STRAY NOTES ON THE TEIGN VALLEY

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Spinsters Rock

Like many dolmens, or as we more usually call them, cromlechs, the Spinsters Rock consists of a capstone supported by uprights the spaces between which admit ready access to the area covered by the capstone. But the evidence seems conclusive that in their original form the dolmens constituted completely enclosed chambers, in which four stones at times sufficed to form the sides and ends, while in other and larger of these structures it took a greater number to close the space.

At Chun dolmen near St. Just, there are but two side and two end stones, and it is at once apparent that a dolmen is but a larger form of the kistvaen; at Trethevy, St. Cleer, a single stone at either end suffices, but for the sides two stones on either side are required.

Now, as a general rule under such circumstances three points of support, and three only, will be found to be effective; hence any of the enclosing stones can be removed, provided that three are left so placed that the centre of gravity of the cap stone falls within the triangle formed by their points of contact with it.

Here at Spinsters Rock three supporters and three only now held up the cap; at Lanyon Quoit, in Madron, four supporters have been left, but in effect three only function. The robbery which took from both these dolmens the greater number of their enclosing stones led, in each case to ultimate disaster; Lanyon Quoit fell in the year 1815, and was re-erected in 1854, with no respect to its original form. The Spinsters Rock fell in the year 1862, on Friday the 22nd January. Happily Mr. G. W. Ormerod had made camera lucida sketches of it on the 9th September, 1858. The dolmen was restored in November of 1862, but, here too, the restoration does not fully reproduce the original form; the eastern stone has been placed almost at right angles to its original position, and the capstone, instead of resting on the top of the northern support, rests in a notch cut in its bevelled slope.

This same form of theft has been practised on a smaller scale upon the kistvaen at Meacombe, in Chagford parish, where the end stones of the kist have been removed and the side stones, with the coverstone, left standing as a trilithon. And the same reason has in each case induced the thieves to stay their hands at partial wreckage, which reason is fear of the consequence of inducing the fall of the impost; much smaller at Meacombe, but still weighing more than two tons.

The capstone or quoit is irregular in form, a feature which has no doubt contributed to the confusion that attaches to its alleged dimensions. In 1789 the Rev. John Swete states the length "from N. to S. edge to be 14½ feet," and also "a similar length from E. to W.," but adds that it was "in width 10 feet." These statements present difficulties. They may mean that the diagonals were each 14½ feet in length, and the width 10 feet.

In the same year John Andrews of Traine, Modbury, gives the measurement of the longest side as 11ft. 9½ins., the breadth at the widest end as 9ft. 2ins., and at the narrowest end 6ft. 2ins. And he alone of all who took measurements supplies a sketch plan.

In 1796, POLWHELE and N.E.,[1] who are supposed to have derived their information from SWETE, say, from N. to S. 14½ft. and from E. to W. 10ft. LYSONS affirms that the measurements are, length about 12ft. and breadth 9ft.; this in 1807.

According to ORMEROD the greatest length parallel to the sides is about 14ft., and the mean length 13ft. 6ins. The greatest breadth 10ft. and the mean breadth 9ft. 10ins., he wrote in 1872.

ROWE, 1830, evaded the difficulty by giving the circumference, which he says is 41 feet, which would accord fairly well with LYSONS. From all which we may learn the desirability of preparing a measured drawing when describing objects of irregular outline. Admittedly a foot more or less in either or any dimension, except the thickness, would be of no archæological importance; what is important is the reliance which we place or may hold ourselves entitled to place on the observers.

There are but two other graves on Dartmoor which may fairly be described as dolmens, one on Brent Fore Hill near

[1] Miss Cecily Radford has kindly helped me in the matter of "N.E." She has in her possession a copy of *Essays by a Society of Gentlemen of Exeter*, in which has been inserted a copy of a letter which, on the authority of the late Mr. Winslow Jones, identifies "N.E." a contributor of several essays, as the Rev. John Swete, who used the finals of his name instead of the initials, thus "johN swetE." This fully accounts for the constant agreement of N.E. with John Swete. It also, thanks to Miss Radford, solves a problem which I had abandoned as unsolvable.

Corringdon Ball Gate, and the other on Cuckoo Ball, near West Peek, in the parish of Ugborough. Both are much ruined.

In 1838 the Rev. William Grey conceived that he had discovered a group of double stone rows associated with stone circles to the west of the dolmen, and in the same year, in company with his brother, he made a plan on the spot, which was completed at the hotel at Okehampton the same evening. The plan was made by pacing only, and the north point was only approximate.

Mr. Ormerod prepared a plan from Mr. Grey's data, which plan received Mr. Grey's approval, and was published by ORMEROD. It must be said that if any such discovery could have been proved it would have established the former existence of a group of circles and rows which for complication and incomprehensibility would be unique.

There have been and still are some few standing stones, but none of these, scattered as they are, can be made to do duty for any part of GREY'S supposed discovery.

SWETE, in 1779, " In the adjoining field to the West " (of the dolmen) " remarked several conical pillars about four feet high. On the Southern side there are three standing in a direct line from East to West, the distance from the most Western one to the middle one was 212 paces, from the middle to the one on the East 106, just one half of the former, by which it would seem that an intermediate one at least had been removed. In a parallel line to the north are two other remaining erect, the one from the other distant about 52 paces, nearly one fourth of the greatest space on the opposite line, the area between is 93 paces, in the midway of which at the Eastern extremity stands the Cromlech."

It will be seen that this description involves five stones in all, three in a line which is at least 795 feet in length, and in a parallel line, 232 feet away, two other stones 130 feet apart, a most exiguous *via sacra*, for such SWETE held it might have been. GREY attempts to account for 105 stones. ANDREWS in 1789 makes no mention of any standing stones. POLWHELE at first contents himself with a verbatim copy of SWETE, and later adds to the " two rows of pillars," " several columnar circles," but condescends to no detail. N.E. in or before 1796, LYSONS in 1807 and ROWE in 1828 are all silent, but, in 1848, ROWE writes that POLWHELE'S " two rows of pillars marking out the processional road of the Druids, and several columnar circles will now be sought in vain, even if they existed, to the extent described by the author."

It has long seemed to me that the time was overdue for someone, in the interests of archæology, to deal in an even more summary manner with the Rev. W. Grey's *discovery*.

There is no evidence that prior to 9-30 a.m. on Wednesday, July 4th, 1838, any person other than GREY or his brother ever saw, or imagined that he saw, the remains which the pair conceived that they then surveyed. And it is certain that no independent observer has since reported having seen those remains ; while it is, or should be, common knowledge that uninformed enthusiasm can gravely over-stimulate the imagination.

BRADMERE POOL

While here we may well take the opportunity of visiting Bradford, or Bradmere Pool, as to which I may quote SWETE (September 1789) :—" The little eminence chosen for our repast, over-hung what a year or two since was called Bradford Pool, a vast hollow excavated through a succession of ages by miners, the tin works, however, had been given over for a considerable period owing to a vast quantity of water which had overwhelm'd the bottom. It had been drained lately by some enterprising persons by means of adits drove under the hill on which the Cromlech stands."

At some time prior to 1848, the adit to which SWETE refers had collapsed and become choked, thus allowing the water to accumulate once more in Bradford, and ROWE found it a pool again. ROWE was a sound observer, but had two weaknesses, the one for the Druids, whose hand he saw everywhere, the other for the scholarship of Col. Hamilton Smith, to whose views he deferred always.

ROWE writes :—" Bradford, or Bradmere Pool, is popularly reported to occupy the site of an ancient tin mine. . . . On the south side, the bank rises steeply from the brink of the pool, and forms, apparently, the slope of an earthwork, where the vestiges of a ditch or moat can be traced, surrounding a mound of elliptical form, measuring, on the top, one hundred feet by one hundred and thirty. There seems to have been a provision for draining this piece of water, should occasion require. There are too many indications of regularity and design, to admit the supposition, that this mound is nothing more than the upcast of an abandoned mine." He then proceeds to state that if the evidence of entrenchment be thought too slight, there is yet another hypothesis, which connects this pool with the legendary erection of the cromlech. That legend is a variation of the three spinsters' tale, and attributes the erection of the cromlech to an old man and his three sons. Obviously, says ROWE, Noah and his sons ; this leads to the Deluge, and the Deluge leads to Mt. Ararat ; thus we come to Arkite Worship ; and on Arkite Worship Col. Smith was an authority. It appears that the pool is intended to be reminiscent of the waters which covered the

earth, and the waste heap of the mine to be a miniature Mt. Ararat, "As for the sloping ditch forming a road," says SMITH, "it may have served for the covered coracle, containing the novice in his mystic regeneration, and second birth, to be drawn up from the waters to the mimic Ararat of Gwidd-mau."

ROWE admits that the evidence for a sacred mound and lake may be questioned as insufficiently conclusive. But, says he, "it can scarcely be imagined that the memory of the flood should not have reached our Celtic ancestors two or three thousand years ago," and proceeds: "The tradition of the deluge, being thus manifestly familiar to the primitive inhabitants of our island, it is far from improbable, that indications of its existence would be found in their religious rites and monumental relics. And, if, as some antiquaries contend, cromlechs are Arkite cells, not only is plausibility added to the conjecture, which interprets the legend of the erection of the Drewsteignton cromlech, by three young men and their father, who came down from the heights of Dartmoor, as originating in an obscure and perverted tradition of Noah and his three sons—but the probability of an Arkite character pervading the accompanying archæological relics, is increased in proportion."

Which shows how very tidy our early antiquaries were in their methods, and how fully aware they were that, taking a number of convergent assumptions it would be found that they gave mutual support, but how sadly they failed to realise that no truth could be demonstrated by the concurrence of an assembly of guesses.

THE HILL CAMPS

Prestonbury is one of a group of three camps, *Cranbrook*, *Prestonbury* and *Wooston*. Their sites are at different elevations; *Cranbrook*, the highest, touches and just exceeds 1,100 feet above Ordnance Datum, *Prestonbury* rises to a trifle above 800 feet, and *Wooston* attains 650 feet. But, different as are their levels, one feature is common; each occupies the extreme of a hill spur, planted on the summit with precipitous slopes on three sides, and a relatively level approach on the fourth. At *Prestonbury* there are gradients of 1 in 1.5 on the south of the camp; 1 in 2 on the west; 1 in 5 on the north, but to the east there is an approach on practically level ground.

At *Cranbrook* the northern slope varies from 1 in 5 to 1 in 1.5, the western slope is comparatively gentle being no more than 1 in 12; to the east it is in places 1 in 6, while southward there is an approach on level ground. *Wooston* stands on ground which north, east and west falls at gradients between 1 in 1.3 and 1 in 2.4; to the south-west it can be approached over ground falling toward the camp 1 in 15.

At *Prestonbury* and at *Cranbrook* the contours have led to a marked strengthening of the defences on the side of easiest approach. Three ramparts defend the camp of *Prestonbury* on the eastern flank, whereas one rampart suffices for the other flanks. *Cranbrook* presents a much more formidable defence to the south, where the approach is over practically level ground, than on the north where the gorge of the Teign presents natural defence. The graduation is unusually marked ; to the south there is a length of 220 feet where the defence is an outer ditch and rampart, followed by an inner, deeper ditch and higher rampart. To the east the camp presents 160 feet of the inner ditch and rampart, with no outer works ; to the west 190 feet, with outer rampart, but no outer ditch, and an inner ditch and rampart.

East and west the earthworks cease abruptly, and the cincture is closed by a rubble mound, the ruin of a stone wall, originally 6ft. 9ins. in thickness, and of unascertainable height, the wall as well as the high stone face of the inner rampart, elsewhere, having formed for many years a convenient quarry for road metal.

At *Wooston* the bank is continuous around the camp, although now less marked on the eastern side, but there are detached outworks to the south which are a little difficult to understand in the absence of a precise survey, which I have never prepared,

Excavations were made at *Cranbrook,* with slight result. Bronze Age pottery was, however, found, and occupation during the Early Bronze Age is indicated. A feature sometimes found in camps attributed to the Neolithic Age is well marked, the presence of causeways of approach, formed by strips of the natural ground, left at its original level, traversing the ditches and giving access to the camp through openings in the ramparts. It is not certain that this form of approach was limited to works of the Neolithic Age.

It has been fashionable to describe this group of camps as so sited that they commanded the valley of the Teign, which by their aid could be closed to invaders. This application of the principles of modern strategy to prehistoric camps has two defects. In the first place, these hill-top sites had not the course of the river, except in the distance, within visual observation, and sallies from the camps would be made down declivities of such gradient that the danger to life and limb would be as great as any danger from the enemy.

Secondly, no sane commander would lead his forces up the banks of the Teign, with no room for deployment, and no chance to manœuvre on either side of the line of advance except upon ground of precipitous slope. The approach to

the high lands could readily be made along the ridge of the hills and by side valleys, on good ground by-passing the hill-crest camps at a convenient distance.

It would appear that the camps were places of refuge in times of stress and disturbance, unlike the Dartmoor pounds, which were in daily occupation and use. In construction and in location they are wholly unlike the pounds.

Oak Copse and Charcoal

In the days when oak copse was grown largely for the production of bark for the tanyards, when in fact leather was a reliable product, some part of the poles was usually converted by the charcoal burners after the bark had been stripped. The method followed was to heap the poles around a small central core of brushwood, inclining them toward the centre, and thus building a truncated cone, with an opening or chimney left at the top, the remainder of the surface covered closely with turf, except for a few small openings left for draught during the first ignition of the wood. The centre being set alight, and the fire well distributed through the mass by the careful manipulation of the draught, the chimney and all other openings were closed, and combustion allowed to proceed in the presence of as little air as sufficed to keep the fire alight.

The more volatile components of the wood were thus either driven off or consumed, and the fixed carbon remained as charcoal. Under favourable conditions the charcoal obtained was about 16 per cent. of the weight of the wood used.

It has long been known that more complex devices for the control of the draught would yield in use a higher percentage of charcoal, and in modern practice retort-fired wood may give 27 per cent. It was held, however, that the product of the simple pile was harder and thus more desirable than charcoal made by most of the more elaborate processes. But much depended upon the skill of the men in charge, and charcoal burning was a skilled trade, its secrets of manipulation somewhat jealously guarded.

In combination with other elements carbon forms 51 per cent. of the weight of wood, on the mean of five species of trees; while the fixed carbon recoverable as charcoal ranges, according to the process adopted, between 16 and 27 per cent., at the best little more than one half the total carbon.

In the early years of the nineteenth century, according to Vancouver, oak coppice in Devonshire was cut every sixteen years or from that upward to twenty; it fetched, standing, from £15 to £20 an acre; near Torrington, where it was allowed to stand for 30 years' growth, its value was £35 per acre.

The usual appropriation of the oak wood, after peeling every branch of an inch or more in diameter, was to select all the best poles for building, fencing, paling and making hurdles, to tie the brushwood in faggots and convert the remainder into charcoal; the charcoal fetching about four shillings a hundredweight on the spot, and being sold to woolcombers and other customers, chiefly from the manufacturing towns.

Charcoal was largely used for scalding milk (it is stated by FRASER) the pans being made of either tinned copper or brass; and the little stoves being nothing more than deep, cup-shaped hollows sunk in a granite stone, as we know from examples still remaining, but disused. Earthenware pans were also in use, but brass was supposed to raise more cream.

Writing in 1796, MARSHALL records the fuel of farmers and cottagers in the enclosed country to be invariably wood; on the skirts of the mountains peat, while Plymouth had a supply of Newcastle coals. He says that Spray Faggots (4 feet long and 3 girth) were sold at 16d. a dozen to the King's bakehouses, presumedly at the Victualling Yard at Plymouth.

In 1788, John Andrews of Modbury, noted that :—" The scarcity of fuel begins to be a serious inconvenience in most parts of the County: the farmers find it very difficult (notwithstanding the severity of the laws) to prevent their hedges etc. being plundered by the poorer sort of people, who cannot afford to buy: and the evil seems to be increasing."

It will be seen that oak coppice and its products bulked far larger in those days in the national and local economy. With the introduction, first of tan extracts from the wood rather than the bark, then of chrome tanned leather, and with the increasing use of mine coal, the coppice rapidly declined in value. But yet it is within my recollection that the coppice was regularly cut, rinded for bark, and the poles converted into charcoal, the faggots sold as firewood. And until but a few years ago I knew a dairy in which the milk was scalded in a brass pan.

Here, in the valley of the Teign, the collier lingered still, when the younger generation in my western quarter held him not in memory even. It has taken a world war to bring him back to both quarters; but he is no longer the skilled builder of a pile, he is the operator of an oven.

On the 20th September, 1892, at a meeting of the Teign Naturalists Field Club, Dr. Pearson, Rector of Whitestone, read a short paper on the accounts of one of his predecessors in that living, with special reference to the proceeds of about 25 acres of oak coppice in the years from 1817 to 1843. The Rector of that period was evidently a man of business habit; he gave details of the yield in bark, poles and faggot wood

produced, the cost of labour, cartage etc. and the price of bark per cwt. To the year 1837 a note is added, stating that the gross value of the proceeds of the coppice during twenty-one years up to that date had been £788 ; the expenses £225 and net profit £563 or about £26 10s. per annum. The highest value received for bark had been 10s. 7d. per cwt. in 1818, and the price had scarcely ever fallen below 7s. It will be seen that the figures confirm VANCOUVER'S statement as to the value of coppice, being somewhat over £1 per acre per annum. This compared with agricultural values of the day was a favourable return from the steep hillsides, unsuited to any other form of cultivation, at a time when the average rent of tillage and grass land was 41s. 6d. per acre in the South Hams, and no more than 14s. 6d. an acre around Holsworthy. But, according to Marshall, writing in 1796, there had at that time been a marked rise in the price of coppice, between the years 1783 and 1794 it had advanced from £10 to £15 per acre, and within memory the price had been as low as £5. He attributes the rise to an increase of demand from Ireland for the bark, and the effect of the war on the price of wood.

MILLS

The river which runs at the foot of Prestonbury has also in the past played a part in the life of the district, a part which has taken on a changed character. In Elizabethan days and earlier it was the source of water and power for the tinner. There yet remain two leats, or rather in one case the channel only, now dry. Of these leats one provided power for a tin mill opposite Thornworthy ; its channel is now dry. The other served a tin mill near Outer Down, and this leat is still in use, having been extended to Combe Farm and the Sanitorium. At both mills tin was crushed, washed and smelted.

Other leats there were which supplied power to various mills, flour, woollen and edge-tool. Some few of these mills are now idle, even ruined, for instance the mill at Fingle Bridge.

Omitting the tin mills there were fourteen in all, with powers varying from 4 to 19 horsepower. Two of these mills are derelict, four have been wholly or partly diverted from their original use to domestic purposes of light and power. The flour mills are now gristing and agricultural mills. Two new power stations have been formed, the one to supply electricity to Outer Down, the other to Castle Drogo ; and one new station is for the purposes of the clay works.

The iron or edge tool mills still work, and still supply hooks, bills, etc. to the neighbourhood ; they hold their own against Sheffield, because their quality of work is at least as good, in most instances better ; their choice of patterns is

far larger, and there are parochial fashions of traditional forms and balance even in such things as hedging hooks.

Of all the mills it may be said that they were constructed to come near to fully utilising the mean flow of the river, and at the same time to be workable in dry times, but not in excessive drought. As a help toward this possible adjustment some have two, or even three wheels. Both overshot and breast wheels are to be found, according to the available fall.

But the day of small sources of power is, I fear, passing; and until the oil resources of the world fail the internal combustion engine will be the enemy of small water-powers. The Teign as a source of water grows in importance, as a source of power it unfortunately decays; and the two uses are not, under present Parliamentary practice, compatible.