

## Wednesday: Excursion.

The morning opened somewhat unpleasantly, and rain was falling at the time for assembling. The start, however, was punctually made, and by good fortune before noon the rain ceased, and the day remained fine.

The first place visited was the

### Castle Rock Quarry.

The Rev. H. H. WINWOOD having been called upon to make some remarks on the geology of the district, said they were standing upon a very fine mass of Conglomerate, of Triassic age, which fringed the basset edges of the upper Devonian beds in this neighbourhood. Making a passing allusion to the Devonian controversy existing between the Irish and English geologists, he said he accepted the conclusions arrived at by Etheridge, Ussher, and Townsend Hall (the latter's familiarity with these beds being surpassed by none), rather than those of the opposite side, though supported by such an authority as that of the late Professor Jukes. The Members would, in the course of their day's excursion, pass over strata in a descending order, *i.e.*, from the more recent to the more ancient Devonian beds; but at present his remarks would be confined to the Triassic conglomerate before them. They would see from the lime-kiln close at hand that some of these pebbles were burned for lime—a very valuable commodity in these parts; others, consisting of sandstone and grit, were used for road mending. Now as to the source whence they came: were these limestone pebbles Carboniferous or Devonian? As to the source whence the so-called Dolomitic conglomerate which fringed our Mendip Hills was derived, there was but little doubt the limestone pebbles contained

therein were plainly the result of the denudation of the Mountain limestone strata on which they rested; the palæontological evidence was abundant; the fossils contained in them being clearly of Carboniferous age. But as to these before them, he was by no means certain, as he had not seen any fossil evidence whereby their age could be accurately determined: he was rather disposed to consider them Carboniferous. The other sandstone pebbles of which the mass was composed might be of any age between the Silurian and the Coal Measures proper. He would now make way for Professor Boyd Dawkins, who would be able to controvert, or otherwise, the few remarks he had, with great diffidence, ventured to make in his presence: but before doing so, he called upon the local geologists to collect all the fossil evidence from these conglomerates they possibly could, and to be especially careful accurately to note their localities.

Professor BOYD DAWKINS said he did not agree with Mr. Winwood as to the source of the limestone pebbles, and it was perhaps one of the great advantages of a meeting of this sort that they got some disagreement. He should like to point out the real lesson to be taught from a quarry like this. The pebbles which they saw before them were really fragmental rocks. There were three kinds or conditions of rocks. One was the fragmental, such as these before them; another was crystalline, like the granite; and then there were those which had first been fragmental and had then become crystallized to a certain extent. The conglomerate before them was the result of the dashing of the waves for a series of years upon the older rocks—an untold series of years. It was absolutely impossible to form the slightest idea of the length of time which had been occupied by the formation of this beach. They stood there upon an ancient shore, exceedingly clearly marked by the Devonian hills. There was a distinctly marked coast-line extending towards the Bristol Channel. This same beach was to be found in the neighbourhood of

Bristol. Everywhere it pointed out that they were standing upon the margin of an ancient sea. Some of these pebbles were limestone, and Mr. Winwood had said they were Mountain limestone; although, for his own part, he failed to see how he could make that out. It seemed to him that they had a true series of sandstones on these hills, and that it was more reasonable to suppose that these limestone pebbles had been derived from the same area that provided the Dolomitic conglomerate. The quarry consisted of a kind of petrified shingle beach, belonging to the New red sandstone period. It was impossible to realise the length of time that had elapsed since the waves of the sea had been beating on the Devonian rocks, which in those days formed the sea cliffs in the district. In the physical geography of Britain in those days, the West of England consisted of a line of islands encircled by sea. The mountains of Wales formed islands, overlooking the same sea. The Mendips, too, formed a very small island, and the line of islands extending past the present area of Wales to the Pennine chain—the very back bone of England, and that led to the area of Cumberland, and Westmoreland, and the highlands of Scotland. All these hills constituted the islands, and the intervening sea was marked in the low-lying country between these districts, and by the New red sandstone which constituted the low-lying parts of the garden of England in the south and midland districts. Those who resided in this beautiful neighbourhood had a wonderful opportunity of enlivening the monotony of their lives. If they examined into the causes of the things they saw around them, they would derive, he thought, a greater amount of pleasure—more lasting pleasure—than they could get from the ordinary amusements resorted to.

Mr. RICHARD LANGRISHE, Vice-President of the Royal Historical and Archæological Association of Ireland, made a comparison between the sandstone found here, and that found in his native county of Kilkenny, where they had a very fine

series of lower geological formations, commencing with a granite axis, and continued through the Silurian slates, with great masses of pure quartz, appearing near the granite. Over the slates lay a considerable thickness of a very hard, compact sandstone, mottled with purplish red and yellow, with numerous quartz veins running through it. This appeared to be succeeded by very thick beds of Conglomerate, apparently made up of the decomposition of the latter rock, but without limestones in it. At a distance this Conglomerate greatly resembled that at which they were now looking, but on close examination would be found to contain a large quantity of white quartz pebbles, and to be otherwise quite different in its constituent parts. This Conglomerate lay to the south of the granite axis, and appeared to dip under the Carboniferous limestone. The hard, mottled sandstone, just mentioned, lay to the north of the granite axis, and also dipped beneath the Carboniferous limestone, which was of vast thickness, and, in general, of a much harder and more crystalline character than that seen here. There were also numerous beds of hard red and grey sandstones, called Devonian on the geological map, which appeared also to intervene between the Carboniferous limestone and the lower sandstone first referred to. Over the Carboniferous limestone they had the coal measures, containing the anthracite or Kilkenny coal, and beds of fire-clay, and capped by sandstones of similar quality to those with which those present were familiar in many of their local buildings.

At the conclusion of these remarks a workman brought a tray of fossils, none of them, however, being sufficiently characteristic to decide the question whether the limestone was Carboniferous or Devonian.

### Gauldon in Tolland.

Proceeding next to Tolland, the old house known as Gauldon was visited. As soon as the party had collected,

Mr. E. CHISHOLM-BATTEN, in giving some account of a

previous visit made by him, said that being informed by the owner that it was a curious place, he went there, and was received with great kindness by the occupier. From an inspection of some old deeds, it appeared that the manor was part of the property of Taunton Priory. There were fish ponds, still to be seen. On the chimney-piece would be noticed some handsome carved work, in which the arms of the Turberville family were very distinct. The ceiling was highly ornamented. There was what was said to be a chapel, and the room, he thought, looked like one in which service might have been held in the time of Elizabeth. There was a notion that Bishop Turberville retired here when compelled to leave his See of Exeter, and such a chapel would have been used privately for his Popish service.

Rev. F. BROWN remarked that no doubt the house belonged to the Turbervilles, and that they occupied it. From some notes he had collected, he found them as owners to quite a late period. In 1680, the will of George Turberville of Tolland was proved, March 18th, in which he left all his goods to his brother John. John married Elizabeth, daughter of Sir Peter Fortescue, who died in 1686; and he found in the will of a gentleman named Fortescue, of Berkshire, in 1746, mention of "my daughter Turberville of Tolland." Bishop Turberville was of the family from Beer Regis; there were others seated at Crediton.

The interior was next inspected, and the ceilings and mantel-piece criticised. Some discussion then ensued as to the date of the house.

Mr. FERREY, having lately been engaged on a similar building, was of opinion that this was late Jacobean.

Mr. GREENFIELD explained the armorials and the motto on the chimney-piece.

Bishop CLIFFORD having examined the room said to have been a chapel, concluded that such was not the case, and that it was simply an ante-room.

Mr. GREEN drew attention to the screen dividing the rooms, and said that it was perfect until recently.

In the Chancery proceedings in the time of Elizabeth, there is a case of John Smith, *alias* Tucker, of Lawrence Lydeard, yeoman, against Richard and Symon Murley. The dispute was concerning a messuage and lands in Toland and Lydeard Lawrence, parcel of the manor of Galden. The 'orator' stated that George Mynne, gentleman, was seised in fee of the "Manor of Galden, with all his members," and that in March, 22nd Elizabeth, 1580, "in consideration of a great sum of money," he demised all that messuage, gardens, orchards, etc., so situate, to him and his wife, and the survivor of them, with a rent of twenty-five shillings, payable at the feasts "most usual." But "so yt ys yt maye please yo' good Lordshipp," Richard Murley and Symon Murley had by indirect and unlawful means gotten into their hands and possession the deed of lease, and by colour of a "fayned" title entered into the premises, and endeavoured wrongfully to expel the petitioner, albeit that he had often times in a friendly manner requested delivery of the deed, "yet the same he utterly refused."

If this document refers to the Manor House, it was to one now gone. It would help to show that the Turbervilles were not the Elizabethan owners, and to suggest that their first work on getting possession was the building the present house in Jacobean times. Under these circumstances, he feared that the supposed retirement here of Bishop Turberville, in Elizabethan times, so prettily worked out, as published in our *Proceedings*, vol. xxiii, must be quite abandoned.

### Hartrow Manor.

A short drive brought the party to Hartrow Manor, where all were received by the Rev. W. Sweet-Escott, and most kindly entertained: a luncheon being set out in the dining room.

The Rev. W. SWEET-ESCOTT, jun., showed a plan of the old house, built about 1580. It was pulled down by his grand-

father when a portion of the present building was erected. About 1817, the hall in which they were was built. The armour and other things around the walls were nearly all of them very old; their arrangement had been made by one who had showed them to the best advantage in a remarkable way. The heraldic glass they saw in the windows was Flemish, Swiss, and Bavarian. He would be glad to give any further information they wished.

REV. W. SWEET-ESCOTT, sen., said that there was a living, that of Brompton Ralph, attached to Hartrow, in which the register had been kept from 1557—only nineteen years after the order was issued by Henry VIII. Although some of the entries were rather carelessly written, they were all quite regular down to the present time. It was seen that during the Commonwealth the marriages had been performed by the magistrates, John Turberville being one of them.

The register and the various signatures of the justices having been examined,

The PRESIDENT thanked Mr. Escott for his kind reception. The family was an ancient one, and one distinguished for ability. He recollected at the time of the first Reform Bill, that Lord Lyndhurst, had he succeeded in forming an administration, proposed to make one of the Escotts a Cabinet Minister.

Mr. ESCOTT having acknowledged the President's attention, the Members passed out to the lawn, where some remarkable trees were seen.

The Members then sought the refreshment so kindly provided, and afterwards examined and admired a very fine tree, of especial magnitude, growing on the lawn.

A long, hard pull for the horses brought the party to

### *Elworthy Barrows.*

Professor BOYD DAWKINS said the place was admirably suited for a camp. Perhaps he was trespassing on local tradition when he called this a camp. When he looked round

he saw what appeared to be the remains of an old rampart, although it might be anything else. The early Neolithic camps of this country were built on a slope, and made to command the ground in front—to sweep it, as it were, with arrow and stone sling-shot. They were not often found on the top of a hill. In the Neolithic times the country was divided into communities, who lived the same sort of life that the wild tribes in India did at present. Each village was at war with its neighbour, and on the look out for its cattle.

Mr. ELTON agreed with Professor Dawkins that such camps were common in the extreme West of England. They were probably Belgic. On the Blagdon Hills they found a better style of camp, evidently constructed by a more advanced people. At Clevedon some Roman camps shown him were originally Gaulish, and from this Roman occupation some of our towns had grown. Gardens, cemeteries, shops, and temples would soon follow, and the encampment became permanent. In time the Romans chose their own ground.

Sir ALEXANDER HOOD, who had joined the party here, asked what was meant by the name Cadbury; there were several in the county.

Professor DAWKINS said it meant an embattled entrenchment; a war camp.

Mr. Blommart kindly sent a drawing and the dimensions of an ancient British urn, made of unbaked clay, found in the winter of 1834-5, in a barrow in a field called Sparborough, at Willett, in the parish of Elworthy. Its outside diameter at the top is  $7\frac{1}{8}$  in.; outside height,  $9\frac{1}{2}$  in.; base diameter,  $4\frac{7}{8}$  in.; largest circumference,  $23\frac{1}{2}$  in.; circumference at top,  $22\frac{1}{4}$  in.; average thickness,  $\frac{1}{4}$  in. The burial place contained a circle of upright stones, about six feet in diameter, and three feet high. On one side was a square cavity, about fifteen inches in diameter, inclosed with flat stones, containing this urn, with fragments and ashes of burnt bones. There were also pieces of another urn. The perfect one is in the possession of General Blommart.

Mr. ELTON had lately opened a barrow near his own house, and had found several of these urns. In one were the bones of a grown person, and those of a child; from which he concluded that the bones of a mother and her child had been burned together.

Sir ALEXANDER HOOD asked if it were usual to find a good supply of water near these camps. There were many capital springs near this one.

Professor DAWKINS said it did not seem to be always the case.

### *Raleigh's Cross.*

Proceeding to Raleigh's Cross Inn, a welcome and most excellent luncheon was found ready, provided by the thoughtful care and kindness of the President.

Rev. F. BROWN, at the conclusion of the repast, in a few appropriate sentences, thanked the President for his hospitality.

The PRESIDENT having acknowledged this courtesy, the Members adjourned, well pleased and surprised at finding, in this distant quarter, such a luncheon, and so well served.

This so-called 'cross' is simply a land-mark, dividing the manors of Nettlecombe formerly owned by the Raleighs, and Clatworthy, the now properties of Trevelyan and Carew.

The following information regarding it is contributed by Mr. Beamer, as gathered by him from Mr. Babbage, now aged, but for many years steward to the Trevelyan estates. The same office was held also by his father before him, their term together counting over a hundred years. Mr. Babbage learned from his father and grandfather that the 'cross' was erected when Nettlecombe was owned by the Raleighs, the hill being then an open common, and traversed only by pack-horses from Bampton to Watchet. The paths or tracts are still visible in the cultivated fields. The 'cross' was fixed by the side of a dangerous bog, called the snipe bog, in a field below and north-west of where it now stands, as a mark of danger and a warning to travellers to keep to the south side of it. The bog is still visible, but

is now partially drained. When the hill was enclosed—about forty or fifty years ago—and a road cut from Sticklepath Gate, the ‘cross’ was standing in its original place by the bog; but by order of Sir Walter Trevelyan, Mr. Babbage then removed it, and put it where it now is, as a boundary stone, parting the Trevelyan and Carew properties.

Professor BOYD DAWKINS, standing on the base of the ‘cross,’ gave a short account of the

### Brendon Mines.

His recollections of the Brendon mines were comparatively ancient. Some twenty years ago he had the pleasure of examining them rather critically. According to tradition, these mines had originally been worked by the Romans. The evidence for that consisted in the lines of old refuse heaps and *scoriæ*, which ran in an eastern and western direction. He regretted that he had not a map there that day whereon this was recorded. There was nothing very interesting in the mines themselves. He would, however, give them an account of the

### Origin of Minerals:

of the condition and mode in which they found their way into the veins.

The rocks had been traversed by a series of fissures, running east and west in this district, and a very curious thing had happened. The water falling from the clouds had found its way into these fissures, and sunk deeper and deeper into them. He need hardly say that the earth was a cooling body, just in the same way as a hot brick was a cooling body. The water gradually descended deeper and deeper, obeying the law of gravitation. Another set of agents then came into play. The internal parts of the earth were so hot, that no idea of their heat could be formed. The same sort of circulation went on in the earth as in a boiler or kettle of water on the fire. In the case of the earth, the water did not boil, however, because of the enormous pressure at great depths,

and because it gradually cooled as it approached the surface. The water, enormously heated, would dissolve almost any thing. For instance, if a wine glass were put in the boiler of a steam engine, a considerable portion of it would dissolve away. If a piece of glass, or a piece of sandstone composed of silica, be put in a closed cylinder, highly heated, it will also dissolve away. That was just what happened in the earth. The water, under the above conditions, exercised an enormous chemical effect upon any thing that came in contact with it, and thus it became laden or charged with mineral matter. This matter, as the heated water rose, and as the pressure and heat diminished, was deposited in the cracks, and formed mineral veins. This involved another consideration. In those times of which he had been speaking, to allow this deposit to have taken place, these hills must have been many thousands of feet beneath the surface of the earth. That idea conveyed an impression of time almost infinite. Vast changes had taken place. The deeper rocks had been elevated. The rocks formerly buried miles beneath the sea were lifted up, and were now our hills and valleys. It was the land that had always changed—not the level of the sea.

Mr. WINWOOD added a few words as to the geology of the 'cross.' The upright limb was composed of Triassic Conglomerate, of the same age, probably, as that they had seen yesterday, though of very much finer texture. It had been selected with a purpose from one of the finer beds of the mass, and contained something of much interest on its south side, which he had never seen in that Conglomerate before. It consisted, as they saw, of the usual small pebbles, more or less rounded; and amongst them, on the south face, was a fragment of Chert or impure flint. Did not that tend to corroborate the view he had ventured to take with regard to the Castle Rock quarry? He questioned whether his learned friend, Professor Boyd Dawkins, had ever found a piece of chert, in a Devonian pebble.

Professor BOYD DAWKINS said it seemed to him that before Mr. Winwood's remarks obtained that point, which it was his wish they should obtain, he would have to prove that there was no such thing as chert in the Devonian rocks, and if he did that he would have to work very hard indeed.

### *Huish Champflower.*

A comfortable and gentle descent—an agreeable change—passing by the way the Dun stone and the source of the river Tone, brought the excursionists to Huyschechamfflower, as it was written in olden time.

### *The Church.*

The Rector, the Rev. W. King, received the party.

Mr. FERREY, describing the edifice, pointed out some peculiarities externally in the bell chamber: there seemed to be a double range of windows—one range blocked up forming small niches. The tower arch within was very remarkable; there were no piers, and the character was very plain for a church built in the Perpendicular period. The nave arcade was certainly the most curious that he had seen in this neighbourhood. Notwithstanding some of the detail being apparently of earlier date, he should take it to be of early Decorated period. The character and plan of the piers were of that period; the capitals were very shallow, and the carving was very much of the character common to this part of Somerset. The very beautiful large window was evidently of the transition period, between the Decorated and Perpendicular; the two quatrefoils in the tracery would be noticed, these marking the differentiation, not being at all usual in pure Perpendicular windows. Externally the mouldings were very good; not shallow and poor, as many Perpendicular mouldings were. With regard to this window, he was surprised that such great authorities as Clayton and Bell had attributed it to the thirteenth century: he should certainly place it in the fourteenth. There were signs of a rood-loft, which had extended across the nave and aisles.

Bishop CLIFFORD said it appeared to him that the entrance to the rood-turret and the rood-loft must be older than the arcade, and that the rood-loft did not belong to it. There must have been an earlier church, as could be seen by the masonry on the outside. Perhaps this chapel was a part of it.

REV. W. KING, the Rector, said that the large window came from Barlynch Priory, but there was no document to prove this; the story had come to them by tradition. There had been alterations, he thought, in the church. This corner was the private chapel of the Lady of the Manor, and the doorway her private entrance.

The remainder of the journey homeward was easily made, and the hotel was reached by half-past six.