BUCKS ARCHÆOLOGICAL AND ARCHITECTURAL SOCIETY.

ANNUAL MEETING, AUGUST 19, 1862.

(From the Bucks Advertiser and Aylesbury News.)

The annual meeting of the members of this Society took place on Tuesday. The programme included a visit to Hartwell, and, almost as a matter of course, the researches of the *savans* were directed into a geological channel, thus making an addition to the number of the subjects which are supposed to come within their province. Not that there are not at Hartwell ample objects of interest for the archæologist proper, but the peculiar natural features of Hartwell, laid open by the brick-making, the quarries, and the sand-pits, offer an excellent field for the illustration of the elementary principles of geology, and the museum of Dr. Lee (so amply stored that few visitors leave without carrying away with them some specimens of the productions of the district), facilitates the more leisurely illustration of the subject. Professor Morris had been invited by Dr. Lee to meet and accompany the members on a geological tour, and a party of about 40 assembled at the brick-field of Messrs. Locke, among whom we noticed Dr. and Mrs. Lee, Mr. G. G. Pigott and Misses Pigott, Rev. C. Erle, Mr. and Mrs. Buxton, Dr. Morris, Mr. Mayo, Mr. Bartlett, Mr. J. Bartlett, Mr. John Morgan, Rev. C. Lowndes and Mrs. Lowndes, Rev. G. R Ferris, &c., &c.

The PROFESSOR first called attention to the Kimmeridge clay which forms the foundation of that part of the geological series visible in this district. This clay, he observed, is the subsoil of, and may be partly the cause of the fertility of the Vale of Aylesbury. The spurs or terraces of chalk-marl which extend from the base of the chalk range afford, from their peculiar character, good arable land. At the extremity of the brick-field, the Professor pointed out the commencement of the Portland Rock, and the numerous fossil remains, especially ammonites. In passing the Park, several immense specimens were observed built up in the wall, some of which were rapidly being decomposed by the action of the atmosphere, giving rise to a remarkable discoloration of the wall. In a quarry now being worked near the Bugle Horn Inn, the same rock was more fully exposed. In this quarry, and also in the one at Barnett's Close, the upper layers exhibit another change. The old sea bed is here covered by strata which were accumulated in an estuary, and some of the beds are full or almost composed of a small bivalved crustacean called Cypris, a genus of shell fish now living in our ponds and rivers. These strata alternate with others of shale and clay and soft limestone, one of them being locally termed "Pendle," and form the strata of the Purbeck group, so named from their characteristic development in the Isle of Purbeck, and which also occupy a portion of the area in the Vale of Aylesbury. These beds are well exposed in two pits which are opened on the road to Bishopstone from Stone, the last one frequently yielding perfect fishes and remains of turtles. The Pendle is a bluish compact, but sometimes fissile limestone. This and the associated beds contain cyprides, some shells, with bones, coprolites, and palates of fish, besides wings and wing-cases of insects and fragments of ferns and lignite.

The visitors next explored the red sand-pit on the left of the Hartwell and Bishopstone road, where the Professor pointed out that some of the pebbles found in the gravel must have come from a remote distance, there being no rocks of similar nature within this vicinity. The site on which the new schools are being built was explored, and the soil obtained in digging a well was examined. The party next, passing the pits already noticed, came to the sand-pits on the road to Thame, containing the white sand used in the glass manufactories of Birmingham, and above it the coarser sand and bed of fuller's earth. The presence of iron, in considerable

quantities, was also noticed. These beds probably represent a part of the Wealden and Lower Green sand groups.

The party next adjourned to Hartwell House, and a short time was devoted to the examination of the museum, the contents of which we need not again describe. Dr. Lee generously permitted the visitors to take away such specimens as they might desire to illustrate the lecture of the morning.

The members of the Society were afterwards hospitably entertained at luncheon, after which Dr. Lee proposed "Prosperity to the Architectural and Archæological Society," coupled with the name of Mr. Pigott, who briefly responded. The health of Professor Morris, with thanks for his valuable explanations, was proposed by Dr. Lee and briefly responded to. The health of the hon. secretaries, Rev. C. Lowndes, Rev. G. R. Ferris, and Mr. Field, was also duly honoured, after which the health of Dr. and Mrs. Lee was proposed by Professor Morris, and acknowledged by Dr. Lee, after which the company adjourned, it being near the hour fixed for the evening meeting.

THE MUSEUM.

The collection of curiosities displayed for the inspection of visitors was not so large as on former occasions, but we noticed among other objects a dagger found three feet below the soil, at the foot of an old oak in Balmore wood, in 1853; also a photograph of the autographs of 11 out of the 14 members sent by the county of Bucks to the Long Parliament, exhibited by Sir Harry Verney. A jug, found in digging the foundations of a cottage at Mentmore, by Lady Rothschild; barrel of a horse pistol and Misericorde Dagger, time of Henry VII., found at Whitchurch on the site of the castle, by Mr. E. Butcher. Very ancient stirrup, found at Long Down, near Amersham, and presented to the society by Mr. Wilson. Monumental Brass to Sir Thomas Boleyn, father of Queen Ann Boleyn, and Lord of the Manor of Aylesbury, by Mr. F. M. White. Model of the Old Market Hall, Aylesbury, by Mr. Jackson. A large folio MS. Latin Bible, of the early part of the XIIIth century, extremely beautifully written on vellum, and illustrated with numerous exquisitely illuminated capitals throughout, but particularly in the New Testament, by Dr. Lee. Ancient Silver Finger Ring, found in Mr. Gibbs' garden, in 1847, with this inscription:—BENE ET SEIT QUI ME PORTE—Blessed be he who wears me; or well may he be who wears me, by Mr. Robert Gibbs. Bronze figure of our Saviour, gilt, found under the Sacristy, in Aylesbury Church, by Archdeacon Bickersteth. A very interesting collection of Roman relics, from the rubbish of an ancient Roman Villa, discovered in the spring of 1861, on Mr. Greaves' property, of Tingewick, consisting of a great variety of pottery, tiles, portion of patera, an arrow-head, a bone comb, two knives, nails, &c., and a remarkably curious pair of bronze compasses. An extensive collection of ancient coins, and numerous specimens of ancient arms and armour.

THE EVENING MEETING.

The general meeting of the members was held in the evening, at the White Hart Room, Archdeacon Bickersteth in the chair. There was a large company, many of whom appeared to take a deep interest in the proceedings.

Archdeacon BICKERSTETH, in opening the proceedings, said—I will not trouble you with many words of mine on this occasion, because I am surrounded by gentlemen who, I am persuaded, will give you an intellectual feast to-night. Most of you, doubtless, accompanied Professor Morris on his ambulatory lecture this morning, and you will, I am sure, gladly welcome him again. I had not that gratification, and I look forward with great pleasure to his observations on the geology of this district. We have also a paper written by Mr. Kelke on "The Sepulchral Monuments of Bucks," another by the Rev. Mr. Ouvry on "Wing Church," and one by the Rev. Mr. Travers on "Stewkley." We will now at once proceed to the formal business of the meeting.

The report and statement of accounts were then read as follows:—

"The society has now been in existence fourteen years, and during that period has increased steadily in its number of members, and received several donations to its library and museum. Since the last report, in 1854, the society has printed annually and distributed to its members gratis two numbers of the records, which contain the various

papers read at the meetings, an account of the restoration of churches in the county, and a record of the discovery of relics of antiquity. The printing the two numbers of the records with the illustrations, is more than the society anticipated at its formation, and the expense has necessarily become so great that your committee deemed it expedient to recommend at the last annual meeting an alteration in Rule 4, to the effect that each member shall in future pay an annual subscription of not less than 6s. or shall compound for the same for five years by one payment of £1 5s., or for life by one payment of £5. This alteration came into operation on the 1st of January of the current year. In consequence of the small attendance at the quarterly meetings, your committee consider it desirable to hold, instead of them, one general meeting annually. These meetings have been held in Aylesbury about Christmas, and have been well attended. Since the last report annual meetings have been held in Buckingham, Eton, Newport Pagnell, and Amersham. In the year 1858, on the resignation of the Rev. H. Wanklyn as hon. sec., the Rev. C. Lowndes and the Rev. H. Roundell were appointed to act with the Rev. W. H. Kelke, who continued in office. In the same year a room in Silver-street, Aylesbury, was taken as a deposit for the property of the society, where the members have an opportunity of reading and borrowing the books. Your committee have now taken, on a lease of six years, two rooms in Church str et, lately occupied by Mr. Bingle, and belonging to the Bedford Charity, with the view of removing the library from the room in Silver-street, and forming a permanent museum for the county in connection with the society. The following gentlemen have already promised donations, viz. :—Sir Harry Verney, £5 5s ; Hon. W. Cavendish, £5; Right Hon. B. Disraeli, £5; G. C. Du Pre, Esq., £10 ; Ven. Archdeacon Bickersteth, £5; J Lee, Esq., £5; S. G. Smith, Esq., £5; J. G. Hubbard, Esq., £5; T. T. Bernard, Esq., £2 2s.; Captain Burgess, £1. Your committee appeal to the members and the county generolly for further donations towards this object, and will be happy to receive presents for the museum. A sub-committee has been appointed to carry out this proposal."

The Secretary—the Rev. C. Lowndes—read an abstract of the accounts for the year ending December 31, 1861. The receipts amounted to £42 14s., including £32 14s. as subscriptions, and the payments left a small sum due to the treasurer.

On the motion of Mr. PIGOTT, seconded by the Rev. G. R. FERRIS, the report and accounts were received and adopted.

The *following donations to the museum have been received*:—Account of further discoveries of Flint Implements in the Drift, by J. Evans, Esq. Notes on the Origin and History of the Bayonet, by J. Y. Akerman, Esq. Four Old Deeds, by Archdeacon Bickersteth. Light Shining in Buckinghamshire, 1648, by Archdeacon Bickersteth. A Letter concerning the Election of Knights of the County, by Archdeacon Bickersteth. An Act in the 10th year of George II. to empower the Justices of the Peace to raise money for the Building of a Gaol and Court Rooms, by Archdeacon Bickersteth. Ancient Map of Buckinghamshire, by Archdeacon Bickersteth. Mediæval Key found in Aylesbury, July 28, 1862, by Mr. S. G. Payne. Spur found near Marlborough, and presented by W. Rowland, Esq. Six Views of Churches in Buckinghamshire, by Mr. J. C. May.

The Rev. C. LOWNDES proposed that the Vice-Presidents should be re elected in a body, namely—The Duke of Buckingham, Sir Harry Verney, Bart., M.P., Ven. Archdeacon Bickersteth, C. G. Du Pre, Esq., M.P.; T. R. Barker, Esq.; T. T. Bernard, Esq., M.P.; R. R. Clayton, Esq.; Sir P. D. P. Duncombe, Bart.; Henry Hanmer, Esq.; J. Lee, Esq.; W. Lowndes, Esq.; Vice-Admiral Smyth; and on the suggestion of the ARCHDEACON, the name of Mr. G. G. Pigott was added to the list.

The following new members having been duly proposed and seconded were declared duly elected:—The Rev. W. C. Risley, Deddington, Oxford; Mr. G. Butcher, Aylesbury; Mr. J. Locke, Aylesbury; the Rev. H. C. Calverley, Aylesbury; Mr. Rowland Plumbe, 43, Tokenhouse-yard, E. C.; Dr. Morris, Stone: Mr. Richard Durley, Bierton; the Rev. W. H. Prichard, Ashendon; Mr. John Morgan, Aylesbury; the Rev. T. Bristow, Bierton; Mr. George Thorne, Bierton; Mr. T. Thorne, Bierton Hill; Mr. T. Parrott, Aylesbury; the Rev. H. A. Gibson, Linslade.

Professor MORRIS then rose to deliver his lecture on the geology of the district and the surrounding neighbourhood. He said—I feel some apology is due for appearing here this evening at the request of Mr. Lowndes, to offer some observa-

tions on the geology of the neighbourhood of Aylesbury, inasmuch as there might appear to be a very slight connexion between geology and Archæology. Still, if we reflect for a short time on the records presented to us by one and the other science, we shall find that at least there is some slight connexion between them. The archæologist brings under our notice the remains of comparatively remote antiquity; he attempts to decipher the medals and coins, or to understand the brasses, of a by-gone age. But the very materials he attempts to decipher are either metallic substances originally obtained from beneath the earth—such as copper, silver, and gold, and—as in the case of brass—a mixture of metals. Or if he turns his attention to the inscriptions on stone monuments, or to the history of churches and other ecclesiastical edifices, the material, whether artificial, as brick, or the more enduring stone, is composed of substances that have been obtained from or beneath the earth's surface. True it is, that the Archæologist has to deal chiefly with the workmanship of man, and the geologist chiefly with the works of creative power. I shall now proceed to offer a few observations on the different subjects illustrated by the geology of this county, drawing my illustrations, as far as I can, from the immediate neighbourhood. Our object is to inquire respecting the composition of the substances which form the earth's crust, their arrangement, and the changes they have subsequently undergone. Besides this, if we more carefully inquire, geology tells us of the varieties of ancient life when this globe was in a very different state from what it is at present. Geology shews the records of ancient seas and rivers which have been instrumental in the formation of the hard stony masses which we find. Most of you, whom I had the pleasure of accompanying in our agreeable excursion to-day, noticed some interesting facts. First, there were certain petrifactions called fossils, dug out of the earth's crust. Then there were certain variations in the character of the different soils—clay, limestone, sandstone, or marl. The origin of these two classes it is the business of the geologist to investigate. First there are these substances called fossils; secondly, the nature of the materials in which these fossils are found, and thirdly, the origin and mode of formation of the different minerals; and then, we have to investigate their probable or relative age. Now all the rocks we observe in nature, with comparatively few exceptions, (and the term rock is indiscriminately used to denote substances like sand or the hardest granite), have been once in the state of soft sand, soft mud, or soft lime. The hardest rock used for our different edifices has been at one time in a very plastic or soft state, and in most cases was formed beneath the bed of the ocean. Then, if we look at the nature of the rocks, we find two kinds, generally speaking, one of which is rarely used for building purposes, which is presumed to have had a different origin from the chief materials of the earth's crust. These (of which the granite rocks may be taken as the type) were formed by the action of heat or fire, while the others, including all the rocks in this immediate neighbourhood, may be styled the water-formed rocks. I may now advert to another point—namely, the fossils or petrefactions. These are of different kinds and forms, and are abundantly distributed through every part of the water-formed or stratified rocks, but they differ according to the nature and age of the rock in which they are found. Most of the fossils in this neighbourhood are specifically different from any existing in the sea at the present period. Many of them have no generic representatives in the present series; some of the most remarkable—as the ammonite and belemnite—are not recent genera. They belong, however, to a large class of animal life—represented in the case of the ammonite by the nautilus, and in that of the belemnite by the cuttle-fish. I come now to another point in geological history—namely, the nature of the rocks themselves, containing these different assemblages of animal life. How is it that these completely indurated rocks have been so far consolidated as to resist the action of the atmosphere for centuries—some at least of them? We observe that all these accumulations were originally old mud, sand, or gravel, and were deposited as beds, successively beneath the waters of the ocean. They were not deposited at one time, but layer by layer, until the whole body of rock was formed. Now these deposits must have had some origin, and that origin is the decay and destruction of some primæval matter, the wasting away of some old coast line, the sweeping away of the bed of some earlier ocean. This

stone, found near Hampden, used anciently as a hand corn mill—it is a hard rock that would exist for ages, unaffected by the agency of the atmosphere. It is composed, you will see, of pebbles, rounded and cemented together by some hard cement that resists atmospheric influences. These pebbles are commonly known as flints, and they are derived from the destruction of certain chalk cliffs existing anterior to the formation of these rocks. They are the same material as the common black flints with which you repair the roads. That flint was a hardened stone anterior to the formation of the pebble rock; it was subjected to wear and tear probably on some old beach, like the pebbles from our chalk cliffs recently bared. On the sea shore we observe first pebbles, then coarse gravel, then sand and still finer sand, until you come to the mud of the deeper sea. Here, then, is the application of present knowledge to past times. But this rock, originally formed out of a gravel beach, has become consolidated or hardened by a different process, by the infiltration of water, possibly holding in solution a portion of flint or silex, and gradually cementing together the fine grains of sand and the larger pebbles existing on that ancient beach. It is further hardened by the operation of certain other forces well known to the physical geologist, and further still by the pressure of the mass of sedimentary matter which has accumulated over it.

This piece of common Hampden stone belongs to a rock of a comparatively recent time, formed after the accumulation of the soft materials that constitute the great chalk range. It is in this way that most of the sedimentary formations have been derived. They are due to the wear and tear of some pre-existing mineral matter. The finest sand on the sea coast and the hardest sandstone are equally the result of the destruction of a silicious rock. Mud is formed by the destruction of rock of a more clayey or argillaceous nature, first decomposed, probably near the beach, and then carried out into the bed of the ocean. You will notice that muddy deposits are chiefly in the bed of the tidal ocean, and as you approach the shore you find the sand become coarser and coarser. Lastly, with regard to the calcareous or lime deposit, or limestone. This is distinguished from the silicious and clay formations by being composed of chalk or carbonate of lime. This rock has been partly formed by the action of the sea, partly by the chemical action of water holding mineral matter in solution. We know that certain water is termed hard—that is, it has a large quantity of lime in solution, and when that water flows out in the shape of springs, whether cold or hot, there we have deposits of calcareous matter, such as limestone and tufa. You may, for the present, take it for granted that where we have had trees or plants growing near some ancient spring containing carbonate of lime, the depositions from these springs have preserved the appearance of the tree, the roots of the trees themselves having been subsequently decayed. The water, holding lime in solution, when it impinges on any hard body, loses part of the gas with which it is charged—carbonic acid gas—and carbonate of lime is deposited. Thus, I have here a little lime-water, perfectly clear. If I breathe into it (my breath containing carbonic acid gas) the result is a deposit of carbonate of lime, and the water becomes white. This gas, under certain conditions, will dissolve limestone. We come now to the relative age of the water-formed rocks, and this we know by the nature of the fossils found in them. If we make a traverse from East to West of England we find the soils vary, and the rocks of the surface differ as we proceed, and it is easily seen that the rocks were accumulated one after the other—i.e., by super-position—the earliest at the bottom, and the newest at the surface. But these rocks, instead of being placed horizontally one above the other, have an inclination, like a pile of books raised at one end, so that as we pass along the surface we come to the cropping out of one after another. We know this to be the explanation—firstly, because they must have been deposited one after another; and secondly, because there is ample evidence that frequently before the deposition of one class of rocks another has been elevated by some internal force. In the Isle of Wight, at White Cliff Bay and Alum Bay, there is a large series of variously coloured strata, lying at an angle of 90°, one bed formed of rounded pebbles. Now these pebbles could not have been deposited in a vertical line; again, when we find rocks in a perfectly horizontal position lying against inclined beds, it is clear that some change in their position has taken place. In general, the rocks in

England have a slight inclination towards the south-east, and vary in their mineral character. In this immediate neighbourhood you find limestone in one place, sand in another, and clay in another, and their relative age is known because we see them to have been formed one after another. But we further judge of the distinct age of each rock because the petrefactions or fossil remains which occur in the lower strata are different from those in the upper, and time must have elapsed to allow of the death and decay of one set of animals, and the coming in of another group. Geologists find three great groups of rocks, the old, the middle, and the newly formed rocks, which I might illustrate by laying 27 or 28 books in a slanting direction. It was in the middle or secondary period that the strata of this immediate neighbourhood were formed. We begin with the oolites, formed of small oval grains, resembling the roe of a fish, as you may see by examining a piece of Bath stone. Now supposing we make a journey from Brackley by Winslow towards Aylesbury, and further towards Amersham and the chalk downs, at the Brackley end we have what are called the lower oolite rocks; between that and Winslow, in the Claydon district, or middle oolite, of which the Oxford clay is the representative; towards Aylesbury, a third class, a still newer group, i.e., the Kimmeridge clay, Portland rock, and sand. Proceeding southwards, you trace the Purbeck beds, and over lying this a faint indication of that rock which in the south of England separates the great oolitic strata from the chalk beds—the Wealden. For there is evidence that at some distant time the Wealden formation extended over a large portion of this area In Dr. Lee's museum there are some specimen of a plant, the *Endogenitos erosa*, a fossil very common in the Wealden, and thereforeit may have existed in this neighbourhood. Overlying this again, as we pass to the chalk hills, we come to the commencement of the great chalk group, the lower portion without flints, the upper with flints, and over that, in some parts, we have traces of a group represented by certain hard sands, of which the Hampden stone is an example. These belong to what are known as the lower tertiary strata. Lastly, we have, in the valley, a gravel, equivalent to what is found in low situations in this country, along the range of existing rivers, and these are probably the latest accumulation with which we are conversant in this immediate neighbourhood. The best localities for examining the geology of the district are the pits around Hartwell and Stone. The Kimmeridge clay and the base of the overlying Portland beds are well seen in the clay-pit on the ascent to Hartwell, and the various conditions of the Portland and Purbeck strata in the stone-pit near theBugle and in those on the Bishopstone road, while the white sand and associated beds are clearly exposed in the pits on the road from Hartwell to Stone.

Now, if I point out the nature and formation of these rocks, it may possess some slight interest to you. Most of the rocks up to the Purbeck beds were deposited beneath the bed of the ocean—consequently the deposits are all marine, forming a portion of similar strata which extend to Dorsetshire. We find that if we go either north-east or south-west from Aylesbury, similar formations come to the surface. At Brill, Shotover, Tisbury, and in the Isle of Portland, you find similar limestone to that quarried in this immediate neighbourhood, the Portland limestone. Below that, however, you find the formation known as the Kimmeridge Clay overlying the rocks of older date, which form the surface in the north-west part of the county. The Kimmeridge clay extends southwards, forming a line marked by the lower portion of the Portland bed. At Boulogne, you find somewhat similar series of strata to those which we have between Winslow or Brackley and Aylesbury. These marine beds are marked by the varied forms of animal life, of which the ammonite is an example, distinct from the nautilus, though allied to it. The nautilus, by the way, is the only living representative of a great number of genera of shells which were abundant in the seas of the ancient world, just as the common cuttle-fish is an existing type of the belemnite. These, however, give place to another set of remains, which are found in the Purbeck. Here we have to place faith in the evidence of the anatomist and naturalist. They tell us that certain forms of animal life are destined to exist only under certain physical conditions, and that there is a certain fixed relation between the organic and inorganic worlds. If then we find a rock almost entirely composed of shells, and those not marine, but fresh-

water shells, the inference is fair that this rock must have been formed in some inland lake, river, or estuary. This occurs in the Purbeck strata. It is not limited to this district, although the furthest limit for your neighbourhood is little to the north of Whitchurch. But as we go south there is evidence of a deposit of a fresh-water character—the Wealden group. The Purbeck and Petworth limestones are almost entirely composed of masses of Paludina, a freshwater shell, cemented together. These so-called marbles were largely used for ornamental and other purposes in the early ecclesiastical edifices and buildings, as well as those of later days. These beds indicate an extensive coast-line, a large amount of land, and possibly a great river; because when we candider the great area occupied by those deposits, —say 200 miles long by 100 miles in breadth—we have an area nearly equal to the delta of the Ganges, although twice its thickness, this being about 1,000 feet, and the delta of the Ganges about 500 feet deep. These small blocks of rock tell us a history of the past physical condition of the globe. In your neighbourhood the land and fresh-water conditions were again changed, and the sea gained its old empire over the estuary and the land. Sand and chalk were formed beneath the sea, for they contain remains of animal life which could only have lived therein, and perfectly distinct from those of the rocks below. Overlying these we come to the Hampden stone, and here is a further change of condition, before the formation of which the old deposits of the chalk period had ceased, and had probably to some extent become consolidated, thus affording the materials to form some other and newer deposit. Thus these beds denote, to some extent the coast line formed by the chalk at that time. With these we shall stop, as the rocks above them are not well represented within your area. The only one of interest is the valley deposit which occurs along the shores of existing streams. And this leads me to another point. To what agency may we attribute the peculiar physical features of this district, and the present irregularities of the surface? At one time the limestone of Hartwell and the adjacent hills was deposited in a continuous bed at the bottom of the old sea, and if you take in Quainton, Shotover, and Brill, you find that there has been at some period of geologic history a scooping out, evidently the result of water passing over the land. All valleys—where they are not the result of change in the position of the rocks themselves—are due to the "sweeping out" action of water. By the first cause the great valleys are formed; by the second the hills are rounded and smoothed down, and in the third place fragments of this washing out are distributed along the valleys. Beds of gravel are formed from the destruction of a portion of the chalk rock itself. The flints were gradually rounded, and there is little doubt that the chalk extended over a larger portion of area than it at present occupies.

Those of you who have been at Stonehenge may have noticed that the material of those great blocks is of the same nature as your Hampden stone. I refer to the outer stones only, for the inner ones, especially the great Altar Stone, are of a far older rock, and open a very interesting question of another kind.

I have attempted to show you that there are proofs as clear to the geologist as those of coins to the antiquary: and there is as much evidence for the observations he makes as are found in any other department of science. If we only read the Book of Nature with clear and careful eyes, and draw our reasoning from the present, showing by analogy that existing life fulfils certain conditions, and that ancient life fulfilled the same, we have the broad ground on which the geologist bases his whole argument. And when he shows you evidence of truth in a large portion of his observations, he is led to feel that there is the same beautiful harmony and beneficent design in existing nature and in nature as it has existed in all periods of time; and whether he looks to the latest rock or the earliest formed pebbles, to the history of this earth on which man is but a dweller, he finds associations which stimulate his intellect and direct his industry, because he is thereby brought to investigate those laws which have regulated the physical structure of the globe.

At the conclusion of the lecture, Professor Morris exhibited several experiments, shewing the effect of the decomposition of fossils, and the proofs of the existence of iron in the sandy deposits above mentioned. Professor Morris also exhibited some interesting specimens of fossil fish, kindly lent by Dr. Lee, which were ob-

tained from the Purbeck beds on the Hartwell estate, and said that they belonged to a genus described by Sir Philip Egerton, presenting certain peculiarities in the dorso-ventral scales, and named by him *Pleuropholis*, the fish were of diminutive size, and limited geological range, all the species known being found in the Purbeck strata.

Mr. PIGOTT said the lecturer had displayed that wonderful lucidity and clearness of exposition, which enabled him to convey to the most uninformed mind a tolerably clear idea of his subject, and he felt sure he was conveying the unanimous sense of the meeting by expressing his sincere thanks to Professor Morris for his able lecture.

The ARCHDEACON said he was happy to join the expression of his own thanks to the remarks of Mr. Pigott, and he felt he had gained a great deal by listening to the lecturer. He thought that the lecture might prove to be of most essential service in reference to this district. When lately sinking a well at the Infirmary they pierced through the Kimmeridge clay for 80 feet, then came to a bed of coral rag, about two feet, and immediately afterwards the Oxford clay. As soon as they touched the coral rag, they had an abundant supply of excellent water, which shewed that, by going through the Kimmeridge clay, a good and plentiful supply might generally be obtained.

The Rev. C. ERLE made some remarks on specimens found in the Kimmeridge clay at Hardwick and Weedon; the ichthyo dorulite of the Asterocanthus ornatissimus; the palatal teeth of the lepidotus Fithoni; the vertebræ and other bones of the pleiosaurus, one weighing 60lbs.

The reading of two of the papers on the list was postponed, the authors not being present, and the Rev. C. H. Travers then read a paper on "Stewkley" of which, as it will appear in the "Records," we abstain giving any abstract. The rev. gentleman referred at some length to the restorations now in progress, and stated that about £400 only, out of the £1,100 required, had been raised in Stewkley. Unless further aid could be obtained the unsightly gallery and the porch, which is out of keeping with the edifice, must remain.

The ARCHDEACON said it should be understood that there is not in the proposed restoration the slightest disturbance of the old framework of Stewkley Church. As a different plan had once been proposed, he feared that the zeal of some archæologists had been damped, and their subscriptions had been withheld, on this account.

Mr. FOWLER thought that this work of the restoration of Stewkley Church—one of the earliest and most beautiful specimens of Norman architecture in the kingdom—deserved to be supported, and he was astonished at the small amount of local interest which it appeared to have excited. He thought an appeal might go forth from this society to the county, to aid in the complete restoration of this beautiful Church.

Mr. LAMBORN remarked that a friend of his had in his possession an alabaster image, taken from a wall near the church, which he purchased some years ago for 2s. 6d.

The ARCHDEACON said, twenty years ago he made a pilgrimage from Shropshire to visit Stewkley Church, little thinking that he would ever be brought into official communication with it.

The Rev. H. ROUNDELL then proposed a vote of thanks to the Archdeacon for presiding.

The ARCHDEACON, in responding, said he received this compliment with very mingled feelings. It might perhaps be news to some present that Mr. Roundell had been compelled, through ill-health, to resign the position he had so well filled in this county, and though he hoped the Society might not lose the benefit of his services as one of the hon. secretaries, they could hardly hope to receive the benefit of his active services. He could not but express his sincere regret at the cause which had compelled him to resign the prominent position he had hitherto held, and he felt sure that the hearty sympathy of all present would be with him, and that all the members would join in an expression of sympathy and of gratitude for the services he had already rendered to the county.

The meeting then broke up.