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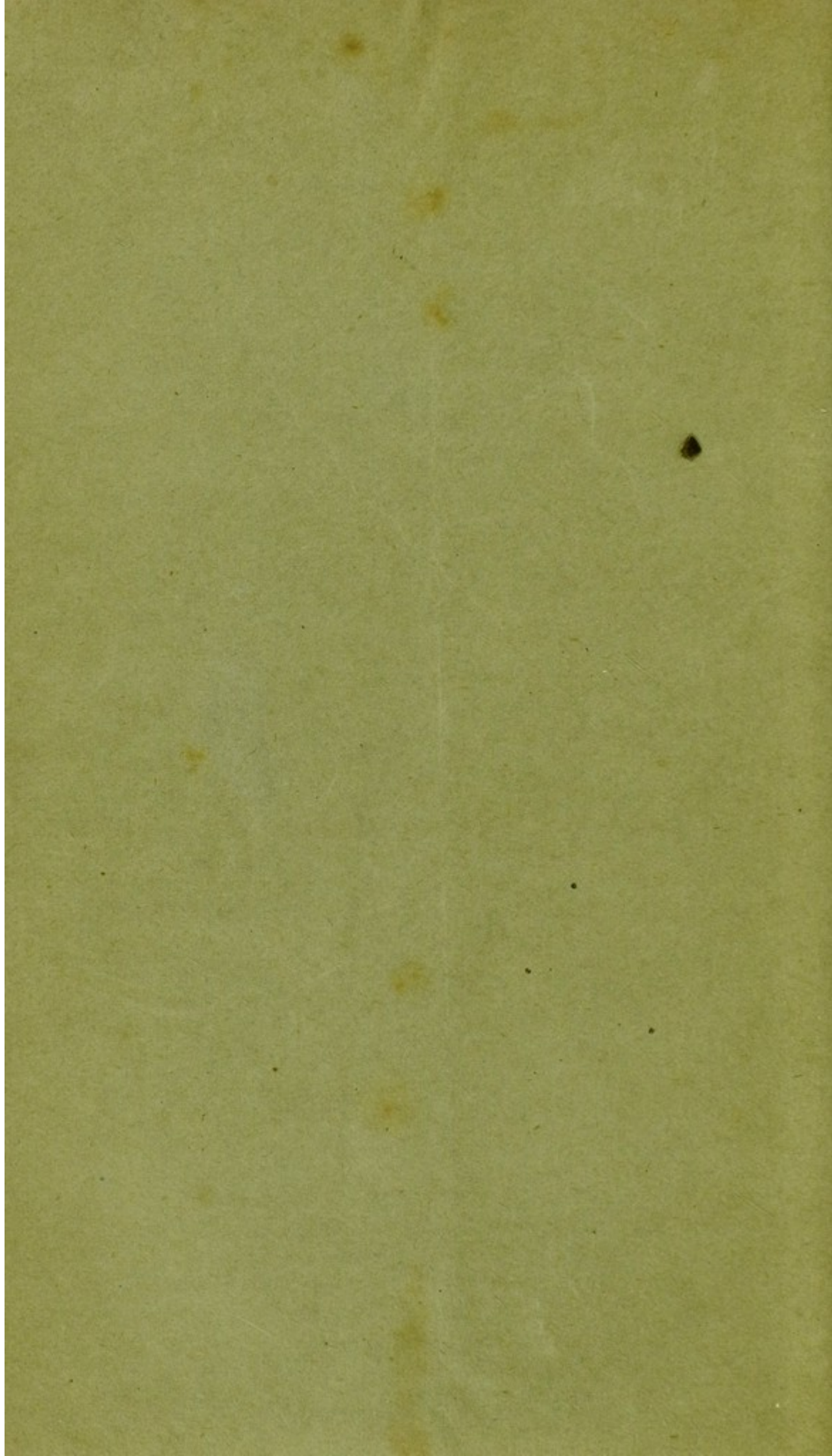
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PROCEEDINGS
OF THE
BERWICKSHIRE NATURALISTS' CLUB.

The Annual Address, delivered at Wooler, on the 29th September, 1859.

By JOHN CHARLES LANGLANDS, Esq., President of the Club.

GENTLEMEN,

THE return of another anniversary affords me the opportunity of expressing my sincere acknowledgments, for the unexpected honour, which you conferred upon me last year, by electing me your President. A feeling of my own incompetency to occupy such a position would have led me to decline so high an honour, had not a rule of the Club forbade my doing so.

I have endeavoured to fulfil *one* of the *duties* of the office in attending all the meetings during this summer; meetings which have been favoured by bright and beautiful weather, and marked by pleasant intercourse. I shall now attempt to discharge *another duty* of your President, and offer a cursory review of the proceedings of the past season. The courtesy and forbearance which I have already experienced at your hands, encourage me to hope, that my shortcomings on this occasion will not be subjected to a very unfriendly criticism.

The anniversary meeting of 1858 was held at Norham, on the 22nd of September. I could not attend that meeting, and am indebted to Mr. Tate for the following notes of the proceedings.

“There were present, the President, (the Rev. W. Darnell), P. J. Selby, Rev. J. D. Clark, John Church, John Church, jun., George Tate, D. Milne Home, Wm. Boyd, Dr. Robson, Rev. R. Kirwood,

Wm. Dickson, P. Dickson, P. Clay, T. S. Grete, and J. Melrose. After dinner the President read his address, and proposed that J. C. Langlands, Esq., of Old Bewick, be the President for the ensuing year. The Rev. R. W. Kirwood and Mr. Walker were elected members. There were afterwards read the following papers:—Obituary Notice of the late Rev. Joseph Watkins Barnes, Vicar of Kendal, and *Miscellanea Zoologica*, by Robert Embleton, Esq.; Notes on the Geology and Archæology of Beadnell, by George Tate, F.G.S.; an Account of the Spurs found near Belford Castle, by the Rev. J. D. Clark; a Catalogue of Land and Fresh-water Shells in the neighbourhood of Alnwick, by Geo. R. Tate, M.D., Royal Artillery. Mr. Grete exhibited coins, cannon balls, and other Antiquities obtained near to Norham Castle, of which he agreed to furnish an account for our Transactions. Mr. Selby shewed two rare butterflies, *Vanessa Antiopa* and *Colias Edusa*, of which he also will give a notice.

“Mr John Wheldon, of London, was nominated a member of the Club.

“Norham, the place of meeting, though now but a poor village, was formerly a place of no little importance. It had its charter, granted by Bishop Pudsey in the 12th century, its Burgesses enjoying ‘all the liberties and free customs, which were enjoyed by the Burgesses of Newcastle and North of the Tyne,’ and its Bailiffs and Corporate Officers. It had also its weekly market, ‘kept,’ says a survey made in Queen Elizabeth’s time, ‘on the Sundaye, which by reason it is undecent is therefore the less used or esteemed.’ During the Saxon period this town was called Ubbanford, from Ubba or Offa a personal name, and a ford which here crosses the river. Its recent name Northam or Norham (that is North Town) occurs in A.D. 1082, and indicates its northern position. It gives the name Norhamshire to a considerable district, which was one of the earliest possessions of the see of Lindisfarne, and which subsequently formed part of the County Palatine of Durham. Over it, for many centuries, the Bishops of Durham exercised the powers of great Feudal Lords; but these powers were taken away by an act of Parliament in the reign of Queen Elizabeth. The church, the castle, and the historical events associated with them, still, however, give a great interest to this locality.

“After breakfast the Club visited the church, which since the repairs and restorations effected during the incumbency of the late

Dr. Gilly, is a large and impressive edifice. Notwithstanding the ravages of time and of war, there are still considerable remains of the original structure, which was erected about the middle of the 12th century. The style is late Norman, similar in character to the Galilee of Durham. Some of the old arches and piers of the nave, and the chancel arch, are in good condition; and there are three original windows which are distinguished by the bold and beautiful chevron ornament which adorns the circular arches. Further notice however is unnecessary, as an admirable description has been given of this church by Dr. Gilly in our Transactions; and, as he was long a member of our Club, and President of it in the year 1851, the party could not view, without feelings of deep interest, the monument which has recently been erected in the chancel to his memory. A full-length figure of the Reverend Doctor, carved in Caen stone, reposes on a raised tomb, over which is a Norman arch. The sculpture expresses well the intellectual and benevolent features of this distinguished man. Within the niche is placed the following inscription:—

‘ TO THE MEMORY OF
THE REV. WILLIAM STEPHEN GILLY, D.D.,
VICAR OF NORHAM, CANON OF DURHAM,
AND FRIEND OF THE VAUDOIS.
WHOEVER SHALL LOOK UPON THIS MONUMENT,
LET HIM REMEMBER
THAT BY WORKS OF FAITH AND LABOURS OF LOVE
A NAME MAY BE IMPERISHABLE.’

“A little eastward of the present church stood the older Saxon church, which was erected by Eggrid, Bishop of Lindisfarne, in the 9th century. Several sculptured stones—fragments of this old church, have, at different times, been dug out of the foundations. One of these, with an inscription in Saxon letters, is noticed by Wallis in his History of Northumberland, in 1769, and he gives a copy of the inscription. Hutchinson subsequently gave a drawing of the whole stone, which, besides the inscription, has six heads sculptured on it. This stone has for some time been lost. Wallis’ explanation of the sculpture is very fanciful; and Dr. Raine in attempting a reading of the inscription is equally imaginative. Eighteen other fragments, discovered chiefly in 1833, are now preserved in the churchyard, built up into a pillar in imitation of the shaft of an ancient cross. One of these stones, which has been sepulchral, has an inscription in Saxon letters, which appears to be

P. ANIMA ÆLFA, probably when complete meaning "Pray for the soul of Ælfa." Another stone has a figure of a monk giving the benediction; some present strange combinations of circles; one has a large and elaborate wheel-shaped ornament; and others furnish beautiful examples of knot, scroll, and diaper work. The whole of these sculptures should be figured in our Transactions, as they are an instructive group, illustrating the Saxon styles of ornament in the ninth century.

"Leaving the church, the party strolled along the north bank of the Tweed towards Milne Graden, and under the guidance of Mr. D. Milne Home, noticed the geological features of the district. The strata here consist of red and other sandstones, marly limestones, and shales. In the sandstones are carboniferous plants, and in the shales, species of *Modiola* and *Entomostraca*. These beds belong to the lowermost division of the mountain limestone, which I have in a former note designated as the Tuedian group; and they lie below the workable seams of coal. The rocky strata are overlaid by a large deposit of rolled blocks and water-worn gravel, indicating that at no very distant era, the valley was filled with water to a height considerably above the present level of the river.

"At Milne Graden the party were hospitably entertained; and some time was spent there in examining a map of North Durham, on which Mr. D. Milne Home had laid down the range of the various coal seams and limestone strata. Before leaving Milne Graden the rain began to fall heavily, and as the day was unfavourable for natural history observations, the party crossed the Tweed in a boat, and returned by railway to Norham.

"'Norham's castled steep' was next visited; and the different parts of this interesting ruin were ably explained by the Rev. J. D. Clark. Though but a ruin, the castle is still a noble object, standing on the elevated and steep southern bank of the Tweed; and enough still remains to attest its former strength and magnificence. It was built by the warlike Bishop Flambard in A.D. 1121, and since that period it has been the scene of many of the leading events in Border History. Fifteen years after its erection, it was taken by David I. King of the Scots; but soon afterwards restored to the English. In A.D. 1138, it was again taken by the same king, who is said to have razed it to the ground; but the destruction had not been so complete, for a considerable portion of Flambard's work remains on the east side and south-east corner of the Keep. Bishop Pudsey repaired the broken fortifications,

and built a strong tower. He made additions to the western part of the Keep, and raised the height of the tower; this masonry is readily distinguishable from that of his predecessor. To obtain the means of accomplishing this great work, appeal was made to the superstitious feelings of the period; for a fragment of the winding sheet of St. Cuthbert, the popular Northumbrian saint, was exhibited to those who contributed money to carry on the building. Early in the 13th century, conferences were held in the castle between King John of England, and William the Lion of Scotland, to establish peace between the two nations; but kingly treaties were of little avail, for in A.D. 1215, Alexander, King of Scotland, besieged the castle for forty days, but without success. Norham in A.D. 1291 witnessed the submission of the candidates for the Scottish throne to Edward I. of England, who here sat in judgment on their rival pretensions. The gallant defence of Sir Thomas Grey, the governor, and the timely aid of Lords Percy and Neville, saved the castle from the Scots in A.D. 1318; such, however, was the changing fortune of Border warfare, that it fell into the hands of the Scots in A.D. 1322, but was soon retaken by Edward II., after an assault of ten days. In the course of this century it was repeatedly besieged, taken, and recovered. It was extensively repaired and strengthened in the early part of the 15th century; but towards the close of that century it had again fallen into a ruinous condition; it was however put into a good state of repair and well garrisoned by Bishop Fox, and in A.D. 1498, it withstood successfully a siege by the Scots led by their gallant King James IV; the Bishop himself hastened to succour the castle, and after a heroic defence of sixteen days, it was ultimately relieved by the Earl of Surrey, It was however taken by James in A.D. 1513 after a siege of six days; but the disastrous battle of Flodden Field, fought soon after, when so many flowers of Scotland's 'forest were a' wede away' caused it to be restored to the English. From this period the castle loses historical interest. The accession of James I. to the English throne brought peace to the Borders, and strong castles and Peel towers, adapted for defence and not for comfort, lost their importance, and were for the most part abandoned, and suffered to fall into decay. Neglect, the silent aggressions of time, and the more serious dilapidations occasioned by the inhabitants of the district using the castle as a quarry, to supply stones ready prepared to build houses, boundary walls, and even common dykes and drains, have

combined to render the once proud Norham Castle an uninhabitable ruin, but still a ruin majestic and impressive."

The first meeting of the year, under my Presidency, was held at Berwick, on Wednesday the 27th of October. Present,—The Rev. Wm. Darnell, Rev. J. Dixon Clark, R. Embleton, Secretary, George Tate, J. Church, Wm. Dickson, Robert Home, Major Elliott, Wm. Boyd, James Grey, F. R. Wilson, and J. C. Langlands, the President for the year. The accounts were examined, and the subscription fixed at 6s. 6d. Mr. G. Tate was appointed joint secretary with Mr. Embleton. The meetings for the year were fixed as follows:—Coldingham, May 26; Rothbury, June 30; Melrose, July 28; Wooler, September 29; and Berwick, Oct. 27.

The financial business being finished, the majority of the party drove to Burnmouth, from whence they walked along the beach beyond the village of Ross: passing the point at which the carboniferous series of rocks abuts upon the Silurian beds; the sandstones becoming visible in masses, on approaching Marshall Meadows. Passing through Ross, we observed a curious notice affixed on the door of one of the herring curing houses, to this effect:—

“BORDER MARRIAGES.

ANDREW LYON

Begs respectfully to intimate, that he can be found, at his residence, Coxon's Lane, adjoining Walken Gate Lane, any time his services may be required, by parties visiting the Hymeneal Shrine on the Scottish Borders.”

It is to be regretted that this practice still continues among residents in Scotland. The new church of St. Mary's, recently built by Capt. Gordon, M.P., of Fyvie Castle, was visited on our return.

The party assembled at dinner at the Red Lion, and had the pleasure of welcoming as their visitor, John Stuart, Esq., of Edinburgh, the secretary of the Spalding Club; with whose valuable and beautiful work on the “Sculptured Stones and Crosses of Scotland” the Club has been made acquainted by Mr. Tate. We had the satisfaction of electing Mr. Stuart one of our members.

The Club met at Coldingham, on Thursday, the 26th of May. After breakfast the remains of the Priory were examined under the able guidance of Mr. Dickson, whose connection with the parish of Coldingham, as owner of the estate of Whitecross, on which formerly stood one of the crosses which marked the boundary of the sanctuary, in addition to his taste and information in

antiquarian pursuits, give him great interest in this once extensive ecclesiastical foundation. The paper by Dr. Hood on Coldingham Priory, which was read in 1856, must be familiar to most of you. I shall, therefore, content myself by condensing a few remarks upon the Priory from the pen of one, who, alas! can no longer instruct or amuse us, by his varied stores of information—the late Rev. Dr. Raine.

The Priory was founded in 1098 by king Edgar, and dedicated to S.S. Cuthbert, Mary, and Ebba. Its large possessions gave the name of Coldinghamshire to a considerable part of Berwickshire. Its records commence at an earlier period than those of any other monastery in Scotland of which the charters have been preserved, and supply much new and valuable information with respect to that kingdom. From the locality of the Priory of Coldingham, and its connection with England, its history is of more importance than that of any other Border monastery. Although locally situated within the territory of Scotland, it was subordinate to an English Church—that of Durham; which exercised over it an absolute control, and appropriated to its own use a considerable portion of its revenues. The church of Coldingham was therefore not unnaturally a source of jealousy to Scotland in times of peace, and an object of open attack in time of war. Often did the monks find it necessary to conciliate the protection of their powerful neighbours, the Earls of Dunbar, the Douglasses, and the Homes, by beneficial leases, or places of emolument; and in time of war, were not unfrequently driven from their Priory to await at Holy Island, or Durham, the truce which might send them home to empty garners and a desecrated church.

In 1485 an Act of the Scottish Parliament annexed the Priory of Coldingham to the Royal Chapel of Stirling. In 1544, the Priory was partially burnt and destroyed, in the reign of Henry VIII., on the retreat of the Earl of Hertford, afterwards Duke of Somerset. Its demolition was completed by Cromwell on his invasion of Scotland in 1648. The inhabitants of the district, who were for the most part Churchmen and Royalists, offered some opposition to the Protector, and defended themselves in a massive square tower, which stood at the north-west corner of the Priory. The tower was shattered by his artillery, and the south wall of the church at the same time was blown down with gunpowder. Of the present remains of the Priory of Coldingham, a few words may be said: they are but a small part of the former edifice. The

domestic buildings have nearly all disappeared, but the rude inequalities of the ground prove them to have been of considerable extent, as might naturally have been expected in the case of an establishment so opulent in its endowment, and so marked by the favour of the earlier Scottish kings. Of the church itself, Dr. Raine remarks in his preface to the Surtees papers of 1841: the north aisle only remains, which is used as the parish church. The architectural features of this portion of the original church are of a very interesting character. The base is externally Norman, of a somewhat late date. The upper portions of the walls, and internally the whole fabric, are of the Early English period; and the ornamental parts of these portions will bear a rigid comparison with the most highly finished buildings of that most striking style.

Recent excavations have proved that the north and east walls are those of the choir of king Edgar's magnificent structure, built over the ruins of the chancel of a former nunnery, the apsidal termination of which was laid bare in clearing out the rubbish. The Heritors of the parish, assisted by Her Majesty's Commissioners of Woods and Forests, to whom the fabric belongs, have, highly to their honour, lately completed a preservation of this part of the structure, which is used as the Parish Church. The inside has been stripped of the unsightly galleries and pews, which, with the whitewash, concealed the finest part of the work, and by which the beautiful masonry had been mutilated and effaced. On the outside, the earth has been excavated and removed from the base of the building, and the incongruous erections, which clustered against the north wall, have been removed. The solid mass of masonry which was built up in 1662, to restore the part destroyed during the Great Rebellion, has been pierced by lancet windows, and the west gable has been rebuilt in uniformity with the east and north walls. The propriety of thus closing up the choir in the place where the arch once stood, as well as the adoption of a flat roof, may perhaps be questioned; but so much has been done to improve that it is perhaps unfair to criticise. The architect employed was Mr. W. J. Gray, a native of Coldingham. The workmanship of the whole has been very well executed, and the general effect of the beautiful Early English arcade inside is very striking. With the exception of a short period after the demolition of the church by Cromwell, it seems to have been always used as a place of worship.

The first Presbyterian Minister after the Revolution was Mr. John Dysart; he was forced on the unwilling parishioners, who were chiefly staunch Episcopalians, by the military in 1694, their own clergyman continuing to officiate in a barn.

Leaving the Priory, the party proceeded to St. Abb's Head and Coldingham Loch, under the guidance of Mr. Heriot of Northfield, who kindly accompanied them. The beauty and colouring of this bold and picturesque coast, enhanced as it was by brilliant sunshine and a clear smooth sea, afforded such a series of pictures as are not to be rivalled. The extraordinary contortions of the Silurian strata which form part of these precipitous heights have long attracted the attention, and supplied materials for speculation to some of our most eminent geologists. They extend from Siccar Point to Burnmouth, on each side of the igneous rocks which are intruded about St. Abb's Head. For the following valuable notes on this interesting sea wall, I am indebted to Mr. Tate, who had set out from Coldingham at an early hour:—

“Tempted by the fineness of the morning, I started very early, under the guidance of Mr. Wilson of Coldingham, to ramble over the neighbourhood, and more especially to examine the rocks and antiquities of St. Abb's Head. Coldingham stands on porphyry, (a fire-formed rock), which ranges from the Eye water to the north side of Coldingham sands. This rock is seen in the Eye, and it forms cliffs in the narrow glen in which Cole Burn flows. The bold headland of St. Abb's is also porphyry, which extends from Coldingham sands northward about two miles to Petticowick Cove, forming a promontory jutting into the sea; and more effectually resisting the wasting action of the German ocean, than the softer greywacke rocks, which it has pierced through and uplifted. The porphyry is usually of a reddish colour, having a claystone base, through which are scattered a few crystals of felspar; at the north end it is amygdaloidal, and not unfrequently contains green earth; in the more southern parts amygdaloidal tufa occurs. This promontory consists of four hills separated from each other by what are here called “nicks” or high valleys. The same term is used to designate similar valleys in the basaltic range in south Northumberland, which is crested with the Roman wall; there we have the “Nine Nicks of Thirlwall.” The most southerly and lowest of St. Abb's hills is the Castle Hill, named so from the resemblance presented by the rocks to a ruined castle; the Kirk Hill follows, next is Harelaw, and the largest and boldest is the Headland. Some parts of the rock are softer than others, especially

where there is tufa; and these portions have been hollowed out and caverned and worn into deep chasms; here, even in moderate weather, there is a heavy roll of the tide, and a hoarse gurgle is heard resounding among the caverns. The scenery is wonderfully varied, picturesque, and impressive. In front of the lofty cliffs are many detached masses of rocks. Some are single, surrounded by the sea, others are in groups; all, however, are fashioned by the elements, into peculiar, and not unfrequently grotesque forms; not a few resemble ruined buildings and towers. One rock in Petticowick Bay had for its old name "The Auld Wife;" its more modern name is "Lord Brougham," from an odd likeness to that distinguished orator; there are his wig—his marvellous nose—his projecting and heavy under lip, and a vivid imagination can even see the Judge's robe.

"The stratified rocks in this district are greywacke and greywacke slate, being part of that formation, which extends across Berwickshire in a west-south-west direction, and which has been ranked as lower Silurian by Murchison and Cambrian by Sedgwick. These rocks are seen at the mouth of the Cole Burn and at Coldingham sands, on the south side of the porphyry; they appear again at the north side in Petticowick Cove, where they form a series of remarkable foldings and curvatures, in one part dipping north-north-west 50 degrees and at a short distance making a complete bend, and dipping 50 degrees to the south-east. Westward of St. Abb's Head, greywacke forms the Raven's Brae; a deep swampy valley here separates the stratified from the igneous rocks. Most probably this had been scooped out when the district was under water, for beneath the soil is a considerable accumulation of rounded water-worn stones. A natural cause was, however, not sufficient for the old chroniclers; one relates that, in the seventh century, the sea flowed miraculously into this valley, and that for seven days St. Abb's Head was converted into an island, in order that the Virgin Queen Edelthyra and her two Holy Virgins Sewenna and Sewara might be protected from her husband King Egfrid. He had given her permission to become a Nun in the sanctuary of Ebba, but changing his mind, he followed her to bring her back by force; but the miraculous flow of the water evidenced to him, that the Deity was unfavourable to his purpose, and he therefore abandoned the attempt and returned to York.

"In the course of our ramble we saw a singular mass of artificially fused rock, called "The Deil's Danders," standing on the south side of the Cole Burn where it joins the sea; it is six feet

high, and as many in diameter at the base. It is said to have formerly been considerably higher; and it was then useful as a "Mead" or landmark for seamen. This mass is a kind of scoria with fragments of greywacke interspersed. Its origin is doubtful; one account states, that about sixty years ago, in accordance with the advice of Sir James Hall, an attempt was made to procure lime by burning the greywacke, and that the "Danders" was the result. The popular name however indicates a more remote origin; and it is scarcely probable that so good a geologist and chemist as Sir James Hall would recommend such an attempt, since greywacke contains little or no lime. More probable is the opinion, that the "Danders" is a monument of an abortive experiment made by the mediæval Monks of Coldingham to obtain lime from rocks in their own district, to save the expense of bringing it from the neighbourhood of Berwick.

"Ecclesiastical remains are on two of the hills constituting Abb's point—on the Kirk Hill and on the Headland. A monastery was erected at an early period in Saxon times on Abb's Head, probably indeed sometime previously to the middle of the seventh century.* Certain it is, however, that about this period Ebba was the head of a religious establishment here, when, according to Bede, it was visited by the renowned Northumbrian Saint Cuthbert. Not long after Ebba's death it was burnt through carelessness in A.D. 679. Another convent was subsequently built, but whether on the Headland or on the site of the Priory of Coldingham is doubtful. This was also, in A.D. 870, destroyed by the Danish chieftains Inguar and Hubba. Of the early Saxon buildings on the Headland no vestiges remain; and the ruins now seen on the two hills are, I think, referable to the early part of the twelfth century; for in Carr's History of Coldingham, written in 1836, it is stated, that "the walls of St. Abb's Kirk and a small Saxon arch were seen within these few years." Doubtless the arch referred to was of the Norman period; it was the fashion at the period when Mr. Carr wrote, to call "Saxon," the circular arches which are now well known to be the work of the latter portion of the eleventh and early portion of the twelfth centuries.

*When St. Ebba drifted on shore at Coldburg Head, about 640 A.D., she found a religious establishment already existing. It was probably founded by St. Cuthbert about 570 A.D.

Churches stood on both hills; the plan, which is distinctly traceable and is peculiar, is the same in both. Little more than the foundations remain of that on the Kirk Hill; internally it is 72 feet long, and 22 feet broad, with walls 4 feet in thickness, built partly of porphyry and partly of sandstone. The boundary of a small cemetery is also visible; and formerly there were several monumental stones. A farmer, however, it is said, coveted this "God's Acre," tore up the tombstones, tumbled these memorials of the dead over the cliff into the sea, and ploughed up the green 'heaving turf.'

"The ruins on the Headland most probably mark the site of Ebba's monastery. The situation is singularly wild and picturesque. Here the porphyry presents to the sea a stupendous wall, about 300 feet in height; protruding from this wall into the sea, is a mass having a lower level; it is indeed a little peninsula of about two acres, united to the mainland by a narrow neck, which has been cut into, so as to form a ditch, the inner edge of which was defended by a strong wall and probably also by a draw bridge. This portion of the Headland is hence named the "ramparts." The church stood near to the edge of the northern cliff, indeed only two yards from it. The remains shew somewhat more than the foundations; the wall on some parts is three feet high, built entirely of porphyry. The size is about the same as that on Kirk Hill, being 72 feet long by 21 feet broad. A door is in the south-west corner, and there appears to have been a flight of steps from the exterior into the church of about three feet in height; another door opened from the north about eleven feet from the west end. The peculiarity of both churches is however in the chancel, which was a small recess of a square form at the south-east corner, being about twelve feet in breadth, or about half the width of the church, and eight and a half feet long. This, I believe, is an unusual arrangement. To the west of the church are obscure remains of other buildings which had probably been the inhabited portion of the monastery. Few if any records throw light on the history of these edifices. They had, I think, been subordinate to the magnificent establishment which flourished at Coldingham; and they may have been placed on commanding positions on the sea shore to attract the attention of mariners and induce them to make their offerings before the shrine of the Sainted Ebba.

"Though confined, lonely, and inhospitable, the situation of the monastery was tolerably secure, and the scenery romantic and picturesque. Viewed on a fine day, such as we enjoyed, with a

clear blue sky above, and a bright sun illuminating rock and sea, there was even much beauty in the scene. Columns and broken masses of rock rise on the north side of the platform whereon the buildings stood ; but through the opening between them, we look down a deep chasm, bounded on the north by lofty cliffs, adorned by lichens and mosses, here and there relieved with patches of the bright sea pink, and of the sea campion with its white flowers and glaucous green leaves. Isolated pillars and masses of rock stand in the midst of the sea, and, resembling a group of buildings, they have been named the Barn Yard. According to Scott, Melrose should be visited by moonlight, and I am told that when these rocks are viewed by moonlight, the illusion is complete—the farm house with its chimney is seen, and beside it may be recognised the various buildings usually clustered around a farm house. Few spots would therefore be more fitted for recluses than this. Shut out from the world and placed amid impressive natural objects, they had around them abundant materials suggestive of thought and calculated to excite the feelings ; and if, in the calm and sunshine, there is much to minister to fancy and gratify taste, how powerfully would such a scene impress the mind, when the wild wind blew, and the ocean was lashed into a storm.”

Mr. Heriot conducted us to the summit of a precipitous sea cliff north-west of St. Abb's Head, called Earnsheugh, on which there is a curious three walled camp placed on the very edge of the precipice, three sides of which supplied it with a natural bulwark, elevated 430 feet above the sea. This camp has a striking resemblance to the large camp at Old Bewick in Northumberland. Many of the knolls also, between Earnsheugh and Coldingham Loch, are marked by trenches. The loch is a fine sheet of water, about thirty acres in extent ; and about 250 feet above the sea. The view from the summit of St. Abb's Head is very fine. To the south are the distant Cheviots, Bamburgh Castle, the Farne Islands, and the Holy Isle ; turning round, to the north, are Fast Castle, the Bass Rock, Tantallon Castle, and the Isle of May, with the Fife coast in the extreme distance. Several rare birds were noticed during the ramble, especially two pairs of Peregrine Falcons, and two pairs of Ravens. The buckbean (*Menyanthes trifoliata*), and the yellow water-lily (*Nuphar lutea*), were found near the loch ; and the rose-root (*Rhodiola rosea*), in great luxuriance on the cliffs about St. Abb's Head. Some of the party extended their walk to Fast Castle, the Wolf's Crag of the Bride of Lammermuir.

The party assembled at dinner, consisted of J. C. Langlands, President, Robert Embleton and G. Tate, Secretaries, Wm. Dickson, Rev. Dixon Clark, Rev. Wm. Darnell, W. Watson, C. Watson, F. R. Wilson, Dr. Robson, W. Boyd, J. Boyd, Scott Dudgeon, Geo. Hughes, jun., J. Macbeath, W. Logan, C. Rea, J. Clay, and Ralph Carr; with Mr. Heriot, Mr. Lomas, Mr. Pringle Hughes, and Mr. Edmund Carr as visitors. The following gentlemen were proposed for election at the next meeting:—Rev. J. A. Bennett, Ellingham, Mr. Pringle Hughes, Middleton Hall, Dr. Embleton, Newcastle, Mr. Middleton Dand, Hauxley, Mr. Stephen Sanderson, Berwick, Mr. James Maidment, 25, Royal Circus, Edinburgh.

The meeting at Rothbury was held on Thursday the 28th June. Present, the President, G. Tate, Secretary, Rev. Dixon Clark, Rev. F. Simpson, Rev. W. Dunn, J. Clay, F. R. Wilson, Ralph Carr, J. Stuart, Charles Rea, Jas. Grey, R. G. Huggup, Rev. G. S. Thomson, M. Dand; and as visitors, Rev. A. Procter, Rev. J. Hall, and F. Simpson, jun.

The drive over the rugged mountain road on a beautiful summer's morning gave a peculiar relish to the breakfast at the Three Half Moons, after which the members visited Rothbury church, and examined with much interest the fragment of the Saxon cross, which now serves as the shaft or pillar of the Font, and which was described by Mr. Dickson in the last year's transactions. A headless figure was formerly set in the wall on the right-hand side of the south porch of the church—the right hand bearing a sword, the left a large purse, representing St. James of Compostella—like the fragments of the Saxon cross, it also has disappeared since the restoration of the church. The Rev. J. Hall shewed the members some urns, and an iron weapon, which, with a number of bones had been found in cists at Tosson and Rothbury. A description of these will be given in a separate paper. The party then strolled down the banks of the Coquet to Brinkburn Priory—viewing on their way the romantic *Thrum* or Scottish ford, the Reiver's Well, one of those wonderful springs of water which occur in several places in this neighbourhood. They passed round the Crag End, on which is situated the quarry of pure white close-grained freestone, from whence the massive blocks are procured for the landings and staircases of Alnwick Castle. The extensive works of the new iron smelting company were passed; but no smelting appeared to be going on at present.

In a deep dark dell, at the bend of the river on the north bank of the Coquet, stands Brinkburn Priory, one of the finest relics of the transitional period in England. The site of the monastery must have been chosen, with a view to perfect seclusion. The opposite bank is rocky and precipitous, and covered with wood. The approach is partly cut through a rock, and affords no view of the building till we come within a few yards of the north door of the church.

The Priory chapel, with the exception of the roofs and the south-west angle of the nave, was in very perfect preservation; and some years ago, it was in contemplation to restore the roof, in order that Divine service might be celebrated there. Mainly through the energy of the late Archdeacon Sharp, Vicar of the adjoining parish of Hartburn, a fund was collected by public subscription for the purpose; but the then proprietor, Mr. Fenwick, claimed the building as his private property, and the attempt was not made. The fund has remained in the hands of the Archdeacons of Northumberland until it now amounts to upwards of £3000.

The roofs of the chapel, and the dilapidated parts of the stone work, have recently been restored at a very considerable cost; under the able direction of T. Austin, Esq., Architect, Newcastle. The good work which has been accomplished, is entirely *the result of private exertions*; and the restoration will proceed until the building is rendered, once more, a fitting temple for the worship of God. Some difficulty has occurred respecting the appropriation of the fund, but it is hoped that it may yet be overcome. As the object for which it was raised is attained, an attempt is about to be made to make it applicable to the payment of a clergyman, and to allow the Vicar of Felton to cede the chapelry of Framlington, which, united to Brinkburn, shall constitute a benefice.

The history of the Monastery of Brinkburn, Brenkburn, or Brincaburgh is very obscure. William Bertram, second Baron of Mitford, is generally believed to be the founder, in the reign of Henry I. Leland attributes the foundation to a member of the families of Felton or Lisle. An abstract of the Brinkburn chartulary is printed in the *Archæologia Æliana*. It is now the property of C. H. Cadogan, Esq., whose modern residence occupies part of the site of the monastic buildings. I am glad to have this opportunity of expressing our obligations to him, for his kindness in permitting us to view this interesting relic; as well as for his courtesy in affording information regarding the restoration..

The right of sepulture within the chapel is still claimed, or permitted, to some properties in the vicinity. On the 24th May, 1828, Fenwick of Brinkheugh shot his son, the bullet used being the top of a brass extinguisher. He was tried and acquitted on the ground of insanity. The young man was interred in the family burial place belonging to Brinkheugh, in the south transept of the Priory church. Brinkheugh has since been purchased by Mr. Cadogan.

In clearing away the rubbish inside the church, a coped coffin lid was found; in the centre is a cross with trefoils, on the right side is a Bishop's mitre, on the left of the shaft of the cross is a pastoral staff. An inscription in well cut letters runs round, one word of which seems to have baffled all attempts to read it. It is the tombstone of Prior William, who was a suffragan under the Bishop of Durham, and who died in 1484. Dr. Raine conjectured that the word was the name of a Scottish or foreign see, of which he had formerly, "quondam," been Bishop. He never saw the tombstone himself, but investigated the matter, having a copy of the inscription supplied to him by the Rev. John Bigge. They found a regular list of the suffragans of Durham, *subsequent to* 1484; and in the rolls of the Bishop of Durham, there is an entry of certain sums paid as a salary to William Prior of Brinkburn, as suffragan to the Bishop of Durham.

Pellitory-of-the-wall (*Parietaria officinalis*) was observed in abundance about the ruin, as is usually the case near monastic buildings, forming as it used to do part of the *materia medica* of the monks.

The Rev. C. Vernon Harcourt on our return to Rothbury politely invited the members to visit Whitton Tower, one of the ancient Border Peel Towers; had time permitted, I am sure it would have afforded us much gratification to have availed ourselves of the Rector's kindness. It was with regret that we found his health prevented his joining our dinner party. After dinner Mr. F. R. Wilson showed some carefully executed drawings of Chibburn near Warkworth; a religious house of the fourteenth century, and explained the peculiarities of its structure. He then read an excellent paper on Brinkburn Priory, which was accompanied by a highly finished wood cut, presented by him to the Club, and which appears in this number of the transactions. The members proposed at the last meeting were elected, and the Rev. Aislabie Procter of Alwinton, and Dr. Lewis George Broadbent of Bamburgh were proposed.

The Club met at Melrose on Thursday the 28th July. Present, the President, the Rev. J. Dixon Clark, the Rev. W. Darnell, Robert Home, J. Macbeath, Wm. Boyd, S. Sanderson, Rev. J. Baird, Rev. Thomas Leishman, Major Elliott; and the Rev. W. Murray, Melrose, Mr. Curle, and C. J. Langlands as visitors. The members proposed at the last meeting were elected, and the Rev. J. D. Clark proposed Charles Bertie Pulleine Bosanquet, Esq., of Rock; and Mr. Macbeath proposed Wm. Melville Lomas, Esq. of Horbury Hall, Wakefield, for election.

The distant position of Melrose, and railway arrangements, made it late ere the members could assemble: after a hasty luncheon, they proceeded to the Abbey—the finest specimen of the Decorated style of which Scotland can boast. Amidst the ruins, close by “the marble stone” where “a Scottish Monarch slept below,” the interesting historical sketch of this famous foundation, drawn up for the meeting by John Stuart, Esq., F.A.S., Edinburgh, was read, to the manifest gratification of some fair tourists who were present, as well as of our members. The beauty of this ruin is well known; its most minute ornaments retain their sharpness, and seem as entire as when newly wrought, after having resisted the weather for so many ages. Leaving the Abbey, the party separated; some to visit Abbotsford—the realization of the great author’s dream of territorial acquisition; some, on a ramble to the pretty little valley, about two miles west of Melrose, “The Fairy,” or “nameless glen,” remarkable for the “*Fairy Stones*” which are found after falls of rain, washed out of the boulder clay, through which the little brook cuts its downward course. These concretions contain about 30 per cent. of lime, and are probably segregations of the lime, originally diffused through the clay; the lime in the course of its separation from the mass has attracted to it certain quantities of the earthy matter. The cause why this occurs is obscure, but we know that certain minerals do separate from others; ironstone nodules from shale—flints from chalk—and chert out of the limestone on the Tweed, are examples of this fact. I state this on better authority than my own—that of Mr. Tate. This little glen is also interesting, as being the scene where many of the events of the great novelist’s romance of “The Monastery” are supposed to have taken place. Another party climbed the three picturesque Eildon Hills, to inspect the remains of the ancient camps, on the eastern hill; and to enjoy the glorious prospect which embraces such a wide extent of the borders. Sir Walter Scott used to say, that he could point out from this hill

nearly fifty places, noted as the scenes of Border exploits, or celebrated in Border song. The plants observed, were musk Mallow (*Malva moschata*), Wall Rue (*Asplenium Ruta-muraria*), yellow Stonecrop (*Sedum reflexum*), and in abundance on the top of the hills Bilberry (*Vaccinium Myrtillus*). Mr. William Boyd announced the intention of the Rev. James Turnbull to resign as member of the Club, he being on the point of emigrating to Africa. Mr. Turnbull wished it to be made known to the members who take an interest in Entomology, that he shall be glad to afford any assistance in his power, in that department of natural history. His address will be, "*Beaufort, Cape Colony.*"

I have one mournful duty to discharge, in recording the death of two of our members since the last anniversary, the Rev. T. S. Goldie, of Coldstream, has been taken away at a mature age; and Dr. George Douglas, of Kelso, has been cut off in the prime of life, leaving a youthful widow to deplore his loss.

The progressive increase of members, augurs well for the future success of the Club. Since the last anniversary fourteen new members have been elected; all of whom, I hope, have joined it, determined to contribute something to the general stock of information—some of them, I am sure, are likely to be active promoters of its objects.*

The details which I have submitted to you, show that the attention of the Club has been more than usually directed, this summer, towards Archæology. This has arisen in some measure, from the circumstance that the natural history, botany, and geology of the district have been pretty well worked up; but chiefly, because the places chosen for our meetings have peculiarly favoured the pursuit of such studies. In this particular department a broad and rich field of labour is still before us. The border district, within the limits of the Club, is richly studded with numerous ancient dwellings, hill forts, and camps, many of which remain unnoticed in the more secluded parts of the district. Much has been done of late to elucidate the *Roman*

*NEW MEMBERS.—Rev. R. W. Kirwood; J. Walker, Greenlaw; J. Wheldon, London; J. Stuart, F.A.S., Edinburgh; Rev. J. W. Bennett, Ellingham; Pringle Hughes, Middleton Hall; Dr. Embleton, Newcastle; Middleton Dand, Hauxley; J. Sanderson, Berwick; James Maidment, Royal Circus, Edinburgh; Rev. Aislabie Procter, Alwinton; Dr. Lewis George Broadbent, Bamburgh; Charles Bertie Pulleine Bosanquet, Rock; and W. Melville Lomas, Horbury Hall, Wakefield.

portion of the history of Northumberland, by the accurate and beautiful surveys which have been executed at the cost of His Grace the Duke of Northumberland, by Mr. Maclauchlan. The Duke proposes, I believe, next to direct the attention of that accomplished surveyor and antiquary to laying down the still more ancient series of fortifications, which stretch across from the hills near which we are now assembled, to the coast.*

The tale of the curious sculptured stones, which have been found in close connection with so many of these camps, is yet untold. Mr. Tate has been engaged upon this investigation, and will, I hope, ere long, have something to disclose to us. We need not despair, after the progress which has been made in deciphering the Runic inscriptions, that a key to the meaning of these strange circles, may be discovered.

The past season has been very peculiar in its character. Succeeding a year of unusual dryness, the same absence of rain has marked its course; water has become scarce, and many weak springs have been dried up. From the 1st of January up to the 28th of September only 20 days of *rain*, and 34 days of *changeable* weather are noted, while we mark 214 days of *fair* weather. The winter was remarkably mild, the *lowest* temperature reached, being January 14th 27°, February 8th 29°, March 31st 25°, April 1st and 16th 26°. The summer which succeeded has been hot, the thermometer in the shade having reached, May 29th 78°, July 10th 76°, July 16th 86°, August 13th and 18th 76°. The average temperature at 8 a.m. has been January 40°, February 40°, March 43½°, April 42½°, May 50½°, June 56°, July 60½°, August 60¼°, and September 53°. The fall of rain at Lilburn Tower from January 1st to September 14th has only amounted to 14·031 inches.† Notwithstanding the high temperature there has been an absence of thunder storms in this district; but the Aurora Borealis has appeared unusually early—on the 28th August.

* ANCIENT FORTIFICATIONS.—Yeavinger, Akeld (Gleed's Cleugh, Harehope), Humbledon, Green Castle (Cup and Saucer), Maiden Castle (Kettles Camp), Weetwood, Doddington, Horton, Chatton, Chillingham, Ros Castle, Lyham, Belford Moor (Roman), Belford, Outchester (Roman), Spindleston.

BEACONS.—Yeavinger, Ros Castle, Warenton Law, Bamburgh, and Alnwick.

† FALL OF RAIN AT LILBURN TOWER.—January 0·875, February 1·740, March 2·055, April 2·295, May 0·345, June 1·820, July 2·156, August 1·245, September 1·500. Total 14·031 inches.

The harvest which is just concluded, has been one of the finest ever remembered; from its commencement, early in August, to the 9th of September there was only once or twice a slight shower of rain, and hot airy weather prevailed. The insect tribes, especially the destructive sorts, have not been so prevalent as is generally the case in hot summers. The Black Caterpillar or Collier, being the larvæ of the *Athalia centifoliæ*, which committed such ravages on the turnip crops in 1835, 1836, and 1837, as also in 1780 and 1783, made its appearance in the beginning of July, after an east wind which followed some extremely hot weather. Though very destructive during its stay, it did not remain long.

Our kindred society, the Tyneside Naturalists' Club, held a meeting on the 17th of August, on Cheviot. A joint meeting of the Clubs for personal and friendly intercourse was suggested, by their President, the Rev. H. B. Tristram; this was not practicable, but four of our members, Mr. Carr, Hedgeley; Mr. Tate; Mr. T. Tate, Hastings; and Mr. F. R. Wilson met the party at the remains of the ancient British town, near Linhope; and on the following day, I had the pleasure of accompanying them from Bolton to Hulne Park, and visiting with them "The Guards" (a reputed Roman camp), which is historically interesting as the meeting place of the Earl of Surrey, with Lord Dacre and the forces from the west, on his advance to Flodden Field.

There is a subject which has lately called forth some remarks from my friend, the President of the Tyneside Club, which is important to all lovers of natural history, and to which I wish to draw your attention; it is the wanton destruction of rare birds and beasts, some of which have entirely disappeared; and also the eradication of plants, many of which, once common enough, are no longer to be found. Draining and agricultural improvement may to a great extent be the causes of the latter; but the Botanist is himself partly to blame, when he removes a rare plant from its habitat—forgetting that he deprives those who follow him of a gratification equal to his own. Such pilfering would long ago have eradicated the Lady's Slipper (*Cypripedium Calceolus*), in Castle Eden dene, but for the friendly watch which Mr. Burdon has found it necessary to keep over it; if similar care had been taken, the *Osmunda regalis* might still have existed among the rocks at Rowting Linn.

Two Hoopoes have been shot this summer, in Northumberland. This bird is almost domesticated in Holland, and would

become so with us, if unmolested. I lately found a very fine specimen of the Horned Owl, now becoming rare, which had been wantonly shot. The Peregrine Falcon, which used to breed on the moors close by my residence, has disappeared for many years. One of the pairs of Ravens which is still left in Northumberland, occasionally gratify us with their wild cry. But even these have been driven from their time honoured nest, by having their young ones shot in it. This destruction must not be charged against naturalists; it is mainly effected by the license which is permitted to gamekeepers, to destroy every thing which they may think proper to deem injurious to game. The enormous increase of Rats and Rabbits, also, is greatly owing to the destruction of their active little enemies, the Weazels, by persons of this class. Surely something might be done to check this growing evil.

Allow me, in conclusion, to express my thanks to the Secretaries, for the kind assistance which I have received from them; and to apologise to you, for having taxed your patience to such an unreasonable extent. May the Club flourish, and long continue to realise the intentions of our Founder. The motto which he selected, "MARE ET TELLUS, ET QUOD TEGIT OMNIA, CÆLUM," indicates a boundless range for investigation, in every part of which—to use the words of a charming modern writer—"The naturalist acknowledges the finger mark of God, and wonders, and worships."

Brinkburn Priory.

By F. R. WILSON, Associate of the Royal Institution of British Architects.

"I ransacked for a theme of song,
Much ancient chronicle and long."

In the green shade of a deep-set valley on the banks of the river Coquet, Osbertus Colutarius built Brinkburn Priory. The smoke from the hospitable fires of the Priory must have mingled its fleecy clouds with the boughs of outspreading trees; and the sound of the church bell must have reverberated thunderlike through their intertwined branches, for, on both sides of the river, high banks, crested with trees, rise steeply up to a great altitude and shut out the world from the Priory, much as a convent gate shuts out the world from its inmates. These banks are clothed with one rich

entanglement of foliage, through which juts of grey rock protrude themselves covered with mellow patches of amber lichens, and from which tall fir trees cast sombre shadows into the rippling stream below.

Situated in a spot so far removed from the highway, Brinkburn unfortunately escaped the notice of our earliest chorographers. This is to be regretted, as every notice of a building by a competent person is a link in its history. Camden, however, refers to the book of Brinkburn abbey for information on various subjects. This was the chartulary of Brinkburn Priory, an archæological treasure which is happily still in existence. An index compiled by Hodgson and published in the *Archæologia Æliana* is the only portion that is accessible now to the antiquary, for after a long repose in the Stowe collection, the Book of Brinkburn Abbey passed into private hands at the memorable sale. The topographer of the last century, painstaking Francis Grose, Esq., was more exact in his researches; and has made due mention, with due appreciation of the venerable pile. Hutchinson, Wallis, and Hodgson have all endorsed Grose's remarks. In our own day, Turner in his "Beauties of England and Wales," has immortalised the stage of decay at which it had arrived before the present restorations were undertaken; Cope, the royal academician has painted it; and the Rev. John Louis Petit, and the gifted Sidney Gibson, Esq., have lit up this building with their pens, each after his own inimitable manner. It would appear, after an enumeration of so many learned notices of the Priory, that there can be but little left to say upon the subject. But this is far from being the case. The history of Brinkburn Priory is not finished yet. Year after year facts of interest come to light which should be carefully recorded for the benefit of future generations of such societies as this, of which we have the honour of being members. In one year a fragment of the bell of the church, which had so often called men's thoughts from earth to heaven, and which Wallis says was removed to Durham Cathedral, was found buried at the root of a tree on the hill on the opposite side of the river. In another year a bronze mediæval vase was dug up about twenty yards south-west from the south-west angle of the nave, beneath a layer of charred earth and wood ashes, apparently the debris of a wooden building. It was nearly full of bright broad gold rose nobles of Edward the Third's reign, most of which have the Calais mint mark; a few dated from the short reign of Richard II.; and one from the reign of Henry IV. A roughly hewn stone trough was placed inverted over the precious treasure—amounting in all to nearly three hundred pieces. Old people in the neighbourhood talk about curiously carved chairs, which they can remember as having seen in cottages round about; from which remembrance we may form a hope, that we have not seen the last of the hidden treasure or dispersed furniture of the long departed Canons. And when we take into consideration the important restorations now in progress, we may fairly assume that there are many chapters in the history of Brinkburn yet untold.

In the reign of Henry I., William Bertram, Baron of Mitford, gave the site of these buildings to Osbertus Colutarius for the purpose of founding a priory of Black Canons. With the consent of his wife and son he endowed it richly with lands and woods. Subsequently his grandson made additional grants of land, with permission to cut timber out of his woods for the use of the Priory; besides allowing the Canons the privilege of killing game—a liberty there is no doubt they highly valued. This was the age when princes and nobles vied with each other in their zealous liberality to the church. It was a time also of unbounded superstition, when men's minds easily received the conviction, that the founding of a church to the glory of God must infallibly secure permanent and hereditary absolution for the founder and his heirs. Hence the profuse gifts, the ample endowments, and the liberties of taking fish and killing game so liberally granted to the religious communities of this period. Farther on in the march of time, it is recorded, that Prince Henry, afterwards King of Scotland, being created Earl of Northumberland by King Stephen, gave the property of a salt pan at Warkworth. He and his son William de Warren (so called from his mother's family) confirmed all previous privileges and possessions; the same being again confirmed more than once in those turbulent times by royal charter. Gifts flowed freely in from all quarters. The Canons sometimes made droll bargains to suit the wants of their Convent. Among others they granted two tofts at the east end of Newbiggen to Simon son of Mangur, jun., in consideration of the yearly rent of 500 herrings! Edibles must have been a most pressing necessity in an age when every traveller made a convent his inn; when passing regiments laid the community under contributions; and when foraging parties of Scots often stripped the priory of its stores. About this time, in the 8th year of the reign of Richard the Second, the Lady Johanna induced her son Ralph Lord Guystocke to give the impropriation and advowson of Long Horsley to the priory. The Canons of Brinkburn agreed, in return for this power vested in their hands, that the said Johanna and her heirs, Lords of Morpeth, should for ever have the power of nominating one Canon there; in virtue of which agreement we find Allen, son of John de Prestwick, soon afterwards nominated. Alas! for the heirs of the pious lady Johanna! The power vested in them forever was confined to very few generations. About a hundred and fifty years from this time Thomas Cromwell, whilome a hanger on at a Surrey blacksmith's forge, afterwards Secretary of State to Henry VIII. sent his fire-brand of a commission across the length and breadth of the country, which resulted in the dissolution of six hundred and forty-five monasteries, including this priory.

Many are the Brinkburn legends of foes and fays; and historical facts are scarcely less numerous. In the year 1414 the Prior of Brinkburn was deputed to attend a congress at "The City of Constance," when no less a subject was in agitation than the claims of three rival Popes to be the rightful occupiers of the

Papal chair. The Bishop of Durham was convened to attend this conclave, but being too much occupied with French negotiations at the time to be able to leave, he deputed the Prior of Brinkburn to go in his stead. Accordingly in one of the account rolls of the monks of Lindisfarne, we find an item of 6s. 8d. as a contribution towards the Prior of Brinkburn's travelling expenses to "the city of Constance."

Almost the last incident in the history of Brinkburn Priory, is recorded by the herald John Younge, in his account of the "Fyances of Margaret daughter of Henry 7th to James King of Scotland." He relates that when the splendid cavalcade of the Princess left Newcastle for Alnwick Castle "Half a mylle out of the said towne was Sir Humphrey Lysle and the Prior of Brinkburn, well appoynted and well horst to the number of xx horsys. Their folks arrayed of their liveray." In all probability the Prior carried his most costly crucifix for the princess to kiss, as the herald records the observance of this ceremony in all similar cases on the long road from London to Edinburgh. A very short time after this, we find Sir Humphrey Lisle turning round upon his friend the Prior of Brinkburn, no longer travelling in his company to pay respect to a maiden princess, but carrying off his cattle, stealing his goods, taking his servants and tenants prisoners and setting them in the stocks, as may be seen from the following extract from a letter written by Thomas Dacres, and published in Hodgson's *History of Northumberland*:—

"To my lordes of the king our soveraigne lordes most honorable counsaill.

"My singular good lordes in most humble and lowly wise I recommend me to you—in so much as I am one of the justices of the kings peas within the county of Northumberland, and also have authority by commission for reforming of attemptates within the same, the copie whereof I send your lordships with my servant this bearer, the pore prior of Brinkburne for such injuries, wrongs, and misdemeanours as of late were committed and done to him, his brethern, their servants and tenants, as well as in taking their goods and cattelles, as presonning of their servants and tenants, setting them in the stocks wrongasly, as also putting the vicar of Felton, beyng a chanon of Brenkburn, from his cure and taking his cors prisoner, and now serving the cure by a secular preeste put in by Sir Humphrey Lisle, knight, with other attemptates committed and done by the said Sir Humphrey and others, his childrn, servants and tenants."

The Lises and their followers suffered severely for their moss-trooping indiscretions, for finding their luck turning, they submitted themselves to the Earl of Northumberland, and were subsequently decapitated in various parts of the kingdom.

The annual revenue of the Priory of Brinkburn at the dissolution of the monasteries was £68 19s. 1d., according to Dugdale; but according to Speed it amounted to £77. The ten Canons living in this peaceful dwelling were dismissed; the buildings they had inhabited, the lands they had cultivated and the privileges they

had enjoyed were bestowed by Edward VI. upon John Dudley, afterwards Duke of Northumberland—better known perhaps as the ambitious and ill-fated father-in-law of Lady Jane Grey. In the short life time of the same monarch, Brinkburn passed into the possession of the martial family of Fenwick of Fenwick. Probably they held it in the first instance by lease, for it has been ascertained that Ambrose Dudley and his co-feeoffee, Richard Bowland, sold it, May 26th, 1571, to Sir John Forster, Knight, whose descendant, Edward Forster of Eldford, on the 18th of April, 1626, sold it to George Fenwick of Grey's Inn, London. The supposition that the Fenwicks held Brinkburn by lease, long before the absolute purchase, is founded on the frequent mention of the Fenwicks of Brinkburn, prior to that event. A George Fenwick of Brinkburn was one of the gentlemen of the middle marches as early as 1550.

The site of the old Priory buildings is occupied by the modern mansion of the present owner of the property, beneath which is a crypt, which once formed part of the ancient edifice. In Grose's time, the Priory had been converted into a farmhouse. In the view of the church, given in his work, we can just discern the Priory buildings depicted in the distance, with the character of their mullioned windows. In most vivid contrast to the disappearance of nearly every vestige of the domestic buildings, was the very perfect preservation of the Priory church. The roof and south-west angle alone appear to have suffered at the hands of Time. The disappearance of the greater part of a turret stair, in this fallen angle of the church, has led to a general misunderstanding as to its ancient purpose. It has been erroneously supposed to have led to a guest chamber or other monastic accommodation; when in reality it was the access to the triforium. This is certain for two good reasons. First, because there is no other access to the triforium or to the passage in front of the western triplet. Secondly, because there never was an instance in which a church was made a thoroughfare to a guest chamber.

The plan of the church is cruciform; having a nave 22 ft. 8 in. wide, and 70 ft. 4 in. long, with a north aisle; a chancel 37 ft. 9 in. long, and 22 ft. 5 in. wide; north and south transepts both with aisles; and a total length including the tower of 130 ft. 10 in.

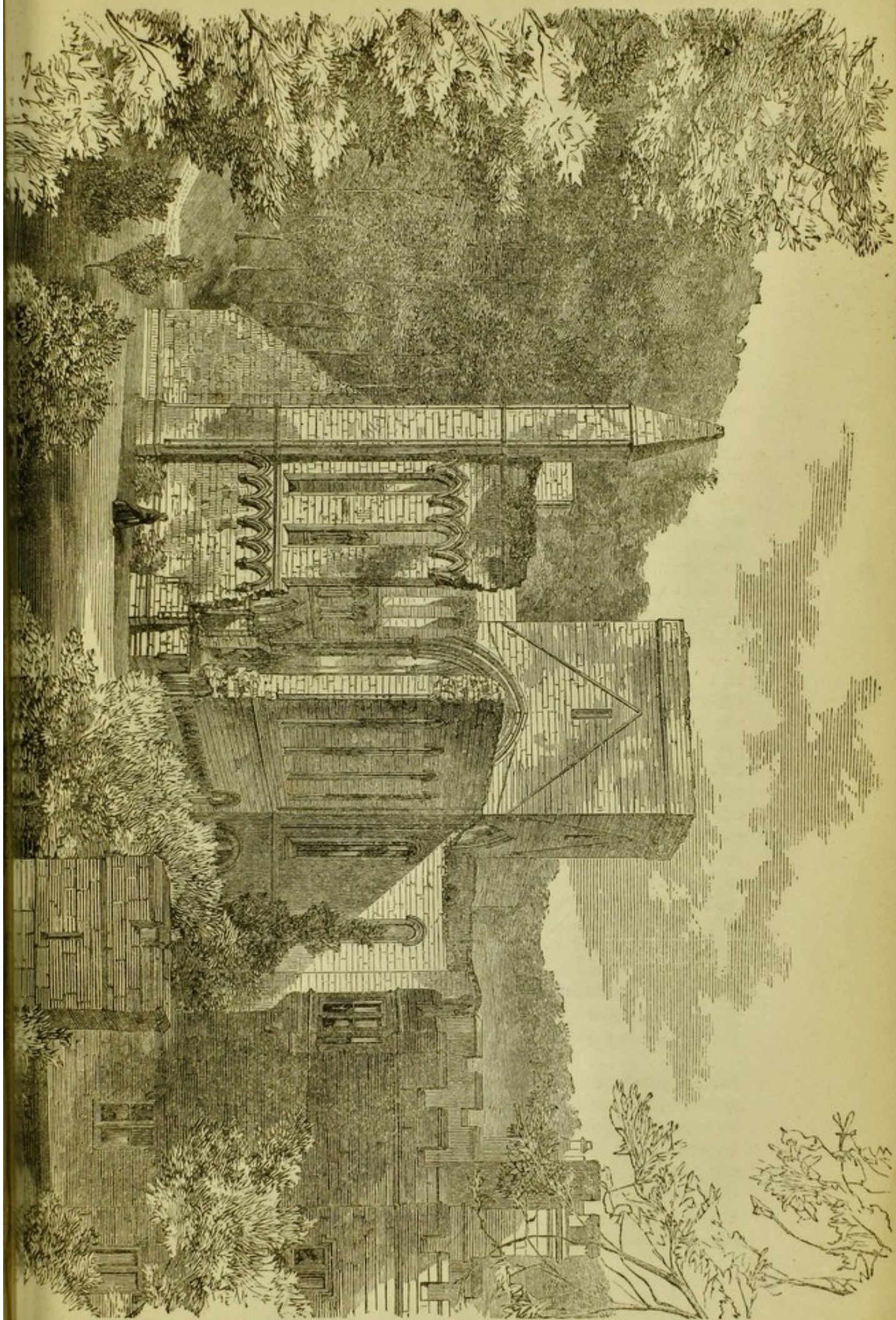
At the point of intersection there is a very low square tower; so low, that it is scarcely visible from the adjacent country. On the exterior of the south side of the nave there is a beautiful arcade of trefoil arches supported on slender shafts, which proclaim the existence of a cloister on this side of the building. The chancel is peculiar. It is lighted by three tiers of triplet windows; the two lower tiers possessing pointed arches, while the arches on the third tier are round and very plain. The doorways have circular arches. The north-west doorway stands slightly forward surmounted by a gable in which is contained three pointed trefoil arches resting on shafts similar in character to those forming part of the decorations of the cloister, but smaller in size. This doorway is richly decorated with Norman ornaments, intermixed with

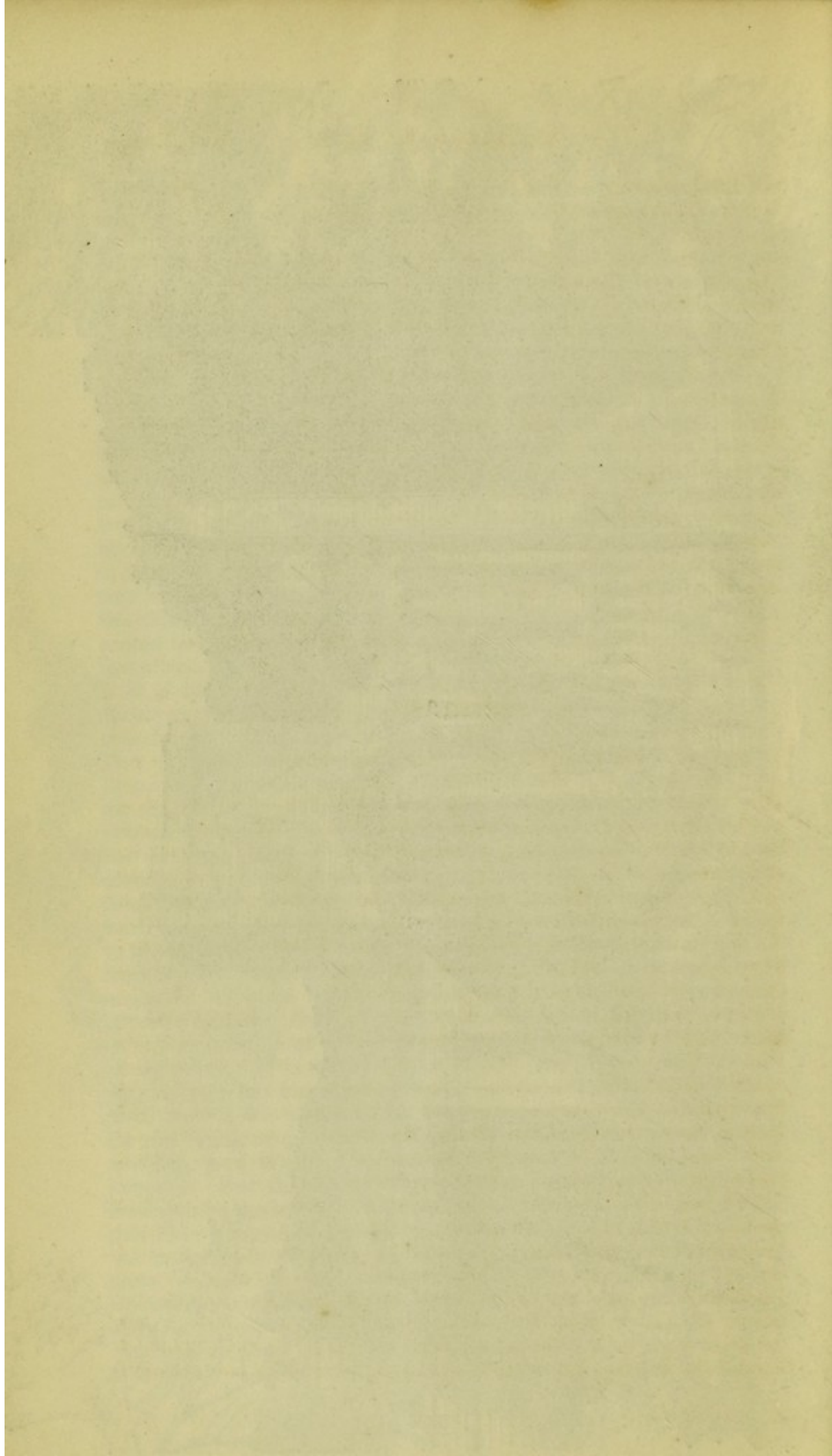
the early English quatre-foil flower, and presents as beautiful a specimen of the mingling of these two styles as any we have left us.

The tower partakes of the marked transitional character of the rest of the building, being supported by Norman piers spanned by early English arches. The transepts appear to have been the only part of the building vaulted with stone; the roof of the nave, aisles, and chancels having been in all probability constructed of timber. Such at all events is the interpretation put upon the evidence by the architect, Thomas Austen, Esq., under whose auspices a handsome timber roof, covered with small tiles, has been placed over the building. The effect of this restoration is most pleasing, the quiet red hue of the tiles of the new roof making a cheerful contrast to the deep green of the umbrageous trees with which it is surrounded. Very little sunshine ever falls upon Brinkburn Church, for the shadows seem to love to linger in its quiet precincts, but when the rays of a sunset burnish the rose windows of the gables and send autumn tints quivering over the climbing foliage on the steep banks around, a scene is presented to the eye that memory will cherish after many others are forgotten.

It is impossible to find, upon the whole, a more perfect and chaste representation of the transitional period of two important eras in our national architecture, than we see in these remains. The characteristic feature of Gothic architecture, namely its thorough adaptability to the requirements of any given site, or for the wants for which the buildings were intended, are in our subject exemplified to a most charming degree; and if we except the romantic ruins of Fountains Abbey, or the grander and more elaborate remains of Tintern Abbey, there is no parallel to be found throughout England or Wales, to the choice ruins of Brinkburn Priory. The illustration which I have the honour to present to the Club is from a photograph taken by Mr. Trotter, of Alnwick, from the opposite side of the river looking upon the west end. It is engraved on wood by the eminent architectural wood engraver, Alfred Williams, Esq., of *The Illustrated London News*.

The restoration of the Church has been in contemplation for many years. It is unlikely that service has been held since the dissolution; but burials were made as late as 1745. Grose mentions that a few years before his time a scheme was set on foot, for the fitting up part of the church for the performance of divine worship; and Wallis records that a brief was obtained for that purpose. But this great and interesting undertaking has been reserved for the several members of the family who at present own this long neglected edifice, and who, with fitting appreciation of the importance of the work in an archaeological point of view, have brought every accessory at command to the difficult task. Operations were commenced in the spring of 1858. It is noticeable, as a proof of the excellence of the workmanship of the Early English buildings, how well the masonry has stood the wear and tear of 700 seasons. The situation being remarkably sheltered,





but little damage was to be expected from wind; nevertheless thunderstorms and deluges of rain, with consequent floods from the river, might have been more disastrous in their consequences, but for the solidity of the foundation and strength of the masonry. The monks of Brinkburn Priory succeeded in entailing their beautiful church upon centuries of generations, and the judicious restorations now in progress will assist in furthering their endeavours for scores of generations to come.

After we have viewed our subject with all its feudal accessories of steel-clad founders, royal charters, and pious gifts of lands and woods; with all its architectural detail of tower, turret, and cloister; with fancied resonance of chant and chime still lingering in nooks; the most romantic legend in connection with it still remains untold. The fairies, dead and gone this many a weary year, are supposed to lie buried at Brinkburn. Peace be to their tiny ashes! for they could not have a more fitting place of sepulture; nor more verdant aisles than those from which the birds and bees intone their requiem.

Melrose.

By JOHN STUART, F.S.A., Edinburgh.

The history of Melrose as a religious establishment draws back to that early time when the torch of the Christian faith kindled at the shrine of Iona was soon after rekindled at holy Lindisfarne, and dispersed its beneficent light over heathen Northumbria. At that time the kingdom of the saintly Oswald extended through Lothian to the Forth, and when, with the assistance of Aidan, he had trained a colony of monks at Holy Island, he dispersed them into various religious houses which he established. One of these was Melrose, which dates from about the middle of the 7th century. Of this monastery, Eata, one of twelve Saxon youths instructed by Aidan, was the first Abbot, when Boisil was its Prior. The next Prior, who as a boy, herded his flocks in the neighbouring vale of the Leader, has, as the holy Cuthbert, left an imperishable name, not so much for the many miracles attributed to him by his biographers, as for the austere piety, unworldly self-denial, and missionary zeal, by which he awed and converted the neighbouring pagans to the Christian faith.

This primitive monastery was burned by Kenneth, King of the Scots, in his invasion of the Saxon territory, but in 875 it seems to have been rebuilt, when it became one of the resting places of the body of St. Cuthbert, when removed from its sepulchre at Lindisfarne, on account of the invasion of the Danes. Before the end of the 11th century Melrose appears to have been ruined and deserted, except for a short time between 1073 and 1075, when it became the retreat of a few monks, among whom was the historian

Turgot, afterwards Bishop of St. Andrew's, and Confessor to Margaret, the saintly queen of Malcolm Canmore. The monastery was succeeded by a church or chapel dedicated to St. Cuthbert, and dependant on the Priory of Durham or Coldingham, till between 1126 and 1136, when David I. exchanged for it the church at Berwick, and annexed it to the new Monastery at Melrose, which he founded in the latter year. This chapel became famous as a resort of pilgrims. Towards the middle of the 13th century this sanctuary was the dwelling of a monk named Aidan, reputed of great sanctity, who for twenty years never entered a bed, but slept sitting or lying before the altar of the Virgin in that chapel, at the door of which he sat during the day time reading his psalter, supplying the wants of the poor who visited the sanctuary, from a basket of provisions which he kept beside him, and bestowing his blessing upon all visitors, among whom were King Alexander II. and many of his nobles.

This venerable Monastery of Melrose was not on the same site as that whose ruins our members have now assembled to inspect, but on a promontory surrounded by the Tweed at a place now called old Melrose, about two miles farther down the stream. Yet in writing of the second foundation, it seemed impossible not to linger for a time over the first, and to feel that the glory of that humble structure which witnessed the missionary labours of Aidan and Boisil and Cuthbert, transcends that of the second, although the grandeur and beauty of the latter yet remain to charm and surprize us, while the other only survives in the dim pages of early chroniclers.

In 1136 King David I. founded the modern Abbey of Melrose, having brought thither from Rievale in Yorkshire a colony of Cistercian Monks. The church, which was ten years in building, was finished in 1146, and was with great pomp and solemnity dedicated to the Blessed Virgin, on the 28th July of that year, and the establishment soon became rich from the benefactions of the Scottish monarchs and their great subjects.

About 1321 the church was pillaged and destroyed by the English under Edward II. In consequence of that destruction, King Robert Bruce, to aid in rebuilding the church, granted to the monks all wards, reliefs, marriages, escheats, fines, amerciaments, issues, and perquisites of both Justiciary and Sheriff Courts belonging to himself and his heirs within the Sherifffdom of Roxburgh, to be held by them until they should have fully raised the sum of £2000 sterling; a gift which appears to have enabled them to erect the beautiful fabric whose ruins still remain. In 1329 the same King, a few weeks before his death, addressed to his son David and his successors a letter recommending to their especial favour the monastery of Melrose, in which he had ordered his heart to be entombed, and in which he earnestly enjoined them to allow the monks to enjoy all his donations for the rebuilding of their church, and to increase rather than diminish them. This purpose of the Scottish monarch touching the resting-place of his heart seems to have been altered

by a last thought, for we know that he gave it in charge to the good Sir James Douglas, that he should bear his heart to the Holy Land, whither he had formerly meditated a pilgrimage in expiation of his early sacrilege in the slaughter of the Red Comyn in the church of the Minor Friars at Dumfries. The history of that gallant heart will not be forgotten, which records that the good Sir James, in pursuance of his promise to the dying King, set out with his precious treasure, in company with a noble cavalcade, to bear it to Palestine, but learning that a war was going on between the Christians, under Alonzo King of Leon, and the unbelieving Moors, in Granada, he diverged thither, in order to signalize his prowess against the Saracens. In his first attack, after the defeat of the Moorish cavalry, the impetuosity of Douglas carried him away from his friends, when he was surrounded by the Moors and overpowered. Finding this, he took from his neck the casket which contained the heart of Bruce, exclaiming "now pass onward as thou wert wont, and Douglas will follow thee or die." They were his last words. On the following day the body and the casket were both found on the field. It is said that both were brought home, the body of Douglas to repose among the ashes of his ancestors in the church of St. Bride, in the little dark vale of Douglas, and the heart of his Sovereign to lie in the stately Monastery of Melrose, according to the original design of the King.

This must have been before the present building was completed, the work of which was commenced in 1326, and which is in the Decorated Style of the period. It has been asserted that some parts of the building date from the time of James IV. and perhaps we may find traces of something approaching to the Perpendicular Style of that period (rare as it is in Scotland) in the great east window, which is 37 feet in height and 16 in breadth. Sir Walter Scott's description of this great window will readily occur as both true and beautiful. The church is almost the only remaining part of the Monastery, and it is greatly ruined. The west end of the nave is gone, but from the extremity of the nave now remaining to the end of the chancel it measures about 250 feet. The transepts measure from one extreme to the other 115 feet, and the breadth of the nave and side aisles is 69 feet within the walls.

The nave has a narrow lofty north aisle, and a double south aisle, the outer one being much lower than the inner, and divided into eight chapels running the whole length of the nave. There is a buttress betwixt each window, which terminates in a pinnacle, and from these spring flying buttresses over the roof of the side aisle for the support of the main wall of the nave. Every part of the ruin bears marks of the Decorated sculptures, which have been more numerous or better preserved on the face of the south transept than elsewhere, and the delicacy of which may be traced in the doorway leading from the north transept to the ruined cloisters. The grotesque figures and clusters of plants and flowers which occur in various places are worthy of study. Among the latter are lilies, ferns, grapes, leeks, oak leaves with acorns, palms, hollies, and fir cones.

On the floor of the chancel lies a slab of polished marble of a greenish black colour, with petrified shells imbedded in it, and of a semi-hexagonal form, which is believed to cover the dust of King Alexander II. who was interred beside the high altar of this church in 1249. Within the church were likewise deposited the remains of James, Earl of Douglas, slain at Otterburn, as well as those of Sir William Douglas, the Knight of Liddisdale, the latter having been interred before the altar of St. Bride's Chapel.

In 1544 Melrose was partially destroyed by parties of English, under Sir Ralph Eure and Sir Brian Louton, when the tombs of the Douglasses were defaced, an insult wiped out on Ancrum Moor in the following year.

Then came the period of the Reformation, when our church lands became generally secularized. After passing through several hands, the possessions of the Abbey of Melrose became at last vested in the Earl of Haddington, in the reign of James VI., from whose descendants they were acquired by the family of Buccleuch about the beginning of the 18th century.

It is probable from the pieces of burnt oak and melted lead that have been found by digging upon the site of the Monastery, that its buildings were destroyed by fire. At various times the ruins are said to have been used as a quarry for building houses in Melrose, and at last, about 1618, a part of the nave was converted into a Parish Kirk—a species of adaptation which has invariably proved disastrous to old buildings. Many of the carved stone images from the niches all over the building, which escaped the fury of the Reformation, remained till the Covenanting Iconoclasts turned their attention to them, when they were demolished.

Of the brotherhood of Melrose, it has been alleged in an old Scottish song—

“O! the Monks of Melrose made gude kale
On Fridays when they fasted;
They wanted neither beef nor ale
As long as their neighbours' lasted.”

That they had the means of making good cheer without encroaching on the larders of their neighbours, may be gathered from the following statement of the rent of the Abbey in 1561:—

Scots money, £1758.
Wheat, 14 chalders 9 bolls.
Bear, 56 chalders 5 bolls.
Meal, 78 chalders 13 bolls 1 firloft.
Oats, 44 chalders 10 bolls.
Capons, 84.
Poultry, 620.
Butter, 105 stons.
Salt, 8 chalders.
Peats, 340 loads.
Carriages, 500.

Fauna of the Mountain Limestone Formation on the Berwickshire coast, with a preliminary notice of the succession of the strata on the Eastern Borders. By GEO. TATE, F.G.S

Living plants and animals, observed within the district of the Club, have been carefully noticed in its Transactions; few, however, of the extinct organisms have been recorded. An attempt was made to fill up a blank, by the Monograph on the Fossil Plants, which was published in the "Natural History of the Eastern Borders;" and lists have been given in our Transactions of animal remains found on the Farne, at Beadnell, and at Howick. But as an excuse, why so little has been accomplished in this department of natural history, it should be recollected, that the scientific study of fossils is but of recent origin, and that the collection and accurate determination of them demand much time and labour. Materials, however, have been gradually accumulating to illustrate the Palæontology of the district, and it may be hoped, that, at no very distant period, an ample catalogue of our fossils may be completed. Meantime as "*Ars longa est, sed vita brevis,*" I purpose giving, as opportunity offers and as far as I am able, lists of the extinct organisms which may be observed in localities visited time after time by the Club; but these lists will be far from exhausting the subject, for many fossils are found in an imperfect state, and do not possess the characters requisite for correct determination, while many more will remain, for years to come, locked up in their rocky cabinets.

As preliminary to these lists, a brief and general sketch of the succession and range of the strata in the border counties of Berwickshire and Northumberland will be of some use.

The formations belong to the Palæozoic Era, and in ascending order are—

- I.—The Cambrian of Sedgwick or Lower Silurian of Murchison.
- II.—The Devonian or Old Red Sandstone.
- III.—The Carboniferous.
- IV.—The Permian or Magnesian Limestone.

I.—The Cambrian or Lower Silurian rocks form the Lammermuir hills, the axis of Berwickshire; and range across the county in a west-south-west direction from Siccar Point and Burnmouth, in a belt having an average width of about ten miles. The rock is generally Greywacke and Greywacke slate. This formation is prolonged into Selkirkshire and Roxburghshire, and thence into the western part of Northumberland, where it is seen on the flanks of the Porphyry of the Cheviot on the Coquet above Philip, and again in a similar position at Whitelee on the Reed near to Carter Fell. The only undoubted organic remain discovered in this formation in our district is a Graptolite, which was found by Mr. Wm. Stevenson, on the Dye Water; he has also noticed some curious markings on slabs, for which he thinks it is difficult to account without supposing the influence of organic agency.* It

* Proceedings of the Geological Society, Vol. IV., p. 29.

is probable that Annelids are also entombed in some of the Berwickshire beds, as both Annelids and Graptolites have been discovered, in other parts of the range, at Grierston and Thornielee on the Tweed in Selkirkshire.

II.—The Devonian or Old Red Sandstone formation occupies a considerable area in the central and south-western parts of Berwickshire. There is a fine section of it on the north side of the Lammermuirs, from Siccar Point to the mouth of the Pees; the conglomerate is seen overlying unconformably the Silurian or Cambrian strata. In Northumberland we find it in Roddam Dean on the flanks of the Cheviot Porphyry, where it contains rolled pebbles and blocks of this Porphyry, evidencing that the Cheviots had been protruded previously to the deposition of the Old Red conglomerate. There is no physical break in Berwickshire between the Old Red Sandstone and the Carboniferous formation; but the limits of the former are nearly marked by the occurrence, near to the Pees mouth, of *Holoptychius nobilissimus* and *Pterichthys major*, which are fish characteristic of the upper beds of the Old Red Sandstone.

III.—The Carboniferous formation occupies nearly the whole of Northumberland, and a considerable area of the south of Berwickshire, with a small patch or two in the northern part of that county. Four groups are distinguishable; commencing with the uppermost we have: 1—The Coal Measures; 2—The Millstone Grit; 3—The Mountain Limestone; 4—The Tuedian Group.

1—The Coal Measures are a series of alternating strata of sandstones, shales, ironstone, and coal; with an abundance of remains of land plants, and, in a few beds, of Fish and fresh-water Mollusks, (*Anthrocosia* King), allied to the *Unio* of our rivers. Lacustrine conditions are generally indicated.

The term "Coal Measures" usually applied to this group is objectionable, because workable beds of coal are contained in other groups, though not in such abundance and excellence of quality as in this. These Coal Measures constitute the Newcastle coal field, and occupy the triangular area in Northumberland which lies eastward of a line drawn from the mouth of the Coquet to Wylam on the Tyne. They do not extend into Berwickshire.

2—The Millstone Grit consists of coarse gritty and conglomerate beds interstratified with sandstones and with thin beds of coal. It lies at the base of the Coal Measures, and forms a narrow zone running from the mouth of the Aln nearly parallel with these Coal Measures. It contains remains of plants and Annelids. Grains of Protoxide of Iron and Garnets are found occasionally in the gritty sandstones.

3—The Mountain Limestone is a more complex group than the Coal Measures; it has similar alternations of sandstone, shale, ironstone and coal, and contains similar fossil plants; but we have indications of a new condition; for intercalated with these strata, are several limestones and calcareous shales, in which *marine* remains are abundant. The most characteristic fossils are Brachiopods, especially *Producti*, and hence some of these beds have been called

Productal Limestones. Encrinites are locally numerous, and have given the name of Encrinal Limestones to other beds.

The Mountain Limestone occupies nearly the whole of that part of Northumberland, which lies northward and westward of a line drawn from the mouth of the Aln to Riding Mill on the Tyne; but of this group, only a few of the lower beds are prolonged into Berwickshire, and they cover but a small area. One narrow strip of them extends from the mouth of the Tweed along the coast, for about five miles northward of Berwick. On the north side of the Cambrian or Silurian axis they overlie the Tuedian group, from the Cockburnspath Cove to Dunglas burn, the northern extremity of the county; but the same group of beds is continued into Haddingtonshire.

4—The Tuedian Group. In 1856, I applied this name to a series of beds, lying below the Mountain Limestone, which are largely developed on the Tweed. They consist of grey, greenish, and lilac shales, sandstones, slaty sandstones sometimes calcareous, thin beds of argillaceous limestone and chert, and a few buff magnesian limestones. *Stigmaria ficoides*, *Lepidodendra*, Coniferous trees and other plants occur in some parts of the group; but there are no workable beds of coal. The Fauna consists chiefly of fish remains, *Modiolæ* and *Entomostraca*. In one bed on the Tweed, *Orthocerata* and *Pleurotomariæ*—marine Mollusks—are associated with Coniferous trees. The whole group is especially distinguished by the absence of *Brachiopods*, which are abundant in the overlying Mountain Limestone. It forms a marked transitional series, intercalated between the Mountain Limestone and the Old Red Sandstone. Generally fresh-water and lacustrine conditions are indicated; and when marine remains do occur, they are accompanied with plants which appear to have been swept into a shallow estuary.

This group occupies a considerable area in the south of Berwickshire, and there are good sections on the Tweed and Whiteadder; it is exposed on the coast from Burnmouth to near Lammerton Shiel; and it is seen also, on the north side of the Lammermuir, on the coast between the Pees mouth and Cockburnspath Cove. In Northumberland, there are sections of it in Garmitage bank and Crawley dean, which are from six to nine miles westward of Alnwick; and the same group is tilted up against the Cheviot Porphyry in Biddleston burn, and in the Coquet below Linn Brig.

IV.—The Permian formation occurs only in two small patches in Northumberland, at Tynemouth and Cullercoats, where the Magnesian Limestone overlies the Coal Measures.

The following list is limited to the organisms observed in the narrow strip of Mountain Limestone along the Berwickshire coast; and in giving localities I use the term Berwick for that part of the coast which is near to the town.

CLASS—PISCES.

Genus—*HOLOPTYCHIUS*. Agassiz.

1. *H. Hibberti*. Ag.

A tooth in black carbonaceous shale, Lammerton, associated

with other Ganoid fish (not yet determined), plants, and large Entomostraca allied to *Estheria*. Scales of *H. Hibberti*, I have also found in Shale at Cockburnspath.

And here I may record the occurrence of a *Gyracanthus* in sandstone belonging to the Tuedian group, a little southward of Ross, as a specimen was found there by Mr. Langlands, the President, when the Club met at Berwick. This is a spine of the dorsal ray of a cartilaginous fish, analogous to that of the *Spinax Acanthias*—the Dog-fish of our coast. It is not sufficiently perfect to enable me, as yet, to identify it with any described species; the fragment is arched, and gradually tapers to a point; it is six-and-a-half inches long, and three-quarters of an inch broad; the oblique ridges covering the sides appear to be smooth. Three other species occur in Northumberland: *G. formosus* (Ag.), at Amble in the Coal Measures; *G. Alwicensis* (Ag.), and *G. obliquus* (McCoy), in sandstone of the Mountain Limestone formation, Alnwick Moor. *G. obliquus* has been found also on Langton Burn, by Mr. Stevenson.

CLASS—MOLLUSCA.

CONCHIFERA.

Genus—SANGUINOLITES. McCoy.

2. *S. arcuata*, Phil. G. Y. 2, t. 5, f. 4.
Rare in shale, Lammerton.
3. *S. variabilis*, McCoy, Pal. Foss. t. 3 F., f. 6—8.
“Rare in the Carboniferous Limestone of Berwick-on-Tweed.”
McCoy.

Genus—SCHIZODUS. King.

4. *S. carbonarius*, Sow. Geol. Trans. vol. 5, t. 29, f. 2.
In shale, Lammerton.
5. *S. depressus*, Port. Geol. Rep. t. 36, f. 8.
In argillaceous sandstone, Lammerton.

Genus—NUCULA. Lam.

6. *N. gibbosa*, Flem. = *N. tumida*, Phil. G. Y. 2, t. 5, f. 15.
In shale above the limestone, Marshall meadows.

Genus—AMUSIUM. Megerle.

7. *A. Sowerbyi*, McCoy, Carb. Foss. t. 14, f. 1.
In shale, Berwick.

Genus—AVICULO-PECTEN. McCoy.

8. *A. pera*, McCoy, Carb. Foss. t. 15, f. 19.
In argillaceous sandstone, Lammerton.

BRACHIOPODA.

Genus—PRODUCTUS. Sow.

9. *P. giganteus*, Martin, Sow. M. C., t. 320; Phil. G. Y. 2, t. 8, f. 5.
Common in limestone. Berwick, Marshall meadows and Lammerton.
10. *P. semi-reticulatus*, Mart. Derb. t. 32, f. 1, 2.
In limestone, Berwick and Lammerton.

11. *P. Martini*, Sow. M. C. t. 317, f. 2—4.
In limestone, Berwick.
12. *P. punctatus*, Mart. Sow. M. C. t. 323; Phil. G. Y. 2, t. 8, f. 10.
In limestone, Berwick.
13. *P. scabriculus*, Mart. t. 36, f. 5.
In calcareous shale, Berwick.
14. *P. setosus*, Phil. G. Y. 2, t. 8, f. 9, 17.
In impure limestone, Berwick.
15. *P. Flemingii* = *P. longispinus*, Sow. M. C. t. 68, f. 1, 2.
In calcareous shale, Berwick.
Genus—CHONETES. Fischer.
16. *C. sordida*, Sow. Geol. Tr. 5, t. 53, f. 5, 16.
In shale, Berwick and Marshall meadows.
Genus—STROPHOMENA. Rufinesque.
17. *S. analoga*, Phil. G. Y. 2, t. 7, f. 10.
In limestone, Lammerton. This species is not generally distributed in Northumberland; I have found it only at Belford Moor, Bellingham and Redesdale. De Koninck and Mr. Davidson think that the Carboniferous species is not distinguishable from the *Strophomena rhomboidalis*; if this be correct, the species must have existed during an enormously long period—during the Silurian and Devonian Epochs, and far into the Carboniferous Era.
18. *S. crenistria*, Phil. G. Y. 2, t. 9, f. 6.
In limestone and calcareous shale, Berwick.
Genus—ORTHIS. Dalman.
19. *O. resupinata*, Mart. Derb. t. 49, f. 13, 14.
In calcareous shale, Berwick.
Genus—SPIRIFER. Sow.
20. *S. lineatus*, Mart. Derb. t. 36, f. 3; Phil. G. Y. 2, t. 10, f. 17.
In limestone, Berwick. A common species in Northumberland.
21. *S. laminosus*, McCoy, Carb. Foss. t. 21, f. 4; Dav. Carb. Brach. t. 7, f. 17—22.
This pretty shell is ornamented by concentric lamellæ crossing longitudinal ribs. It is an interesting addition to Berwickshire fossils, and was found by me at one of the meetings of the Club, in sandstone, at Lammerton, where it is associated with *Aviculo-pecten pera*, Carboniferous plants, and Ganoid fish scales. It is rare; I have seen it in Northumberland only at Denwick, Bellingham, and Redesdale.
Genus—LINGULA. Brug.
22. *L. squamiformis*, Phil. G. Y. 2, t. 11, f. 14.
In shale, Berwick, Marshall meadows. It occurs also at North Sunderland, and at Lemmington, west of Alnwick, in beds low down in the Mountain Limestone series.
22. *L. mytilloides?* Sow. M. C. t. 19, f. 1, 2.
In shale, Marshall meadows. The specimens are more elongate than Sowerby's species.
Genus—DISCINA. Lam.
24. *D. nitida*, Phil. G. Y. 2, t. 11, f. 10—13.
In shale, Marshall meadows, associated with the abovenamed

Lingulæ. This occurs pretty abundantly at Bellingham and Redesdale, and in the Glasgow and Lanarkshire shales.

CRUSTACEA.

Genus—CYPRIS.

25. *C. Scoto-Burdigalensis*, Hibbert.

In shale, Lammerton.

A description of the new form allied to *Estheria* will be given hereafter by Mr. Rupert Jones, a distinguished authority for fossil Entomostraca.

CLASS—ZOOPHYTA.

Genus—AULOPHYLLUM. Milne Edwards.

26. *A. fungites*, Flem. M. Edw. Br. Foss. Cor. t. 37, f. 3.

In limestone, Berwick.

Genus—LITHODENDRON. Philips.

27. *L. junceum*, Flem. M. Edw. Br. Foss. Cor. t. 40, f. 1.

In limestone, Berwick, Marshall meadows, and Lammerton.

A very common coral.

28. *L. affine*, Flem. M. Edw. Br. Foss. Cor. t. 39, f. 2.

In limestone, Lammerton.

29. *L. irregulare*, Phil. G. Y. 2, t. 2, f. 14, 15.

In limestone, Berwick.

Genus—LITHOSTROTION. Llwyd.

30. *L. Portlocki*, M. Edw. Br. Foss. Cor. t. 42, f. 1.

In limestone, Marshall meadows. This fine coral occurs in circular masses, convex on the upper surface, about one foot in diameter, formed by the union of numbers of prismatic star-like Corallites. I have found it also at Harlow Hill on the Tyne, in one of the uppermost beds of the Mountain Limestone, and on the Irthing near the Roman Wall.

Genus—STENOPORA. Linsdale.

31. *S. tumida*, Phil. G. Y. 2, t. 1, f. 25.

In limestone, Berwick, Lammerton, and Lammerton Shiel.

Genus—FAVOSITES. Lam.

32. *F. parasitica*, Phil. G. Y. 2, t. 3, f. 61, 62.

In limestone, encrusting *Producti*, Lammerton and Lammerton Shiel.

Genus—ASTRÆOPORA. McCoy.

33. *A. cyclostoma*, Phil. G. Y. 2, t. 2, f. 9, 10.

A rare coral. A single specimen, attached to a *Productus*, in limestone, Lammerton Shiel. I have found it also at Lindisfarne, Bellingham, and pretty abundantly at Newton-on-the-Moor. McCoy records the same species from Ireland, but under the name of *A. antiqua*.

Genus—SYRINGOPORA. Goldfuss.

34. *S. geniculata*, Phil. G. Y. 2, f. 1.

In limestone, Lammerton.

Genus—AULOPORA. Goldfuss.

35. *A. gigas*, McCoy, Carb. Foss. t. 27, f. 14.

Attached to a *Productus*, Marshall meadows.

Miscellanea Zoologica. By R. EMBLETON.

RHOMBUS HIRTUS.

Muller's Top Knot. Yarr. B. F. vol. 2, p. 243.

A beautiful specimen of this rare fish was taken in Beadnell Bay last autumn, and is now in my possession. It agrees in every respect with the description given by Mr. Yarrell; my specimen, however, is 8 inches in length, by 5 in breadth; being 3 inches longer. A specimen was taken some years ago in Berwick Bay, and presented by Dr. Johnston to Mr. Yarrell.

SYNGNATHUS ÆQUOREUS.

The Æquoreal Pipe Fish, Yarr. B. F., vol. 2, p. 335.

During the last autumn I obtained two specimens of this rare fish. From Mr. Yarrell's account, it would appear to be more plentiful on this coast, than on the southern.

Botanical and Zoological Notices. By JAMES HARDY.

BOTANICAL.

1.—CUSCUTA EPITHYMUM. August 1, 1859, I found this novelty to the Berwickshire Flora (for the "Eastern Border" example was Northumbrian), in a pasture field near Penmanshiel, over-running thistles (*Carduus arvensis*), *Prunella vulgaris*, *Plantago lanceolata*, *Medicago lupulina*, &c. Possibly it may have been introduced with clover; but as this part of the field was a moor not many years back, it may equally claim to have originated from seeds left in the soil while in its unreclaimed state. It was confined to one spot.

2.—DANTHONIA STRIGOSA. As an agricultural weed in cereal crops, this is fully as worthy of record as the Wild Oat (*Avena fatua*), which is scarce in the Lammermoors, while *D. strigosa* is common. It does not lie in the soil like the wild Oat. There is a white variety, which may be the 'Argyle Oat' of Lawson, which is difficult to detect if one undertakes the trouble of picking seed Oats.

3.—HABENARIA VIRIDIS. Of this Orchis, thinly scattered over the Borders, compared with some parts of the North of England, I met with instances on the sea banks behind the Preventive Service houses, Redheugh, and again at the foot of Cheviot near Langleyford Hope—single specimens only.

ZOOLOGICAL.

1.—MULLUS BARBATUS. Mr. Wilson sent me a specimen of this rare fish from Coldingham.

2.—*ACMÆA TESTUDINALIS*. This shell may be looked for on the Berwickshire coast. I have one slightly worn from shell-sand at Greenheugh, where the accompanying shells did not appear to have travelled far.

3.—*ACHERONTIA ATROPOS*. Two Death's-Head Moths have reached me this summer, from the vicinity of Cockburnspath. The caterpillars were general in 1858, and, that year, I had two of the moths from East Lothian.

4.—HIVE BEE CARRYING FROM GRASS, &c. In the *Scottish Gardener*, vol. III, 1854, I have recorded a long series of Wild Plants, 81 being enumerated, to which the Hive Bee resorts for honey or pollen. On the 4th July, 1859, I was greatly surprised to find a Bee engaged in detaching the pollen from the florets of *Holcus mollis*. This was near half-past 7 in the evening, when the day's labours were nearly over in the hive. It rested on the flowers, and rubbed the anthers with its legs, scattering by this means the pale sulphur-coloured dust, of which it obtained a considerable quantity. The Common Dock (*Rumex obtusifolius*), and the Knot Grass (*Polygonum Avicularia*) yield honey on several occasions, as I have observed.

5.—A DRONE-BEE SEARCHING FOR HONEY IN FLOWERS.—It is generally believed that the Drone-Bee makes no effort to obtain food out of doors. The following is a single instance to the contrary. On the 28th July, 1854, being in one of our deans, I witnessed a Drone alight on the flowers of the wild Angelica, (*Angelica sylvestris*), whose shallow cups are of a depth proportioned to its short feeble proboscis. I stood beside it and watched it from the instant it alighted, and it went on deliberately probing each floret that came within its reach. Flying off, it spent a few seconds upon the Meadow-sweet, but speedily correcting its mistake, it sped once more to the plant that first attracted it. Altogether I pursued its course from one umbel to another, for about five minutes.



THIS View of ALNWICK CASTLE is taken from the North Bank of the River above the Bridge: it is a North-West View, with all the late alterations. The Tower to the right is the Barbican, or Entrance-Gate from the Town of Alnwick; the next is the Abbot's Tower, in the north-west corner of the Curtain Wall. The great building in the centre is the Donjon, or Keep; and the western portion of it, including the Flagstaff Tower, is the great "Prudhoe Tower," erected by the present Duke. The first Tower to the east of the Keep, in the north Curtain Wall, is the Postern Tower; the next is the Constable's Tower; and the most easterly of all is the Record Tower. The only part of the south Curtain Wall visible in this View is the Tower, or Entrance to the Gardens, and Wall adjoining, seen as above between the Keep and the Postern Tower.

In the foreground is Alnwick Bridge, along which passes the Great North Road from London to Edinburgh.

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