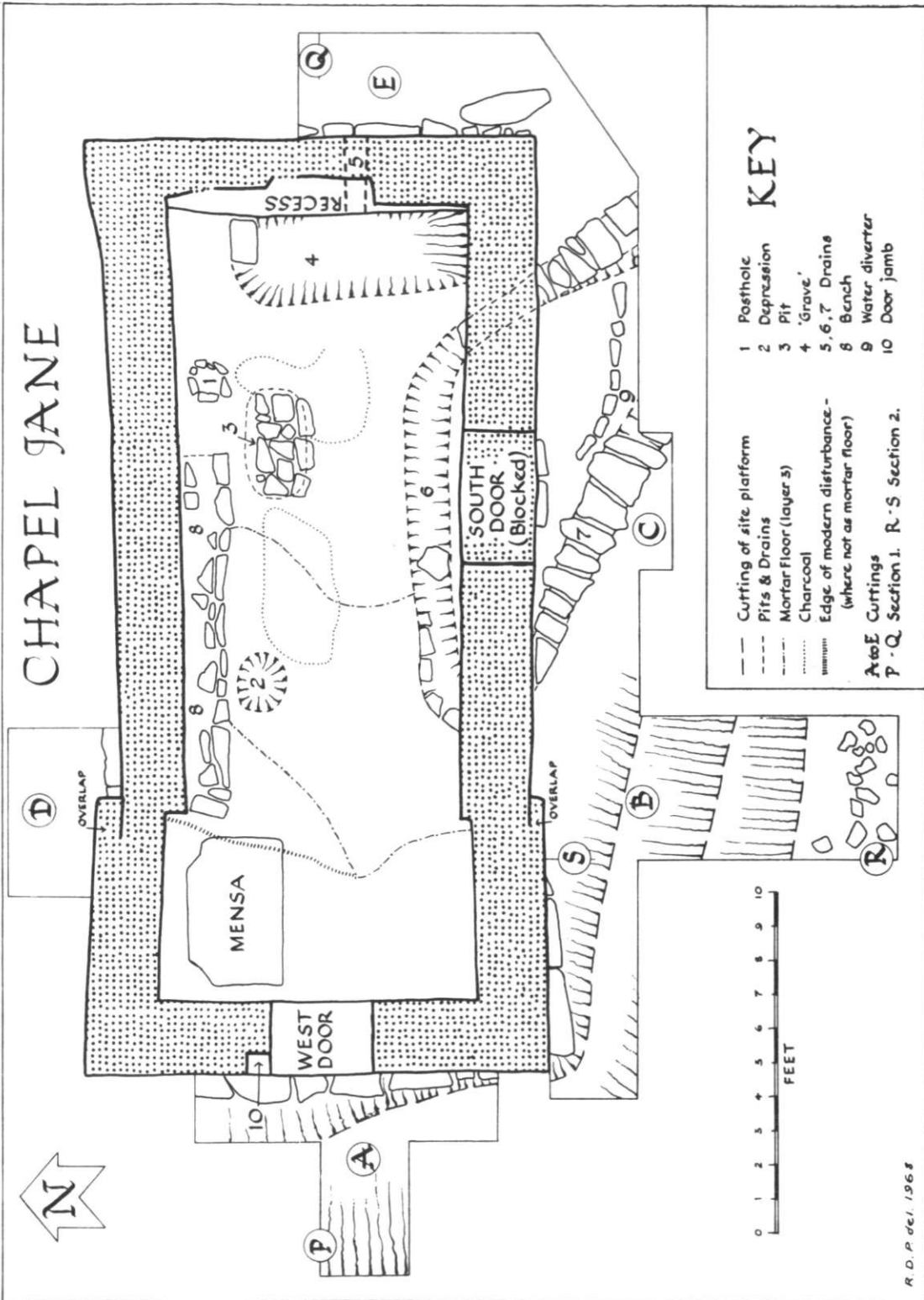


Fig. 10: Chapel Jane, excavated site plan

2 ins. of fairly clean silt immediately above the floor (layer 4) and sealed by the second phase occupation layer; these sherds included Fig. 12 no. 16, and Fig. 13 no 2.

To this first phase belong the altar mensa, the pit (3), and the shallow depression (2), the two latter of which first appeared in the surface of the made ground forming the first-phase floor. The 'grave' (4) is clearly of intermediate date between the first and second phases, since the upcast from it (layer 5) overlies the first-phase floor and is itself sealed by the later floor.

The second phase of construction involved the total removal of the W. wall of the original building, the blocking of the S. door, and the construction of an extension at the W. end whereby the interior length of the building became 23 ft. The interior width of the extension averaged 9 ft., 1 ft. greater than that of the original building, but it shows signs of careless planning in that its walls are not parallel with those of the first phase; this deviation is especially marked on the N. side. At the junctions between the two phases the outer walls of the extension appear to overlap those of the original building by over 1 ft., and on the S. side this overlap is precariously based on 1 ft. of soil. The construction at the points of junction was not explored as this would have involved partial destruction of the building, and for this reason the exact position of the W. wall of the first phase building cannot be given. The walls of the extension show the same general mode of construction as the older walls, but are from 2 to 6 ins. wider and show greater use of granite and also the practice of using slates inserted horizontally to trig wall stones, which is not found in the first-phase building. The extension had substantial off-set foundations at the S. and W., and at the SW. corner it approaches to within 6 ins. of the slope of natural ground which marks the edge of the shelf levelled to receive the original building. A door approximately 3 ft. wide in the centre of the W. wall of the extension gave access to the enlarged building. On the N. side of this is a carefully squared block (10) of fine granite porphyry, 9 ins. high with a base 8 ins. square, trigged with slate and showing a stop-chamfer and traces of an iron door-hanger. This is the base of one of the jambs, and two other chamfered stones of the same material found in the rubble nearby, the longer of them 2 ft. long, are probably also fragments of the jambs. The stones forming the base of the doorway are about 1 ft. 6 ins. above the interior floor level and show no signs of regular wear; there must have been wooden steps covering these and leading down to the floor. Two stones with circular depressions were found in the rubble near this doorway and may have been door pivots. Other stones found in the same area included three fragments of a granite arch, the largest 2 ft. long, in section 10 by 10 ins. with a chamfer on one of the lower sides. These are of a coarse tourmaline-biotite granite very different from the jambs of the W. doorway, and in Dr. Radford's opinion are of late date, possibly post-Reformation. Another interesting stone was a fragment of window mullion, apparently a very weathered greenstone, found in the topsoil outside the building near the SE. corner, and dated by Dr. Radford as *c.* 1500. This stone had a groove for glass on each side, showing that the building possessed a window of at least two lights, probably at the E. end. Owing to the destruction of the upper part of all the walls, no structural evidence of windows remained, and no window glass was found.

A mortar floor (layer 3), sealing the silt (layer 4) above the lower floor, clearly belongs to the second phase of the building since it reaches into the extension beyond the presumed position of the former W. wall. It may have originally been more extensive since many fragments of mortar were found elsewhere; it had been re-mortared in several places and at one area towards the E. end had evidently been replaced or extensively patched with slates. It was almost certainly contemporary with a mortar rendering of the inner walls, since although in no place is there a physical join, near the SE. corner of the extension the gap between floor and wall mortar was only a few

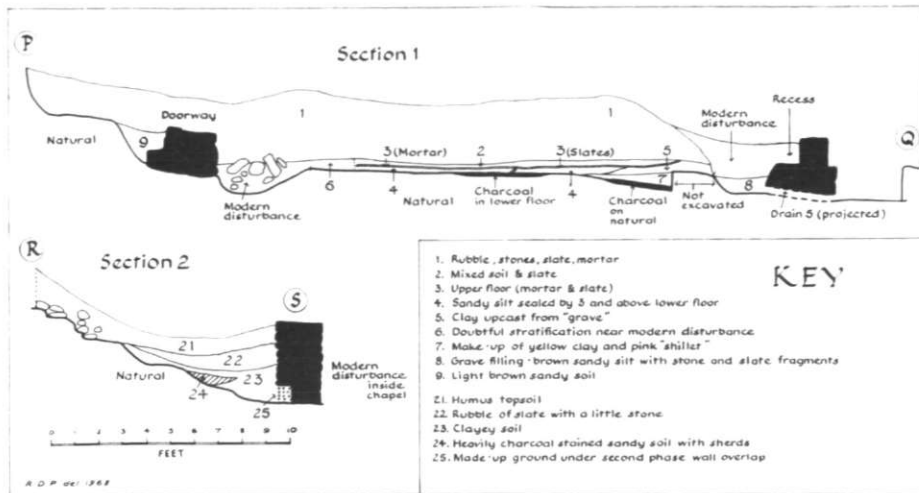


Fig. 11

Sections: see Fig. 10 for locations of P-Q, R-S

inches, and the outward curve of the bottom of the latter seemed to indicate continuity. Traces of mortar rendering were also found on the outer side of the S. wall. Over the mortar floor was a layer from 2 to 4 ins. thick of soil and slate fragments (layer 2), and above this the whole interior was filled with building rubble and slates (layer 1), the slates clearly resulting from collapse of the roof after disuse of the building. There were modern disturbances in the floor at each end of the building. At the W. end the greater part of the extension had been dug into deeply and the floor destroyed; the pit had been loosely filled back with stones and soil, the filling including pieces of clay pipe and glazed pottery, probably 18th or 19th century. At the E. end a smaller disturbance overlay the 'grave'; this was indicated by a pronounced dip in the rubble accumulation and proved by much charcoal with fragments of modern bottle-glass.

It is uncertain to which phase of the building the drains on the S. side (6 and 7), the bench (8), and the posthole (1) belong, although drain 6, which passes through the wall, is more likely to be first phase, and the posthole, which first appeared on the level of the second phase floor, probably belongs to that phase.

In the exterior of the building much hill-wash had settled in the angle between the S. wall and the slope of the cutting, and from the lowest levels upwards this contained slates and occupation material in patches, the former ranging from small fragments at the bottom to a considerable roof-fall (including complete slates) just below the recent humus. At a low level, between 2 and 3 ft. from the S. wall of the extension, there was a deposit (layer 24) of heavily charcoal stained soil containing sherds, including Fig. 12 nos. 2, 4, 7, 9, 11, and Fig. 13, no. 13. There were also traces of occupation (including sherds) on the W. side, but none were found on the N. or E. Most of the pottery found came from the exterior, where many limpet shells and beach pebbles were also found.

FURTHER NOTES ON FEATURES

The Altar mensa. This is a fine slab of very coarse-grained granite, carefully trimmed, measuring 4 ft. 4 ins. wide by 2 ft. 8 ins. deep by 8 ins. thick. Its top bears no markings of any kind. The lower side is less carefully tooled than the top and has the front and sides, but not the back, chamfered. The two rear corners have been somewhat crudely

cut away and the rear width of the stone thereby reduced to 2 ft. 3 ins. When found it was neatly set in the N. part of the W. extension at a high level and partly overlying the modern disturbance. Clearly this was not its original position and presumably it came from the E. end of the chapel, although the evidence already quoted as to its position in the 19th century is conflicting. It is possible that the removal of the rear corners might have been to enable the mensa to be set in the recess 3 ft. wide in the E. wall; this theory is admittedly rather speculative, but it is clear that the back of the stone as mutilated would fit into the recess and that it would not have done so otherwise. The absence of consecration crosses on the mensa indicates that the chapel was not formally consecrated and that mass would have been celebrated with a small portable altar placed on top of the mensa, somewhat as at St. Madron's Well Chapel, where the mensa has a rectangular recess in its centre to receive such an altar. The mensa at Chapel Jane is considered by Dr. Radford to be either 12th or 13th century; for discussion of the dimensions and dating of this and other Cornish examples see *Thomas, 1967*, 108-9.

The Grave (4). The term 'grave' is applied in this report (perhaps misleadingly) to a sub-rectangular pit 7 ft. long by about 2 ft. wide by 1 ft. deep, with sloping sides and rounded bottom, dug at the E. end of the building beneath the presumed original site of the altar. On the E. and S. sides the grave rises to the wall bases, but on the N. its edge is nearly 2 ft. from the N. wall and is marked by a large set stone 9 ins. thick which may be the bottom part of an altar support. The grave was filled with hard and compact brown sandy silt (layer 8) with some stones on the bottom and many slate fragments throughout, but no trace of burial was found, and its N.-S. alignment makes identification as an actual grave doubtful, although a grave so aligned was found beneath the presumed site of an altar in the chapel on St. Helens, Scilly (*O'Neil, 1964*, 49). A passage (5), probably a drain, runs from the bottom of the grave under the E. wall to the exterior. It is cut in the made ground, measures 7 ins. wide and about 5 ins. deep, and was filled with dark sandy soil containing one sherd. A stone set in the plane of, but below, the inner wall face acts as a capstone. The stratigraphic evidence shows the grave to be intermediate in date between the two phases of occupation and has been considered.

The Bench (8). Along the N. wall is a feature which is probably the lower part of a side bench or pew, such as was found also at St. Madron's Well Chapel and at the chapel recently excavated at Fenton-Ia, Troon, Camborne (*Thomas, 1967*, 80). It is 10 ft. 9 ins. long, 1 ft. 5 ins. wide and from 1 ft. to 1 ft. 6 ins. high above the floor. The central portion of the face of the bench is formed of stones set vertically, but at either end they are set horizontally and at the W. end there are three courses of stones so set. All the stones are of killas except one of granite at right angles to the wall, which forms the W. end of the bench and may be a late addition. Between these stones and the wall earth and small stones are packed; this filling was sectioned and found to rest on made ground and to contain no charcoal or mortar. No stones survived *in situ* from the top or seat of the bench.

The Posthole (1). This is near the N. wall E. of the bench, and was first seen on the level of (not covered by) the slate patching of the mortar floor. The hole was surrounded by eight packing stones and was 8 ins. in diameter at core and 1 ft. deep. The top 2 ins. of the filling were mixed clayey soil with small stones and fragments of mortar and slate; below was sandy soil containing one nail and one piece of iron. This was the only post-hole found and may be attributable to a screen dividing off the E. part of the chapel from the rest; a somewhat similarly placed hole was found at Troon (*Thomas, 1967*, 77, 80).

The Pit (3). This was first seen as a patch of apparent paving on the surface of the made ground. It is sub-rectangular, measuring 3 ft. E.-W. by 1 ft. 9 ins. N.-S. by 1 ft. 6 ins. deep, and was filled with large stones packed loosely so as to leave many air spaces, and some sandy soil. The top stones of the filling were flattened out and worn smooth so as to resemble paving. The significance of the charcoal layer seen in section in the E. side of this pit has already been discussed. The purpose of the pit is not clear, but it may have been a sump to reduce floor dampness.

The Depression (2). This is in the N. part of the floor near the bench, and first appeared in the surface of the lower floor. It is oval, of shallow bowl shape, measuring 1 ft. 9 ins. E.-W. by 1 ft. 5 ins. N.-S. by 6 ins. deep, and was filled with small stones and dark soil, with some charcoal on the bottom and sides which probably came from a patch on the floor nearby.

The Drains (6,7). Two drains were found, in addition to the probable one leading E. out of the 'grave'. One (6) runs along the inside S. wall, turns to pass under it through a carefully built diagonal passage with side stones, and outside continues in a SE. direction towards the cliff. Inside the building it is a shallow channel cut in made ground; no capstones were found *in situ*, though several stones in the area could have been displaced capstones. Outside the capstones remained and the drain was 1 ft. 2 ins. deep, 1 ft. 4 ins. wide at the exit and broadening thereafter, U-shaped in section throughout and filled with medium dark shilletty silt containing no finds. The other drain (7), which also retained its capstones, started outside the S. wall and headed ESE. away from it, being traced for 8 ft. It may have led to and joined drain 6, but this was not investigated. At the W. it was shallow—11 ins. wide by 6 ins. deep with vertical sides, but further E. it became deeper and wider with a V-shaped section. The filling was of darkish soft soil containing fragments of slate and mortar and one sherd. Between drain 7 and the wall is a curved row of stones set vertically in the ground (9), almost certainly intended to divert flood water away from the wall.

CONCLUSIONS

We consider first the evidence for and against the identification of this building as a chapel, and then (assuming it to have been one) why it should have been sited in this place.

The evidence supporting identification as a chapel is as follows:

1. References from the 16th century onwards to a chapel in this vicinity, its identification for over a century with this building, and the absence of any other likely structures nearby.
2. The orientation of the building.
3. The existence of the presumed altar mensa.
4. The reported vicinity of a well.
5. The absence of hearths or similar indications of secular occupation..

To the contrary can be cited the absence of references to the site in ecclesiastical records, or indeed of any references earlier than the 16th century, and the domestic character of the pottery found. However, the existence throughout Cornwall of a large number of chapels not recorded in episcopal registers (preserved from 1257 only) is well attested (*Adams, 1957, passim*), and the greater part of the pottery was found outside

the building and only a small proportion from the inside floors. The evidence is not conclusive, but the writers accept it as establishing the site very probably as a chapel, an identification which has the unqualified support of Dr. Radford.

Assuming the site to be a chapel, there is little direct evidence why one should have been built on this remote and exposed cliff. It is one of three sites of medieval Christian worship in Zennor, first mentioned as a parish *c.* 1150. An assertion (*Blight, 1865, 98*) that the Parish Church included Norman work was found to be incorrect when the building was restored in 1890, and nothing at present visible there is earlier than the early 13th century. About 600 yds. SW. of the church, adjoining the coast road, is a field on Kerrow called 'Park Chapel' in the Tithe Apportionment of 1839 and still known as 'Chapel Field' (Nat. Grid 452381). Remains of the chapel survived into the 19th century, but there is now no trace; F. C. Hirst believed that this was an earlier site of the Parish Church, but quoted no evidence other than a confused oral tradition that 'Zennor Churchtown ought to have been in Chapel Field' (Hirst MSS., Wayside Museum, Zennor).

Chapel Jane, the third site, produced no pottery or architectural features indicating a date prior to 1100, and any association with the pre-Conquest period or with the Patroness of the Parish, St. Senara, would be purely inferential, although the existence of a well near a chapel is sometimes taken to indicate early date (*Adams, 1957, 49*) and it is possible that some earlier building could have been destroyed by cliff erosion.

The position of the site is inconsistent with its having been either a chapel of ease or a domestic oratory; the nearest farmstead at Treen is 600 yds. away and seems not to have attained manorial status until the 16th century and never to have had a manor house. Chapel Jane could possibly have been a votive chapel commemorating an escape from shipwreck, but seems more likely to have been associated with fishermen. Treen Cove below the site, now almost inaccessible through erosion, is known to have supported a small pilchard seine fishery in the late 19th century, of which traces including a ruined bulking house still remain, and there is evidence of fishing having been carried on in the parish in medieval times. The tithe of fish is specifically mentioned in the two medieval *taxationes* of Zennor vicarage (*Peter, 1903, 13*, quoting Exeter Episcopal Registers). In 1270 this tithe was assigned to the Rectors, Glasney College, possibly continuing an earlier arrangement since the parish had previously been appropriated *c.* 1150 to Tywardreath Priory, but in 1315 it was assigned to the Vicar. Also, the Haveners' Records of the Duchy of Cornwall from 1337 onwards refer to Porthsenar (for administrative purposes linked with Portheras in St. Just) among the fishing coves of Penwith (*Campbell, 1962, 124*). It is probable that medieval fishing at Zennor took place from Treen Cove, although the name 'Porthzennor' is now given by the O.S. to a cove over a mile to the E., since at Treen the protruding mass of Gurnard's Head gives some degree of protection from the prevailing W. wind, such as is not obtainable elsewhere on the exposed and rocky coastline of this parish. The writers are most indebted to Dr. C. A. Ralegh Radford for the suggestion that Chapel Jane was the spiritual centre of an association of Zennor fishermen (such as existed on a formal Gild basis at St. Ives where there were three chapels on or near the shore), where they could give thanks for safe return or good catches, hold an annual festal mass at the opening of the fishing season (whence the tradition of an annual procession to the site), and possibly other celebrations such as masses for those lost at sea. The quantity of 12th and 13th century domestic pottery round in and near the site could be explained by the requirements of a visiting chaplain who would probably have had a lodging near the chapel for use when he attended to take the occasional masses; the absence of pottery later than the 13th century could be referable to the change introduced by the *taxatio* of 1315, whereby the Vicar of Zennor obtained the fish tithe previously taken

by the absentee Rectors and with it, presumably, the responsibility for conducting services at the fishermen's chapel, so that visiting chaplains would no longer have been required.

As well as providing for the spiritual needs of the fishermen, the chapel probably contributed also to their physical safety by providing a light to guide them into the cove below, as at Chapel Angier in Lelant, Chapel Carn Brea in St. Just, and other places (*Adams, 1957, 57; Pool, 1964, 29*). A light on the summit or end of Gurnard's Head would have been more widely visible to seafarers, but one on the cliff at Chapel Jane would have been of greater use in the final and dangerous quarter-mile into Treen Cove. The western extension to the chapel has more substantial foundations than the original building, suggesting that it could have carried a small tower to display the light. If it is regarded simply as an extension, the problem arises why it should have been built 1 ft. wider than the original building, since one would expect an extension to be either the same width as the original or else significantly wider, whereas in fact the builders seem to have gone to much trouble to alter the width while gaining thereby only a negligible extra area. Possibly the walls were staggered in order to break the flow of wind round the chapel and so reduce the risk of damage to the roof.

The following summary of the probable chronology of the site is submitted as having the approval of Dr. Radford, based on the pottery and architectural details. The original chapel was constructed *c.* 1150, and contained the mensa which is either 12th or 13th century. The western extension was built in the 14th century, the stopped chamfer of its door being of *c.* 1300 at the earliest or, in this remote district, more probably later in the century. The two-light window with glass-grooves represents a final reconstruction of the chapel, 15th century at the earliest and probably *c.* 1500. The arch-stones may be part of this reconstruction, but are late and could be post-Reformation, suggesting secular re-use of the chapel, to which could also be attributable the removal and mutilation of the mensa.

Professor Charles Thomas, has, however, pointed out that it is quite possible that a pre-Conquest phase may be present. His view is that the comparatively small size (about 8 ft. by 16 ft.) and internal double-square (2:1) proportions of the first-phase chapel are consistent, seen against his analysis of ground plans of a number of admittedly early chapels in Cornwall (*Thomas, 1968b, 11-14, with diagram*), with an origin considerably before the 12th century. The south doorway, the unmortared masonry, and the remote position, he feels, are all aspects which support this view, and suggest to him that Chapel Jane may have started as a hermitage, or conceivably a well chapel, like that at Fenton-Ia, Camborne, which also stands in the remains of an oval enclosure. The absence of any pottery prior to the early 12th century is not an objection to this earlier dating, since a number of pre-Conquest chapels have failed to produce directly-associated pottery and there is no real reason why such finds need always be expected. Practically nothing is known of the patron saint, Senara, except that she is usually assumed to have been female; and on the analogy of other west Cornish patronal figures (e.g., Uny, Madron, or Meriasek) it might be expected that some site other than Zennor parish church could have been ascribed to her.

CHAPEL JANE: THE FINDS

CHARLES THOMAS

POTTERY (Figs. 12 and 13)

(In the following catalogue, HM = hand-made, WM = wheel-made, i.e. on a fast wheel, and WF = wheel-finished, i.e. possibly hand-made but completed on a slow wheel or a tournette. The letters and numbers in parentheses (B 20) refer to the *cutting* and the *layer* respectively).

Fig. 12

1. Small cooking-pot, thin HM ware with dark brown body and surfaces, fine grit, and a faintly 'soapy' feel (B 23).
2. Similar pot, thin HM ware with pronounced vertical finger-marks on interior, grass-marked external base and external lower wall. Sparsely gritted, but individual grits up to 3 mm., dark brown body, interior medium brown, exterior carbonised. Two string-holes perforated after firing (B 24).
3. Base of similar pot, WF but probably HM, interior light brown with small white grits visible, exterior carbonised. Under-side sparsely grass-marked (B/C 23).
4. Base of similar pot (possibly of no. 12?), apparently HM. Light red-brown body, medium brown surfaces showing fine to medium white grits, underside grass-marked (B 24).
5. Everted rim, body and surfaces as for no. 1, but regularity suggests this is WF (A, slaty rubble outside door).
6. Similar everted rim, from another vessel (A, as 5).
7. Everted rim with flattened burred top, WF, exterior carbonised, interior surface dull medium brown showing medium grits (B 24).
8. Short everted rim of larger pot, WF, exterior carbonised, body and interior light buff-brown, with much fine white grit (west of B, 23).
9. Everted rim with flat top and internal curvature, WF(?), body and surfaces light brown with fine grit including sparse white shell-sand (B 24).
10. Slightly everted rim WF(?), exterior carbonised, interior medium reddish-brown (body the same) with grits, as no. 9 (east of C, 23).
11. Small everted rim, WF(?), light to medium brown surfaces, body rather darker, with fine grit (B 24).
12. Small very coarse everted rim with notching on outer flange, HM, exterior carbonised, with red-brown body, and medium brown interior with fine to medium white grits (west of B, 23).
13. Small everted rim, WM, exterior black, interior a dull medium grey-brown, specks of mica on both surfaces; a hard rather brittle fabric which feels like 'OO' grade sandpaper (west of B, 23).
14. Wall sherd, perforated after firing as in no. 2 above, whose fabric and colour it resembles (east of C, 23).
15. Large flat sherd, very dark core to body, surfaces red-brown partially discoloured black, with fine white grits; the underside as shown is grass-marked (east of C, 23).
16. Sagging base, WM, very dark, brown body and surfaces with sparse flecks of mica and fine grit, faintly 'soapy' to the touch (interior, 4).
17. Sagging base, WM, exterior carbonised, interior and body dull medium brown with fine white grit—just possibly the base of no. 7 above ? (B 22).

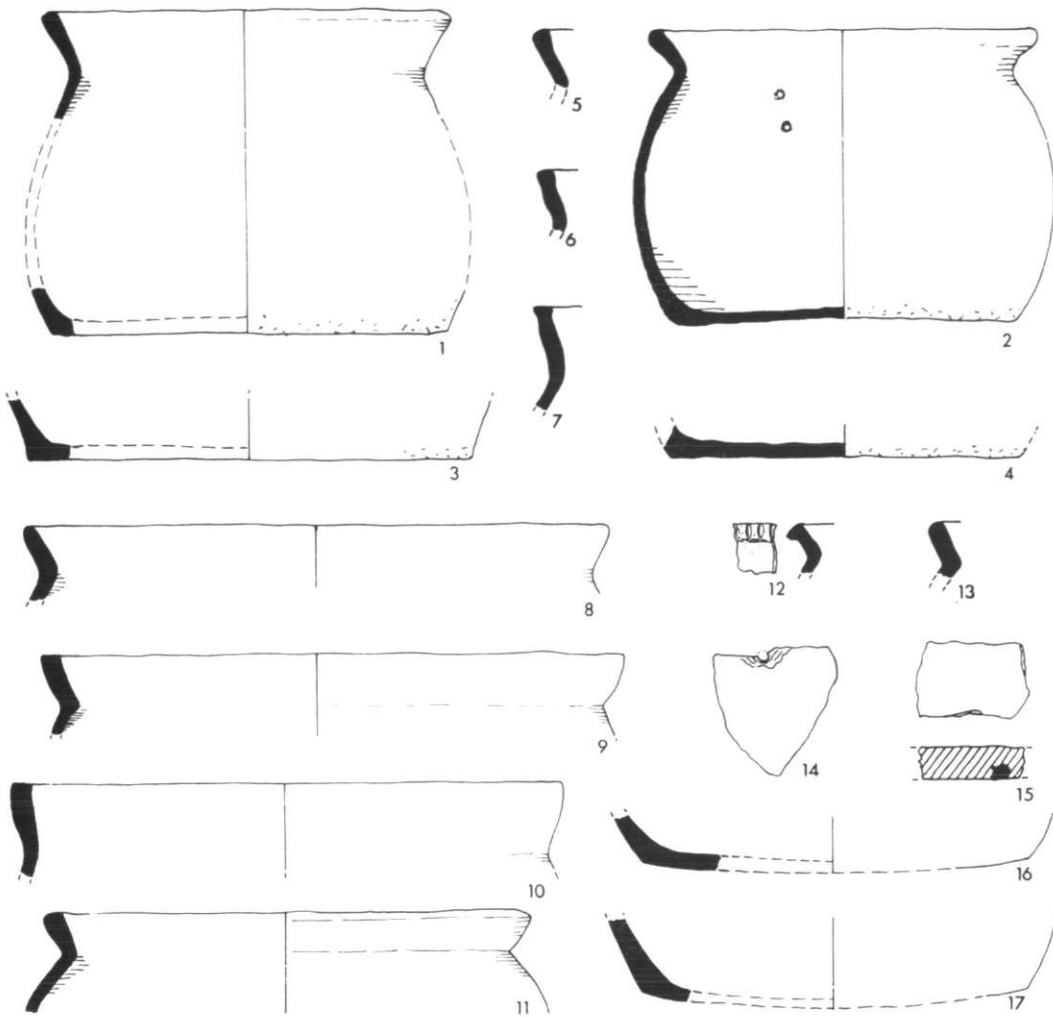


Fig. 12
 Chapel Jane: pottery of Sandy Lane styles 2 and 3 (scale: one-third)

Fig. 13

1. Everted rim, WM, fine buff-brown body and surfaces, medium to fine white grits (east of C, 23).
2. Everted rim, WM, fine hard fabric, interior and body grey-brown with sparse mica flecks, exterior carbonised (interior, 4).
3. Everted rim, WM, same fabric as no. 1 (west of B, 23).
4. Everted rim, WM, same fabric as nos. 1 and 3 (A, rubble).
5. Everted rim, rather thick, WM, body and interior red-brown with medium to coarse grits visible, exterior with a dull dark red-brown wash (?) (C 23).
6. Body sherd, WM, dull light red-brown exterior and core, interior burnt, with mica specks; traces of external rilling (east of C, 23).
7. Body sherd, WM, from below spring of a handle, interior a dull orange-red, body brown, exterior blackened (A, charcoal-stained gritty soil heaped against wall over offset course).

8. Body sherd, WM, with finger-printed cordon; brown body, hard dull red surfaces, interior showing dragged grits which include mica and dark red particles (A, as 7).
9. (Joining) body sherds, WM, with finger-printed cordon; exterior carbonised in places, surface light to medium brown, body greyer with medium grits and plenty of fine white sand (east of C, 23).
10. Upper spring of handle of 'bun' section, dull brown surfaces, red-brown-body with fine to medium white grit (A, rubble).
11. Body sherd, WM, with lower spring of strap handle. A hard fabric, the exterior a dull pink-grey with sparse mica flecks, interior buff, showing dragged grits, some dark red particles up to 2 mm. (cf. no. 8 above) (A, as 7 and 8).
12. Angle of sagging base, WM, reddish surfaces showing fine to medium, white grits, brown body (C 23).
13. Sagging base, WM, dull red-brown surfaces with sparse mica flecks, grey-brown body (B/C 23, and B 24).
14. Angle of kicked base, WM, a hard light-grey ware (surfaces and body), the surfaces (organically?) stained brown; feels like 'O' grade sandpaper (A, base of topsoil).

DISCUSSION

Omitting Fig. 13, 15, which is a late stray, the pottery discussed above represents two basic forms; the everted-rim cooking-pot, ranging from small hand-made forms with grass-marked bases to rather larger forms with sagging bases, and handled pitchers (with finger-printed cordons?) made on fast wheels. These forms are domestic, and as the frequent instances of burning on the cooking-pots show, were used in domestic contexts. They therefore afford admirable dating evidence, since there can be no question of their being survivals; and the sheer number—at least fifteen cooking-pots are involved—suggests that the breakages were the result of use, and that no pot on this site had a very long life.

The earliest material represented here is shown in Fig. 12, the pots 1 and 2, the bases 3 and 4, and probably the sherds 12 and 14. These are in every respect characteristic of what I have elsewhere (*Thomas, 1964*, 48 ff.) described as the 'Sandy Lane' style. They represent the final stage of a long sequence of local, hand-made, west Cornish cooking-pots commencing with the crude 'grass-marked' ones (*Thomas, 1964*, 46 ff. with refs.; see now, too, *Thomas, 1968a*) introduced probably in the later 6th century A.D. by Irish settlers.

The Sandy Lane style, so named after the type-site at Gwithian, has two successive early forms. The first, a small straight-sided hand-made pot with grass-marked base, is not represented here. The second (= Style 2) is also hand-made, but shows for the first time the characteristic everted rim of the full medieval series in southern England. In the report of the Sandy Lane material, written late in 1963, it was not clear whether this Style 2 was also characterised by grass-marked bases, but here Fig. 12, no. 2, shows that it was, and this has now (August, 1966) been confirmed by the very much larger series from Fenton-la, Camborne, which has produced exactly similar vessels.

The date of Style 2, on a variety of grounds, should be the 12th century, commencing in the period *circa* 1100-1150; and there is no reason why this date should not apply to Chapel Jane.

A later phase, labelled 'Style 3' at Sandy Lane itself, exhibits the abandonment of grass-marked bases, largely because this ceramic trick is not feasible once sagging bases are introduced. Examples from Sandy Lane (*Thomas, 1964*, Fig. 18 and text) show that

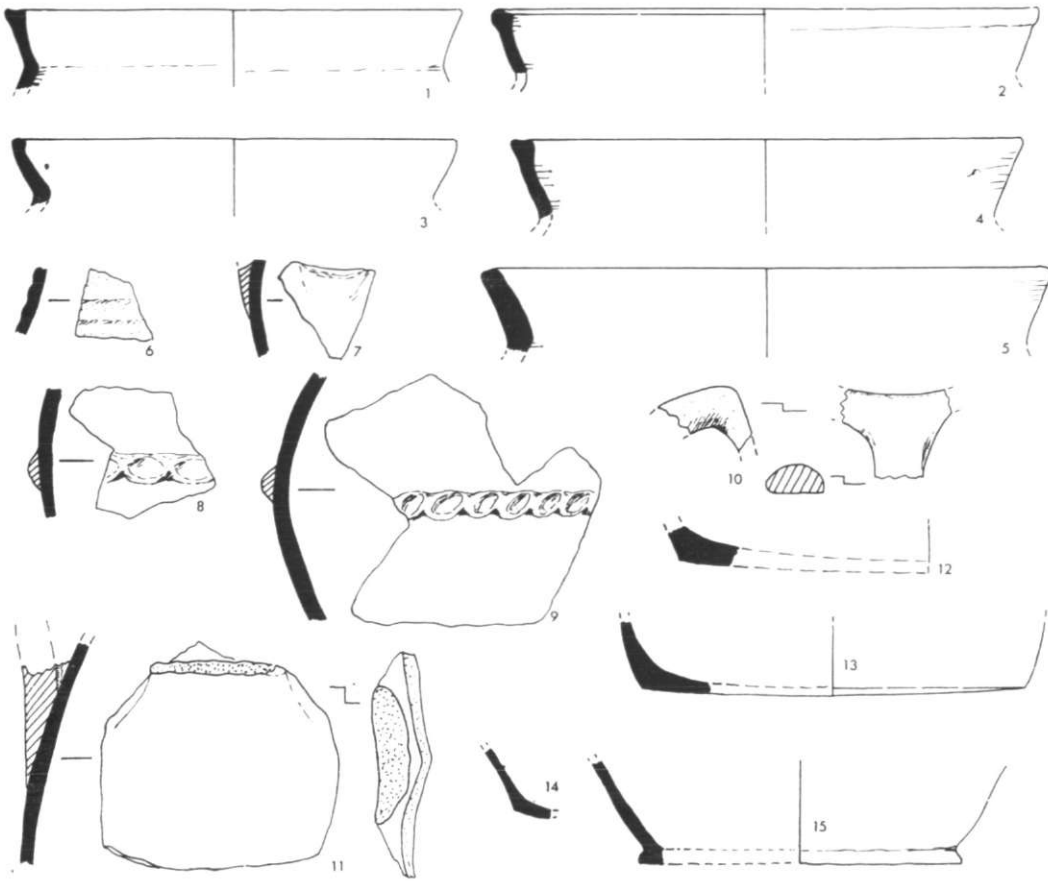


Fig. 13
 Chapel Jane: wheel-made medieval pottery (scale: one-third)
 (No. 15 is a seventeenth-century base sherd)

the cooking-pots are rather larger, with examples of a short sort of everted rim, have sagging bases, and are normally wheel-made, though some may have been made on a slow wheel. At Chapel Jane, it is fairly certain that the rims nos. 8, 9, 10 and 11, and the bases 16 and 17, all in Fig. X, represent this local manufacture, to which at Sandy Lane a date of *circa* 1150-1250, if not later, was tentatively assigned.

With the pots in Fig. 13, some of which (as the dragged grits show) are mass-productions from a fast wheel, and include the thin hard red-brown and orange-red fabrics characteristic of a much wider area in the south-west, we must be in the 13th century. The finger-impressed cordons can be seen again at Treworld (*Minter, 1966, Fig. 16*) at this time, and Fig. 13, no. 2, is probably a derivative (again, 13th century) of the cooking-pot rim with internal concave bevel as mapped and discussed by Jope (*1963, 331, with map*).

In summary, then, the extreme range for the pottery represented in Figs. 12 and 13 is from *circa* 1100 to *circa* (?)1325, with the proviso that a quarter-century might be lopped off at either end of this range. The complete absence of Sandy Lane style 1 rules out the 11th century, and in general the complete absence of any glazed wares rules out a date much after the end of the 13th or the beginning of the 14th centuries at the other extreme.

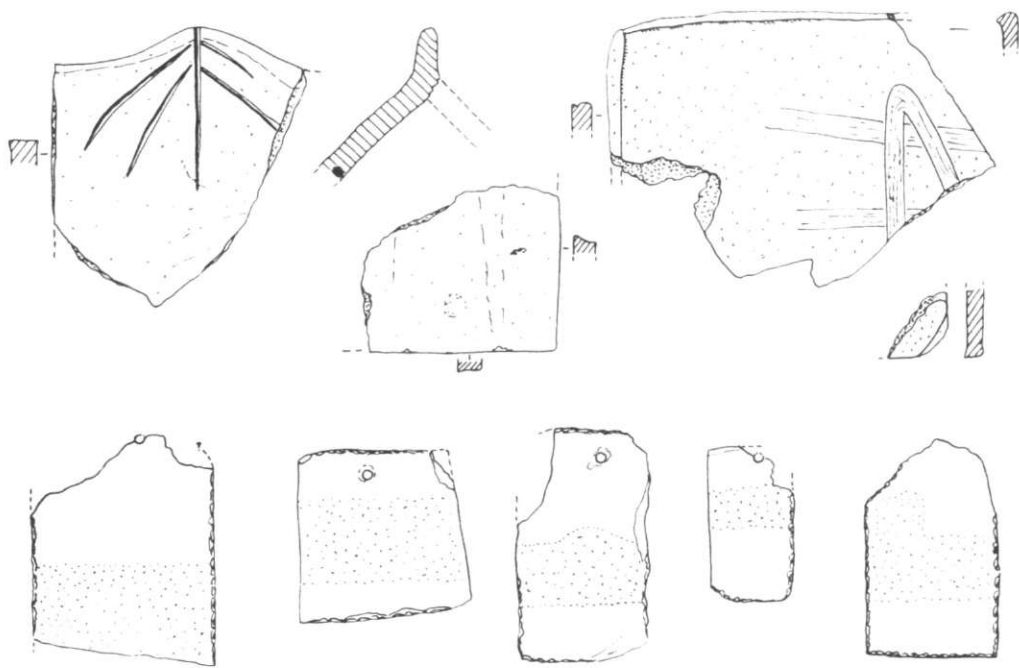


Fig. 14

Chapel Jane: pottery ridge-tiles (1, top left; 2, top centre; 3 and 4, top right, here shown inverted) and roofing slates (stippled areas represent plaster still adhering). Scale (all): one-quarter

RIDGE-TILES (Fig. 14)

- 1,2. Portions of a ridge-tile or crest, including one end with a rounded hand-moulded peak, ornamented with five slashes, and a pitch of about 45 degrees; and a lower corner, showing the squared-off bottom and side. Light to medium red-brown with reddish patches; the fabric shows very sparse small mica flecks, lumps of quartz up to 12 mm. (!), tiny plates of shell (coarse shell-sand?), felspars, and specks of some dark mineral.
- 3,4. Two (joining) pieces, and a small loose rounded corner, of what is probably another ridge-tile, loosely ornamented with a dragged finger-tip, forming an N-shaped motif over horizontal lines. The edges have been smoothed over and are slightly burred. The fabric is a uniform dull medium brown, the rather soft body being the same as the surfaces; it includes sparse mica flecks, white sand particles, and small to medium particles of quartz.

A proper discussion of the evolution of 'crests' or ridge-tiles in Cornwall would require more space than is available here, and will appear (with a wide range of comparanda) in the Fenton-Ia report (cf. the series shown in Thomas (1967), 84, fig. 17). At the moment it must suffice to say that the first ridge-tile (nos. 1 and 2) is a characteristic west Cornish type, doubtless produced not too far away, and can be reconstructed as having four similar low hand-moulded peaks, being about 14 to 15 inches overall. It should be dated to the 13th century, and not before the middle of that century; as such, since it comes from cutting C, on or near drain 7, it must go with fig. 13, nos. 5 and 12, as belonging to the later class of pottery on the site.

The other piece, if it is a ridge-tile, has no immediate parallel, but its general appearance suggests a slightly earlier date—as does the fabric—and it may be 12th, or early 13th, century. It was found in cutting B with sherds which are the same as (and form the body of) the base, fig. 12 no. 17, to which this dating could apply. The evidence from Fenton-Ia now makes it tolerably certain that quite evolved ridge-tiles were in use in west Cornwall in the 12th century, including (as well as the 'slashed peak' ornament) the use of fingered grooves on their surfaces.

SLATES

A selection of these, designed to show the general shape and trimming, is displayed in fig. 14; the stippled areas represent where white plaster, used in torching or pointing, still adhered. There were not enough complete slates to make a full analysis valid, but measurements taken from twenty-three more or less unbroken specimens show that a random load was used, the lap being fairly small. The overall lengths vary from $7\frac{1}{4}$ to 12 ins., occurring at quarter-inch intervals, and the overall widths are equally irregular; the distances from the centre of the hole to the 'tail', or bottom of the slate, are a better index of how a roof was actually laid, and distances of about $7\frac{1}{4}$, $8\frac{1}{2}$, and $9\frac{1}{4}$ inches are often repeated, confirming the usual practice of laying such a roof, where the lap, or overlap, is not fixed, but decreases from eaves to ridge. Most of the slates are from 5 to 6 mm. thick, and are a rather coarse grey to grey-blue variety, probably from some unlocated west Cornish quarry.

PLASTER

Four samples of white plaster or mortar were preserved. These were manually cleaned, subjected to dry pulverisation in a mortar, and the samples sieved through a 1-mm. mesh, the retained grain content being then washed and dried for examination.

In all four cases, the plaster was, as a hand specimen, a hard dull white matter with an uneven surface. After sieving and washing, the individual mineral grains from the body were only partly free, about half of them by volume being still coated with lime. The grain content was mostly angular, some particles being slightly rolled, but by no means to the extent associated with sea-shore gravel. These particles were predominantly quartz or quartz-tourmaline, with feldspars, the odd mica plate, and tiny fragments of slate which could of course have been incorporated on the site. The most likely source for the gravel would be any nearby stream draining the high granite moors inland. The lime showed no sign whatsoever of undissolved shell fragments or of recognisably rounded shell-sand particles, and must have been derived from a source (prepared limestone?) other than calcareous shell-sand.

Two samples may be classed as 'fine', in this case with no mineral grain larger than 3 mm. These came from a roofing slate, where the plaster had been used to torch the underside, and from the mortar floor inside the chapel. The other two samples were 'coarse', in that they contained about one-third by volume of grains over 3 mm. long, and came from the external west wall, and from the facing of the interior of the chapel. The difference between the two batches is minimal, and could be accounted for by supposing that the gravel had been taken from different points in the same stream-bed, so there is no reason to suppose that the plasters represented are not broadly contemporary. Plasters of a very similar nature occurred in periods 2 and 3—from the mid- to later 12th centuries, and from the mid-13th century respectively—at the chapel at Fenton-Ia, Camborne. The absence of a shell-sand lime element, which *was* present in later (late 13th?) plasters at both the Fenton-Ia chapel, and at St. Constantine's chapel, St. Merryn, is worth noting, since this calcareous sand appears to be common in those medieval plasters in west Cornwall which I have so far examined. Is it possibly a characteristic of the 12th century?

ACKNOWLEDGEMENTS

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Penzance

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The Tin Streaming Industry in Cornwall: a Survey

B. C. L. BAINBRIDGE

DURING THE PAST two years, I have been compiling a Historical Survey of the Tin Streaming Industry in Cornwall. The work was undertaken as an original study for St. Luke's College, Exeter.

The appeal of tin streaming is that there has been little or no work carried out on the industry for its own sake. Although the industry is tied up with mining in its refining methods, the scope and distribution of the streaming industry merit consideration as a separate entity. It must also be remembered that the tin streaming industry has a much longer history than that of tin mining, for it is unlikely that the latter appeared in Cornwall before the fourteenth century, while the tin industry, based upon streaming, is definitely much more ancient.

Embarking upon the research, as an amateur, it seemed quite possible to attempt a complete history in the time available to me; however, after working on the subject for a few months, it became evident that, in the time at my disposal, a general survey only would be possible. Much of the industry, by its very nature, is distributed along river valleys, and therefore it was decided (for interest's sake) to include in this survey a detailed study of one such river valley. At this stage, it was clear that the two most important rivers in the history of the tin streaming industry were the Carnon and Red Rivers. In deciding which of these two river valleys to study, the availability to me of documentary evidence was the prime mover, and therefore it was decided to study the Red River from Tuckingmill to Gwithian: the area of the valley once controlled by the Bassets of Tehidy, in Illogan.

The Tehidy estate was extremely well documented, and therefore, to obtain the depth of study which I desired, it was necessary to limit the research to a period of roughly 35 years, from approximately 1870 to approximately 1905. Much of the documentary evidence available for this period took the form of tin streaming leases, or 'Setts', which gave details of the agreements made by the tin streamer with the owner of the land which he wanted to work. These setts, which were renewed every ten to fourteen years, also gave details of the dues which were to be paid to the landowner. The dues were usually set out in the form of graduated scales, which made allowances for fluctuations in the price of tin.

A comparison of the dues paid by different streaming companies on the Red River not only provided a guide to the general condition of the industry in the valley over a period of years, but also gave an indication of the relative prosperity and fortunes of the fourteen different companies. A further study of scales of dues, over a longer period, and covering most of Cornwall, would give a clear indication of the shifting prosperity in tin streaming throughout the county, and would be a valuable addition to our knowledge of the industry.

Working with these documents was indeed rewarding, but more interesting still was actual fieldwork. The industrial archaeology of tin streaming is evident in many places in Cornwall, though even more striking is the devastation of the natural vegetation in the valley bottoms caused by the streaming methods. Nowhere is this more evident than in the Carnon Valley, where the huge settling pits are still in use. A perhaps more inspiring example, though on a smaller scale, is Trevellas Coombe, near St. Agnes, where the combined effects of streaming and mining have rendered the valley completely derelict.

In Trevellas Coombe can also be seen the industrial remains of a once-flourishing industry; for the valley contains great stretches of superb walling and leats, while areas of dressing floors, complete with buddles, can be made out, even though partly covered by waste ore and tailings. The visitor to Trevellas Coombe will notice the remains of two waterwheels which were used to drive Cornish Stamps. Both the wheels have now disappeared, and the need for urgency in preserving such relics, either *in situ* or in some form of folk museum, is emphasised when it is realised that only two years ago the lower wheel, driving a twelve-headed stamp, was intact and in almost perfect condition. A list of industrial remains which have needlessly been allowed to disappear would indeed be long, and would of course represent a great loss to the historical culture of Cornwall.

Due to lack of time, the work done on the industry before approximately 1800 consisted of an evaluation of published material relating, in various degrees of depth, to tin streaming, and a consideration of archaeological evidence, most of which is to be found in the Royal Institution of Cornwall (Truro). A great deal of work needs to be done to substantiate the various theories concerning the extent and distribution of the industry from the Bronze Age to the Industrial Revolution.

A period which stands out as being especially bleak in evidence is the so-called Dark Ages, which was inky black as far as the tin streaming industry of Cornwall was concerned. The change-over period from streaming to the development of mining is also obscure in detail and a further look into the industry from written sources would also be valuable. Above all, I feel that a rekindled interest in streaming must primarily be directed towards the preservation and care of the extant nineteenth and twentieth century relics of this once so important industry, so that interest in these monuments will foster a desire to explore the industry as a whole.

Dartington, Totnes: June 1968

THE SOCIETY FOR MEDIEVAL ARCHAEOLOGY'S EASTER CONFERENCE, 1968

IT IS NOT OFTEN that the Cornwall Archaeological Society has the pleasure of welcoming national bodies to its own area, but the increasing volume of archaeological activity in Cornwall and Scilly has attracted some attention beyond the Tamar. In deciding to visit Cornwall for their 1968 spring meeting, the S.M.A. selected Penzance as the centre, named 'Early Christian Cornwall' (in a rather wide sense) as the theme, and invited Mrs. Nankivell, Mr. P. A. S. Pool, and Mr. Charles Thomas to act as local secretaries and to make the necessary arrangements.

The conference, under the chairmanship of Dr. D. B. Harden, vice-president, opened on the evening of Friday 5th April at the Methodist Hall in Chapel Street. After a formal welcome by the Mayor of Penzance (Ald. Nicholas), and the President of the C.A.S., Mr. Andrew Saunders, the traditional general introduction to both locality and theme took the form of an illustrated survey by Mr. Thomas, which emphasised recent work on the period, particularly in the direction of chapel architecture and pottery sequences. The soirée which followed, enlightened by a fine spread of refreshment provided by the Borough of Penzance, enabled delegates to meet local members and to buy appropriate literature.

The Saturday morning lectures, given in the Council Chamber at St. John's Hall, included a general conspectus of medieval architecture of all kinds in Cornwall, by Mr. Saunders, and a concise masterly survey of the rise of Western monasticism by Dr. Radford. The afternoon excursion commenced with Madron parish church and its inscribed stone, went on to Madron well-chapel, and then, via the Old Lanyon medieval dwelling-site, to the recently-excavated chapel at Gurnard's Head, Chapel Jane. The return was made via Towednack parish church and the Bleu Bridge inscribed stone.

The whole-day Sunday excursion was, by contrast, centred on early monasticism. It began with a prolonged visit to Tintagel, where Dr. Radford expounded his excavations, hitherto not visited by many of the delegates. It was not possible, as planned, to go to St. Endellion, but Tintagel parish church was substituted, and in the afternoon the conference travelled to St. Kew (*Landocco*), site of an early monastery and one still possessing features of interest.

On the Monday, those delegates who were able to stay another day visited Truro, primarily to see the collection at the Royal Institution of Cornwall. In the afternoon, there was a special visit to St. Michael's Mount, where Lord St. Levan, in addition to providing transport in his DUKW because of the tide and welcoming the party, was good enough to conduct a rather more extensive tour than that provided for the general public. The conference dispersed on the Monday evening.

Judged by no more than the many appreciative letters received by the local secretaries, the meeting was a great success. It was blessed with a fortunate spell of warm sunny weather; the official welcome from Penzance, arranged through the good offices of the Mayor and Ald. Beckerleg, the Deputy Mayor, was seen and felt to be more than a mere routine formality; a considerable bundle of relevant literature was provided, largely by the C.A.S., for each delegate; and a fair cross-section of interesting sites was seen, linked to appropriate lectures and a museum visit. The peculiar problems, and special fascination, of Cornish protohistory came well to the fore, and in welcoming the S.M.A., the many members of our own Society who attended were able to share these in the most pleasant circumstances with old and new friends.

(Members are reminded that extra copies of the specially-issued Guide to Early Christian sites in West Penwith—4to., 16 pp., 7 figs.—are still available at 3s. 6d. post extra, from the Editor (Professor Charles Thomas, The University, Leicester LE1 7RH). Please make cheques or p.o. payable to the Cornwall Archaeological Society, not to the Editor.)

Early Lighthouses in Cornwall

DOUGLAS B. HAGUE, A.R.I.B.A., F.S.A.

I ST. MICHAEL'S MOUNT (SW 514298)

THE HISTORY AND ARCHAEOLOGY of early lighthouses are seldom complementary. Historical records are rare and there is every reason to suppose that the existence of many medieval lights was never committed to written record of any kind. As regards the structures, technical advances have usually resulted in the erasure of the past for the, obvious reason of space and convenience. Two notable exceptions might be mentioned: the Roman Tower at Corunna, presumably the oldest working lighthouse in the world, and the oldest working tower in the British Isles, the medieval tower of Hook, at Waterford in Ireland.

Cornwall with its long indented coastline and great sea-faring traditions of trade and fishing must from the earliest times have been liberally scattered with coastal lights of various kinds. The extent to which medieval sea-going ships made port at night is open to discussion and is beyond the scope of this short note, but it is clear that in Cornwall there were both substantial sea lights capable of directing a sea-going ship to a recognizable land-fall, and a large number of small, less permanent, harbour lights, including tiny lamps from secluded seamen's chapels which were more devotional than efficacious.

In a recent short tour of some of the lighthouses of the county one of the most interesting sites surveyed was that on St. Michael's Mount. Somewhat unexpectedly we hear that St. Michael's was the most important early port in west Cornwall, and one from which a great deal of tin was exported. Its tiny harbour was sheltered from the south east which is not the case with the later ports of Penzance and Newlyn.

Work on the harbour followed a grant from the King in 1427 which authorised the collection of dues from visiting and sheltering ships, and at this time Sir John Arundale, a naval officer, must have been grateful for the facilities, because in his will of 1433 he left the sum of 13 shillings and 4 pence for the maintenance of the 'light of St Michael' and the same sum towards the rood screen. A similar bequest to the light was made in a will of 1515 by Peter Bevill; the monastery was dissolved in 1539 and in 1596 when it was granted to Arthur Harris he was obliged to maintain the harbour installation. With this knowledge of the existence of the medieval light, a visit of inspection was clearly indicated; and one such was made, with the kind permission of Lord St. Levan, during the Society for Medieval Archaeology's visit to the Mount at their Penzance meeting, April 1968.

On the highest point of the island, on the top of the 14th-century crossing tower and added to the south-west corner of the battlements, were the remains of a stone cresset-lantern; see Figure 15. This remarkable structure is to my knowledge unique, and sufficient survives to enable an almost complete restoration to be made, although attrition due to its exposed position has softened some of its edges. It consists of a stone basin about 1 ft. 3 ins. in diameter with a hollow about 3 ins. deep to contain the oil. In the centre is a small round hole presumably for the end of the rope wick; around this are three smaller square holes which I consider were to house the legs of an iron tripod which must have supported the top of the wick at such a level as to make it

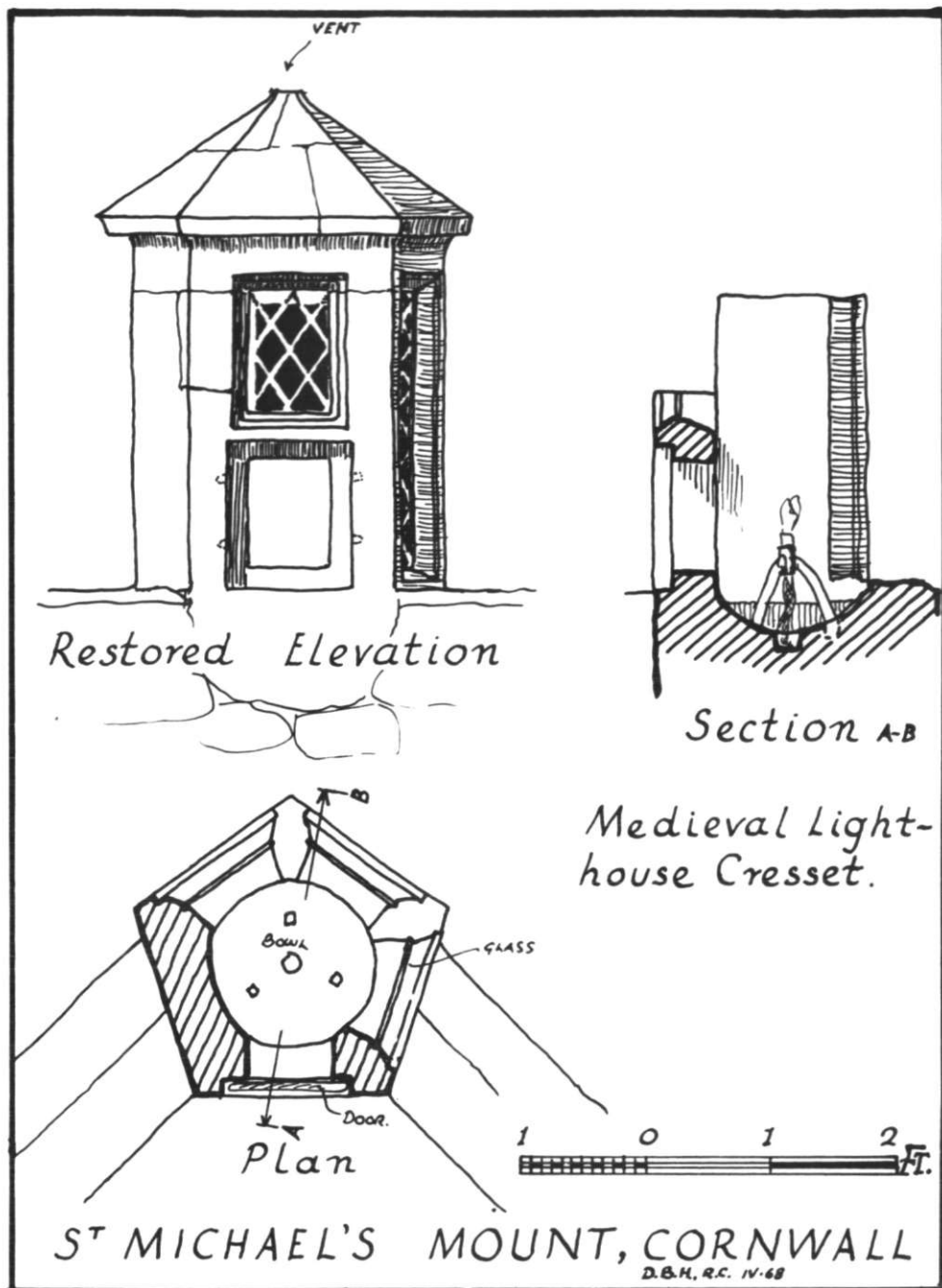


Fig. 15

visible above the cill of the lantern. The superstructure is pentagonal and very ingeniously designed, with the facet facing the top of the tower provided with a shutter or door for lighting and servicing, with a small glazed window above which would enable the keeper to judge the quality of the light. On the east there was a solid stone back or reflector; this survives to its full height of 2 ft. 8 ins. and gave solidity to the whole structure although it is doubtful whether the murky nature of the fuel would have

enabled this to reflect much light. The remaining three sides, covering roughly 200 degrees of the south western approaches, consisted of three glazed windows each with an effective height of 2 ft. 3 ins. and a width of 9 ins. Naturally no glass or lead has survived but it can be assumed that the normal type of lozenge-shaped light would have been used, as indicated in the drawing. Of this drawing the top of the lantern is a complete restoration, and pending the discovery of knowledge of any similar unrestored medieval structure, I favour the simplest form of cap. Medieval chimney tops are rare, and as the draught necessary for a great-hall fireplace must be totally unrelated to the waste products from one single wick, comparison seems futile. Any elaborate vertical openings such as that on the 'checker' at Abingdon would merely invite a cascade of rain water or a windy vortex sufficient to extinguish the lamp. I consider that a simple conical form with a small hole at the top would minimize the problem of water whilst the wind should induce a draught sufficient to keep the interior free from exhaust gases. I should be very glad to hear from anyone who claims to have the original top on their rockery, or who can provide parallels or reasonable suggestions as to the form of the top. Its position, being virtually invisible from the land, makes it unlikely that the mason would have applied anything but the most coarse decoration.

I know of no really comparable structure in Britain or elsewhere. The well-known medieval lighthouse on Chale Down, Isle of White had a wooden floored lantern room about 4 ft. 3 ins. square with eight glazed windows of about the same size separated by massive pillars of solid masonry. It has been suggested that the light was provided by a brazier, which would have been impossible in such a cramped space apart from the wooden floor. On the evidence from St. Michael's Mount it might be postulated that it was provided by a cresset of similar form.

II HERMITAGE CHAPEL, CARN BREA, ST. JUST IN PENWITH (SW 386280)

Another early documented lighthouse in Cornwall is that formerly situated on a large prehistoric cairn on the summit of Carn Brea, St. Just in Penwith. This has been fully described in a recent and excellent article by P. A. S. Pool.¹ In this, the 1396 record of tithes paid by the fishermen of Porth Nanven and Priest's Cove, for the maintenance of a beacon, is discussed in detail, and the suggestion is made that the building might have been two-storied with the upper floor, or chapel, carrying a lamp of some kind. Whilst I do not for one moment doubt the significance of the document. I have some misgiving about the form of the building and its intended function.

Having visited the site of the destroyed chapel and the other two sites and talked to local fishermen, I find it difficult to regard Carn Brea as a purely local light to benefit the fishermen concerned; much better places nearer the sea are available, and the sight of the cairn is obscured by the cliffs except from well out to sea. Secondly a small cresset lamp at such a distance would have been totally ineffective. I would suggest that any light on such a fine commanding position as Carn Brea was a proper sea-light and intended to assist sea-going ships in making a land-fall, and that for the maintenance of such an important station contributions would have been sought from all the ports and harbours in the peninsula, although no record of such payments has yet or may never come to light. To be effective a light of this kind could only have been a simple open fire, and I suggest that this was burnt at the base of the cairn as is done at mid-summer by the St. Just Old Cornwall Society today.

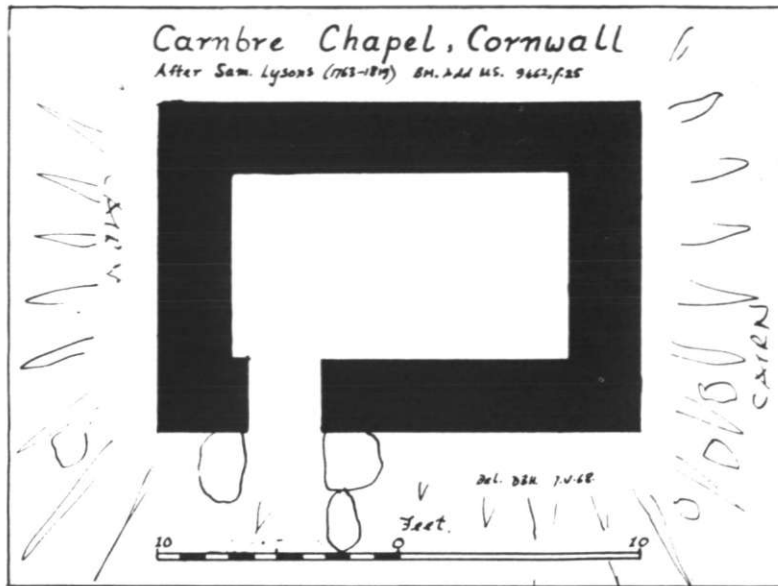


Fig. 16

Some clarification of generally confused 18th-century accounts of the chapel can be gleaned from the sketches and notes made by Samuel Lysons (1763-1819), now in the British Museum.² Fig. 16 is a plotting of a sketch plan on which he gave full dimensions; this indicates a simple building 14 ft. by 7 ft. 6 ins. internally with 3 ft. thick walls. It is somewhat precariously set on the summit of the cairn and although capable of taking a vault could never have carried an upper storey. Together with this plan and an elevation are a number of other sketches, very clearly of Roche Rock hermitage, although not all are titled. This fact was not known when the drawings were mounted, and may well have not been known by the artist; I would suggest that this sort of muddle is very common amongst even the most meticulous reporter, and is very likely to have been the case with Nicholas Boson in the second half of the 17th century. When he describes 'the dutchesse herself admiring the biformity therof consisting of two curious vaults the one over the other in the top of the mountain'; Her Grace was admiring Roche, not Carn Brea.

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References

1. POOL, P. A. S., 'The Hermitage Chapel of St. Michael of Brea', *Ann. Rep. Roy. Cornwall Polytech. Soc.*, Falmouth, 1964.
2. British Museum *Add. MS.* no. 9462, at f.25

'Crows' in Cornish Hedges in the Pendeen Area

E. M. NICHOLAS

(This represents a survey made by Mrs. H. Derrington and Miss Nicholas in the parish of St. Just-in-Penwith in 1967. The field numbers are taken from the Ordnance Survey sheet of 1875, revised in 1906, scale 1/2500. Where the fields also appear on the Tithe Apportionment Map of 1840 their numbers are given after the letters T.A.).

MOST OF THESE 'CROWS' are to be found in the mining area to the north of the parish, at Pendeen. Some of more recent date are in hedges built by miners after 'core', only 120 to 130 years ago. Wood was expensive and scarce and granite not only easily come by, but the miners were skilled in working it, and this may have led them to copy an earlier style of building—some with corbelled walls and beehive-like, and others roofed with large lintels of granite laid horizontally. The older examples are of unhewn moorstone but the later ones show drill-marks where the granite has been split. Most of them show signs of having had doors to their low entrances.

No. 1. In Field 377 (T.A. 663 *Croft Burden*) in a winding hedge about 7 ft. wide is a 'beehive' crow facing SW. It is 4 ft. 6 in. square inside and about 4 ft. 4 in. high. The opening is 21 in. across—inside it is about 22 in. high but the field level has risen and it is only about 15 in. high outside, with a lintel 2 ft. 9 in. long.

No. 2. In Field 223 (T.A. 644 *Plot*) is an oval-shaped crow about 4 ft. 6 in. wide and 5 ft. 6 in. long and 4 ft. high; the opening is about 2 ft. 3 in. square with a lintel 3 ft. 2 in. long. It is below the level of the field and faces SW. It has dry stone walls slightly corbelled and roofed with three flat stones.

No. 3. In Field 212 (T.A. 668 *Inclousure from Bough Croft*) is the largest of this type of crow; it has been used to house yearlings in the winter up to 1966. There are steps up to it, as it is about 2 ft. above field level. It is kidney-shaped and about 15 ft. across and 5 ft. deep; the height is 6 ft. 6 in. and it has a corbelled roof. The crow faces NE. and is

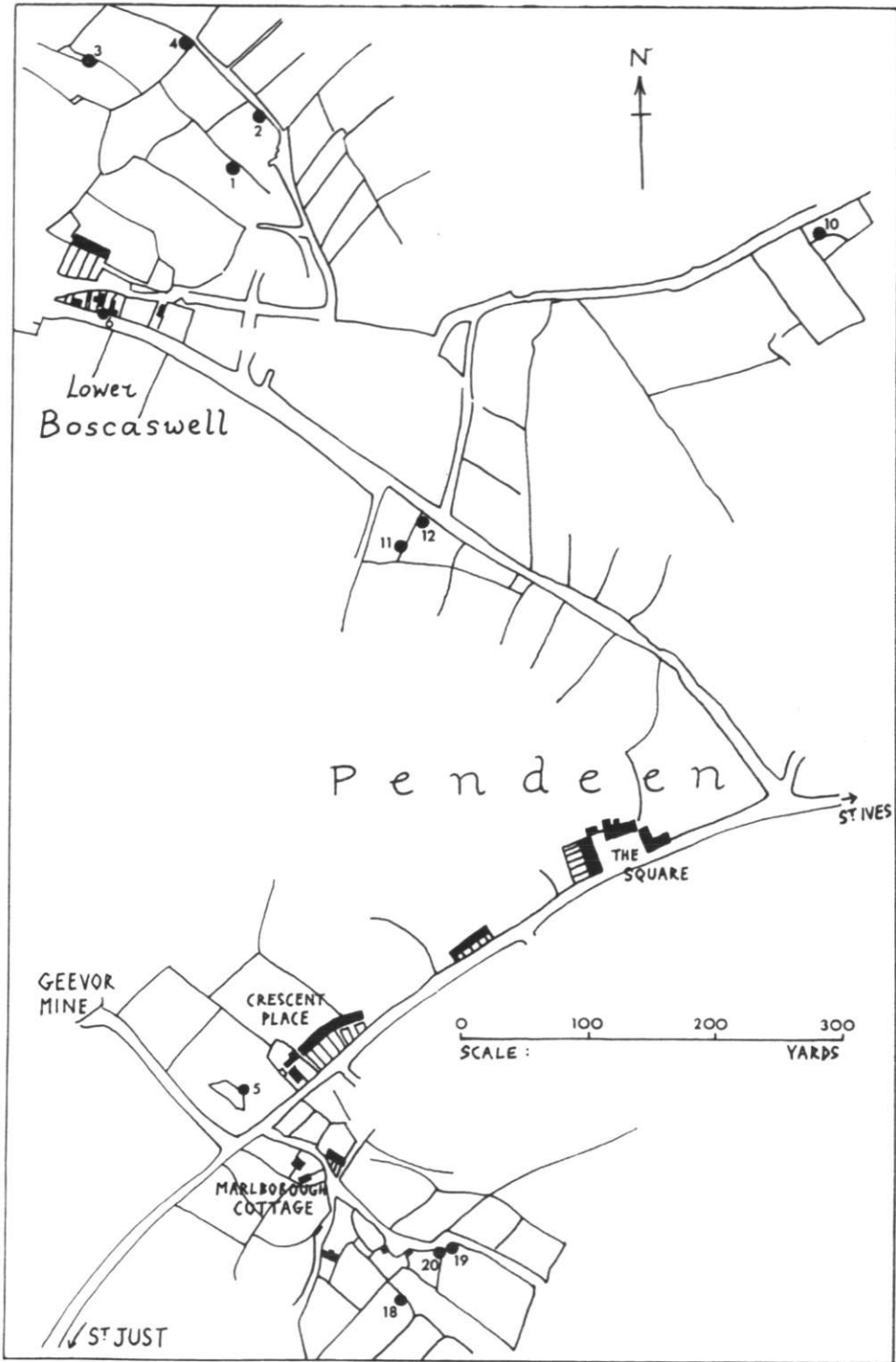


Fig. 17
 Location of 'Crows' 1 to 6, 10 to 12, and 18 to 20, in the Pendeen area
 (based on the Tithe Map)

in a huge wall of natural moorstone which is beginning to collapse—the wall on the right of the doorway is 5 ft. thick and that on the left about 3 ft. and the opening is 2 ft. across (see Fig. 18).

No. 4. In the opposite hedge in the E. corner of the field is a collapsed crow with a low 'creep' opening 21 in. high by 20 in. wide facing SW. One can still see the remains of a chamber about 5 ft. high, but a mass of stones has fallen into it from the collapse of the wall at the back. Three and possibly four of the hedges in this field are pre-1834. The SE. corner of the field looked as if it might have another chamber but we could see no opening. Nos. 1 to 4 are in Lower Boscaswell.

No. 5. There are some complex structures such as the one west of the old Pendeen Post Office in Field 423 (T.A. 1023 and 1026, *The Lane Field* and *Square Field*). This was once two fields, and the north end of the complex may have formed part of the hedge; there now remains only this isolated mound. It contains a chamber and a passage reminiscent of the complex at Boskednan. Newmill, which W. C. Borlase believed to be 'a genuine ancient structure'. A NE. facing doorway 2 ft. 3 in. wide and 5 ft. 6 in. high leads into a large chamber about 9 ft. high with walls going up straight for 6 ft. 6 in. and then corbelled; it is oblong in shape and about 11 ft. long by 6 ft. 6 in. wide. The curved passage leading off it is 4 ft. wide and 6 ft. 6 in. high. The roof has one central lintel with the others going across each corner. There are mines in the vicinity.

No. 6. Another complex long crow is by House 22 in Boscaswell Road, but it has partly collapsed. It has one opening facing west 3 ft. 4 in. high and 2 ft. 2 in. wide and a second one 2 ft. 2 in. high and 22 in. wide, with a frontage in all of 13 ft. and depth of 7½ ft. Another one nearby has lately been removed which was roofed with large lintels like a fogou passage.

No. 7. In Field 1657 (T.A. 1852 *Eddy's Croft off Kenyhton Lane*), is a long crow in the corner of a field facing north but also open at the west end where a lintel has fallen. It runs from E. to W. and has a doorway about 4 ft. 6 in. high on the N. side. A blocked doorway prevented examination but the walls were slightly corbelled with eight lintels across the roof and another fallen one. The height inside appeared to be about 6 to 7 ft. and the width about 5 ft. and length 10 ft. It is said to have been a powder-house and can be reached also by a higher lane called Devil's Lane.

No. 8. There is another collapsed long fogou-like crow which was roofed with massive lintels near the ruined farm of Boslow (T.A. 1523, *Botallack Common*).

No. 9. Nearby in a hedge is a rectangular chamber 9 ft. by 4 ft. roofed by a huge capstone, with a low entrance on the south side. This was thought by Charles Henderson to be a kist, but appears to be another crow.

No. 10. In Field 424 is a round chamber roughly 7 ft. 6 in. in diameter and 6 ft. high (possibly the one mentioned by Evelyn Clarke in *Cornish Fougous* (1961), 103). A lintel has fallen and it looked too dangerous to go inside. The walls are covered in red slime from tin mining and the interstices between the stones are packed with clay; it has a corbelled roof and once had a door. This chamber is built into a big wall and is near a mine shaft. There was once a horse whim nearby.

No. 11. Field 411. This hedge, which is about 7 ft. wide, was built by miners about 120 years ago, after 'core', according to Mr. Andrew Hall, the present owner. It is said locally that a hedge was often ordered to be built foot by foot, i.e. if 7 ft. high then it must also be 7 ft. wide. The crow faces NW. with a large boarded-up doorway opposite another opening at the back of the crow 2 ft. 3 in. wide by 4 ft. high. It is 7 ft. 6 in. long, 5 ft. 6 in. wide and 6 ft. high.

No. 12. Field 413. In the corner on the south side of the above hedge is a crow about 6 ft. high, of 12 courses of stones laid without clay or earth, and corbelled. It is roughly 6 ft. by 6 ft. inside and the opening is 3 ft. 4 in. high and 2 ft. 4 in. wide with a 3 ft. lintel

on top. There is a small peephole over the doorway 16 in. by 22 in. on the inside but only 7 in. long by 5 in. wide outside. It faces SE.

Beare's account of Blackmore (Roche) in 1586 (*Harleian MS.* 6380, British Museum) says: '... at some distance from both their cottages and their work the Tin-streamers build little turfen shelters (for lack of stone in this part) for the nests of their store-geese as soon as these are hatched, therefore, the goslings find suitable food in the neighbouring pools, marshes, rills and scattered patches of grass...' The late Mr. Henry Thomas, in his unpublished paper on St. Just (1936), says that geese were kept on the green at Carnyorth and there are still three crows there which older inhabitants can remember being used as such; the larger one was used to house lambs at one time.

No. 13 is rectangular and roughly 7 ft. by 5 ft., and 4 ft. 6 in. high with lintels across each corner. The height in the centre is 5 ft. 6 in.

No. 14 is similar to No. 13 but a little higher and smaller. It is built under the field which is above the level of the green.

No. 15 is built under the field also and is similar to the two previous ones. It has an entrance about 3 ft. high and a raised stone floor inside. They all three face due north.

No. 16. At the top of this road from the green, and on the lefthand side, is a very tiny crow about 3 ft. in diameter, with a 'creep' entrance about 12 in. high, but the level of the ground outside seems to have been raised considerably. All have had doors at one time.

No. 17. On the opposite side of the road near Carnyorth school are the remains of a crow now built over in a garden.

No. 18. In Yskynnan's Lane in Field 807 (T.A. 883 *Lower Long Croft*) is a crow of roughly cut stone showing drill marks with dry stone walling. The doorway is 4 ft. 6 in. high, 2 ft. 9 in. wide, and the chamber inside 9 ft. long by 5 ft. wide and 6 ft. high. The walls slope in to the roof, which is covered by two very wide lintels about 2 ft. and 2 ft. 4 in. respectively, and 5 ft. long.

No. 19. In Field 801 is a crow of massive stones roofed by three lintels of split stone with a hole in the roof which lets the light in. It is 7 ft. long by 5 ft. wide and 5 ft. high with dry stone walling. The opening is 4 ft. 6 in. high and 3 ft. 6 in. wide and it faces SE. There is a small passage inside extending westwards about 6 ft. and it is about 18 in. square and 20 in. off the ground. This crow has been used to house pigs.

No. 20. In Field 198 is an almost triangular crow with a narrow opening 23 in. at the widest part but sloping in—it is 3 ft. 6 in. high. The chamber is about 4 ft. high; corbelled—the walls are packed with clay. These last three are in Trewellard.

No. 21. In a cottage garden at Nanjulian (T.A. 4038) is a small crow built into a hedge about 3 ft. 8 in. high with a narrow opening 12 in. wide and 2 ft. 10 in. high; the little chamber is semi-circular and about 3 ft. 6 in. in diameter and 2 ft. 8 in. high.

No. 22. Nearby is a second crow built in under the field—3 ft. wide and 3 ft. 11 in. high and the opening 15 in. wide by 2 ft. 11 in. high. Both once had doors.

No. 23. In a lane leading to Tregeseal Hill from Little Waters is a crow with a collapsed roof, some of the stones in the hedge opposite appear to have come from it. It is in a short length of hedge built of very large unhewn moorstone with modern hedging on each side of it. It has one opening on the SE. side in Pool Field (T.A. 2010) 2 ft. high and 18 in. wide in a hedge 3 ft. 6 in. high and across the corner of the field. Another north opening into the lane has a large lintel across the opening 22 in. wide and 2 ft. 4 in. high.

Nos. 24 & 25. Two large crows made of huge split granite lintels at Silverly Cottage, Crippas Hill, and one at Falmouth Place, may have been used by roadmen for spalling stones in bad weather as was a similar one now collapsed on No-go-by-hill. They look fairly modern.

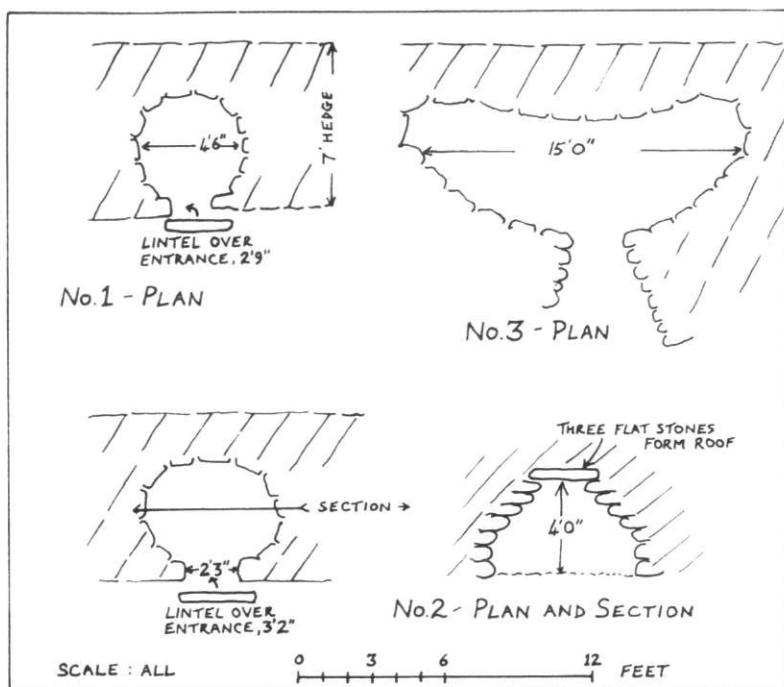


Fig. 18
Details of some typical 'Crows'

These little crows are mainly above-ground, except Nos. 14, 15 and 22, and are built into hedges often over 7 ft. wide. They fall roughly into three groups: those with corbelled roofs—Nos. 1, 2, 3, 4, 10, 12, 20; those with horizontally laid lintels for roofs—Nos. 6, 7, 8, 24, 25; and those with chamber and adjacent passage—Nos. 5 & 6 (also Boskednan). No. 9 is unlike all the others being roofed with one huge capstone. It would be interesting to know if these crows occur elsewhere or if they are peculiar to mining districts where miners often used to keep a pig and other livestock and rent a single cow: or if they are related to 'fogou' country, since many lie between Boscaswell and Pendeen.

It is strange, if some are genuinely ancient, that none of the 19th century antiquarians refer to them, except W. C. Borlase to Boskednan, although Dr. William Borlase (*Antiquities of Cornwall*, 294) after describing Boleigh, Bodinnar, and Pendeen Vau, says, 'There are many other caves still to be seen in these parts, and some have been rifled and destroyed by converting the stones to other uses, but none have yet come to my notice different enough from the foregoing to merit a particular description'.

St. Just in Penwith

Notes on Cornish Mammals in Prehistoric and Historic Times: 1

F. A. TURK

FOR THE PREVIOUS eight years the Royal Cornwall Polytechnic Society has published annually in its Report the author's 'Notes on Cornish Mammals'. From time to time, these have included short notices of bone finds and records of the occurrence of both wild and domestic mammals within the historical period. This arrangement has ceased with the publication of the eighth series of such Notes and, because of the steady accumulation of material and the unique importance of the mammalian fauna of Cornwall in former times, the author has very willingly taken advantage of the Cornwall Archaeological Society's invitation to continue the publication of the sub-fossil material in the yearly issues of *Cornish Archaeology*. Obviously, in the present state of our knowledge, such subject matter can be produced in no other form than a series of *dissecta membra* (to misuse a phrase of Horace) with an occasional interim report on some wider, but still subsidiary, theme of the total field.

In a general way, the utility of such studies to the student of archaeology will be easily apparent but, in this first report, it may not be out of place to make some mention of particularities such as may serve to call attention to the kinds of material available and some of the uses to which they may ultimately be put. Any knowledge of animal life in the recent past—recent, that is, geologically speaking—must contribute to two major sciences, archaeology and zoology. For the latter, the data obtained from the study of sub-fossil bones may illuminate the nature and limits of the variation of mammals,¹ provide facts about their evolution and zoogeographical distribution and serve as evidence of the changing ecological and climatic conditions of succeeding periods. For archaeology and history, the contribution made by the records of animal remains or documentary evidence of their form, number, kind and management may be of fairly considerable importance. Much of this will be known in general terms to readers of *Cornish Archaeology*; it is perhaps more to the point to draw attention to certain aspects of such study as have particular relevance to Cornwall.

The relative geographical isolation of Cornwall, its Celtic character retained into recent times, the fact that during much of its history its cultural connections were more with Wales, Ireland and the Continent than with the rest of Britain, and the uniqueness of both its climate and topography, were factors moulding its feral, semi-feral and domesticated faunas in very special ways. Although this may all be discerned in a very general sense there is, as yet, little factual evidence by which we may unravel this group of associated problems in detail. That, at various periods in history, Cornwall had its own breeds of cattle, and perhaps of horses, seems reasonably certain; that more archaic races were retained longer here than in most other places is an almost equally unavoidable conclusion for, in the same way, certain members of the wild fauna lingered on in Cornwall longer than in most other places in Britain. Thus, one may cite in this connection the dark race of the water vole (*Arvicola amphibius* subsp. *reta* Miller) and a race of the vole, *Microtus arvalis* Pallas, which today is found live in Britain only in Guernsey and the Orkneys but which was still part of the Scilly fauna in the Early Christian period.²

Yet several species once here, e.g., Roe, Elk, Beaver, Wolf and Bear, have long been extinct; but when that extinction occurred we cannot as yet say. The bear may have lingered on in Scotland into the 9th or 10th centuries A.D.,³ but the question of its demise as a species in Cornwall is as obscure as it is in Ireland. Elk probably did not survive the neolithic but the other three species were here in the Iron Age although for how long afterwards we cannot say. The purchase, in 1204, from the Crown by the men of Cornwall, of the rights of disafforestation in the county must have been soon followed by the diminution in number, extinction or adaptation of many woodland animals. As yet, nothing is known of this for certain.

Turning to domestic stock the problems multiply but the clarification of them is little further advanced than is the case with the wild mammals. When, for example, did the ass arrive? It is generally assumed that it reached northern Europe in the Middle Ages but we have the strange record of it at Chysauster sometime between the 1st and 3rd centuries A.D. It is most unfortunate that much mystery surrounds the reported occurrence of the ass at this site. In pre-war days the Penzance Natural History and Antiquarian Society exhibited, at its former Museum, a small number of bones, some pieces of charred wood and a spindle-whorl in a single case labelled 'Chysauster'. Some of these bone fragments were labelled 'Ass' and the writer, as a young zoology student then in the second year of a University course, examined these during the winter of 1930. Because of an interest in vertebrate osteology, he made drawings of a tibia, a metapodial, a calcaneum and part of a radio-ulna. Further examination of these showed no reason to disagree with the museum attribution, the authority for which remains unknown. Two of these drawings survive and again the writer would, on this evidence, tentatively identify them as the bones of an ass. It is a minor tragedy that soon after 1930 (in 1931?) these bones disappeared from the museum, possibly through theft. The charred wood suggests that the material was derived from the society's 1897 excavations at Chysauster. Since all these finds were once in the collection of Sir George Fitzgerald, they may have been lent by him to this society. It is certain that these bones were not known to Hencken when he wrote his later paper on Chysauster in 1933.⁴ This unsatisfactory situation will be all too familiar to the student of animal bones, and not only in connection with older excavations. The positive evidence for the ass at any west European site of this age would have been of the greatest possible interest.⁵

Again, one has the impression that the pig may have been kept in Cornwall only in a semi-feral condition until well into the Middle Ages, but it is difficult to substantiate this owing to the paucity of materials. Relatively ancient types of dog may possibly have been kept in Cornwall and Scilly until comparatively late times but, once more,

the material is too scanty for us to be sure. Certainly sheep of archaic stock—or closely allied to such—were kept here far into the historic period and, whilst these are but a few general examples, such things are distinctly unusual for Britain as a whole. More certainly, we *can* say something about the breeds of livestock in the neolithic, Bronze and Iron Ages in Cornwall as well as in later historical times, but we are still very far from being able to characterise the types of animal-husbandry of the smaller cultural complexes of areas such as those which Charles Thomas has indicated as areas of Irish settlement in post-Roman times.⁶

But the study of mammals in Cornwall, in past times, may have another kind of relevance; namely in the sphere of folk-custom and early religion. I have myself recorded the occurrence of animal bones in the walls of a 17th (?) century cottage in Boscastle⁷ and I have since come upon another example. To me, it appears probable that these are vestiges of the 'foundation sacrifice' which seems to have persisted in the county until nearly the end of the 19th century.⁸ Connected with such subjects we should perhaps consider the extraordinary statements by both Carew and Cox⁹ to the effect that the Cornish gentry hunted, on horseback, semi-feral cattle in the county's woodlands whilst Carew further testifies to the 'fierceness and Wariness' of these cattle. Since the mounted protagonists of the Portuguese *combate de touros* are still noblemen, it may well be that in Cornwall, we have here, the record of the final decayed remnant of the cult of the Minotaur.¹⁰

These are but a few instances of the special importance of the study of Cornish mammals as they existed in the past. In all such study the accurate identification and comparison of bone material must form the essential basis and it is for this reason that these notes will contain what may seem to be an undue amount of detailed measurement where this may have significance for later comparison. Too often the work of experts is rendered needlessly tedious by the failure of authors to record these measurements in detail thus making it more difficult to make valid general statements arrived at by the comparative method. But to the bare bones we must add the careful recording and appraisal of all written accounts and delineations of animals found among what must, of necessity, be a great variety of source material.

BONES FROM AN EARLY CHRISTIAN MIDDEN, TEAN, ISLES OF SCILLY

These were handed to me by the excavator, Professor Charles Thomas, in August 1965. All were from a midden dated to some period between the 2nd and 8th centuries A.D.; the site is thus a little later than the latest material from Nor-Nour, the bones from which have been reported upon elsewhere². A comparison of bones from the two sites, separated by a few centuries at the most, reveals at least two points of interest. At Nor-Nour the dominant animal was the grey seal, but in the Tean material the seal is non-existent. Whether this really represents a change in the economies of the two settlements is doubtful, since one cannot rule out the possibility of a large-scale fluctuation in the local population of the species. Indeed in the last 30 to 40 years there appears to have been an increase in the numbers of grey seals in Britain, and there is a steady relationship between the size of a population and the number of pups, this being of the order 3.5:1. Mortality among the pups is very heavy in the first year and is usually greater after severe winters, reaching as much as 20%; a succession of bad winters might reasonably be supposed to reduce a population of this species drastically. The period in question, especially in the 6th, 7th and 8th centuries A.D., does in fact show an abnormal number of terrible winters such as that of A.D. 509, when all the rivers of Britain are

said to have frozen for two months, and the most terrible of all recorded European winters—that of A.D. 764¹². The second point of difference worth noting is the probability that the domestic animals on Tean at this later period *may* have been a little larger than those from Nor-Nour, although the evidence for this is admittedly scanty.

The bone material from Tean proved to be exceptionally well preserved, and hence it is worth giving measurements at some length (all dimensions are in millimetres unless otherwise stated).

Sheep

Horn cores: Length on outer curve, 141; length on inner curve, 122; max. breadth at base, 31.5

Mandibles:	No. 1	No. 2	No. 3	No. 4
Length, condyle to tip	139	148	151	
Condyle to base of ramus	60.5	62.5	61.5	
Depth, post. to last molar	31.5	31	30.5	29.5
Length of last molar	21.5	20.5	19.5	24.5
Length of tooth row	59.5	61	62.5	67
Metacarpals:	No. 1	No. 2		
Maximum length	113	113		
Max. proximal epiphysis	19	19.5		
Max. distal epiphysis		23.5		

Femur: (fragment) with distal articular surface 32

Calcaneum: total length, 49

Astragali:	No. 1	No. 2
Max. proximal epiphysis	18	15
Length	25	21
Max. distal epiphysis	16.5	13.5

(Both astragali seem to belong to adult animals, but the dimensions are very small)

Metatarsal: Total length 112, max. proximal epiphysis 17.5, max. distal epiphysis 20.5
(*Comment*: Perhaps these figures indicate a sheep very slightly larger than the Nor-Nour type, longer-legged and smaller-footed.)

Goat¹¹

Humerus: Maximum distal epiphysis, 28.5

(*Comment*: The paucity of positively identifiable bones of this animal suggests that few were kept and that they were probably away from the main settlement. The species is often incredibly destructive to island vegetation and the small number of those found on Scilly, at all periods, is not surprising.)

Ox

The remains of this animal were quite numerous and it is therefore a disappointment that fragments only were uncovered; more especially the absence of radius, scapula and tibia in a nearly complete state, since these would have enabled one to classify the breed more exactly. Like those from Nor-Nour, these oxen appear to be among the smallest—if not *the* smallest—of the breeds recorded from the British Isles at any period. Most of the bones are those of young adult animals, and the single mandible (left) is peculiar in showing an abnormal sequence for the eruption of the teeth. P2 has not erupted, P3 is breaking the surface of the jaw, P4 has not erupted; M1 is fully erupted and worn, M2 erupted and abnormally worn, and M3 is just breaking the jaw. The horns are short and thick and spring from the side of the head directly outwards, with no trace of a forward curve. From the many remains of oxen that I have now

examined from Scilly, it seems likely that the Islands had a breed which was fairly distinct from that of the mainland of Cornwall. More material, or the happy chance find of a nearly complete skull, would enable us to characterise this race more exactly than is possible at present.

Horn cores: (Right) circumference at base 120.5, length along anterior curve 97, length along posterior curve 78, (Left) circumference at base 115

Maxilla: (fragment) Length of P3 (third premolar), 25

Length of M1 (first molar) 26; 25; and 18.5

Mandible (left fragment):

Length of tooth row	121.5
Depth of jaw at post. margin of last molar	60
Depth of jaw anterior to second premolar	32.5
Length of M1	25.5
Length of M2	28.5

Scapulae: (Coracoid process well developed, acromial spine reduced)

	No. 1	No. 2
Length of glenoid cavity	51.5	55.5
Breadth of glenoid cavity	41	48.5

Ulna: Length of trochlear notch, 45.5; width at nutrient foramen in radio-ulna interosseous space, 19

Radius: Max. upper articular surface, 40.5; max. lower articular surface, 50.5

Femur: (So far as I can judge, from the material which has so far been available to me, this bone in Scillonian cattle of early historic times seems consistently to possess the nutrient foramen actually *inside* the apex of the supra-condylar fossa).

(Fragment) Lateral width of shaft at level of nutrient foramen, 36; antero-posterior width at same level, 38.5.

Calcaneum: Maximum length, 117; length of tuber calcanei, 53; width of sustentaculum tali, 38.5 (and another, 43)

Astragalus: Length, 54.5; max. proximal width, 40.5; max. distal width, 40.5.

Pig

All the bones could have belonged to a single animal. A piece of maxilla with M1 and M2 present, but M3 not yet erupted, would suggest an age for this individual of about 1 yr. 4 (or 5) months. If it was a domestic animal, this would argue that it had been taken over the winter; it seems more likely that it would have been semi-feral.

Mandible: (Fragment) Length of M3, 31; max. breadth, 14

Tushes: No. 1—dia. at base 16.5; triangular; lingual side concave, median and buccal sides, flat. No. 2—dia. at base 13.5; triangular; lingual side flat, medium surface nearly flat, buccal side convex.

Humerus: Very slim with deltoid tuberosity very little developed. Length (est.) 140, the bone being worn on the epiphysis. (For the age of the animal, this represents a very small short-legged race.)¹³

Radius: Total length, 124; prox. articular surface, 27

Metacarpal: Length, 69; prox. articular surface, 19.5.

Dog

The remains of this animal, although so few, are extremely interesting. They all belong to an old individual since, in a fragment of maxilla M2 and M3 are worn to the level of the bone. This animal can hardly have been much bigger than a fox. It is unfortunate that, until more complete fragments of the skull of this breed are discovered, there is little that can be done to classify it more exactly.

Radius: Length, 136; Max. prox. articular surface, 26; Max. distal articular surface, 23.5

Metatarsals: 1st and 2nd fused—Length, without the conical nodular 1st mt., 74; max. prox. articular surface, 14.5; max. distal articular surface, 13; max. sagittal breadth of shaft, 11.5; length 1st metatarsus, 10.5.

Teeth: Upper 2nd premolar (P2), 8; 3rd premolar (P3), 10.5.

BONES FROM TWO SITES ON ST. AGNES, ISLES OF SCILLY

Material from two sites on this island were sent to me in 1963 by Mrs. Margaret Hicks of Atlantic Cottage. It is presumed that both sites were middens, but both were undated, although at Perkilben a completely oxidised iron object, which had formed an iron pan with surrounding sandy soil, was found with the bones.

'Site II' (Perkilben) produced remains of *sheep*, *ox* and a Cetacean—probably a *porpoise*.

'Site III; Top of Hill' produced the usual remains of *sheep*, *ox* and *pig*, the latter being from a somewhat larger animal than that from Tean, but otherwise all were similar to remains of these species found at other Early Christian sites in Scilly. In addition, there were bones of *seal* and the tibiae (both right) of two *red deer*, of which one was fairly perfect. The overall length of this perfect bone was 308 mm. These bones from Red Deer are an important find, since they form additional evidence for the author's belief that the Red Deer (and, in Bronze Age times, probably the Roe Deer) did in fact occur wild in the Isles of Scilly. It is hoped to discuss this matter in a future paper.

Identification of material

The writer asks that all such suitable material should be sent to him (at 'Shangri-La', Reskadinnick, Camborne) with a view to its publication in these annual reports, where due acknowledgement will of course be made. To avoid any misunderstanding the following points should be noted: (1) Not all bone fragments can be identified nor does the possibility depend altogether on the size of the piece: a tiny part of a lower jaw, the epiphysis of a long bone or an astragalus is likely to be more useful than a large chunk of rib or of vertebra. (2) Bird and fish bones involve special difficulties and many may be impossible to identify with complete certainty. (3) All fragments should be submitted in the first instance, partly because some may prove worth re-study in the light of later identifications, and partly because a small unconsidered fragment may represent human material. (4) The speed with which all such material is dealt with must depend on the author's many other commitments, and it is requested that correspondents will show as much patience as is humanly possible! (5) All materials, whether bone, manuscript copy, photographs, prints or whatever else should be accompanied by the fullest data known to the sender.

Camborne

References

1. The extent, and value, of such information—where the material itself is numerous enough—is well demonstrated in a recent and important Russian work, A. V. Yablokov's *Izmenchivost' Mlekopitayushchikh* (The Variation of Mammals), Moscow (1966).
2. See Turk, F. A., 'Report on the Animal Remains from Nor Nour', *JRIC*, (n.s.) V, pt. iv (1968), in press.
3. Ritchie, J., *The Influence of Man on Animal Life in Scotland* (Cambridge, 1920), 115.

4. Hencken, H. O'N., 'Excavation at Chysauster, 1931', *Archaeologia* LXXXIII (1933), 237 ff., at 240.
5. Only one other similar occurrence is known to me, from Kempton in Allgäu in Roman imperial times (Boessneck, J., 'Tierknochen', in Kramer, W., *Cambodunumforschungen*, 1953—*Hefte Bayer. vorgesch.*, München, 9 (1957), 103-116). Perhaps it is not altogether unlikely that a few specimens of the domestic donkey would have been introduced from time to time along the Roman trade routes.
6. Thomas, C., 'Cornwall in the Dark Ages', *PWCFC* II. 2. (1958), 59-72, and map, fig. 4, 66.
7. Turk, F. A. 'Notes on Cornish Mammals: An annual report—No. 7', *Ann. Rep. RCPS* (1966), 49-55.
8. Thomas, C., *Studies in Cornish Folklore: No. 2, The Sacrifice in Cornwall* (Camborne Prtg. Co., Camborne, for the author, 1952), 59-60.
9. Carew, R., *The Survey of Cornwall* (1602), 24, and Cox, T., *Magna Britannia* ('Cornwal' = pp. 306-364 incl.) (1720), 328.
10. For a good short modern account of this topic, see the late Professor K. H. Bouman's *Forgotten Gods* (Leiden, 1949), where he specifically identifies the mounted noblemen of the Portuguese bullfights with the early East Mediterranean cult of the Minotaur and other cognate matters.
11. Boessneck, J., Muller, H. H. and Teichert, M., 'Osteologische Unterschiede zwischen Schaf und Ziege', *Kühn-Archiv: Arbeit a.d. Landwirtschaftlichen Fakultät d. Martin-Luther-Universität, Halle-Wittenberg*, Bd. 78, heft 1/2 (1964), 1-130.
12. Eaton, C. *Les Hivers dans l'Europe Occidentale* (Brill, Leiden, 1928). Undoubtedly the influence of these more dramatic evidences of minor climatic shifts on animal life in early historic times has never been fully taken into account, yet its importance for both archaeology and zoology must be obvious.
13. In view of the fact that the now submerged central area between the islands may, in these centuries, still have been marsh, it is interesting that one authority on porcine osteology has stated that short legs and large feet are characteristic of races of pig that are amphibious in habit or that are confined to swampy ground (Azzaroli, A., 'Filogenesi e biologia di *Sus strozzi* e di *Sus minor*', *Palaeontogr. Italica*, 58 (1954), 41-76).

Excavation News, 1967-1968

STANNON DOWN, ST. BREWARD

Excavations were conducted during July and August, 1968, for the Ministry of Public Building and Works, by Mr. Roger Mercer. The site (SX 138205), shown as a group of hut circles on the O.S. maps, was threatened with encroachment by the tip of a new E.C.L.P. pit at Stannon. Survey revealed a group of seventeen hut-circles, together with an extensive related field-system defined by low stone walls and enclosures. The excavation, which lasted eight weeks, showed two main phases of activity. The earlier, which (stratigraphically) antedates all the huts, is defined by a horizon of what appears to be cultivated soil, in which was found sherds of cord-ornamented pottery of a type otherwise assignable in Cornwall to the final neolithic or

Early Bronze Age, together with two greenstone axes and various flints. The latter phase, which includes the huts, is marked by pottery of a different kind, probably Middle Bronze Age in date. The huts themselves are of the double-faced stone-walled type in most cases, though other types of construction are found combined with these; the interiors are rich in post- and stake-holes which may give some clue to their internal arrangements. Finds included two flint plano-convex knives, a series of hones of (?non-local) stone, granite saddle-querns, and other minor artefacts, though no metal or bones. A full report is in preparation and will appear in *CA* in due course.

ROGER MERCER

The University of Edinburgh, August 1968

WOOLLEY BARROW, MORWENSTOW

This previously-excavated barrow at SX 252165 was re-excavated for the M.P.B.W. in 1967. The barrow, 80 ft. in diameter and 8 ft. high, possessed both berm and ditch, the mound being carefully built of alternating layers of local clay and soil. The central area was surrounded by a low wall built of flat slabs of local stone. The burial rite, both primary and secondary, was cremation. Finds were scanty; they included a piece of amber, probably a pin-head, and a broken bead of late Roman date from the area of the first intrusion. There was also some fine, plaster-like material, possibly used as a backing for some flat metal object about 8 ins. diameter. A local tradition tells of gold from this barrow. The Woolley Barrow is probably of Wessex date; the well-known long barrow stands only a short distance from it.

DOROTHY DUDLEY

BARROW AT CARNON DOWNS

This barrow, also excavated for the M.P.B.W., lies just north of Devoran. It proved to have been disturbed centrally in the past, though the excavated material had been carefully replaced and the intrusion completely disguised from the outside. This intrusion did not reach as far down as the pre-barrow old land surface, and a small Bronze Age vessel had been thrown in with the filling about half-way down the funnel-shaped intrusion. The mound was very carefully constructed of local red clay, surface soil, and a black peaty material. There was a secondary burial in the north-west quadrant, and the barrow centre was surrounded by a ring (of 18 ft. radius) of well-made stake holes. A single sherd of Bronze Age pottery was found on the wide berm of the north-west quadrant. Neither the primary nor the secondary burial areas revealed any evidence except burnt ground.

DOROTHY DUDLEY

TREGIFFIAN, ST. BURYAN

Excavations, for the M.P.B.W., took place in 1967 and 1968 at this site (SW 43032442: St. Buryan list, barrow 3: Borlase, *Naenia Cornubiae*, 107-110). The barrow was extensively damaged about 1840 by roadmakers, and was partially dug by W. C. Borlase in 1868, Borlase's work being located in the present excavations. The barrow, part of which is interrupted by the B.3315 road, may have been about 40 ft. in dia-

meter. A megalithic passage, 14 ft. long and 4 ft. wide, was discovered, and this is surrounded by a setting of large granite slabs 3 to 4 ft. high, at about 3 ft. from the outer edge of this passage. The stones blocking the entrance, one of them cup-marked, had been displaced by Borlase. Slightly east of the entrance a large (3 ft. 6 ins. square) granite block, covered with a whole group of cup-marks, had been set at an angle to the entrance. Another large cup-marked stone was found lying in the south-east quadrant. The floor of the passage was strewn with comminuted bone fragments; below this floor were two pits. An oval one contained charcoal, stone, and cremated bone; a round one held an undamaged urn 15 ins. high.

DOROTHY DUDLEY

THE RUMPS, ST. MINVER

The third and final season of work here took place in the summer of 1967, under the direction of Mr. R. T. Brooks. No further work is planned for the moment. A third short Interim Report (cf. *CA 3* (1964), 26-34: *CA 5* (1966), 4-8) appears above (p. 38) and a final report is now in active preparation.

HALANGY DOWN, ST. MARY'S, SCILLY

Mr. Paul Ashbee's excavations, for the Ministry of Public Building and Works, continued in the spring of 1968. A lengthy report, covering the work of the seasons of 1967 and 1968, appears above (p. 24).

CARN EUNY, SANCREED

Work took place here, as part of the Ministry of Public Building and Works' conservation and research programme for this important site, in the spring of 1968 (Miss V. Russell) and again in the summer (Mrs. P. M. Christie). A fourth Interim Report (cf. *CA 4* (1965), 24-30: *CA 5* (1966), 17-19: *CA 6* (1967), 24-28) appears earlier in these pages (p. 33).

TREVINNICK, ST. KEW

Following the completion of their work at Tregear, Nanstallon (see the Third Report, above, p. 40), Lady Fox and Dr. W. L. D. Ravenhill intend to examine the rectangular earthwork at Trevinnick (marked 'Earthwork' at SX 008788) during the latter part of September 1968.

CARVOSSA, GRAMPOUND

Gear Meadow at Carvossa (SW 918483) is a sub-rectangular earthwork of approximately 5 acres, situated at 200 ft. O.D., on a ridgeway. The rampart and ditch on the north side are still substantial, while those on the west and south are represented by the modern field hedges, cut back from the original defences. The rampart on the eastern side has been pulled down at some stage to enlarge the field.

A small-scale excavation was carried out by the Society in April 1968, with the object of elucidating the sequence of construction and occupation. For this initial period of work, two cuttings were laid out, each 108 ft. by 12 ft., to cut the line of the eastern rampart and ditch. The first of these revealed a laid floor associated with a fine series of post holes and a set of separate field-ovens or hearths. The latter appear similar to those at Martinhoe, North Devon (Fox and Ravenhill, *Antiquity* XXXIX (1965)). This cutting also revealed a well-metalled road in the interior. Along the side of the road was a channel, constructed to carry away rain-water from the surface of the road into a stone-filled drainage pit. Alongside was the base of the pulled-down rampart, still *in situ*. This consisted of well-graded hard packed stone, about 14 ft. wide at the base.

A feature of the second cutting was a very large gully. This, from its direction and size, may be of one the main drains of the camp, directed towards the SE. corner of the site. A large post hole, some 14 ins. across, was discovered in this cutting on the line of the rampart. From its position, together with two support-holes nearby, and very worn killas to one side, it would seem that this could well be part of the south side of an east entrance.

The amount of pottery so far recovered from the excavation is so large as to be almost an embarrassment. Though space does not permit an exhaustive list here, it can, however, be said that many hundreds of sherds so far discovered date to the 1st and 2nd centuries A.D. They include sherds of cordoned, Belgic, and Roman coarse ware, some early New Forest, and a small quantity of Terra Nigra. The amount of samian, both plain and decorated, appears to exceed any previous find of this type of pottery. From this site also there came two types of

mortaria; a worked stone one, and a biscuit-ware rim complete with stamp.

Various bronze objects were recovered, including a spatula, some bronze pins, and two fibulae, one of which was in almost mint condition. Other small finds include a coin of Vespasian (69-79 A.D.) a debased silver denarius, and another bronze coin, not yet identified. From the ditch there is a certain amount of fine glass, and the drain yielded a twisted iron hammer-head and some glass-enamel slag.

The work continues at week-ends through the summer, with the promise of another extended period next Easter at least.

The two directors (S. W. Beard and H. L. Douch) would like to record their thanks for the co-operation and help received from the land-owner, Miss E. Johnstone of Trewithen, and the tenants, Messrs. Ralph and Bill James.

Newquay, June 1968

S. W. BEARD

MERTHER UNY, WENDRON

The Society's main summer excavation took place here, by kind permission of the owner, Mr. Henry Noye, from late June to early August, 1968. The venture also constituted the main training excavation for the year for archaeology students from the University of Leicester; and students from seven other Universities, most of them members of the Society, also took part. In all, thirty-eight members of the C.A.S. participated, fourteen of them camping at Gwithian.

The site, superficially an ovoid enclosure with a standing cross, the ruined walls of a reputed medieval chapel to St. Uny, and reputed human burials, proved to be full of interest. It appears to have commenced as a small form of 'round' or domestic enclosure, judging from pottery finds (native wares of Glastonbury/late Castle Dore type, samian, buff amphora) in use from the 1st century B.C. to the 2nd(?) A.D. The initial enclosing bank, cut at four points, was smaller than the present-day one, embraced a slightly smaller area, bore (at one point) some form of palisade or stockade, and lacked any form of outer ditch. About 1000 A.D., if not before, the site was re-employed for what I have elsewhere labelled as an 'enclosed developed cemetery' of the familiar Cornish *lan* class. A neat entrance, flanked by granite slabs, may date from this

period (on the W. side—now blocked and replaced by a modern N.W. entrance). The fine standing cross of granite, 7 ft. 5 ins. overall with a sunken wheel head and dot-and-panel ornament, must date from this time, and stands in its original pit just inside and S. of the contemporary entrance. Bar-lug pottery of the Gunwalloe fabric (cf. *CA 2* (1963), 60 ff.) seems to imply (clerical?) occupation, but the main Christian feature was an extensive series of dug graves, some in rows, oriented a good 12 to 15 degrees off E-W in a SE-NW direction. Any chapel of this phase, probably of stone rather than wood, was either destroyed by the later ones or was simply not found. A 12th-century continuation is implied, both by further pottery of 'Sandy Lane' styles 2 and 3 (cf. *CA 3* (1964), 49) of the period c. 1100-1250, fragments of worked stone with simple chamfer and strong diagonal tooling, and the presence of the green-grey roof slate that indicated phase 2 (? c. 1125-1150 or later) at the Fenton-Ia chapel, Troon (see my *Christian Antiquities of Camborne* (1967), 78-82). The chapel of this phase was unquestionably re-built, perhaps on enlarged foundations, to give the extant foundations, internally 20 ft. N-S, 30 ft. E-W, with a W. doorway, encountered in the work. This final chapel may be of late 14th or 15th-century date, judging from a few fragments of ridge-tiles, part of the west door arch-head with double hollow moulding re-used as half of the cross-base, and a window-sill built into the adjacent structure at Merther Uny cottage. Burials of the 12th, or later, centuries, include some cist-graves, one or two with stone lintels, and some adjacent to and oriented on the latest chapel. While practically all skeletal remains had disappeared in the early graves, some fairly good bones were recovered from the later ones, and men, women, and children are represented. Some form of free chapel, enjoying quasi-parochial status and used for lay burials (? up to the Reformation, if not conceivably later!) is indicated. Finally, in the 19th century, an abortive attempt to build a Methodist chapel on the site, employing the N. wall of the final medieval chapel as its S. wall, and including an *ad hoc* 'open-air pulpit' against the external N.E. corner, must be mentioned; the last vestiges of this (uncompleted) building were removed about 1920 or so.

A full report will, it is hoped, appear in *CA 8*

(1969). The writer, as director of the work would wish to offer his very best thanks to Mrs. E. A. Dowson, who was associated with the project at all stages; Miss Angela Buxton, who acted as his assistant; Mr. Peter Sheppard, who took charge of all the skeletal material and will report on this; and the numerous diggers, members and non-members, who contributed to the marked success of this very interesting one-season project.

August, 1968

CHARLES THOMAS

PERRAN SANDS

Work at this site (opposite Ellenglaze Manor, Cubert, at SW 774577) has continued for nearly the last year, facilitated by a pumping-engine able to cope with the water seeping in. The door opening of the house (cf. *CA 6* (1967), 78) has been located, and outside this the stratigraphy—thin turf, some 20 ins. of clean wind-blown sand, then a transitional deposit of light brown sand contaminated with clay particles, then a black clayey compressed level with killas fragments and shells, then bedrock killas—was obtained. The house walls prove to stand on ridges of killas, left after the bedrock had been cut away on either side; this feature was also noted at Mawgan Porth. An extensive collapse of wall in the north-east corner proves to be a doorway.

The various granite lumps referred to in the previous note are almost certainly derived from the felsite dyke running eastwards from the Perran Iron lode at Ligger Point to Ellenglaze and beyond. Many of these lumps are blackened with soot and some have been smoothed by domestic use. Small finds, mostly from the light brown clayey sand, include also animal teeth and bones, fish bones, the shells of molluscs, slate pot-lids or thatch-weights, an unfinished spindle-whorl, and some 50 to 60 fragments of pottery. The last falls into two main types; grass-marked pottery, similar to that found nearby at Kelsey Head, and brick-red ware heavily impregnated with mica, well-fired, the rims showing high neck forms. During the next year it is hoped to obtain further sections from all parts of the site and to investigate the interior of the structure. Thanks are due to the many boys of Truro School who have given freely of their time and labour on this project.

Truro, September 1968

L. J. PENNA

LAUNCESTON CASTLE

A third August season took place in the current Ministry of Public Buildings and Works excavations on this site (SX 328845). The results show that the medieval defensive strength of the castle was considerable more formidable than the present softened contours might suggest. The guard tower at the foot of the steps leading up the castle mound, with the wall retaining the terrace at the foot of the great mound, are probably of 13th century date. They cover at this point, the early ditch which encircled the mound. This year's work exposed another ditch, over 20 ft. deep, in front of the guard tower and which cut through the earlier bailey rampart. This ditch had been bridged with a drawbridge at the tower entrance, the first timber bridge being renewed by a series of masonry piers sited on the ditch silt. The putative site of the steps up the slope of the bailey rampart, beyond the bridge, proved to have been destroyed—probably to deny access to the keep—by a large hole, finds (notably wine bottles) from which suggest Civil War activity.

In the middle of Castle Green (the bailey), a large square building close to the curtain wall on the S. side was discovered. It started (probably in the 13th century) as a kitchen, and later became a brew- and bake-house, the large well-preserved bread oven being a notable feature.

A major section was dug through the bailey rampart on which the ruined curtain wall now stands, to examine the original defences of the castle built by Robert of Mortain, the Conqueror's half brother, shortly after 1066. This revealed that the earth and stone banks were not constructed in one operation. There were three heightenings of the original bank which was only some 10 ft. high on this south side (above New Road). The bank was shortly afterwards strengthened with a massive rampart faced and revetted with timber-work. The stone wall may not have been built until 50 or 100 years later.

August, 1968

A. D. SAUNDERS

ST. NIGHTON'S CHAPEL, NEWLYN EAST

In September 1968, during construction of a loop road between Goonhavern and Newquay, word reached the R.I.C., Truro, that the presumed site of St. Nighton's Chapel (SW 804568) was

likely to be cleared in preliminary grading. Thanks to the co-operation of the contractors, and the County Highway authorities, it was possible to organise limited rescue work on a long fine evening; Miss Dudley, Messrs. H. L. Douch, A. C. Thomas, and C. Woolf, and about a dozen members of the Society took part. What appears to have been the west end of the chapel was located, cleared, and planned, though the rest had already gone and estimates of length and the location of the (presumptive) south doorway must remain uncertain. Finds included slates, mortar, and enough fragments of pottery ridge-tiles to suggest (with the nature of the remaining wall) a 14th- or early 15th-century date. A fuller note will appear in the next issue of *CA*. The site itself, which was clearly one of considerable importance in the Middle Ages—it stands close to the Newlyn East-Cubert-Crantock parish bounds—is discussed in Henderson's notes (*JRIC n.s. III.2* (1958), 367-8), an account which draws on Nicholas Roscarrock's 16th-century description of the chapel, its enclosure, and 'little mount or hill' in which relics were displayed.

September 1968

LAKE'S POTTERY, TRURO

During recent alterations to the office and store range at this well-known Cornish pottery, at Chapel Hill, Truro, Mr. and Mrs. William Lake made a most interesting discovery. Traditionally the site is of great age as a pottery, primarily for the manufacture and output of glazed domestic earthenware for mid-Cornwall, but this has not hitherto been confirmed archaeologically. Below the floor of a building in the centre of the range, which forms the present uphill (west) side of the establishment, the foundations of a circular kiln were revealed. Part of the kiln has now been re-built in an adjacent shed, and the numerous wasters in and around it give an excellent idea of contemporary products from this pottery. The kiln itself included bricks, in Mr. Lake's opinion produced on the spot from Truro clay, thus implying a still earlier kiln in which they were fired. The discoveries would appear to take the continuous history of Lake's pottery back to at least the end of the 18th century.

Cumulative Index of Cornish Archaeology

LIST No. 16 JUNE 1967—SEPTEMBER 1968

THIS LIST, which covers a longer period than usual as our journal finally shifts to late-autumn publication, embraces material published between the beginning of June 1967 and the end of September 1968, with the odd reference to material not hitherto encountered. In all items which do not form part of journals, or are not in themselves hard-cover books, the letters (PC) imply 'paper covers', i.e. pamphlets. Certain items may be found specially noticed in the next year's *Digest* of Cornish periodicals or, if important enough, noticed under *Reviews* (p. 109). Numbers in brackets on the right-hand side of any entry, thus (633), are cross-references to earlier entries in this Index, for instance where a preliminary or interim report is followed by a final one, or where some paper has elicited a reply or counter-view. Any item bearing a number lower than 341 will be found in the entries in *Proceedings of the West Cornwall Field Club* (nine issues, 1953 to 1961), the predecessor of this present journal.

General

- 678 DOWSON, E. A. Lists of the antiquities of Kerrier, by parishes, 7: Grade-Ruan. *CA* 6 (1967), 102
- 679 RUSSELL, V. Lists of the antiquities of west Penwith, by parishes, 9: Zennor. *CA* 6 (1967), 85
- 680 SHEPPARD, P. Lists of the antiquities of Powder, by parishes, 5: St. Ewe. *CA* 6 (1967), 98
- 681 TANGYE, M. Lists of the antiquities of east Penwith, by parishes, 4: Redruth. *CA* 6 (1967), 90
- 682 TANGYE, M. Additions to previous lists, east Penwith: Illogan. *CA* 6 (1967), 95 (625)
- 683 THOMAS, A. C. Parochial check-lists and the Lizard. *Lizard* III.3 (1967), 6-8
- 684 THOMAS, A. C. and POOL, P. A. S. The Principal Antiquities of the Land's End District. *CAS Field Guide* no. 2, 12th edn., 1967
- 685 WARNER, R. B. Additions to previous lists, Pydar: St. Agnes and Perranzabuloe. *CA* 6 (1967), 97 (391, 449)
- 687 CLARKE, B. B. The Sandrock and other features of the cliffs at Mother Ivey's Bay near Padstow. *Proceedings of the Ussher Society* I.6 (1967), no. 144, 286-7 (686)
- 688 MITCHELL, G. F. and ORME, J. R. The Pleistocene Deposits of the Isles of Scilly. *Quart. Journ. Geol. Soc. London* 123 (1967), 59-92

Mesolithic

Nil

Neolithic

- 689 SMITH, W. C. Source of the stone used in a mace-head from Dorchester, Oxon. *PPS XXXIII* (1967), 455-6 (identified as from Lizard area)
- 690 THOMAS, A. C. and WAILES, B. Sperris Quoit: the excavation of a new Penwith chamber tomb. *CA* 6 (1967), 9-22

Bronze Age

- 691 DUDLEY, D. Excavations on Nor'nour in the Isles of Scilly, 1962-6. *Arch. Journal CXXIV* (1967), 1-64
- 692 TYLECOTE, R. F. Metallurgical examination of socketed axe and 3 lumps of bronze from Gillan. *CA* 6 (1967), 110-111

Quaternary Studies

- 686 CLARKE, B. B. Geomorphological features of Mother Ivey's Bay near Padstow, etc. *TRGSC XX.1* (1965-6: issued 1968), 69-80

Early Iron Age

- 693 BROOKS, R. T. The Rumps Cliff Castle. *CAS Field Guide no. 9*, 3rd edn., 1967 (462, 575, 632)
- 694 CHRISTIE, P. M. Carn Euny Excavations: Interim Report on 1966 Season. *CA 6* (1967), 24-28 (576, 633)
- (691) DUDLEY, D. Excavations on Nor'nour in the Isles of Scilly, 1962-6. *Arch. Journal CXXIV* (1967), 1-64
- 695 MEGAW, J. V. S. The Trenoweth Collar. *CA 6* (1967), 5-8
- 696 WARNER, R. B. Some New Cliff Castles. *CA 6* (1967), 111 (286)

Roman and Native (-400)

- 697 FOX, (Lady) AILEEN and RAVENHILL, W. L. D. Excavation of the Roman Fort at Tregear, Nanstallon, 1966: 2nd Interim Report. *CA 6* (1967), 32-34 (635)
- 698 WARNER, R. B. The Carnanton Tin Ingot. *CA 6* (1967), 29-31 (663)
- (691) DUDLEY, D. Excavations on Nor'nour in the Isles of Scilly, 1962-6. *Arch. Journal CXXXIV* (1967), 1-64

Early Christian (400-1100)

- 699 PEACOCK, D. P. S and THOMAS, A. C. Class 'E' Imported Post-Roman Pottery: A Suggested Origin. *CA 6* (1967), 35-46
- 700 PEACOCK, D. P. S. The Heavy Mineral Analysis of Pottery—A Preliminary Report. *Archaeometry 10* (1967), 97-100 (699)
- 701 THOMAS, A. C. Christian Sites in West Penwith. *CAS Special Field Guide* (for Soc. Med. Arch. conference, Penzance), 1969
- 702 THOMAS, A. C. Early Christian Cornwall: Selected References, 1933-1967. *CAS Special Bibliography no. 2*, 1968

Medieval (1100-1500)

- 703 ADAMS, J. H. A new type of cresset stone? *CA 6* (1967), 47-56
- 704 ADAMS, J. H. Chapel Carn Brea, St. Just in Penwith. *DCNQ XXXI* (1968), 12-14 (587)
- 705 BERESFORD, M. W. New Towns of the Middle Ages. Lutterworth Press, 1967 (see *Gazetteer*, 399-414, for Cornwall)
- 706 CHAPLAIS, P. The authenticity of the royal Anglo-Saxon diplomas of Exeter. *Bull. Inst. Historical Research XXXIX* (1966), 1-34

- 707 CHESHER, F. J. The late medieval house at Colquite, St. Mabyn. *CA 6* (1967), 57-63
- 708 DARBY, H. C. and FINN, R. W. The Domesday Geography of South West England. C.U.P., 1967
- 709 DOWSON, E. A. Confusion between two Wendron crosses. *CA 6* (1967), 113
- 710 DUNNING, R. W. The Hylle Cartulary. *Somerset Record Soc.*, 68 (1967) (Cornwall, 181-237)
- 711 ELLIS, G. E. Newly-found cross at Trevivian, Davidstow. *DCNQ XXXI* (1968), 10-12 illus.
- 712 HULL, P. L. Review of CHAPLAIS, P. (706 *supra*). *CA 6* (1967), 117-118
- 713 HULL, P. L. The Foundation of St. Michael's Mount . . . a priory, etc. *Millenaire monastique du Mont S. Michel: I. Histoire et vie monastique*, ed. Dom J. Laporte (Paris, Bibl. d'hist. et d'arch.chret., 1967), art. xxix, 703-724 (410)
- (701) THOMAS, A. C. Christian Sites in West Penwith. *CAS Special Field Guide*, 1968 (plans of medieval sites)
- 714 THOMAS, A. C. Merther Uny, Wendron. *CAS Field Guide no. 11*, 1968
- 715 VARCOE, Maurice. Note (with photo.) on a four-lugged slate(?) mortar from Pentewan. *Country Life vol. cxliv, no. 3729* (for 22 August 1968), 462
- 716 WITHERICK, M. E. The medieval boroughs of Cornwall: an alternative view of their origins. *Southampton Research Series in Geography*, 4 (June 1967), 41-60 (705)

Post-medieval (1500-) and architectural

- 717 ALLEN, J. The Cornish round chimney in Australia. *CA 6* (1967), 68-73 (652)
- 718 PICKLES, W. Relics of the Turnpike Roads (Cornish toll-houses, illus.). *Cornish Magazine 11.1* (March 1968), 32-35
- 719 WEAVER, M. E. Notes on a farmhouse complex at Penrice, Karslake. *CA 6* (1967), 64-67
- 720 WHETTER, J. C. A. Robert Hoblyn of Nanswhyden, Clerk, 1658-1705. *Old Cornwall VII.1* (1967), 12-21
- 721 Note (illus.) on restoration of hall and lady chapel at Trecarrel, Lezant. *Cornish Magazine* (Sept. 1966), 114
- 722 Note (illus.) on the gatehouse at Lanhydrock. *Cornish Magazine 11.2* (June 1968), 80-81

Scilly

- 723 ASHBEE, PAUL. The excavations at Halangy Down, St. Mary's. *Scillonian Magazine no. 170* (1967), 149-157 (650)
- (691) DUDLEY, D. Excavations on Nornour in the Isles of Scilly, 1962-6. *Arch. Journal CXXIV* (1967), 1-64
- 724 DUDLEY, D. and BUTCHER, S. Nornour. *Isles of Scilly Museum Publ. no. 7* (4to., illus., 18 pp.), 1968 (691) (PC)
- 725 GIBSON, F. E. Shipwrecks in the Isles of Scilly. A. H. Read, St. Mary's, 1967 (PC)
- 726 MACKENZIE, M. Recent discoveries at St. Mary's (cistgrave, Halangy). *CA 6* (1967), 111-112 (91, 121, 175)
- 727 MACKENZIE, P. Z. Thumbnail scrapers in the Isles of Scilly. *CA 6* (1967), 109
- (688) MITCHELL, G. F. and ORME, J. R. The Pleistocene Deposits of the Isles of Scilly. *Quart. Journ. Geol. Soc. London 123* (1967), 59-92
- 728 MUMFORD, CLIVE. Portrait of the Isles of Scilly. Robert Hale, 1967
- 729 Extract from John Savage's 'Memoirs and Travels': visit to Scilly in 1790. *Scillonian Magazine no. 171* (1967), 230-233
- 730 Shipwrecks around the Isles of Scilly. *Isles of Scilly Museum Publ. no. 3*, 1967 (725) (PC)
- 731 The Shipwreck of Sir Cloudesley Shovell on the Scilly Islands, 1707. *Isles of Scilly Museum Publ. no. 6* 1968
- Material Culture and Industrial**
- 732 ASSHETON-SALTON, K. L. The Port and Railway of Pentewan. *CR 7* (1967), 58-61 (676)
- 733 BARTON, D. B. (ed.) Historic Cornish Mining Scenes Underground. Barton, Truro, 1967 (PC)
- 734 BEARD, S. W. The Industrial Monument Survey of Cornwall. *CA 6* (1967), 74-76 (543)
- 735 BICK, D. E. Cornish Engine Houses at Welsh Metal Mines. *JIA V.3* (1968), 262-5 (illus.)
- 736 CROMBLEHOLME, R. *et al.* Callington Railways. Branch Line Handbooks, 1967 (PC)
- 737 DOUCH, H. L. Windmills in Cornwall and Devon. *DCNQ XXXI* (1968), 56-59 (481)
- 738 EARL, BRYAN. Cornish Mining: The Techniques of Metal Mining in the West of England, Past and Present. Barton, Truro, 1968
- 739 GENTRY, P. W. Tramways of the West of England (full account of Camborne trams). 2nd edn., W. J. Fowler & Son, 1960
- 740 GILLIS, R. H. C. Wrecks around the Cornish Coast. Harvey Barton, 1968 (PC)
- 741 ISHAM, K. Lime through the ages: the lime-burning industry in Cornwall and Devon. *English China Clays Review*, autumn 1967
- 742 JENKIN, A. K. H. Mines and Miners of Cornwall (issued in parts). 14, St. Austell to Saltash. Barton, Truro, 1967 (PC)
- 743 ORDISH, H. G. Cornish Engine Houses: a survey. Barton, Truro, 1967 (PC)
- 744 ORDISH, H. G. Cornish Engine Houses; a second pictorial survey. Barton, Truro, 1968
- 745 PHILLIPS, R. M. Notes on 19th century farming in the Lizard District. *Lizard III.3* (1967), 13-16
- 746 RAISTRICK, A. The Hatchett Diary. Barton, Truro, 1967
- 747 ROCHE, T. W. E. Plymouth and Launceston Railway. 2nd edn: Branch Line Handbooks, 1965 (PC)
- 748 ROCHE, T. W. E. The Withered Arm: reminiscences of the Southern lines west of Exeter. Branch Line Handbooks, 1967 (PC)
- 749 ROWE, JOHN. The Rise of Foreign Competition to Cornish Tin-mining. *132 Ann. Rep. RCPS* (1965), 22-39
- 750 RUSSELL, V. Barrows and Whim-Rounds. *CA 6* (1967), 110
- 751 THOMAS, CHARLES. Mining Fields of the West. London, 1867: re-issued Barton, Truro, 1967 (PC)
- 752 WHETMATH, C. F. D. The Bodmin and Wadebridge Railway. 2nd edn: Branch Line Handbooks, 1967 (PC)
- 753 WHETMATH, C. F. D., and STUCKEY, D. The North Devon and Cornwall Junction Light Railway. Westcountry Handbooks, 1963 (PC)
- 754 WILLAN, T. S. The English Coasting Trade, 1600-1750. Manchester Univ. Press, 1938, re-issued 1967
- 755 Note on Cornishmen at Moonta, S. Australia: engine houses at Moonta, illus. *Cornish Magazine 11.1* (March 1968), 26-29

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- 756 CAMPANILE, ENRICO. Un frammento scenico medio-Cornico. *Studi e Saggi Linguistici III* (Pisa, 1963), 60-80
- 757 KOLVE, V. A. The Play called Corpus Christi. Edw. Arnold, 1966
- 758 LONGSWORTH, R. The Cornish Ordinalia: Religion and Dramaturgy. Harvard Univ. Press, 1967
- 759 NANCE, R. M. and SMITH, A. S. D. (ed. HOOPER, E. G. R.). Cornish Studies no. 2: comments on H. Lewis, *Llawlyfr Cernyweg Canol* (2nd edn.). *An Lef Kernewek*, Cambridge, 1968 (PC)
- 760 WAKELIN, M. F. Names for the Cow-House in Cornwall and Devon. *DCNQ XXXI* (1968), 52-56
- 761 WILLIAMS, N. J. A. Four Textual Notes on the Middle Cornish Drama (OM 1399, PC 334, RD 2201, BM 2463). *BBCS XXII.3* (1967), 236-238
- 772 TANGYE, M. Portreath: some chapters in its history. Olson, Redruth, 1968 (PC)
- 773 TOY, H. S. A History of Education at Launceston. Worden, Penzance, for the author, 1968
- 774 TOY, H. S. Launceston Savings Bank 1818-1968. B.P.C., Gloucester, 1968 (PC)
- 775 TREMEWAN, T. Cornish Youth: Memoirs of a Perran Boy, 1895-1910. Blackford, Truro, for the author, 1968
- 776 Truro Cathedral Pictorial Guide. Hamilton-Fisher, Torquay, n.d. (1967) (PC)

Place-names

- 762 BAKER, G. F. Clampitt. *DCNQ XXXI* (1968), 26-30 (670)
- 763 POOL, P. A. S. Cornish Place-names. *CR 8* (1968), 19-24

Local History

- 764 COUCH, JONATHAN. History of Polperro (reprint of 1871, slightly condensed). Frank Graham, Newcastle-u.-Tyne, 1965 (PC)
- 765 COX, D. Madron Parish Church: a guide. 1966 (PC)
- 766 DUNSTAN, BOB. Falmouth's Famous Past (repr. of articles from *Falmouth Packet*). Lake, Falmouth, 1968 (PC)
- 767 LLOYD, H. M. *et al.* A Cathedral for Cornwall: The Story of Truro Cathedral (good account of J. L. Pearson). Netherton and Worth, Truro, 1968 (PC)
- 768 NICHOLAS, EDITH M. A Short Guide to St. Just and Pendeen. Headland Prtg. Co., Penzance, 1968 (PC)
- 769 NOALL, CYRIL. The Penzance Library, 1818-1968. Worden, Penzance, 1968 (PC)
- 770 REDWOOD, URSULA. The Story of Flushing. Lithoprint Co., Newquay, 1967 (PC)
- 771 SHEARME, F. A Short History of St. Swithin's Church, Launcells. Bude Prtg. Co., Holsworthy, 1967 (PC)

Abbreviations

- BBCS Bulletin of the Board of Celtic Studies (Cardiff)
- CA Cornish Archaeology
- CR Cornish Review (second series)
- DCNQ Devon & Cornwall Notes & Queries
- JIA Industrial Archaeology (David & Charles Ltd.)
- PPS Proceedings of the Prehistoric Society
- RCPS Royal Cornwall Polytechnic Society (Falmouth)
- TRGSC Transactions of the Royal Geological Society of Cornwall (Penzance)

Parochial Check-Lists of Antiquities

OUR ANNUAL ISSUE includes the eleventh list from the Western Division, Penwith Hundred, together with a number of additions to previous Penwith lists; three more lists from the Hundred of Powder; and Mrs. Dowson's eighth list from the Hundred of Kerrier. We are again grateful to the Ministry of Public Building and Works for their financial support in printing these lists, and are happy to say that, during the last year, five more members have been kind enough to offer their services in compiling future lists. The present group bring the total up to thirty-three lists in all, or nearly one-sixth of Cornwall.

The new Abbreviations given below should be added to the Lists of Abbreviations which appeared in *CA 1* (1962), 107 ff., and *CA 6* (1967), 82 ff.

Blight, Barrows CBA 7	J. T. Blight's pamphlet <i>Barrows in Cornwall</i> (Penzance, May 1865) Council for British Archaeology's 7th Research Report, <i>Rural Settlement in Roman Britain</i> , ed. C. Thomas (1966).
CBS	C. Henderson and H. Coates, <i>Old Cornish Bridges and streams</i> (Exeter, 1928).
Hawk, V. R.	Christine Hawkridge, <i>Veryan and The Roseland</i> (Truro, 1967).
Langdon/Hend. MNB	C. Henderson's <i>Supplement</i> to Langdon's MS. of OCC, at R.I.C., Truro Guy Maynard, small MS Notebook of sites and finds in St. Keverne, etc., at R.I.C., Truro
Resk, 1812	Survey of the manors of Reskymmer Meneage and Reskymmer Cutter (1812), at R.I.C., Truro
Thomas Survey Trevanion S.C.	Richard Thomas, Survey sheets, R.I.C., Truro Trevanion Sale Catalogue (1852)
WEH	The <i>Western Evening Herald</i> , daily, Plymouth
WMN	The <i>Western Morning News</i> , daily, Plymouth

CORRECTION

In *CA 6* (1967), 84, the second consolidated list of Check-List abbreviated references, some confusion (for which the Editor is responsible, and offers his apologies) crept in apropos of the numbering of the various Henderson MSS. at the R.I.C., Truro. The following slightly amended scheme should replace, for check-list compilers and users alike, that given at the foot of p.84 in *CA 6*.

Hend. E. A.	Two MS. notebooks of ecclesiastical antiquities: now (ed. J. H. Adams) in printed edn., <i>JRIC n.s. III.3</i> (1955) <i>et seq.</i> , from which entries can preferably be cited by <i>JRIC</i> vol. and page no.
Hend. I	MS. notebook of parochial antiquities, (Deaneries of) Penwith, Kerrier and Carnmarth, part one
Hend. II	Ditto, part two
Hend. III	Ditto, Powder, Pydar and St. Austell
Hend. IV	Ditto, Kerrier
Hend. V	Ditto, Powder
Hend. VI	Ditto, East Cornwall
Hend. Top I	MS. Topography of Penwith
Hend. Top II	Ditto, Kerrier
Hend. Top. III	Ditto, Powder
Hend. Top. IV	Ditto, Pydar
Hend. Top. V	Ditto, East Cornwall
Hend. MSS	Vols. of transcripts of original deeds, to be cited by vol. and folio nos. (e.g. Hend. MSS V.21)

HUNDRED OF PENWITH, WESTERN DIVISION

11: PARISH OF TOWEDNACK (2850 acs.)

VIVIEN RUSSELL

(Note: in CA 6 (1967), 85, 'Zennor' should be re-numbered as '10')

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Barrows			
1 Conquer Downs	47023601	Yes	Blight, Barrows 4; N.C. 210; Hend. I.204-5, Pl. 203(C); CBAP I.47, Pl. 45, table 7; CBAP II.60
2 Conquer Downs	46993610	Yes	Blight, Barrows 5; Hend. I.204-5, Pl. 203(D)
3 Conquer Downs	47543568	Yes	Hend. I.204-5, Pl. 203(H)
4 Embla	47483706	Yes	OS. 68 NW (1906 edn.); Hend. I. 204-5, Pl. 203(F); ? barrow or round?
5 Lady Downs	47173651	Yes	Hend. I.204-5, Pl. 203(E); ? L.E. 34; PZ 1848, 235-6?
6 Lady Downs	47873649	Yes	Hend. I.204-5, Pl. 203(A)
7 Lady Downs	47523616	Yes	Hend. I.204-5, Pl. 203(B)
8 Lady Downs	47303643	Yes	? L.E. 34; PZ 1848, 235-6?
9 Lady Downs	47013658	Yes?	? L.E. 34; PZ 1848, 235-6?
10 Lady Downs	47213654	Yes?	
11 "Giant's Rock"			Borlase Ant. 300n; Misc. 44(13); V.C.H.R. 12, 42
12 Bussow Vean			Hend. I.96; CBAP I.35, 41, Pl. 42, table 6; CBAP II. 44, 65n; PWCFC II.2 (1958) 41-2; PWCFC II.5 (1961) 199
13 Amalveor	47843758	Yes	
14 Bussow			C.P.R.E. 55
15 Amalbrea	Ap. 49503649		TA 969 Burrows Field
16 Nancledra	Ap. 49643612		TA 912 Lower Burrow Field
17 Chytodden	Ap. 49763810		TA 614 Burrow Field
18 Amalveor	Ap. 48413750		? TA 1120-1 Creglow
Cists			
1 Churchtown			CA 1 (1962) 98
2 Lady Downs	Ap. 47473710		Hend. I.205
Menhirs			
1 Lady Downs	? fragments at 47203630 ?		Misc. 43 (15)
2 Chylason	Ap. 49863653		TA 854 Park Menheere
3 Amalbrea	Ap. 49453658		TA 967 Long Rock Field
4 Bussow Vean	Ap. 49873891		TA 470 Long Rock Field
Rounds			
1 Amalwhidden	48743724	Yes	
2 Trevega	Ap. 48343953		TA 214 Castle Hewes, 218 Castle Lewes
3 Amalwhidden	Ap. 48823690		Hr. and Lower Carvednack in 1822 (Praed Estate map at R.I.C.)
4 Embla	47483706	Yes ?	? Round or barrow ? see barrow no. 4
Huts			
1 Higher Bussow	49653875	Yes	Hend. I.96, 98
2 Amalveor	Ap. 47933757		Arch. J. 98 (1942) 113

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Round Fields			
1 Churchtown	48303857		TA 69 Round Croft
2 Brega	49003810		TA 124 Round Field
3 Churchtown	48573838		TA 24 Round Field
4 Churchtown	48653790		TA 10-1 Round Field
5 Lady Downs	47453621		TA 1470 Round Field
6 Woon Smith	47943612		TA 1403a Round Field
7 Chytodden	49403838		TA 596 Round Field
8 Bussov Vean	49933885		TA 469 Round Field
9 Trevega	48503995		TA 256 Round Furrywidden
10 Embla	48183656		TA 1368 Round Meadow
11 Trevega	48004045		TA 314 Round Park Horn
Fields and Terraces			
1 Bussov	49653875	Yes	
2 Amalveor	479377	Yes	
3 Amalveor	47933757	Yes	Arch. J. 98 (1942) 113
Medieval and later			
1 Bussov Vean, culverhouse	49853874	Yes	Arch. J. 120 (1873) 332, Pl. 337; Hend. I.95-6; OC. II.3.38
2 Amalbrea, prison			Gilbert, P. H. IV.54
3 Brega, ? chapel ?	Ap. 48663877		TA 172 Chapel Croft
4 Amalveor, strip fields	47743790	Yes	
5 Rosewall, ? mining enclosure ?	49303910	Yes	
6 Nancledra, corn mill	49603600	Yes	Hend. Topog. I. 21
7 Chypons, stamping mill	49513635	Yes	Hend. Topog. I.21
PROVENANCE	PRESENT LOCALITY		REFERENCES
Crosses			
1 Trevega	Zennor churchyard, ? base at ap. 48503986 ?		Langdon 105; OC V.10.408; DCNQ xxix pt. IV (1963) 98
2 Coldharbour	Churchyard		Langdon 118; JRIC III (NS) 4.449
3 Chylason			TA 855-6 Park Chegrouse
4 Churchtown			TA 5 Cross Field
5 Bishop's Head and Foot	? shaft ? removed c. 1966		= Gulval no. 9, Zennor no. 19
PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
Miscellaneous Finds and Sites			
1 Amalveor	Gold hoard	B.M.	H. 287, 309; Hawkes, in Man (1932) no. 222; PWCFC II.2 (1958) 29; SWE 101,239, Pl. 51
2 Trevega	Holed stone	48143972	Hend. I.98, Pls. 97, 111

PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
3 Amalbrea	Cupped pebble	Miss Russell	Axes IV.256 (704)
4 Bussow	Axe	Truro	Axes IV.224,257 (755)
5 ?	30 Roman coins		Gilbert, H. S. II.718; Matthews 22
6 "Giant's Rock"	80 Roman coins		Borlase Ant. 300n
7 Church	Cross slab	Church porch	H. 281; C.W.C. 150; CA 5 (1966) 87
8 Near Church	Altar slab	Church	Hend. I.95
9 Amalveor	Quern and other worked stones	Amalveor farm	
10 Amalveor	Urn		Drawing at R.I.C. (Rogers file)
11 Bussow	Flint axe	Truro	
12 ?	2 saddle querns	Morvah churchyard	Hirst, Notes
13 Bussow	Querns	formerly at Bussow Veon farm	Hend. I.96, 98

**ADDITIONS TO PREVIOUS LISTS:
PARISH OF ST. BURYAN (PWFCF II. 4: CA 1 (1962), 112)**

VIVIEN RUSSELL

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Barrows			
23 Boscawen-un	Ap. 41212735		Borlase Ant. 209n, 233n, Pl. 198
Barrow no. 17 Boscawen-un—grid reference should read 41052757.			
Cists			
4 Trelew	42322720	Yes ?	
Cist no. 2 Tregiffian—add grid reference Ap. 43432412.			
Stone Circles			
5 Boscawen-ros			Borlase Par. Mem. 21, 81
Stone Circles no. 3 Tregurnow and no. 4 Boleigh are probably the same circle.			
Rounds			
16 Selena	39462482	Yes	
17 Alsia			Park an Castell in 1640 (Hend. Topog. I.134); ? = no. 16?
Round no. 4 Tregiffian—add Demolished 1965-7.			
Fields and Terraces			
6 Banns	39722640	Yes	
7 Boscawen-un	42032785	Yes	
Medieval and later			
12 Tresidder, mill	38822424	Yes	Hend. Topog. I.20
13 Trewoofe, mill	44152534	Yes	Hend. Topog. I.20
14 Bosfrankan, mill	38492435	Yes	Hend. Topog. I.20
15 Nantewas, corn mill			Hend. Topog. I.20
16 Trevorrian, grist mill			Hend. Topog. I.20

PLACE	GRID REF.	ANY		REFERENCES
		REMAINS	EXTANT	
17 Trevorrian, fulling mill				Hend. Topog. I.20; Essays 205
18 Vellansaga, corn mill				Hend. Topog. I.20
19 Vellansaga, fulling mill				Hend. Topog. I.20
20 Vellyndruchia, fulling mill	Ap. 42352635			Hend. Topog. I.20
21 Tremborhick, mill	42232640			Hend. Topog. I.20
22 Lr. Alsia, mill	39502519	Yes		Hend. Topog. I.20
23 Crean, mill	39262465			Hend. Topog. I.20
24 Rissick, corn mill	Ap. 39122665			Hend. Topog. I.20; TA 2254 Mill Meadow, 2280 Mill Pool Field
25 Bosehan, mills	Ap. 40062298			TA 475 Mills
26 Trelew, mill	Ap. 42102666			TA 1809 Mill Field
27 Pendrea, ? windmill ?	Ap. 40322502			TA 803 Mill Field
28 Lr. Treave ? windmill ?	Ap. 38282706			TA 2336 Mill Field
29 Selena, ? windmill ?	Ap. 39942368			TA 423 Velin Vork
30 Leah, fulling mill				Essays 208n.
Crosses				
27 Trelew				OS. 73 S.E. (1906 edn.) at 42102666
28 Croupale				Named in parish in 1515 (Hend. Topog. I.130)

PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
Miscellaneous Finds			
37 Treverven	Spindlewhorl	Penzance	A. Cwll II. Pl. 29
38 Boscawen-ros	16th century spoon		Proc. Soc. Ant. XIX. 27
39 ?	Seal		JRIC VIII, 71-2
40 Trevedran	Cupped pebble	Truro	Axes IV.258 (802)
41 Tredinney	Pestle or pebble	(C. B. Crofts)	Axes IV.260 (912)
42 ?	Greenstone ball	„	Axes IV.260 (913)
43 ?	Flint and chert implements	Truro	PWCFC II.2.17
44 Boleigh	Urns		A.N. Cwll 152
45 ?	Urn	Penzance ?	PZ 1883-4, 310
46 ?	Cupped pebble	St. Buryan Museum	JRIC (NS) IV.4, 448-9
47 Bosliven	Flints	Truro	
48 Downs Barn	„	„	
49 Tresidder	„	„	
50 Boscawen-un	„	„	
51 Pridden	„	„	
52 Crean	„	„	
53 Penberth	„	„	
54 Bosfrankan	„	„	
55 Boskennal	Holed stone	41452550	

Find no. 29 Boleigh—add grid reference 43652489.

(Some worked stones at Lower Leah have been brought there from other parishes.)

PARISH OF SANCREED (CA 1 (1962), 109)

VIVIEN RUSSELL

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Barrows			
38 Grumbla	Ap. 40452957		Misc. 44(7)
39 Goldherring	41032805	Yes	
40 Lr. Tregerras	41193280	Yes	
41 Beacon			G.M., May 1844, 485
Barrow no. 22 Tregerras—add grid reference	41003262	Yes	
Rounds			
9 Brane	40752876	Yes	Misc. 44(7); 6" OS (1877 edn.) 73 N.E.
10 Goldherring	41122821	Yes	as Hut no. 2
11 Chygwidden	41543103	Yes	as Hut no. 7
12 Tregerras	40803276	Yes	
13 Tregonebris			Park in Gare c. 1640 (Hend. Topog. I.144)
14 Boswens			Park an Kilgar 1646 (Hend. Topog. I.144)
Huts			
18 Goldherring			Proc. Soc. Ant. (1866) III.302-3
19 Boslow	39683272	Yes	
20 Brane	Ap. 40752876		Misc. 44(7)
21 Lr. Tregerras	41213254	Yes ?	
Fields and Terraces			
8 Goldherring	41102814	Yes	as Hut no. 2
9 Brane	40122880	Yes	
10 Hr. Bodinnar	41383240	Yes	
11 Boslow	39633274	Yes	
Medieval and later			
7 ?, 17th cent: kiln			R.I.C. catalogue
8 Drift, mill	43862868		Hend. Topog. I.21
9 Little Sellan, crasing mill	43243027		Hend. Topog., I.21; TA 1224 Mill
10 Receven, mill	41743176		Hend. Topog. I.21 (2 refs.); TA 1703 Mill Field
11 Nanquitho, corn mill	Ap. 43352948		Hend. Topog. I.21
12 Nanquitho, stamping mill	Ap. 43352948		Hend. Topog. I.21
13 Trannack, mill	41803005		Hend. Topog., I.21
14 Roskennals, mill	43073105		Hend. Topog. I.21; TA 1297 Mill
15 Treganhoe, mill	42892970		TA 382 Mill
16 Brane, mill	Ap. 40242809		TA 655-7 Hall Vellan, 660 Mill Field; ? Hend. Topog. I.143?
PROVENANCE	PRESENT LOCALITY		REFERENCES
Crosses			
18 Receven			Park an Growse in c. 1640 (Hend. Topog. I.144)
19 Tregerras			Gwelcrose in c. 1640 (Hend. Topog. I.144)

PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
Miscellaneous Finds			
17 Goldherring	Jews' house tin		TRGSC VI.44-5; Cornishman Sept. 3, 1885
18 Brane	Axe (roughout)	Miss Dudley	Axes IV.214, 256 (713)
19 Trannack	Axe	Truro	Axes IV.257 (757)
20 Leah	Spear-heads etc.		Ex. Dis.
21 Hr. Bodinnar	Worked stones	At farm	Hirst, Notes
22 Lr. Tregerras	Quern	At farm	Hirst, Notes
23 Drift	3 cup-marked stones		Mines IV.8
24 Drift	Mill stone		Mines IV.8
25 ?	Roman coin		N.C. 172; V.C.H.R. 12
26 Drift	Holed stone with carved sinking	Lr. Leah in St. Buryan	
27 Sellan	Urn		A.N. Cwll. 146
28 Chapel Uny	2 spindle-whorls		Proc. Soc. Ant. (1868-70) IV.164

PARISH OF MADRON (CA 3 (1964), 90)

VIVIEN RUSSELL

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Barrows			
28 Carthew/Trewern	42713146		Praed, Estate map of Trembethow 1803 (at R.I.C.)
29 Boswarva	42943295	Yes	
30 Tregavara			Bethkile in 1334, Bethkele in 1388 (Hend. Topog. I.152)
Rounds			
11 Polmennor			Castle Down in 1560 (Hend. Topog. I.153)
12 Crankan	Ap. 46573204		Name Crankan; field name Carvodgew in 1810 (Hend. Topog. I.157)
13 Gt. Bosullow	Ap.41473349		TA 106 Park an Danes
14 Alverton			Kerigou Alwern in 1351 (Hend. Topog. I.154)
15 Carnegoes			Name Carnegoes; Kerigou in 1350 (Hend. Topog. I.152)
16 Rosecadghill			Borlase Ant. 346n; Roscaswal in 1316 etc. (Hend. Topog. I.153)
Huts			
25 Gt. Bosullow	Ap. 40843417		Blight, plan at Soc. Ant. London, Borlase portfolio
26 Kerrow			G.M., June 1865, 756
Fields and Terraces			
8 Bosullow	40873422	Yes	
9 Boswarva	429330	Yes	
10 Lanyon	425336	Yes	
11 Lanyon	431343	Yes	
12 Kerrow	41443465	Yes	

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Medieval and later			
19	Laregan, tucking mill	46662952	Rutger, Survey of Penzance 1831 (at R.I.C.)
20	Trembath, mill	45052900	Hend. Topog. I.21
21	Tolcarne, mill	46202910	Hend. Topog. I.21
22	Tolcarne, mill	46222905	Hend. Topog. I.21
23	Treneere, mill	46723150	Hend. Topog. I.21
24	Carthew, mill	42553172	Hend. Topog. I.21
25	Mulfra, mill	45753410	Yes Hend. Topog. I.21
26	Lescudjack, mill		Hend. Topog. I.21
27	Netcuran, mill		Hend. Topog. I.21
28	Vellyndruchia, tucking mill		Hend. Topog. I.21
29	Polteggan, mill	Ap. 44983096	Hend. Topog. I.21
30	Nancothan, mill	44332926	Hend. Topog. I.21
31	Lanyon, mill	41983409	Yes Hend. Topog. I.21
32	Alverton, mill	Ap. 46203017	TA 2141-2 Mill Pool
Crosses			
20	Lanyon		Crauft an Grouse in Survey of 1670 (at CRO)

PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES	
Miscellaneous Finds				
25	Tremethick	Tin ingot	Truro	JRIC IV.251; CA 5.33
26	Bosullow	Holed stone		Ex. Dis. 3
27	?	Bronze ring	Truro	JRIC V.202
28	?	Urn		R.I.C. catalogue
29	Kerrow	Cupped stone		G.M., June, 1865, 756

HUNDRED OF POWDER 6: PARISH OF ST. MICHAEL CARHAYS (815 acs.)

PETER SHEPPARD

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES	
Barrows				
1	Polgrain	95914278	Yes	TA 33 Great Burrow Close: Hend. V. 370; Air photo
2	Polgrain	95954289	Yes	As above
3	Polgrain	96104281	Yes	As above
4	Polgrain	96134270		As above
5	Polgrain	App. 960426		TA 32 Burrow Close Meadow
6	Polgrain	96114265	Yes ?	TA 31 Little Burrow Close (Concentration of white stones)
Round ?				
1	Old Park	96754231	Yes	Air photo

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Lan			
1 Churchyard	96394218	?	Lanvyhaill 1473 Gover 414; Hend. Topog. III.41; Essays 190.200
Chapels			
1 Carhays Castle	97084159?		Borlase Par. Mem. 146; Essays 188.191; JRIC(NS) II.74; Pen HS II.95; Gilbert H S 845-6; Lake III.342
2 Carhays	App. 960418		'Old chappell or church house' JRIC(NS) II.75; H & D II.481; Pen H S II.96
Medieval and later			
1 Original Carhays Mansion	96824205	Yes?	Norden 54; Tonkin PH II.339; JRIC (NS) II.75; Essays 185.188; Air photo; (Levelled rectangle. Identity not positive).
2 Deer Park	96794229 96734255 96934270	Yes	Essays 162.185.188; TA 115 Old Park; O.S. Old Park Wood; (Extensive remains)
3 Carhays Mill	97294155		TA 72; Essays 187
4 Tolcarne Mill	96114321	Yes	(1750 Tucking Mill); Essays 187.190.207; Hend. V.370; RCG 11.4.1851; TA 64; Trevanion S.C.
5 Pound	96904133	Yes	TA 94 Pound Piece; Willimott Diary 14 (at Carhays)
6 Lime Kiln	97324139	?	TA Map; RCG 27.4.1822
7 Lime Kiln	96044122	Yes	Trevanion S.C.
8 Coast Guard Hut	96884125	Yes	TA Map

PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
Miscellaneous Finds			
1 Grid Ref. 96944263	App. 2,500 coins Third brass	Cardiff Truro Penzance	O.S. Roman coin hoard; Arch. J. 28, 142, 208; Numismatic Chronicle XX.209; WB 25.11.1869; Lake III.343; JRIC III. pp.xxi, xxix; JRIC V.201; JRIC X.246, pl. Y; JRIC XV, 57; V.C.H.R. Fig. 8, p. 12, 33
	Tin jug	Carhays Castle	J. Brit. Arch. Assoc. 32, p. 521; Cardiff Nat. Soc. XI.45; Geology around Mevagissey G.S. 1907 p. 61; SWE 156; Cat. Notes x256/7 CRO;
2 Porthluney	Spanish cannon (Armada?)		Hawk. V.R.41

HUNDRED OF POWDER

7: PARISH OF CUBY, WITH TREGONEY ST. JAMES (2340 acs.)

PETER SHEPPARD

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Camps			
1 Rosevallon	94364353		Carbons 1688 Hend. Topog. III.64; Essays 120; TA 581.582.590 Carbers
2 Carveth	App. 936459		Caervegh 1334 Hend. Topog. III.64; Gover 443; Essays 120
3 Pittsdown	96494636	Yes	Air photo crop mark; Adjoins Creed TA 609 Castle Moor
Fogou			
1 Tregoney	92354472?		Notes x256/7 CRO; RCG 29.8.1862
Linear Earthwork			
1 Tregonhayne	933451	Yes?	TA 338.339 Fose Meadow; ? Fosgall DCNQ XXIX, 27
Medieval			
1 Priory	92314482		JRIC (NS) II.136-7. III.450-2; Map x256/7 CRO; Essays 21; Hend. III.245-6; H & D II.198-9; Cathedral II.51; Gilbert P H I.300; Lake I.281; OC VI.305-6
2 Church of St. James	92214487		O.S. Church (Site of); TA 108 St. James' Park; Hend. III.248.258-61; JRIC (NS) III.450-5; H & D II.197; Gilbert P H I.299. IV.289; Cathedral II.48; Lake I.279; Mines XIII.46; OC VI.306; Hawk. V.R.34; (Remains built into porch of St. Cuby Church?)
3 Chapel of St. Anne	92674485		Hend. MSS.(14) 109.117. (10) 110; JRIC (NS) III.455; Hend. III.247-8; H & D II.198; Cathedral II.50-1; Gilbert P H IV.289; Lake I.283; OC I. Vol. 2. p. 18. VI. 308
4 Holy Well, St. Cuby	92824500	Yes	JRIC (NS) II.137; Hend. MSS (14) 109.113; Hend. III.257; Hend. Topog. III.69; RRIC 1846 p.28; TA 10 Well Meadow
5 Moor Cross	App. 922448		Notes x256/7 CRO
6 Cross site?	94194415		TA 486.513 Cross close
7 Tregoney Castle	92294475	Yes?	TA Map; O.S. Castle (Site of); Plan x256/7 CRO; Norden; Borlase N.B. 219; Tonkin P H I.256; Gilbert H S 856-7; Cathedral II.48; Gilbert P H I.296. IV. 289; H & D II.197; RRIC 1848 pp. 22-3. Pl. xviii; Thomas 43; RCG 8.8.1862; Essays 21; JRIC (NS) III.450.455; Hend. III.245-6,250
8 Tregoney Bridge	92124477		Tonkin P H I.258; CBS 85-9; Essays 20-1; JRIC IX.165. (NS) III.453-4; Hend. Topog. III.69; OC VI.309; Hawk. V.R.6
9 Reskivers Bridge	92694456	Yes	On ancient pack road. Single large stone. Very worn.

PLACE	GRID REF.	ANY		REFERENCES
		REMAINS	EXTANT	
10 Quay	92124475			Cathedral II.49; H & D II.199; Essays 21; OC VI.304; Hawk. V.R.5
11 Tregoney Manor Pound	92554523	Yes		Treg. Map 1787 (DDJ641) CRO; JRIC (NS) III.456 (as first ref?); OC VI.308
12 Pound	94314339			Poundgate 1748 Gover; Martyn; O.S. 1813
Fields				
1 Tregoney	924452 to 928454	Yes		Burgage strips. O.S. & other maps.
2 Bohago	App. 940468			'12 acres in sticheis' Hend. V.356
Mills				
1 Tregoney	92284514	Yes?		TA 462 Tregoney Mill; Treg. Map 1787 (DDJ641) CRO; JRIC (NS) III.452; Hend. III.259. V.350-3
2 Tregoney	App. as above			As above
3 Tregoney	App. as above			As above
4 Tregoney	App. 922448			'Fulling Mill Meadow' 1787 Treg. Map (DDJ641) CRO
5 Tregoney	92834439			TA 471 Mill pond. 472 Mill hill; cf. Thomas Survey & Veryan TA map
6 Treluckey	94974350	Yes		O.S. 1813; TA 570; RCG 11.4.1851
Post-medieval				
1 Polglaze	94844378	Yes		Abandoned settlement; O.S. 1813; Thomas Survey; Air photo
2 Tregoney	92354482	Yes		Alms Houses; Treg. Map 1787 CRO; C.P.R.E. 70; Notes x256/7 CRO; Hend. III.249; OC VI.309; Gilbert H S 857; Hawk. V.R.26
3 Tregoney	92284477	Yes		Poor houses; Notes x256/7 CRO
4 Tregoney	92334481	Yes		Prison; Treg. Map 1787 CRO; Notes x256/7 CRO
5 Tregoney	92524494	Yes		Clock Tower; OC VI.308
PROVENANCE	OBJECT	PRESENT LOCALITY		REFERENCES
Miscellaneous				
1 Tregoney	Inscribed stone. 6th cent.	St. Cuby Church		Arch. Camb. 84 p.179; Lake I.281; V.C.H.411.416; JRIC II.47; Hencken 243; Hend. III.256; SWE 159; Hawk. V.R.18
2 Tregoney	Medieval stonework	Methodist Chapel		Built into wall; NGR 92594500

HUNDRED OF POWDER

8: PARISH OF CREED, WITH GRAMPOUND (2864 acs.)

PETER SHEPPARD

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Barrows			
1 Penbetha	App. 945484 -949500		1280 Penbethou. Gover 440
2 Nancor (Crego)	App. 948483		1284 Nanscorf. Gover 442; 1511 Crugow Nancorba, Hend. Topog. III.62; Gilbert P H I.297
3 Trenchree	96244833		1286 Trenchreekybyhan, Gover; V.C.H.374; Tonkin P H I.239; H & D II.186; Gilbert P H I.254; Lake I.258; Local information
4 Polglaze	App. 964499		1302 Crucglas. Gover; TA Crugglaze; Hend. MSS. (14) 42
5 Manheirs	94074767	Yes	
Long Stone			
1 Manheirs	App. 939477		1302 Maynhir. Gover
Camps			
1 Carwinnick	95654840?		1334 Carveynek. Gover; Hend. V.450; Essays 119; TA 74. 77 Stoney Close
2 Penchoose	96504636	Yes	TA 611 Round. 544 Parkenberry; O.S. Castle; Thomas 44; RRIC 1848 p.21; V.C.H. 464; JRIC X.245; Air photo; (Ploughed but visible)
3 Tybesta	94454915	Yes	1566 Carveor, Gover 59; TA 269.270 Carveor. 274 Castle Field; O.S. Camp; Tonkin H.155; Borlase Par. Mem. 176; Thomas 44; RRIC 1848 p. 19; V.C.H. 464; Hend. V.450; OC VI.389
4 Garlenick	93965000		1430 Ponskeyre. Gover; Hend. Topog. III.59; O.S. 1813 Burgh Gear; TA 321 Park Gear; RRIC 1848 p. 21; Essays 119-20; Local information; (Rectangular)
Chapels			
1 St. Naunter	93854978		TA 22 St. Nounter; O.S. St. Nun's Chapel (Site of); Tonkin H.157; Borlase Par. Mem. 176; Tonkin P H I.241; Gilbert P H I.257; Hend. V.449; Lake I.258; JRIC (NS) II.123. 125; OC VI.388: WMN 1.4.1929
2 St. Mary	92594831		TA 221 Site of ancient chapel; Borlase Par. Mem. 176; MSS.1795 Tour (AD43) CRO; Grampond Survey 1831 CRO; Lake II.112; JRIC (NS) II.124-5; OC VI.388; (Remains built into Veryan vicarage lodge.) Hawk. V.R.19; Engraving by S. Prout.
Holy Well			
1 St. Naunter	App. 938497?		TA 102a Ladywell Hill; Tonkin H.157; Tonkin P H I.241; Lake I.258; JRIC (NS) II.123.125

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Lazar House			
1 Grampound	?		JRIC (NS) II.126. V.84
Crosses			
1 Trevillick	93874884	Yes	Base only; O.S. Stone (Site of); TA 49. 531 Cross Close; JRIC (NS) II.126; Baird; OC VI.388: WMN 1.4.1929
2 Creed Hill	93504788	Yes	Base only; O.S. Stone (Remains of); Hend. V.466; OC VI.388: WMN 1.4.1929
3 Fair Cross	95604735	Yes	Head missing; O.S. Stone (Remains of); TA 619.620 Fair Cross; Baird; JRIC (NS) II.126; Hend. V.466; OC VI.388:WMN 1.4.1929
4 Grampound	93594830	Yes	Head missing; Grampound Survey 1831 CRO; X.E.63; Lake II.112; JRIC (NS) II.126; WMN 1.4.1929 Baird; OC VI.388
5 Grampound	As above	Yes	Base only; JRIC (NS) II.126; Baird; ? MSS 1795 Tour (AD43) CRO
6 Nancor	94394840	Yes	Only Head original. Found 100 yds south; TA 282-3 Cross Close; Baird; Essays 196; Hend. Topog. III.59-60; Langdon/Hend. WMN 1.4.29
7 Bossillian	94244788	Yes	Base only; JRIC (NS) II.126; OC VI.388 (TA 183-4 Tregenza); Baird: WNM 1.4.1929
Medieval and later			
1 Tybesta	94734867	Yes?	Abandoned settlement, Levelled site. Stoney; RRIC 1848 Pl. XVII; Essays 116; Hend. Topog. III.58; JRIC (NS) II.121
2 Penbetha	94814843	Yes	Abandoned settlement; 1280 Penbethou. Gover 440; O.S. 1813
3 Grampound	93304839		Bridge; 1296 'Ponsmur', Gover; Borlase N.B.265; Lake II.112-3; CBS 12.85; OC VI.390
4 Grampound	93484861	Yes	Borough Poor House; TA 241
5 Polglaze	96554982	Yes	Church Poor House; TA 359-63
6 Grampound	93604831	Yes	Clink; Church Records; Local information; (Rear part of Town Hall)
7 Grampound	93604830	Yes	Town Hall. TA 220a; MSS Tour 1795 (AD43) CRO
8 Grampound	93374825	Yes?	Pounds; Grampound Survey 1831 CRO
Fields			
1 Grampound	935486 to 942486	Yes	(Burgage Strips) TA 85a Stiches; Hend. Topog. III.58, 62: Air photo
2 Polglaze	965499	Yes	(Small Strips) TA Map
Mills			
1 Nanclasen	93254767?		1400 Hend. Topog. III.59; Leat marked TA Map
2 Mays Mill	97084653	Yes	1338 Melynclap, Gover; TA 502 Melon Wat; O.S.1813; (Also known as Baileys 1759, Gover)
3 Grampound	93494875	Yes	TA 25a; ? OC I.2. p.23
4 Tybesta	App. 949491?		(Fulling Mill) Hend. Topog. III.62; Essays 207
Industrial			
1 Bossillian	93954802- 93984810	Yes	Copper Mine; WB 29.6.1838, 14.1.1848, and 21.1.1848; Mines XIII.48

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
2 Grampound	93624823	Yes	Tannery; Grampound Survey 1831 CRO; Lake II.114; New Cornwall 10(1962) 3; Cornish Guardian 13.4.1967 (In use)
3 Grampound	93484878		Woollen Factory; TA 18a Factory Moor; Lake II.114
4 Grampound	93494837	Yes	Glove Factory; Local information
5 Trevillick	93874921	Yes	Cider Press with accessories.

PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
Miscellaneous Finds			
1 Trencreek (As Barrow 3)	Urn		H & D II.186; V.C.H. 374; Local information
2 Tregonjohn	Medieval stonework	93834713 93904713	Large decorated door jamb alongside farm track. Lintel used as rubbing stone.

HUNDRED OF KERRIER 8: PARISH OF ST. KEVERNE (10299 acs.)

EDITH DOWSON

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Flint-working Sites			
1 Crousa Downs	76251934		N.C. 279 f.n.; JRIC (1866) 123; PZ (1890/91) 252; LIZ (1955) 10; MNB 15
2 Trebarveth	79721962		MNB 154; LIZ III.4.(1968)
Barrows			
1 Goonhilly Downs	73372155	Yes	Thomas 35 ('diam. 50 ft.');
2 Goonhilly Downs	73492162	Yes	= St. Martin No. 4 OS; Thomas 35 ('diam. 65 ft.');
3 Goonhilly Downs	73602138	Yes	Hend. IV.44; = St. Martin No. 5
4 Goonhilly Downs	73702135	?	OS; Thomas 35 ('diam. 70 ft.');
5 Goonhilly Downs	73792127	Yes	Hend. IV.44
6 Goonhilly Downs	73782109	Yes	OS; Thomas 35 ('diam. 85 ft.');
7 Traboe	73962092		Hend. IV.44 TA 3414-15 Lr, Hr, Burrow Field; Thomas 35 ('diam. 80 ft.');
8 Rosuick	74492077	Yes	MNB 71
9 Rosuick Common	73702009	Yes	Thomas 35 ('diam. 55 ft.')
10 Goonhilly Downs	74211996	Yes	OS; Thomas 35 ('diam. 80 ft.')
11 Goonhilly Downs	73991967	Yes	OS; Thomas 35 ('diam. 85 ft.')
12 Goonhilly Downs	74061957	Yes	OS
13 Goonhilly Downs?	73481950	Yes	OS
14 Goonhilly Downs	73431935	Yes	Fieldwork
15 Goonhilly Downs	73411928		OS
16 Goonhilly Downs	73821846	Yes	OS 'Tumulus, site of'
17 Goonhilly Downs	73841847	Yes	OS; Thomas 35; = Grade-Ruan No. 11

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
18 Crousa Downs 'The Three Brothers of Grugath'	76171980	Yes	N.C. 278; Lukis 10, Pl. 23; JRIC X (1891) Pl. P; Hend. IV. 36; Hencken 77, 320
19 Crousa Downs?	App. 763195	?	Hend. IV. 32
20 St. Keverne Beacon	77361988	Yes?	OS 'tumulus'; Hend. IV.33; 1939-45 damage
21 St. Keverne Beacon	77381985		Hend. IV.33; Destroyed 1939-45 war
22 Cowyjack ?	77801968	Yes	Hend. IV.40; MNB 64; ? = Hut No. 6
23 Cowyjack ?	77661967	Yes?	Hend. IV.40; ? = Hut No. 7
24 Little Kistles	77441960	Yes	OS 'tumulus'; Hend. IV.33
25 Hr. Polcoverack	76801901	Yes	OS 'tumulus'; Thomas 35 ('diam. 65 ft.');
26 Hr. Polcoverack	76791887	?	partly destroyed
27 Black Head ?	? 777172?		OS 'tumulus, site of'
28 Arrowan Common	75381764	Yes	Hend. MSS.XVII.19. 'Crukeheir' named in 1444, nr. Porthbean and Pednavounder
29 Gwenter	74871789		OS 'tumulus'; Thomas 35 ('diam. 65 ft.')
30 Carnpessack	74721766	Yes	Thomas 35 ('diam. 40 ft.');
31 Trevenwith	746169		ploughed down circa 1916
32 Kilter	78191942		OS 'tumulus'; TA 2776 Burrow Croft;
33 Trythance	79802057		Thomas 35 ('diam. 85 ft.')
34 Trythance	79692085		Resk. 1812, 'Burrow Downs'
35 Trembrase	783216		TA 1682 Park an Creague
36 Penare ?	79752475		TA 1406-7 Lr., Hr. Grumbler
37 Dean Quarry	805207		TA 1188, 1191 The Creague
38 Kestle Merris ?	77011957		TA 438-9, Greater, Lesser Park Kruge
			TA 667 Caernmeers
			Barrow or cist? Provenance of Misc. Find No. 2
			Hend. IV.33 (Site correctly known as 'Split Rocks')
Cemetery			
1 Trelan Bahow	74901955		JRIC IV (1873) 266; Hend. IV.30; Hencken 117, Fig. 33, 120; PWCFC II.2 (1958) 58; PWCFC II.3 (1959) 126; SWE 113, 242, Pl. 76; CBA 7.76, Fig. 1; CA 6 (1967) 7
Menhirs			
1 Tremenheere	77772103	Yes	N.C. 277; Thomas 35 ('a high stone set up');
2 Crousa Common	77532008	Yes	Hend. IV.35
3	77532007	Yes	Hend. IV.35; MNB 17
4 Trelanvean	75751993		Hend. IV.35. Prostrate
5 Dean Point ?	805202		TA 3157 Longstone
			Local inf. 'Man of the Dean' quarried away
Cliff Castles			
1 Dean Point	80602043		PWCFC II.3 (1959) 119; Hend. IV.47
2 Dolor Point ?	78451815		PWCFC II.3 (1959) 119
3 Chynalls	78601745	Yes	Thomas 35 ('a promontory entrench. abt 4 acres');
4 Lankidden	75571652	Yes	PWCFC II.3 (1959) 119
5 Black Head ?	774162		Thomas 35 ('promontory entrench. abt 3 acres');
			PWCFC II.3 (1959) 119
			Coast name 'Dynas Cove'
Rounds, Fortified Areas			
1 Roskorwell	795238		RCPS 98 (1931) 75, fieldname 'Park an Gear' in 1810

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
2 Halwin	78902307	Yes	TA 591 The Round; Thomas 35 ('circa entrench. abt. 1 acre'); Hend. IV.21
3 Tregarne	78072285		TA 591 Park Hear, locally corrected to 'Park Gear'
4 Tregarne	78802283		TA 531 Carthew
5 Tregaminion	795224 app.		RCPS 99 (1932) 190, 'Crenhoc, nr. Tregaminion' named in 1260
6 Rosenithon	80262113		TA 1090 Hr. Kestles, 1907 Lr. Kestles
7 Roscarnon	77732154		TA 1819 Kestlemenack; RCPS 98 (1931) 74
8 Anhay	75602155	Yes	TA 3611 The Gear; Thomas 35 ('traces of circ. entrench. abt ½ acre'); Hend. IV.24
9 Kestle Merris	76831954		RCPS 98 (1931) 64
10 Carnsullan	78051865		'Kaersulek' in 1285
11 Trewillis	77801718		TA 2421, 2423 Curgear
12 Priscan	768173 app.		RCPS 98 (1931) 73, fieldname 'Carworgy'
13 Carnpessack	74501756		'Karpesek' in 1230
14 Trevenwith	74521695		TA 2891 Lit. Castle Close, 2897 Gt. Castle Close

Fogous

1 Rosuick ?	74732105		TA 3332 Kevuggan
2 Trevalso ?	79122015		TA 1528 Vorgo
3 Arrowan ?	75551725		TA 2818 Vogo
4 Polkernogo ?	75922205		Hencken 300

Huts

1 Trelanvean Moor	75202005	Yes	MNB 68
2 Trelanvean Moor	75232015		MNB 68; Robbed of stones <i>circa</i> 1964
3 Trelanvean Moor	75242024	?	MNB 68
4 Crousa Downs	76161928	Yes	
5 Kestle Merris	76721930	Yes	
6 Cowyjack	77801968	Yes	MNB 64
7 Cowyjack ?	77661967	Yes	
8 Cowyjack	77451920	Yes	MNB 65
9 Cowyjack	77431918	Yes	MNB 65
10 Cowyjack	77391916	Yes	MNB 65
11 Polcoverack	77361887	Yes	
12 Polcoverack	77391883	Yes	
13 Polcoverack	77411882	Yes	
14 Polcoverack	77401877	Yes	
15 Polcoverack ?	775187	?	Inf. C. E. Bean Esq.
16 Trebarveth	79631987	Yes	(T.1.). MNB 149; LIZ III.4 (1968)
17 Trebarveth	79681970	Yes	(T.2.). MNB 151; LIZ III.4 (1968)
18 Trebarveth	79601931	Yes	(T.3.). MNB 153; LIZ III.4 (1968)
19 Trebarveth	79152020		Inf. J. A. Pengilly Esq.; LIZ III.4 (1968)
20 Lowland Point	79931958		LIZ III.4 (1968)
21 Godrevy	804210		RCPS 98 (1931) 61
22 Poldowrian	74761696	Yes	} Inf. P. S. Hadley Esq.
23 Poldowrian	74691690	Yes	
24 Goonhilly	733194		Hend. IV.45
25 Goonhilly	73451943	Yes	Hut ?

Linear Earthworks

1 Lesneage	76402245	Yes	= Manaccan No. 2; TA 3825 The Deadman's Croft; Hend. IV.23
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PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
Unclassified Earthworks			
1 Trelan	73101942	Yes	Sub-rectangular; OS 'Earthwork'; Hend. IV.45
2 Goonhilly Downs	73551913	Yes	OS 'Earthwork'; Hend. IV.45
3 Goonhilly Downs	73321883	Yes	OS
'Turf Huts'			
1 Trelan	73341951	Yes	OS
Kiln			
1 Trebarveth	79601931		MNB 153; LIZ III.4 (1968)
Round Fields, Ring Fields			
1 Polkerth	73842137		TA 3423 The Round
2 Trewoon	75712276	Yes ?	TA 3516 The Ring Field; air photo ?
3 Chyreen	80502196		TA 987 The Round
4 Trenance	80452234		TA 919 Round Field
5 Kestle Merris	76731943		TA 1950 Round Field
6 Trelan	75101925		TA 2998 Round Moor
7 Treleage	78202233		TA 508 Jacob's Field, locally known as 'Round'
8 Kilter	782194		RCPS 98 (1931) 65, fieldname 'Round' in 1715; ? = barrow No. 32 ?
Fields and Terraces			
1 Trelanvean	752201	Yes	
2 Crousa Downs	761193	Yes	
3 Kestle Merris	767194	Yes	Air photo
4 Cowjack	778197	Yes	
5 Polcoverack	774189	Yes	Linking hut group 8-10 with group 11-13
6 Trebarveth	796194	Yes	LIZ III.4 (1968); air photo
7 Poldowrian	748169	Yes	Under survey by P. S. Hadley Esq.
8 Goonhilly	736190	Yes	Air photo; 10ac. enclosure linked with Unclassified Earthwork No. 2
Lans			
1 Church	79132131		RCPS 98 (1931) 53; JRIC (NS) III.2 (1958) 263
2 Laddenvean	78742136		RCPS 98 (1931) 65
3 Lanarth	76772116		RCPS 98 (1931) 65; ? Chapel site No. 6 ?
Chapels			
1 Lestowder St. John	79002427		Borlase Par. Mem. 194; Lysons 161; RCPS 98 (1931) 68; JRIC (NS) III.2 (1958) 274; TA 4105 Hospital
2 Tregowris St. James	77242242		TA 3898 Chapel Close; Lysons 161; Hend. IV.23; JRIC (NS) III.2 (1958) 270
3 Trelease	76552104		TA 3729 Chapel Close; Lysons 161; RCPS 99 (1932) 15; JRIC (NS) III.2 (1958) 273
4 Traboe	74312143		TA 3449, 3451 Gt. and Lit. Chapel Close Hend. IV.43; RCPS 99 (1932) 186; JRIC (NS) III.2 (1958) 273
5 Chynalls	78201780		Lysons 161; JRIC (NS) III.2 (1958) 273
6 Gwenter	74231791		TA 2946, 2947, 2952 (Gwenter) 2939, 2943 (Carnpessack) Park Chapel; Lanhydrock Atlas 'Park an Chapple'; Lysons 161; Hend. MSS. XVII.190; RCPS 98 (1931) 63; JRIC (NS) III.2 (1958) 273

PLACE	GRID REF.	ANY		REFERENCES
		REMAINS	EXTANT	
7 Nambol	77282140			Lysons 161; Lake III.348
Crosses and Cross Sites				
1 Trelanvean	75141957	Yes		Langdon 113; Hend. IV.31; JRIC (NS) III.2 (1958) 276; Baird
2 Church	79132131	Yes		X.W.57; Baird (part of altarpiece)
3 Parish	?	?		Found <i>circa</i> 1870 built into cottage, said to have been removed to Scorrier (notes penes E.D.)
4 Rosenithon	79802128			TA 1177 Park Grouse
5 Trevean	79682035			TA 1413 Park an Grouse
6 Treglohan	79732043			TA 1409 The Grose; = No. 5 ?
7 Treskewes	78212030			TA 1717 Park an Grouse
8 Crousa Downs ? base ?	766194			Essays 196; Hend. IV.32; JRIC (NS) III.2 (1958) 277; WMN 14.7.27
9 Zoar (base ?)	76361990			JRIC (NS) III.2 (1958) 277; Baird; (circular basin, locally called 'The Devil's Punchbowl')
10 Cowyjack	77651940			TA 2027 Park Grouse
11 Trevithian	77202080			TA 1875 Grouse Ve an
12 Trevithian	77152020			TA 1899 Croft an Crouse
13 Trevothen	77701817			TA 2343 Hr. Park Grouse, 2350 Lr. Park Grouse
14 Grugath	75702045			TA 3205 Crouslevan
15 Trelease	76102135			TA 3696-97 Hr., Lr. Crowsajack
16 Anhay	75102170			TA 3578 Park Grouse
17 Tregarne	78552272			TA 526 Homer Park Grouse
18 Trenoweth	79402195			TA 347 Crouse Harvey; RCPS 101 (1934) 18; JRIC (NS) III.2 (1958) 276
19 Traboe	74002130			TA 3417 The Cross, 3419 Cross Close
Medieval and later				
1 Holy well ?	?			'Funten Keran', p.n. in 1260; Hend. MSS. VI.262; JRIC (NS) III.2 (1958) 277
2 Tregoning Priory	78892150			Lake IV.76 (Leland); Borlase N.B.309; RCPS 99 (1932) 192; JRIC (NS) III.2 (1958) 268
3 Churchtown Sanctuary	79122130			Lake IV.76 (Leland); JRIC (NS) III.2 (1958) 265
4 Nancledgy lazar house	? 783223 ?			JRIC (NS) III.2 (1958) 274; JRIC (NS) V.1 (1965) 88
5 Trenoweth	79752205			TA 351 Lazarus Field (ref. No. 4 above, correction to JRIC (NS) V.1 (1965) 88/89)
6 Laddenvean Plain an gwarry?	788213			Hend. IV.18; Hend. I.452; RCPS 98 (1931) 70
7 Tregoning Plain-an-Gwarry?	79352135			Park-in-Plain, Plain Vean and the Ring in 1797
8 Trythance culver house	79802075			TA 223-24 Hr. and Lr. Playhouse
9 Vicarage culver house	79162127			Essays 212
10 Lowland Point casting sand pit	80351961	Yes		Hend. MSS. XVII.107
11 Downas Valley	76551665	Yes		Borlase N.H.65; Used at Hayle Foundry, inf. J. A. Pengilly Esq.
				Old copper workings; Mines XIII.20
Mills				
1 Tregidden (corn)	75422293	Yes		TA 3493 House, Mill; RCPS 98 (1931) 191

PLACE	GRID REF.	ANY REMAINS EXTANT	REFERENCES
2 Tregidden (Tucking)	755224 app.		TA 3540 Park Trutcher, 3489 Park an Wreck Essays 206; RCPS 98 (1931) 191
3 Polkernogo	756221 app.		RCPS 101 (1934) 15
4 Trelease	75932160	Yes	TA 3621 House, Mill, Gardens, etc.; Traboe Manor mill, RCPS 101 (1934) 15
5 Rosuick	756209		TA 3295, 96 Lit. and Gt. Park Vellan, 3302, 3300 Gt. and Lit. Park an Vellin; Hend. IV.28
6 Trelanvean			RCPS 98 (1931) 64
7 Mill Mehall	78032217	Yes	Manor mill of St. Michael's Mount; JRIC (NS) III.2 (1958) 270; RCPS 98 (1931) 68
8 Lesneage	779223		Tucking mill?; TA 3929 Tuck Field, TA 3930 Lower Tuck; RCPS 98 (1931) 68
9 Tregarne	78902242	Yes	TA 556; Mill and yard
10 Pengarrick	79622310		alias Porthallow mill; TA 786 House, mill and waste; demolished 1966
11 Tregoning	79322150	Yes	TA 226 Mill
12 Trenoweth	80042195		TA 299 House, Mill and Yard
13 Chyreen	804221		Windmills 39
14 Godrevy	80421082		Rosenithon Manor mill; RCPS 98 (1931) 61
15 Polcoverack	77601867	Yes	
16 Coverack	78211837	Yes	
17 Coverack	78221837		Local information
18 Coverack	78101836	Yes	Building and wheelpit
19 Downas	76201725	Yes	TA 2564a Mill, House and Croft
20 Trevenwith	73851720	Yes	TA 2923 Mill and Waste
21 Gwenter	74071790		TA 2956 Park Vellan

PROVENANCE	OBJECT	PRESENT LOCALITY	REFERENCES
Miscellaneous Finds			
1 Lr. Treloyan	Bronze gouge	Taunton	Ant. J. 14 (1934) 425
2 Dean Point	Urn	Penzance	Hend. IV.47; Arch. J. 101 (1944) 25. Fig. 3; PWCFC II.2 (1958) 42; see barrow ? No. 37
3 Tregaminion	Axe	Helston	Greenstone, serial no. 1383, Cornwall 291
4 Tregaminion	Thumbstone	Helston	
5 Trebarveth 'cave'	Neolithic ? sherds	lost	Arch. J. 108 (1952) 44; PWCFC II.2 (1958) 14, 16; LIZ III.4 (1968)
6 Trebarveth	2 Glass beads	Helston	LIZ III.4 (1968)
7 Trebarveth	Stone tools	Truro	Ant. J. 29 (1949)
8 Trebarveth	Roman ? coin	lost	LIZ III.4 (1968)
9 Goonhilly	Axe ?	Lanarth ?	Axes IV.247 (245) Group I; Found at SW 73581970
10 Trelan Bahow	Bronze mirror, brooches etc.	BM	As for Cemetery No. 1
11 Polcoverack	Incised stone	?	WEH of 1.5.56; slab bearing concentric circles
12 Hr. Polcoverack	Stone pestle	Helston	
13 Carnpessack	LBA sword	Truro	JRIC XXI (1924); Hencken Fig. 24A
14 Tregoning Priory	Worked stones	Par. church	Fragments of carving, tracery etc.

ROMAN COIN FROM GWITHIAN BEACH

A small worn bronze coin was picked up on an exposed surface on the S.W. side of Gwithian beach, approximately SW 583417, and reported to the R.I.C., Truro, by the finder, G. Juleff, of 13 Mitchell Hill, Truro. The reverse is entirely corroded, but the obverse is of Tetricus (senior), the Gaulish pretender of A.D.267. The site is that described, broadly, as 'OLS' in *CA* 3 (1964), 44, and the find tends to confirm that, as with the native pottery reported from there, there was an occupation broadly contemporary with that at Porth Godrevy, or site GT (cf. Fowler, *CA* 1 (1962), 17-60). The only other coins from the Gwithian area are the very corroded ones found at Porth Godrevy, and it is interesting to note (Fowler, *op. cit.*, 50) that Dr. J. P. C. Kent regarded these as the remains of 'barbarous radiates of the late 3rd century'.

Gwithian, August, 1968

CHARLES THOMAS

EARLY BLOWING-HOUSES AT GODOLPHIN, BREAGE

Work is proceeding on an industrial complex, part of the various Godolphin Tin Works at SW 603321. Among the more interesting discoveries is the recognition, and partial clearance, of two small buildings as blowing-houses. No. I, internally, is 13 ft. 8 ins. by 19 ft. 10 ins; it has no provision for the bellows being outside, and by analogy with the Dartmoor examples cited by R. Hansford Worth they must have been inside. The Godolphin blowing-house no. I differs, both in that no wheel-pit has been found, and that the hearth is about half the depth of the Dartmoor ones (this would probably have facilitated loading it). The comparatively large size of building no. I is presumably to afford room for the moulds and molten tin as well as the bellows and frame; the tin probably ran out along a long float under and between the bellows. This type of blowing-house, according to Worth, can be dated between the 15th and early 17th cen-

turies: this one could have been used up to about 1580-1600.

Blowing-house no. II, internally approximately 11 ft. by 10 ft. 2 ins., has been added on the north side of no. I, and was clearly designed to separate the bellows from the mouth of the furnace. This is a completely different design from that of no. I, and could very well be one result of Sir Francis Godolphin's 'innovations' with the help of Burchard Kranich (c.1515-1578: see M. B. Donald, *Annals of Science* VI, no. 3 (1950)). In essence it follows closely the methods shown in Agricola's *De Re Metallica*, where the bellows is on the opposite side from the mouth of the furnace. This would be an improvement from the point of view of operating convenience—moving the bellows into a separate shed, away from the molten tin; the difference in size between buildings no. I and no. II is very marked. After all, presumably more tin was smelted in house no. II than in house no. I, and yet the latter is the smaller. With no bellows in the way, there was clearly no need of a large space for making the ingots. The action of the bellows, which would have been outside against the north wall of house no. II, with the wheel on the east side, would have forced the molten tin out of the mouth of the furnace (according to W. Pryce, *Mineralogia Cornubiensis* (1778)).

It is fascinating to speculate on the exact design of the furnace, and whether the flue originally returned inside the wall, or was vertically above the furnace, Richard Carew (*Survey*, 1603) says, apropos of the custom of burning the thatch from blowing-house roofs to collect the tin-dust '... Other doe frame the Tunnels of the Chimnies verie large and slope, therein to harbour these sparkles, and to save the burning . . .' Perhaps at Godolphin we have located two blowing-houses which span a very important period in Cornish tin smelting.

JOHN SCHOFIELD

Godolphin, Breage, 1968

AN UNUSUAL CIDER-PRESS, TRESCO, ISLES OF SCILLY

On the summit of the hill to the S.E. of the church on Tresco is what appears to be a gigantic cider-press carved from a natural outcrop of granite. At first glance it seems to consist of the usual central axis stone with central sinking, surrounded by a circular (annular) trough roughly 7 ft. in diameter with a lip on the N.W. side. However, about 4 ft. to the E., a curved piece of granite can be noted, protruding from the turf. When the turf is rolled back, this can be shown to be the outer rim of an *outer* trough, still part of the same granite outcrop. As the remainder of this feature was covered by turf and thick undergrowth, it was not possible to make further observations, but the diameter of the entire press should be about 15 feet. It appears to have been previously mentioned only once, briefly, in the standard guide book to the Isles (*The Isles of Scilly*: A.G. and H. J. Gibson, 1st edn., 1925, p. 74), with no details as to size, etc. It is possible that such a very large cider-press was constructed for communal use, just as the huge granite trough—which is reputed to be a 'kist-vaen'—situated on the E. side of Old Town bay, St. Mary's, above the old quay, was used for the communal salting of fish. Excavation of the cider-press and proper preservation of the granite trough would provide the Isles with added interest.

Redruth, June 1968

MICHAEL TANGYE

THE RECONSTRUCTION OF A GWENNAP CROSS

In the west end of Gwennap parish church stands, on a modern base, a wheel-headed cross with a portion of its shaft. This cross originally stood at Chapel Moor, a few yards from a reputed chapel site on the old churchway, or field-path, from Tresamble to the parish church. The portion referred to above was removed about 1840 to the Vicarage garden at Gwennap (see A.G.Langdon, *Old Cornish Crosses*: Truro, 1896), where indeed it remained until recent years.

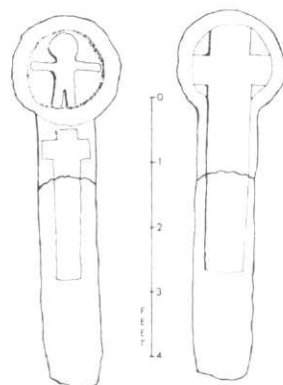


Fig. 19

Commenting on this cross, the late Charles Henderson stated (*JRIC* n.s. II.4. (1956), 195), 'The shaft of this cross now forms the lowest step of the Church path stile a few yards from the site of the Chapel'. The writer of this note located this cross shaft in 1964, and with the co-operation of the Vicar it was brought into Gwennap churchyard, where it now lies, soon to be reunited with the cross head. A reconstruction of the complete monument is shown in the drawing (Fig. 19).

It is interesting to note references to three other cross shafts in the parish, any of which might possibly be re-discovered in the future. These are: 1, Shaft concealed in the church vestry wall (Langdon); 2, Shaft in use as a step at Lanner Mill (?), also Langdon; 3, 'Fragment of a cross head and stem forming a step in Gwennap churchyard on the right side of the church east of entrance to Porch' (J. T. Blight, sketchbooks at Penzance Library, Morrab Gardens—cited **Blight SB** in parochial check-lists).

Redruth, June 1968

MICHAEL TANGYE

H. G. ORDISH *Cornish Engine-Houses. A Pictorial Survey*. Pp. 70, pls. 76. 15s. (with) *Cornish Engine-Houses. A Second Pictorial Survey*. Pp. 64, pls. 57. 16s. D. B. Barton Ltd., Truro, 1967 and 1968.

'What are all those hideous old ruins?' visitors sometimes ask us, and there is an awful moment of truth in the lives of most Cornishmen when they realise that a feature of the landscape, as familiar as trees, pillar-boxes, or the larger Methodist chapels, actually *offends* somebody else's aesthetic sense. Are they hideous? Are they beautiful, come to that? In a way, these are both non-questions; the thousand and one empty engine-houses, which once held the massive and ponderous giants that made deep mining possible, are part of Cornwall. Some, of course, are shoddy affairs run up on the cheap, inevitably collapsing. Others (cf. the first part, p. 59) possess noble façades, arched and coursed in an easy mock-classical style, or are whimsically coigned in contrasting stone (first part, p. 55; these are repeated, by the way, in the Manx lead-mines at Foxdale). The best examples are now rightly accorded protection as historic monuments.

Mr. Ordish has done, with his eye and his camera, for engine-houses what the Gibsons did for Cornish wrecks in late Victorian times. He has an almost unerring eye for the *mise-en-scène*. One engine-house does (after the first hundred) look much like any other, viewed in isolation. Seen by Mr. Ordish, they dominate the landscape—thunderous skies, the flat light of a Cornish February, the muddle of burrows and overgrown shafts—like Corsican menhirs. A three-quarters view in the middle distance, in strong light, makes use of the shadow of deep-set arched windows and roof-timbers. The texture of granite, of the multiple brick arches and chimneys, and dried-out boarding, can almost be felt. This is a delightful excursion into a mining land which will not always be the same; Mr. Ordish's photographs are dated (from the 1920's onward) and many of his subjects have, even in that brief span, gone for ever.

A.C.T.

MICHAEL TANGYE *Portreath—Some Chapters in its History* Pp.40, pls. 4 incl. map, paper covers (May 1968). Obtainable from the author, Pednolva, Trefusis Terrace, Redruth. 3s. 6d. post free.

Reviews

Our member Mr. Tangye has recently given us parish check-lists for Illogan (CA 5) and Redruth (CA 6); his temporary withdrawal from this project is explained when one realises the amount of work which has gone into this modest booklet. Portreath, the north-coast outlet for the Redruth area, is now undergoing a metamorphosis; the former trading-port becomes a holiday centre, and terraced houses are appearing in what was the harbour yard. On the west side of Portreath are the old, represented by the Iron Age round at Feadon, the 18th-century battery, and the railway incline. On the east is the new, where the war-time aerodrome at Nancekuke now houses a Government chemical warfare station, producing tons of CS riot-control gas for sale to foreign police forces. The defences of 18th-century Portreath are more accessible and rather more attractive.

In the compass of some forty pages, Mr. Tangye has covered a very wide range. Ship-building, wrecks, and smuggling naturally figure; who knew that around 1800 there was a seining company, with fish-cellars, at Portreath? or that a tin smelting house was established at Glenfeadon in 1813? or that, in 1808, Portreath witnessed a fashionable race-meeting, with wines served around the course? All this, and more besides, is drawn, not from existing accounts—few county histories devote more than a paragraph to this place—but from a variety of unpublished MS. sources (Henderson MSS., County Record Office material, Tehidy estate papers, etc.), local tradition, and distant newspaper entries. Mr. Tangye is to be most warmly congratulated, not only on this enviably detailed picture, but on his pertinacity in searching out so much that seems entirely new, and on his initiative in publishing this account himself (at a very modest price). Anyone concerned with local history in Cornwall should hasten to acquire a copy.

Gwithian

A.C.T.

EDITH M. NICHOLAS. *A Short Guide to St. Just and Pendeen*. Pp. 36, pls. 6, figs. 14 (incl. map). *St. Just and Pendeen O.C.S.* (1968). 3s. 0d., or 3s. 6d. by post from the author, Trevengy, Higher Bosavern, St. Just in Penwith, via Penzance.

All too few Cornish parishes have satisfactory local guide books, and many have, like St. Just, only 'An account of the Parish . . .' written in the last century by the Vicar. These works are now of little use to the historian or archaeologist, having long been outdated by scientific fieldwork and research. There is then a genuine need for those with a detailed knowledge of their locality to help rectify this situation, and especially so in the case of a parish which, despite its remoteness, has so many antiquities, and an eventful history culminating in its position as the centre of the western mining district.

Now Miss Nicholas has produced a guide to St. Just and Pendeen (i.e., the old pre-1843 parish of St. Just) which should appeal both to the interested tourist and those with a more specialist knowledge who do not yet know the area. The first chapter consists of a brief tour, with many digressions on various topics, including mining, with an account of how the sea breach in Levant mine was sealed, and the plants and flowers of the parish. The second chapter describes the antiquities in detail, giving the national grid references, and clear instructions on how to reach them, while the final chapter covers the places of worship, and some of the old houses. The book is nicely illustrated with the author's own sketches, which together with the photographs convey the character of this windswept coastal parish. Simply written, with strong affection for the area, this is a guide book with its main emphasis on the historical background and antiquities. Criticism is more likely to be on the grounds of omission than inaccuracy; no mention is made of Holman's Foundry, and the suggestion that the Rev. Aitken based his design for Pendeen Church on Iona Abbey is omitted. Obviously though, with limited space, every aspect could not be covered, and there is much in it that makes it a worthwhile addition to a Cornish bookshelf.

It is to be hoped that this may become a precedent for other Old Cornwall Societies to publish similar works when the Gorseth is held in their particular areas. J.P.S.

THOMAS SHAW. *A History of Cornish Methodism*. D. B. Barton Ltd., Truro (1967). Pp. 145 (including maps), pls. 23. 30s. 0d.

The Revd. Thomas Shaw has rendered many services to Cornish Methodism. He has crowned

them by his *A History of Cornish Methodism*. Despite the modesty of his foreword, it should be said that he has done more than anyone to foster the affairs of the Cornish Methodist Historical Association.

It is fitting, on many counts, that he should have written the history of the Methodist Church in Cornwall. It is the first history to be published. It is likely to be the last. It must find a place on every Cornish bookshelf, or its absence will be felt.

Mr. Shaw has been collecting materials since 1941. He has an accumulation of facts and detail unrivalled by any living student of Cornish Methodism. Probably no-one, since it all began in 1743, has collected so avidly and with such success. The book is a miracle of compression to suit the taste of a public willing to lavish its wealth on many things but not on literature.

Mr. Shaw is an Englishman and sees the thing with a judicial eye. Earlier writers have been born within Cornish Methodism. Even where they have entered other folds ('strayed' was the pre-ecumenical word) they owed their souls, humanly speaking, to Cornish Methodism. They had not Mr. Shaw's detachment. To the Celt things are black or they are white. One has heard many an up-the-country minister say that whatever it is that goes on in Cornwall it is not Methodism! Mr. Shaw is not of their number. As General Secretary of the Wesley Historical Society, and of the British Section of the International Methodist Historical Society, he has looked at us objectively. He does not eulogise and he does not condemn—Mr. Shaw knows the value of grey. Had he detailed something of the bitterness that existed between the branches of Methodism half a century ago only those who remember it would have believed him. He has drawn a kindly veil.

Mr. Shaw has great boldness;

'Whatever the future may hold, Cornish Methodism has come to the end of, at any rate, its first chapter. Exactly when that chapter ended, future historians will have to decide, perhaps it ended after the last war, and everything else has been an appendix; while the writers of the Cornish Methodist Historical Association have been working on the index.'

Had a Methodist Minister written in this vein a generation ago he would not have looked

forward to a Ministry at St. Keverne or anywhere else this side of the Tamar! Perhaps no more eloquent proof of the general truth of Mr. Shaw's thesis could be found than that such sentiments should go uncriticised and perhaps unnoticed. Some there will be who will think that 1932 was the fateful year for Methodism in Cornwall and present-day developments will take a sober colouring from that event. But, as Mr. Shaw says, such matters must be left to the historians.

We have here a fine account of a great creative movement, and however we may speculate or analyse the decline or the absorption of the Methodist Church, nothing can rob the County of what has been its peculiar glory. The book is most readable. A beloved Chairman, our own Hubert Luke, has set his *imprimatur* upon it.

Like all Mr. Barton's publications, the book is well-produced and illustrated. The services of Messrs. D. Bradford Barton Ltd. to Cornwall are unparalleled and ever-increasing.

Truro

JOHN PEARCE

D. B. BARTON **A History of Tin Mining and Smelting in Cornwall** Pp. 302 (incl. Index), pls. 36, figs. 8, maps 5. D. B. Barton Ltd., Truro (1967). 60s. 0d.

This work comes at an opportune moment, when, concurrently with widespread prospecting for tin in Cornwall, there is a growing interest in the history of its production. The first to cover the twin industries, the book gives a brief account of production under the Stannaries, and traces the course of events down to the present day. The major part played by smelting and banking interests in mine management, the industry's struggle for survival in the face of the growth of low-cost production overseas, the end of smelting in Cornwall and the impact of modern mining methods are all covered.

With a vast field open to him, the author has drawn on three main sources: the Royal Cornwall Gazette, the West Briton, and the Mining Journal, supplemented by other periodicals and by original documents to which the public has access. One misses however (in alphabetical order) any reference to such eminent authorities as J. H. Collins, H. G. Dines and A. K. Hamilton Jenkin; and those not closely acquainted with mining may feel the need for a glossary of mining terms.

Inevitably there are a few errors, but these are mainly of a minor nature which do not detract from the general usefulness of the work. For instance, a footnote on p. 259 suggests that the pony at the 350 fm. level in Levant Mine was drowned by the rising waters, whereas in fact the manager was sent down with a revolver to destroy the animal humanely. Similarly, a footnote on p. 278 refers to the smelting-works at Bedminster, Bristol, demolished four years before the book went to press. Nevertheless, in days gone by, financial terminology was not nearly so precise as it is today, and one cannot blame the author for following his sources into the trap of confusing profits with dividends (p. 158), relinquishments of shares with forfeitures (p. 157), and buying-in shares with buying (p. 203).

The rise and fall of the cost-book system of management is well covered, and also some of the abuses which arose from the laxity of Stannary law and from badly-drafted limited company legislation, the ill-effects of the latter being felt after 1857 (not '1862' as stated on p. 120), when the first limited company was formed to work a tin mine in Cornwall (East Cornwall Consolidated Mines Co. Ltd.). Comment is unfortunately lacking on the oft-voiced complaints of shareholders, who did not understand that the wide fluctuations in share prices were due to the lack of a free market in their shares and to the operation of the law of supply and demand. Most of the tales of 'rigging' share prices can be dismissed, as can most of the stories of share-dealers' profits, if the experience of one of them (Martin Edwards jr.), who made only 2½% on his turnover between 1878 and 1895, can be taken as typical (*Stock Exchange Journal*, Sept. 1965, p. 23).

Understandably, the author has little interest in the present and future developments of mining in Cornwall, and one cannot help feeling that a broader range of contacts with the industry might have led him to a different conclusion from the one on p. 284, where he states that the latest revival in Cornish tin can be said to have depressing similarities to the earlier booms of about 1906, 1926 and 1936. For today, like the cost-book company, the 'nurse' company formed to keep the market in a new company's shares free of violent price movements is no more; so also are small company flotations, honest or otherwise. Planning techniques for opening up mineral

deposits have reached a stage of perfection not formerly possible (*Mining Magazine*, April 1967 p. 254, *et seq.*), and exploration is now largely in the hands of the great mining finance houses, whose work never stops for lack of funds or falls in metal prices.

The photographs, though anonymous, are carefully chosen and well-reproduced, and give roundness to the author's story. The book is simply and solidly bound, but the narrow margins and the lack of white space between text and tables make paper seem a rare commodity. The choice of an archaic type-face (Bembo, dating from about 1930), a slightly irregular system of punctuation, the occasional broken letter, raised space and misprint, and the poorly-reproduced names on the maps on pp. 56-57, seem hardly in keeping with a work of this importance.

This book will give great pleasure to many. It is a work of wide interest which, by providing the necessary historical background will serve as a useful starting-point to those investigating the many other aspects of mining and smelting, whether geological, metallurgical, financial, legal or social. The scope, as the author shows, is almost unlimited.

JUSTIN BROOKE

Harrow

D. B. BARTON *Essays in Cornish Mining History*: 1 Pp. 200, illus. 21. D. B. Barton Ltd. (Truro) (1968). 40s. 0d.

Mr. Barton has already revealed himself, in a series of detailed works, as a most competent historian of technology and of the industrialisation of Cornwall. The first volume of his collected essays (and we note that further similar volumes are waiting in the wings) shows, not only the same powerful analytical mind and the same insistence upon the value of primary sources, but a degree of detachment in the approach to Cornish mining that, alas, no Cornishman seems to be able to attain. Not least in importance in this stimulating book is the three-page preface, where the author, stressing the essential role played by nineteenth-century newspapers and the county archives (and it is still sadly necessary to hammer home this point), tells the cautionary tale of the industrial archaeologist who reconstructed the buildings and engine-houses of a mine from their bramble-covered ruins, ignorant of the

existence of the 'large-scale, original drawings by the engineers and masons who had built these houses and their engines . . .'

The six essays cover a variety of topics and all are important. *The Cornish Miner in Fact and Fancy* illumines the rather dangerous gulf between the reality and the emotive, slightly nostalgic, picture that so many still have. *Cornishmen and Australian Copper* is a first contribution to the study of the Greater Cornwall, and we must hope for more of this. *Mine Names in the West of England* is interesting, but would have been more interesting still had some outside aid been sought; in discussing the vast group of names taken over from ordinary place-names, we are told that 'Analysis of their etymology and any attempt to rationalise these names is a matter best left to the speculation of scholars in the Cornish language, each of whom would put forward his own particular theory as to their derivations.' This was certainly true in the last century and is probably still true at the Old Cornwall level, but given series of dated forms, as with Dolcoath, Botallack, etc., the elucidation of meaning is generally a matter of certainty rather than 'speculation'. Nor does the treatment of the element 'huel' (Wheal) really suffice. There is a case-history of a single mine (New Trumpet and Lovell United), a *genre* which Mr. Barton is now encouraging in his alternate persona as a publisher; a most valuable essay on *The Techniques of Tin Smelting and Blowing*, which might well be read in conjunction with R. Hansford Worth's similar chapter in his (posthumous) book of essays, *Dartmoor*; and, finally, *Water-Engines in Cornish Mining*. Eyebrows will be, and should be, lifted at the remarkable material assembled in this study of a neglected aspect of motive power: look, for instance, at p. 153, a drawing (by none other than W. Warrington Smyth) of a 55 ft. diameter water-wheel used at North Roskear. We even hear of experiments with 'wind-engines'—wind-mills harnessed for pumping (p. 178).

The book is, as always, well-produced, though the index seems scarcely adequate. Mr. Barton is sensibly adhering to the same format (shelf-height) in his mining works, the growing list of which forms the best indication of his contribution. We look forward to further volumes of essays from his enlightening pen.

A.C.T.

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