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Edited by the Rev. J. Cowley Fowler, B.A., F.G.S

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PROCEEDINGS OF THE CLEVELAND NATURALISTS' FIELD CLUB.

T. M. FALLOW, M.A., F.S.A.

BORN 26TH NOVEMBER, 1847, DIED 25TH NOVEMBER, 1910.

THE news of the death of Mr. T. M. Fallow, M.A., F.S.A., at Coatham, on the 25th November last, after a brief illness, came as a painful surprise to his many friends and acquaintances, most of whom were unaware of his indisposition. As he was a Vice-President and the Secretary of the Archaeological Section of this Field Club, as well as a frequent contributor to the Proceedings, I have thought that this brief sketch of his life and work would prove of interest to the Members. Some of the facts, as well as the portrait which appears here, I have obtained from the obituary notice in the Yorkshire Archaeological Journal, which the Hon. Editor, Mr. H. B. McCall, has kindly allowed me to make use of.

Mr. Fallow was born in London on the 26th November, 1847. His father, the Rev. Thos. Mount Fallow, was the first Incumbent of St. Andrew's, Wells Street, London, and died at Tunbridge Wells a few months before the birth of his only child, the subject of this sketch. His mother was Horatia, youngest daughter of Thos. Murdoch, Esq., a member of an ancient family who had once owned the estate of Cumloden in Galloway, but had been deprived of it in the previous generation. On the death of her husband, Mrs. Fallow went with her two sisters and son to live at Winchester. Her sister Maria had married General Monteith, and it was while on a visit to her in 1853 that Mrs. Fallow was taken ill and died. The boy, then six years of age, went with his aunts to live at Brighton, and was educated first at Brighton College and afterwards by a private tutor. In October, 1866, Mr. T. M. Fallow went into residence at St. John's College, Cambridge, where he took the degrees of B.A. in 1870 and M.A. in 1873. It was here that he first showed signs of those archaeological tastes with which his name was to be so widely associated in future years, and with this was combined a wide and deep knowledge of ecclesiastical matters, which was amply illustrated in his writings. In 1872 Mr. Fallow moved to Chapel Allerton, near Leeds, where his cousin, the Reverend K. R. Kirby, was Vicar, and where he worked as a lay helper for many years. In 1885 Mr. Kirby having been presented with the living of Mixbury, Oxon., Mr. Fallow moved to Coatham, Redcar, where the writer first made his acquaintance, and he continued to reside there until the time of his death. He was of a retiring disposition, and disliked publicity and social functions. Anything, however, which he took up he threw his whole life and soul into, and it is only necessary to allude to him as a Churchwarden and Sidesman of Coatham Church, as a School Manager, as a Member of the Board of Guardians of the Guisboro Union, and last, but not least, as one of the founders of the Cleveland Literary Institute, to recall his

energetic and genial personality to the minds of his many friends. His general literary work is fully dealt with in the obituary notice I have referred to above, and I will therefore confine myself to what is connected with this immediate district. I have already alluded to the articles he contributed to our Proceedings, which appear in Volumes 1. and II. He was for some years Editor of "The Reliquary," and subsequently of "The Antiquary," and edited the first edition of the "Memorials of Old Yorkshire." In 1888 he was elected a Fellow of the Society of Antiquaries.

In the years 1894 and 1895 there was a lawsuit between the Kirkleatham Estate and the Crown in regard to the foreshore and Mr. Fallow interested himself greatly instigating the early history of the sandhills and marshes round about where the present village of Warrenby now stands. He wrote a long article, which appeared in the Coatham Parish Magazine for July, 1806, which is reproduced at length in the present volume of the Proceedings. The matter it contains may be new to most of the Members, as it is many years since the article was published. It affords an instance of the kind of research in which Mr. Fallow was constantly engaged, but, as a matter of fact, there was hardly a church in Yorkshire which had not been visited by him, and it is a matter of congratulation that the mass of information which he collected should have enabled Mr. H. B. McCall, F.S.A., to complete and publish, under the auspices of the Yorkshire Archaeological Society, the first instalment of Mr. Fallow's monumental work on the Church Plate of the County. Vol. I comprises the City of York and the North and East Ridings, and it is hoped that in due course it will be supplemented by Vol. II dealing with the West Riding, and thus completing the work. Mr. Fallow has passed away from us, but his great learning, his sound advice, his ready help, and his tactful sympathy will long be missed in the place where the concluding years of his life were spent.

J. M. MEEK.

BORN 24TH DECEMBER, 1846, DIED 1ST AUGUST, 1912.

IT is with very great regret that we have in the commencement of the Third Volume of the Proceedings to place on record the life and works of one of our oldest and most enthusiastic Members, Mr. Henry Simpson, of Redcar, who passed away on August 1st, 1912, in the sixty-sixth year of his age. Mr. Simpson was elected a Member of the Club at its second Meeting, on 16th April, 1881, and had thus been a Member from within a year of its inauguration. He was elected Vice-President at the Annual Meeting in 1901, and held the office of President in 1906-7. For many years he acted as Secretary to the Microscopy Sectional Committee, and was usually responsible for the arrangement of the Microscopical Exhibition Meetings, which owing to his great enthusiasm, were always some of the most successful Meetings of the Winter Session. He was a very regular attendant at both Winter and Summer Meetings, until his indifferent state of health alone prevented him from attending as often as he would have wished. At excursions to Redcar Rocks Mr. Simpson always acted as guide, and as he was especially well-informed in matters pertaining to marine life and geology, his kindly assistance and ever-ready willingness to impart his stores of information on these and other occasions will always be remembered.

The last occasion on which Mr. Simpson attended a Meeting was that at Kirkby Sigston and Northallerton on 29th June, 1912. He also attended the Meeting at Roseberry Topping on 15th June, when he seemed as active as usual, and although his state of health was such as should have precluded him from climbing, he would not be satisfied until he ascended to the top of Roseberry to see the result of the recent disturbances and to obtain what was to be for him a last look at the beautiful view from that position. Although possibly he should not have undertaken this feat in his then state of health, one cannot help admiring the enthusiasm that permitted him to take his last look at one of the finest views of the Cleveland district, of which he was so sincere and ardent an admirer.

On 14th March, 1908, Mr. Simpson lectured to the Club on " Seaweeds as Food," and one of his greatest services consisted in his reports of the Meetings in the local press, in this way bringing the work of the Society to the notice of the public. As all these press notices have been preserved, they constitute a valuable record in the minute books of the Society. The following papers were also contributed "by the deceased gentleman to the Proceedings :—

" Notes on the Submerged Forest and Peat Beds at Redcar," Vol. 1., Part 5, 1902 ;

" Excursion to Redcar Rocks," Vol. II, Part I, 1903

He also very materially assisted in the editing of the Proceedings. Mr. Simpson was born at Redcar and lived there all his life. He started in life as a school teacher, but abandoned that profession on medical advice. Then in July, 1870, he entered the office of the late Mr. John Jones, who was secretary of the Iron and Steel Institute of the Cleveland Ironmasters' Association, of the Middlesbrough Chamber of Commerce, and other kindred Institutions. He was also the founder and the first editor of the " Iron and Coal Trades Review."

Mr. Simpson, who had always had an inclination towards journalism, soon proved himself an able assistant to Mr. Jones, and helped him largely not only with the work of the " Review," but with many trade articles, which he wrote for numerous journals. Mr. Jones died in 1877 and among the many offices he held, the Editorship of the " Iron and Coal Trades Review " and the secretaryship of the Middlesbrough Chamber of Commerce fell to Mr. Simpson, as well as other minor appointments and connections.

Subsequently Mr. Simpson resigned his editorship, as it would have involved his residing in London, and he preferred to remain on Tees-side. To the end of his life, however, Mr. Simpson remained a valued contributor to the paper. But he retained his secretaryship of the Chamber of Commerce, which he held till the end. He contributed to many other journals, and the North-Eastern Daily Gazette had the advantage of his great knowledge and services as its iron trade correspondent for many years. Mr. Simpson was indeed in this capacity the doyen of the staff of the Gazette.

No man had a greater knowledge of the iron and steel trade. He united a great statistical exactness, an amazing memory, and a wonderful grasp of all the ramifications of the trade. He was, indeed, a widely-recognized authority, and cheerfully placed his knowledge at the disposal of many authors of standard works on the industry.

As secretary of the Chamber of Commerce he produced over a long period of years a series of reports of incalculable value. To his initiative are due many of the reforms, governmental and otherwise, which the Chamber has been instrumental in inaugurating for the advantage of the traders of Tees-side and the welfare of the trade generally.

On 'Change ..Mr. Simpson ,was a respected figure, and was regarded with affection and esteem by all with whom he came in contact.

The Club is indebted to his daughter, Mrs. Goodwin, for the excellent portrait which accompanies this sketch of Mr. Simpson's life, which has been compiled .for the minute book of the Club and the obituary notice in the " North- Eastern Daily Gazette." I am also indebted to Mrs. Goodwin, Messrs. Winpenny and T. A. Lofthouse for kindly revising this notice.

THE ANCIEXT CHURCH OR CHAPEL OF COATHAM

By THE LATE T M.. FALLOW,MA., F.S.A .

*Extracted from the Christ's Church, Coatham, Parish Magazine, July, 1896, by
J.M.MEEK.*

THE tradition that there formerly existed a church or chapel at Coatham has not wholly died out among the older of those who may be termed the indigenous inhabitants of the place, but it seems more than probable that, if the tradition had been left to itself, in another generation it would have have become extinct.

When I came, about twelve years ago, to live at Coatham, I stumbled across a record of the time of Edward VI. which seemed to refer to the former existence of a church or chapel at Coatham. I drew the attention of Mr. Daniel, who was at that time Vicar, to it, and he made inquiry of Some of the old people about the matter. Among those to whom he spoke on the subject was old Mrs. Faith, who has since died, and of whom many persons retain a kindly and pleasing remembrance.

Mrs. Faith not only knew that there had been an old chapel, but she remembered as a child some portion of its walls standing on the sandbanks not far from Marsh House, where her earlier life was spent. She added that the stones which formed the walls were used in repairing certain of the outhouses attached to Marsh House. Further inquiry revealed the fact that other old persons knew the site of the chapel, although they could not add to what Mrs. Faith had related, except that Mr. Suggett remembers, on more than one occasion, finding human skulls and other remains when digging the ground in the immediate neighbourhood where the chapel stood.

In the spring of 1894 Mr. Robert Simpson took Sir Cecil Smith, Mr. H Rutherford, Mr. Costelloe (one of the counsel for the Kirkleatham Estate in the recent lawsuit with the Crown as to the foreshore), and myself to the site of the chapel. This is almost directly north-east of Marsh House, in a hollow in the sandbanks. A sandhill known as " Church Hill " from its proximity to the chapel, was removed some years ago. The hill was an old topographical landmark, and its disappearance is to be regretted.

Nearly all that is known of the chapel is what can be gleaned from a few scattered allusions to it in various documents connected with the Parish of Kirkleatham. These I will endeavour to give in as intelligible a form as possible.

In the first place it should be stated that we know nothing as to the time when the chapel was founded or built. There is no mention made of Coatham in the Domesday Book, and very possibly, like many other places in the north, it was then suffering from the effects of the Conqueror's vengeance, and was—although not so described as they are—"waste." The existence of a church and priest at Kirkleatham is recorded, and from the silence as to Coatham, it may be assumed that the chapel there was of later origin, and that it was not in being when the great survey was

made. Early in the next century the monastery of Guisboro' was founded (in 1119 or 1129), and soon after the foundation of that house we find several gifts to the prior and convent of salt-works at Coatham. These salt-works—which have left their mark in the existence at the present time of the salt-cote hills in the marsh—must have kept a large number persons employed in the evaporation of sea-water for the purpose of obtaining salt. If we add to this the fact that at the time of which we are speaking the port of Cleveland was at Coatham, and that it was then, and for some centuries later, of very considerable importance relatively to the other ports on the coast, we are at once confronted with the existence of a considerable population at the far end of and beyond what is now called Warrenby, and the consequent necessity for a church or chapel there. This no doubt led to the existence and after maintenance of the chapel. It is not, however, until the latter half of the fifteenth century that we meet with any reference to it. It would seem that it was then undergoing repair, and that some endeavour was being made to parochialize it and to place it on a status of greater security and usefulness than it possessed as a wayside chantry chapel.

The first reference to it that I am aware of, occurs in the will of Robert Taylor, of East Coatham, which is dated 5th October, 1470. In that will he bequeaths the sum of twelve pence (a very much more valuable sum than now) to "the repair of the chapel of Saint Sulpitius." Three years later another resident at East Coatham, Robert Hunter, made his will, which is dated 10th December, 1473. By that will the testator bequeaths his soul, after the pious manner of that day, "to God the Father Almighty, to blessed Mary, and to all the Saints," and his body "to be buried within the chapel of Saint Sulpitius in the parish of Saint Cuthbert of Kirkleatham." But this is not all, for after directing that the Chaplain of St. Sulpitius (John Danby) is to celebrate for the good of his (Robert Hunter's) soul, the souls of his two wives, Jane and Alice, and those of other persons whom he names, he goes on to direct that the rents of certain specified lands and tenements in Kirkleatham, Upleatham, and Seaton Carew are to be appropriated for the endowment of the chapel on the condition that the inhabitants will be at the cost and trouble of obtaining the royal licence for that purpose. This would seem to indicate a desire that the chapel should become parochial. Had the plan been fully carried out it is not improbable that, as in the case of Wilton (which was formerly a chapel in Kirkleatham Parish), the Coatham chapel would have survived as a religious edifice to our own time. One other bequest to the chapel is recorded. It occurs in the undated will of William Raughton, or Raughtonbald, which, however, is somewhere about the year 1500. He describes himself in his will, which is in English, as of East Coatham Hall, and he directs that his body is to be buried "in the Kyrk of Saynte Cuthberte in Ledom before our lady awltere." He then bequeaths "to Saynt Syplyn A nawter clothe and a Kandylistik" (i.e., an altar cloth and a candlestick). This gives a fresh name or dedication of the chapel, a puzzling subject of which it will be necessary to say more further on. These three testamentary references to the chapel give us a slight glimpse of it while it served its holy purpose as a place of Christian worship. When we next hear of it the hand of the spoiler was laid upon it, and its slender endowments had been seized to help to swell the national exchequer.

Nothing more is to be found regarding the chapel until 1545. In that year an Act of Parliament was passed which empowered Henry VIII to dissolve all collegiate chapters, chantries, hospitals, guilds, and other non-parochial foundations belonging to the Church of England throughout the country and to seize their property. The preamble of the Act states that the money thus raised was to be appropriated to defraying the expenses of the Scotch and French wars. The Commissioners for Yorkshire under this Act were appointed in the year following, and they were instructed to inquire, among other matters, as to the names and conditions of the chantry chaplains, the original purposes of the chantries, what use they were then, and also to take an inventory of the plate and other goods belonging to each chapel, together with a survey of the lands and possessions held as endowments.

The certificate of the Commissioners regarding the chapel at Coatham is dated 14th February, 1547, and is as follows:—

" The Chapell called Sepulchres Chapell in the Paryshe of Kyrkelethome. William Arnarde Incumbent there of thaige of fforty yeres of honeste conversacion and qualities and of good lerneninge, having no other promocions but onely the revenewe of the said chauntery or chapell. The necessitie of the said chapell is to do divine service to the inhabitaunts there, being distaunt frome the parishe church twoo myles, and there is in the said parishe of howseling people (i.e., communicants) to the number of cccxii, and there is no landes ne tenements sold sithens the said xxiii. day of November in the year of the reign of the late King Henry VIII. the thirty-seventh.

" The yerely value of the said chapell is as shall appere by the particulars of the sayme, xlvijs. iiijd. Summa of the said chapel xlvijs.iiijd. which remain. " Goodes, orneyments, and plate appertening unto the said chapel, viz. :—

Goods: (*left blank*),)

Plate: nil

(The original is partly in Latin, but I have thought it better to give it wholly in English.)

This certificate gives a third name for the chapel, a matter which will be dealt with later. The chaplain, William Arnarde (or Arnold), seems to have been a Kirkleatham man born and bred. He was a son, I think, of Thomas Arnold (or " Hernalde "), who farmed his own land in the parish. The name of William Arnold, " Chaplain," occurs pretty frequently in the wills of Kirkleatham people from about 1480 to about 1810, but from the way in which he is spoken of it seems more probable that he was chaplain in the Parish Church at Kirkleatham than attached to the chapel at Coatham. A John Arnold is also mentioned in 1470 as being then the parish clerk of Kirkleatham. The Coatham chaplain was a witness to the will of John Hill, of Kirkleatham, in 1542, and as "Sir William Arnolde," received a small legacy from him. His name as " Sir William Harnolde " occurs in a similar connection in 1545. The Arnold family was one of old standing in the parish. " William, the son of Arnald was taxed for three shillings towards a Fifteenth granted to Edward 1. in 1302, and it is quite likely that the family descended from him. The Arnolds continued at Kirkleatham till the eighteenth century, when they became extinct or moved elsewhere. During the fifteenth and sixteenth centuries they formed quite a large clan. The fact that William Arnold was one of themselves would, no doubt, make the

people do what they could to influence the Royal Commissioners in his favour, and as the chapel undoubtedly served a useful purpose, and was a convenience to the people who lived near it, and at a distance of two miles from their Parish Church, it might reasonably have been expected that both chapel and chaplain would have been left alone. But the greed of gold was too strong, and the next reference to the chapel tells us what had happened. What became of William Arnold does not appear, but in 1575 Queen Elizabeth issued a Commission of Inquiry into certain "concealed lands" (as they were called) in Yorkshire. In their return the Commissioners reported under the heading of "Kirkledam" as follows:—

"And also that there is a free chapel with appurtenances and a yard belonging to it in the parish of Kirkledam, otherwise called *Seplyns Chapell*, in the said County of York, the land containing by estimation one acre more or less, now or lately in the tenure or occupation of Christopher Marshall or his assigns. And also that there are twelve *swathes of grass in Este and Weste Coatham Inges in Clevelande* in the said County of York now or lately in the tenure or occupation of the said Christopher Marshall, given and appropriated for one priest called the *Chauntrie Priests* in the said Chapel of Seplyns."

(This deed is in Latin with the exception of the words printed in italic type). East and West Coatham Ings are, I am informed by some of the older residents, land in the immediate neighbourhood of Marsh House and especially south and west of it. From this it seems very likely that Marsh House (now occupied by Mr. Hartgrove) may be on the actual site of, and represent in an enlarged form, the former residence of the chaplains of Coatham. Christopher Marshall, into whose hands the chapel and its appurtenances had passed belonged to a Kirkleatham family, one member of whom, Peter Marshall, was vicar of the parish from 1531 to 1558. Christopher Marshall speculated largely in the lands which were set loose by the dissolution of the monasteries and the general upheavals of the sixteenth century. These changes in the ownership of the land were more felt in the parish of Kirkleatham than in most places. What land there was which was not monastic or Church property almost all belonged to the lord of the manor, John, Lord Lumley, whose possessions became forfeited to the Crown when he was attainted of high treason for the part he took with his neighbours. Sir John Bulmer of Wilton, and the Prior of Guisborough in the Pilgrimage of Grace. The throwing of so much land at Kirkleatham and Coatham into the market gave birth to a band of local speculators, of whom Christopher Marshall was perhaps the chief. What eventually became of him is not known. Ten years later the Queen made a grant of the chapel and its appurtenances to two jobbers in church lands, Anthony Collyns and Lawrence Woodnett of London. The chapel is described under yet a fourth name in the Queens letters patents as follows:—"And also all that one chapel of ours called Sanct Cyprian's Chapell, with its appurtenances, lying and being upon the sands in the Parish of Kirkleatham in the said county of York, in the tenure of Peter Mackerage of Kirkleatham." Peter Mackerage at that time inhabited the mansion house of Kirkleatham, of which, together with the manor itself, he held a lease. He was succeeded by his son Roger, but they did not belong to Kirkleatham and left when their lease expired.

The next we hear of the chapel is in the thirteenth year of Elizabeth (1578), when an indenture was enrolled in Chancery by which Edmund Downynge and Milo Doddinge, both of London, two notorious land jobbers of that day, sold to Richard Bellasis of Morton, in the County of Durham, all "le frontland," containing half an acre, and all those arable lands in Kirkleatham " to the late chantry of St. Sulphon in the Parish of Kirkleatham aforesaid belonging," as fully as the Queen had, only a few days earlier, by letters patents granted the same to them, Edmund Downynge and Milo Doddinge.

It may be as well to explain that a " frontland " or " frontstead " is a site on which a house or other building stands or has stood. Here we meet once again with another name for the chapel. It is, however, one which had occurred before in a return (which it was not necessary to cite) in 1548. From the Bellasis family the manor of Kirkleatham, and with it this piece of church property, passed by purchase to John Turner of Guisborough, and from the Turner family it has descended to its present owner. This is practically all that we know about the old chapel, which for many generations, until an evil day, served the inhabitants of Coatham as their place of worship. There is, however, one other document which it may be of interest to quote, and that is a conveyance of lands in East Coatham dated 9th July, 1632. By it Robert Coulthurst (whose fine memorial brass is still to be seen within the altar rails at Kirkleatham) assigned to John Turner, with other lands, "one parcel of ground called and known by the name of Kirkhill next adjoining to East Coatham coney warren, part whereof is now the "cole yearde" This is, of course, the Church Hill before alluded to, and which was removed about thirty years ago. It obtained its name from the adjoining church or chapel, the enclosed ground of which may very possibly have been the coal yard spoken of in the deed.

It now remains to say something as to the names by which in the different documents quoted, the chapel has been called. They are five in number, (i) St. Sulpitius, (2) St. Seplyn's, (3) St. Sulphon, (4) Sepulchre's, (5) St. Cyprian's. This multiplicity of names for one and the same chapel is puzzling, although possibly not so unusual as might be supposed. It no doubt gave rise to a curious story, which seems to have been invented in the sixteenth -century by an anonymous correspondent of Sir Thomas Chaloner, who, while living in Italy, had inherited the Guisboro estate. The writer evidently knew Cleveland well, and he wrote to inform Sir Thomas Chaloner of the character of his inheritance, at the same time describing the country around. The original letter, which is full of interest, is preserved among the Cotton Manuscripts at the British Museum. A short portion of it relating to Coatham has been printed by Graves in the History of Cleveland but not the part where mention is made of the Coatham chapel. The writer was of a poetic, not to say an imaginative turn of mind and he occasionally embellished his tale out of the resources of his own fertile brain. He says, speaking of the port which was then at Dabholm, west of the present Warrenby, " they have a tradycon that the Danes used to land there, showinge greate heapes of huge Dunes in the sands, in length little exceeding ours, but in strength and bigness gyant lyke, whether they had gotten a cruste or noe, or that there were some charnell-house there I knowe not, wch I suspecte by a reason that a Chapell, one of three built by three sisters, along that

coaste is neere at hand". The legend of a certain number of sisters building as many churches, or portions of them is very common piece of folk-lore, and the writer of this letter has improved the occasion by making use of it in regard to the Coatham chapel with its many names. There is, it need hardly be said, not the least ground for the story. The allusion to a charnel-house in connection with the Chapel is very interesting and instructive, as it very possibly affords a clue to the origin of the name of Sepulchre's Chapel. Of the other names two (St. Seplyn s and St. Sulphon) are manifest errors on the part of some copyist.

It is a well-recognised maxim in the interpretation of place-names and names of local objects of antiquity, that the earliest form in which the name is found is most likely to give the clue to its meaning. In this case the first name St. Sulpitius is a perfectly reasonable and likely dedication for the chapel. There was a chapel under this dedication in York Minster, and it was not unknown elsewhere in England before the Reformation. It is, perhaps, best known to us as the dedication of the great seminary church of Saint Sulpice at Paris. There were, however, two saints of the name commemorated in the English Martyrology. One was St. Sulpitius of Bourges, in France, who was commemorated on 17th January, the other St. Sulpitius of Rome, who, being converted in company with St. Publius and St. Servulane, was afterwards martyred with them. They were commemorated together in England on 20th April. The name of neither St. Sulpitius occurs in the pre-Reformation York Kalendar. If the dedication was to the Roman saint it is just possible that it was to St. Sulpitius and St. Servulane, and that "Seplyn's " is a corruption of the latter. It is more likely, however, that " Seplyn's " is a mistake in some form in writing of Sepulchre's—it may, indeed, be "Seplyus," for " n " and "u " were written alike. The Coatham chapel might very well have served as a burial place for shipwrecked sailors, and bodies cast ashore, and thus have acquired the name of the " Sepulchre Chapel." " St. Sulphon " can scarcely be anything else than a blunder, very possibly for some contraction of Sulpitius.

This leaves us with the dedication to St. Cyprian. Of all the names we should probably most wish to establish one which would connect the chapel and Coatham with the memory of the great African Father of the Church. Unfortunately this cannot be done with any degree of probability in its favour, for a dedication to St. Cyprian was unknown in the Church of England until after the Reformation. The most likely explanation is that St. Cyprian was a conjectured correction for the blundered St. Seplyn, there being a similarity of sound in the two names.

We may assume, then, that the dedication of the chapel was to St. Sulpitius, and that it was popularly spoken of as Sepulchre's Chapel because it was largely used as a burial place for bodies cast ashore. The chapel itself was no doubt small, and probably without any structural distinction between nave and chancel, but with a bellgable at the west end. It may be assumed that it was of fairly early date, but altered in the perpendicular style in the fifteenth century, when, as we have seen, it was undergoing repair. That was, indeed, a sad day for Coatham, when for the first time the old bell failed to sound and call the people to worship, a wrong which was only repaired in our own day when the late Mrs. Newcomen built and endowed the present church. There, after the lapse of three centuries, the Holy Sacraments are

once more ministered, and the Church's voice of prayer and praise is once more daily heard in Coatham, while the Mission Church of St. Andrew almost stands on the very ground which was hallowed by the presence of the ancient chapel. The old site, while it is yet known, cannot fail to be of interest to Coatham people, and it would be very well worth while to explore it by means of excavation, in order to see what remains there are of the foundations of the chapel underground, and so discover, if possible, its original size and form.

NOTES ON INGLEBY ARNCLIFFE CHURCH

BY REV. C. VALE COLLIER, M.A.. F.S.A.

THE church of Ingleby Arncliffe is of considerable antiquity. When the first church was built here we do not know, but we do know that it has existed from times prior to the Norman Conquest. The evidence of this early church is found in the hogbacks, cross-shafts, and other memorials still in existence, the finest specimens being preserved in the museum of the York Philosophical Society and in the Chapter Library at Durham. The remaining early memorials are still here, built high up in the tower, a few fragments are in the vestry, and one old grave-cover lies among the grass north of the present chancel wall.

The oldest church, the position of which we know, stood about ten yards to the north-east of the present building. This old church appears from an early drawing to have been very small, merely an aisle-less nave with small west tower, probably of what is commonly called the Norman style. The east window was inserted probably 1370, and there was a fifteenth century window in the north wall.

This old church was demolished at the beginning of the nineteenth century, and the present church was built in 1821. It is characteristic of its period, high pews, a three decker, hat pegs all round the nave and part of the chancel, and a drawing-room ceiling. It is one of the few churches yet in existence of this type, and as it is in good condition, well-attended, and there are no complaints, it may well be preserved as an interesting specimen of nineteenth century Gothic. The western Romanesque door is probably a copy of one in the old church, and the capitals on the nook shafts are certainly of that date. The present east window is the east window of the old church, removed from the old work and put into the new. The old Norman font was removed from here and set up in the church of Newton-under-Roseberry. In the east window are two ancient pieces of coloured glass bearing the arms of Fauconberg and St. Quintin respectively. These are the arms of the first and second wives of Sir William Colville, who was living about 1360. The absence of the husband's arms may be accounted for by the attainder of his son and heir, Sir John Colville, in consequence of his having been implicated in Archbishop Scroopes rebellion against Henry IV., after which event his arms may have been defaced.

On each side the sanctuary lies a recumbent effigy in stone of a knight. They represent Sir William Colville and his brother. Sir Robert, the former of whom died before 1300. There is one unusual feature in these effigies, that is, the ailettes. Ailettes were small square shields, worn upon the shoulders of knights from the latter

part of the reign of Edward I. to that of Edward III. They are generally considered to be defences for the neck, but here they are used as rests for the helms. The shields at the head and feet of these knights are:— North side, and by the wall—Mauley Fauconberg of Rise and Skelton ; near the rails—Colville of Arnecliffe and Dale, Colville of Coxwold; south side, by the wall—Mauley of Mulgrave, Meinell of Whorlton; near the rails—Malbis of Hawaby and Scawton, Sigston of Sigston

NOTES MADE DURING THE RESTORATION OF INGLEBY CHURCH.
BY PETER HUNTINGTON.

ONE of the many interesting churches to be found in the Cleveland district is that of Ingleby Greenhow. That it has undergone alterations during the past there can be no doubt, but unfortunately there are no records to be found rating definitely what was done on these occasions. Over the gateway of the south porch there is a tablet with this inscription :—" This church was rebuilt at the Parishioners' Expence, 1741.--H. Ripley, T. Morley, I. Hutchinson, churchwardens, W. Ripley, Mason."

There are no documents of any kind in the custody of the vicar or churchwardens which tend to show what work was accomplished or what was discovered at this period. The only evidence externally is the stonework of the walls -of the nave and north aisle, and the east wall of the chancel, the herring-bone chiselling being conspicuous. As regards the inner walls of the same, I am inclined to think they were not touched. With regard to the interior we can only infer that the plastering, the high straight-backed pews, oak pulpit, and wooden reredos at the east end of the chancel were products of the 1741: restoration. In order to obtain evidence, if possible, I asked the late Mr. Hudson, of the Diocesan Registry Office, York, to let me have a copy of the faculty for the date named. His reply was :—" I have searched in the faculty book round about 1710, and can find no record of any faculty having been granted for the restoration of this parish church." The interior of the church, under these conditions, was uninviting, particularly as the walls prior to the restoration in 1905-6 were pink washed down to the panelled portion, this latter being painted a drab colour. The pews were most uncomfortable, and sufficiently high to only allow the head to appear above. To provide heat for the building a stove was placed near the octagonal pillar towards the east side of the arcade, with a long iron pipe, which pierced the ceiling and root to carry away the smoke.

. It became evident that certain parts of the church were in a very bad, if not dangerous, state. The chancel wall began to show signs of giving way, the leaden roof was no longer waterproof, and the plaster round the walls peeled off, exposing the laths beneath. It was decided that there should be a thorough change made in the interior, the Rev. J. Hawell, Vicar, taking the first steps towards this. For a long time, however, he got little support, and it was not till 1902 that progress was made. The present Lord and Lady de L'Isle, of Ingleby Manor, took great interest in the scheme, and chiefly through their exertions, and the neighbouring gentry: together with the loyal co-operation of almost all the parishioners, sufficient money was obtained to begin the work of alteration. Unfortunately, Mr. Hawell died in 1904: and so did not live to see the various things brought to light, which he could have described so well.

In 1904 the work of restoration commenced. A faculty was obtained, and Lord De L'Isle, the Rev. M. A. Horsfall (the newly-appointed vicar), and the churchwardens under this document, were appointed a committee to see that all the orders laid down in the faculty were properly earned out. The services of Mr. Temple Moore, the celebrated church architect, were secured, the contractor for the work being Mr. John Cruddas, of Guisborough. The Committee decided that the church should retain as far as possible its ancient character. Hence the plain oak seats and bare walls. The carved ends of the seats in the north aisle are copied from some ancient pews found in Danby Church.

During the progress of demolition I went as often as I could to take notes of what transpired, so that a record could be kept of what was done and what was discovered.

All the stoothing was pulled down. The stoothing itself consisted of plaster upon laths, the latter nailed to long horizontal bars of wood about an inch thick. These in turn were held in position by nails driven into plugs fixed in the walls. The plugs were of oak, some measuring six inches long and from three to four inches square at the thicker end, others being circular, with a diameter of from three to four inches. When the walls were exposed and the plugs drawn the interior presented a most dilapidated appearance.

Several objects of interest came to light. In the chancel wall were two squints, that on the south side being much smaller than that on the north. Inside the smaller was an old slate, perforated for a peg. Probably the roof consisted of such before lead was used. The headpiece of this squint was composed of a similar slate. The head of the larger squint was part of a monumental slab supported at the end vertically by part of another slab. The former may be seen in the arcade wall of the north aisle towards the western end; the latter is included among those supporting the priest in effigy.

On the chancel wall within the nave part of the ten commandments, in eighteenth-century characters, could be plainly seen. The following is a copy of what I obtained :-

(5) Hon .
be long (6) Thou (7) Thou (8) Thou
(9) not bear false

Some of the writing had disappeared altogether, and the capital letters were painted red. On obtaining a ladder I found by using the point of my penknife that the plaster would peel off in flakes. Through this I was enabled to expose a second series of writing in Old English characters. Unfortunately my time was limited, and it was impossible to try all the wall. High up in the left-hand corner I made out the following :-Three painted lines, the colours running into each other, formed a kind of framework for an imitation of a stone, upon which were the commandments. These lines were yellow, red, and black. The framework was evidently oblong, and the "stone" in shape similar in design to many of the tombstones found in churchyards.

On trying to remove the plaster on which was this writing found a third and last series painted on the stones, which seemed to have had a white coating on them prior to lettering being done. To obtain a specimen of this I took away a stone with a word upon it, which is now in my possession. It was not possible to obtain a copy of the reading, as the slightest touch destroyed the letters, the layer proving too fine and brittle for much investigation: Some of the stones, however, with words upon them, were put on one side, and when the chancel arch was rebuilt I asked the masons to insert them in the wall, so that they might be seen. During my absence they did this, but put them upside down ! There are traces of them still, but they are becoming obliterated through having the sweeping-brush periodically across them.

The word " fear," belonging to the second series, may still be seen on the fourth stone from the spring of the arch. The third style of writing appears to be "blackletter " type. The late Mr. Fallow called it the " ribbon pattern." Evidently the chancel arch had been in position for a considerable period, and was untouched in 1741.

On the other side of the wall within the chancel there were no paintings, but on the north and south walls, where the hatchments of Lord De L'Isle now hang, were painted circles, also with Old English writing inside. As the workmen were scrubbing the walls with steel brushes, they had partly rubbed them out when I found time to visit the church, and only one or two words were visible. A similar circle was also on the east wall of the north aisle, but the contents of the three were lost.

Below the squints on the same side several stones projected inwards. Some of these are above the floor on the north side, and may be seen. Those on the south side are hidden from view, but may be found by lining a small trap-door immediately below the smaller squint. Mr. Temple Moore concluded these were the remains of a former apse, and deemed them worthy of preservation. The late Mr. Fallow took great interest in the church, and on several occasions I communicated with him respecting the " finds." He was anxious to know the diameter of the apse. It was about eleven feet. The vault of the Foulis family lies under the chancel floor, part of it occupying the space once taken up by the apse. It might not be out of place to mention that the will of an old Greenhow family contains these words:—

" 19 April, 1526. I, Robert Ascoo, of Grenowe, of the par. of Yngleby in Cleveland. . . My body to be beried in Yngleby Churche under the glas wyndoo of the south side of the churche. To the churche warke and for my beriall, vjs, viijd. To Yngleby Churche, ij torches."

Mr. William Brown, of Ingleby Arncliffe, sent this copy to the late Mr. Hawell, pointing out to him that this was perhaps the only glass window in the church at that date. (*Vide* " Hawells Ingleby Register.")

I had informed Mr. Fallow of this will, and had searched the inner wall for signs of this " glass wyndoo of the south side" but found none. Digging midway of the present south wall, within the church, and a distance of three feet from it and to a

depth of two feet, I came across a skeleton, but whether of Robert Askew or some other person it is impossible to say. Mr. Fallow, however, was struck with an idea, which he communicated to me, as he thought there was a good opportunity to carry it out. It related to the south squint plus the south window. He wrote as follows:—"The present south wall of the nave above ground is 1741, but is there any indication that a chapel was built out on the south side? You might detect a break in the old foundations. They exist near the southwest door. Are they continuous to the chancel arch? I think it just possible that there *may* have been an excrescence in the shape of a chapel which would account for the squint, and the window may have been in it." He gave a rough diagram.

When the floor was taken up and the surface of the interior lowered, I carefully examined the lower courses of the wall, but observed no break in them. Also, when new drains were laid on the outside and these passed over that part shown in the diagram, no traces of foundation walls of a chapel were come across. In none of the copies of old wills in my possession, dating from 1462 to 1591, relating entirely to Ingleby, Greenhow, and Battersby, is there mention of a chapel co-existing with the church. As the squints existed before the north aisle was erected, would they not be used for the purpose of overlooking the people down each side of the nave?

It was known that three windows were walled up before the restoration began, as the stonework on the exterior showed. Two were in the chancel walls, that in the south wall lancet-shaped, and square-headed in the north wall. A long narrow one was in the west wall of the belfry tower. These were opened out, and now form an interesting feature of the building.

In the wall of the north aisle, forming part of the building material, may be seen two monumental slabs. The upper one, by the shears, shows it to be that of a woman, and is of the thirteenth century. It was originally covered with plaster, but by frequent washing and scraping I got this away. The lower slab has been broken, a sword handle and part of a cross alone remaining.

The walls of the chancel arch was found in such a dangerous condition it had to come down, with the following exceptions. The stones of the arch itself were untouched, and they stand as they must have done for a few centuries. The pillars supporting the arch were untouched, but the tipper part of the larger squint had the old slab taken out and strong pieces of oak laid across the top. The lesser squint was left intact. The mortar used for the arch was so loose in texture that this was all taken out and redone. Many of the stones used in the wall had evidently belonged to a former church, several were chamfered, but only one I was retained, as this had formed part of a monumental slab.

When removing the soil from the body of the church to form a foundation for the new floor it was discovered that the foundation stones supporting the pillars were quite loose, the mortar having crumbled away. These had to be strengthened, but the Committee decided that part of the arcade wall had better come down and be rebuilt. The result was that the second and third pillars from the west end, together with the stones composing the arches and walls, were taken down. The pillar and

arch stones were all numbered. The other pillars were underpinned while fresh foundations were put in. The materials used were bricks and cement. The most trouble was with the east pillar, for on digging down the workmen came upon a sandy bed into which water oozed, so that a larger quantity of cement had to be used before a firm foundation could be secured. The depth reached was close upon seven feet. As the walls came down several of the stones were also found to consist of broken portions of monumental slabs. These were carefully put on one side and afterwards used to form the sides of the altar-tomb of the priest in effigy. I made drawings of several of these, and forwarded them to the Antiquarian Society in order to find the period to which they belonged. Several other stones were also found. These may be seen under the fourteenth-century effigy. They have evidently belonged to a former building differing in character to the present church.

As trenches were made round the pillars, several skeletons were exposed and some of the bones displaced. These were gathered together and afterwards buried in the east corner of the north aisle. From under the second pillar at the east end I obtained part of a stone with the " nail head " pattern. Not far from the middle of the nave a boar's tusk was in the soil, and when digging close to the wall under the smaller squint I picked up two teeth, which I presumed to belong to the horse. When excavations were made near the third pillar, and for the new vestry, I came across similar teeth. Mr. Elgee says they are teeth of *Bos taurus*. A piece of jet and two cockle-shells were picked up at a depth of one foot in the soil. Numerous pieces of old glass were found in the soil near the chancel arch within the nave.

When the floor was being taken up in front of the chancel arch one of the stones was found to be a tombstone with part of an inscription upon it. The words originally upon it were :-

HERE LYETH THE
HERE LYETH THE BODY
MR. PETER
LATE OF
WHO DE

The stone has been cut at the edges to fix in the floor, and was again recut to allow it to be placed in its present position. It therefore lost some of the above words.

Our Registers contain this entry among the burials:— " August 5--Mr. Peter Moore." He was Vicar of Ingleby in 1708, and was nominated to the Curacy of Great Ayton by Sir H. Marwood in 1718. Graves names him as Curate of Ayton in 1718 (hence the words " late of ").

It was somewhat curious that when the men were digging in this particular place some bones were touched by their implements. On working at them I exposed the framework of a skeleton, and found the head lying to the east and feet to the west—the priest facing his congregation. It was here also I found the only remains of a coffin within the church, and these consisted of the two handles, very much corroded, together with a few more corroded particles of iron, and which I still retain.

The stone now lies a little to the left of its former position and can be seen. Lord De L'Isle, during a visit to the church, stated that his father held the opinion that the Lords Eure were buried in the east corner of the north aisle. To see if a tomb was there I excavated to the depth of six feet, and found no signs of anything but soil and then hard clay. There were no bones. From copies of old wills, I think an altar, or an image or picture of the Virgin Mary stood there, so that no one would be buried close to the place. Opposite the second pillar in the north aisle, east end, I exposed a skeleton by taking the soil away from the bones, which was very easy to do, owing to its being so dry. It had never been disturbed. All the teeth were there, and every one sound. In 1505 Thomas Askew wished to be 'buried " before the image of the blessed Mary on the north side." Close behind this was another, neither of them was more than sixteen inches below the surface. Another skeleton was found, the skull lying under the threshold stone of the belfry. To get it in this position a stone had been taken out. The bones were all there, and not disturbed. Several more were found, the deepest being two feet underground. At the west end an old floor of rough slabs was uncovered. The interstices were filled with small cobble stones.

I stated that when the pillars and arches were taken down, all the stones were numbered. When put up again they occupied the same positions. Before the third pillar was fully erected I got one of the masons to make a hole in the centre of the pillar. In this was placed a glass bottle, which was sealed. Inside it was placed a "Middlesbrough Daily Gazette," dated 18th February, 1906, a sixpence, a penny, a halfpenny, each with " 1906 " upon them, the only coins we could raise among us at the time. I wrote an account of the alterations carried out, gave the names of the lay-rector, Lord De L'Isle, the vicar (Rev. M. A. Horsfall), churchwarden, architect, contractor, and those of the workmen engaged. The bottle was then cemented in the hole. A new roof had to replace the old one. In the nave are four of the old beams and four old spars, the other woodwork being worm-eaten to such a degree as to be unsafe. The old lead was taken off and re-melted, the work of making the new covering being carried out by Mr. Petty, of Boroughbridge. The woodwork of the roof in the chancel is entirely new. Near the eastern end of the church, but on the south side, a large stone, six feet six inches long, two feet wide at one end, one foot wide at the other, and nine inches deep, was found some three feet underground close to the wall. It had the appearance of a tombstone, but there were no markings of any kind to be seen. Next day it had been broken into half a dozen pieces and used as building material for the new vestry!

**NOTES OF A SERIES OF BORINGS MADE ~LH':CH r8TH, ,\XD APRIL 18TH,
1902, AT WEST HOUSE KILDALE.**

By THE LATE REV.]. HAWELL, IREV.]. C. FOiHE,{. ,\XD ~IR. P.
HFXTDfGTOX.

(1). A boring was put down just east of the road between the bridge and the turn to west House, immediately opposite the end of the fence extending from the road across the stream and up the hill to the south. At a depth of five feet an obstruction was reached. The material hored through was mostly stiffish impure peat.

(2.) A boring was put down fifteen yards to the south and a little farther from the road. After boring through eight feet of peat a stratum of rock or stone was encountered. Several fragments of sandstone like that of the Margaritatus zone of the Middle Lias were brought up, the largest being over half an inch in diameter. A depth of twelve feet was reached in this boring, the last few feet being through stony blue clay or shale. At last the borer did not seem to make any progress, but there was no grinding vibration, the impression left with those, who were boring being that the end of the borer was in Liassic shale. When the borer was brought up, however, the lower part was filled with peaty matter, and the upper parts of the screw with blue clay, sandstone fragments, etc. This boring was nine yards from the hedge bounding the road.

(3.) A boring was put down about mid-way between the railway and West House, but a little to the west of the shortest line joining them, and sixty yards from the fence bounding the railway. The first nineteen feet appeared to be through peat, after which the borer began to grind a little, and for the next four feet the boring was considerably slower. Judging from the buttery blue clay brought up, in which were many particles of oxide of iron, it was through a firmish clay. A depth of twenty-three feet was reached, and at the point reached there was no obstruction and the borer was still going down.

(4.) An excavation was made in the hole on last boring. We dug down five feet and came upon a loose scree of lower oolitic sandstone, and though we did not work through this we had reason to believe that the solid sandstone was immediately below. Over the sandstone debris there was about a foot of clay full of vegetable fibre. The lower portion of this contained a good many fragments of sandstone and small pockets of loose sand grains, the remains of decayed sandstone fragments. The uppermost four feet or so of this digging consisted of turf and peat.

(5.) A hole was put down twenty feet from the last one in the direction of the centre of the peat carr. The rock was reached at a depth of 7 feet 2 inches. The boring was mostly through peat, but for the last two or three feet a grinding sensation was experienced while boring and the borer brought up some bluish clay.

(6.) Twenty yards further in a direct line across the carr another boring was made. Here the rock was reached at a depth of nine feet through peat and buttery blue clay. There was not much grinding until the stoppage was encountered. A little wood was brought up in the borer.

(7.) Forty yards further in a line across the carr another boring was made. The rock was reached at a depth of ten feet 2 inches. A little grinding sensation the last few inches.

(8.) A boring was put down forty-two yards further across the carr in a direct line. The rock was reached at a depth of nineteen feet. There was some grinding sensation during the last two feet.

(g.) A boring was put down in a line on the other side of the road about half-way between the road and the stream. The rock was reached at a depth of 8 feet 4 inches. There was some grinding during the last foot.

LIST OF CLEVELAND LICHENS.

BY THE LATE WILLIAM MUDD, OF GREAT AYTON.

WHEN collecting data for my work on the Eastern Moorlands I came across numerous local records of lichens in Crombie's "British Lichens," published by the Trustees of the British Museum. These records were made by the late William Mudd, of Great Ayton, and thinking that they might be of use to local botanical students, I made a list of the species which, with the permission of Dr. A. B. Rendle, F.R.S., of the Botanical Department of the British Museum, is here reprinted.

At the same time I also endeavoured to obtain information concerning Mr. Mudd, who was an exceptional man in many ways, and by the kind assistance of Mr. R. Irwin Lynch, curator of the Botanic Garden at Cambridge; Mr. E. W. Holmes, Secretary of the Pharmaceutical Society; and Mr. Ralph Dixon, of Great Ayton I have been able to draw up the following sketch of his career, which will doubtless prove of great interest to the members of the Cleveland Naturalists' Field Club.

William Mudd was born at Bedale in 1830, and was for "some time in the employment of Mr. Joseph Pease at South End, Darlington. Later he was gardener to Mr. John Pease, at Cleveland Lodge, Great Ayton. Writing of him at this period, Mr. Dixon says:—"His education was quite limited beyond the knowledge he possessed of the names of plants, etc., in the way of his business. We were very much interested in Botany and other natural history subjects at the friends' School when we formed the acquaintance of Mr. Mudd, who soon showed himself keenly interested in anything connected with plants, especially mosses and lichens, which last became almost the sole object of his studies. His evening hours were spent with his powerful microscope in examining the structure of these minute vegetable organisms, and in arranging and dividing them into genera and species. He ranged about the Cleveland hills and woods until he became acquainted with every lichen and moss to be found within its limits, and soon acquired a very extensive collection of lichens in particular. In time he became known to many eminent botanists in this country and some on the continent. I often helped him to translate some Latin description, as well as letters from correspondents, mostly written in French. With many of these he exchanged duplicate specimens, until he became possessed of one of the most extensive collections in England. He then began his book on "British Lichens," which he illustrated with actual specimens—a most laborious operation, for which he was never sufficiently paid.

"British Lichens" was published in 1861, and was accompanied by a series of illustrated specimens in three fasciculi. The copy at the Botanical Museum, Cambridge, was his own interleaved copy, presented by his widow, May 10th, 1897, and contains five plates with 130 illustrations drawn by Mudd himself. Mr. Holmes states that the monograph was far in advance of his time. He followed Continental modes of classification, and his method has been followed with recent modifications in Crombie's "British Lichens." Mr. Lynch also thinks that even now Mudd's work would be of considerable value to anyone studying lichens, and he further remarks that it is of the nature of a flora, and, so far as he knows, does not embody the result of original research and investigation. In a memoir in the "Gardeners' Chronicle" of

May 3rd, 1879, Mr. J. G. Baker, F.R.S., says:—" His manual of British lichens contains a full description of all the species and varieties then known in Britain with figures of the spores of 130 species, illustrative of the genera. If anyone will look through this, remembering that it is the production of a man who had to educate himself after reaching mature life, and who at the time he was engaged upon it was working hard with his hands for twelve hours a day, and keeping a wife and family upon a wage of something like twenty-five shillings a week, he will see that the book is really a wonderful monument of energy and perseverance."

This work was a great help to Mudd in procuring him the Curatorship of the Botanic Garden at Cambridge University, which appointment he received principally through the influence of Mr. J. G. Baker, of Kew Gardens, in 1864 or 1866, the exact year being uncertain. He became an Associate of the Linnean Society in 1868, and remained 'at Cambridge until his death in 1879.

Mr. Holmes, of the Pharmaceutical Society, informs me of a visit he paid to Mudd at Cambridge about forty-five years ago, when the following conversation ensued:—

" Meeting a man dressed like a park-keeper, I inquired for Mr. Mudd. He replied: ' I am Mr. Mudd.' I said: ' I wrote you some time since, but received no reply.' He said: ' Whenever I get a letter on lichens I put it in the fire, because the doctor told me that if I continued to use the microscope I should lose my eyesight.' Hence he was obliged to give up his work on lichens after coming to Cambridge." Mudd's collection is at the Botanical Museum at Cambridge, and consists of fifty-two fasciculi arranged in a cabinet. A number of his specimens are also in the South Kensington Museum.

FRANK ELGEE.

LIST OF CLEVELAND LICHENS.

COLLEMEI.

Collema flaccidum (Ach.) Rievaulx. On old walls, rocks, tree trunks, etc.

Collema tenax (Ach.) Near Ayton. Among mosses on rocks, and on bare ground in upland districts. Local and scarce

Var. **coronatum** Near Ayton.

Collema glaucescens (Hoffm). Coatham Marshes. On moist clayey soil in maritime and upland districts.

Collema crispum (Ach.) Coatham Marshes. Among mosses on gravelly soil, and on the tops of old walls.

Collema cheilum (Ach.) Pinchingthorpe. On the mortar of old walls, etc.

Collema granuliferum (Nyl.) Redcar. On calcareous walls and rocks.

Collema nigrescens (Ach.) Near Guisbrough. On trunks of old trees, chiefly poplars and willows.

Collema aggregatum (Nyl.) Ingleby Greenhow. Among mosses on trunks of old trees.

Collemodium microphyllum (Nyl.) Ingleby Park. On trunks of old trees, chiefly ash and elm.

Leptogium tenuissimum (Koerb) Near Easby. On ground among mosses and short grass.

Leptogium subtile, (Nyl.) Near Ayton. On cretaceous rocks on the ground, rarely on roots of old trees.

Leptogium minutissimum (Fr.) Near Ayton. On the ground, rarely on tree trunks.

Leptogium lacerum (Gray.) Mulgrave Castle. Among mosses on ground and old walls in shady places.

Form **fimbriatum**, Cleveland.
Subsp. **fulvinatum**, Kildale.

Leptogium palmatum. (Mont.) Coatham. Among mosses and short grass in sandy and gravelly places.

CALICIEI.

Calcium subsp. **stemoneum** (Nyl.) Bonsdale Gill. On old tree trunks, stumps and pales.

Calcium chrysocephalum (Ach.) Rosedale. On old pales and barn doors.

Calcium acicuiare (Fr.) Old tree trunks. Very local and scarce.

Calcium melanophaeum (Ach.) Lonsdale. On old fir trunks etc.

Var. **ferrugineum**. Near Ingleby.

Sub-sp. **brunneolum** (Nyl.). Bransdale.

Calcium hyperellum (Ach.) Ingleby and Bransdale. On old tree trunks.

Calcium querinum (Pers.). Baysdale. On old pales and decayed tree trunks.

Calcium curtum (Turn. and Borr.). Near Ayton. On old pales and decayed oaks.

Calcium trachelinum (Ach.) Kildale. On old tree trunks, old pales etc.

Calcium parietinum (Ach.) Cleveland. On trunks of decorticated dead trees, etc.

Stenocybe trajecta (Nyl.). Ingleby Park and Bransdale On bark of holly, etc.

Conocybe furfuracea (Ach.). Bransdale. On roots of decayed trees, etc.

Conocybe hyalinella (Nyl.). Bransdale. Only recorded locally. On indurated stumps of trees.

Trachylea tympanellaonerla (Fr.). Rosedale. On old posts and pales.

Trachylea strigonella (Fr.). Easby Wood and Ingleby. On old oak and on other lichens.

SPHAEROPHOREI.

Sphaerophorus compressus (Ach.) Farndale. On rocks and boulders.

Sphaerophorus coralloides (Pers.) Kildale Moor. On rocks and boulders.

Sphaerophorus fragilis (Ach.). Farndale. On mossy and naked rocks and boulders.

BAEOMYCETII.

Baeomyces infus (Pers.). Ayton. On sandy and gravelly soil, etc.

Baeomyces roseus (Pers.). Cleveland. On sterile travel gravelly or turf soil.

Baeomyces aeruginosus (D.C.). Guisbrough Moor. On moist turfy soil, on decayed bog moss, and on putrid tree trunks.

STEREOCAULEI.

Stereocaulon condensatum (Hoffm.). Battersby Moor. On ground and on turf-covered walls.

CLADONEI.

Pycnothella papillaria (Duf.). Ayton. On ground in dry exposed places.

Cladonia ulcicornis (Floerke). Near Great Ayton. In dry sandy places amongst mosses and heaths.

Cladonia pyxidata (Fr.). Ayton. On ground, old walls, rocks, and about roots of trees.

Var. **pocillum** (Fr.). Redcar.

Var. **chlorophaea** (Fl.). Ayton, Newton, and Kildale Moors.

Cladonia pityrca (Fl.). Lonsdale, Guisbrough Moor, near Roseberry, Ayton Moor, and Black Banks.

Cladonia cariosa (Spreng). Ayton. On clayey and sandy soil.

Cladonia fimbriata (Fr.). Ayton and Bilsdale. On ground, roots of trees, and among mosses on old walls.

Var. **conista**. Easby.

Var. **tubaeformis** (Fr.). Ayton.

Form **macra** (Cromb.). Cleveland.

Form **abortiva**. Near Ayton.

Var. **subcornuta** (Nyl.). Ayton and Baysdale.

Form **nemoxyna** (Nyl.). Ayton Moor.

Var. **radiata** (Nyl.). Westerdale.

Cladonia gracilis (Hoffm.). Farndale and Cleveland
Among mosses on ground and on rocks.

Form **abortiva**. Highcliffe.

Form **aspersa** Ingleby Park.

Cladonia cornuta (Fr.), Ayton Moor. Among mosses; on ground, on heaths, and in woods.

Cladonia ochrochlora (Flor.). Cleveland. On putrid trunks and turfy soil.

Form **ceratodus**. Lonsdale.

Cladonia verticillata (Flor.). Ayton Moor and Baysdale. On mossy rocks and boulders.

Cladonia sobolifera (Nyl.). Ayton and Ingleby Moors. On mossy boulders, rocks, and ground.

Cladonia degenerans, sub-sp. **coralloidea** (Nyl.). Baysdale Moor. Very local, and scarce. On wet heaths.

Form **pleolepidea** (Wyl.), var. **anomaea** (Fl.) Burton Head.

Cladonia lepidota, form **hypophylla** (Cromb) Battersby and Ayton Moors. Among rocks.

Cladonia furcata (Hoffm.). Near Ayton and Newton. On the ground on moors.

Form **exilis**. Guisbrough Moor.
Var. **corymbosa**. Ayton Moor.
Var. **spinosa**. Ingleby Park.
Sub-sp. **racemosa**. Guisbrough Moor.
Var. **recurva**. Farndale.

Cladonia pungens ~Fl.). Near Ayton and Cliff Rigg, On ground, among mosses, etc.

Form **foliosa**. Redcar.

Cladonia crispata (Nyl.). Kildale Moor and Lonsdale. On ground among mosses.

Sub-sp. **furcatiformis**. Ingleby Park. Only record

Cladonia squamosa (Hoffm.). Among mosses on ground. etc. Ingleby Park

Form **ventricosa**. Westerdale.
Form **cucullata**. Cleveland.

Cladonia subsquamosa (Nyl.). Kildale and Ingleby. On rotten stumps and among mosses.

Cladonia asperella (Crom.). Stockdale. Only record. Among mosses on rocks, etc.

Form **polychonia**. Baysdale. On moors.

Cladonia caespititia (Fl.). Cliff Rigg. Among mosses on trees, etc.

Cladonia delicata (Flor.). Easby Wood and Kildale. On rotten rails and stumps, etc.

Cladonia coccifera (Shaer.). Battersby, Ayton, and Baysdale Moors. On sterile rocks and turf walls.

sub-sp. **pleurota** (Cromb.). Ayton.

Cladonia deformis (Hoffm.). Guisbrough Moor and Lonsdale. On moors.

Cladonia digitata (Hoffm.). Kildale Moor. Putrid tree trunks and among mosses.

Cladonia macilenta (Hoffm.). Ayton and Ingleby. Among mosses on old trunks.

Form **styracella**. Lonsdale

Form **davata**. Westerdale.

Var. **scabrosa** (Nyl.) Bridle Gill.

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Var. **coronata**. Baysdale, Ingleby, Lonsdale, and Kildale.

Form **ventricosa**. Kildale Moor.

Var. **ostreata**. Battersby.

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Cladonia bacillaris (Nyl.), form **pityropoda**. Kildale Moor

Var. **subcornuta**. Ingleby Park.

Cladonia floerkiana (Fr.), form **trachypoda** (Nyl.). Baysdale. On peaty ground.

Cladonia sylvatica (Nyl.). Reindeer lichen Generally distributed over the moors.

Form **tenuis**. Kildale Moor

Var. **granlis**. Ayton Moor

Form **pumila**, Burton Head

Cladonia uncialis (Nyl.). Ingleby Moor

Form **bolacina** (Cromb.). Cleveland

Form **adunca**. Battersby and Ayton Moor

Cladonia amaurocrea (Nyl.). sub-sp. *Destriata*. Baysdale and Guisbrough Moors.

RAMALINEI.

Ramalina calcicaris (Nyl.). Airyholme Wood

Var. **subampliata** (Nyl.). Ayton On tree trunks.

Ramalina farinacea (Ach.) Newton. On trees.

Ramalina fraxinea (Ach.). Cleveland. On trees.

Ramalina fastigiata (Ach.). Cleveland. On trees.

Ramalina pollinaria (Ach.). Ingleby. On tree trunks.

Ramalina evernioides (Nyl.). Ingleby. On old trees.

Ramalina subfarinacea (Nyl.) Langbarough. On rocks and walls.

USNEEI

Usnea hirta (Hoftm.). Ingleby. On old pales and trees.

Usnea dasypoga (Nyl.). Ingleby. On fir trunks.

Usnea ceratina (Ach.) Ingleby Park.

Usnea ceratina (Ach.). Ingleby Park.

Var. *scabrosa*. Ayton Moor. On trunks of old trees.

ALECTORIEI.

Alectoria jubata (Nyl.). Baysdale and near Great Ayton.

Sub-sp. **Chalybeiformis**. Battersby. On trees, chiefly

pinus.

Alectoria bicolor (Nyl.). Farndale. On rocks and boulders.

CETRARIEI.

Cetraria islandica (Ach.) Iceland moss. On ground amongst heaths.

Cetraria aculeata (Nyl.). Farndale. On ground in sandy places and on moors.

Var. **hispida**. Cleveland.

Platysma ulophyllum (Nyl.). Ingleby Park. On old pales, etc.

Platysma diffusum (Nyl.). Baysdale. On old pales, etc.

Platysma glaucum (Nyl.). Kildale Moor. On tree trunks, walls, rocks, etc.

Form **fallax** (Nyl.). Ingleby Park.

PARMELIEI.

Evernia prunastri (Ach.). Lonsdale. On trunks and branches of trees, chiefly firs.

Evemia furfuracea (Fr.). Farndale. On trunks, old pales etc.

Parmelia perlata (Ach.). Bonsdale Gill. On trunks of trees and on rocks.

Parmelia scorteia (Ach.). Stokesley. On trees and old pales.

Parmelia saxitilis, form **furfuracea** (Schaer.)
Cleveland On rocks, walls, and trees.

Parmelia sulcata (Tayl.). Cleveland. On trees and walls.

Parmelia omphaloides (Ach.). Cleveland. On rocks and boulders.

Parmelia caperata (Ach.). Cleveland. On trunks of old trees, on boulders, and on old pales.

Parmetia mougeotii (Schaer.). Ingleby. On rocks and boulders.

Parmelia acetabulum (Dub.). Stokesley. On trunks of old trees.

Parmelia exasperata (Nyl.). Ayton. On old tree trunks.

Parmelia subaurifera (Nyl.). Ayton. On trunks of shrubs and trees.

Parmelia physodes, Form 1, **labrosa** (Ach.). Lonsdale. On trees, rocks, walls, etc.

Form 2, **tubulosa** (Mudd). Cleveland.

Parmeliopsis ambigua (Nyl.) Ingleby Greenhow. About roots of fir trees, etc.

STICTEI.

Lobarina scrobiculata (Nyl.). Oggeray Gill (? Hograh). On trunks of old trees.

Lobaria pulmonaria (Hoffm.). Kildale. On trunks of forest trees, especially old oaks.

Ricasolia laetivirens (Leight.). Baysdale. On trunks of old trees.

PELTIGEREI.

Solorina Spongiosa (Nyl.). Guisbrough Moors. On the ground amongst rocks, and on turf walls.

Nephromium lusitanicum (Nyl.). Cleveland. On trunks of old trees, on mossy rocks, etc.

Peltigera canina (Hoffm.). Cleveland. Among mosses on ground.

Peltigera rufescens, form **praetextata** (Flerke.). Easby and Sowerdale. Among mosses on shady rocks and walls.

Peltigera spuria (Leight). Ayton Moor. On ground among short grass and mosses.

Peltigera polydactyla (Hoffm.). Form **microcarpa**, var. **hymenina** (Nyl.). Kildale Moor. Among mosses on ground.

Peltigera horizontalis (Hoffm.). Stockdale. On shady rocks and mossy stumps of trees.

PHYSCIEI

Physcia parietina (De Not.). Cleveland. On trunks of trees, old pales, etc.

Physcia polycarpa (Nyl.). Redcar. On old pales and trees.

Form **lobulata** (Crom.). Cleveland.

Physcia ciliaris (Fl.). Ayton and Dalby. On trunks of old trees.

Var. **saxicola** (Nyl.). Near Langbarugh. On rocks and walls.

Physcia pulverulenta (Nyl.). Ayton. On trees and pales.

Physcia pityrea (Nyl.). Cariton. On tree trunks.

Physcia stellaris (Nyl.). Near Ayton. On trees by road-side.

Physcia tenella (Nyl.). Near Stokesley and Kildale. On trees.

Physcia aipolia var. **cercidea** (Nyl.). Near Ayton. On tree trunks.

Physcia erosa (Leight). Near Ayton. On trees, walls, and rocks.

Physcia caesia (Nyl.). Ayton. On walls, roofs, and boulders.

Physcia lithotes (Nyl.). Near Newton. In depressions of rocks moistened by streams, lakes, and the sea.

Physcia ulothrix, var. **virella** (Cromb.). Ayton. On tree trunks.

Physcia adglutinata (Nyl.). Cleveland. On tree trunks.

GYROPHOREI.

Gyrophora polyphylla (Turn and Borr.). Ingleby and Battersby Moors. On rocks and boulders.

Gyrophora polyrrhiza (Krb.). Ayton Moor. On rocks and boulders.

LECANO-LECIDEI

Pannaria brunnea (Nyl.). Battersby Bank. On ground, among rocks, and decayed mosses.

Pannularia nigra (Nyl.). Sub-sp. **psotina** (Cromb.). Bilsdale. On mortar of walls, etc.

Lecanora saxicola (Ach.). Cliff Rigg, Ayton. On rocks, boulders, and walls.

Var. **diffracta** (Nyl.). Near Ayton.

Lecanora tegularis (Nyl.). Ayton. On rocks and walls.

Var. **obliterascens** (Nyl.). Near Ayton.

Lecanora dissidens (Nyl.). Ayton. On slate roofs of outhouses and on brick walls.

Lecanora sympagea (Nyl.). Bilsdale. Chiefly on calcareous rocks and on wall mortar.

Lecanora laciniosa (Nyl.). Stokesley. On tree trunks.

Lecanora vitellina (Ach.). Near Ayton. On rocks, walls, etc.

Lecanora citrina (Ach.). Near Ayton. On mortar of walls, etc.

Lecanora erythrella (Nyl.). Roseberry. On rocks and old walls.

Lecanora ferruginea (Nyl.). Cleveland. On tree trunks, etc.

Var. **festiva** (Nyl.). Near Roseberry. On rocks.

Lecanora cerina (Ach.). Bilsdale. On tree trunks, etc.

Lecanora chlorina (Nyl.). Newton. On shady rocks.

Lecanora pyracea (Nyl.). Langbarough and Easby. On rocks and stones.

Var. **pyrithroma** (Nyl.). Kildale.

Lecanora holocarpa (Nyl.). Near Ayton and Rockcliff. On old pales.

Lecanora irrubata (Nyl.). Bilsdale and near Cariton. On rocks.

Lecanora sophodes (Ach.). Ayton. On tree trunks, etc.

Lecanora exigua (Nyl.). Near Newton. On trees, rocks, land walls.

Lecanora teichophila (Nyl.). Near Ayton. On rocks and walls.

Lecanora galactina (Ach.). Near Ayton. On walls and rocks

Lecanora subfusca, var. **campestris** (Nyl.). Near Ayton. On rocks and walls.

Lecanora allophana (Nyl.). Ayton. On tree trunks.

Lecanora parisiensis (Nyl.). Near Ayton. On tree trunks,

Lecanora chlarona (Nyl.). Near Ayton. On smooth bark of trees.

Form **pinastri** (Cromb.). Ayton Moor. On trunks of fir, etc.

Var. **geographica** (Nyl.). Cliff Rigg. On shrubs and branches of trees.

Lecanora coilocarpa (Nyl.). Ayton. On rocks and walls.

Lecanora angulosa (Ach.). Cliff Rigg and Easby. On tree trunks.

Lecanora glaucoma (Ach.). Cliff Rigg. On rocks, boulders, and walls.

Lecanora subcarnea (Ach.). Ayton. On rocks.

Lecanora umbrina (Nyl.). Ayton. On rocks.

Lecanora crenulata (Nyl.). Near Ayton and Carlton Bank. On calcareous, rarely sandstone, rocks.

Lecanora hageni (Ach.). Ayton. On tree trunks.

Lecanora sulphurea (Ach.). Roseberry. On rocks and walls.

Lecanora varia (Ach.). Ayton. On old pales and tree trunks.

Lecanora expallens (Ach.), Airyhoime Wood. On tree trunks.

Lecanora symmictera (Nyl.). Near Ayton. On old pales, etc.

Var. **aitema** (Nyl.). Battersby.

Lecanora metaboloides (Nyl.). Cleveland. On old pales, etc.

Lecanora polytropa (Schaer.). Cliff Rigg. On rocks, boulders, and walls.

Form **subglosa** (Cromb.). Guisbrough and Ayton Moors.

Lecanora intricata (Nyl.). Ingleby and Kildale. On rocks, walls, and boulders.

Lecanora sarcopis (Ach.). Near Cariton. On old pales.

Lecanora erysibe (Nyl.). Near Ayton and Coatham. On rocks.

Form **cinereofusca** (Cromb.). Near Ayton.

Lecanora nylanderiana (Nyl.). Near **Marske** on old walls.

Var. **caeruleorubella** (Cromb.). Near Ayton.

Lecanora badia (Ach.). Roseberry. On rocks and boulders.

Lecanora coccinea (Cromh). Battersby. On shaded perpendicular rocks, etc.

Lecanora ventrosa (Ach.). Kildale Moor. On exposed rocks and boulders.

Lecanora rubra (Ach.). Bilsdale. On old elms.

Lecanora tartarea (Ach.). Highcliff. On rocks and old trunks.

Var. **frigida** (Ach.). Ayton Moor.

Lecanora subtartarea (NyL). Rosedale. On tree trunks, etc.

Lecanora parella (Ach.). Ayton. On rocks and tree trunks.

Var. **Turneri** (Nyl.). Near Ayton.

Lecanora pallescens (Nyl.). Near Easby. On tree trunks.

Lecanora gibbosa, var. **fusca** (NyL). Near Newton. On rocks.

Lecanora cassiocinerca, form **obscurata** (Nyl.). Cliff Rigg. On rocks and boulders.

Lecanora calcarea (Somm.). Bilsdale. On calcareous rocks and walls.

Var. **Hoffmanni** (Somm.). Near Roseberry.

Lecanora flavida (Hepp.). Cockshaw Bank, near Ayton. On moist rocks and boulders.

Lecanora fuscata (NyL). Ayton and Guisbrough Moors. On rocks, boulders, and walls.

Lecanora rufescens (Nyl.). Ayton. On rocks and walls.

Lecanora smaragdula (Nyl.). Near Ayton. On rocks and walls.

Lecanora heppii (Nyl.). Great Ayton. On arenaceous rocks, etc.

Lecanora pruinosa (Nyl.). Bilsdale. On calcareous rocks, etc.

Pertusaria multipuncta (Nyl.). Bransdale. On trunks and branches of trees.

Pertusaria globulifera (Nyl.). Near Ayton. On trunks of old trees.

Pertusaria communis (D.C.). Kildale and near Ayton. On trunks of old trees.

Form **rupestris** (D.C.). Ayton.

Pertusaria dealbata (Nyl.). Kildale Moor, On rocks, boulders, etc.

Form **corallina** (Cromb.). Ayton Moor.

Pertusaria coccodes (Nyl.). Baysdale. On tree trunks, etc.

Pertusaria lactescens (Mudd). Ayton Moor. On rocks and walls.

Pertusaria Wulfenii (D.C.). Ingleby Park. On tree trunks.

Var. **rupicola** (Nyl.). Ingleby Park.

Pertusaria lutescens (Lamy.). Near Battersby. On old tree trunks.

Pertusaria leioplaca (Schaer.). Newton Wood and Sowerdale. On tree trunks.

Phlyctis agelaea (Koerb.). Airyhoime and Hoggart's Woods. On tree trunks.

Thelotrema lepadinum (Ach.). Baysdale. On smooth bark of trees.

Urceolaria scruposa (Ach.). Lonsdale. On rocks and walls.

Urceolaria bryophila (Nyl.). Langbarugh. Overspreading mosses and on *Cladonia pycnidata*.

CLEVELAND LEPIDOPTERA IN 1910.

BY T. ASHTON LOFTHOUSE, F.E.S.

* *Denotes species recorded in Proceedings for first time.*

THE season was not a particularly favourable one for Lepidoptera. The first insects noticed were *Phigalia pedaria* and *Hybernia leucophearia* on February 5th at Ingleby Greenhow. Larvae of *Bombyx rubi* were noticed on the moors on 13th February. The weather was not very suitable for working "sallows," and the only visit to work these

at Saitburn resulted in single specimens of *Pachnobia leucographa* and *Taeniocampa munda* being taken in addition to the usual commoner species.

PYRALIDES.

**Eurrhyncha urticata*. At Light, Linthorpe, 1906 (Sachse).

**Hydrocampa stagnata*. Marion (J. W. H. Harrison).

**Ephestia kuhniella*. In flour at Middlesbrough (J. W. H. Harrison).

TORTRICES.

Tortrix costana, var. *latiorana*. On Marshy ground near Grangetown Station in June.

**Dictyopteryx loefligiana*. Lealholm. July, 1909.

**Penthma pruniana*. Kildale.

**Penthina sauciana*. Fairly plentiful about bilberry on the moors at Great Ayton.

**Spilonota roborana*. Linthorpe, Middlesbrough.

**Grapholitha nisella*. Kildale.

**Phloeoes immundana*. Ingleby Greenhow.

TINEA

**Gelechia discordella*. Easby.

**Lita viscariella*. Kildale, 13th August.

Ceratophora rufescens. Linthorpe, Middlesbrough.

Oecophora stipella. Kildale.

Gracilaria tringipennella. Grangetown, Eston, Ayton.

**Colcophora anatipennella*. Linthorpe, 23rd July, 1908.

**Batrachedra praeangusta*. Kildale, 15th August, 1908.

**Elachiste apicipunctella*. Eston and Middlesbrough.

***Elachista monticola (alpinella)**. Two specimens at Kildale in 1909. This species does not appear to be recorded in the Yorks list.

***Elachiste cerusella**. Grangetown in June.

***Elaehista rhynchosporella**. Grangetown. June.

Lithocolletis quercifoliella. Eston.

***Bucculatrix nigricomella**, var. *aurimaculella* Middlesbrough, 19th June.

CLEVELAND LEPIDOPTERA IN 1911.

* *Denotes species recorded in Proceedings for first time.*

IFAIRLY mild winter, with result that vegetation was well forward early in March—in fact the “sallows” in garden at: Linthorpe were in full bloom as early as 1st March. But from the beginning of March for some weeks cold weather either prevailed, the winds being mostly from the east and north, and very few insects were noticed. From May to the autumn very fine sunny weather prevailed. This proved very favourable for insect life for the early part of the summer—that is, to about the first week in July. After this time, although the weather was fine, lepidoptera were not at all plentiful, the larvae and pupae possibly suffering from the exceptionally dry weather. Another noticeable feature was the early emergence of some of the species, in some cases being at least three weeks earlier than in the previous year. Sugar, when tried, proved of very little use, and autumn insects on the whole were much scarcer than usual.

RHOPOLOCERA

***Gonopteryx rhamni**. A specimen taken freshly emerged drying its wings on a bracken stem at Great Ayton in August (J. W. H. Harrison). This is an interesting addition to the Cleveland list.

***Epinephele tithonus** Specimen taken at Great Ayton in August. Have seen this species at Redcar some years ago and also specimens taken at Hinderwell.

BOIVIBYCES.

Nudaria mundane Fairly plentiful on walls at Kildale in July.

Hepialus vellea. Fairly common among bracken at Kildale, including some of the var. *carnus*. This species flies often about half an hour before dusk and only for limited period of ten to fifteen minutes.

NOCTUA.

Orthosia suspecta. A specimen occurred on sugar in the garden at Linthorpe.

Cucullia umbratica. A female taken on moor at Ayton in June. A few pupae were obtained from ova laid by this female, and two specimens emerged unexpectedly in September. probably owing to fine season.

GEOMETRAE.

***Melanippe hastate** Larvae taken in Beech wood Eston (J.W.H. Harrison).

TORTRICES.

***Tortrix ribeana.** Common in garden at Linthorpe and no doubt all over the district.

Tortrix viburnana. Occurred fairly freely at Kildale in June.

***Penthina corticana.** Beaten out at Kildale and taken off birch trunks in Baysdale.

***Grapholitha cinerana.** Specimen at Kildale in September. An addition to Yorkshire list.

***Grapholitha nigromaculana** Kildale.

***Batodes angustiorana.** Flying freely round yews and other evergreen shrubs in garden at Linthorpe, generally about 6 p.m. in July.

***Paedisca rubiginosana.** Three specimens at Great Ayton. A single specimen taken near York being the only other previous Yorkshire record.

Ephippiphora turbidana. A few flying about "butter-bur " at Kildale. On the wing between five and six o'clock on July 5th and 6th. Wind changed to easterly direction on 7th, and although fine and sunny, never saw another specimen. The change of wind also affected other tortrices very materiallv

Coccyx taedella. Common about spruce fir at Great Ayton

***Coccyx nanana.** Several flying about spruce-fir between 5.50 and 6.30 p.m. in July.

Pamplusia mercuriana. Several on moors at Great Ayton.

Retinia pinivorana. Fair number among Scotch fir.

***Stigmonota coniferana.** Easby and Kildale.

Dichrorampha tanaceti. Kildale and Ingleby Greenhow in July.

TINEAE.

***Micropteryx seppella.** Great Ayton.

Gelechia diffinia. Great Ayton.

***Gelechia confinis.** Great Ayton.

***Bryotropha desertella.** Kildale.

Oecophora fuscescens. Redcar and Kildale.

***Argyresthia conjugella** Among Mountain Ash, Great Ayton.

***Argyresthia atmoriella.** Several taken among larch at Great Ayton. This species is also an addition to the Yorkshire list.

***Argyresthia dilectella.** About juniper in Baysdale.

***Cedestis farinatella.** Great Ayton.

***Ornix scoticella.** Great Ayton.

***Laverna ochraceelia** Bred from pupae found in stems of willow-herb at Great Ayton.

***Elachista albifrontelia.** Great Ayton.

***Elachista pollinariella.** Great Ayton.

***Opostega saliciella.** Great Ayton.

REPORT ON COLEOPTERA OBSERVED IN CLEVELAND

BY M. LAWSON THOMPSON, F.E.S.

THE following Report on Beetles occurring in the Cleveland district is compiled from observations made during 1910 and 1911, except in a few instances. These last are additional old records of G. T. Rudd's, made in the early part of last century and not included in previous reports. Mr. G. B. Walsh, B.Sc., has again kindly contributed some notes on local species, the result of his own examinations of various localities in the district. Owing in a great measure to his work, some very interesting insects find a place here in the Cleveland list for the first time. The extremely dry weather prevailing during last summer proved very unfavourable to beetle life, with the result that we experienced one of the seasons in which both species and individuals are scarcer than usual. With the additions contained in this report the list of recorded Cleveland Coleoptera now numbers 985 species.

COLEOPTERA.

Miscodera arctica (Payk.). Under stones at Eston, near the coast. Several specimens of this typical moorland insect were found by Mr. Walsh in 1910 and 1911 in this locality. I took an example on a moorland ridge at Kildale in May, 1911.

Pterostichus vitreus (Dj.) common under stones at Eston, near the coast (G. B. Walsh). Another strange locality for a moorland species.

Amara curta (Dej.). One specimen under a stone on the coast at Eston in April, 1910. Mr. Walsh found two females in the same locality in 1911. This insect must be very rare in the north of England, as the species does not appear local catalogues for this part of the country.

Amara lunicollis (Schiod.). On the moor at Eston. One specimen in 1911 (G. B. Walsh).

Amara tibialis (Payk.). At Eston, under *Zostera*, on the coast, June, 1911.

Pristonychus terricola (Herbst.). At Eston, near the coast (G. B. Walsh).

Anchomenus puellus (Dej.). At Eston, near the coast (G. B. Walsh).

Bembidium rufescens (Guer.). Leven Bridge (G. B. Walsh).

Bembidium obtusum (Sim.), On the old banks of the Tees at Acklam.

Bembidium mannerheimi (Sahlb.). On the moor at Kildale.

Bembidium bipunctatum (L.). At Eston, under *Zostera*, on the coast, June, 1911.

Patrobis excavatus (Payk.). On Stanghow Moor and at Ingleby Arncliffe.

Lebia chlorocephala (Hoff.). At Marton in 1910 (G. B. Walsh).

Haliplus fulvus (F.). On Eston Nab (G. B. Walsh).

Laccophilus interruptus (Panz.). Near Marton (L. Rudd. *Vide* Steph. Man., 1839. P71)

Hydroporus lepidus (Ol.), and **H. obscurus** (Sim.). On Eston Nab (G. B. Walsh).

Hydroporus celatus (Clark) (*longulus*, Muls.). On the high moors at Kildale. I took two specimens of this rare species in May, 1911.

Agabus sturmi (Gyll.). On Eston Nab (G. B. Walsh).

Philydrus nigricans (Zett.). In Coatham Marshes.

Helophorus aquaticus (L.), var. **aequalis** (Th.), and **H. arvernicus** (Muls.). At Glaisdale in 1910 (G. B. Walsh).

Ochthebius bicolon (Germ.). At Eston, in a ditch near the coast, August, 1911.

Hydraena gracilis (Germ.). Kildale, in the stream.

Aleochara lygaea (Kr.). I took a single specimen of this rare insect at Saltburn in April, 1888. It remained in my collection unnamed until recently.

Gyrophaena manca (Er.). Common in *Boleti* at Ingleby Arncliffe, July, 1910.

Tachyporus humerosus (Er.). At Saltburn: also Glaisdale (G. B. Walsh).

Tachyporus transversalis (Grav.). On Eston Nab (G. B. Walsh). A rare species in Yorkshire

Megacronus cingulatus (Man.). Mr. Walsh took a single example of this rare beetle on the moor at Eston.

Megacronus analis (Payk.). On the coast at Eston, 1910.

Trichophya pilicornis (Gyll.). At Yarm (G. T. Rudd. *Vide* Steph. Man., 1839, p.376)-Very local in Yorkshire.

Quedius lateralis (Grav.). Stockton-on-Tees (G. T. Rudd, *Vide* Steph. Man., 1839, p.389)-Also at Glaisdale, 1910 (G.B. Walsh).

Quedius cruentus (Ol.), **Q. picipes** (Man.), and **Q. nigriceps** (Kr.). Among dead leaves at Glaisdale, 1911 (G. B. Walsh).

Quedius fumatus (Steph.) (**peltatus**, Er.). At Kildale. Among wood in a marshy place, August, 1910. Also at Glaisdale, 1911 (G. B. Walsh).

Quedius maurorufus (Grav.). Redcar (G. T. Rudd. *Vide* Steph. Man., 1839, p.393) Also at Kildale.

Quedius scintillans (Grav.). At Eston, 1911 (G. B. Walsh). A rare species in Yorkshire.

Quedius attenuatus (Gyll) At Middlesbrough, 1911 (G. B. Walsh).

Ocypus fuscatus (Grav.). On the coast at Eston, April, 1910.

Ocypus cupreus (Ross.). Eston and Kildale.

Philonthus laminatus (Creutz.). At Nunthorpe (G. B. Walsh).

Philonthus cephalotes (Grav.). At Lealholm (G. B. Walsh).

Philonthus discoideus (Grav.). On the coast at Eston, July, 1910.

Philonthus sanguinolentus (Grav.). This insect is rare in Yorkshire, but Mr. Walsh took it at Great Ayton in 1911.

Catius xantholoma (Gr.). Common on the shore at Eston and Runswick Bay.

Xantholinus ochraceus (Gyll). At Kildale, 1911 (G. B. Walsh).

Xantholinus tricolor (F.). On the coast at Eston, July, 1910.

Othius laeviusculus (Steph.). Very local in Yorkshire, but taken by Mr. Walsh at Eston in 1911.

Lathrobium brunnipes (F.). At Kildale.

Dianous coerulescens (Gyll). Staithes in 1901 (N. L. Gyllespie). Also at Glaisdale in 1911 (G. B. Walsh).

Stenus bimaculatus (Gyll.). At Leven Bridge in 1911 (G. B. Walsh). Very local in Cleveland.

Stenus guynemeri (Duv.). On Hutton Moor, near Guisbrough, in 1911 (G. B. Walsh). Rare in Cleveland.

Stenus junco (F.), and **S. declaratus** (Eh.). At Eston

Stenus bifoveolatus (Gyll.). On the moor at Kildale, in moss.

Bledius pallipes (Grav.). Mr. VV. E. Sharp of London when on a visit to Middlesbrough, took this, species in Linthorpe in 1911.

Anthophagus testaceus (Grav.). At Nunthorpe (G B Walsh). Also near Osmotherley.

Lesteva pubescens (Man.). At Kildale, 1911 (G.B.Walsh).

Lesteva sicula (Er.). On the high moors at Kildale in moss. May 1911. Also at Eston in June.

Olophrum fuscum (Grav.). In marshy place at Kildale.

Anthobium minutum (F.). At Kildale in 1910.

Silpha thoracica (L.) On the Guisbrough and Danby Moors

Scydmaenus exilis (Er.). Under bark at Kildale in August 1910

Scymnus nigrinus (Kug.). Near Osmotherley in August 1908. This very local species is found on the lower branches of the Scotch Fir.

Hister cadaverinus (Hoff.). At Redcar on the coast

Pachylopus (Saprinus) maritimus (Steph.). At Stockton-on-Tees (G. T. Rudd. Vide. Steph. Man., December 31st, 1830, iii, 372.). A very local insect

Trichopteryx atomaria (De G.) Amongst rotten wood in a marshy place at Kildale. August 1910.

Cercus bipustulatus (Payk.), and **C. rufilabris** (Lat.). In a marshy place at Kildale, August, 1910.

Rhizophagus dispar (Payk.). At Kildale (G. B. Walsh)

Atomaria pusilla (Pavk). and **A. analis** (Er) Common at Kildale.

Limnichus pygmaeus (Stm.). This rare insect is recorded from near Stockton-on-Tees (G. T. Rudd, *vide* Steph. III, March 31st, 1825, v., 411, and Steph. Man., 1839, p. 145)

Elmis aeneus (Mull.). and **E. volkmari** (Panz) In the stream at Kildale.

Aphodius constans (Duft.). Mr. Walsh has taken this local upland species on Eston Moor.

Geotrupus sylvaticus (Panz.). On Hutton Moor. Also Stanghow and Danby Moors.

Serica brunnea (L.). Glaisdale (G. B. Walsh).

Athous niger (L.). At Hutton near Guisboro. Also at Staithes, 1901 (N. L. Gillespie).

Agriotes obscurus (L.), and **A. pallidulus** (Ill.). Kilton Wood

Corymbites pectinicornis (r,) and **C. cupreus** fF.). Marton Lodge in plenty. (G. T. Rudd, 1830, *vide* Steph. III., iii.,266).

Campylus linearis (L.). At Kildale (G. B. Walsh).

Telephorus paludosus (Fall.). Also at Kildale (G. B. Walsh)

Dryophilus pusillus (GylL). Common on fir trees at Kildale and in Kitton Wood, near Saltburn.

Leiopus nebulosus (L.). At Glaisdale, 1910 (G. B. Walsh).

Donacia discolor (Panz.). On Eston Moor in 1911 (G. B. Walsh).

Luperus rufipes (Scop.). Kildale (G. B. Walsh).

Rhinosimus ruficollis (L.), and **R. planirostis** (F) At Marton (G. B. Walsh). ' '

Deporaus betulae (L.). Common on birch at Glaisdale (G. B. Walsh).

Orthochaetes setiger (Beck). At roots of low plants on the coast at Eston in August, 1910. A very local species in Yorkshire.

Cionus pulchellus (Herbst). At Kildale in 1911 (G. B. Walsh).

Ceuthorhynchus pleurostigma (Marsh). Common on cruciferae at Kildale (G.B. Walsh).

Ceuthorhynchidius troglodytes (F.) Common on plantain, Middlesbrough (G. B. Walsh). Also at Kildale.

SECRETARY'S REPORT FOR THE YEAR 1910-11.

Presented at the Thirtieth Annual Meeting, held on March 28th, 1911.

I BEG herewith to submit my third Annual Report upon the work of our Society during the past season, which has been of an average character.

SUMMER MEETINGS.—Six Field Meetings were held during the summer, the weather being fine upon every occasion. The average attendance at the Meetings was about twenty, and they were held at Liverton, Wilton, Kildale, Levisham, Ingleby Arncliffe, and Whitby. A few Members attended the Yorkshire Naturalist Union Meetings at Middleton-in- Teesdale and Kirby Moorside. The Club are indebted to Captain R. B. Turton (Kildale Hall), Major Mitchelson (Pickering), C. W. Paine, Esq. (Elleron Lodge), and Sir Hugh Bell, Bart., for permission to visit their estates, and our best thanks are due to Mr. and Mrs. Joseph Constantine for entertaining us to tea at Harlsey Hall on the occasion of the Ingleby Arncliffe Excursion. I also have to acknowledge the assistance I have received from the following Members in making arrangements :--Messrs. T. W. Saunders, T. A. Lofthouse, and the Rev. J. C. Fowler.

WINTER MEETINGS.—Seven of these have been held, including the Annual Meeting of the Yorkshire Naturalists' Union on 17th December. With the exception of this special occasion, the attendances have again been exceedingly poor, the average number present being fifteen. This is a feature of our otherwise prosperous condition which is far from satisfactory to all concerned, and to which I shall again refer towards the end of my Report.

Our best thanks are due to the following gentlemen for coming forward to give papers:—Messrs. T. A. Lofthouse, F. Elgee, M. L. Thompson, Rev. G. J. Lane, T. J. Cozens, and G. B. Walsh. We are also indebted to the Literary and Philosophical Society for the use of their rooms, and to Mr. H. Simpson for kindly reporting several of our doings in the local Press

YORKSHIRE NATURALISTS' UNION ANNUAL MEETING

The Yorkshire Naturalists' Union's Forty-ninth Annual Meeting, held on 17th December, by invitation of this Society, was, I am very pleased to say, an unqualified success, and I have received the following letter from Mr. Sheppard:—

THE MUNICIPAL MUSEUM,
HULL, *20th December, 1910.*

DEAR SIR,

Will you kindly convey to the Members the thanks of the Yorkshire Naturalists' Union for the excellent arrangements which were made in connection with our annual meeting.

Yours faithfully,
T. SHEPPARD.

F. ELGEE, ESQ.,
23 Kensington Road, Middlesbrough.

The Field Excursion to the Marske Quarry, under the leadership of Messrs. Lane, Saunders, and Burton, was somewhat interfered with owing to the wet weather, but about twenty visited the quarry and a large quantity of material was loosened by Mr. Saunders and many interesting specimens were obtained. On the day following the Meeting Mr. Saunders conducted another party to the quarry, including Professor Seward, Mr. Erasmus Darwin, Mr. J. E. Stead, Mr. and Mrs. Monk, and I believe several others.

The evening Meeting was very well attended, over 130 members and guests being present in the hall of the Girls' High School when Professor Seward delivered his address on "The Jurassic flora of the East Riding in relation to the Jurassic Floras of the World," which was illustrated by lantern slides. The address was, of course, of special interest to our Society, and a Yorkshire Naturalists' Union Committee, under the Presidency of Professor Seward, was formed for the purpose of still further investigating the Bajocian plant beds of the district, and among its Members were the following representatives of the Field Club:—Messrs. J. J. Burton, G. J. Lane, T. W. Saunders, and myself. Whilst dealing with this matter I should like to give you a quotation from a letter I have received from Mr. J. M. Meek, in which he relates how the Marske Plant Bed came to be discovered by himself nearly twenty years ago. Mr. Meek says:—

"I think it was about 1892. when I was examining the rocks out of which the footpath which runs round Upleatham Hill has been cut, that I came upon some fragments with the peculiar purple tint, and among them I found the casts of what, I thought, were *ferns*. I made several visits to the place, and got specimens of what I afterwards found to be *Williamsonia pecten*, *Williamsonia gigas*, *Taeniopteris vittata*, *Otozamites Beani*, *Nilssonia mediana*.

"I showed these specimens to various people, among others to Dr. Veitch, and in time I found their names, but I found it difficult to get any books bearing on these specimens (Mr. Seward's book on the Jurassic Flora was not published till 1901). Mr. Hawell, about March, 1902, asked to see my specimens, and I showed them to him, and accompanied him to the place where I had found them."

The Society is indebted to the following gentlemen for exhibiting specimens and microscopes at the Annual Meeting:—

THE MUSEUM COMMITTEE.—Rare local birds, fossil plants, etc.

F. R. ATKINSON.—Insects and birds.

F. W. ALLISON.—Geological sections of the Cleveland district.

E. B. EMERSON.—Pine marten caught at Swainby.

HAROLD HOOD.—Local photographs.

W. H. HUDSON.—Viper and young.

J. R. HARWOOD.—Lower Lias fossils, etc.

Rev. HORSFALL.—Short-toed lark.

J. P. HODGES.—Carboniferous plants.

Dr. HEDLEY.—Plants for decorating the platform, lent by the Park Committee.
E. W. JACKSON.—Geological section of Teesdale.
T. A. LOFTHOUSE.—British butterflies.
J. W. R. PUNCH.—Fossils, chiefly Jurassic plants.
W. SACHSE.—Cases of Lepidoptera, twelve generations of *Spilosoma lubricipeda*.
T. W. SAUNDERS.—Local mollusca and fossil plants.
M. L. THOMPSON.—Coleoptera.

The following lent microscopes:—Messrs. J. E. Stead, J. W. R. Punch, Henry Simpson, J. P. Hodges, H. G. A. Stedman, G. W. Stephens, J. W. Whiteley, H. Hallimond, J. J. Burton, A. E. Ward, T. F. Ward, Captain Lambelle, J. R. Harwood, G. B. Walsh, and Mrs. C. Hood. Dr. Robinson lent microscopic slides, Mr. Punch gave a demonstration with the spectroscope. Dr. Drake Brockman lent coloured lantern slides, whilst the electrical illumination of the microscope tables was undertaken by Messrs. H. Simpson, G. W. Stephens, and H. G. A. Stedman.

Our best thanks are therefore due to all these gentlemen and to all those who helped to make the meeting a success. .Particularly are we indebted to Mr. J. E. Stead, F.R.S., .who, at the eleventh hour, kindly consented to act as .Chairman in the unavoidable absence through illness of the Mayor, Sir Samuel Sadler, who had expressed his willingness to preside at the evening Meeting.

WORK OF THE SECTIONS.—Circumstances this year have specially favoured the ARCHAEOLOGICAL SECTION, and those who attended the Field Meetings had an opportunity of examining some of the most interesting antiquities of North Eastern Yorkshire.

At the Liverton meeting on the 7th May Members had occasion for for studying the church, the principal features of which were graphically described by Mr. T. A Lofthouse, the President.

At the Levisham Excursion, on 2nd July, the Club had the privilege of exploring the Cawthorn Camps under the Guidance of Major Mitchelson, of the Hall, Pickering, to whom much of the success of this Meeting was due. Members also on this occasion able to examine the Roman road across the moors to Goathland, a section of which had a short time previously been bared by Mr. Oxley Grabham, of the York Museum.

At the Ingleby Arncliffe Excursion the Rev. C. Collier kindly provided notes on the church. At the excursion, which was held on 16th July, the famous ruins of Mount Grace Priory were again visited.

At the Whitby Excursion, on 27th August, Canon Austen was good enough to conduct Members through " high Whitby's cloistered pile," and were enabled to hear an admirable and instructive address upon its history. Our best thanks are due to the reverend gentleman for his services at this Meeting.

On 18th March Mr. Lane-lectured upon the "Roman, the Saxon, and the Celt in the neighbourhood of Saitburn," in which he presented some of the results of recent archaeological investigations in that district, including kitchen middens, barrows of the bronze age, Roman camps, and an Anglo-Saxon cemetery at Hob Hill.

GEOLOGICAL SECTION.—An Exhibition Meeting of this section was held in Hinton's Cafe on 26th November, when the following specimens were on exhibition :
—

Flint Implements.—The Rev. G. J. Lane, F.G.S.

Fish Scales from the coal measures, two *Lima gigantea*, Coprolites, and *Productus giganteus*.—Mr. J. J. Burton, F.G.S.

Jurassic Plants and Local Marine Mollusca from Mr. T. W. Saunders.

Specimens showing the Geological History of Astarte, Part of Mammoth Tusk from Hob Hill, Tusk of Wild Boar from Ingleby, and Tree Remains from moorland peat beds.—The Hon. Sec.

The following report was presented on the work accomplished at the Field Meetings :—

" As fine weather prevailed during the Field Meetings last season, there was no difficulty in prosecuting outdoor geological work, but only a few of the Excursions provided much opportunity for investigations. Not having been present at the Liverton and Whitby Meetings, I cannot say what was noticed on those occasions, but at the Eston, Wilton, and Guisbrough Meeting, on 4th June, several very interesting sections in the Ironstone Series and drift deposits were examined. In one place a most curious break or fault was detected by Mr. Saunders in which the main seam was abruptly truncated, across which, at a high dip for this district, ran a bed of shale. The stratigraphical position of the shale in relation to the ironstone could not be very accurately determined, and await further investigation, as does the cause and exact nature of this singular feature. This was observed at Wilton Mines, where also drift was seen resting on shale which had every appearance of being contorted, but after a close inspection it was found that this was only an appearance due to the unequal weathering of the rock. A brief visit was paid to the fine sections in the boulder clay at Dunsdale, where the glacial beds attain a thickness of over thirty feet.

" At the Kildale Meeting, on 18th June, Members were able to examine the great peat moss dividing the drainage of the Esk from that of the Leven at West House, perhaps one of the most mysterious places in Cleveland. For, it appears from borings made by Professor Kendall and the late Rev. J. Hawell, that the rock floor beneath this peat bed is much lower than the level of Sleddale Beck falling into Eskdale, and hence it is difficult to understand why the Leven or Warren Beck, as it is here called, flows into Kildale (*see particulars page 32*).

" At Kildale Members were enabled to observe a very characteristic feature of peat bogs, viz., their greater elevation in the centre than at the circumference. Much of my own limited field work this year has been upon the peat bogs of the high moors, and it is an almost invariable rule that their centres are at a greater elevation than their margins. The specimens of tree remains from peat beds exhibited at this Meeting include a piece of pine bark from the bole of a large tree in the Harwood Dale Peat Holes near Scarborough—a very rare tree indeed in our peat bed. The other is a fragment of birch from Bluewath Peat Holes at the head of Wheeldale Gill, where the peat is nearly thirty feet thick and with a birch zone about half way down the sections.

At the Levisham Meeting Members had an opportunity of beholding the great gorge of Newton Dale with its precipitous crags of Kellaways Rock, the bold escarpment of the lower calcareous grit at the Roman camps, and the singular outlier of the Kellaways Rock at Trigger Castle.

In company with Mr. Rowland, of Goathland, I witnessed some of the effects of the cloudburst on the day of the King's funeral, 20th May. In the short space of half an hour more erosion had been effected by the streams in the Goathland district than in the preceding twenty years. Even small streams had carried down an immense quantity of detritus, and large stone slabs used as foot-bridges had been carried several yards from their original sites.

For the Geological Section,

FRANK ELGEE

CONCHOLOGICAL SECTION.—Mr. Saunders reports upon this as follows:-

REPORT OF MARINE, LAND, AND FRESH-WATER MOLLUSCA,
NOTED DURING THE YEAR 1910 BY T. W. SAUNDERS.

MARINE.—I have examined the coast during the past year at various times between Bridlington and Redcar and more especially at Saltburn, which I have visited twice a week for ten successive weeks, and by this mean I am able to form some idea as to the fauna of the district I have collected regularly up to about twenty-seven species on most occasions, keeping all microscopic shells. There are also several of the smaller Mollusca to be collected when there is a little sea-coal up, chiefly after a land wind when the sea is smooth, whereby the smaller shells and lighter gravels are washed inshore. It is possible on most occasions to collect most of the following species :—*Turtonia minuta*, *Syndosmya alba*, *Tellina fabula*, *Cardium fasciatum*, *Helcion pellucida*, *Eumargarita helcina*, *Risscia parva*, *Risscia parva*, var. *interrupta*, *Alvania punctura*, *Anoba striata*, *Cingula semistriata*, *Lunatia alderi*, *Bela turricula*, *Bela rufa*, *Clathurella lincarlis*.

All the above-named mollusca may be collected by the ordinary observer, but in the last sixteen careful search is required, because in several cases the shells are microscopic but fairly common.

I have increased the list from last year by thirty-one, being now 132. *Turtonia minuta* is much commoner along the coast than is generally believed. I have found it in abundance at different places. I have also again found a very good specimen of *Psammobia ferroensis* alive. This shell is rather scarce.

Capulus hungaricus I have again found, and a specimen of *Tornatina truncata*. It is very seldom that a specimen of *Hinnites pusio* is found whole, but I have been fortunate in securing three specimens, which is fairly good.

We had a very good time at Redcar, the Marine Biological Section of the Yorkshire Naturalists' Union holding a Meeting for the purpose of studying the marine life, three days being given to the study. A very rare specimen of *Venus fasciata* was secured, as well as a very fine specimen of *Barnea Candida*, which was making its home with a colony of *Zirphea crispata*, both these specimens being borers. In some cases they had bored fifteen inches into the rock.

LAND AND FRESH-WATER MOLLUSCA.—I have increased land and fresh-water list, from my own observations from 39, which was the total reported last year, to a total of 59 this year, which is a gain of twenty species. I have paid very much attention to this branch, but by putting a little more energy into the work I hope to increase this very considerably, and when our next proceedings come out I hope to give a full list of my finds of the land and fresh-water mollusca of the district.

Slugs 9

Land mollusca 32

Fresh-water Mollusca

I have practically nothing to report from the result of any of our Meetings.

ENTOMOLOGICAL SECTION.—The usual field work of this Section has been accomplished by Messrs. Lofthouse, Thompson, and Walsh. On 5th November Mr. Walsh gave an interesting lecture on "The Relation of Insects and Plants," whilst on 25th February the President and Mr. Thompson gave two lecturettes, illustrated by beautiful slides, on Lepidoptera and Coleoptera. In my lecture on "The Fauna of the Moors," delivered on 6th October, I dealt largely with the insect life of our moors, considering chiefly their origin.

In the BOTANICAL, MICROSCOPY, and VERTEBRATE SECTIONS there is nothing special to report.

Mr. T. J. Cozens, of Stokesley, also gave us a lecture on 28th January entitled "Unseen Workers," dealing chiefly with the action of bacteria in the soil and their effect upon leguminous crops.

PROCEEDINGS.—Part IV. of Volume II. of our Proceedings was issued in September, bringing the second volume to a close. The Proceedings are perhaps the most important part of our work, serving as a record of our investigations and becoming more valuable to workers in the district as the years pass away. I wish,

however, to point out to recorders that both the Editor and myself are agreed upon deleting all repetitions of records in future numbers, and it would be advisable, if those who intend sending in a list of their finds would look up preceding volumes and only send in such information as is new. With regard to the issue of a further part, no papers have yet been gathered together, but there will be no difficulty in procuring the necessary material.

MEMBERSHIP.—This now stands at 109, and with the new members to be elected this evening, the total becomes 115 an increase of three upon last year. During the year seven members have resigned, one is deceased, one has been struck off for arrears of subscriptions, whilst the following eight new members have been elected :—Mrs. Dickie (since resigned). Miss Moorhouse, and Messrs. Blewitt, A. E. Burns, F. W. Pearson, H. G. A. Stedman, J. R. Harwood, and W. S. Fothergill.

It is with great regret that I have to record the decease of one of our most eminent members, and one of the leading- ecclesiastical archaeologists in the country, Mr. T. Macall Fallow, of Redcar, who passed away on 25th November last. Mr. Fallow had been a member of the-Club since 1902, and was one of its Vice-Presidents at the time of his death. Only a few weeks before he died I was in correspondence with him regarding a lecture on the Ecclesiastical Houses of Yorkshire, which he would have delivered before the Club but for the fact that he thought it much too technical and dry, and therefore not likely to be of sufficient general interest. Mr. Fallow was a Fellow of the Society of Antiquaries, and contributed the following papers to our Proceedings dealing with local archaeology:

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- “Effigy found at Normanby.”
 - “Norman Font at Marske-by-the-Sea.”
 - “Early Cross at Marske-by-the-Sea.”
 - “Discoveries at Liverton Church.”
 - “Monumental Brasses of Cleveland”

He also acted as guide at some of our excursions, and Mr. J. M. Meek has kindly consented to prepare a sketch of his life and work for the next issue of the Proceedings

LIBRARY.—Miss Roberts has very kindly presented a copy of Lord Eversley's "Commons, Forests, and Footpaths" to our small collection of books, a work of some interest to us on account of the enormous area of common land in this district.

COMMITTEE MEETINGS.—Five of these were held the year, including two of the Yorkshire Naturalists' Annual Meeting Sub-Committee. They were held Literary and Philosophical Society's Rooms on 8th April, 6th October 1st, 8th, and 23rd November.

SUGGESTIONS FOR INCREASING THE UTILITY AND SCOPE OF THE WORK OF THE FIELD CLUB.—I have reserved for the close of my Report a few remarks I would like to make concerning ways and means by which the usefulness, and I may also add, the attractiveness of the Field Club might be considerably augmented.

We can contemplate with some satisfaction our present position both financially and scientifically. I do not think there is any likelihood of a further considerable increase of our membership, which has remained well over a hundred for some years, but as I have already stated, the attendance at the Winter Meetings is, to say the least, very unsatisfactory. The object of the meetings is twofold; first, to read and discuss papers arising out of our own work and to exhibit rare and interesting specimens, and second, to impart scientific knowledge. The first of these objects must, I think, be considered by far and away the most important purpose they subserve, and I notice that in the last three winter Sessions, out of twenty-six meetings twelve dealt with local matters.

To increase the attendance at these meetings is by no means easy, but I would suggest that the room in which we hold our meetings be made more suitable for our purposes. I am aware that this room has recently undergone considerable embellishments that have vastly improved its appearance, but it still possesses drawbacks that militate against our holding meetings in it. It is cold and draughty, the chairs are uncomfortable, and above all, the noise from the street often drowns the speaker's voice. What we need is a room of our own, in which we could keep our papers, books, and other properties, and where it would be a temptation to pass a quiet hour after the lecture or upon other informal occasions. If we had a room properly furnished, not only could we do this, but we could make it a kind of reading-room, where "The Naturalist" and other journals could be placed on the table for the benefit of members. Several of our members are Fellows of the Geological and Entomological Societies, and they might be induced to lend the journals of their Societies for this purpose. I am aware that there are difficulties in the way of carrying out this suggestion, but I have made it for your consideration, because I think it essential and because I think if we had a more attractive room we might get a better attendance at the Winter Meetings.

By a little outlay per annum, I believe, the utility of the Field Club Library might be enhanced. I think it should be our aim to collect all books, papers, etc., dealing with the Cleveland district from the historical, archaeological, and scientific points of view. Many out-of-the-way papers by Canon Atkinson and others are more or less inaccessible. Some time ago I accidentally discovered that in the Transactions of the Wiltshire Antiquarian Society Atkinson published an elaborate paper on the name of Seamer, and so in other cases. A very small amount of money would enable us to obtain many such papers, which in the course of time would render our library invaluable to local students.

My next suggestion naturally follows from my remarks on the occasion of Mr. Lane's lecture, viz., that we occasionally devote some of our funds to archaeological excavations and for geological purposes. In fact we have already done this in the case of the Marske Quarry with eminently satisfactory results. Our archaeological work now practically means revisiting places that have been visited many times. If however, we could arrange to have an ancient camp or entrenchment explored, or a moorland howe opened, we might have a most unique and enjoyable field excursion. To arrange and discuss such matters, I venture to suggest the formation of a Committee of Investigation that would advise and report. The results of any such

work could be published in the Proceedings. I also think it would be a good plan to collect scattered records relating to the district and re-publish them if they are of value. Thus when searching through cognate works during my moorland researches, I came across a number of records of local Lichens in Crombie's "British Lichens," issued by the British Museum. These records were made by William Mudd, of Great Ayton, many years ago, are particularly interesting, and of which I made a complete abstract which might be printed in our next issue of Proceedings.

Lists, too, of local antiquities in museums would be of use, and some of the objects might even be photographed by permission of the authorities. In the Prehistoric Saloon of the British Museum there are scores of objects from the Cleveland Moors, a complete list of which would be invaluable. It is a matter to be deeply regretted that so much that is of intense local value and interest should have passed out of a district which is far from rich in pre-historic remains.

In conclusion, I have to thank all those who have assisted me in many ways during the past year, and without whose aid much of what has been accomplished would have remained undone.

FRANK ELGEE,
Hon Sec.

SECRETARY'S REPORT FOR THE YEAR ENDING MARCH, 1912.

Presented at the Thirty-first Annual Meeting, held on 28th March, 1912.

I have pleasure in submitting my fourth Annual Report upon the work of our Society during the past twelve months.

SUMMER MEETINGS.—Eight Field Meetings were held during the summer, viz., at Saitburn, Ingleby Arncliffe, Castleton, Middleton-in-Teesdale, Black Hall, Mulgrave Woods, Fryup Dales, and Goathland. Except on the occasion of the Middleton excursion the weather was gloriously fine, and the average attendance of members was sixteen.

The Saitburn Meeting, held on 6th May, was attended by thirty-five members and proved most successful. Under the able leadership of Messrs. Hornsby, Lane, Stanton, and Saunders, the Club examined various antiquities of the Stone, Bronze, Roman, and Anglo-Saxon periods, including the Anglo-Saxon cemetery at Hob Hill, kitchen middens, a Roman look-out station on Huntcliff, and tumuli and earthworks on Brotton Warsett Hill. The thanks of the Club are due to Mr. and Mrs. Monk for kindly entertaining members to tea on this excursion.

The Meeting arranged for Ingleby Arncliffe to Swainby, on 20th May was altered to an excursion from the former village through the woods to Mount Grace, where members were entertained by Mr. and Mrs. Greville Jones. Permission to visit the woods and priory was kindly granted by Sir Hugh Bell, Bart., and Major Walter Johnson kindly conducted members through Arncliffe Hall and woods.

The Whitsuntide Meeting of the Yorkshire Naturalists' Union at Castleton was a success in every way, though the attendance thereat was somewhat small. Under the leadership of our President, several very interesting excursions took place. On the Saturday the moors and hills north of Danby were explored, whilst in the evening, after being entertained to tea by Mr. Punch, members listened to a paper by myself on "The Peat Beds and other Superficial Deposits of the Eastern Moorlands," and Mr. Punch showed them astronomical wonders through the telescope. On Sunday a visit was paid to Comondale Quarries, where a fresh-water shell bed (*Unio*) was discovered in the Inferior Oolite. Some members of the Union enticed by the term, "Baysdale Abbey," tramped in the afternoon to this secluded spot, only to be vastly disappointed in the ruins. On Monday a good muster proceeded up Danby Dale, and Mr. Macmillan kindly showed the party round his grounds at Botton Hall. Leaving Botton Hall, tracks were made to Trough House and George Gap, the heat being intense. The refreshing waters of the chalybeate spring, however, revived many who were then enabled to proceed to the end of their journey. A full report of the Meeting appeared in the "Yorkshire Observer" and in "The Naturalist."

As usual, the Middleton Meeting, on 17th June, was utterly spoilt by wet weather, though five or six of our members attended the Meeting. It seems almost useless to arrange this excursion, for in the last three years rain has always intervened.

The sixth summer Meeting was held at Black Hall Rocks, and proved most successful from a botanical point of view, a goodly number of maritime plants being observed.

At the Mulgrave Meeting, held on 15th July, a party of fifteen members and friends spent a most enjoyable afternoon in the woods under the guidance of Mr. H. Frankland. The party first proceeded to Lythe Church, in the process of reconstruction, where they were conducted round by Vicar. A number of relics of a much older building inspected, not only of Norman, but also of Saxon times, and as these are pronounced by Professor Collingwood to be of extreme interest and value they are carefully arranged in the new crypt of the church. They include a stone coffin, which contained the skeletons of two women and part of a male skeleton. On one of the stones is carved a representation of two men wrestling, another shows Adam and Eve in the Garden of Eden, and another an animal devouring itself. The representation of our first parents was on a block of sandstone which had evidently formed part of a doorway. Adam's hand, we were told, is out-stretched to steal—an apple, I presume. Numerous interesting plants were observed in the woods, including the Enchanter's Nightshade, Black Horehound, Cat Valerian, etc.

The Fryup excursion was very largely a failure, as, owing to the Railway Strike and the uncertainty of trains, but four members put in an appearance.

The last Meeting of the season was very successful, being held at Goathland on 2nd September, in very hot weather. A visit was first paid to the church, thence the party wended its way to Two Howes, where a singular outlier of Kellaways Rock

was noticed on Simon Howe. Much time was spent in searching for the killing pits, which, when found, gave rise to exciting discussions as to their purpose, some members contending that they were ancient workings for ore, others that they were formerly habitations. A return was then made to the village for the indispensable tea, after which the party walked to Egton *via* Julian Park and Randay Mere, many interesting observations being made on the route.

WINTER MEETINGS.—Only three of these have been held this winter. I have had great difficulty in arranging even these, but I do not think we need for once regret this falling-off. Of late years we have had a considerable number of Winter Meetings, and it is not always possible to keep up a continuous flow of material. The three lectures were—

"Some Notes on the Geological History and Geographical Distribution of the Moorland Flora," by myself, on 28th- October.

"Corals, Ancient and Recent," by Mr. Stanley Smith M.Sc.. F.G.S., on 6th January.

"Early Man in East Yorkshire," by Mr. Sheppard, on 21st March, in conjunction with the Literary and Philosophical Society.

All three lectures were well attended.

WORK OF THE SECTIONS.—I regret my inability to present special reports on the work of the sections, not only because I have been unable to write to the various members but . because for once there is little to report. The past summer though. very fine, was excessively hot, and made field work a prodigious effort, and this probably accounts for the lack of material. To illustrate what field work on the moors meant last year, I may state that on one occasion I was unable to obtain a drink of water for seven hours on a broiling hot day, all the well-known springs being dry or stagnant. I hope, however, to be able to collect a few notes from various members which I shall incorporate in this Report when it is published.

MEMBERSHIP.—During the year four new members were elected, Miss Sedgwick, Messrs. C. M. Hornsby, C. A. Edwards, and W. Charlton. Five members have resigned or left the district, Miss Appleyard, Messrs. G. B. Walsh, T .. Smlth, F. Sheppard, and Waddington, and three deceased. With two members to be elected this evening our membership now stands at 114, a decrease of one upon last year.

It is with great regret that I have to record the decease of three members. Sir S. A. Sadler, who passed away in September last: was elected a member in 1901, after having acted as Chalrman on the occasion of the Yorkshire Naturalists' Union Annual Meeting at Middlesbrough in October, 1900. Those who were present on that occasion will not have forgotten his most entertaining and instructive address, delivered in his peculiar and inimitable manner. The late Sir Samuel was to have presided at the Annual Meetmg of the. Union in December, 1910, and had most generously promlsed to do everything he could to make the meetmg a success. But ill-health prevented him from carrying out his intentions.,

By the death of Mr. George Barnley on 19th March our Society has lost one of its oldest members, he having been elected on 16th April, 1881, a week or two after the establishment of the Club.

Mrs. Sanderson is another old member who passed away in January. She was elected in 1894, and until her removal to Middleton-one-Row, was a very regular attender at the Winter Meetings, and took a keen interest in the work of the Club, particularly in that of younger members, of which I have vivid recollections.

PROCEEDINGS.-Papers have been gathered together for another issue of Proceedings, which will initiate Volume III. This it is hoped to publish during the summer. A few copies of back parts have been sold.

COMMITTEE MEETINGS.-Two have been held, on 20th April and 25th September. I have to thank all those who have assisted me in various ways during the past year, without whose valuable aid I should have been unable to carry out the work of the Meetings. In conclusion, I should also like to thank the Club for the great support it has given me in subscribing to my forthcoming work on the Eastern Moorlands, no less than forty-eight copies. having been subscribed for by Club members.

FRANK ELGEE, *Hon Sec.*

INCOME.	£	s.	d.
Balance brought forward	19 17	5	
Subscriptions, 1911	23	5	<i>a</i>
1912	<i>a</i>	5	<i>a</i>
Arrears	4	<i>a</i>	<i>a</i>
Sale of Proceedings	<i>a</i>	5	6
Bank Interest ..	<i>a</i> 13	<i>a</i>	
Yorkshire Naturalists' Union-Subscription and Levy .			
Literary and Philosophical Society-Subscription			
Jordison & Co.-Printing ..			
Lecture and Excursion Expenses ..			
Clerical Assistance for Hon. Secretary Postage and Telegrams			
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