

Reprinted from the Devonian Year Book, 1927.

Clovelly Dykes. - By G. E. L. CARTER, B.A., I.C.S. (retired).

AN examination of the Dykes and their neighbourhood in June, 1926, yielded the following results :—

- (1) It was noticeable that the inner lines on the west were escarpments, and not the ordinary vallum and fosse.
- (2) The inmost enclosure, viewed from the north, was apparently a rectangle, a regular figure. In fact, it was not so, as towards the south the long sides converge.
- (3) At exactly one-third of the distance from the north along the long axis of the inmost enclosure is a slightly elevated piece of ground—apparently rectangular in plan.

The enclosure lay with a south aspect on gently sloping ground. This location was not prescribed by local conditions which would have allowed accommodation to any slope, and was therefore carefully chosen with reference to the compass points and to metaphysical beliefs.

## 2. Plan and Area.

On the map a variety of points demand attention. The Dykes are not symmetrical on any line ; the south-east corner is of a plan different from the central and western portions. The great circles of the western portion are all butt-ended ; for this there must have been a special reason, since it is not required by geographical factors.

By scaling the 25-in. Ordnance map I find the area of the inmost enclosure is 11,202.5 square yards. If we take a common measure of primitive times, the lesser Asiatic foot, we find, on the assumed value of 13.5 inches, that 11,202.5 square yards equals 79,693 square Asiatic feet, a figure near enough to 80,000 to justify our believing that 80,000 was the scale of measurement on which the site was planned. The total area enclosed by the outermost dyke, by the same method, is about 27.357 acres, or twelve times the area of the inmost enclosure.

To check the above working, I examined the plans of some of the earthworks catalogued in the Victoria County History.

There were difficulties in working by scale accurately, but the results obtained may be thus tabulated :—

Area of enclosure in sq. A siatic ft.

Farway 6,400

Beacon (Martinhoe) 6,400

Parracombe ... 6,400

Dunterton 6,400

Seaworthy 48,000

Coffinswell 84,000

Shoulsbury (High Bray) 160,000

Castle Dykes (Chudleigh) 240,000

For Old Barrow Camp (Countisbury), with the square inside the circle, we have a more complicated calculation. There the circle is ten times as large as the inmost enclosure, on areas of 48,000 and 4,800 square feet respectively.

Let me say at once that none of my figures were exactly as in the above table. They must all be checked by re-survey or on the 25-in. maps ; they are approximations to the calculations and are indications of what will be found. The list is not exhaustive and must, in any case, exclude earthworks of a special nature such as coast defence forts, nor is it probable that all earthworks are of one political horizon.

### 3. Water Supply.

There can be little doubt that the water supply for the Dykes was from the springs at the north-east re-entrant angle of the earthworks, near the farm now called Dyke, the sources of the streams draining north-east into Holwell Wood.

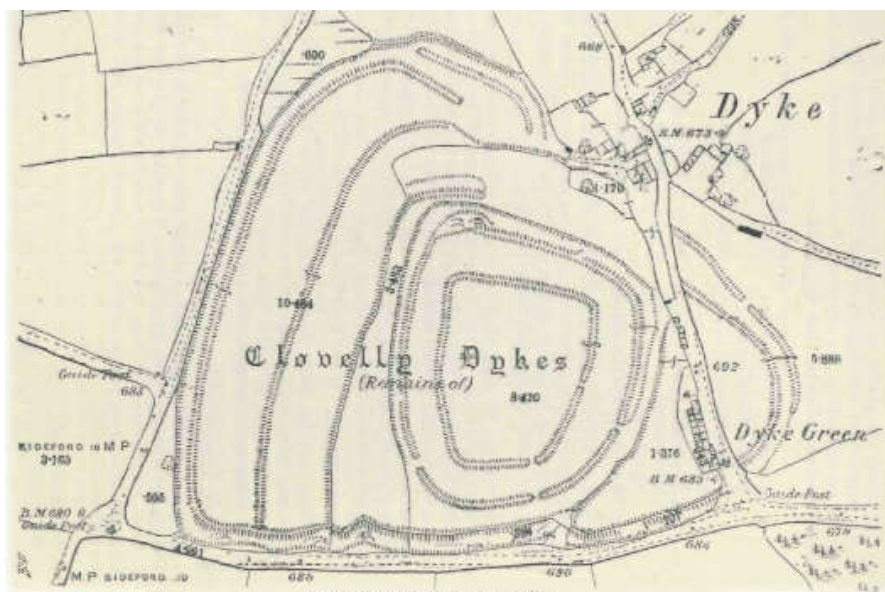
#### 4. Road Approaches.

It is remarkable that not a single road or lane approaches the Dykes directly from the south. Possibly the Dykes were isolated on that side by bogs ; probably not, as we shall see later that the associated people cultivated upland terraces and would have drained such.

#### 5. Ground Plan.

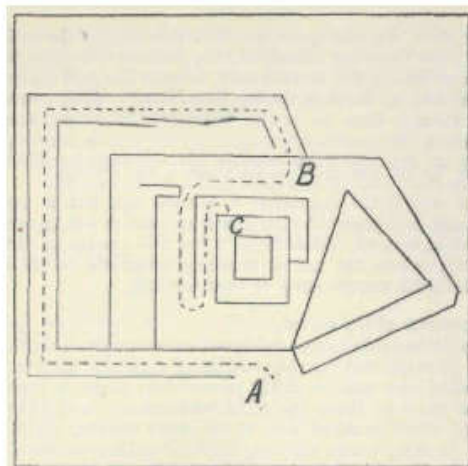
I have already indicated the difficulties of the map of the Dykes. My solution, giving due weight to the differentiation of scarped wall and ditch is, in brief, that the Dykes were a maze, a labyrinth, to which the approach was by the ditches.

Diagrammatically the plan is as shown on next page :—



Scale about 16 inches to a mile.

Based upon the Ordnance Survey Maps with the sanction of the Controller of M.M. Stationery Office and printed by Francis A. Perry, Ltd., West Baling.



At A is the true entrance, the path following the outer ditch ; at B there would be a stockaded or taboo-gate, and at C the ceremonial approach to the inmost places.

One is not hard pressed to exemplify the suggestions.

Daedalus was long regarded as purely mythical, but the excavations in Crete have done something to rehabilitate a belief in the labyrinth of the Minotaur, nor need we forget that King Prempeh of Kumassi thought himself secure in a mazy stockade. We may also find a reason in this why no road approached from the south, where the outer entrance was located.

#### 6. Purpose.

The orderly lack of symmetry suggests that there was a general purpose behind the plan. The projection to the southeast indicates that a pointer was required to the southern tropic, to show when the seasons would be propitious by the sun entering upon its northern course. The tumulus, some 1,800 Asiatic feet due west of the north-west corner of the inmost enclosure (now marked by a low mound), would give the line of the equinoxes.

" Now when he (the Sun) moves northwards, then he is among the Gods, then he guards the Gods ; and when he moves southwards, then he is among the Fathers, then he guards the Fathers. When he (the Sun) moves northwards, then one may set up his fires ; the Gods have the evil dispelled from them (by the Sun) ; he (the sacrificer) therefore dispels the evil from himself; the Gods are immortal; he, therefore, though there is for him no prospect of immortality, attains (the full measure of) life, who sets up his fires during that time." And, conversely, as the Fathers have no power over evil, to set up sacrificial fires during the southward course of the sun is ineffectual in warding off evil and in prolonging life.—(Satapatha Brahmana, II, 1. 3.).

Not only is the quotation, I submit, apt, but a precisely similar case of a pointer to the southern solstice will be found on the great karewa of Yendarhom, a few miles north of Srinagar (Kashmir), where the arc of

standing megaliths is one of the great but little known relics of that country.

## 7. Economics of the Period.

The Dykes are clearly associated with an upland civilisation.

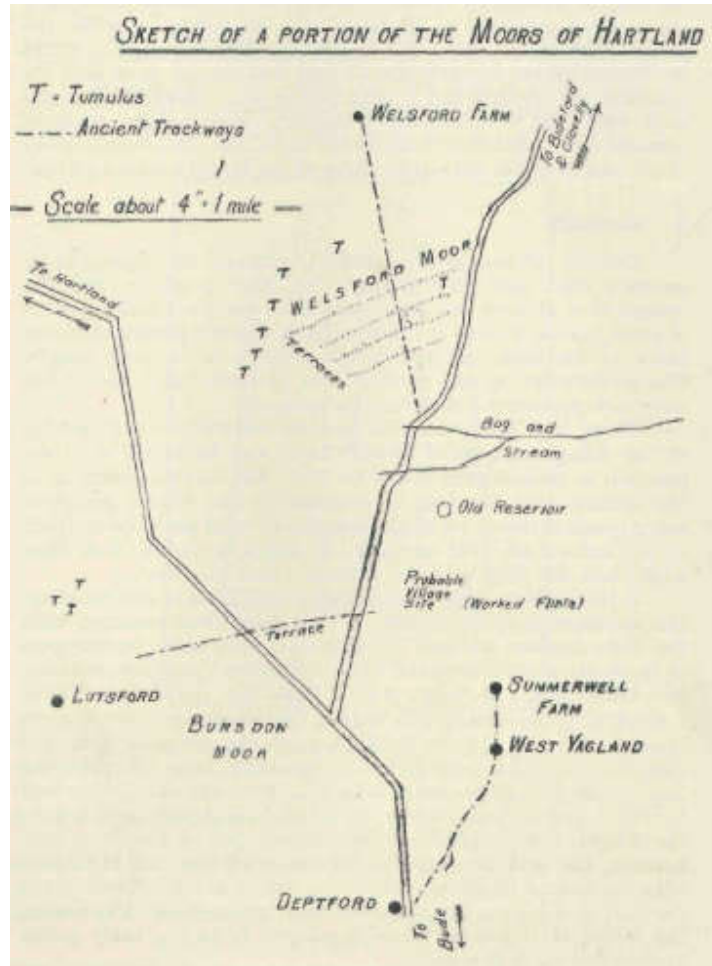
It may be calculated for the purpose of argument that it would have taken one man working twenty-four hours a day three hundred years to build the earthworks alone, or by the Rule of Three, three hundred men three years working eight hours a day. In other words, allowing for bad weather, holidays, tribal wars, etc., Clovelly Dykes could probably not have been completely built by less than three hundred men in less than ten years.

In short, the Dykes were a colossal undertaking for early times ; the tribal labour market and food supply must have been dislocated during the period of construction, and no such work could have been undertaken without either the express sanction of the tribal government or the submission of plans and estimates by the tribal priests. In no nomadic state would it have been possible for so great a work to be carried out and we must assume that the Dykes were built by agriculturalists.

We are fortunate in finding on the neighbouring Bursdon and Welsford moors the remains of an agricultural civilisation. There, in a large shallow basin about a mile square, we may find lines of ancient terraces for cultivation, tumuli on the terraces, a mystic circle, worked flints on an old village site, ancient trackways linking the whole. There is, too, if only had the time and money, the possibility of finding a lake-village below Summerwell.

These features combine to elevate the imagination and to clear one's vision of a dim past. The limiting factor of this civilisation around Clovelly was the 500 feet contour, perhaps the 600 feet contour, and even for that high level there is an area continuous enough to justify our suggesting that in these moors of Hartland we have a " little Dartmoor," with a range, of course, extending far beyond the limits I have mentioned. In the accompanying sketch map I have indicated the principal points, and it need only be added in explanation that the

probable village site is the first field of Summerwell Farm, on the south of the road as one draws off from the bog-lands and begins to climb to Bursdon Moor.



Once ascertained, the terraces are a prominent feature on the hill-sides and the map is also of value in indicating the juxtaposition of these highland farms—Welsford, Lutsford, and Deptford.

In estimating the reservoir of wealth from which was drawn the capital and labour involved in the construction of the Dykes, there grows a picture of Hartland and Clovelly very unlike the present-day conditions. All below the 500-ft. contour could be blotted out as impenetrable thicket and swamp, save only for occasional short cuts and a path to the sea. Over 600 feet the land would be well in hand, cultivated with a light grain in summer, but in winter a wind-swept moor, the whole reminiscent of conditions of life not unlike those of the North German plains.

## 8. Summary.

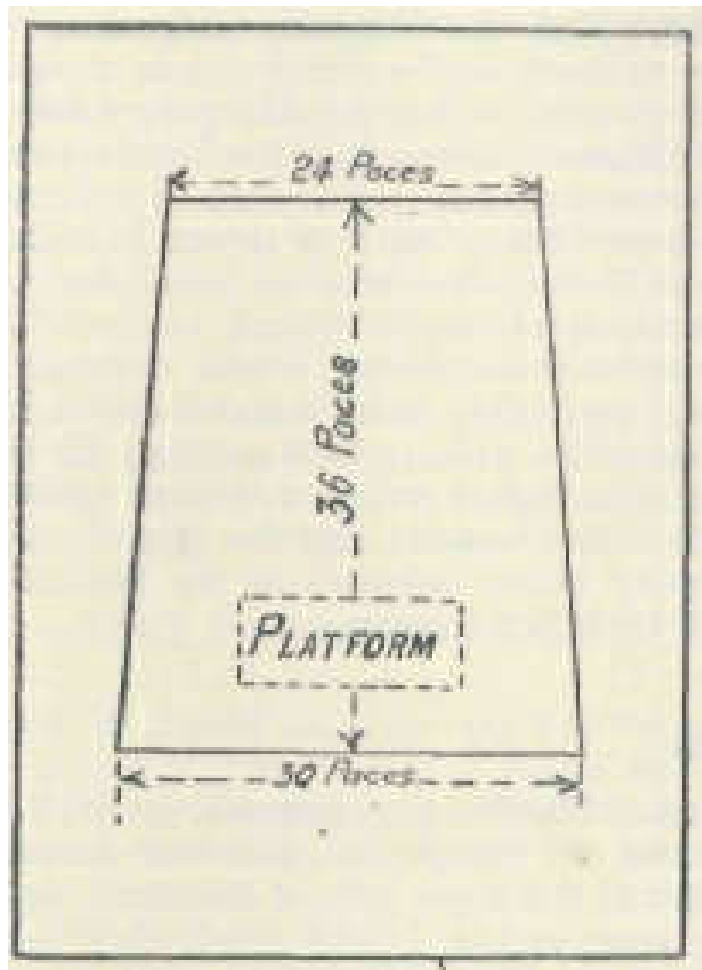
Clovelly Dykes would seem to combine the functions of seasonal clock and holy ground. In other words, it was the cathedral of at least one early race in Devon, the abode perhaps of great priests, a focus of tribal religious life and almost certainly taboo to the rank and file, except perhaps in its outer courts. The eccentricity of the ground plan indicates that the Dykes were not primarily for defensive purposes. Those who have seen the lines of ancestors (vadil) set up at the village temples of Hindu India and have realised their function as genealogical trees (sat pedi) will find no difficulty in the surmise that the long low mound in the inmost enclosure was a rough earthen platform, bearing a line of anthropomorphic stocks and stones (but see para. 9) which served to link Now with Then, the Seen with the Unseen—Man with God.

If the builders (and by builders I mean the master builders, the aristocracy) were Aryan, having root ideas common with the Indo-Aryans, we may assume that they were worshippers of the Gods, the leathers and Fire. Whether the priest was king we know not. I think not. That the priest was Druid I think not, for the Druids taught the transmigration of souls (Caesar, VI., 14) and the conception of transmigration is too complicated to be primitive. At the same time the principal god of the Druids (Caesar, VI., 17), Mercury, the Guide and Inventor, corresponds closely with the Indo-Aryan Agni (I'ire), the Bright, the Pathfinder, the principal god of the Satapatha horizon, the god to whom in all his attributes the eight fold oblation had to be offered, save only when as Agni Vaisvanara, the God of All-Men, the oblations were twelve-fold. Perchance, the Druid of historical times developed from the early priest as did the Indian Brahman.

## 9. The Maha- Vedi.

We may strengthen the foregoing hypothesis by corroboration from the Satapatha Brahmana (Sacred Books of the East, Vols. XII, XXVI, XLI, XLIII, XIvIV). This work is a composite prayer and ritual book of the Indian Indo-Aryans of the period 600 B.C., compiled in its present form probably much later.

In the ceremonial devoted to the worship of Agni-Soma, based on oblations of barley (Vols. XII and XXVI) (and therefore performed by agriculturalists) we find special instructions for congregational worship in the maha-vedi, the great altar. The dimensions prescribed for it give (S.B., I 11 , 5, 1) a plan thus :—



but it was essential that the narrow end should point to the east (not as at Clovelly to the south) to ward off magically the chance of attack by enemies. The dimensions prescribed give a superficial area of 972 square paces.

On the assumption that 6,400 was the mystic number of square feet required for such a place (and where we are working out a problem, we must proceed by trial and error), this gives a value of 6.59 square Asiatic feet to a square pace : Square root of 6.59 = 2.567



If 13.5 standard inches are equivalent to one foot, the length of the pace will be :

$2.567 \times 13.5 = 34.65$  inches, and soon for other variants of the foot between 13 and 14 inches. This represents well the length and variation of a stride, and so we may conclude that unitary measure for a mahavedi was 6,400 ( $82 \times 102$ ), a figure represented by the smaller earthworks in Devon. We may indeed marvel how the priest reduced the Asiatic feet to paces, but the formula for the outline of the mahavedi was simple, the lengths being  $6 \times 4$ ,  $6 \times 5$ , and  $6 \times 6$  paces.

You cannot read the Satapalha Brahmana without being impressed by the luck of 5's and 8's and compounds thereof.

The 80,000 of Clovelly is directly related to 6,400 in its factors. The only real difference between the two cases is in the orientation of the enclosure, but the point need not be stressed. The Indo-Aryans were proceeding in a generally easterly direction.

The builders in Devon were in a cul-de-sac, and all varieties of enclosure, round, square and elliptical, are to be found. None the less, the resemblance of the inmost enclosure at Clovelly to a mahavedi is so striking, in form and notation, in the platform and in the association with agriculture, that the two must have been associated through a common original civilisation. What one meant the other meant, and the presumptions from local inspection (drawn before reference to the Satapatha Brahmana) are confirmed by that reference.

#### 10. Tradition.

An upland civilisation long lingered. After I had found the terraces and the old village site and had framed the general hypothesis, Mr. Richard Pearse- Chope, J.P., of Hartland, supplied me with the following note :—

" . . . DeanMilles' Parochial Returns, circa 1760, now in the Bodleian. I always thought his informant had been pulling the old man's leg.

Secinton, a large town of former times.

Hendon, a large town also.

Firebeacon, a large town. Of these places nothing remains.

There was a Swannery near Bradstones well.

A great many human bones found in digging the field called Newling.

Bradstone well water good for scurvy.

" Is the reservoir (below Summerwell)

? If so, where is Bradstones Well ? The three places named are the three chief heights around the moor. Secinton is in a direct line between the reservoir and Clovelly Dykes. Hendon is the highest point (765 feet) in line with Woolley Barrows. Firebeacon is the highest point, almost, but not quite, in line with Embury Beacon."

Here, then, is a new stimulus to further local spade work. Bradstones must have been a bridge of megaliths or a line of stepping-stones crossing the bog between Welsford and Bursdon Moors and is clearly associated with the old routes through the highland ford farms. Perhaps the reservoir was the swannery ; perhaps, however, it was Bradstones Well itself or on the site of the well. Further inquiry has shown that there is a second reservoir at a distance of half a mile down the stream. That one is fed and drained by a leat, while the one below Summerwell has a drainage cut only and is thus clearly fed by a natural spring. The reservoir would thus probably be part of the swannery.

Bradstones Well may very possibly have been converted to a second swannery pond after the Reformation, the other being older. The value of the well water as a specific for scurvy would be due to the presence of bog water. Welsford has always been interpreted to mean the Welsh-ford, the ford on the way to (West) Wales. Might it rather not be the ford at the Well ?

Newling is possibly Newlands near Woolley Barrows. It may well be argued that ancient tradition will not be persistent over so long a period. I must record that I found one tradition in Sind, in the desert beyond Karachi, among Mahommedans, where Hinduism has been

extinct for 1,200 years, regarding a circle of stones around a cromlech, that the ghosts at midday and at night throw lighted torches at you—a reference to the ancient fire-dance explicable only by a continuity of tradition.

Of course, it is not suggested that the whole of Dean Milles' record relates to prehistoric times, the mention of the swannery being enough to indicate otherwise. It does emphasise, however, that even in the middle ages there were settlements on the hills, settlements now long forgotten, that there was a well at Bradstones of great popular repute (and therefore of antiquity) and it is no striving after a conclusion which gives the deduction of a continuity of life on these high hills.

Mr. Chope has since recovered a hitherto meaningless doggerel:—

" Yennon (Hendon) was a market town,  
When Lunnon was a vuzzy down,"

which, though of a common pattern, must, in the language of the Stock Exchange, mean something or nothing. My submission is that all such traditions carry a meaning, that it was not until the monks preached by practice " laborare est orare " that the highland civilisation really began to give way to the lowland one. Vested interests, of course, remained, though gradually passing away. Thus from the earliest times to one not long gone, through quite forgotten, the hills of Hartland were cultivated by agriculturalists, who had done so continually from the time the Clovelly Dykes were built.