

Proceedings
of
Cleveland Naturalists' Field club

1905-06

NOTES BY THE LATE REV. J. HAWELL, M.A., F.G.S.

Extracted from "*The Stokesley and Ingleby Greenhow Magazine*," 1887-1902.

Some time ago, a lady in Stokesley kindly lent me several bound volumes of "The Stokesley and Ingleby Greenhow Parish Magazine," containing many contributions during a series of years, beginning with 1887, from the versatile pen of the late Rev. J. Hawell, M.A., F.G.S., Vicar of Ingleby.

We are now publishing the greater part of these little essays in our "Proceedings," omitting some of the papers which related to the Lake District, Buxton, etc.

In these writings we get a glimpse of the many-sided mind of our late friend, whose death was such a loss to the Field Club and to the neighbourhood generally.

We may say that nothing came amiss to Mr. Hawell in the domain of Nature-animate or inanimate alike, and with his years grew his enthusiasm.

We might imagine him saying, as Thomas Edward, the Scotch Naturalist, said of himself: "Every living thing " that moves or lives, everything that grows, everything created or "formed by the hand or the will of the Omnipotent, has such a "fascinating charm for me, and sends such a thrill of pleasure " through my whole frame, that to describe my feelings is utterly " impossible."

As a palaeontologist he shone most of all, and was an expert at cataloguing-a thing requiring an immense knowledge of genera and species, the varieties in species being often so minute and perplexing, even to the scientific mind.

The great facts of nature in which he revelled do but recall the saying of Agassiz, that scientific systems are but translations into human language of the thoughts of the Creator. And so Mr. Hawell always felt in his labour of love, peopling the vast geological ages with forms and organisms (once more almost living to his active imagination). Botany also had a charm for him, and he was always ready for an antiquarian ramble or a controversy about words and folklore. But, it must not be imagined that he was any the less alert in regard to his duties as a Parish Priest, which office he admirably fulfilled, and his study of Nature and cast of mind made him a scientific theologian, ready to discuss matters of abstruse and deep meaning in that mysterious realm, which he did at times, with the usual force of his character and powerful mental grip.

We trust the members of the Field Club will appreciate these extracts, entombed as they are in such a humble literary production as a Parish Magazine, from which we have rescued them, so that they may again see the light, and add to the enjoyment of many who did not read them before.

Whorlton Vicarage,
April 6, 1907. J. C. FOWLER.

JUNE, 1887. THE GLACIAL PERIOD.-Some time ago nearly 400 boulders, transported into our Parish during the Glacial Epoch, were examined by the Vicar, and notes and measurements made more recently, specimens of the different kinds were forwarded to Dr. Crosskey, of Birmingham, Secretary of the Boulder Committee of the British Association. They have subsequently been examined by Professor Bonney, and also by Mr. Clough, F.G.S. The very valuable notes of these two distinguished Geologists have been forwarded to us. Dr. Crosskey says- "The collection of specimens you kindly forwarded is very interesting, and will throw important light on various problems of Glacial Geology. The specimens show the action of ice descending from the Cheviots and South of Scotland over your district. Another stream of blocks has been evidently (from your collection) brought down by the ice travelling on the East side of the Lake district, and the glacial work done by it has to be studied in relation to the Physical Geography of the district generally. Could, or could not, the ice-work of your district have been effected by glaciers filling the valleys, and pressing downwards, carrying the *debris* from the upper regions from which they started? This and many other kindred questions will be helped to a decision by such collections as you have sent."

AUGUST, 1887. LIST OF INCUMBENTS OF INGLEBY GREENHOW.-Circa 1180, Reiner-" R-
 Persona de Englibi" (Whitby Chartulary, 88). "Reinerii Clerici Sui," (W.C.55). "Reinero Clerico" (W.C.
 52). The date of Charter 55 is certainly not later than 1181; and the date of 52 certainly not
 earlier than 1143. From 55 it would appear that Reiner had been" Persona" (that is "Parson")
 when Ingleby Church was originally granted to Whitby Abbey, Circa 1211-" Adam Capellano de
 Ingleby" (Whitby Chart, 216). Circa 1300-" Vilks de Wrelton Capellan," (effigy in Ingleby Church).
 1587-Henry Routre. 1590 (?) -1606 (?). John Blackburne. 1626 (?) -1631 (?). George
 Levingstonne. 1634 (?) -1680, Wilham Boweston (elected as Registrar in 1658, and continued as
 such during the period of Cromwellian rule). 1680 (?) -1703 (?). Henry Mason. 1703-1710 (?).
 George Spencer, 1710(?) -1719, Peter Moone. 1722 (?) -1758, Samuel Hassel. 1758-1784,
 William Spedding. 1784-1795, William Pennyman Consett. 1795-1846, John Dixon. 1847-1859,
 John Fletcher. 1860-1870, Ralph Prowde. 1870-1880, Henry Toovey. 1880, John Hawell.

SEPTEMBER, 1887.-In our list of Incumbents last month we inadvertently omitted two. We
 hasten to rectify the omission now. They are both mentioned in Archbishop Gray's Register. The
 first was Michael, who was Rector in 1237:-" Michael Rectori Ecclesie de Lengeby". The other
 was Simon de Nevill, who, in May, 1248, was instituted , to the Church of Langheby, at the
 presentation of the abbat and convent of Wytteby." The spelling of Ingleby in these two cases is
 peculiar, and we had at first some doubts as to whether our Parish was really meant. But we
 now feel convinced that the inference that it is so, is correct. It is unfortunate that the Torre M.S.
 gives no list of Incumbents of Ingleby Greenhow, though one or two interesting notices of the
 Parish occur.

OCTOBER, 1887. THE TORRE M.S.-In the last number of the *Magazine*, we mentioned that it
 was unfortunate that the Torre M.S. gave no list of the Incumbents of Ingleby. Since then, that
 portion of the M.S. which relates to our Parish, has been printed in the *Yorkshire Post*. We were
 previously in possession of this extract, which is as follows :-" There is a Church or Chappell at
 Ingleby under Greenhow served by a stipendiary curate-Testamentary burials-25 Feb. A.D.
 1505. Tho. Ayscogh gent. of Ingleby Greenbawe made his Will (proved -----) giving his soul to
 God Alm, St. Mary and All Saints', and his body to be buried in the Parish Ch. of Yngleby before
 the Ymage of St. Mary in ye n. side of the church. 29 Julii A.D. 1507, Edw. Ayscought of
 Greenhow made his Will (proved 17 Aug., 1507) giving his soul utsupra, and his body to be buried
 in ye Parish Kirk of Ingleby, near the buriall of his fader." The Askews appear to have been persons
 of some importance in the Parish in the 16th Century. In 1542, William Askew bequeathed £60 to the
 poor of the Parish, the interest of which is still annually paid to them.

NOVEMBER, 1887.-Mr. Hawell lectured to the Young Men's Society at Ingleby Greenhow on "The
 Christian Names, Surnames, and Place-Names of the Parish of Ingleby. He stated that Ingleby and
 Battersby were derived from two Danes, Ingialldr and Buthar. Greenhow from the natural "houe," or
 small round hill, near the centre of the township: Greenhow Bottom from O.N .. , *botn*, a bottom,
 or depth," applied to the innermost recesses of a sea, or a dale: Farnsides from "*Fernes* (A.S.) a
 wilderness" : Blue Mells from Gael, "*maol*, a hill." He regretted the unfortunate blunders in the names
 of places on the Ordnance Survey maps, such as ., Tidy Brown Hill," for" Tarry Brown Hill," "Blue Bell
 Trough," for" Blue Mells." As these maps are put forth by authority, it is practically impossiblo to
 correct the mistakes, and interesting old names run great danger of being lost. He defined Barker as
 meaning a "tanner," and derived Hepburn from Hebburn-on-Tyne, Havelock from Dan. "*haj*, sea and
leik, sport, an appropriate name for one of a race to whom the ocean" was a delight": Hoggart either
 from the Dutch, meaning" high-natured," or from the English, meaning Keeper of Hogs: Garbutt from"
gar, spear" and "*bod*," envoy: Medd and Metcalfe from "*mea*, reverence": Alonzo from "*hild* battle,"
 (the name of the holy abbess of Whitby, signifying " battle-maid ") and "*funs*, vehemence," its
 genealogy being Hildefun, Ildefonso, Illefonso, Alfonso, Alonzo.

On November 4th, same year, Mr. Hawell lectured to the Young Men's Society above-named, on
 "The Earthworm, the Friend of the Farmer." He showed how worms excavate the ground: drain the
 soil and make it fertile: manufacture manure: carry it, and spread it: cover up stones, etc.: that if it be
 rightly estimated (but, for us it is certainly an over estimate) that 10 tons of earth are cast up by

worms on each acre, then the farmers of the parish of Ingleby had to thank the poor despised worm for 70,000 tons of good manure every year. Some interesting facts were told about their nature and habits, and Mr. Hawell endeavoured to show that worms have played a most important part in the world.

In January, 1888, a Lecture to the Young Men's Society was given by Mr. George Markham Tweddell, of Stokesley, entitled "A glance at the History of Ingleby." The parochial history was reviewed from the earliest times to the latest, and some notice given of the families of Baliol, Eure, Meinill, D'Arcy, and Foulis, all of which have been connected with the parish. Mention was also made of the interest which the Abbeyes of Whitby and Hexham. and the Knights Templar of Westerdale once had in the parish. An extract given from the "Black Book" of Hexham was peculiarly interesting, as several of the old place-names of the parish occurred in it.

JUNE, 1890. Some curious Christian names .. A review of "The Register Booke of Inglebye juxta Greenhaw," which recently appeared in the *Athenaeum* calls attention to some interesting matters relating to the parish. Some notice of one or two of these will perhaps not be unacceptable.

"From 1653 to 1659, Births, not Baptisms are registered. In those years, England was a Commonwealth, and the opinions of our lawgivers, combined with the legal advantages of such a course, caused the passing of a statute, entitled-" How Marriages shall be solemnized and registered, and also a Register of Births and Burials" During these seven years eighty-eight births are recorded. This was the precise time, if the novelist's view of history were correct, when we should find the largest crop of those strange theological names which go by the nickname -Puritan. It is, therefore not amiss to remark that there is not one among them which can fairly bear that character; Dinah, Esther. and Josias are the only ones which can, without hesitation, be attributed to the influence of the Old Testament. An examination of the remarkably good index with which the volume is furnished, leads to a like conclusion. There are, of course, a few names strange to our ears, the source of which is certainly not Holy Scripture, such as Bethalina, 1797; Heroina, 1684; Anastache, 1743; Pontia, 1664; Munday, 1544 ; and Merrill, or Merroll, which seems to have been a by no means uncommon name." Bethalina occurs but once, and about the Ilfme Bethalina Beagerie, there is a quaint euphony, which may be paralleled by another name in the Register, viz.:-" An Man." One would rather expect to find that the females bearing such names were village characters. The form Bethalina is extremely rare, but "e take it to be one of the very numerous names for which we are debtors to the name of Aaron's wife Elisheba, which signifies, " God hath sworn." Other forms are Elizabeth, Eliza, Elspeth, Bessie, Betsy, Betty, Libby, Liza. Heroina, a feminine of Hero, occurs as the name of a certain Heroina Foulis, of whom we have never met with mention in any pedigree of that family. Anastache is a name formed from the Greek word for the Resurrection, and has a somewhat Puritan flavour. The circumstances attending the occurrence of Pontia in the Register are to our mind more than a little amusing. To a certain Robert Ripplay there was born about mid-day on Jan. 10th, 1648, a daughter, who was baptized on Jan. 14th, by the name of Bridgett. It was the parson's custom at the time to enter all the names in Latin, but he had a difficulty about the Latinization of Bridgett-this "learned Theban," as Sir Walter would have called him, knew, however, that" pons" was the Latin for a bridge, and was familiar with the Latin name Pontius in the Creed. Bridgett, however, struck him as being a *diminutive* form signifying apparently a *little* bridge. He, therefore, after writing the name Bridgett, put as an alternative" Ponti a vel Pontiola" in the margin-the latter form being the Latin diminutive. Later on in 1664, he boldly put Pontia in his list of entries, and relegated Bridgett to the margin. Bridgett has, in reality, nothing in the world to do with *bridge*, but is a good old Irish name, coming from a Keltic root, signifying" strength." Munday Williamson was very possibly born on a Monday. Merrill, or Merroll is a corruption of Muriel, which is said to signify Myrrh. The following is another Extract from the "Review alluded to on " Nicknames." " The Ingleby juxta Greenhaw Registers don't furnish many nicknames-oone however, is curious. There was in the Parish, a highly prolific race of the name of Ripley, one branch of which for some generations went by the name of Ripley, alias Midnight. Entries regarding these people occur between the years 1669 and 1694. It would be interesting to know from what deed of darkness they acquired their second name." The Reviewer has here fallen into the same mistake as a friend of ours, who, on reading the announcement of a Meeting to be held in this Parish, was much scandalised to observe that it was to be held at midnight. The fact is, that it is simply the name of a farm-house in the Parish-the appellation was probably given to it on account of its sunless situation. We were indeed at one time

under the impression that for a while, in the depth of winter, the sun did not shine upon it-and in fact Graves in his excellent "History of Cleveland," indicates a place in Greenhow Bottom, which he describes as being in this predicament. We happened, however, to be calling at the house about mid-day on the 21 st of December last, and found the sun's beams clearly striking it. But in an estate book of the date of 1764, kindly lent to us recently by the owner of the Ingleby Estate, we found that at that date (nearly a century later than the entries relating to Ripley, *alias* :Midnight) the house was still standing on a site yet easily recognisable in a position upon which. the sun would not shine in mid-Winter. The nickname of midnight appears to have stuck pretty close for the time, and almost to have superseded the original name, for in 1692 we have the entry of the burial of Thomas Midnight. But we have no evidence that the nickname survived in any degree to after generations, though the Ripleys came down to quite recent times. There was, apparently, at least one other Thomas Ripley living in the Parish at the same time, and this made the employment of the distinctive place-name of great utility. It is by no means uncommon even now, in the neighbouring dales and in other country districts in the North of England, especially in cases where men with the same christian and surname live near each other, to distinguish them by applying to each the name of his respective dwelling-place. We remember a similar case where there were two neighbouring hamlets named Middle Row and Far Row. The common surname was seldom mentioned, and we knew the owners of it as Middle Tommy and Far Tommy, We have here interesting survivals of what was once a common practice, or what a petrologist would term a "recurrence of phase." If in such cases as these there is confusion between two or three persons in a district bearing the same christian and surname, what must the confusion have been before surnames became general? It was necessary to distinguish between the many bearing the name of Robert or William or Henry. They could distinguish so far by writing, as they often did" Robert, the son of Robert," and still further, by writing "Robert, the son of Robert, the son of William, but carried further this mode of nomenclature became clumsy. And therefore, in addition to the patronymic surnames such as Robertson, Williamson and Harrison, it became customary to make use of the place-name. Thus, we get in the records of our Parish such names as Adam de (that is "of") Ingleby, William de Stokesley, Nicholas de Ayton, Later on, the *de* was dropped in most cases, and the name became William Stokesley, etc. Ripley itself is a name of the same kind, and amongst others in our Register will be found the following :-Aldus, Appleby, Appleton, Barton, BarWick, Bertley, Blenkarne, Bousfield, Bowes, Bradley, Br,aithwaite, Bushby, Carington, Castle, Charleton, Chilton, Chfton, Consett, Cornforth, Craven, Cowtas, Croston, Dale, Denton, Dinsdell, Dinsley, Dousland, Douthwaite, Duffield, Easby, Easton or Eston, Eden, Ellerby, Ewbank, Farnaby, Featherstone, Fintres (elsewhere Ventriss, signifying "five trees), Flankland, Flintoft, Flinton, Fothedey, Fullerby, Galloway, Gatenby, Gill, Goulton, Grange, Greenside, Hackworth, Harlesey, Harrop, Hepburn (commonly written Hebborn), Heddon, Hill, Hornby, Howe, Hugill, Hutton, Kearsley, Kildale, Kirby, Lauthorpe (*i.e.*: Linthorpe), Lythe, Maltby, Marwood, Middleton, Milburn, Mountain, Newton, Sherwood, Skelton, Slingsby, Stockton, Thornaby, Trenholme, Trousdale, Wellbury, Wilton, Yorke. This list might be considerably extended, and there are few villages in the neighbourhood, the names of which do not recur as surnames in our Parish records.

FROM THE CHOIR TRIP RECORD, OCTOBER, 1890.-" Much of the district through which the route lay (to Rievaulx) was, in the days of its prosperity, in the possession of Rievaulx Abbey. In fact the ancient territory of this great Religious House was entered before the limit of the Parish of Ingleby was reached. We were reminded of this on coming to Hagg Yat, just at the entrance of Bilsdale, for an old document still existing recounts how Stephen de Meinill, Lord of the Manor of Greenhaw, granted to the Abbot and Monks certain lands in the neighbourhood of *Haggsgata*. Since those days the word" gate" which then signified a road has changed its meaning, and has come to signify the wooden structure which obstructs the road. We here, therefore, have an interesting survival of an old name, the meaning of the word and its application having in this instance correspondingly changed. In like manner, Chop Yat, which was shortly afterwards reached, was probably originally" Market Road," that is, either the road to the Market, or the road upon which, or near which the actual buying and selling was done.

NOVEMBER, 1890. AN ANCIENT CASTLE.-It has occurred to us that the following note written for another purpose may not be without interest to some of the readers of the *Parish Magazine*. "The term "Castle" is a very grandiloquent one, whereby we describe the subject of this note, but the subject appears to be worth a note. Those who have visited this part of Cleveland will

be aware that the south-eastern slopes of the hill upon which Captain Cook's Monument stands, are ornamented at about half their elevation by a belt due to the superior hardness of the *Margaritatus* rocks as compared with those immediately above and below. Below the belt the space is occupied by the picturesque woods of Easby and Kildale. Just above the belt the denuding forces have quarried back the shale in such a way as to leave an extensive platform surmounting the steep wooded slopes. Upon this platform stands the farm-house of Burrow Greens, and along the verge of it on the Ordnance Maps, the name "Castle Hills" is written. I have learned that the name "Castle Hills" survives as that of two fields in that position, and it was probably obtained by the officers of the survey from some old field book or farmer's agreement. No historian of Cleveland, so far as I am aware, has made any mention of a Castle, or the indication of the former existence of a castle at that place, and the latest of them—Dr. Atkinson—once mentioned to me that he had never visited it. The Ordnance Survey Maps give no indication of an earth-work, as they usually do where one exists.

Suspecting that something of interest might turn up I recently paid a visit of exploration to the place, and soon discovered that my suspicions had an excellent foundation. At the angle of the platform I found a space railed round and occupied by trees of fairly ancient growth, such as the beech, the oak, and the hawthorn. Here had evidently been the structure responsible for the names of "Castle Hills" and "Burrow Greens." Around three sides of the space indicated there runs a well preserved moat, the fourth side being formed by the almost perpendicularly falling bank. The enclosure thus formed is approximately square, the corners behind being, however, somewhat rounded. It is about 50 yards in diameter in each direction. Immediately within the moat is an irregular raised ridge, highest about the corners away from the cliff. The centre of the enclosed space is slightly depressed, but the enclosure as a whole is somewhat raised—partly by natural and partly by human agency above the level of the field behind. No trace of the stonework survives at the surface. The situation is, in some of its features, not altogether unlike that of Knaresborough Castle, but is considerably more elevated above the encircling stream. Anyone visiting the spot must be struck with its commanding position, overlooking as it does, the entrance to the dale which connects Whitby with the Cleveland plain. I must leave it to others to deduce from the name, the appearance, and the position, the probable date of this so-called Castle.

MARCH, 1893. THE GLASS WINDOW.—Mr. William Brown, of Trenholme, sends us the following extract from an old will which he lately met with :—"19th April, 1526. Rob. Ascoo of Grenowe of the par. of Yngleby in Cleveland. My body to be buried in Yngleby Church, under the glasse wyndoo of the Southside of the Church. To the Church warke and for my beriall vjs viijd. To Yngleby Church ij torches." Mr. Brown points out that this was perhaps the only glass window in the Church at that date. The manufacture of glass has of course long been known. We have in our possession some bottles dating from the period when the Romans were the masters of the country, or what afterwards became such. Its use for Church-window! also was early. About 675 Benedict Biscop, who was at the time erecting a religious house at the mouth of the Wear, sent to Gaul for men to make glass for the windows thereof. The historian tells us that there had been no glass makers in this country previously. Before they returned they taught the English the art of making glass. It did not however become general in the windows of country Churches till long after this.

MAY, 1893. GOD AND THE CHURCH.—On page xii of the Introduction to the Ingleby Parish Register, of which so many of the subscribers to the magazine possess copies, there is printed a Latin document, with the following English translation :—"Let all men know, present and future, that I, Stephen Hay, have given and by this my present charter confirmed to God and the Church of St. Andrew of Ingleby, one half acre of land in Ingleby, namely on the outside at the north of my two oxgangs in Aistangarthes, for the salvation of my soul and the souls of my fathers and mothers and ancestors, for a free and pure and perpetual alms :—To be held of me and my heirs, freely and exempt from every secular service and exaction. And I and my heirs will warrant the aforesaid alms to the aforesaid Church for ever. These being witnesses R. ... Parson of Ingleby, Walter a Chaplain, Henry a Deacon, Arnald a Deacon, William Lane: and others. There we have an illustration of the way in which the property of the Church of England was given to it. Stephen Hay was on his death bed. He was the possessor of a virgate or yard-land, the usual size of holding throughout England, consisting of two oxgangs or bovates of land. The size of the oxgang varied much on account of the nature of the land and because the big manorplough with its eight oxen could turn up a great deal more soil in

light land than in heavy. So there were bigger oxgangs on light land. In Little Broughton where there must have been some strong clay, there were some oxgangs of only eight acres, and in Great Broughton, where there must have been light land, there were some with as many as eighteen acres. The average size of the oxgang in England was about 15 acres, and it so happens that it was of exactly this size in that part of the parish of Ingleby in which Mr. Hay's land lay. Perhaps he had other land, but at any rate he had a normal peasant holding of 80 acres in Aistangarthes, a remarkable district partly in Ingleby and partly in Little Broughton. The name survives in "Hasty Garth," a field name on the farm occupied by Mr. John Seaton, and in some adjoining field-names it has been further corrupted into "Hayle Garths." In memory of his pious ancestors, and in the hope, and with the prayer that the gift may bring a blessing upon himself, he dedicates to "God and the Church of St. Andrew of Ingleby" a portion of his worldly possessions, to be their heritage for ever. Carefully note that he does not leave it to the Church of England as a corporation, for the Church of England is not a corporation for property-holding. Each incumbent is a "Corporation Sole" in whom is vested God's property. So Stephen Hay leaves his land to "God, and the Church of St. Andrew of Ingleby," the very identical Church of St. Andrew in which we worship every Sunday (though some portions of it have been rebuilt since then) which at that date, 740 years ago or a little more, had then been newly built or re-built, for the services of that same identical Church of England to which we ourselves are so truly proud to belong.

RAINFALL IN 1896.-The fall of rain at the Vicarage during 1896, amounted to 32.93 inches. One inch is equal to about 100 tons per acre, so that the entire fall was equal to about 8,298 tons per acre. And as the parish contains 7,002 acres the entire fall upon the parish would be about 28 millions of tons, giving about 46,000 tons, or over 10 millions of gallons to each inhabitant. And yet we are talking about a deficient water supply! In the first six months the fall was exactly eight inches, or less than a quarter of the whole. The average fall at the Vicarage for the last 18 years has been 31.14 inches, so that in spite of the dryness in the early part of the year the fall of 1896 has been more than an inch above the average. In 1895 it was nearly the same, namely 32.64 inches. We had last year 201 wet days, the average number being 198. The monthly falls of rain were as follow:-

January	0.89 inches	July	2.04 inches
February	0.47 "	August	8.19 "
March	2.46 "	September	3.80 "
April	0.68 "	October	7.86 "
May	1.07 "	November	2.99 "
June	3.48 "	December	4.55 "

DECEMBER, 1897. ST. CHAD.-As the parish of Ingleby joined the old parish of Lastingham, which, (if our information be correct), included the present parish of Bransdale-cum-Farndale, a short account of this great Northumbrian Saint may not be without interest. You will have noticed, no doubt, the name of this Saint opposite the date of March 2nd, the day of his death, in the Calendar in your prayer book or your almanack. Chad lived about the middle of the seventh century, and was one of four brothers, of whom the eldest was probably Cedd, and all of whom became priests. They were no doubt born in the North, but it is not known where. We first hear of Cedd in the year 653 when the son of Penda, King of Mercia, was converted to Christianity, and married a Northumbrian princess. Cedd and three other priests accompanied them into Mercia, which was the Kingdom then including the central portions of England, and up to that time was heathen. Their missionary work was very successful, and large numbers were daily brought into the Church of Christ through the waters of baptism or as it is expressed

"were daily washed in the foundation of faith. After a short period of missionary work in Mercia, Cedd was sent to preach the Word in the kingdom of the East Saxons-the men of Essex-whose King had become a Christian. A little later he was made Bishop of the East Saxons, being consecrated by Finan, Bishop of Lindisfarne, assisted by two other Bishops. On one occasion when Bishop Cedd had come to pay a visit to his brothers in the north, Oswy, King of Northumbria-which included Yorkshire-asked him to build a Monastery in his kingdom" to which the King himself might frequently resort, to offer his prayers to the Lord, and hear the Word, and where he might be buried when he died." He accordingly founded the monastery of Lastingham. Here Cedd died and was buried after he had appointed his brother Chad to succeed him in the Government of the Monastery. Chad did not,

however, long remain Abbot of Lastingham, but was appointed Bishop of York. Just at that time there was, as it were, two streams of Christianity mingling in the North of England. There was the older stream from Iona, and the newer one from Rome. Wilfrid had been appointed Bishop of York by the Rome party, and had gone to Rome for consecration. When he returned, Chad who had been appointed by the Iona party, was in possession of the see: Wilfrid, like a good man and true, made no trouble about it, but quietly retired to the monastery at Ripon. A little later that grand man, Theodore of Tarsus, Archbishop of Canterbury, came down and tried to make out that Chad had not been properly consecrated. Chad said, " If you are persuaded that I have not duly received episcopal ordination, I gladly resign the office, for I never thought myself worthy of it, but, though unworthy in obedience to authority, I yielded so as to undertake it." Theodore was greatly touched by his humility, and exclaimed that he should not resign the bishopric. But Chad insisted on doing so, and retired again to the monastery of Lastingham. There we will leave him for the present.

JANUARY, 1898. St. Chad.-When Chad was recommended for the Bishopric of York he. was described as ' a holy man, grave. in character, well read in the Scriptures, and diligently practicing what he learnt therein." For the three years during which he held the. Bishopric,. he toiled humbly and quietly in true Apostolic fashion, travelling about, generally on foot, and preaching the Gospel in the towns and open country and the villages; wherever an opening was found, whether it was in the peasant s cottage, or the great man's castle." Last month we left Chad in retirement at Lastingham after he had resigned the see of York. But he did not stay there long, for Archbishop Theodore persuaded him to accept the Bishopric of Mercia. Theodore found fault with him for walking so much, and commanded him to. ride whenever. he had a .long journey to make, and finding him very unwilling to omit, out of love to it, his former pious labour, he himself, with his own hands, lifted him on the horse; for he thought him a holy man and therefore obliged him to ride wherever he had to go."

And so Chad went into Mercia, and fixed the seat of his rule at Lichfield, where he died and was buried. Bede tells us that for two years and a half he gloriously governed the church there He often used to retire to a monastery near the Church where he was wont to pray and read with seven or eight of the brethren as often as he had any spare time from the labour and ministry; of the word-The legend of his death is very beautiful. One of his pupils, we are told, was at work outside the little Church where Chad was praying, when he suddenly heard. the sound of persons singing most sweetly and rejoicing, and appearing to descend from heaven to earth. The voices gradually drew near to him, till they came to the Church where the bishop was, and entering, filled the same, and all round about it. The good man listened awhile, and after some thirty minutes heard the same song of .Joy. ascending, and returning to heaven by the way it came, with inexpressible sweetness. Suddenly the bishop signed to him, and bade him come with the seven brethren of the house to the Church. "When they were come, he first admonished them to preserve the virtue of love and peace among themselves and towards all others; indefatigably to practice the rules of regular discipline, which they had either been taught by him, or seen him observe, or had noticed in the words or actions of former fathers. Then he added, that the day of his death was at hand; for, said he, "that loving guest who was wont to visit our, brethren has vouchsafed to come to me also this day, and to call me out of this world-Return, therefore, to the Church, and speak to the brethren, that they in their prayers recommend my departure to our Lord, and, that they be careful to provide beforehand for their own, the hour whereof is uncertain, by watching, prayer, and good works." When he had spoken thus much, and they had gone away in much sorrow, he who had heard the heavenly song returned alone and besought leave to ask a question. " Ask what you will" answered the bishop. Then he said, I entreat you to tell me what song of joy was that which I heard of beings descending upon this oratory, and some time after returning to heaven." The bishop answered, "if you heard the singing, and knew of the coming of the heavenly company, I command you, in the name of our Lord, that you do not tell the same to anyone before my death. They truly were angelic spirits who came to call me to my heavenly reward, which I have always loved and longed for; and they promised that they would return seven days hence, and take me away with them." And seven days later the soul of the gentle Chad passed away from earth.

MAY, 1898. A Lenten Hymn.-The following simple hymn, written during a walk from Bilsdale to Ingleby, on Sunday, January 80th, was sung in Ingleby Church, on Sunday, March 6th :-

1. I feel that I have erred and stray'd
And that my sins are sore,
And yet I feel that God is good,
And shutteth not the door.

2. I seem to see with eye of faith,
Though dim and distant still,
A place reserved for me on high,
That none but I may fill.

3. Lord Jesu I grant me grace to pray
With earnest loving heart,
That I may gain that Blessed Home,
Thence never to depart j

4. That I may love God's House on earth,
Still more His Home above
That I may reach His Dwelling-place
And give Him all my love.

5. And may these holy days of Lent
Lead me to fix in faith
My thoughts on Him who rules the earth,
And doeth- what He saith.

6. So when the World's great Easter comes
. And all the, dead shall rise,
E'en I-thouh I have err'd and stray'd
Shall reign beyond the skies.

[This touching hymn is the only one we have met with as showing Mr. Hawell as a Hymn writer].

AUGUST, 1898. Rainfall at Ingleby Greenhow.-The fall of rain as registered at the Vicarage, for the first six months of the present year has been as follows:

January 0.65 inches on 10 days
February 1.90 " 19 "
March 2.99" 16 "
April 2.52" 15 "
May 2.88" 17 "
June 1.81" 16 "
Total 12.25 93

MAROH, 1900. Rainfall.-The following is the measurement of the fall of rain as taken at the Vicarage during 1899 :-

January 3.38 inches on 20 days
February 2.17 inches on 12 days
March 2.22 inches on 16 days
April 2.96 inches on 22 days
May 4.27 inches on 18 days
June 1.44 inches on 9 days
July 1.31 inches on 7 days
August 0.96 inches on 7 days
September 3.40 inches on 18 days
October 3.54 inches on 10 days
November 2.20 inches on 13 days
December 3.23 inches on 17 days
TOTAL 31.08 inches on 169 days

Since 1884 the number of inches and the number of wet days have been as follow:-

26.95 (?) ; 33.540 (207) ; 39.64 (204) 29.74 (185)
28.55 (193) ; 30.55 (185); 30.61 (194); 33.18 (191)
30.48 (189) ; 27.38 (165); 28. 61 (205) 32.64(196)
32.93 (201) ; 28.82 (196); 27.31 (170) ; 31.08 (169).

From the above figures it appears that the average yearly fall is 30.75 inches on 190 days. Last year, therefore, we had practically the average amount of rain, but the wet days were 21 fewer than the average. The present year has been more wet than 1899 so far as it has gone. In January we had 3.56 inches on 23 days. The average rainfall in January for 17 years has been 2.42 inches on 18 days. The fall of rain at Ingleby Manor is usually greater than at the Vicarage, while the fall at Easby is less. In order to elucidate to some extent the law governing the fall of rain in the neighbourhood we are endeavouring to establish a rain-gauge in the vicinity of Botton Head, the highest point of Eastern Yorkshire.



AVENUE ENTRANCE, INGLEBY MANOR.

APRIL, 1900. Rainfall.-In February we had a greater rain-fall-of course including snow-than we have ever before had in that month since our measurements began. The depth registered at the Vicarage was 5.48 inches, which fell on 23 days. The nearest approach to this was the fall of February 1893, when we had 3.23 inches on 16 days, and only in two other years has it exceeded two inches, namely 2.29 inches on 19 days in 1892, and 2.17 inches on 12 days last year. In February 1891, we had only 0.11 inches of rainfall on 6 days, this being the driest month in 17 years. The average fall in February has been 1.78 inches on 14 days. Until this year the largest number of wet days was 20 in 1889. Up to the end of February this year we have had a fall of 9.04 inches on 46 days the average being 420 inches on 32 days. So that the fall of the first two months of 1900 has been more than double the average.

JANUARY, 1901. Water borings at Stokesley.-It has been suggested that the results of certain operations in boring for water should be placed on record in the pages of our magazine, and by the kindness of Messrs Carrick, Wiggins, and Wetherill, who have supplied the following information, we are able to give certain facts which may be of more or less general interest, as showing the results in different parts of the town. Mr. Carrick, whose borings were considerably the deepest has unfortunately met with disappointing results, having left off without finding water.

T. Wiggins & Son's boring, made in 1887.

2 ft.	Soil
1 ft.	Yellow clay
Water rises to within 7 ft of the surface in the tube	Sand and gravel, but not so much gravel as at old bore-hole
35 ft.	Greatest supply of water here
2 ft.	Bookleaf loam
	Lower boulder clay, some parts containing more stones than others. All the stones water-worn.
68 ft	Small quantity of water about middle of clay bed
2 ft.	Red marl, very dry. No sign of water here
110 ft.	Left off boring.

The Auction Mart Co's. boring at the New Inn, made in 1899:-

Light spring at 8 ft. (apparently much contaminated)	Blue sandy loam
31 ft.	Blue Clay, mixed with small stones
56 ft. Light spring 1 ft	Sandy bed Blue clay
64 ft. Light spring	Gravel bed [Analysis]
110 ft.	Hard blue clay, mixed with small stones Red marl stone, or red shale

A powerful* spring 149ft	[Analysis]
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*This spring rises in the pipe to 3 ft. above surface level, and has continued running from a tap night and day since November 16, 1899, on which date it was found.

Analyst's Report on Water obtained at a depth of 64 feet:-

BOROUGH HALL, STOCKTON-ON-TEES,
July 3rd 1899.

I hereby certify that the following are the results of an analysis of the sample of water received on the 26th instant, from Mr. G. W. Weatherill, High Street, Stokesley:-

		Grains per Gallon
Description of sample	from spring (64 ft).	
Drawn	on the 26th instant	
Appearance in 2 ft tube	Pale straw and milky	
Smell when heated to 100 degrees F.	Earthy	
Chlorine in Chlorides		10.80
Phosphoric acid in phosphates	Trace	
Nitrogen in Nitrates and Nitrites	Slight trace	
Ammonia ...	...	.04760
Albuminoid Ammonia	...	.00700
Total solid matter dried at 212 degrees F.		233.24
Microscopical examination of deposit	Mineral matter etc	

This water is not suitable for drinking purposes or domestic use. It is a very hard water, and is polluted with organic matter.

As witness my hand this 31st day of July, 1899.

(Signed), A. C. WILSON, F.C.S.

Analyst's Report on Water obtained at a depth of 140 ft.

BOROUGH HALL, STOCKTON-ON-TEES,
February 2nd, 1900.

I hereby certify that the following are the results of an analysis of the sample of water received on the 31st ulto. from Mr. G. W. Weatherill, Stokesley :-

Description of sample	Spring water
Drawn	from well (140)
Appearance in two-foot tube	Clear, pale straw (almost colourless)
Smell when heated to 100 degrees F.	Very slightly earthy
Chlorine in Chlorides	10.52
Phosphoric Acid in Phosphates	Very slight trace
Nitrogen in Nitrates and Nitrites	Very slight trace
Ammonia	00.16
Albuminoid Ammonia	.0007
Total solid matter dried at 212 degrees F.	236.32
Microscopical examination of deposit	Satisfactory

This water is remarkably free from organic pollution, but is heavily charged with soluble salts, and will be found extremely hard.

As witness my hand this 2nd day of February, 1900.

(Signed), A. C. WILSON, F.R.S.E.

Mr. Carrick's boring, 1900:-

63ft	Sand with thin beds of clay
4ft	Clay and boulder-stones
124 ft.	Red marl, dry and hard
191ft	Left off boring

MARCH, 1901- Rainfall in 1900.-The following is the monthly record of rainfall during 1900, as measured at the Vicarage: -

January	3.56	inches on	23	days
February	5.48	inches on	23	days
March	1.93	inches on	19	days
April	1.14	inches on	13	days
May	1.35	inches on	12	days
June	3.22	inches on	20	days
July	1.68	inches on	16	days
August	7.07	inches on	19	days
September	0.82	inches on	9	days
October	6.13	inches on	24	days
November	3.40	inches on	24	days
...				
December	2.28	inches on	18	days
...				
TOTAL	38.02	inches on	220	

The average rainfall for the 16 previous years has been 30.75 inches. The fall last year was 71/4 inches above this and brought up the average for 17 years to 31.18 inches. Only in one year has last year's total been exceeded, namely, in 1886, when the measurement was 39.64 inches on 204 days. In no other year has it. exceeded 33.54 inches. The lightest. fall recorded was 26.95 inches in 1894. Until last year the number of days on which at least one hundredth of an inch of rain fell had never exceeded 207. The average number of wet days for 16 years has been 192. But though the year was one of excessive wet, it was apparently by no means unhealthy. It seemed to us that there was less sickness than usual prevalent, while the only two persons who died in the parish during the year were each over 80.

FEBRUARY, 1902. Rainfall in 1901.-It was mentioned in the March number of the Magazine for last year that the average annual fall of rain as measured at the Vicarage for 17 years up to and including the year 1900 was 31.18 inches. At the end of October last we had only had 21.45 inches of rain, or about two thirds of the average annual fall. There was 9.73 inches to make up, and only two months to do it in. But in November we had some drenching rains, especially on the 12th when 2.35 inches fell. And the fall in December was greater still, including 1.16 inch on the 12th. So by a remarkable coincidence the year's rainfall was brought exactly up to the average. . The average remains, therefore, precisely as before. Appended is the monthly fall during 1901, together with the number of wet days in each month;-

January	1.78	inches on	17	days
February	2.99	inches on	24	days
March	2.72	inches on	24	days
April	1.77	inches on	15	days
May	1.55	inches on	10	days
June	2.06	inches on	13	days
July	4.23	inches on	13	days

August	1.36	inches on	13	days
September	0.99	inches on	18	days
October	2.00	inches on	18	days
November	4.84	inches on	17	days
December	4.89	inches on	20	days

The average number of wet days in the previous 16 years was 192.

APRIL, 1902. An Old Inscription.-On a stone placed over the door of an old building near Battersby Hall is an inscription which is meant to read as follows: "Anno Domini 1670:-R.W. -RH". We take it that most of our readers are familiar with our Ingleby Register and Parochial Monograph, and are consequently aware that at the close of the 16th and in the early portion of the 17th Century Battersby Hall was occupied by a branch of the Ridley family, connections of Dr. Ridley, burnt at the stake in 1555, and of the present Lord Ridley. A Pedigree of this branch will be found on page XLVIII of the Monograph. This branch apparently became extinct in the male line in 1689. In the above-named inscription the " R W." probably represents Robert Ward who married Anne Ridley, May 4th, 1640. This Anne was probably a daughter and not improbably heiress, of Nicholas Ridley of Battersby Hall, who was buried at Ingleby as an "Octogenarius," June 29th, 1689. The only son of whom we find mention in the Ingleby Register is William, baptised in 1595, and buried June 9th, 1689. A Robert Warde, son of Richard Warde, was baptised in 1595. Anne, wife of Robert Ward of Battersbie, was buried in 1675. Then in 1677, Robert Ward (not Improbably the same) married Mary Marwood. In 1680, Robert Ward de Battersbie, was buried. In 1684, Mary Ward, Widow, married Geo. Cooper. In 1699 Mary wife of Geo. Cooper, died at Battersby.

LECTURE. AT EASBY.-On Wednesday evening, March 5th, at the conclusion of the Lenten Service in the Church, the congregation adjourned to the marriage-house of the Hall, where they were joined by several friends, and a lecture illustrated by lime light views was given by the Rev. J. Hawell. Referring to the service they had just left the lecturer said there was no incongruity between the successive addresses. The great green book of Nature was but a companion volume of the old brown Book which they had just closed. The Bible stated that God made the world "in the beginning." It neither told us *when* that beginning was, nor *how* the world was made. These things it remained for the geologist to ascertain by investigation. Glancing at the birth of the moon during the earth's liquid youth, and pointing out the reasons for its airless condition and rugged face he expressed the opinion that it was probably not very long after; the moon's birth that the earth began to get its solid crust, and the hills and valleys, and the solid material out of which all hills and valleys should subsequently be formed, began to be. Onwards and downwards from that time-some fifty millions of years ago-he briefly sketched the earth's history, shewing how hypogene forces are ever tending to elevate portions of the earth's surface above ocean level, and how immediately thereupon epigene forces set to work to reduce them to ocean level again. He showed by means of diagrams thrown on the screen how some of the original rivers of the Cleveland area had once flowed and traced the successive changes up to the time of the great ice age.

The blocks illustrating this paper have been kindly lent by Mr. J. W. Brotton, of Battersby.

**THE RIVER TEES:
ITS MARSHES AND THEIR FAUNA***
BY THE LATE R. LOFTHOUSE

THE River Tees (Teyse, Tesi, Teisa, Tesa, Teise, Teysa-of old records) separates the counties of York and Durham. At the mouth of the river there is a vast extent of mudflats (or as they are locally called, slems) some thousands of acres in extent. These mud-flats or slems used to be bordered by marshes more or less all the way to Stockton, a distance of about ten or twelve miles, and in former times were resorted to by vast numbers of wild fowl. The marshes south side of the river, and a good deal of the fore-shore From Stockton to Eston, have been for the most part reclaimed and filled with slag, and are now occupied by Ironworks, wharves and ship-building yards; and of late years Ironworks have been established on the Coatham Marsh opposite to the extreme Mouth of the the

river on the site of a rabbit warren, and close to wild duck decoy, which existed there down to the years 1870-2. On the north side of the river one or two Ironworks have been established at Port Clarence, opposite to Middlesbrough a distance of seven or eight miles from the sea: that of Messrs. Bell Brothers is the principal, and one of the oldest in the district. To the east of Port Clarence, the north side of the river is still open and unoccupied, and the Saltholm Marsh remains in much the same state as in former times, but extensive reclamation works are being carried out on the shore opposite by the Tees Conservancy Commissioners., who have reclaimed or have in course of reclamation over 2500 acres of land, their operations being confined to the area principally of the foreshore on both sides of the estuary, comprised between high water at spring tides and high water at neaps, and who have constructed over a dozen miles of reclamation embankments, principally of slag. The mud-flats at the mouth of the river are succeeded by a sandy beach, on the one side reaching from Seaton Snook to Hartlepool, and on the other by perhaps one of the finest stretches of sand in Great Britain, extending from Tod Point to Saltburn, a distance of seven or eight miles, and firm enough for horses and vehicular

*This paper was contributed to the "Naturalist" in 1897. The notes referring to Seals on the Tees have been omitted. For paper on Seals in the Tees, see C.N.F. Proc., Vol 1pp.87-99 .See Vol 1 pp100-105 for description of this decoy.

traffic. These sands are thus referred to in the Cottonian MS., as quoted in Graves's 'History of Cleveland,' p. 899:- 'From the passage of the sands, by Reason of the Fyrmenesse and Smoothnesse frequented by such as delight in Swifte Horses, you next come to Redcarre, a poor fysher Towne.' The Tees Conservancy Commissioners have erected a magnificent breakwater at Tod Point, on the south side of the river, and are now erecting another on the north side. This, when complete, will leave the entrance to the river about 700 yards wide, From this breakwater to Middlesbrough there is an area of between 5,000 and 6,000 acres, between the high water embankments of the Tees Commissioners, which is covered at high tide only. except the channel; the greatest extent of mud-flat is on the north side, and is called Seal Sand; that on the south side is called Bran Sand. Geologically, the basins of the Tees may be said to consist principally of Boulder Clay, with detached patches of an estuarine deposit of sand and gravel in places-the old part of the town of Middlesbrough being built on one of these. Under the Boulder Clay is found the New Red Sandstone; and below this again, at depths varying from 1,000 feet to 1,500 feet, has been found a bed of rock salt, about 100 feet in thickness, and underlying the town of Middlesbrough and adjacent district. It will probably be found to form a kind of basin, and to cover no very extensive area; yet, taking into consideration its great thickness and its quality, it may reasonably be expected to give a great impetus to the town and trade of Middlesbrough and district, with the development of the chemical trades connected with it. It is now being pumped up in the form of soluble brine in one or two places on the north side of the river, and has been reached at boreholes on the south side of the river at Middlesbrough and Eston. The method of raising the salt is thus described in a paper on 'The Iron Trade of Cleveland and the Industries of Middlesbrough,' by Sir Isaac Lowthian Bell, Bart., published in a handbook of Middlesbrough and district :- 'A tube, 16 inches diameter, is carried from the surface to the bottom of the bed of salt-the portion which traverses the salt being pierced with holes. Inside this a second tube is placed, open at the lower end. Water is run down the annulus formed by these two tubes, and, becoming saturated with salt, rises in the internal tube until it is balanced by the outer column of fresh water. The proportional weight of fresh water and brine is as 1,000 is to 1,200, so that the inner column stands considerably below the outer. A pump is placed at the top of the inner column, and by this means the brine is raised to the surface.'

It would appear that the manufacture of salt is an old industry on the Tees, though operations appear to have been confined to the surface in former times. Brewster thus refers to it in his 'History of Stockton': - 'Near the mouth of the Tees, on Seaton and Greatham Marshes, anciently were very considerable salt works. Traces of these works are still to be seen, and have the appearance of breastworks and fortifications. By an inquisition post mortem (an^o 36, Hatfield, 1380), it appears that Robert, son of Marm. de Lumley, Knight, died seized of 25s. rent and one quart of salt issuing out of three messuages and one saltwork in the tenure of John de Carrowe in Seaton. And by another inquisition of the same kind (an^o 15, Langley, 1421), that Arnisia, the widow of Thomas de Elmedon, died seized of a quarter part of the manor of Seaton, consisting, among other things of a saltwork

value 2s., another saltwork, and a fourth part of a saltwork, and the passage of the river Teese. The farms in the parish of Greatham, bordering upon the marshes, holden by leases under the Master and Brethren of the Hospital of God in Greatham, are covenanted to pay a stipulated number of bushels of salt as an acknowledgement to the hospital, which, of course, are now commuted for a money payment.' In Burton's Mon. Ebor. it is stated that the canons of Guisborough possessed considerable saltworks here: and in the Cotto MS. before quoted, is the following reference to salt and other minerals :-' A.s the Tyde comes in, yt bringethe a small wash Sea-cole, which is imployed to the makeinge of Salte, and the fuel of. the Poore fisher Townes adjoininge: the oyhe sulphurousness bemge mlyed with the salte of the sea as yt floweth, and consequently hard to take fyre. or to keep in long without quenchinge, they have a meanes, by making small vaults to passe under the hearthes, into which by fore-setting the wynde Wlth a board they force yt to enter, and so to serve instede of a pair of bellows, which they call in a proper word of art, a blowcole. The shells, sand and sea-rock serve instead of marle to enrich the land, which is fruitfull of itself, but much bettered by the neighbourhood of the Sea, making the good husbands of the lowe towns fatt in purse and merry in the heart. Within the sea-marke on oone syde lyeth a rock of excellent plaister, cankered by the salte water; but if it werr searched from sande, yt is probably that It would prove pure alabaster.'

On the north side of the river at Canoe Point, near to Greatham Fleet, are a series of low shelving banks or cliffs of sand and gravel, four or five feet high, grassed over on the top; the face of these reveal a large mixture of shells chiefly cockles, mussels, and whelks, at a depth of about 18 inches from the surface, which would almost suggest that the river had at some remote time emptied at a higher level, and covered much of the adjoining marshes and land which is now under cultivation; or perhaps, more properly speaking, that the beach had been raised. In the vicinity of the river. near Middlesbrough, are found patches of peat, in which occur large quantities of timber, in most cases hard and sound, and with the bark still on. In digging for drainage and foundation works, the stems of trees have frequently to be sawn through at each side of the cutting; in this peat have also been found deer's horns in perfect condition. The dredges of the Tees Conservancy have at various times brought to the surface semi-fossil remains. In the Albert Park at Middlesbrough is a gigantic tree, dredged from the bed of the river some years ago, and is said to be Oak; it is perfectly sound and hard-indeed, sound enough to be made into furniture. I have also seen a fairly perfect skull of an animal of the genus *Bos* (probably *Bos primigenius*), which measured 2 ft. 4in. across the horns-which were, however, imperfect- 8 in. across the skull just below the horns, 10 1/2. at the eyes, and 1ft. 9in. in height, although imperfect. I have also seen part of a very large skull, probably a *Amstodon*, and a single vertebra (of some animal) fully a foot in diameter, and two very large and perfect deer's horns, besides many other bones; these are all in private hands, and have not been examined by any expert, so far as I am aware.

Turning to the fauna of the Tees, if we look over the Ordnance and other maps we find many names suggestive of the same, some of the animals long since extinct. We have Seal Sand in the river estuary, and Seal Goit on the coast beyond Saltburn, Wolviston and Wolviston Grange on the north side of the river., and, as might be expected, Cowpen in the same neighbourhood; then we have Hartburn, near Stockton, and Hart and Hartlepool on the adjoining coast, and of less significance Hunter hall and Cat Coat; and on the south side, Warrenby at the mouth of the river, Eaglescliffe near Yarm, and probably Ayresome near Newport, North Hern near Hartlepool, and Dabholm Beck adjoining Coatham Marshes.

Porpoises (*Phocaena communis*) are abundant in the sea at the mouth of the river, and frequently enter and are sometimes captured in the river. One was seen in the river at Newport, near Stockton, quite recently; efforts were made to capture it, but without success. They are generally mentioned together with Seals in old records; and *Porcus marinus* appears to have been a favourite dish with the old monks and the aristocracy, as appears from numerous entries in the 'Durham Household Book' before mentioned, and from their frequent mention in the bills of fare of famous feasts. Otters (*Lutra vulgaris*) are found in the higher reaches of Tees, but not often at the estuary. Some years ago one was caught at the Middlesbrough Docks, and I have heard of another caught near Stockton Racecourse. Brewster, in his 'History of Stockton' before referred to, states that the Otter is rare, but occasionally caught in the Tees. Two were seen on the rocks at Winston Bridge, about the end of

April 1883. The Water Rat (*Arvicola amphibian*) is common in all the tidal 'stells' which run into the Tees. The common or Norway Rat (*Mus decumanus*) swarms in all the reclamation embankments constructed by the Tees Commissioners, particularly those constructed of slag, and make short work of any wounded birds taking refuge there. The old English or Black Rat (*Mus rattus*) still lingers in some old warehouses at Stockton, and, I believed in an old building at Middlesbrough,* and probably at yarm also. Three fine specimens in Newcastle Museum were procured at Stockton, in 1868; they are jet black, and finer and larger than other specimens in the same museum from the south of England. Hares (*Lepus timidus*) have a peculiar partiality for the reclaimed land on the Tees banks; at one place where game is preserved they are very numerous. In the Saltholm and adjoining marshes several kestrels (*Falco tinnunculus*) may often be noticed at the same time, hovering over the rough grass, on the lookout for Mice and Shrews, which there abound, particularly the Long-tailed field Mouse (*Mus sylvaticus*), the Field Vole (*Arvicola agrestis*), and the Common Shrew (*Sorex tetragonurus*). Notwithstanding the aversion which the carnivore are supposed to have for the last, I once shot a Weasel (*Mustela vulgaris*) which was carrying one in its mouth, but on picking the Shrew up I found it impossible to discern any wound on it whatever. We have also in the neighbourhood, I believe, two Water Shrews, *S. fodiens* and *S. remifer* Macg. I have myself caught the latter with eight young. In the drier part of the marshes and the adjoining land, Moles (*talpa europaea*) are common, cream coloured individuals being occasionally met with.

* See C.N.F. Club Proceedings, Vol. II, p.42

The sands and mud-flats of the Tees estuary and the adjoining marshes have always been the resort of vast numbers of wild fowl, and many very rare birds have at various times been procured here; their numbers have, however, greatly decreased of late years, owing to the increase of shipping and boating on the river, the reclamation works, and the yearly increasing number of shooters, who take advantage of the reclamation embankments which have been made to intersect the mud-flats, or, as they are locally called, 'slems.' As these banks are formed of slag from the ironworks, small huts are easily formed in them, where a shooter can sit completely concealed, and wait the rising of the tide, when the Waders are compelled to leave and seek refuge in the adjoining marshes, and, of course, have to cross the banks; at times great numbers are thus shot, both of Waders and Ducks. At various places on the mud-flats may be observed the tops of casks, protruding out of the mud eight or nine inches. These have been put down by wild-fowlers to conceal themselves in (before the slag banks were built). They had to be approached on mud-pattens, or flat pieces of wood fixed to the boots, to prevent sinking into the mud. The casks had to be baled out every time they were used, not a very pleasant proceeding on a frosty day in winter; nor would they form a very comfortable waiting place when they were baled out. Curious experiences are related by some old wild-fowlers, who in former years were in the habit of using these casks. I have heard of one man who, after baling out his cask, was in the act of lowering himself into it when he accidentally caught the trigger of his gun with his foot, and had his hand shattered. The wild-fowlers frequenting the Tees at the present time are chiefly working men from Middlesbrough, and the guns they carry are a study in themselves, every conceivable kind of weapon being brought into requisition, from the modern breech-loader to adaptations of the flint and steel guns of our forefathers; the greater number are single muzzle-loaders. Some have old duck guns, such as were formerly used in the fen districts, fully six feet long over the stock, and almost as heavy as a punt gun. Some of these guns will kill at very long distances. One man I have met carries a double-barrelled 'Joe Manton,' which has been a very

expensive gun in its day, and formerly belonged to Wynyard, Punt guns are also still used on the river, and, I understand, were much more frequently so formerly. when the river was periodically visited by wild-fowlers from Lincolnshire and other places, who usually took up their quarters on the river for some time. In the Coatham marshes, on the south side of the river, there existed down to the years 1870-72 a Wild Duck decoy, in which used to be taken the Mallard (*Anas boschas*), Sheldrake (*Tadorna vulpanser*), Widgeon (*Maraca penelope*), Pintail (*Dafila acuta*), Shovellor (*Spatula clypeata*), and Pochard (*Fuligula marila*). On the 17th of March, 1850, a ferrugineous Duck (*Nyroca ferruginea*), was taken. Very little indication of this decoy now remains, the establishment of the ironworks in the neighbourhood would soon scare the birds away. That most beautiful of our native ducks, the Sheldrake (*Tadorna vulpanser*), used to breed in some numbers on the sandhills at both sides of the estuary, and does yet in limited numbers. I have frequently seen old birds in the breeding season; and the birds shot early in the autumn are chiefly young. In 1880 a pair nested in a metal pipe that goes under a slag-bank at Tod Point. In 1883 a pair nested in a slag bank at the north side of the river. The young birds were caught by some navvies who were working there, and, I am afraid, destroyed. I have heard of several other nests being found within these last few years, but I am afraid in most cases the eggs have been taken. There is an ascension of numbers in winter when flocks of from three of four dozen or more are not unfrequently met with. The Mallard (*Anas boschas*) is sometimes met within large numbers in autumn and winter months, flocks of one hundred or more being not unfrequently seen. A few years ago a number were washed ashore dead at Tod Point after a severe gale. The other ducks most commonly met with are the Widgeon (*Maraca penelope*), and Teal (*Querquedula crecca*) The Mallard and Teal breed here in the marshes, and it is possible that the Garganey teal (*Querquedula circia*) may occasionally. I have known an old and young bird to be shot together in August. Others of the duck tribe frequently met with are the Goldeneye (*Clangula glaucion*), Shovellor (*Spatula clypeata*), Pintail (*Dafila acuta*), Pochard (*Fuligula farina*), Scaup Duck (*F. marila*), Tufted Duck (*F. cristata*), and occasionally the Long tailed Duck (*Harelda glacialis*) and the Common Scoter (*Edemia nigra*), in considerable numbers at times in the autumn and winter months. The Eider Duck (*Somateria mollissima*) has been met with a few times in the Tees. The Goosander (*Mergus merganser*) has frequently been met with; one was shot in the winter of 1883. The Dabchick or Little Grebe (*Tachybaptus fluviatilis*) is a winter resident. The Slavonian or Dusky Grebe (*Podiceps auritus*) and the Eared Grebe (*P. nigricollis*) have also been met with.

It appears that two centuries ago the sands and marshes by the Tees estuary were remarkable for the number of birds which nested there, as the following quotation from the Cotto MS., copied from Graves's 'History of Cleveland' will show :- 'Neere unto Dobham, The Porte of the mouth of the Teese [now called Cargo-fleet, or, more properly, the Cleveland Port] the shore lyes flatt, where a shelf of sand raised above the highe water marke, entertaines an infynite number of sea-fowle*, which lay theyr Egges heere and there scatteringlie in such sorte, that in Tyme of Breedinge one can hardly sett his Foote so wary lie, that he spoyle not many of theyr Nests. These curious Buylers may furnish themselves with choice of shells and particoloured stones fytt for the makinge of artifciall works.' In the memory of man large numbers of birds, I have been informed by a friend who was born there. still frequented the shore opposite Cargo-fleet, and nested on the shingle there and in the adjoining ditches and marshes. Wild Ducks, Wild Geese, Snipe, and Water-hens were some of the birds mentioned as breeding here. Snipe may be taken as including the Redshank and others, as I find birds of that kind are called Snipes indifferently by many people in the district. The fore shore at Cargo-fleet is now covered with ironworks and a graving dock. The Ring, Dotterel (*Aegialdis hiaticula*) no doubt nested on the shingle, as it does still at a particular place, in some numbers, every season. I have before me, while writing, two eggs of this bird, taken from a nest containing four, found in a slag-bank last year (1885). They are spotted with dark brown, on a drab ground, and also with less distinct greyish-purple spots. Dunlins remain all the spring and summer. The Redshank (*Totanus calidris*) used to nest in Coatham Marshes, and may do still occasionally; a pair nested, to my knowledge, on the north side of the river in the Summer of 1884. Two or three Spotted Redshanks (*Totanus ruscus*) were shot at the estuary last autumn.

It is not improbable that the Ruff** (*Machetis pugnax*) bred here formerly. I have seen a very fine pair of male birds that were shot in the month of March, in the act of fighting, twenty-five years ago.

Cormorants (*Phalacrocorax carbo*), still nest in the cliffs beyond Saltburn, and during the breeding season they are observed to make daily visits to the Tees mouth.

*Probably Terns, with a few Oyster Catchers and Ringed Plovers.

**See note on Ruff in present Proceedings.

Numbers of non-resident birds sojourn for longer and shorter periods on the sands and mud-flats in the spring and autumn-or, perhaps, more properly nspeaking, there is a sucession of the same species. Autumn birds begin to arrive at the beginning of August, and continue passing southwards until late in October; these are the Whimbrel (*Numenius phaeopus*), Dotterel (*Endromias morinellus*), Pygmy Curlew (*Tringa subarquata*), Little Stint (*Tringa minuta*), in limited numbers, and others of the Sandpipers. The Dotterels pass here, going north, early in May, and return early in September. The numbers are said to be on the increase; a few years ago, before there was a close time for birds, a local sportsman, who is an expert on tieing trout-flies, shot seven in obne day; he uses the feathers for many flies. They are stupid birds and easily shot, allowing themselves to be walked up to and shot in succession. Unlike many of the other migrants they appear to be often met with in the spring rather than the autumn migration. In 1883 one killed itself against the telegraph wires, and in the same year over a dozen were observed flying over Cowpen marshes. The Little Stiuntt (*Tringa minuta*) is occasionally met with; I came across four on the 22nd September last year, and shot one. Their note is a feeble plaintive whistle; nothing like that of the Dunlin.

The Common, Sandwich, and Arctic terns (*Sterna flaviatilis*, *mcantiaca* and *macrura*) also appear at this time, the first sometimes in great numbers. If one of these birds be shot, the others will hover around it, regardless of theirom own danger, even after several shots have been fired. The Roseate and Black Terns (*Sterna dougalli* and *Hydrochelidon nigra*) are also occasionally met with; one of the latter was observed among others of the common species last autumn. The Little Tern (*Sterna minuta*) and the White-winged Black Tern (*Hydrochelidon leucoptera*) have also been met with. All the commoner gulls are abundant during the winter and autumn months, and in less numbers the whole year. The Iceland, Glaucous, and Little Gulls (*Larus leucopterus*, *L. glaucus*, and *L. minutus*) have been met with occasionally; one of the latter in November of last year (1885); and an Ivory gull (*Pogophila eburnea*) on the 14th February, 1880.

Hérons (*Ardea cinerea*) are also very common in the Autumn, chiefly, if not entirely, young birds; at least, all those I have known to be shot were birds of the year. I Remember seeing ten or eleven on rthe wing together on the 2ndf of September, 1884, skimming along lazily just over the surface of the ground. They leave before the winter sets in. They must come from a considerable distance, as there is no heronry in the neighbourhood; there used to be one at Kildale, another at Sedgefiefd, and I have been informed there was one at Greatham, but none of them exist at present that I am aware of. Other birds, such as the Grey Plover (*Squatarola helvetica*), are resident, but in diminished numbers, most of the winter; as is also the Turnstone (*Streptilas interpres*), Oystercatcher (*Haematopus ostralegus*), Purple Sandpiper (*Tringa striata*), Knot (*Tringa canutus*), and Bar-tailed Godwit (*Limosa lapponica*). The Common Curlew (*Numenius arquata*), Golden Plover (*Charadrius pluvialis*), and Redshank (*Totanus calidris*) are resident all the year, but in greatly increased numbers in autumn and winter. The Dunlin (*Tringa alpina*) apd and Ring Dotterel (*Aegialitis maticula*) are also resident all the year, and congregate in immense flocks in the autumn and winter, occasionally associated with Knots (*Tringa canutus*), Turnstones (*Streptilas intelpres*), Greenshanks (*Totanus canescens*), and Redshanks (*Totanus cahdriis*). Dunlins (*Tringa alpina*) shot on August 7th still retained the black pectoral patch, but it had entirely disappeared in birds shot on September 22nd. These birds vary greatly, not only in plumage, but in the length of the bill and other members, so much so that a taxidermist of my acquaintance maintains there are two distinct species, one having a bill much longer and more bent, and more slender legs, than the other.

Of the winter migrants, the average date of the arrival of the Woodcock (*Scolopax rusticula*) at the Tees mouth is about the 5th of October, generally with north-east or easterly winds. They begin to arrive early in September, and continue until late in December, but the greatest number usually arrive about the date named, and, curiously enough, often accompanied by Goldcrested Wrens (*Regulus cristatus*). The breakwater, which is built of slag, at times swarms with these pretty diminutive birds,

which arrive in an exhausted condition. In Sharpe's List, published in 1816, it is recorded that many Woodcocks were found drowned on the north sands about twelve years previously, in the spring, supposed to have met with a contrary wind,'. Redwings (*Turdus iliacus*), and Field fares (*T. pitaris*) begin, to arrive about the end of September, but the second week in October for the Redwings and the third for the Fieldfares is about the average time of arrival. There is generally, too, a very large immigration of other Thrushes about the same time, or a little earlier, chiefly the Missel Thrush (*Turdus viscivorus*), with a sprinkling of the

Common Thrush (*T. musicus*) and the Blackbird (*T. merula*) amongst them. I have several times noticed the fields suddenly literally to swarm with these birds- they, however, soon disperse, or probably pass on in a body further south. Short-eared Owl. (*Asio brachyotus*) arrive chiefly in September and October; Hooded Crows (*Corvus cornix*) about the middle of October; and Snipes (*Gallinago caelestis*) from October, probably on to December. Large numbers of Wild Geese pass over in September and October in flocks of from a dozen to one hundred, and occasionally stay a short time on the mud-flats; they do not, however, frequent the mud-flats much until later on, when cold and frosty weather sets in and they are driven down from the moors. Wild Swans [*Cygnus musicus* and *bewicki*] frequent the estuary in severe winter weather, and are seen passing over in the autumn months. Individual birds are shot almost every winter, both, mature and young birds in grey and white plumage. Sometimes they are observed singly or in pairs, at other times in flocks of from five to upwards of one hundred. I have examined many birds in private collections that were procured on this river. In Brewster's List it is described as follows :- 'The Wild Swan visits the marshes near the Tees in large flocks in severe winters. In the beginning of the year 1823, several were killed at Cowpen, and also in January, 1827.' The following actual records of the occurrence of Swans in the Tees are copied chiefly from the last six years' Reports of the Committee appointed by the British Association to collect statistics from the lighthouse-keepers on the migration of birds :-

1879. December 4th.-Six at Teesmouth, flying N. to S.
 " „8th.- Five at Teesmouth.
 " „14th.-Nine "
 " " 15th.-Forty-three "
 „16th.-Three "
 " 18th.-Two "
 20th -Ten " 10 am.
 " 20th.-Ninety-five" 11.,
 187 {One shot in Billingham Bottoms: a young
 1880 Winter, bird in grey plumage.
 1881-Winter -Two noticed at Durham side of estuary.
 1882.
 1882. August 5th.-Six at Teesmouth.
 " October 24th.-Six "
 1888. March 25th., One, Tees Light-vessel.
 1884. October 5th.-Nine at Redcar, flying N

Semi-wild birds of the tame species or Mute Swan (*Cygnus olor*) that have escaped from confinement on ornamental waters, are frequently met within the estuary. Last winter one was shot; and on August 1st this year (1886) eighteen put in an appearance, and on the following day eight or ten were shot for wild birds a few of the remainder were observed about for several days; three were seen by a friend (some distance inland), who supposed them to be wild birds from their strong, steady flight. Bewick's Swan (*Cygnus bewicki*.) has been shot in the estuary on two or three occasions. Snow Buntings (*Plectrophanes nivalis*) frequent the margin of the river in the winter, arriving about the beginning of November, and departing again early in the spring. They may be seen in vast flocks or clouds, sometimes associated with Larks and other small birds; in severe weather feeding on the stubbles -they eat grain and other seeds, and always appear to be in good condition. I have examined them at all times during their stay here, and never saw one in bad condition; they are exceedingly fat when they arrive in November. I witnessed their arrival on a cold and stormy day the 3rd of November at Tod Point, last year.. They appeared to be somewhat exhausted, but heading inland in great numbers; they apparently did not wait long to rest. Larks (*Alauda arvensis*) swarm at times in the winter months by the margin of the river; and vast numbers of Brown Linnets (*Linota*

cannabina) and Redpoles (*Linota rufescens*) frequent some patches of Sea Lavender (*Statice limonium*) on the north side of the river, feeding on the seeds. Starlings (*Sturnus vulgaris*) and Lapwings, (*Vanellus vulgaris*), associated with Golden Plovers (*Charadrius pluvialis*), congregate in immense flocks on the marshes; and in very severe winter weather Wood Pigeons (*Columba palumbus*) come down to feed after the receding tide. Reed Buntings (*Emberiza schoeniclus*) frequent the reeds and long grass by the sides of the saltwater ditches, and breed there, and Meadow Pipits (*Anthus pratensis*) are abundant all the year. Kingfishers (*Alcedo ispida*) are frequently met with by the river-side, and in the small tributaries, but are sadly persecuted by gunners, their skins being readily purchased by the dealers for half-a-crown each. Wheatears (*Saxicola cinerea*) are common on the river-bank; during the summer months, and nest there; their numbers are greatly increased during the autumn months when migrating—on August 22nd last year the banks literally swarmed with them. This is one of the earliest of the migrants to arrive with us, generally appearing about March 29th or 30th, and I have seen it so late as October 9th.

The Spotted Crake (*Porzana porzana*) breeds in the marshes on the north side of the estuary, and is frequently shot in the autumn, Baillon's Crake (*Ponana bailloni*) and the Little Crake (*Porzana parva*) have been met with in the same place.

In stormy weather the Storm Petrel (*Procellaria pelagica*) and the Little Auk (*Mergulus alle*) are often driven into the estuary. On the 22nd November, 1884, I got a fine specimen of the latter, and others were seen.

The Great Snipe (*Gallinago major*) is occasionally shot in the marshes. The Jack Snipe (*Limnocryptes gallinula*) and the Common Snipe (*Gallinago coelestis*) were, until late years, abundant, the latter breeding there. In speaking of the Common Snipe Brewster in his List says:—"I am informed that there is a Snipe sometimes shot in the marshes, which is commonly called the Russian Snipe; it is larger than the Common Snipe, and differs from it in the white lines on the back, and some other marks of the plumage. As I have not yet seen a specimen, I know not whether it be a distinct species or only a variety of the Common Snipe."

Of rare birds that have been procured here, I may mention the Avocet (*Recurvirostra avocetta*), the Spoonbill (*Platalea leucorodta*), and some Pallas' Sand Grouse (*Syrhaptes paradoxus*), shot at Port Clarence in 1863, which went to Mr. Oxley's collection at Redcar; two bought at his sale are now in the Newcastle Museum.

A Bee-Eater (*Merops apiaster*) was shot some years ago under peculiar circumstances. A wild-fowler had seated himself in a slag-bank to wait for birds, when suddenly a bird alighted on the barrel of his gun. He shot it, and it turned out to be a specimen of this rare bird.* The commonest of the Falconidae are the Kestrel (*Tinnunculus alaudartus*) and the Sparrow Hawk (*Accipiter nisus*); and the Merlin (*Falco aesalon*) is by no means uncommon in the autumn and winter months; while the Iceland Falcon (*Falco islandus*), the Hobby (*Falco subbuteo*), and the Rough-legged Buzzard (*Archiebuteo lagopus*) have been shot here, and I have heard of one of the latter being noticed inland this autumn (1886).

* Mr Hancock ('Birds of Northumberland,' &c., p. 28) says an example of the Blue-tailed Bee-eater (*Merops philipinus*) was shot near The Snook, Seaton Carew, in August 1862. I have not been able to ascertain whether the above refers to the same bird as my own note, made several years ago from information communicated by a friend, who saw the bird.

In the autumn of 1883 a Kite (*Milvus icinus*) was shot near Warrenby, and has been purchased for the Middlesbrough Museum; it was a female bird, and in good condition. A Golden Eagle (*Aquila chrysaetus*) is reported in Brewster's List as having been shot near the Tees on the 5th November, 1823, by Mr. L. Rudd, of Marton, Cleveland. It weighed 12 lbs.; its length was 3 ft. 4 in.; the extent of its wings 7 ft. 5 in.; bill, 3 in. long.

BIRD-NOTES FROM THE TEES DISTRICT DURING THE LATE. AUTUMN AND WINTER. MONTHS, 1889-90.

SMALL flocks of Dunlins (*Tringa alpina*) and Ringed Plovers (*Aegialitis hiaticula*) frequented the mud-flats and sands at the Tees estuary all the summer as usual.

The autumn migration set in about the end of July. On the 31st, Terns were noticed, probably the Common or Arctic species (*Sterna fluviatilis* or *S. macrura*).

On the 5th August the flocks of Dunlins and Ring Dotterel had increased in size, and a few Knots (*Tringa canutus*) were seen, also two or three Sheldrakes (*Tadorna cornuta*). On the 17th Sanderlings (*Calidris arenaria*) were first observed, and a mature bird was shot; Knots were also observed. On the 21st Sanderlings were more common.. On the 22nd an extremely large flock of Arctic Terns was noticed in the early morning resting on the sands (they were associated with Gulls of various kinds); one or two were shot for identification. These Terns were noticed in the same place on several successive mornings. On the same date a Curlew Sandpiper (*Tringa subarquata*) was shot-a good specimen and I heard of another being shot about the same date. On the 23rd early in the morning, I fell in with a flock of about fifty Little Stints (*Tringa minuta*), and shot one or two for identification they settled by the margin of a small pool close to where I happened to be concealed, and I had a good chance of observing their quick and lively movements in the shallow water as they probed their bills into the mud. Knots and Sanderlings were more common at this date, and there were immense flocks of Dunlins and Ring Dotterels while a good many Curlews (*Limosa arquata*) were about. I also noticed about half a dozen Duck, which I think were Teal, but the light at the time was not very good. On the 24th several Bar-tail Godwits (*Limosa lapponica*) and Turnstones (*Streptopelia interpres*) were noticed, and two of the former shot, and one or two Common Terns (*Sterna fluviatilis*) were shot for identification in the place frequented by the Terns before mentioned. A small flock of Little Stints were also noticed, and Sanderlings were frequently seen; this is one of the most restless of shore birds, being always in motion, and running at a very rapid pace for so small a bird. On the 25th I noticed three or four darker birds in the flock of Terns; these were probably Black Terns (*Hydrochelidon nigra*). On this date I picked up a fine Turnstone in winter plumage. About the end of August I heard of two Little Stints being shot at the Durham side of the Tees estuary, and one at Redcar. Some Sandwich Terns (*Sterna cantiaca*) were also shot at Redcar.

About the second week in September I noticed a flock of Terns about ten miles up the river, apparently Arctic or Common Terns, or probably both. About the 17th September an immature Ruff (*Machetes pugnax*) was shot in Cowpen Marshes, and on the 18th two Spotted Crakes (*Porzana maruetta*). On a visit to the Tees Breakwater in the early morning of the 18th September, I noticed four or five Cormorants (*Phalacrocorax carbo*) fishing on the sea side of the breakwater close into the shore; this is a favourite fishing-ground for Cormorants. The morning was bright and the birds seemed singularly large as they circled round and round, every now and again dashing with lightning rapidity into the seething water, sending the spray several feet high, and emerging again in a few moments. A few hours later these same birds may be seen sitting on the rocks opposite Huntcliffe, with their wings spread out to the sun to dry, and presenting a very odd and curious spectacle. Numbers of Gulls and a few Skuas were about, and we witnessed some very pretty chases, the latter invariably seeming to effect his purpose, as evidenced by his sudden drop after a severe chase, to intercept the fish given up by the Gull. On this same morning the sands between the breakwater and Redcar were alive with Wheatears (*Saxicola cinanthe*) and Pied Wagtails (*Motacilla lugutris*), particularly the former, and there was evidently a migration taking place overhead as well; numbers of Larks seemed to be coming in from the north or north-west, and passing on inland. .

Great flocks of Lapwings (*Vanellus flulgaris*) have been about this district all the winter owing, I suppose, to the very open weather we have had. A Wryneck was shot in the district in the late summer and a Rose-coloured Pastor (*Pator roseus*) was shot out of a flock of Starlings at Redcar and came into the hands of Mr. T.H. Nelson. Fieldfares (*Turdus pilaris*), Redwings (*T. iliceus*), and Hooded Crows (*Corvus cornix*) have been here in their usual numbers.

Of the Sand Grouse (*Syrhaptus paradoxus*) which favoured this district with their presence in some numbers during the late invasion, I have heard nothing lately, and I question very much whether there is one alive in the district.

THE RUFF IN THE NORTH OF ENGLAND

The Account of the breeding of the ruff in England, as described by Montagu, has been so frequently quoted as to have become familiar to the majority of ornithologists, though at the present day the bird is not included among the nesting species of this country. It is therefore with feelings of great satisfaction I am enabled to announce the fact that, for three successive seasons, a pair, at least, of these interesting and peculiar birds have successfully nested and brought off young within a very short distance of his corner of Cleveland. The first intimation I received of their presence in the neighbourhood was late in June, 1901, when my friend Mr. C. Milburn informed me that a ruff had been seen several times by his friend C. and himself on the edge of the marshes. Adiligent search for the nest was, unfortunately, not attended with success, and, in the light of subsequent experience, it appears to be probable that the reeve would by that time have hatched off her eggs and taken her brood away. The ruff disappeared about the end of July.

In the following season an anxious watch was kept for the appearance of the visitors, and on May 10th notice was forwarded to me that the Ruff and two reeves had arrived on the scene. The following observations, as noted in my journal, while the events were fresh in my memory, are given in diary form, and may prove interesting being the impressions of what occurred as recorded on the spot:

May 15th.—Went with M. to the marshes, where we met C. The ruff had been observed "courting." C. had found the nest of No. 1 reeve (as we termed it), about the centre of the marsh, containing four eggs of a dark green ground colour, blotched and streaked with black; a lovely clutch. On our proceeding to the place the reeve ran off the eggs, which were quite warm. The nest was situated in a tussock of grass, not unlike the position chosen by a redshank, but the cup-shaped depression was deeper and rather greater in diameter than that usually made by the latter species.

May 17th.—Visited the marsh again, and, on my approaching the nest, the ruff appeared on a little hillock, where I watched him through a pair of binoculars for some minutes. He had a yellowish frill with dark edges, and black or purplish ear-tufts; he ran away for a few yards, then hid in the grass, and after a short interval reappeared in another place, repeating this performance several times. I walked to the nest and flushed the female at about 6ft. distance; she tumbled headlong on the ground, and shuffled along on her breast as though severely wounded and in great distress, her feathers all dishevelled and wings drooping, a truly pitiable object; after dragging herself in this fashion for a few yards, she lay perfectly still, apparently simulating death; next she quietly crept away round a tuft of grass, and slyly peeped back to see what had become of the intruder on her peace (I was prone on the ground, watching her through the glasses); she then lay still again for a little time, and finally, no doubt thinking all was right, stole off among some long grass and tussocks, where she disappeared. The ruff now made his appearance on a slight elevation, whence he flew up and around where I was concealed, as though he wanted to assure himself that no harm was being done to the treasures hidden near. He came directly towards the nest, and alighted close by, put back his ruff, and, after looking round for a few moments, rose and flew off again. I then, after examining the eggs, that were hot and near hatching, walked away out of sight of the nest and awaited developments. Once or twice I saw the ruff's head pop up among the grass, then disappear, and shortly afterwards reappear at another spot. After waiting half an hour I flushed the reeve again (the ruff was still hovering about). She repeated her former tactics, crept off crouching close to the ground till she was some 20yds. distant, and then walked away, seemingly unconcerned, in the bunches of long, coarse herbage. I watched her dodging in and out among this for a little while, till she finally disappeared. 'The ruff, when courting, lowered his wings like a blackcock, and

strutted round the females, now and then rising and flying in a circle. He spread his ruff, and repeated these antics for fully twenty minutes. No. 2 reeve's nest is as yet undiscovered

May :20th.-Went to the marshes with M. We saw the ruff near the nest, where the eggs were partly hatched; but some unfortunate accident had befallen them, as they were broken the chicks dead, and the nest deserted. The ruff rose, and in flying away hovered suspiciously over a certain patch of grass, whence one of the reeves flew up, and on going to the spot M. found the second reeve's nest with three eggs, similar to those first described in ground colour, though not so heavily marked, and of rather smaller dimensions. We saw both the reeves, and No.2 flew over our heads, calling out in a low tone, not unlike a godwit's, but more feeble. While we were watching the birds, some cattle that were pastured on the marshes approached the place, and, one of them coming in the direction of the nest, alarmed its owner, which flew at the beast's head in an excited manner that had the effect of turning it, otherwise the eggs would probably have been trodden upon.

May 29th.-On the marshes, I saw all three birds. No. 1 reeve was evidently nesting again; she flew round me for a long time, then settled on a bare patch of ground, and fell on her breast as though wounded, endeavouring to lure me from the locality. M. joined me about 6 pm and we watched the ruff and one reeve at quite close quarters. The ruff stood motionless, looking at the reeve, which continually ran in and out of the grass. No.1 reeve had, doubtless, made another nest, and No. 2 was about to build again. We kept them under observation until about eight o'clock, when they departed to a swampy part of the ground to feed.

June 10th -I had been from home for ten days, and was unable to visit the marshes until this date. C. had meanwhile found No.2 female's second nest near the place where the first had been built, but, owing to the marsh being flooded by heavy rains, it was deserted. I photographed the nest and eggs, which C. then took.

June 21st.-M., C., and I were on the marshes. I discovered the third nest of No.2 reeve, quite close to the same locality as the others. After photographing the eggs, I waited till the owner returned. This bird eventually hatched the eggs, but the second nest of No.1 reeve was not located, although it is certain she got her young away, as one was caught by M., who liberated it again. Another very young bird was picked up, having been injured by cattle, and a third was procured when the shooting season commenced. Until the eggs were hatched, the male was always attentive to both sitting birds; afterwards he seemed to desert them entirely, and was last seen on July 16th, when both reeves had their offspring within a week of being able to fly.

An interesting scene occurred one day on the occasion of the ruff attacking a redshank that showed great solicitude about its nest and young in the vicinity of the reeves' nests; lowenng: Its head and extending the ruff, with its bill pointed like a battermg ram, or a spike on a shield, it furiously rushed at the redshank, which nimbly sprang into the air and alighted a yard or two further away. The ruff continued its attacks most energetically, until the redshank was defeated and took its departure.

In the year 1903 the ruff and one female arrived in May, but, no doubt, having profited by their experience of the previous season selected a different part of the marshes for their nest, and, despite the united efforts of my friends and myself to discover its whereabouts, we were obliged to confess ourselves outwitted. In 1904 no sign of either of the birds was seen, nor have they, been observed since that time, and it is to be feared that some mlshap has overtaken one or both of them during the autumn or winter season.

T.H. NELSON

NOTE ON PRE-NORMAN REMAINS AT WELBURY.-During a recent visit to Welbury, I was informed that there were some carved stones in the greenhouse. I asked for permission to see them and found that two of the stones bore unmistakable marks of pre-Norman work. One forms the side or top limb of a cross ornamented with knot work, the other is a fragment of a much smaller cross of the cross patee type; this fragment has formed part of two limbs and a bit of the middle, there is no knot work upon it, but the remains of a more or less carved centre piece.

CLEVELAND LEPIDOPTERA IN 1905.

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

*Denotes Species recorded in our Proceedings for first time.

The conditions prevailing during the year were, on the whole, more favourable for insects than for some years previously. The early spring moths (*P. pedaria* and *H. leucophearia*) were noticed about the middle of February; a fair number of insects occurred on the "Sallows" in April; *Spring Larvae* were fairly abundant in April and May; and *Sugaring* proved attractive at the end of June and early in July, but during August and the autumn months was most unproductive.

The season proved favourable for the smaller moths, and of these I have added a good many new species to our local list, one of them being an addition to the *Yorkshire* list, and one or two others are insects for which there are only one or two previous *Yorkshire* records.

Owing, probably, to the warmer weather prevailing during the summer, *N. dictaea* was bred on September 1st from *Larvae*, taken in July, and one or two *Eupisteria obliterated* were bred as a second brood in September. The following insects also occurred as a second brood at sugar in September :- *M. brassica*, *N. plecta*, and *H. oleracea*, in addition to *A. segetum*, *A. suffusa*, etc.

NOCTUAE.

Cymatophora duplaris. Fairly common at sugar at Kildale, mostly dark forms.

Xylophasia hepatica. Noticed. on sugar in garden at Linthorpe.

Apamea unanimitis. Noticed. on sugar in garden at Linthorpe, and at Redcar.

***Celaena haworthii**. Worn specimen taken in September at Glaisdale. A single specimen on sugar in garden, Linthorpe, Middlesbrough, in 1906 ..

Noctua stigmatica. A few specimens taken at sugar near Kildale.

Calocampa vetusta. Single specimen taken at sugar at Linthorpe, on September 28rd.

Calocampa solidaginia. Specimen taken at sugar in garden, at Linthorpe, on September 1st.

GEOMETRAE. ***Eupithecia fraxinata**. Larvae beaten out of ash at Kildale, in August.

***Eupithecia absynthiata**. Bred from Great Ayton and, Eston larvae taken off Ragwort flowers.

***Coremia munitata**. Female taken at Great Ayton.

PYRALIDES. ***Pyralis costalis**. Specimens taken in outbuildings, Linthorpe, Middlesbrough, only recorded for two *Yorkshire* localities previously.

* **Scoparia olivalis**. Kilton, Loftus.

***Scoparia prunalis**. Bred from monkshood in garden, Linthorpe.

PTEROPHORIDAE. ***Mimaeseoptilus pterodactylus**. At Redcar, on July 3rd.

CRAMBIDAE. ***Crambus pascuellus**. Redcar.

***Crambus hortuellus**. Including dark melanic specimen at Kildale, in June.

TORTRICES. **Tortrix palleana**. Kildale.

***Peronea sponsana**. Middlesbrough; also at Guisborough in 1906.

***Peronea schalleriana**. Kildale.

***Peronea comariana**. Kildale in September. Only one previous *Yorkshire* record.

***Peronea hastiana**. Hibernated specimens taken in May, and a few very nice forms in the autumn, at Kildale.

***Peronea maccana**. Four or five specimens, including both sexes, taken at sugar, Linthorpe, Middlesbrough. This confirms my previous record (the only *Yorkshire* one), which was made from a single specimen taken some years ago.

***Peronea ferrugana**. Beaten out of spruce, Great Ayton.

***Teras contaminana**. Middlesbrough, Kildale, etc.

***Penthina variegana**. Linthorpe, Middlesbrough.

***Hedya neglectana**. Redcar.

***Mixodia schulziana**. Kildale.

- ***Orthotaenia antiquana** A fine specimen taken at Redcar on July 8th. This species is an addition to the Yorkshire list.
 - ***Sciaphila conspersana**. Linthorpe, Middlesbrough.
 - ***Phoeodes tetraquetra** Great Ayton, in October.
 - ***Hypermercia angustana**. Redcar.
 - ***Paedisca ophthalmica**. Among Aspens at Kildale.
 - ***Paedisca occultana**. Among Larch and Fir, Kildale,
 - Paedisca solandriana** Glaisdale Common and very variable at Kildale in 1906.
 - ***Ephippiphora brunnichiana**. Kilton, Loftus.
 - . * **Ephippiphora turbidana**. At Kildale in early July flying in sun, about 5.30pm.
 - ***Olindia ulmana**. Kilton Woods Loftus, in July; also at Kildale in 1906
 - ***Catoptria fulvana**. Swainby in Cleveland June 17th. Only one previous record in Yorkshire list.
 - ***Argyrolepis cnicana**. Kilton Woods, Loftus.
 - ***Conchylis straminea**. Redcar.
- TINEAE.
- ***Tinea pallescentella**, Linthorpe (F. R. Atkinson).
 - ***Swammerdamia combinella**. Kildale.
 - ***Depressaria arenella** Saltburn. Glaisdale.
 - ***Bryotropha terrella**. Swainby in Cleveland
 - . * **OEcophora stipella**. Kildale, in June.
 - ***Olyphipteryx cladiella**. Kilton, Loftus.
 - ***Argyresthia nitidella**. Middlesbrough.
 - ***Argyresthia pygmaella**. Kilton Woods, Loftus; and Kildale
 - ***Coleophora caespititiella**. Kildale.
 - ***Lithocolletis frolichiella**. Kildale.

REPORT ON THE COLEOPTERA OBSERVED IN CLEVELAND.

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

In the following report on Beetles occurring in the Cleveland District in 1905, I have not confined myself to notes on the species met with during that year. My purpose has also been (as in my previous report) to bring together in one place some additional, and at present, scattered information on local species, which shall contribute to our knowledge of the distribution of Coleoptera, as it affects our district.

The notes for 1906, however, refer strictly to that year, the species marked with an asterisk being new to Yorkshire, and therefore of some interest.

I had the pleasure of accompanying Mr. Richard S. Bagnall, of Winlaton-on-Tyne, on a short visit to Saltburn Wood in November, when the results of his work proved very gratifying.

COLEOPTERA.

- Cicindela campestris**, L.-Common on the Cleveland Moors.
- Carabus violaceus**, L.-Saltburn.
- Notiophilus biguttatus**, F.-Common in Cleveland.
- Leistus rufescens**, F., **L. ferrugineus**, L., and **L. fulvibarbis**, Dej.-Common at Saltburn.
- Elaphrus cupreus**, Duft.-Redcar, common on the margin of a large pond.
- Elaphrus riparius**, L.-Saltburn, on the margin of a large pond.
- Badister bipustulatus**, F.-Common at Saltburn.
- Harpalus ruficornis**, F., and **H. aeneus**, F., (**proteus**, Payk).-Common at Saltburn.
- Harpalus latus**, L.-Common on Stanghow Moor, near Saltburn.
- Stomis pumicatus**, Panz.-:-Saltburn, under stones.
- Pterostichus madidus**, F., **P. vulgaris**, L., **P. Strenuus**, Panz., **P diligens**, Sturm, and **P. striola**, F.-Common at Saltburn.
- Pterostichus nigrita**, F.-In Arncliffe Wood Glaisdale on Stanghow Moor, near Saltburn.

Amara fulva. De G., **A. apricaria**, Pk., and **A. plebeia**, Gyll.-All these species occur at Saltburn.

Calathus (Amphigynus) piceus, marsh.-In Saltburn Wood; also at Redcar. (W. C. Hey).

Taphria nivalis, Panz.-Saltburn, on the coast.

Anchomenus dorsalis. Mull., and **A. marginatus** L.- Common at Saltburn.

Bembidium aeneum, Germ.-Common on the margin of a large pond at Redcar.

Bembidium lampros., Herbst., and **B. littorale**, Common at Saltburn.

Bembidium monticola, Sturm.-In Saltburn Wood by the stream.

Bembidium mannerheimi, Sahl.-On Stanghow Moor.

Trechus obtusus, Er. and **F. secalis**, Pk.-Saltburn Single specimens.

Patrobis excavatus, Payk.-Saltburn Wood by the side of the stream; Common; also Glaisdale.

Dromius. linearis, Ol., **D. melanocephalus**, Dej., and **D. nigriventris**, Thoms.-Common at Saltburn.

Haliplus ruficollis, De G.-Common at Saltburn.

Laocophilus obscurus, Panz., (**hyalinus** De G) -Common at Saltburn.

Deronectes depressus, F., and **D. 12- pustulatus** F- Saltburn, in the stream.

Hydroporus lepidus, Ol., **H. palustris**, L., **H. erythrocephalus**, L., and **H. pubescens** Gyll.- Common at Saltburn.

Hydroporus septentrionalis, Gyll., and **H. davisii**, Curt. Saltburn Wood, in the Stream (August, 1894).

Hydroporus dorsalis, F.-Common at Middlesbrough, in a pond.

Agabus nebulosus. Forst., and A. Sturmii. Gyll.-Common at Saltburn; also at Coatham Marsh. (W. C. Hey).

Platambus maculatus, L.-Saltburn, in the stream.

Ilybius fuliginosus, F., **I. ater**. De G., and **I. fenestratus**, F.-Common at Saltburn.

Colymbetes fuscus, L. Salt burn in a pond; Coatham. (W. C. Hey).

Dytiscus punctulatus, F.-At Saltburn, but not common.

Gyrinus natator, Scop.-Common at Saltburn; Redcar. (W. C. Hey).

Hydrobius fuscipes, L.-Common in Cleveland.

Anacama globulus, Payk., and **A. limbata**, F.-Common at Saltburn.

Laccobius sinuatus, Mots., (**nigriceps**, Thoms.,) and **L. alutaceus**, Thomas.-Both species occur at Saltburn, the first being common.

Limnebius truncatellus, Th.-Common at Saltburn.

Helophorus quaticus, L., **aeneipennis**, Thoms., and **H. brevipalpis**, Bed.-Common at Saltburn.

Cercyon haemorrhoidalis, F., **C. flavipes**. F.; **C. lateralis**, Marsh, **C melanocephalus**, L., and **C. analis**, Payk.-Common at Saltburn.

Aleochara lanuginosa, Grav.-Common at Saltburn.

Chilopora longitarsis, Er.-Common at Saltburn.

Homalota gregaria, Er. and **H. analis**, Grav.-Common at Saltburn.

Homalota elegantula, Bris.-Saltburn Wood (May, 1905).

Gnypeta labilis. Er.-Common at Saltburn, and on the margin of the Reservoir at Lockwood Beck.

Falagria sulcata, Payk., and **F. thoraica**, Curto-Common at Saltburn.

Gyrophaena minima, Er. and **G. lucidula**. Er.-In Saltburn Wood.

Phytosus balticus, Kr.-Saltburn, on the coast.

Myllaena Kraatzi, Sharp.-Saltburn, on the margin of a pond. One specimen in July, 1894.

Hypocyrtus laeviusculus, Mann.-Common at Saltburn: Redcar.

Cilea silphoides, L.-Saltburn, in dung.

Tachinus humeralis, Grav.-Common in Cleveland.

Quedius .cinctus, Payk, (impressus, Panz), **Q. fuliginosus**, Grav., **Q. tristis**, Gray., and **Q. molochinus**, Grav.-Common at Saltburn.

Quedius boops, Grav.-On Easby Moor and Stanghow Moor; Common.

Creophilus maxcillosum, L.-Common in Cleveland.

Leistotrophus nebulosus, E.-Saltburn, in decaying fish and garden refuse.

Staphylinus pubescens, De G.-Saltburn, in decaying garden refuse.

Staphylinus erythropterus, L.-On Stanghow Moor under a stone (April, 1890).

Philonthus aeneus, Rossi, **P varius**, Gyll, **P. marginatus**, F., **P. cephalotes**, Grav., **P. sordidus**, Grav., **P. varians**, Payk, and **P. ebeninus**, Grav.-Common at Saltburn.
Leptacinus linearis, Grav.-Saltburn on the sea banks (1894).
Baptolinus alternans, Grav.-Common under loose bark in Cleveland.
Othius fulvipennis, F.-Common at Saltburn.
Lathrobium fulvipenne, Grav.-Common at Saltburn.
Lathrobium brunnipes, F.-Saltburn and Stanhow Moor; common.
Stenus guttula, Mull., **S. impressus**, **S. brunnipes**, Genn, Steph., **S. pubescens**, Steph., **S. nitidulus**, Steph., **S. picipes**, Steph., and **S. tarsalis**, Ljun -Common at Saltburn.
Bledius arenarius, Payk.- Common on the coast at Saltburn.
Platystethus arenarius, Fourc.-Common at Saltburn and Stanghow Moor.
Oxytelus sculptus, Grav., **O. laqueatus**, Marsh, **O. sculpturatus**, Grav., and **O. nitidulus**, Grav.-Common at Saltburn.
Lesteva pubescens, Mann.-Saltburn, at the foot of the sea. banks, May, 1905.
Olophrum piceum, Gyll.-In damp places on Stanghow Moor.
Homalium rivulare, Payk.-Common at Saltburn.
Eusphalerum primulae, Steph.-In flowers of the primrose at Saltburn.
Anthobium torquatum, Marsh, and **A. sorbi**, Gyll.Common at Saltburn.
Liodes humeralis, Rug.-In Saltburn Wood.
Anisotoma lunicollis, Rye.-In the Proceedings for (p. 45) I recorded this species from the Saltburn Sandhills. is an error and must be deleted, the specimen having turned out to be a form of the very variable **dubia**.
Hydnobius punctatissimus, Steph.-On the Saltburn Sandhills, in October; Common.
Necrophorus humator, Goez, and **N. ruspator**, Er.- Common at Saltburn.
Necrodes littoralis, L.-Saltburn, on the coast.
Silphar rugosa, L., and **S. atrata**, L.-Common at Saltburn.
Choleva cisteloides, Froh., **C. nigricans**, Spence, **C. chrysomeloides**, Panz, and **C. fumata**, Spence.-Common at Saltburn.
Choleva kirbyi, Spence.-In decaying fungi, near Saltburn, (September, 1905.)
Adalia oblitterata, L., and **A. bipunctata**, L.-Common at Saltburn.
Rizobius litura, F.-Common at Saltburn.
Coccidula rufa, Herbst.-Common at Saltburn, and in Coatham Marshes.
Hister 12-striatus, Schr, and **H. bimaculatus** L.-At Saltburn, in decaying garden refuse.
Epuraea diffusa, Bris.-Salburn, by sweeping on sea-banks. One specimen in September, 1894.
Epuraea restiva, L., and **E. melina**, Er . Common at Saltburn.
Nitidula bipustulata, L.-Saltburn; Common.
Antherophagus nigricornis, F., and **A. pallens**, Gyll.-On Stanghow Moor.
Cryptophagus dentatus, Herbst, and **C. cellaris**, Scop.Common at Saltburn.
Atomaria fuscipes, Gyll, **A. atricapilia**, Steph., and **A. analis**, Er.-Common at Saltburn.
Ephistemus globosus, Waltl.-On the Sea-banks at Saltburn. One specimen in June, 1893.
Derместis lardarius, L.-At Middlesbrough, in bacon.
Cytilus varius, F.-On the sea banks at Saltburn.
Parnus auriculatus, Panz.-On the sea banks at Saltburn.
Aphodius lapponum, Gyll, **A. putridus**, Sturm, (borealis. Gyll), and **A. contaminatus**, Herbst.- Common in the dung of sheep on Stanghow Moor.
Aphodius fossor, L., **A. prodromus**, Brahm, **A. oontaminatus**, Herbst, and **A. depressus**, Rug.-Common at Saltburn.
Cryptohyptnus riparius, F.-Under stones, &c., on Stanghow Moor; common.
Athous vittatus, F.-On young trees in Kilton Wood and Saltburn.
Limonius cylindricus, Payk.-Saltburn, on the sea banks.
Helodes minuta, L.-Common at Saltburn.
Cyphon coarctatus, Payk.-Common at Saltburn.
Podabrus alpinus, Payk.-In Saltburn Wood (on young oak) and on Stanghow Moor (on Whitethorn).
Telephorus nigricans, Miill, Var., **discoideus**, Steph., and **haemorrhoidalis**, Fr.-Common at Saltburn.

Malthinus punctatus, Fourc.-Kilton Wood; Saltburn Wood; common.
Cis boleti, Scop.-Common in boleti on bark of rotten trees at Saltburn.
Octotemnus glabriculus, Gyll.- Common in boleti on old stumps at Saltburn.
Donacia versicolorea, Brahm, (**bidens**, Ol.)-Common at Saltburn, on Potamogeton.
Phytodecta olivacea, Forst, Var., *litura*, F.-Common on the broom near Saltburn.
Gastroidea polygoni, L.--Common on Polygonum and Rumex at Saltburn.
Longitarsus laevis, Duft.-Common on Ragwort at Saltburn.
Phyllotreta undulata, Ruts, and **P. nemorum**, L.-Both species occur at Saltburn on Cruciferae.
Batophila rubi, Payk.-Common at Salt burn on Rubus.
Sphaeroderma testacea, F., and **S. cardui**, Gyll.-Common at Saltburn.
Crepidodera transversa, Marsh, **C. ferruginea**, Scop., and **rufipes**, L.-Common at Saltburn.
Psylliodes chrysocephala, L., and **P. cuprea**. Roch. (**cupronitens**, Forst).-On Cruciferae at Saltburn; common.
Blaps mucronata, Lat.-Saltburn; Middlesbrough; common.
Tribolium ferrugineum, F.-In granary refuse at Thornabyon-Tees.
Salpingus ater, Payk.-On Whitethorn on Stanghow Moor. One specimen in June, 1905.
Anaspis geoffroyi Mull; (*fasciata*., Foure).-On whitethorn blossom at Saltburn (June 1894).
Apion haematodes, Kirby, **A. viciae**, Payk, **A. onopordi**, Kirby, **A. striatum**, Kirby, **A. immune**, **A. ononis**, Kirby, and **A. ervi**, Kirby.-Common at Saltburn.
Otiorhynchus atroapterus, De G., and **O. ovatus**, L.Saltburn, on.the sea banks; common.
Otiorhynchus ligneus, Ol.-Saltburn, on the sea bank, May, 1905.
Tropiphorus tomentosus, Marsh, (*elevatus*, Herbst).Common on Mercurialis perennis at Saltburn.
Phyllobius argentatus, L.-Common at Saltburn.
Alophus triguttatus, F.-Saltburn, under a piece of wood, end of March, 1894.
Sitones puncticollis, Steph.-On Stanghow Moor; and at Saltburn.
Hypera punctata, F., and **H. plantaginis**. De G.-Common at Saltburn.
Pissodes pini, L.-Imported into Middlesbrough with timber from Northern Europe.
Dorytomus tortrix, L.- Saltburn, on aspens.
Dorytomus pectoralis, Gyll.---,In Kilton Wood, on sallows July, 1905.
Anthonomus rubi, Herbst.-Common on Rubus at Saltburn.
Coeliodes quercus, F.-On young oaks in Saltburn Wood.
Calandra granaria, L., and **C.oryzae**, L.-Common in a granary at Thornaby-on-Tees. 1906.
Agabus biguttatus Ol.-In a dried watercourse at Boosbeck, near Saltburn. Common in September.
Tachyusa atra. Grav.-Saltburn, on the sea banks, July.
Hypocyrtus longicornis, Payk.-At Guisborough in August.
***Quedius fumatus**, Steph., (*peltatus* Er.) and **Q. umbrinus**, Er.-In Saltburn Wood, among dead leaves, November (Richard S. Bagnall).
°**Quedius auricomus**, Kies.-In Saltburn Wood, in moss by the stream side, November (Richard S. Bagnall).
Choleva velox, Spence, and **C. wilkini**, Spence.-Saltburn Wood among dead leaves, November (Richard S. Bagnall).
***Ptenidium punctatum**. Gyll.-Saltburn, among seaweed on the shore (Richard S. Bagnall).
Cryptophagus acutangulus, Gyll.-At Saltburn in a porch. One specimen in October.
Cyphon variabilis, Thumb.-At Saltburn in July.
Donacia simplex, L.-In a pond at Saltburn; also found in Coatham Marshes (W. C. Hey, 1895).
Lema Lichenis, Voet.-At Guisborough in August.
Luperus rufipes, Scop.-At Guisborough in August.
Coeliodes cardui, Herbst -At Saltburn in May.
Poophagus sisymbrii, F.-In a pond at Saltburn in July.
Ceuthorhynchus quadridens, Panz.-At Saltburn in June.
Rhinoncus perpendicularis, Reich.-In a pond at Saltburn, July.
Phytobius quadrituberculatus, F.-In a pond at Saltburn, July.

CLEVELAND NATURALISTS' FIELD CLUB

SECRETARY'S REPORT FOR 1904-5

I have pleasure in presenting to the members of the Cleveland Naturalists' Field Club, the ANNUAL REPORT, this being my 7th Report and the 24th of the Club's existence.

SUMMER MEETINGS-Seven Meetings were arranged by your Committee to be held during the summer months (exclusive of Yorkshire Naturalists' Union Meeting, none of which were held in the immediate vicinity).

The start was rather disastrous; the first meeting arranged to be held at Kettleriess, and the second at Upleatham, had to be abandoned owing to very unfavourable weather conditions. This, unfortunately, did not end our misfortune in this respect, as the fourth meeting, arranged for Hilton, was abandoned from the same cause, and the sixth meeting at Kildale, the party only arrived to spend the afternoon indoors, owing to a very heavy thunderstorm coming on. If the Kilton meeting had not been altered on account of the Mayor's Garden Party, we would have had to chronicle yet another unfavourable day.

It is many years since the summer programme was so interfered with by the weather conditions, and this, in spite of the summer, generally, being much more favourable than had been the case in the two or three previous years.

Five meetings were held, viz:-at Kilton, Lealholm, Kildale, Eston and Kettleness, the latter being refixed again at a later date. The meetings held were fairly well attended: the meetings at Lealholm and Kilton Woods were the most successful.

The thanks of the Club are due to W.H.A. Wharton, Esq, Captain B.B. Turton, Lord Downe, Earl of Zetland, and the late Hon. James Lowther, for permission to visit their estates, also to Dr. Veitch for acting as guide of the Kettleness excursion.

WINTER MEETINGS-Since the last Annual Meeting, 6 Winter Meetings have been held, these have, on the whole, been fairly successful and fairly well attended by our members, but still I consider there is room for improvement both in the attendance of our members and also for assistance by members in giving papers and assisting more at the microscope and exhibition meetings.

The Lectures that have been given since the last Annual Meeting are-a paper by Mr. W. H. Thomas, on "Earlier Civilizations of Ancient Greece," delivered in April of last year. "The Underground Waters of N. W. Yorks.," by the Rev. W. Lower Carter, M.A. F.G.S., on November 24th. "Plant Life on a Heather Moor," by Dr. W. G. Smith, on February 9th, the two latter being given by Yorkshire Naturalists' Union Lecturers. On March :23rd, a paper, entitled "Cleveland: its Geology and Scenery," was given by Mr. J. S. Calvert, and illustrated by a very interesting series of sketches of local scenery.

Microscope and Exhibition Meetings were held on December 15th and January 28th, under the direction of Mr. Simpson and the Microscopy Sectional Committee. Exhibits were made by M. L. Thompson, J. M. Meek, Frank Elgee, and T.A. Lofthouse, and a number of our members and others kindly lent microscopes and slides.

All the Lectures were illustrated by lantern slides or diagrams.

MEMBERSHIP.-The Club membership is 111. This being, I regret to say, a slight decrease on last year, when the membership was 114.

Twelve new members have been elected during the year, 8 have resigned or left the district, 1 died, and 6 have been struck off owing to their subscriptions being in arrears.

The work that is being done by the Club is, I venture to think, worthy of more general support from the Cleveland district, and I trust members will do their utmost to induce any interested in Natural History or Archaeological Pursuits, to join the Society.

PROCEEDINGS.-Since the last Annual Meeting, Vol. 1, part 5 of our Proceedings has been issued to members, together with index and list of members, this completing our First Volume. The cost of Volume 1 in parts (5) has been reduced to 5/- to Members, and they may also obtain single parts at a reduction of 20 per cent.; as there are a fair number of copies of most of the parts in hand, I trust that members who have not complete sets, will avail themselves of the opportunity of Purchasing them before the stock is exhausted.

Your committee appointed the Rev. J. Cowley Fowler, B.A., F.G.S., to the position of Editor, which, we are pleased to say, he has accepted.

LIBRARY.-The following works have been added to the Society's Library during the year :- Vol. 1, Part 2, of the Hull Society's Proceedings; Vol. 1, Part 2, of the Weardale Naturalists' Field Club Transactions, both presented by the Societies.

The Naturalist for 1904, and the Yorkshire Naturalist Union Transactions, Part 31 :-

If the Society had a permanent room and Library accommodation, (that is, if there is a desire for such by the members), I think the Library is a portion of our work which might be further developed, and prove of practical use to our members.

SECRETARY'S REPORT FOR 1905-6

I have pleasure in submitting the following Report, this being my 8TH ANNUAL REPORT, and the 25th year of the Club's existence.

While no great advance on previous years has been made, I think the value of the work done by the Club has been maintained. During the past 12 months, 7 Summer Meetings and 8 Winter meetings have been held, and another part of our Proceedings has been published. The Club has had, I think, during the past more assistance from its members in arranging its Summer and Winter meetings, than, has been the case in any previous year.

SUMMER MEETINGS.-The following Meetings have been held during the summer months; Upleatham, Crathorne and Hutton Rudby, Loftus to Grinkle, Swainby to Snotterdale, Danby to Castleton, and Stokesley to Wainstones. Two meetings on the fixture list were abandoned; the one from Ayton to Hutton on account of inclement weather, and the other owing to it being in "Stockton Race Week," when a good many of our members are usually away.

The districts visited were all interesting, some of them opening out quite new ground. A good attendance took place at all the meetings except Crathorne, which was interfered with by the weather. The Club was indebted to Mr. John Garbutt, of Loftus, the Rev. J. Cowley Fowler, Mr. J.W. R. Punch and Mr. Cozens, for acting as guides and giving information as to routes, etc., at the meetings at Grinkle, Swainby, Danby and Wainstones, their personal attendance and guidance adding very much to the interest of these meetings. The Rev. J. Cowley Fowler, our President, and Mr. and Mrs. J. W. R. Punch kindly entertained our members to tea at the Swainby and Danby meetings.

The Club was also indebted very much to local landowners, for permission to visit their estates on the occasion of our meetings, viz. :-The Earl of Zetland (on two occasions), Sir Chas. Mark Palmer, M.P., J. Lionel Dugdale, Esq. (who also kindly sent someone to meet the party, and explain to them the various objects of interest in Crathorne Church), and J. J. Emerson, Esq.

WINTER MEETINGS.-Since the last Annual Meeting, papers have been given at Winter Meetings by the Rev. J. Cowley Fowler, B.A., F.G.S., on "Brittany," in April; by Rev. W. Lower Carter M.A., F.G.S., on "Early Man in Britain," Y.N.U. Lecture; by Rev. F. Grant James, on "Ancient Worthies of Marske"; and J. W. R. Punch on the "Spectroscope," illustrated by experiments; Thomas Sheppard, F.G.S., on a "Geological Ramble along the Yorkshire Coast," Y.N.U. Lecture; Two Microscope and Exhibition Meetings, and an evening visit to the Dorman Museum, completed the year's Winter Meetings.

Mr. Simpson kindly obtained the microscopes from members and friends, and arranged them for these meetings, with the assistance of Mr. Punch and other of our members. At the second of our Microscope Meetings, the members had the pleasure of seeing Mr. Barnes' beautiful and instructive slides, mostly botanical, and principally illustrating "Mosses," with the life history of which he is well acquainted.

The attendance of members at most of the meetings was fairly satisfactory, although on the occasion of one or two meetings, other attractions and engagements probably militated against as good an attendance as might have been expected.

MEMBERSHIP.-The Club membership is 106, including 2 Honorary members. This being a slight decrease on last year, when the membership was 111.

During the year 10 new members have been elected and 9 members have resigned (mostly through leaving the district), 5 have been struck off for non-payment of subscription, and one member has died, namely, Col. Chas. Lothian Bell, a member who, although he did not attend the meetings, he was interested in the Club's work especially the Proceedings, to the recent part of contributed a very complete meteorological Record for Linthorpe Middlesbrough, in 1904

A satisfactory feature in regard to the membership during recent years is that we are receiving a much more representative Cleveland membership than we have hitherto had

I regret to say, that in my opinion, there seems to be a lack of active workers in "Natural History and kindred pursuits" in our midst at the present time, this is not as it should be, as Middlesbrough is favourably situated for all branches of natural history. There seems to be no one working at the Molluscs, the Marine Fauna and Flora and many other branches in which there is ample scope for workers in this district.

PROCEEDINGS-Part 1 Vol 2, of the Society's Proceedings has been issued to members during the year. This number is of particular local value and has been favourably commented on in the Naturalist, Yorkshire Weekly Post, and other papers. All the papers were of local interest.

It is rather unfortunate that our membership is not large enough to permit printing of Proceedings every year as we have in hand at the present time and could obtain from our members papers that would keep the Proceedings going for some time.

The thanks of the Club are due to the Rev. J. Cowley Fowle B.A., the Editor of Part 1, Vol. 2, and to all the members who contributed papers to the number.

The sale of the Proceedings, as will be noticed from the Treasurer's Report, is an increase on previous years, and if members would only make them more widely known, we should probably have a considerably larger income from this source.

LIBRARY.-The following Works have been added to the Society's Library during the year:- Vol. III, Part 3, of the Hull Society's Proceedings, and the Naturalist for 1905.

MUSEUM.-Mr. Baker Hudson has informed me that the Museum authorities have given permission to us to hold our meetings at the Museum, and have placed a room at our disposal

when required. Under the Curator, Mr: Baker Hudson, and the Assistant Curator, Mr. Frank Elgee, the Museum collection is being got into shape, and will, no doubt, in time become of very valuable assistance to local students, and should also stimulate workers. and possibly become the means of enlarging the Club membership, but to do this it must not be lost sight of that the collection should become more an index of the Natural Fauna and Flora of the Cleveland district, and the more this is kept in view the more valuable will the Museum, as an educational agency, become, in my opinion.

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Hon. Treasurer:

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J. W. Brethton

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[BEFORE RESTORATION.]



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