

CLEVELAND NATURALISTS'
FIELD CLUB.
RECORD OF PROCEEDINGS

1899-1900

PRESIDENT Mr. T. F. WARD

Vice Presidents

Rev. J.Hawell. M. A. F.G.S Mr H.Simpson Mr R. Lofthouse.
Mr. W. H. Thomas Mr. J. M. Meek Dr. W. Y. Veitch

COMMITTEE

Miss Calvert Mr Young Mr. R. G. Clayton Mr. J. A. Jones, B.Sc. Mr. J. W. R.
Punch, Mr. W. Sachse

HON TREASURER

Mr. T. F. WARD Park Road South, Middlesbrough

SECTIONAL SECRETARIES

Archæology Mr. R. LOFTHOUSE

Botany -Mr. T. F. WARD

Conchology - Rev. J. HAWELL, M.A., F.G.S.

Entomology - Mr. T. A. LOFTHOUSE

Geology -Dr. VEITCH, F.G.S.

Ornithology and Mammalogy -Mr. R. G. CLAYTON

Microscopy - Mr. H. SIMPSON

HON. SECRETARY

Mr. T. A. LOFTHOUSE, 62 Albert Road, Middlesbrough.

HON. ASSISTANT SECRETARY

Mr. FRANK ELGEE.

Past Presidents:

1881-Dr.W.Y. VEITCH, M.R.C.S. 1892--Mr. R. LOFTHOUSE

1882- Do.

1893-Mr. T. D. RIDLEY

1883-Mr. J. S. CALVERT

1894-Mr.ANGUS

MACPHERSON

1884-Mr. T. F. WARD

1895-Rev. J. HAWELL, M.A.

1885- Do

1896- Do.

1886-Mr.ANGUS

1897-Mr. J. M. MEEK

MACPHERSON

1887- Do.

1898-Mr. W. H. THOMAS

1888-Mr. J. M. MEEK

1899- Do.

1889-Dr.W.Y. VEITCH, M.R.C.S.

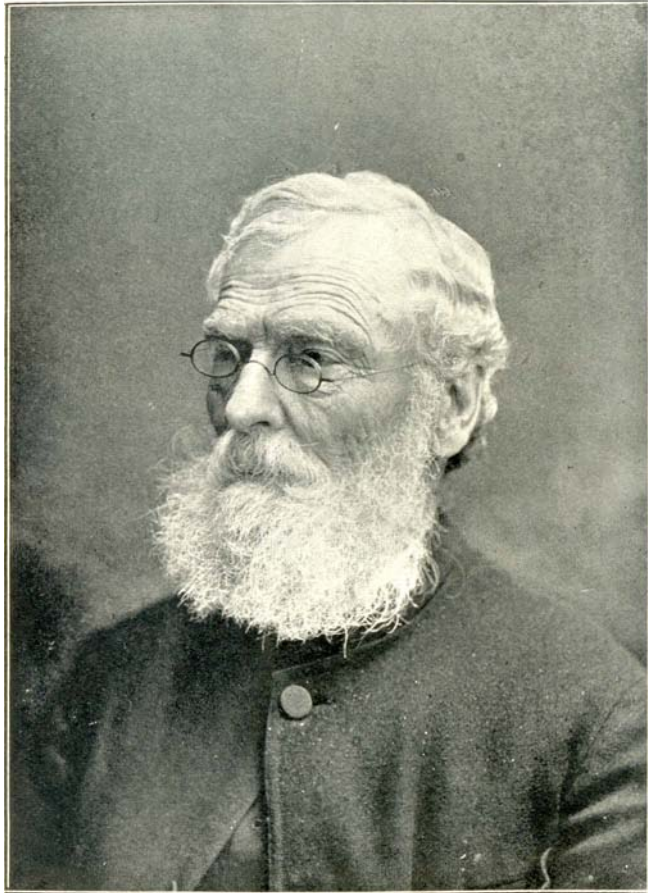
1900- Do.

1890- Do.

1901-Mr. T. F. WARD

1891-Rev. J. HAWELL, M.A.

CANON ATKINSON, M.A., D.C.L.



BORN MAY 9th, 1814.
DIED MARCH 31st, 1900.

It seems desirable that some mention should be made in the Proceedings of the Cleveland Naturalists' Field Club of the life-work of one who wrote a "History of Cleveland," who was a very able naturalist, and who was, moreover, an honorary member of the Cleveland Club.

Born in Essex, in 1814, John Christopher Atkinson proceeded in due course to St. John's College, Cambridge, where he took the degree of B.A. in 1838. He was ordained deacon in 1841, and priest in 1842, by the Bishop of Hereford. From 1843 to 1846 he held a curacy

at Scarborough, and became vicar of Danby in 1847. Here he laboured successfully as a parish priest for 53 years, and his tireless energy led him into avenues of labour and investigation quite apart from the work attaching to his cure, and his keen intellect ensured for whatever he undertook a large measure of success.

He found, for example, that the people among whom he had come to dwell spoke a dialect, which differed materially from standard English. The acuteness with which he observed, and the assiduity with which he collected, the words and expressions and pronunciations of the dwellers in Cleveland, resulted, in 1868, in the publication of that very notable volume, "A Glossary of the Cleveland Dialect," which is, perhaps, at the same time, the best English local glossary that has ever been written, and that one of Canon Atkinson's works on which his reputation will especially rest in the distant future. The numerous *tumuli* or *houes* scattered over the Cleveland Moors also strongly arrested his attention, and ultimately, in conjunction with Canon Greenwell, he investigated large numbers of these. In fact, nothing within the range of his eye and ear, whether it belonged to the domain of the antiquary or to the realm of the naturalist, escaped his intelligent appreciation. Whether the thing observed were an uncommon bird, or a disinterred fragment of "Old Whitby," he forthwith discerned its precise significance, and learnt from it for future use

whatsoever it had to teach.

It has occurred to me that I could, perhaps, best perform the task, which I have in hand by drawing somewhat upon my personal recollections of Canon Atkinson, and by incorporating material contained in letters which at one time or another I received from him.

I first made his acquaintance in the spring or early summer of 1880, when I had recently come into Cleveland, and when, though living nine miles away, he walked across the moors to call on me. An upright, good-looking man, with intelligent eye, pleasant voice, and hair growing grey, he sat on the edge of a chair, as though not in the slightest degree tired, and discoursed very affably. In the following autumn I accepted his invitation to the Danby Harvest Home, where I saw him in the midst of a people who evidently thought much of their vicar. Perhaps the most interesting visit I ever paid to him at Danby was in April 1884, when I took with me my friend the late Rev. R. E. Hooppell. LL.D., D.C.L., Rector of Byers Green. . Atkinson was then about to be married for the third time, and the vicarage was in the hands of workpeople, so that it was with difficulty that the three of us could find sitting accommodation in the study in which the furniture properly belonging to sundry other rooms was piled up. Hooppell had a reputation as an antiquary, but the conversation turned principally on *local* antiquities, and Atkinson, being on his own ground, rather mercilessly snubbed Hooppell when he ventured to express an opinion different from his own, and turned his conversation to me as though I knew more of such matters than my companion. Still he was particularly kind to us both, and gave us luncheon, and afterwards walked to the station with us. His wide and accurate knowledge of local things gave to his conversation a peculiar zest in the estimation of one interested in the neighbourhood, and he was fond of telling strangers stories of the Cleveland he first knew, and the old legends of the locality. I think it was on the occasion of the visit I have just mentioned, when he had been telling us some of these old-world stories, that I asked him whether he had ever published any account of the matters of which he had been discoursing to us, and on receiving an answer in the negative, I suggested that he certainly ought to see that his knowledge of them was preserved in some permanent form. Later the influence of others led to this being done by the publication of that most popular of his books " Forty Years in a Moorland Parish."

The last time I visited him was on the occasion of his "Jubilee" in 1897. He had then been fifty years Vicar of Danby, and a special Service was held in the Church, at which the Bishop of Beverley preached. Atkinson was then getting very feeble, and there was many a watery eye in the Church, as, in a broken voice he pronounced the Benediction at the close of the Service. From the Church we adjourned to the schoolroom for tea and afterwards, a presentation was made to their venerable vicar by the parishioners.

As I have mentioned already, Atkinson wrote a "History of Cleveland." Most unfortunately, however, this work was never published in its entirety. It was to consist of two volumes, but only a little more than half has seen the light, though the whole was actually written. Histories of Cleveland had been

published previously by Graves in 1808, and by Ord in 1846. To the late Mr H. W. F. Bolckow, M.P. for Middlesbrough, there occurred the idea that there ought to be a new History of Cleveland;-or rather, the History of a New Cleveland, the Cleveland which as a pioneer of the iron industry he had been largely instrumental in making. He accordingly summoned to his residence at Marton Hall, Joseph Richardson, printer, of Barrow-in-Furness who was then issuing a work entitled, "Furness, Past and Present." Richardson, however, expressed his unwillingness to undertake a work on " Cleveland" until his " Furness " should be completed. Mr. Bolckow replied that he supposed it was merely a matter of money. Richardson confessed that that was so and Mr. Bolckow thereupon undertook to supply whatever money was needed, and on that understanding Richardson took the matter in hand. Shortly afterwards Mr. Bolckow gave Richardson a cheque for £200, saying "If the work is well done you shall have sufficient to turn your hand in." Atkinson undertook to supply the manuscript, but for some reason or other, he appears to have made a difficulty subsequently about doing this. On the advice of Mr. Bolckow, who undertook to pay the costs, Richardson brought an action against Atkinson to compel him to furnish the MSS. The case came on for trial at the Liverpool Assizes in 1872. On the advice of the Judge, however, a juror was withdrawn and the case was settled in court. The reason for his giving this advice was that the case was one, which could not be settled at Liverpool, but would have to be sent to London to be adjudicated upon, and that this would involve great expense. The judge gave it as his private opinion that there was no agreement. It was arranged that each party should pay their own costs and that Atkinson should receive £6 instead of £5 per part. The agreement drawn up in court, and approved by the counsel on either side, was a much more stringent one upon Richardson than the one, which Mr. T. T. Trevor, of Guisbrough, Atkinson's solicitor, had previously been trying to get Richardson to sign. Mr. Bolckow paid Richardson's costs amounting to £259. Atkinson's costs were less than one-fourth of that sum. In the "Yorkshire Bibliographer," edited by Mr. Horsfall Turner (vol. I., pp. 184-186), 1888, is an article, inspired by Richardson, giving some account of this matter. After speaking of the trial above-mentioned, the following passage occurs, "The work was then proceeded with, but the £200 Mr. R. had at the commencement was all the money he received for the bona fides of the work, with the exception of the £60 he paid Mr. Atkinson for the balance of the MSS., after 19 parts had been issued at a cost of Mr. Richardson of about £3,500. When Mr. Bolckow was removed by death the MSS. for the completion of the work passed into the hands of his heir Mr. Carl Bolckow and are still in his possession, though Mr. Richardson has offered to complete the work at his own cost if the MSS. for the nine remaining parts are handed to him. This Mr. Carl Bolckow refuses to give up, unless Mr. Richardson will pay him the £60 the late Mr. Bolckow paid Mr. Atkinson."

In 1892 I called Atkinson's attention to this statement and remarked that if the completion of his "History of Cleveland" depended upon a sum of £60, the amount could no doubt easily be raised. He replied that he had never heard that Mr. Bolckow wanted £60 as a condition of giving up the MSS. He said, "The arrangement-articles of agreement between the late

Mr. Bolckow and myself, drawn up by Mr. W. C. Trevor, are in my possession as also Mr. Bolckow's assent to them," and Mr. Carl Bolckow *might* make such a reply to Mr. Richardson's application (which I had reason to believe either would be or had been made), though I do not think it likely he would answer so, inasmuch as his uncle's arrangement with me was that if the book was not completed *within twelve months* of the delivery of the MSS. to his keeping, *the said MSS. was to be returned to me*. Anyway, under the existing written agreement or arrangement-for it was never made formal, or of legal force, inasmuch as it was never stamped, and otherwise publicly accredited-It would have been somewhat strange if any mention of £60, or any other sum, for the return of the MSS. had been made in the lengthened series of communications passing between Mr. C. Bolckow and my solicitor, or anyone else acting on my behalf; and as far as my knowledge, or even suspicion, extends, no hint of anything of the kind ever took place. It was by reason of Mr. Richardson's *inability* to continue the publication of the work, and my taking legal steps to annul the agreement between Richardson and myself, which steps were *only not completed* that Mr. Bolckow intervened, a fact which, as well as Mr. Richardson's bankruptcy (repeated, moreover), has some little bearing on any 'offer' made by the latter to 'complete the work at his own cost.' It was in allusion to this 'inability' that Mr. Carl Bolckow, on the only occasion on which I had any personal communication with him, said to me in the presence and hearing of the late Dr. Gardner, of Skelton-we three having travelled together from York to Picton, and been talking a good deal about the completion of the book- 'Well, if it can't be done at Barrow at all events it shall be done at Middlesbrough.' As touching Mr. Bolckow's assent to the arrangement, I give copy of it from letter dated 8th June 1877, now open before me, "I am favoured with your letter, and am prepared to carry out the arrangement which Mr. Trevor and I agreed upon when I had the pleasure of seeing him here. I do not think there is any hurry in sending me the last ten MSS. parts,' which were sent however a few days after. The letter here acknowledged was my letter accompanying Mr. Trevor's draft of agreement, slightly modified by me *as requested*, if I saw necessary." In a subsequent letter Mr. Atkinson says, 'I sent you copy of the opening sentences of Mr. Bolckow's letter of 8th June 1877. The closing ones run thus, 'He' (Mr. Richardson), 'says he is equally anxious to complete the book as soon as possible, as he has over £1,000 sunk in it.' In R.'s private letters to myself, all of which I have, the sum 'sunk' varies amusingly between £1,500 and £3,000. In the 'Yorkshire Bibliographer' it is £3:500." Writing the following day (March 9th), Mr. Atkinson said, "I tried very hard, and for a considerable period of time, first and last, to obtain the remaining MSS. from Mr. Bolckow, but even for the purpose of correction, emendation, addition, and so forth, he was not to be moved. He had recourse to the method of declining to acknowledge Mr. W. C. Trevor's letters even, and I personally have never had a single response from him. As far as I can remember, our last distinct effort was to propose a meeting between myself and Mr. Bolckow, each to bring his legal adviser, if Mr. Bolckow so elected, and so and then consider the whole matter, with my legal

agreement with Richardson, and the written terms of agreement with his uncle, and the written assent of the latter to them before us. And the immediate occasion of this proposition was that Mr. Bolckow's avowed *locus standi* in his demur to give up the MSS. was that he was not assured as to Richardson's claim to the copyright not being a valid one. This was the ground he took, and, as you will see, it totally excludes any idea of a money consideration for the surrender. Looking back on the whole affair with tolerable coolness I cannot see what step additional to, or better than, those actually taken with a view to obtain the, even temporary, repossession of the MSS. could have been adopted. It would take me at least a year of very close work to bring the book up to the standard of my present knowledge and judgment; and for the last four or five years I confess that I have not hankered after such an addition to the work that has been upon me; and I am afraid that now if Mr. B. himself took the initiative, and said, 'Bring out a new edition totally at my cost,' I should hesitate about committing myself to the labour." It appears, therefore, that Atkinson's "History of Cleveland" will never be completed, and that students of local history will have to be content with Vol. 1., issued in 1874, (with three numbers of the second and concluding volume) in which only a portion of the district is dealt with.

In sharp contrast with this aborted birth was the publication of "Forty Years in a Moorland Parish" in 1891. Apart from other considerations it could hardly be otherwise in the hands of a man like Mr. George Macmillan. The fate of the "History" had cost Atkinson many an angry word, but he was delighted with the reception accorded to "Forty Years." I had been in correspondence with him touching some of the matters dealt with in the book, and particularly in Appendix E, and he had forwarded to me some of the "proof" before the book came out. When the volume was in the hands of the public the pleasure given him by its ready appreciation found expression in his letters. On April 26th, 1891, he wrote: "There is a perfectly *spontaneous* notice of my 'Forty Years' in yesterday's 'Times.' Neither I, nor Macmillan, had looked for it, and he is proportionately gratified. It strikes the same note with Greenwell's remark when he knew I had undertaken 'the writing, and with George Macmillan's expressed anticipation." On May 16th he remarked, "You may like to hear that 'Forty Years' is almost sold out, Macmillan & Co. tells me this morning. They have written to recall unsold copies here, and the second thousand is already in the printer's hands."

I had written pointing out the misprint of "Flyingdales" for "Fylingdales," on page 398 of "Forty Years," and he replied under date May 20th, "I thank you for pointing out to me the *Flyingdales* erratum, and all the more that it is in time for alteration in the second edition now printing as fast as can be effected, the first edition being quite sold out. My proofs and revises were read and re-read by myself, by Mr. G. Macmillan, and by Mr. J. Dykes Campbell, not to mention my less experienced daughter, and yet this error and another of a date (p. 266-1164 for 1064) escaped us all." On May 25th, he forwarded to me the following extract from a letter from Mrs. J. R. Green, "I have been quite

delighted with your charming book, which I have read from end to end with unflagging pleasure and interest. The charm of the narrative, the grace of description, the variety of interest, the extraordinary minute and restless observation, the bigness and wonder of the world as seen in this little corner of a little island-I don't know which of these things or a hundred others delighted me most. As a picture of what a clergyman's life and work may be it is really illuminating and stimulating. 'What a vast world lies around him-or any of us-if we will but walk in at its open gates. For my own little private enjoyment, I found much satisfaction in your Appendices-in A and D and in B. I was intensely interested in that glimpse of what the 'letting down' of a town indicates; and I greatly hope that your suggestion may lead to more work being done in this direction. It would be an invaluable addition to our understanding of past changes in England. As to your account of the first settlement of the district, you seem to me to have conclusively proved your point. It is a most suggestive instance of the services local knowledge has to render to general history. I don't care how many more Appendices you add; for all these historical hints are most useful. I don't find, for instance, anything about the *mark* of which you told me. Perhaps it is to appear elsewhere? But why not in an Appendix also, even if in some other place too?" Referring to this letter, Mr. Atkinson says, "That such an accomplished historian as she is should take so decided a view as to my theory touching the first settlement of the district (or rather I should say, considerable portions of it), is to me very gratifying. It was there that I expected attack if anywhere." A few days later he wrote, "In my preface to the second edition I have a few words on the commonness of Cleveland words and idioms with the words and idioms of other districts." By the 22nd of June following he was able to report, "More than one half of the second edition of 'Forty Years' has been already sold." In fact the book was very well received, and was deserving of the reception accorded to it, though not without defects.' For example, the way in which he spoke of his predecessor in the cure of Danby was strongly resented by the surviving members of his family. His suggestion too, on page 177, that Ord's "British Dwellings" on Rosebury Topping may be jet workings, though they occur in the zone of *Ammonites margaritatus*, and his peculiar ideas regarding the formation of the branch valleys in Eskdale, would have been better omitted. His supposition of a lake occupying Eskdale is, however, very shrewd, and the actual existence of a glacial lake there has been curiously ascertained by recent geological investigation. As he once observed to me, "there is latent history at almost every turn in this north-country district of ours," and his readings of this history were usually very correct so far all the light of his time could make them so. As Griffith says of Cardinal Wolsey, "he was a scholar and a ripe and good one."

Writing on May 28th, 1891, Atkinson said, "The Appendix E.-Domesday Difficulties-was written without any intention that it should come in as a section in my book. Indeed I hardly think the book was fully projected. The real occasion was the desire to try and clear up the apparent difficulty both as to Danby itself, and as to Camisedale as well,

and I am now, after having sent off my paper to the editor of the Reliquary, taking up and re-writing the conclusion of Appendix C, as it originally stood." The Camisedale and Greenhow difficulty was a matter regarding which I had much correspondence with Atkinson. The paper just referred to was printed in the Reliquary Vol. vi. No.2, April, 1892, pp. 70, *et seq.* In this he mentions how in the *Domesday Recapitulatio*, Camisedale is placed between Engelbi and Broctun (that is Ingleby and Broughton). This is the actual position of Greenhow, which is not mentioned in Domesday Book. But two centuries later, in Kirkby's *Inquest*, we have mention of Kemesdayll juxta Greneowe. According to the Domesday Record Engelbi had seven carucates all of which were "King's land." In Camisedale there "were five carucates which were "King's land," three in the fee of the Earl of Mortain, and one held by Hugh Fitz Baldric-nine in all. In the preceding parts of the Domesday Record we find among the notices of "King's land ". "M. in Camisedale Ulchel v. car ad geld. Terra ad ii carucas xs," but in the account of the Earl of Mortain's fee there is no mention of Camisedale, though the entry relating to Hugh Fitz Baldric's carucate is there all right. Atkinson gives reason for supposing that the Earl of Mortain's portion of Camisedale passed to the Meinill family. The *Inquest* states that an annual payment arising out of three carucates of land in "Kemesdayll juxta Greneowe" had been withheld from the king by the act of Robert de Mennell, grandfather to Nicholas de Mennell (the regnant baron) from the time of King John. Atkinson argues that "when we meet with the two names Engilby Juxta Grenehowe' and 'Kemesdayll juxta Grenehowe,' we are justified in assuming (at least in inferring), first, that Camisedale has a like juxta-position to Greenhow that Ingleby has, and second, that the Greenhow named must have been conspicuous if an object, well known if a 'vill.' " As Greenhow is not mentioned in Domesday it is clear that there was no vill of Greenhow, areal or territorial, or in the group of houses sense at that time, and in the *Inquest* list of ninetyseven *villæ* in the Langbargh Wapentake "Engilby juxta Greneowe is named, but Greneowe itself is only named as a place, or, more likely, an object." But a century before the date of the *Inquest* there is mention of a "territorium de Grenehou." In the time of King Edward III, we find the term " villa " applied to Greenhow. But it is evident that as late as 1285 there was a clear distinction between Kemesdayll and Grenehowe. Atkinson goes on to argue that the name "Greenhow" may probably not be derived from the "How Hill" in the present township of Greenhow, which hill he belittles much more than is just, but rather from the feature made by the steep scarp of the moor bank in this locality-that in fact, the word was originally "Greenhaugh." But he acknowledges that he has no real evidence for his contention, although the name is so spelled at a somewhat late date in the Ingleby Register. He concludes, "The inference seems to me to be not only natural, or even inevitable, but overwhelmingly convincing, that the name Greenhow may effectively be described as an interloping usurper, claiming and arrogating to itself by a series of successive encroachments the right of distinguishing the lands, the territorial area, that had been previously called by the name Camisedale, or the later Kemesdale," and he continues, " In his introduction to the Ingleby

Greenhow Registers, Mr. Hawell remarks, at page v., that Greenhow is not mentioned in Domesday, 'but may be represented by Camisedale.' As is seen by what I have written above, I am disposed to go a great deal further than that, and indeed to assert my view that Camisedale *must* be represented by Greenhow." His general conclusion is that Greenhow was originally the name of an object rather than of a place. "After a space, we see the name of the object beginning to be applied with an areal or territorial sense, and that the area or territory implied is identifiable with that part of what is now Greenhow which then comprised the district granted to Rievaulx, together with lands, already more or less cleared, lying to the north of the said district. One part, however, up to 1285, retains the name Kemesdayll-juxtaGreneowe, and the much more than merely probable synonymousness of the names Camise and Botton-the former being, doubtless, an original *camas* or *camus*-most likely indicates the exact portion of the district last absorbed by the name now universally applied to the whole district in question." If Atkinson be right, the three carucates in Kemesdayll, on which Robert de Mennell declined to pay the king's dues, were situate in what is now Greenhow Botton, and as he suggests these were not improbably the same three carucates which were in the fee of the Earl of Mortain at the date of the Domesday Record. The Botton District is not very well defined at the present day, but there would clearly be room for them there.

Atkinson's conclusion that "Camise" is "doubtless an original *camas* or *camus*" is possibly rather lacking in caution. He puzzled long over the meaning of the name. Writing on May 22nd, 1891, he said, "I cannot, so far, after years of thought as well as study and enquiry, arrive at anything like a satisfactory philological origin of Camisedale. There is no fixed element, either phonological or philological, to get a firm grasp of. It may have been Cameesdale in sound, or Camisdale. The location is comparatively simple." He had written two days previously to enquire as to the exact local application of the name *May-berk* (or *Me-beck*, as it is written in the Hexham "Black Book "). At a later time he dropped upon the word *Camus*, for the meaning of which he referred me to Joyce's Irish Place Names, or Sir Herbert Maxwell's two books on Scottish Names, much of them due to Joyce (Joyce, second series, p. 397). On January 24th, 1896, he wrote, "I am disposed to think my identification of Camisedale with Greenhaw Botton holds good. I don't know if you are acquainted with Crunkley Gill in this parish, near Lealholm Station. I have been snubbed by one or two of my really learned friends for suggesting that the *crombe* in the Domesday form of the old name was possibly Celtic. Here is the Celtic *camas*, and Celtic of the same family. They tell me that such cases are only cases of survival, as adoptions. My question is, ' Whence adopted?' "

Dr. Atkinson consulted me as to the status of Greenhaw as a constituent portion of the parish of Ingleby Greenhow now and in the past. I was able to inform him that in modern times it had the status of a township precisely like the other two townships of the parish, viz., Ingleby and Battersby. From 1764 downwards each of these townships had its separate overseer constable and churchwarden. But I was not able to

trace the state of things back to an earlier time. Writing on May 28th, 1891, Atkinson says, "I am satisfied that Greenhow was neither an 'ancient manor' nor an 'ancient township.' . . . I have seen nothing to lead me to think that the words 'manor,' 'manorial' are in any other way applicable to Greenhaw than in the way they are applicable to Lealholm in my own parish, *if so much*. Lelum was at least a special manorial dependency, Greenhaw was not, at least under that name. Assuming that it was, in any sense, *under another name*, still it must have been of a non-descript kind, the dependency being not on one definite or capital manor, but it might even be (though I do not think so; the subject is too difficult and uncertain for my knowledge), on three. I do know that the Whorlton manor embraced certain sub-manors, though how many I do not know, each of which had true ancient manorial status and rights. And I infer that this was true of the Eure barony too, or at least may have been. Many, if not most, of the *maneria* in Domesday were simply what I have, I remember, in one place styled 'predial domiciles.' Meinell's *manerium* in Greenhaw was unquestionably neither more nor less. It could be watched as a dog watches a rabbit-hole." The reference here is to the trial of Will Latymer, and others for forcible entry on the Free Chace of Nich de Meynell at Greenhow and chasing, shooting and taking his deer [Yorksh. Assize Rolls, No. 1104, etc] dated May 10, 1305. First they watch his residence (*manerium*) for a length of time with the intention of killing him if they can catch him, and, failing that, go away into his free chace, etc., as above. In a letter dated April 8th, 1891, Atkinson says, "Nicholas de Meinill's *manerium* in Greenhaw appears to have been merely a temporary, or rather 'occasional' residence; or it may be no more than the site of his predial interest there and, as far as I have any evidence, there was no other manor in or appertaining to Greenhaw. I do not say that there *was no manor* of Greenhaw; but simply that I have no evidence of its existence, and that at present I do not believe it ever existed. De Meinill's *manerium* of 1305 was a *place*, and a place only, and was probably neither more nor less than Danby (more accurately Dawnay) Lodge is to Lord Downe now, viz., a sporting, occasional residence." He quoted a letter of Sir Fr. Pollock, in which he said, "*manerium* is constantly as much a physical thing as *messuagium*." Writing on February 6th, 1890, while he was staying with Mr. George Macmillan in London, he said, "The ancient *manerium* is a question I find of growing interest and importance in the minds of the workers dealing with it. I had a long talk with one of those writers last night, and I am in correspondence with the editor of perhaps the most important recent book on certain branches of the subject, and on all hands I am asked to continue my own local part of the enquiry. , Mrs. J. R. Green last night was most emphatic on the subject, and I shall, I hope, be able to go on after my return to Danby next week. Camisedale comes in as subsidiary to other and clearer cases affecting the theory of the ancient manor." Writing under date December 9th 1889 Atkinson said, "The Camisedale enquiry is one that has occupied my mind for these twenty-five or thirty years, and I was in correspondence with Sir Henry James about the perplexing entries-or rather one of them-which involve the name among those under the heading of 'Terra Hugonis filii Baldrici' as

long ago as January, 1863. Why there should be two entries instead of one is a mystery; and it is a great misfortune that the last of them cannot be *exactly* read by reason of what Sir Henry calls 'a blotch of scattered ink.' I do not think the accepted reading is right, and the authority just quoted speaks of it as 'doubtful by reason of the blotch.' My impression very strongly is that the name which has been read Broctun is not perhaps meant for Broctun, but that it involves a *mistaken* entry of the Kemesdayll three carucates as to their being in Fitz Baldric's fee; and that consequent on this mistake arose the necessity for a second notice of the same lands, and, of course, a corrected one. On this theory I can make all things harmonise save only two bovates, and I can see where that discrepancy originates; at least it appears so to me. Two days later he writes, "Touching Camisedale, nine carucates have to be accounted for, and the Kemesdayll is *juxta* not *in* Greneowe. . . Compare, too, the carucateage of Camisedale, Ingleby, Broctun, and Broctun alia or magna. Compare also the areas of Ingleby, Greenhaw and Battersby *inter se*, and with Kirby and Broughton. The composition of the relative fees of Meinill and Eure, and necessarily of Baliol, all have to be considered; and the connection between Baliol and a-if not the-great predecessor in the tenancy of the fees afterwards held by Baliol and Eure, wants sadly to be cleared up. None of these old pedigrees hold water when examined. Most of them are sheer romance in perhaps the majority of the earlier generations, and I am sure that there is a great addition to be made to our information as to the earlier tenentes-or one of them-of the fees in Cleveland afterwards held by the Baliols. I have in my possession the seal of one such lord, Guido de Bovincourt, or, as the name is spelt on the seal, Bovencorh. The Henry de Percy de Battersby has never been cleared up yet. Graves' statement that he belonged to the Kildale Percy family is, no doubt, right. The study of the relative areas accounted for as cultivable in the Domesday returns, and its comparison with the inferential or ascertainable condition, agriculturally, in the case of our various manors townships, etc., is a matter of most difficult investigation but it is at least of equal interest and value. But very few think of it. Some of my conclusions, so far as I have gone, are rather startling. To the said investigation I am adding the results of an agricultural acquaintance with the nature of the soil, etc., in almost every field in my parish. Have you any idea, or made any calculations, as to what was-or what was not cultivable or cultivated at the Domesday date, and of the reasons why in either case? It is a curious, but instructive, enquiry."

Under date of April 20th, 1891, he writes "The 'Manor' question, as it affects and is affected by the History of Whorlton and its barons (and mediately therefore Greenhow), is one of no ordinary difficulty, perplexity, and obscurity. I know a certain amount, and I infer a certain amount, and as I am singularly fortunate as regards the somewhat analogous case of Danby, by reason of certain absolute 'landmarks to act as guides, my inferences may perhaps some day (if I am spared) be verified, if not they will be corrected. I refer of course to the *ancient* 'manor.' So-called 'manors' of comparatively recent creation are another

matter. And then the fact that there was a Seneschal at Whorlton is one that needs more attention than it has yet met with."

On January 3rd, 1810, he wrote, "There is more matter for curious and cautious speculation and research in the early or pre-medieval history of your parish than in the case of nine out of ten, perhaps nineteen out of twenty of the parishes in Cleveland. I can see the way, possibly, up to a certain point; but what is wanted is such a mass of statistics as would be given by either leases or conveyances of three centuries old. Earlier still Inquisitiones post mortem, and of both Meinills and Balliols, and the Eures as well, would quite certainly give up interesting details."

On an earlier page I have quoted a letter from Mrs. J. R Green in which she expresses her extreme interest in what Atkinson had told her about his investigations respecting the "mark." Commenting on her words Atkinson says, "I was talking on this subject with Professor Earle and Sir Frederick Pollock when in London and Oxford early in the year, and their interest was equal to Mrs. Green's. Only I cannot quite gather all my clues together yet. Your 'Esby marche' is of interest, and I am not sure *Aystangarth* may not give up another illustration. There was as much a *mearc-mot* there as at a place near Scarborough, where in the 13th Century I know the name was written *markemod*, *markmote*, *mearmacot*, etc." In the following month (June 15th, 1891), he wrote, "When at Bolton Hall the week before last, while reading a variety of ancient documents with Mr. H. Powlett (to ensure the accuracy of the transcript), I came on a further illustration of the term *marca*, *marka*, *marcha*, as in the 'Esby marche' you quote, and of further terms of the same nature. You would see that Mrs. Green was interested in the questions involved, and I cannot but think it likely that some further illustration may have existed in your district, if it does not now. He sent me a drawing of an enclosure of land, which lay in two different townships. "That enclosure had a marked name at the early date named [six centuries ago] and retains a survival of it still. The name in question was *marke mot*, *marke mod*, etc. It occurs in five separate deeds which I transcribed twenty years ago or thereabouts. The meaning of the name, which is evidently identical with Kemble's alleged *mearmacot*, is, in that case, tolerably clear. Now your *Aistangarthes* is, I think, beyond dispute, an enclosure of the same nature, I mean part in one parish, part in another, and there ought to be, or has been, a *mark* or *march* there also. Have you ever met with any trace of it?" I had before this come to the conclusion that the old name *Aistangarthes* is represented by the present day field-name "Hasty Garths." The enclosure so called is situate just below the junction of May Beck with Ingleby Beck, abutting on the Easby boundary, and only separated by one field from the boundary of Little Broughton. No doubt the name would be applied originally to a larger area. Writing on May 20th, 1891, Atkinson says "As to *Aystangarth* I have little or no doubt as to its approximate position. There is one fact alone which settles it to *within less than half-a-mile*; another, which, with the other, probably fixes it within much less than that," On June 22nd he wrote, "Esby marche is a great fact, and I wish I could actualise the possibly greater one latent

(perhaps) in Aystangarthes." A year later, on June 22nd, 1892, he wrote, "Aystangarthes was not where you put it between Easby and Ingleby, but part in Ingleby and part in Broughton." I replied that the original Aystangarthes in all probability adjoined both Broughton and Easby. By return of post he said, "The Broughton part of Aystangarthes was in *Little Broughton*, which, (unless I am mis-informed) does not extend to the Easby 'marches'." To this I responded that the Broughton adjoining Easby was *Little Broughton*. Atkinson, however, rightly or wrongly, eventually gave up his opinion that in the name Aystangarthes there was probably latent a very interesting bit of old history, and came to the conclusion that it was simply due to a personal name. On January 27th, 1896, he wrote pointing out that the place-name Asenby, in the parish of Topcliffe, is in Domesday written Estanesbi, and later Aystenby, Estanby, Aystanby. The old Scandinavian personal name Eysteinn is common enough in old records, sagas, etc., and no less than a dozen men of this name are chronicled in the *Landnamabok* alone. It was no wonder if two or three persons of the name found their way into England, and gave their names to their lands. "Thus Aystandale, even with the (as we call it nowadays; 'cockney' *h* stuck on to it, is fully accounted for."

In the early days of the year 1890, in the course of a correspondence regarding the meaning of local place names, I called Atkinson's attention to the names "Burrow Greens" and "Castle Hills" occurring in the township of Easby. He replied, January 14th, 1890, "I have long been perplexed over the Castle Hills as well as Burrow Greens. There must have been (if no traces are extant) a considerable earthwork there-and likely analogous to Levington 'Castle.'" A while afterwards, on making an excursion to the place, I discovered that an earthwork still existed there in a remarkably perfect state of preservation. This I described in the "*Yorkshire Weekly Post*." Atkinson was greatly interested and visited the spot at least three times in spite of his increasing infirmities. He also proceeded to make pilgrimages to other earthworks of like character of which he subsequently gave some account in the "*Weekly Post*."

Referring to the Easby earthwork he said, "It is of the same description, and approximately of the same date, as the so-called Castle from which Castle Levington takes its name;" and in a communication to a member of the Cleveland Field Club, he says: "The day I was able to join the excursion party at Kildale, a few weeks ago, I succeeded in getting measurements of the Easby Castle Hill, which is a singularly interesting analogue of the Castle Levington ditto, for they are both on the verge of an exceedingly steep bankside, and have also had, if not *have*, an evident breastwork, with a deep ditch or trench on the land side." Writing on December 8th, 1891, he said "Burrow or burrows is but another alias or form of A. S. *burh*, Scand. *borg*, and in other parts of the North of England and in Scotland the more usual form is *brough*. One of the finest and most distinctive I am acquainted with in N. Yorkshire is in the parish of Aysgarth, where the inner mound, but slightly elevated above the general level, is surrounded by a perfect circular ditch or moat, and that again by a still nearly perfect vallum. There is another, but with the inner

mound more considerably raised, in the Mulgrave Woods, very near the west end of them and the Foss Mill there. I was inspecting several works of the same kind in Galloway two or three weeks since, one very curious one on which the inner mound on the landside (it was girt by the sea on three-fifths of its circuit) was kept up by rude granite-block walling. But I doubted if this were really ancient as the mound was one of our home finest specimens, however, is very near to Middleham Castle for it shows distinctly the evidences of two out of the three phases a large number of these *burhs* have passed through. The very finest and most perfect of all I know is about two or three miles from Dalbeattie (the one by the sea side just named being about six miles from the same town but in the opposite direction). I think I know of 16 or 17 in Kirkcudbrightshire alone, the local name for them there being 'moat' or 'moat-hill.' The one three miles from Dalbeattie is "moated" in our English sense, but many of them are not, or not now traceably so ... It is noteworthy that the Roman Road (on which the camp on Lease Rigg was placed, and which camp originated the High Burrows and Low Burrows Farms' names), [near Danby], when last seen is aiming directly for *Goldsborough*, and that there is traditional mention of a large earthwork there. I look upon that as the site of the terminal *Castra speculatoria* to which the Roman Road led"

On December 11th, 1889, he wrote urging me to make a systematic collection of the old field-names in the Parish of Ingleby. He said: "Copy every field-name without exception, you can always eliminate afterwards. You will meet with dozens of 'duplicates.' No matter. The very redundancy of the same name may be instructive. It is absolutely true that, conversant with the history of my own parish as I was, I learned more from these counterparts of conveyances than I had supposed there was to know, and certainly got a livelier conception of my own shortcomings than had ever been suggested before. And what I have learned has affected matters and conclusions of a much wider scope than merely the past of one great parochial district. In fact, I am obliged to modify conclusions, which have been accepted as valid by Freeman, Green, Pitt Rivers, Earle, and others among my friends and correspondents. I am afraid I am too old to do what wants to be done, and which I could do *now*."

Acknowledging a list of field-names occurring in the Parish of Ingleby, he said, December 28th, 1889, "Although there are fewer-and by many-significant field-names in your list than I had supposed would be the case, even with so low a date as that given, still there are a few well worthy of note, and one among the chief of them is one I have some time since been inclined to claim as, perhaps, of great ethnological importance. I do not venture to say I am right. My theory will have to be tested by the scrutiny and criticism of the actual scholar. The word I refer to is *Wandales*, spelt in your list 'Whandales,' and occurring in Greenhow. As far as I can attain at present that term may, probably does, indicate no colonist-cultivating settlement in the place where it occurs earlier than a Scandinavian one. The word is essentially an agricultural term, and it is neither English (Anglian), nor Saxon (Germanic, in that application). But it

is old Danish, and exists in the same form and sense in my old friend Dean Rietz' admirable Swedish Glossary. *Bare scope* disguises a good old Cleveland word, viz., 'Scaup' Toft Hill, Tofts, Kirk Close, Kirk Bank, How Hill, Burton Hill, all provoke enquiry; so also do Chapel Field, Chapel Garth-unless they clearly connect themselves with some Dissenting Chapel, which I hardly anticipate as likely. 'Two Days' Mowing' 'Four Days' Work,' and all that class of names are full of interest."

The first list of Ingleby field names, which I submitted to Atkinson, was from a Field-book or the date of 1847. Subsequently the late Lord de L'Isle and Dudley very kindly lent me a Field-book of the date of 1764, and I was able to submit to Atkinson a few further names. Respecting one of these, Watelands- he remarks: "There are two places in this Parish which were distinguished by that name from about the year 1200 (as I know-how much before I can't say). One of them is still called Wedlands or Wetlands Head. Besides, I know of the occurrence of the same name in, I suppose, a dozen (may be twenty) other cases, all going back to from the thirteenth to the fifteenth century, and to be met with in almost as many Cleveland townships. It is one of the commonest open-field-system names, and it simply represents a modern form, 'wheatlands.' The oldest form I have is *hvedelandes*, and the contained reference is to a long disused system of agriculture, which necessitated such names as wheatlands, linlands, beanlands, peselands, ryelands, haverlands, etc. This last name occurs in half-a-dozen different localities in Danby in my 1656 abstracts."

In a field known as 'Chapel Hill," in Greenhow Botton, I discovered what appeared to be the foundations of an ancient *capella* and Atkinson wrote, 'The probability is that there were in medieval times chapels in every township. There was a chapel even in Little Kildale, besides the parish church . . . There was a Capella B. Mariæ Virginis infra ecclesiam parochialem Omnium Sanctorum de Aton; over and above the Chapels of Little Ayton, Newton and Nunthorp."

From about 1150 onwards to the date of the Dissolution of Whitby Abbey, in the 16th century, the tithes, etc., belonging to the Ingleby benefice were in the hands of the Abbot and Monks of Whitby. How were the "duties" of the church taken during that interval? On January 23rd, 1891, Atkinson forwarded me the following scrap of information bearing on this enquiry: "There was an authentic 'Robertus Clericus,' who paid to the Fifteenth, conceded to Edward 1 in 1302, at Ingleby (Greenhow). I cannot undertake to say he was "Clerk in Holy Orders." *Probably* he was, and, as paying in such case, resident." Another scrap of local information received from Atkinson on April 8th 1891 was that "In 1306, the King's highway from Broughton to Greenhow was called Scotstye." And on the 25th of May following he expressed the very interesting opinion, " You have the 'letting-down' of a town, as It strikes me, within your parochial district, though possibly your materials may not be ready to your hand."

From a letter written by Dr. Atkinson to a member of the Field Club on June 14th 1893, I make the following extract: "Hilton Church is one of the

most interesting, remaining still in Cleveland, I have not seen it since it was 'restored' - for I think I heard of something of that sort a few years ago. There used to be most curious features in the chancel arch, which arch I had no doubt was a part of the original Norman Church, as well as the two doorways on the north and south (if I remember) sides of the Church. There were also unquestionable indications that the east end of the chancel *had had an apsidal form*--- There are many banks or quasi-banks (as my memory serves me; it is 15 to 20 years since I was there with time to look about) at Hilton, which *probably have a special interest of their own*, and that in connection with considerations of mediæval economy, which is not too usually thought of as recognisable, much more interesting."

In 1889, I had printed the Ingleby Parish Register, into the introduction to which I had embodied extracts from certain documents contained in the Whitby Chartulary. On page IX I had ventured to say, "Dr. Atkinson draws the inference that this confirmation of Guy de Balliol took place before A.D. 1138, and the original grant, of course, still further back in time. But in so doing he is inconsistent, etc." When my book appeared, he wrote to me endeavouring to maintain his own conclusions, but re-examining the Baliol pedigree. On November 15th, 1889, he said, "The old existing pedigrees of Baliol are nearly worthless by reason of their being both notoriously imperfect and incorrect as well. Plantagenet Harrison's, which is at my side as I write, is as little to be depended upon as Dugdale's. By far the best I am acquainted with is by Longstaffe, and certainly, compared with the others, is very good indeed. I am inclined to think that, so far as any part of my note [in the Whitby Chartulary] to Guido de Baliol's confirmation depends on Dugdale's genealogy of the family, it is not much better than waste paper. Thus, I *know* now that there was a Guy de Baliol, who, before 1120, gave three churches (Stokesley being one of them) to St Mary's at York for the souls of his wife Dionisia and his nephew Bernard de Balliolo. I know, too, that there was an early Wimund de Baliolo who is said (in Dodsworth's Collections) to have had issue Guy, Bernard, Joceline and Hawise, and who, beyond doubt, had a son Guy, and another son whose name does not transpire. This Guy, who was still living in 1112, and it is not (yet) known how much later, had issue a daughter Hawise, with whom we at Whitby or Ingleby have nothing to do. Guy's unnamed brother had issue Bernard, Joceline and another son. This Bernard was still living in 1132, but was dead before 1153. By his wife Matilda he had a son Guy, who was acting as the head of the family in 1152; and, besides him, other two sons, viz., Ingelram and Bernard, who (the latter) married Agnes de Pincheneia, and made grants to Rievaulx subsequently to 1161. This Bernard had a son Eustace, who in his turn gave being (among other children, I believe) to a Hugo de Baliol. The Guy first named, and his nephew Bernard *who succeeded him in the Barony*, and the Hugo named last of all, are the three main Baliols concerned in the charters you have taken from the Whitby Chartulary. There is, I believe, no more doubt about all this than about anything else that rests upon clear written evidence. Now, as Guy de Baliol, the first, was, it would appear to be certain, dead before 1132, you will see there is some reason for giving an early date to his confirmation of Adam Fitz

Viel's grant of the mill. The second Guy's confirmation of his uncle's and his father's grants-about 1152-may be safely taken as dating his accession to the family estates, etc" and is too late for the Whitby deed. Who the *clerical* Hugo was does not appear. He may probably be accounted for on the same principal as that on which two Geoffreys de Percy existed, *brothers* (their names are both in one deed, if I remember), the explanation being that one was base-born, and took orders." On December 9th following, he wrote, " As to Guido de Baliol, I am unable to clear up *all* the difficulties, but I can see my way, I think. I am clear as far as this-that he was the second baron of the name; that he was the son of the first Bernard, and brother-elder brother (as everything almost made me think when I wrote my note in the Whitby book, Dugdale & Co. to the contrary, notwithstanding) moreover-of the second Bernard. The elder Bernard was still living in, and it may be after, 1145. He gave a confirmation after this and before 1153. His son Guy, (elder brother of Bernard II, as aforesaid), confirmed his father's gift to St. Mary, at York, 'about 1152,' as is concluded by Mr Longstaffe-a man from whom I do not care to differ lightly in such matters. It is, however, possible that he may have become the head of the family before that, though not much before, and about the time of his brother's succession we know nothing precise. The grants to Rievaulx were made after, or (?) in, 1161 and he confirmed the grants of his father already, as previously, confirmed by his brother Guy, as late as between 1186 and 1189. If I can get a day at York before long I will examine the authority on which several of these statements are founded. But these facts are quite clear-that he (our Guy) was *not* the son, but the *grandson* of the Guy named by Dugdale; that he was the *elder*, not the *younger* brother of Bernard II; and that his confirmation of Adam's gift of Kirkby Church must date somewhere between 1147 and (c.) 1152; also that he is not named by Dugdale at all. If all this is authentic, as I think it is, the 'Whitby deeds enable us to add two items to the genealogy-perhaps more, on enquiry. Your criticism as to the dates is mainly just. "

Discussing the date of the Cleveland Burial Mounds, Atkinson writes, November 15th, 1889, "Nearly twenty years ago, and on the ground that, in the whole series of Cleveland interments I was then personally acquainted with (more than 100 in number), I had only found such and such indications of bronze, I tried to contend with Greenwell and others for an earlier date for some, at least of these barrows. But I hadn't a leg to stand upon, and gave in as reasonable men do when they have proof that they are wrong, or even not right; and every year's experience has but served to prove more emphatically how absurd any other supposition is.

I have been asked a hundred times, and a hundred times to that I dare say, what date I assigned as possible or probable to our Cleveland Barrows, and the answer I have given-and given to a score or two of enquirers within the last few weeks, in connection with the houe in Skutterskelf Park-has been, 'say 25 centuries ago,' with the accompanying remark, usually, that all attempts to answer such a question must necessarily be vague. I remember once, when much pressed for a more definite answer, if it was possible to give one, giving such an answer. The

enquirer was the late Bishop of Lincoln, who came here to pay me a visit. He had been inspecting, and was still busy with interest in, my somewhat considerable as well as interesting and valuable series of urns and other matters derived from the Cleveland grave-mounds. He asked the usual question just noted, and I answered in my usual manner. He was barely content, and pressed me by repeated questions, and at last I said I ventured, *as my own view only, and as the result of speculation almost more than legitimate induction*, to assign a possible age of 28 or 30 centuries, and I concluded with, 'But you know, my lord, this is only my private notion of what may be possible.' His reply was, 'I had rather have your theories than most other men's arguments. You have evidently given your mind as well as your interest to the personal enquiry, and I see you have a reason for everything you advance. You have told me just what I wanted to know, namely, your own personal impressions.' But, observe, I would not advance any such surmise as a thing to be accepted whether or not. For there is *no evidence to make it good*. In my own thoughts it is possible, and that is the utmost I can say."

Greenwell and Atkinson once made arrangements to open one or two barrows on the Ingleby Moor. Permission was obtained to do this, but something occurred to prevent its being done. Dr. Atkinson thought one or two of the mounds might repay examination, but he was not very sanguine.

Atkinson had a very keen scent in antiquarian matters, and wherever he went he was sure to find something, which kindled a new interest or re-kindled an old one. On June 15th, 1891, he wrote: "I was at Stone Raise, on the hill near Addleborough, the week before last.... You know the Cumberland Raises, I assume. Have you ever come across the ancient form of the name or term? Among Lord Bolton's deeds the other day we came on that of the Raise I refer to, and it is such as to set me speculating." Two days later he wrote: "I have been familiar with the word Raise and its application for more than 40 years, and it was but ten days ago I got what may prove to be a hint as to its origin or derivation. You know nothing, I take it, about the interior structure or fabric of the Raises, or even if there were any? A very great deal may turn upon this point, and I do not make the remark without reason on observation and fact."

During his visit to Bolton Hall he became also especially interested in the word "rein." In his letter of June 15th" 1891, he writes: "I was also examining some, as I thought, very evident and correspondingly interesting traces of ancient terrace-cultivation, or linces. Mr. Seebohm [The English Village Community,' p. 381] states that they occur in Bilsdale, Bransdale and Farndale, and that in Nidderdale they are called 'reins.' Do- you know of these terraces in the Dales named, or in Ribblesdale, or Wharfedale, or of the word *rein*? With the word itself, and a varying application of it in this Cleveland District, I am familiarly acquainted, as well as with still another application and sense of it in Wensleydale, while in the old documents in the Muniment Room at Bolton Hall, it occurs in the forms *rana*, *reina*, very frequently. But it is

more with the evidence of ancient terrace culture that I am at present interested." Writing two days later he says, "The latinized form of the word was in continual use in the formal grants or conveyances of five or six centuries ago. Some learned man found the word *rana* in such documents as I have referred to, and looking in his Latin Dictionary found *rana* = 'a frog, a paddock,' whence he translates *rana* in his old deed by, 'paddock = enclosure' ! "

He says "You will see the local interest of the Reins or traces of 'Terrace cultivation' from the following passage, by her brother, extracted from Miss Ashley's translation alluded to in my letter, 'Mr. Gomme has hazarded the supposition that our later rural organisation is in part derived from the Iberian race. He maintains that the traces of 'terrace cultivation,' which we come across here and there in England and Scotland, point to a primitive Iberian hill-folk, whose agricultural system 'in some unexplained way' became incorporated with the agricultural system of the later Aryan 'village community.' His argument turns chiefly on certain alleged Indian parallels. But even if his examples proved the point for India, which is hardly the case, there is in Britain certainly no evidence for Mr. Gomme's contention. If the terrace-cultivation is to be assigned to a prehistoric people, the archæological data would apparently place it in the Bronze period-an age long subsequent to the Celtic immigration.' "

Atkinson thoroughly enjoyed a laugh at the expense of the rash persons who guess at the derivation of place-names instead of working them out. He lamented the production of Canon Taylor's "Words and Places," though he gave him credit for being a very able scholar. Writing on February 3rd, 1897, he says: "Mr. Henry Bradley says he only knows of two or three sane derivationists." In a letter dated December 12th, 1889, he speaks of "the learned gentleman, who one day gravely told me this was a most interesting country to travel in, from an ethnological point of view, for he had noted three stations between Grosmont and Picton (the latter included), which by their names testified to the former occupation of the district by the Danes, the English and the Picts!! I was like the Psalmist, 'I held my tongue and spake nothing.' "

He greatly regretted that no sound work on the derivation of place names yet exists, and insisted that the significance of each name should be worked out on historical principles. Referring to Canon Taylor and the numerous tribes of guessers he says, "It would be a good 'task' for such transgressors to set them to write out so many articles from the new Great Dictionary for each offence."

Dr. Atkinson himself was a most cautious and painstaking worker at derivations. In a communication of the date of November 23rd, 1889, he says, "I never work less than six hours a day at my desk, either in writing or study. I corrected a long proof yesterday of a paper touching the derivation of the place name of Seamer. This is in the forthcoming Somersetshire and Dorsetshire Notes and Queries. Professor Earle

entirely agrees with me in the line I have taken, and the conclusion I have come to."

About the same date I was in correspondence with him regarding the name Aireyholme at the foot of Rosebury Topping. He identified the name with the old *Hergum*, from which name he inferred that the horg or blot-stén-the sacrificial open air stone or stone structure used in the old worship of the Danes stood at the foot of Rosebury, "most likely not far from where the farmstead now is. Such sites are apt to be very permanent." In spite of the name I was inclined to suppose that those old worshippers must have sometimes delighted to pour their libations on the *top* of Odinsberg, their sacred mount, though the summit may have been a Holy of Holies to which only the priests might come. On January 3rd, 1890, he sent me an article, which he had written in a Magazine edited by Mr. Gomme on the subject of *horgs*, which had been replied to by Mr. Stevenson. He says, "More than one of my philological friends-Henry Bradley among them-thought that the ascertained and admitted Danish characteristics of the District in which these *horgs* occur were quite sufficient to establish the Danish, rather than the Anglian, origin of the word. Mr. Stevenson, however, is undoubtedly one of our most scientific, as well as soundest, scholars, and everyone of his strictures on Canon Taylor's much quoted book is just as well founded as accurate." This shows how gracefully Atkinson could bow before the judgement of others. When his own further investigation proved that he had previously been wrong he was ever forward to acknowledge his error. Thus he writes in the same letter, "My Butterwick breaks down inasmuch as I ascertained, beyond question, last spring, that Butterwick was neither more nor less than Butterwhait, for Butterthwaite. And there is a curious piece of inferential history connecting itself with the fact. I have a longish paper nearly half finished dealing with the matter in, I hope, a practical sort of way."

Atkinson was always ready to help other antiquarian workers. Writing of Canon Greenwell's well-known work, he says: "Yes, I know Greenwell's Barrows. I induced him to print it, and made a fair copy for the printer of more than half of his part of the book. I reviewed it also in 'The Academy.'" On June 20th, 1891, he writes: "I have a note from Baring Gould this morning touching on the question of surviving old 'Songs and Ballads' in Yorkshire. Have you ever come upon anything of the sort in your part of Cleveland? I heard of one last year, which it had been customary to sing on occasion of a wedding in the parish. This was in Glaisdale." Again, in the following December, he writes, "At the request of Dr. Tylor, and the instance of two or three others of my friends, I am endeavouring to procure mementos of the old Cleveland witchcraft matters and observances; among other things actual pieces of the 'witch wood' as worn or carried by people within the last half century, or accurate descriptions of such pieces given by such as have seen them in the use (more or less habitual) or wearing of old folks; the same and in both particulars, as to pieces of 'witch wood' that had been in actual use in the dwelling-house, stable, or other outbuildings attached' especially as

made capable of suspension either by twisting into a loose knot, or by the insertion of a ring into one end-also as to the existence in any old fashioned house of a 'witch-post' (made of the rowan-tree wood, as all these portable or suspensory matters were. I am sending several matters of the kind (as well as churchyard pottery, etc), by request, to Dr. Tylor for preservation, as well as illustrative purposes, in the new Oxford Museum, and I should be glad to make my selection as complete as I can. Have you come across anything pertinent to my enquiry-also of the use of the wood of the elder (as well as that of the rowan-tree) in a witch connection whether as a spell or otherwise prophylactic?"

Folklore specially interested him latterly, and he made it to some extent available in the production of his books of Fairy Tales. Referring to the former of these he says in the course of a letter dated the 2nd of March 1892, "Scholars are digging deeper than of yore into the fossiliferous strata of folk-lore, and some day we may hope to know more about the nature and the epoch of the conception we nickname a 'giant.'" Again he writes, on the 22nd of the same month "The 'Old Ram' recitation from Richmond proves to be, as I was sure it would be, one of the most interesting bits of old folk-lore I have come across. It appears now the skin of the ram is not stuffed as I was told at first, but tenanted by a boy."

The temptation to quote from Dr. Atkinson's letters has been so strong that I fear I have gone beyond all fair limits. But I think that many of the extracts, which I have given, will be interesting and instructive to those intelligent persons who take part in the excursions of the Cleveland Field Club, and I am not without hope that some of them may offer suggestions for further investigation and much as I have quoted, I might have quoted much more largely without exhausting the interesting passages occurring in letters with which he favoured me. Thus on March 9th, 1892, he writes, "I think it is ascertained that over and above the Whitby Thingwala there were two Thinghows in Cleveland, and that one of them is (most likely) localised. Possibly the other may be." It may be beyond the powers of the members of the Cleveland Field Club to localise this Cleveland Thinghow. But, in another, letter he suggests that all obtainable field-names in the parish of Kirkby-in-Cleveland should be collected, and specially notes the interest that might result from a comparison of these with the names occurring in the Hexham "Black Book." The systematic collection of the field-names in the various parishes ought not to be beyond the powers of members of the Field Club.

The old interests of the old man died hard. On January 24th 1896, he writes, "At the latter end of my 82nd year I am about to revise and re-edit my 'British Birds, Eggs and Nests.' " And on July 20th, 1897, he says, " My attention has recently been called to what were ' Olde Walles.' when the Whitby Abbey was suppressed in 1535. In spite of infirmity I made an effort last week to see the same. They are most interesting."

I think that what I have written in the above pages, though not claiming to be in any sense a " Life" of Canon Atkinson, will give the reader a very

excellent idea of the man and his work. For no less than about 53 years he went on working quietly at his desk and in his parish, and unearthing the buried History of the Cleveland moors and fields. Once or twice he made an effort to obtain a transfer to a more lucrative benefice as Whitby and Stokesley chanced to fall vacant. But at Danby he remained until the end, receiving honours from the world of science and letters, but from the Church no recognition of long service or merit, until in his extreme old age the present Archbishop conferred upon him the barren dignity of an honorary Canonry of York.

His writings were very numerous, and he did not, himself, remember them all. The following may be noted,

" Glossary of the Cleveland Dialect (1868); History of Cleveland, vol. I. (1874); Handbook for Ancient Whitby and its Abbey (1882), " Forty Years in a Moorland Parish (1891);" "British Birds, Eggs and Nests"; "Lonsdale Glossary"; "Walks, Talks, Travels and Exploits of Two School-boys"; "Play-hours and Half-holidays"; The last of the Giant Killers"; "Scenes in Fairyland." He edited for the Surtees Society" The Whitby Chartulary," "The Rievaulx Chartulary" and "The Furness Coucher Book." He also edited several volumes for the" North Riding Record Society." His contributions to magazines, etc., were very numerous. Among his less important writings may be mentioned a paper on Guisbrough Priory, which he contributed to the Handbook of Middlesbrough and District, compiled by the members of the Cleveland Field Club, and published in 1881, by Mr. W. H. Burnett.

I have to thank Mrs. Atkinson for the excellent photograph, which forms the frontispiece to the present number of our Proceedings, and for some information regarding her late husband.

April 25th 1901.

JOHN HAWELL.

RICHARD TAYLOR MANSON, F.G.S.

BORN MARCH 17TH 1832

DIED MAY 31ST 1900.

Dr. R. T. Manson was the son of Mr. Robert Yule Manson, of Liverpool, a native of Berwick-on-Tweed. He spent his boyhood in Liverpool, and later was occupied with scholastic work at Heighington. Afterwards he qualified as a doctor, and practised at Howden-le-Wear. Having purchased the practice of Dr. Arrowsmith he settled in Darlington. He became a member of the old Naturalists' Society of Darlington, and some years later founded the present Naturalists' Field Club, which owed very much to his enthusiasm. He was especially interested in Geology, and a few years ago he was elected a fellow of the Geological Society. His book entitled "Zig-zag Ramblings of a Naturalist" (originally contributed to the "Darlington and Stockton Times") was published in 1884. A second edition was issued in 1898. In the Introduction to the first

edition he said, "One object held steadily in view was to add, if possible, to the number of those who find a charm in the ever-speaking phenomena of Nature, whether observed in the quarry, the hedgerow, or the river. That to so many 'The world *in vain* unbosometh her beauty' is a matter for regret." And in the Introduction to the second edition he says, "Nature's roofless cathedral is always open to her worshippers. In what I have written I have endeavoured, without I trust posing as other than a student myself, to lead neophytes into the vestibule of the great God-built fane." He wrote much to local newspapers-sometimes in verse. He published a book entitled, "Old Darlington," and a romance called "Cecilia Kirby." Another publication of his was a History of the Synod of Streonshalh. He was a member of the Darlington Town Council. He was elected a Fellow of the Geological Society of London on November 9th, 1898. I had the honour to propose him as a member of The Yorks. Geological and Polytechnic Society, and also of the Cleveland Field Club, and he more than once sent me for identification interesting shells found on the Saltburn beach. He was a painstaking, reverent Naturalist, whom it was good to know.

April 27th 1901.

JOHN HAWELL.

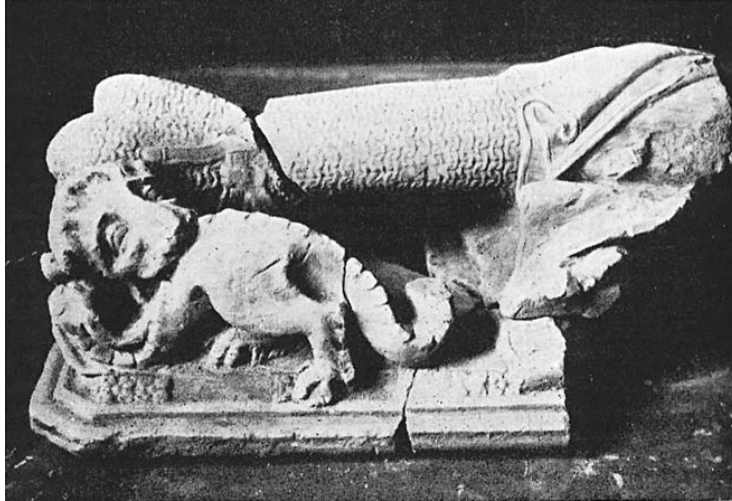
EFFIGY FOUND AT NORMANBY.

A very notable discovery, already recorded was, was made late in the autumn by Mr. Hughes's workmen at the Normanby brick works. The sculpture which was found there formed the lower portion of a monumental effigy of a knight clad in chain mail and with rowell spurs, the date being about 1310-1320. There is nothing remarkable about the sculpture itself, which is quite of the usual type, and two almost perfect and very similar effigies may be seen in the district in Ingleby Arncliffe Church, and a third at Crathorne

'What is remarkable is that the portions should have been found where they were, and at some considerable depth below the surface of the soil, and in the clay. It appears that other small portions were found not far off a few years ago, but they unfortunately buried again under a rubbish heap, and are now lost. These consisted of the arms and hands, or portions of them. The portions recently unearthed show the feet and legs, with the lower folds of the surcoat and the polyens of leather protecting the knees. When pieced together the sculpture measures about 2ft 6in in length by about 22in in width.

It is to be regretted that the heraldic shield (which would certainly form part of it when perfect) was not found, and so we are unable to say whom the effigy was intended to commemorate. The theory that the lion (with a mythical beast in its jaws), on which the feet rest, is indicative of a member of the Brus family is untenable. The lion is purely ornamental, and is commonly found in English effigies of the period. We are, therefore, quite in the dark as to whose the effigy was, or how it came to be found where it was. From the unusual sharpness of the carving, the absence of any trace of mortar on the under

side, and the fact that it was found by the side of an ancient road, it seems reasonable to think that the effigy was never fixed in its intended position in a church, but that it met with an accident on its way to its destination, and was thrown aside.



It should be noted that the moulded edge of the slab (with the four-leaf ornament so characteristic of the Decorated period of Gothic architecture) is not continued round the left side, which is broken and ragged. From this one may, perhaps, surmise that the monument was a double one of the knight and his

lady at his side. A broad slab carrying so much weight would be all the more liable to come to grief on a rough, hilly road, like that by the side of which the remains have been found. Perhaps, in this, we have an explanation of the presumed disaster.

The sculpture is most certainly a piece of English work, and my own idea (although it is only a guess) is that it was on its way from York to some church on the northern side of the hills. That it came from the same sculptor's shop as the effigies at Ingleby Arncliffe seems almost certain from the marked similarity in treatment of the ornamental accessories

Coatham, January 1901.

T.M.FALLOW

We are indebted to Mr. Fallow for the use of the block, by which we are enabled to illustrate the above notice.

SECTIONS OF BORINGS FOR SALT NEAR MIDDLESBROUGH.

The following Section is that of a boring made by the Owners of the Middlesbrough Estate, in June 1887, near Ormesby Road Toll Bar, Middlesbrough. (This Section supplied by the Owners of the Middlesbrough Estate).

	Ft	In
Brown Clay	6	0
Brown Clay and Stones	24	0
Hard Clay and Cobbles	4	0
Red and Grey	5	0

Marl			
Rotten	1	0	
Red Marl	2	6	
Red and Grey	1	0	
Marl			
Red Marl with	5	0	
Gypsum Veins			
Red and Grey	1	0	
Marl-very hard			
Red Marl with	1	1	
Gypsum Veins ...			
Red Marl	1	0	
Red and Grey	1	6	
Marl-very hard			
Red and Grey	4	11	
Marl with Veins of			
Gypsum			
Red and Grey	1	0	
Marl			
Grey Marl with	7	6	
Veins of Gypsum			
Red and Grey	2	0	
Marl			
Red Marl with	12	0	
Veins of Gypsum			
Grey Marl with	3	0	
Veins of Gypsum			
Red Marl with	6	6	
Veins of Gypsum			
Grey Marl with	11	0	
Veins of Gypsum			
Red and Grey	8	0	100ft
Marl with Veins of			
Gypsum			
Red Marl with	5	0	
Veins of Gypsum			
Red and Grey	4	6	
Marl with Veins of			
Gypsum			
Red Marl with	3	6	
Veins of Gypsum			
Grey Marl with	1	0	
Veins of Gypsum			
Red Marl with	14	0	
Veins of Gypsum			
Red and Grey	11	6	
Marl with Veins of			
Gypsum			
Red Marl with	12	0	
Veins of Gypsum			

Red and Grey Marl with Veins of Gypsum	10	0	
Red Marl with Veins of Gypsum	5	0	
Grey Marl with Veins of Gypsum	4	0	
Red and Grey Marl	25	2	200ft
Red and Grey Marl with Veins of Gypsum	21	4	
Hard Grey Marl	3	0	
Rotten Red and Grey Marl	3	0	
Red and Grey Marl with Veins of Gypsum	2	6	
Rotten Red and Grey Marl	1	0	
Red and Grey Marl with Veins of Gypsum	1	6	
Red and Grey Marl	5	0	
Blue Marl	5	0	
Red and Grey Marl with Veins of Gypsum	2	0	
Red and Grey Marl with Veins of Gypsum-broken	2	0	
Blue Marl with Veins of Gypsum	2	8	
Gypsum	1	0	
Grey Marl with Veins of Gypsum	5	10	
Red Marl	16	0	
Red and Grey Sandstone	4	0	
Red Sandstone	267	6	500ft
Red Sandstone-broken	41	0	
Grey Sandstone	2	0	
Red Sandstone	10	0	
Grey Sandstone	1	0	
Red Sandstone	147	0	700ft
Red Marly Sandstone	2	0	
Red Sandstone	131	10	800ft

Red Marl ...	7	0	
Red Sandstone	57	4	900ft
Red Sandstone with Small Beds of Marl	20	0	
Red Sandy Marl	8	0	
Red Sandstone	38	10	1,000ft
Red Marl ...	7	0	
Red Sandstone	1	9	
Red Marl	1	0	
Red Sandstone	4	0	
Marl	0	9	
Red Sandstone	7	0	
Red Marl	1	6	
Red Sandstone	4	0	
Red Marl (Sandy)	15	6	
Red Sandstone	17	6	
Red Sandy Marl	8	1	
Red Marl	8	0	
Red Sandy Marl	45	11	1,100ft
Red Sandy Marl with Veins of Gypsum	12	1	
Red Sandy Marl	10	3	
Red Marl	20	3	
Red Marl with Veins of Gypsum	140	2	1,300ft
White Stone	8	6	
Red Marl (very broken)	12	6	
Marl containing Salt	1	3	
Rock Salt	79	0	1,400ft
Anhydrite		6	
Rock Salt	10	0	
Anhydrous Gypsum	4	0	

The subjoined Section is that of a boring made for Messrs. Bolckow, Vaughan & Co., Ltd., by Messrs. Mather and Platt, at the Middlesbrough Iron Works. The top of the hole is 5 ft. 6 in. above highest watermark. (This Section supplied by Dr. W. Y. Veitch, F.G.S.)

	Ft.	In.
Made Ground	11	0
Slime (dry)	8	0
Sand with Water	10	0
Hard Dry Clay	10	0
Red Sandstone and Water	1	0
Sand or Loam,	3	0

with Water			
Hard Dry Clay	13	0	
Mixed Rock and Clay, with Water	11	0	
Mixed Rock and Clay, Dry	1	0	
Mixed Rock and Gypsum, Dry	6	0	
Shell of Mixed Rock, with Water	2	0	
Red+Blue Rock + small veins of White Gypsum, also Water	55	0	100ft
White Gypsum Rock, Dry	6	0	
Brown Shale, with Water	1	0	
Red Sandstone	4	0	
Red Sandstone, with small veins of White Gypsum	12	0	
Blue Pot Stone and Water	3	0	
Red Sandstone with Water	19	0	
Red Sandstone	134	6	300ft
Marl	6	6	
Sandstone and a little Marl	3	0	
Soft Red Sandstone ...	35	0	
Hard Dark Red Sandstone	9	0	
Hard Dark Red Sandstone, a little softer	5	9	
Red Marl	3	3	
Red Sandstone, with thin layers of Marl	7	0	
Hard Dark Sandstone, with a little Mica	23	0	400ft
Dark Red Sandstone, with a little Mica	9	3	
Rough red Sandstone	20	3	

Rough Sandstone, a little darker	Red	9	6	
Fine Dark Sandstone	Red	7	0	
Rough Sandstone	Red	12	3	
Red Sandstone, with a little Marl		19	3	
Red Sandstone, with Kernels of Marl		8	6	
Red Sandstone, a little harder		24	6	500ft
Hard Sandstone	Red	8	6	
Marl		12	6	
Soft Sandstone	Red	34	9	
Red Marl		9	3	
Soft Sandstone	Red	11	0	
Hard Sandstone	Red	13	0	
Soft Sandstone	Red	4	6	600ft
Red Marl		13	6	
Soft Sandstone, with thin seams of Marl	Red	19	9	
Hard Sandstone, with a little Mica	Red	28	3	
Hard Sandstone and Marl	Red	29	0	700ft
Marl		14	6	
Red Sandstone		8	6	
Hard Sandstone and Marl	Red	25	6	
Red Marl		15	9	
Red Sandstone and Marl		9	3	
Soft Sandstone	Red	20	3	
Soft Sandstone, with a little Marl	Red	5	6	

Hard Sandstone, with Marl Partings	Red	6	6	800ft
Hard Sandstone and Marl	Red	7	9	
Soft Sandstone	Red	4	6	
Red Marl		10	6	
Hard Sandstone and Marl	Red	9	3	
Red Marl		11	3	
Fine Dark Sandstone	Red	12	6	
Hard Sandstone, with Marl Partings	Dark	11	6	
Marl and a little Red Sandstone		6	9	
Dark Sandstone	Red	9	3	
Marl, Partings of Sandstone	with	1	8	
Red Sandstone		7	10	
Red Sandstone, with Partings	Marl	2	0	
Red Marl		21	6	900ft
Hard Sand stone	Dark Red	4	6	
Hard Sandstone and Marl	Dark Red	5	6	
Hard Sandstone	Red	4	3	
Red Marl		21	9	
Red Sandstone, with veins of Marl		9	9	
Red Sandstone		5	9	
Red Marl		43	0	1,000ft
Hard Sandstone, with thin layers of Marl	Red	8	0	
Red Marl		4	0	
Hard Sandstone, with	Red	2	6	

Grey Spots				
Hard Sandstone and Red Marl	11		3	
Red Marl	7		9	
Hard Red Sandstone and Marl	15		0	
Red Marl	15		6	
Hard Red Sandstone and Marl	10		9	
Red Marl	5		9	
Red Marl, with thin Seams of Red Sandstone	20		6	1,100ft
Hard Red Marl, with a little Red Sandstone	9		0	
Hard Red Sandstone and Marl	8		0	
Very Hard Red Marl	4		5	
Hard Marl and Sandstone	17		0	
Mixed Hard Marl	15		0	
Very Hard Marl and Sandstone	16		3	
Magnesian Limestone and Gypsum Rock	2		9	
Magnesian Limestone + Gypsum Rock, much lighter	0		10	
Magnesian Limestone	2		0	
Band of Blue Rock	0		3	
Red and White Rock	0		5	
Hard Gypsum and Lime	1		0	
Red and White Rock, rather salt	14		0	1,200ft
Marl and Salt Rock	2		0	
Hard Marl with blue spots,	5		0	

rather salt			
Marl and Dark	7		0
Coloured Salt			
Rock			
Salt Rock	66		0
Hard Red Marl	0		6
and Salt			
Very hard blue	1		0
Marl and Salt			
Salt and a little	7		3
Red Marl			
Solid Grey	0		6
Gypsum			
Salt and	1		0
Gypsum			
Bed of Solid	3		9
Gypsum			

The following Section is that of a boring made at South Bank Iron Works for Messrs. Bolckow, Vaughan and Co., Ltd., by Messrs. Vivian and Co. The top of the hole is ten inches below highest watermark. (This Section supplied by Dr. W. Y. Veitch, F.G.S.)

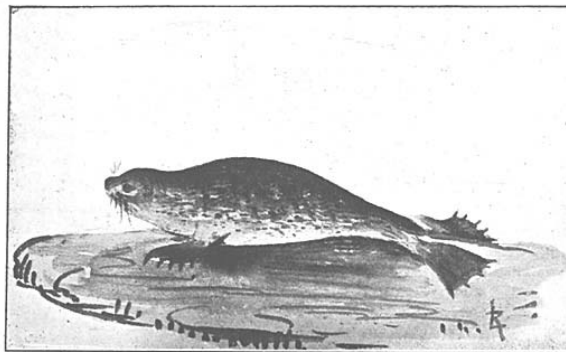
	Ft.	In.	
Made Ground	6	0	
Sand and Blue	10	0	
Clay			
Dark Brown Clay	7	0	
Soft Red Marl	2	0	
Brown Pinnel	1	0	
Hard Brown	15	0	
Pinnel			
Soft Red Marl	6	0	
Red Marl	16	10	
Red and Blue	7	0	
Marl with veins			
of Gypsum			
Red Marl with	3	0	
veins of Gypsum			
Red and Blue	21	3	
Marl with veins			
of Gypsum			
Red Marl with	46	8	100ft
veins of Gypsum			
Red and Blue	15	3	
Marl with veins			
of Gypsum			
Red and Blue	325	0	400ft
Shale with veins			
of Gypsum			

Blue Shaley Sandstone	2	0	
Red Sandstone with thin beds of Gypsum + Shale	10	0	
Sandstone with thin beds of Shale	11	0	500ft
Red Sandstone	415	8	900ft
Red Sandstone with thin beds of Marl	39	0	
Red Sandy Marl	8	6	
Red Sandstone	29	0	1,000ft
Red Sandy Marl	4	2	
Red Sandstone with small beds of Marl	46	0	
Red Marl	8	6	
Red Sandstone with beds of Marl	34	6	
Red Marl	17	8	
Red Sandstone with Veins of Marl	18	0	
Red Sandstone with beds of Marl	120	7	1,200ft
Red Marl with beds of Red Sandstone	21	11	
Red Sandstone with beds of Marl	14	6	
Red Marl with Sandstone	4	6	
Red Marl	43	0	1,300ft
Red Sandy Marl with veins of Gypsum	6	0	
Red Sandy Marl with blue Spots and veins of Gypsum	36	6	
Red Sandy Marl with thin veins of Gypsum	78	0	1,400ft
Red Sandy Marl with veins of	9	6	

Gypsum and blue spots			
Red Sandy Marl with veins of Gypsum	10	0	
Red Sandy Marl with veins of Gypsum and blue Spots	60	6	1,500ft
Hard White Stone (Anhydrite)	11	6	
Red Sandy Marl with Salt	21	0	
Red Marl with Salt	6	3	
Rock Salt	81	0	1,600ft
Hard White Stone with Salt	1	6	
Hard White Stone	1	6	
Hard Stone and a little Salt	18	0	
Hard White Stone with a little Salt in it	4	9	

**ON THE FORMER OCCURRENCE OF THE SEAL IN THE TEES ESTUARY,
AND ON THE ADJOINING COAST.**

BY R. LOFTHOUSE



Previous to the year 1830 large numbers of Seals (*Phoca vitulina*) frequented the estuary of the River Tees, and the seacoast, north and south of the mouth of the river. According to the late Mr. Fallows (see "The River Tees, and what has been done for it") the estuary of the Tees comprised between seven and eight hundred acres, completely overflowed at high water,

in some places only to the depth of a few inches.

Previous to this, however, the tide overflowed a much larger area of land, for in Bailey's "General View of the Agriculture of the County of Durham," published in 1810, we are told that about the year 1740 embankments were constructed, which remain in places to the present day, to secure the lands of Saltholme, near the Tees mouth, from being overflowed by the tide, and in subsequent times a good deal of difficulty appears to have been experienced in maintaining these embankments, breaches having, at different times, to be made good. The whole length of the embankment is stated to have been about four miles. The quantity of land reclaimed was for Saltholme, 600 acres; Billingham, 300 acres; and Cowpen, 500 acres. In the year 1800, Mr. Bamlet reclaimed above 60 acres, at Haverton Hill, afterwards called " Bamlet's Flats."

On both sides of the river were, and still are, extensive tracts of fine sand. That on the north side of the river was called Seal Sand, and appears from an old chart, dated 1762, to have had a channel all round it, the stream becoming divided at a point about opposite Cargo-Fleet, or a little higher at Samphire Point. The northern portion of the stream made a wide detour, and eventually effected a junction with Greatham Fleet to the east, and turning in a south-easterly direction, with the southern arm of the stream (which is now the navigable channel), at Seaton-Snook. Beyond, was a stretch of sand called "The North Gare," and opposite, on the south side of the river, "Bran Sand," or "South Gare," adjoining Tod Point, from whence was, and still is (though in one or two places near the estuary rather spoilt by slag banks, run out from adjoining iron-works), a fine stretch of sand extending past Coatham, Redcar and Marske to Saltburn-a distance of eight or ten miles-covered at high tides, and fringed by grassy sand banks. From Saltburn to Sandsend is a succession of Liassic Cliffs capped with Oolite, and reaching its highest elevation at Rockcliffe, where it is 660 feet high, and which is said to be the highest Cliff on the English coast. In places, the foreshore is rocky, alternating with level stretches of sand. No doubt in less populous times Seals lived and bred in suitable localities along this coast, and Seal Goit, marked on the ordnance map, derived its name from having been frequented by Seals.

Returning to the Upper reaches of the river, from Samphire Point to Yarm, the course of the river was extremely tortuous, and it is recorded that at times it took a vessel a week to sail from the mouth of the river to Stockton. In modern times the Course of the river has been straightened at one or two points by means of cuttings. In a map of the Acklam estate, dated 1716, and also in a chart of the river dated 1832, many islands or sand-banks are shown in the bed of the river between its mouth and Stockton; notably one opposite Middlesbrough seems to have been of considerable size.

From this description of the river, its estuary, and the adjoining sea coasts and surroundings, it will be seen that in less populous times, and when the river (comparatively speaking) was little used for shipping purposes, and with the fine stretch of sand at the north side of the river, covered only at high tides, but surrounded by a channel at all times of the tide, the locality was an

extremely suitable one for the Seal, an animal which feeds on fish (which are always plentiful in a river estuary), and is partial to an isolated situation, and is fond of basking in the sun, conditions which, it will be seen, existed and could be indulged in here in an eminent degree.

Macgillivray, a reliable authority on British Quadrupeds, describes the Common Seal as frequenting "estuaries, sea-lochs, bays, and the channels between islands, where it may be seen occasionally protruding its head above the surface, sometimes following a boat or vessel at a distance, but generally keeping beyond reach of shot. It feeds exclusively on fishes, in pursuit of which it can remain several minutes immersed. At low water it often betakes itself to rocks or small islands, on which it reposes until the return of the tide; and I have seen droves of twenty or more individuals thus basking in the sun. In estuaries they sometimes repose on the sands, where they are liable to be surprised, if the water be distant, for their movements on land are extremely awkward, and their hurry in endeavouring to escape affords an amusing sight, as they seem to tumble about in a ludicrous manner, throwing themselves headlong into the water from the rocks. Where there are caverns on the coast they find a more secure retreat in them, where, if attacked, they can escape by diving. They are frequently shot, either with ball or buck-shot; but unless killed outright are liable to be lost, as they dive, and are seldom seen again; or, although killed, unless the boat is quickly at the spot, they sink to the bottom, young and lean individuals more rapidly than older and fatter. When attacked with sticks, while on shore, they have been known to seize the weapon in their jaws and carry it off; and they are more easily killed by a blow on the muzzle than on the upper part of the head.

Seals may sometimes be induced to come nearer a boat by whistling, and they are said to be attracted by music, even that of the bagpipe. In a state of confinement they are gentle, and, if obtained young, manifest considerable docility, and become attached to their master. In their natural state they do not seem to exhibit the intelligence, which they might be inferred to possess from the great size of their brain, and the predominance of their cranial over their facial region; but their mode of life renders opportunities of observing their habits rare. They, however, show the social propensity, for when their labours are over they repose in company, and vast multitudes are sometimes seen ashore on remote islands."

"Their affection towards their young is also great, and they may be enticed within shot, or even brought on shore, by imitating the whining cry of the cub, especially if they have been deprived of it"

"The Common Seal varies in colour as well as in size. Macgillivray describes "the young as at first of a light bluish-grey above, clouded with darker yellowish-grey beneath, and the first coat of hair is longer and more bristled than the rest. When the pile is about to be shed it becomes of a uniform pale greyish-yellow or whitish tint. In young individuals the spots are darker and more numerous; in very old ones, they are few, larger, and generally brown. The claws, at first flattened, or cylindrical, become deeper and more or less carinate, often triangular, in their transverse section."

"The flesh is dark coloured and rank, but that of young individuals may be eaten; the fat, which forms a layer beneath the skin, affords oil of an excellent quality; the skins are used for covering trunks as well as being manufactured into leather."

"The female brings forth her young in a cavern, or among rocks, where it remains concealed for several days. According to the information which I have received from the country people, only one is produced at birth, and generally in the middle of the summer."

In Bewick's time Seals appear to have been much more abundant on the British Coasts generally than in later times. Writing in the early part of the last (19th) century, or late in the previous one, he states in his "Natural History of Quadrupeds", that, "Seals are found in great abundance on the coasts of Great Britain, particularly in the northern parts of the Island."

In Messrs. Clarke & Roebuck's "Handbook of the Vertebrate Fauna of Yorkshire," published in 1881 (page 8), the Common Seal is said to be a "casual visitant of uncommon occurrence along the coast and in the Humber. In the early years of the present century (*i.e.* 19th) Seals bred in great numbers at the mouth of the Tees, and in 1802, as appears from a document, a copy of which Mr. T. H. Nelson has sent me, they interfered to such an extent with the salmon fishery that determined measures were proposed for their extirpation. There is no evidence to show that the extermination was so effected but it is hardly probable that they would long survive the rapid rise of the Cleveland iron trade and the shipping industries of Middlesbrough, and in all likelihood the decade 1830 to 1840 would be that of the final extinction of the Seal as a permanent resident in Yorkshire, though solitary individuals have been observed to within the last twenty years." And in the appendix (page 135) they further state "respecting the date of extinction; information received from Mr. H. G. Faber, of Stockton-on-Tees, and Mr. H. T. Mennell, shows that this animal survived much later than is stated" above. "The latter has furnished a copy of his and Mr. Perkin's list of the Mammalia of North-umberland and Durham, published in 1863, wherein is stated that between 1820 and 1830 about a thousand seals frequented the mouth of the Tees, of which as many as thirty might often be counted at one time; but that in 1862 the number was reduced to three individuals. The Seals exhibited great dread of the steamboats, which had greatly increased in number on the river during the preceding few years; and to this and the enormous increase of population in the neighbourhood, was attributed their rapid decrease.

"Mr. Faber remembers the Seal being numerous at the Tees mouth, and has seen them lying on the sands as many as a dozen together. He recollects disturbing one about twenty years ago, on Seaton Snook, which was very tame, swimming about within twenty yards, and could only be driven away by throwing stones at it. He adds that the last native

Seal "was killed about ten years ago, when it was shot from the Fifth Buoy Light. A small Seal got about a year ago was but a mere casual visitant. It will thus be seen that the animal survived a good deal later than the evidence available at the time of writing the list would lead one to suppose."

So late as 1867, however, as I have been informed by a gentleman who was in the habit of shooting on the Tees, it was a common occurrence to see from twenty to thirty on the sandbanks at one time. They were, doubtless, then on the decrease, and had been for many years, as a large amount of shipping traffic was then developed in the Tees. It could hardly be expected that they would long survive the enormous development of the iron and shipping trades, and the reclamation works, which have been for years going on in the river. My friend informs me that they are very wary, and when approached in a boat it was an amusing sight to see them tumble about, throwing up the sand in all directions, in their awkward and seemingly ludicrous efforts to regain the water. They were, however, very curious, and would follow the boat at a safe distance. When on the sands they generally kept within about twenty yards of the water; but he remembered assisting to capture a young one that was asleep on the sands about 200 yards from the water, near Seaton Snook. It was cut off from the water, and being laid hold of, it made desperate efforts to escape, being almost a match for two strong men. It was however, at last secured, and was a beautifully spotted specimen or, as my friend expressed it, marked like a leopard. About this time two seals used to visit regularly every day the stake-nets set for salmon at Seaton Snook, though repeatedly shot at. They are, undoubtedly, partial to salmon.

Seals always appear to have been more partial to the north side of the Estuary than the south, though I am informed that occasionally a few might be seen on Bran Sand. The north side is higher, lies better to the sun, and having a bend in the centre of what is called Seal Sand, commands the river both ways. As appears from the old chart before mentioned the river had two channels at this point; and at low water Seal Sand formed an Island between them. The river attains its greatest width across the eastern portion of Seal Sand where it is about 3½ miles wide between high-water marks at neap tides, and as the foreshore on the north side of the river is soft sticky mud from a foot to 18 inches in depth, it will be seen that Seals could rest here pretty securely. Eleven stones was not an unusual weight for seals caught in the Tees.

Nearly all Seals captured and seen in the Tees during recent years have been young animals (three feet long or a little over), which would almost suggest that they still breed in limited numbers somewhere in the neighbourhood. It has been suggested to me that probably the Wash is the nearest locality in which they are for certain, now known to breed.

Macgillivray states that the fullgrown animal sometimes attains a length of five or six feet, but that the individual, from which he took his

description was 3 feet 10½ inches long, and was from the Firth of Forth. It may not be out of place to mention here that a Dog Seal was shot in the river Aire at Rawcliffe, in March 1888, which is said to have measured six feet from nostrils to tail.

Macgillivray's general description of the animal is "muzzle obtuse, outline of forehead concave, grinders four-lobed obliquely placed in the jaws; pile yellowish grey, mottled with dusky on the upper parts; fore feet with the first toe longest."

Of old records of Seals in the Tees and district I have not been able to meet with much except casual references. Graves, in his History of Cleveland, in speaking of Skinningrove, states that Camden mentions the report of a seaman being caught by the fishermen of that place, and from the description there is no doubt that this seaman was a Seal. The same fabulous story is thus more particularly reported in the Cott MS. "Old men that would be loath to have their credyt crackt by a tale of a stale date, report confidently that sixty yeares since, or perhaps 80 or more, a seaman was taken by the fishers of that place, which, duringe many weeks, they kepte in an oulde house, giving him rawe fishe to eate, for all other fare he refused insteade of voyce he skreaked, and shewed himself courteous to such as flocked farre and neare to visit him; fayre maydes were wellcomest guests to his harbour, whome he woulde beholde with a very earneste countenaynce, as if his phlegmaticke breaste had been touched with a sparke of love. One day, when the good demeanour of this newe gweste had made his hosts secure of his abode with them, he prively stoale out of doores, and ere he coulde be overtaken recovered the sea, whereinto he plounged himself; yet as one that would not unmannerly depart without taking of his leave, from the mydle upwardes he rayed his shoulders often above the waves, and makeinge signs acknowledgeinge his good enterteinment to such as beheld him on the shore, as they interpreted yt; after a pretty while he dived downe, and appeared no more" And in a note to the above the author remarks that " many centuries have elapsed since authors first wrote a bout the *Marmenill* or *Sea-Man*. Torfæus, in his History of Norway, says that it is met with in Iceland; and Bishop *Pontoppidan* assures us, in his natural History of Norway. (vol. II., p. 302), that there are several species of it. *M. Stroem*, in his *Sundmoeschen*, (p. 287) is very angry with those who will not believe in its existence; and *Childrey* asserts it as a fact, that some fishermen caught one on the coast of Suffolk, in the year 1187; and that another was taken in Yorkshire, in 1535, being that above mentioned."

It is now pretty certain that all these mythical tales of seamen and mermaids, written about by old authors, originated in the Seal. It will be noted that the occurrence dated back to a time sixty or eighty years previous to the time of the chronicle of it, and doubtless the account gained colour as it was handed down.

Again, in speaking of Saltburn, Graves has the following quotation

from the same source: "Towards Huntscliffe and Bullfleet-Gate there are certain Rockes that at lowe water are left discovered, whereupon Seales in greate Heardes like Swine use to sleepe and baske themselves against the Sunne; for their better securitye they put in use a kind of military Discipline, warily preparing against a soddaine Surprize, for on the outermost Rocke one great Seale or more keepes Sentinell, which upon the first inklinge of any Danger giveth the Allarme to the rest by throweing of Stones, or making a Noise in the water, when he tumbles down from the Rocke, the rest immediately doe the like, insomuch that yt is very hard to overtake them by Cunning: yf yt fortune that any unawares hath chosen his sleepeinge forthe so far from the Sea, that he is in Hazard to become a Praye to the pursuer, he then betaketh himselfe to his Armes, flynginge the Pebbles and Sand from his hinder Feete with suche a tempeste and force, that a man had neede be well advised before he approche too neere; they flye the sight of Men as of those from whom they have received many shrewde Turnes; where the poore Women that gather Cockles and Mussels on the Sandes, by often use, are in better Credyte with them. Therefore, whoe soe intends to kill any of them must craftely put on the Habyte of a woman, to gayne Grounde within the Reache of his peece."

" It was streange to me and hard to be believed, that you had a yonge Seale taken upon the Seye Sande, w/ch for the Space of a Moneth was kepte in your parloure, feedinge him with Milke and Breade which yt sucked greedily, and that in a few Dayes he knew his Keeper soe well that he woulde crawle after him lowinge aloud from the Parlour to the Kitchen; when upon the Hearthe, after his Belly was well fyled he used to turn up his Syde to the Greate of the Fyre. He dyed as yt was tolde me by the Mishappe of one that unawares treade on his Head. After that he had been a Weeke in the House, and felte the Refreshinge of the Fyre, he could never endure the Water, though you threwe him often tymes into yt, and was willinge to let him escape, but he ever returned to the Lande, and with a mournful Crye, as it were bemoaning himself to the Companie, would creep to the next he sawe and nible about their Feet, not ceasing till some one had taken him up in their Armes to carry him back again; he was white, as having his Piggies hair yet on him, and not past three Quarters of a Yarde longe."

In the "Durham Household Book, or accounts of the Bursar of the Monastery of Durham, from Pentecost, 1530, to Pentecost, 1534," published by the Surtees Society, wherein is minutely detailed all the costs of provisioning that house, Seaylls and Seayll Calves are frequently mentioned and in one place Tyse fish are specially mentioned (p. 122). It is probable that occasionally, at least, their Seals were procured from the Tees. The Conservancy of the Tees, together with the rivers Tyne and Wear, belonged to the Bishop of Durham, from a very early period, and to him belonged the privileges and profits incident to such power, such as royal fishes, wrecks, duties, anchorage, fishings, weirs, etc.

In 1345, there was paid to the Bishop 22s 11d for fee farm rent for the "privilege of trading or towing of vessels in the Tees" (Bishop Hatfield's Survey). And in the Cursitor's Rolls, it is recorded that "Bishop Bainbrig, A. D. 1507, granted to John Racket for his life the office of Conservator of all the Bishop's rivers of Tese, Were, Tyne, &c., and for preserving salmon and fry fish. Sept. 28." Not only were Seals much more plentiful formerly, but they appear to have been regarded as a favourite article of food. At a great feast made by George Nevill, Chancellor of England, and Archbishop of York, at his inthronization (6th Ed. IV 1486), "thirteen Porresses and Seals formed part of the provision", and again, at the inthronization of Archbishop Warham, in 1504, "seals et porposs were provided." The value of a Seal or Porpoise was 13s 4d in the 17th year of Henry VIII.

In Brewster's "History of Stockton" is a quotation from a record in the Cursitor's Rolls (1530), having reference to the regulation of the fisheries in the Tees, in which "Sealles, Purpose, Sturgion, and other like fishes" are mentioned. It appears that some difference had arisen between fishers using "drawing netts" and those using "haling nets," and is so interesting as illustrating the customs of these distant times that we quote it in full. "Where variance heretofore hath been among the inh'tants of the town of Stockton, for taking of head fishes as sealles, purpose, sturgion, and other lyke fishes, betwixt the fishers with drawing netts on the one pt, and the fishers with haling netts on the other pt. It is ordered, by consent and agreement of both the said partys for appeasing of all variance in time to come, in manner and form following, (that is to say): That if fishers of both sorts, some with drawing netts and some with haling netts go about to take any Seale, Purpose, or like fish within the river of Tease. If it fortune the said fish to lyght in the haling netts, then all those fishers with haling netts, assembled for that purpose, pursuing the said fish, to have him alone, and the fishers then assembled with drawing netts to have no part thereof with the haling netts; and likewise if it fortune the said fish do lyght in the drawing netts, then all those fishers with drawing netts, assembled for that purpose, pursuing the said fish to have him alone, and the fishers then assembled with haling netts to have no part thereof with ye drawing netts. And also, It is ordered, that evry man of both sorts of fishers, then assembled for that purpose, shall give unto 5 water room sufficient and none to come within another to hurt his neighbour gere upon pain of 6s. 8d on him that shall offend them as oft as he shall so do, to be levyed of the said offender at the next court after, without further delay."

In an account of the salmon fishery in the same history, it is mentioned that, "large shoals of porpoises frequent the sand-banks, and are supposed to be very injurious to salmon and fishes of inferior size. A fishery for these has been attempted, but it has not been attended with success." I imagine that Seals are meant here, and that these two animals are often confounded in old records. At page 102 of the same history, Brewster, quoting from the survey of the Manor of Stockton, states that the Bishop "has the royalties of the river of Tease, as whales, sturgion,

porpoises (probably seals) or the like taken on that side of the river next the County of Durham within the Manor of Stockton."

Still quoting from Brewster, in the list of fishes, published in his History of Stockton, 1829, it is stated that "salmon have much decreased of late years, owing chiefly to the method of hushing carried on in the lead mines of Teesdale, and probably also to the increase of Seals at the mouth of the river."

The Seal is given in the list of the Fauna of Cleveland, in Graves' History' published in 1808, in Sharp's History of Hartlepool, published in 1816, (the tail-piece at the end of this list being a figure of a Seal), and in Brewster's History of Stockton, as mentioned above.

Hutton, in his trip to Coatham, published in 1810, page 102, states that "one of our friends, while at Coatham, shot a Seal, said to weigh seven stone, and to be worth two guineas. I thought it would well bear the name of sea-dog." In Heavisides' Stockton Almanack, for 1896, is a very interesting and amusing account by Mr. Hunter, a respected resident of the ancient borough, of the capture of two young Seals at the Tees mouth. This was about 50 years ago (that would be about the year 1846). A man of the name of Golightly, who frequented the mouth of the Tees for the purpose of shooting wild fowl, when making his way to the Tees mouth in his boat, saw two young Seals on the sands. On nearing them he noticed the old Seal go to them and roll them over towards the water. Golightly secured them and took them to his house, at Stockton, where he kept them for some time in his garden, and fed them on milk, on which they thrived and became quite tame. Golightly was in the habit of taking them to the quayside, and turning them into the river, where they disported themselves to the great delight of the spectators.

Of recent occurrences of Seals in the Tees and district, I have the following records, noted myself, and previously I can remember many being exhibited at Middlesbrough, by fishermen and others :-One shot in Billingham Creek, on Christmas Day, 1880; this Seal was 3 feet 4 inches long, and, of course, immature. In the same winter one was shot at Redcar, and another was seen on the rocks, at Redcar, previous to this, date not noted. On the 24th August 1881, a local newspaper reported that a school of Seals was discovered in the cut at the Middlesbrough Dock entrance. One of the animals made its way into the dock. Efforts were made to capture it, but without success. It is supposed they had chased a shoal of salmon up the river. I afterwards conversed with two persons who saw these Seals; they both put the number at two. It was in the afternoon of the day named when they were seen. They were pursued by boats, and dived whenever the boats came near them. They were eventually lost some distance down the river. At the beginning of the following November a large Seal was observed for several days to frequent the beach opposite the ironworks at Eston, a place noted for eels, to which Seals are said to be very partial. It was observed through a glass from Eston Jetty. About the 15th of January 1883, one was seen in the Tees, and shot at several

times. At the beginning of the following February one was captured in the Tees, opposite Eston Jetty, measuring 3 feet in length. On the 28th July, in the same year, one was exhibited alive in the Middlesbrough Market, which had been taken in the river. In 1884, I have been informed, one was seen and shot at several times on the Durham side of the Tees mouth; this was in autumn, and on October 25th, 1885, a Seal was captured in the Tees near Eston Jetty. This was a young female; it was pursued for some distance, and was at last shot. This I examined, and made a coloured sketch of. It was 3 ft. 10 ins. long, and beautifully mottled on the back with black and yellowish-white. It was reported there was another seen at the same time. One was caught on the rocks, at Hartlepool, on January 4-th, 1886. It was left in a pool by the tide, and attracted some men by its call. It was a young female, and about 3 ft. 3ins. long. On the 20th of November 1887, a Seal made its appearance in the Middlesbrough Docks, and was said to have followed a vessel in. It was there for several days, and was reported in the newspapers to have attracted many people to the Docks to witness its gambols. It was noticed to bring up fish, and on one occasion two large eels. It was subsequently joined by a second, and the two left the Docks when the gate was opened for a vessel to pass out. Several were reported to be seen in the river about the same time.

On January 8th, 1888, a dead seal was washed up near the Middlesbrough Ferry Landing. It was said to have been shot a few days previously, near Billingham Landing. It was pronounced by Mr. Mussel, the taxidermist, to be the largest he had ever seen. It is possible this may have been a Grey Seal. On the 9th of March 1890, a young Seal, about 8 ft. in length, was shot on Coatham Sands, and was afterwards exhibited in a tent at Redcar. In December 1891, a Seal was captured alive on Seal Sand. An effort was made (according to the local papers), to procure this for the Middlesbrough Museum, but does not appear to have been successful, as up to the present time there is no specimen in that Institution. On the 7th of December in the same year a Seal (said to be of the silver variety) was caught near Hartlepool Fish Quay, and was exhibited in the window of a fried fish establishment. On September 16th, 1894, a Seal was shot near Seaton Snook. On the 23rd September 1895 a Seal was caught in the Tees near Yarm. In the autumn of 1899 a dead seal was washed up on the sands between the Tees mouth and Coatham. On the 28th of January 1901, a Seal was shot in the Tees below Port Clarence. It was 3 ft. 9 ins. long and was said to weigh 8 stone. I examined this Seal. It was of a light silvery grey colour, with a few black spots on the back. This Seal struck me as being of a lighter colour than usual, and a local taxidermist, who has had longer experience, was of the same opinion, though he had seen individuals as light.

It is probable that the Grey Seal (*Phoca gryphus*), as well as the Common Seal, occurred in limited numbers in the Tees. Graves, in his 'History of Cleveland,' published in 1808, and before referred to, mentioned the great seal or sea calf (of Pennant's Zoology, 36). I have seen a very large skull, which was dredged from the Tees, and was probably referable to

this animal. One is reported to have been found alive at Seaton Snook in the year 1871, as mentioned in Clarke and Roebuck's "Vertebrate Fauna," and in the report on the Migration of Birds for the year 1883 (page 58), reference is made to the occurrence of a large Seal, seen at the Tees mouth, on the 18th of November, 1803, probably also referable to the above species.

MAMMALIAN NOTES FOR 1899

BY R. G. CLAYTON

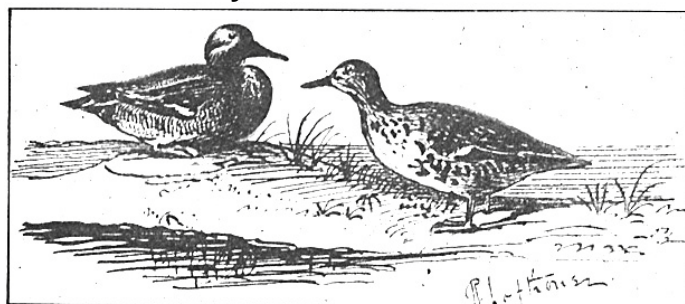
In April I had sent me a fine old male badger (*Meles taxus*) from near Ingleby. The female also had been killed. I was glad to learn that this spirit of extermination* is not countenanced at Pinchingthorpe, where several "earths" were pointed out to the members by Mr. A. E. Pease, when they were privileged to inspect his sporting trophies, and subsequently went over the bank to Hutton Hall.

An otter (*Lutra vulgaris*) was caught alive at Kildale, but I could not get any definite account as to what became of it ultimately.

* This interesting animal is also, unfortunately possessed by a "spirit of extermination," and has of late years extended its range to several parts of Cleveland and the neighbouring district, including Bilsdale and Bransdale.-Ed.

COATHAM MARSHES, AND THE WILD DUCK DECOY THAT FORMERLY EXISTED THERE.

By R. LOFTHOUSE



Coatham Marshes, a large expanse of flat low lying land, lies to the west of the ancient village of Coatham, which, according to Atkinson (History of Cleveland), was at one time a place of some importance. He writes of it thus, "From various items of information touching East Cotum presented in the documents connected with Gisburn Priory, and other religious houses, and with the Brus inheritance and succession, and the like, it is easy to see that the Vill, in old times, certainly could not be described as 'a mean, insignificant village,' any more than, perhaps, as a 'fallen Sidon mourning by the waters.' There were ships trading to the port, paying groundage and other dues, salt-works, a mart." It was "a fishing town of

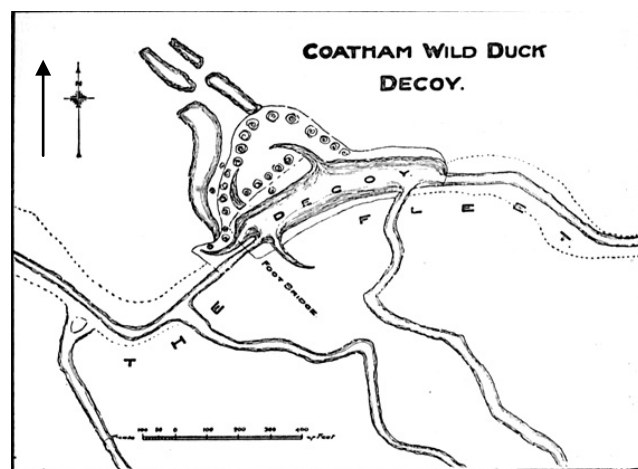
some importance, and, with Redcar, contributed towards the supply of different monasteries with the necessary article of fish," and it is said that in ancient times a Church or Chapel existed there.

The Marshes at the present day are about two miles long from east to west by about three-quarters of a mile broad in the widest part, and are bounded on the north by sand-banks (through which passes the railway to Saltburn and Whitby) of slight and varying elevation, and covered in places with long wiry grass, and in others with a close benty turf and an interesting flora and fauna, the ground in places being literally covered with various *Helices*, chiefly *H. virgata*, *H. nemoralis*, *H. ericetorum*, etc. Beyond the sandbanks the waves break on a fine broad stretch of level sand. On the south, the Marsh is bordered by cultivated fields.

The Marsh is intersected by open drains, or *stells*, as they are locally called, interesting to Conchologists from the variety of fresh water or brackish water Mollusca to be found in them.

The Marsh was formerly the habitat of many interesting birds, particularly of the Duck and Wader species, and doubtless in quieter times many bred there, amongst them probably the Dunlin. The Redshank still nests there in limited numbers, and the Ring Dotterel on the shingle just over the sand-banks; and in the Rabbit Warren where the village of Warrenby now stands, the Sheldrake nested in some numbers in the rabbit burrows. Mallard and Teal doubtless nested in the neighbourhood of the Decoy, for it is essential that there should be good breeding grounds near a decoy.

Commoner birds, such as the Waterhen, still nest by the rush-fringed pools, and large flocks of Plovers, green and golden, and smaller birds, such as Snow Buntings, Larks and Starlings, still frequent the Marsh in considerable flocks in the wintertime.



The Wild-Duck Decoy is situated at about the centre of the marshes, and about half a mile from the new village of Warrenby, which, (as its name

implies,) was built on the site of a rabbit warren. It is situated to the southwest of the village; and at the end of the village next the Decoy is an old farmhouse and farm buildings of considerable size, called Marsh House, built of brick and roofed with pan tiles.

It is a typical Cleveland Farm House of the better class, and doubtless at one time had a large extent of land attached to it, but it is now in a dilapidated condition. In the middle of the last century the Cleveland Hounds were kennelled in part of the farm buildings.

I visited and took measurements of the Decoy at the end of January 1887. The pipes and surroundings were then much more distinctly traceable than they are now, The pipes were formed at the sides of an irregular oblong lake or sheet of water, marked on the ordnance map "The Fleet," fed and emptied by a brook or stream, its longest diameter stretching east and west. The water appears to shallow out on the north side and the greater portion of the sheet is now pretty well choked up with flags and aquatic plants of various kinds. The north side has been sheltered by a patch of shrubs and trees of moderate growth, as evidenced by a few gaunt looking stems and stumps which still remained, and which appeared to have been chiefly willows. About four or five hundred yards to the west of the Decoy was established an ironworks and the date of their erection in 1870-72 sealed the fate of the Decoy, the working of which was discontinued about that time and the smoke and fumes from the ironworks also compassed the destruction of the shrubbery.

There were, at the time of my visit, four trenches (or pipes as they are called when complete with their net covered arches). One, however, had the mouth closed from the sheet of water a narrow strip having been levelled with the ground at each side of the pipe, thus cutting it off from the lake. The other three, though partially choked up with weeds, still contained water, and by the side many short posts, to which presumably the rods were fixed which supported the nets. The trenches or pipes varied in depth below the general surface of the ground from about two to four feet. They are, however, a good deal choked up with vegetation and, doubtless, were deeper when in use. In size and shape they are very much alike, and their dimensions agree very closely with those at Fritton, in Norfolk described by Mr. G. C. Davis, in his Norfolk Broads and Rivers:

The width at the mouth between the posts was about 18 feet, and at the centre of the bend about 11 feet, from which they gradually taper to a point. The length of the chord of the bend from the mouth to the extreme end is about 130 feet and the distance along the outside curve is about 220 feet.

One is situated at the south-west end of the lake, another towards the south-west end, and running south, one a little west of the centre of the lake and running north, and the one which has the mouth levelled up is situated towards the west end and has a northerly direction. At the time of my visit the pipes situated at the south and north sides were in the best

condition. No traces of the screens remained. The shrubbery on the north side would shelter the Decoy from the north winds, and would effectually screen the approach of the decoyman, which would presumably be from the direction of Coatham. Before the construction of the railway, (opened in 1846), to the north, and the ironworks to the west, the situation must have been an admirable one for quietude, which is essential for the successful working of a Decoy. All Decoys have pipes made to suit the prevailing winds, as ducks, like other birds, like to swim or rise with the wind in their faces; therefore it is only possible to work those pipes which are to windward of the birds. A friend who remembers the Decoy when working informs me that the following ducks were taken in it: Shel Drake, Shoveller, Pintail, Mallard, Wigeon and Pochard, and the Scaup Duck, occasionally; and a specimen of the very rare Ferruginous Duck was taken on the 17th March, 1850. To the above list may, no doubt, be added the Teal, and it is probable that some of the species mentioned were only seldom taken. So far as I can gather all the Decoys in this country were very much alike, and the following description of the fitting up and working of a Decoy is quoted from a paper on "Wild Duck Decoys in Essex, by J. E. Harting." " Let us suppose that three, four or five pipes have been cut. These are arched over at intervals with hoops of wood, or iron (if expense be no object), and over these is stretched a strong netting, which tapers gradually towards the far end of the pipe, and terminates in a sort of bag or purse in which the fowl are eventually taken. As it is absolutely necessary that the Decoyman should be concealed from view of the ducks on the pool, a series of screens made of reeds, and set one behind another, are fixed at intervals along the side of each 'pipe.' A few tame ducks, taught to come at a whistle to be fed, a few handfuls of grain, and a small fox-coloured dog, and the Decoyman is ready to begin operations. Selecting his 'pipe' according to the direction of the wind, he throws a handful of grain over a screen into the pipe, and whistles. The wind carries the grain towards the mouth of the pipe, the tame ducks come eagerly to feed, and the wild ones getting an occasional mouthful as the grain drifts by them or towards them, gradually discover that the nearer they swim towards the mouth of a pipe the more plentiful does food become. Unsuspectingly they enter the wide mouth, so wide as to convey no suggestion of a trap; and then the Decoyman's little dog comes into play. Taught to dodge in and out of the reed screens to fetch a piece of bread or biscuit, he shows himself momentarily to the ducks in the pipe, and disappears when returning to his master. 'Wild fowl are eminently curious, and their curiosity proves fatal to them. They behave towards the dog exactly as cattle would do-as long as he retreats from them they follow him. Perhaps from his colour they take him for a fox, their common enemy, and fancy they are driving him away. At any rate they follow him up the pipe until, having passed the first reed screen, they are virtually cut off from the rest of the flock. At this juncture the Decoyman shows himself to the ducks in the pipe, though not to those on the pool. He makes no noise, but merely waves his arms, and the frightened fowl, afraid to return past him to the open water, instantly rise on the wing and fly up the pipe, following its curve in the vain hope that it will lead to freedom. Instead of that, however, it leads to the bag net. The

whole business is conducted so quietly that the wild fowl on the main water are never alarmed."

The Decoyman carries a piece of burning turf to destroy the human scent.

Some distance to the south and west of the Decoy are a number of curious hills, or mounds, more or less approaching to a circular form, and rising abruptly from the general level of the marshes to a height of probably about 10 or 12 feet. These are marked on the ordnance map Marsh Hills, and one place on West Coatham Marsh is marked "Camps." They were formerly supposed to be Roman Earthworks or Camps. There is no doubt, however, that they were salt works, probably similar to others on the Durham side of the river; and Saltholme on that side of the river derived its name from these ancient salt works, and not from the Saltworks which in recent years have been established there. It is probable that very considerable quantities of salt were manufactured there and supplied to the monasteries, some of which held interests in the works, as well as for consumption by the general population. The heat was supplied by coal washed up on the seashore, as we learn from the Cott. MS., which, referring to the mouth of the Tees, states that "as the Tyde comes in, yt bringethe a small wash Sea-Cole, which is imployed to the makinge of Salte, and the Fuell of the poore fisher Townes adjoininge." There can be no doubt that these hills are artificial, some of them were excavated a few years ago, and a cutting was driven right through one of them. I inspected these at the time, and I noticed in one place a piece of cinder or scorixæ in the perpendicular side of the cutting, four or five feet below the surface, and some broken earthenware was found in them.

On the top of some that were excavated were found a series of trenches and a large quantity of scorixæ and clinkers. The salt was made by evaporating sea water, but how the heat had been applied was not very clear.

What seemed the most puzzling thing about these salt-works was the quantity of scorixæ or clinker that was dug up, (it was evident that coals and not charcoal or wood had been used) and the question that presented itself was where this coal had been obtained. The reference in the Cott.MS, however, clears up this question, and coals are washed up on the Coatham Sands to this day, and are gathered by the poor people for fuel, as they were in those ancient times.

The tailpiece is from a sketch made at the Decoy in January 1887.



ORNITHOLOGICAL NOTES FROM CLEVELAND AND TEES-MOUTH, * 1899.

By C. MILBURN.

*The Tees-mouth records refer to both the Durham and Yorkshire side of the river.

The following notes are, unless otherwise stated, the result of my Ornithological researches during 1899 in Cleveland and at the mouth of the River Tees.

I have given what I think are the most interesting notes only, and have accordingly omitted the finding of the common birds' nests. In all, I came across the nests of 65 species of birds in the above districts, and the dates and localities of finding the rarer birds will be found below,

Redwing (*Turdus iliacus*) arrived at Linthorpe on October 15th.

Fieldfare (*Turdus pilaris*) arrived at Tees-mouth on November 6th.

Ring Ousel (*Turdus torquatus*). A single bird frequented the slag wall at Tees-mouth from the last week in April until the middle of May.

Wheatear (*Saxicola œnanthe*) arrived at Tees-mouth on March 31st. A nest was taken by my friend C. Braithwaite, of Seaton Carew, at the mouth of Tees, which contained six wheatear and three meadow-pipit eggs! The nest was that of the latter bird, so that the wheatears must have taken possession after it had laid three eggs. This interesting nest and eggs are preserved in the above gentleman's collection. A nest found by the writer near the Acklam Ironworks contained five young and one egg on May 25th.

Whinchat (*Pratincola rubetra*) arrived on April 23rd. Found nest with six eggs on June 4th near Cleveland Asylum.

Redstart (*Ruticilla phœnicurus*) arrived at Gunnergate on April 22nd. Found nest, six eggs, on May 24th. Scores of redstarts frequented the mouth of the Tees during the first week in October.

Whitethroat (*Sylvia cinerea*) arrived at Albert Park on April 22nd.

Lesser Whitethroat (*Sylvia curruca*). One in song at Linthorpe on May 24th.

Blackcap Warbler (*Sylvia atricapilla*). Found nest with four eggs at Tollesby on June 22nd.

Garden Warbler (*Sylvia hortensis*). I saw and heard a bird of this species several times at Ingleby. It was, no doubt, breeding, although I did not find the nest. A few garden warblers were shot at Tees-mouth during the first week in October.

Gold Crest (*Regulus cristatus*). Found unfinished nest at Ingleby; birds deserted it afterwards. Very few migratory Gold Crests were noted this autumn.

Chiff Chaff (*Phylloscopus rufus*) arrived on April 16th.

Willow Warbler (*Phylloscopus trochilus*) arrived at Albert Park on April 16th.

Wood Warbler (*Phylloscopus sibilatrix*) arrived at Ormesby, May 11th.

Reed Warbler (*Acrocephalus streperus*). A pair, as usual, bred at Linthorpe.

Sedge Warbler (*Acrocephalus phragmitis*) arrived on April 29th.

Grasshopper Warbler (*Locustella naevia*) arrived on May 3rd at Linthorpe fields.

Dipper (*Cinclus aquaticus*). Found nest, five eggs, at Ingleby, on April 20th, and another with six young at same place on May 22nd.

White Wagtail (*Motacilla alba*). Saw a male bird of this species near Connal's Wharf, Middlesbrough, on April 27th. It was evidently fatigued, as it allowed me to get within six yards of it, which made identification easy.

Grey Wagtail (*Motacilla melanope*). Found a nest with three eggs at Ingleby on June 3rd.

Yellow Wagtail (*Motacilla raii*) arrived at Tees-mouth on April 24th. Found nest with young on July 15th at above place.

Tree Pipit (*Anthus trivialis*) arrived at Ingleby on April 20th.

Rock Pipit (*Anthus obscurus*). Saw a party of six on the North Gare Breakwater on November 19th. These may have been the Scandinavian form, as a large number of migrants were arriving on the above date.

Spotted Flycatcher (*Muscicapa grisola*) arrived on April 29th.

Pied Flycatcher (*Muscicapa atricapilla*) arrived at Tees-mouth May 6th.

Swallow (*Hirundo rustica*) arrived on April 25th.

Martin (*Chelidon urbica*) arrived on April 20th.

Sand Martin (*Cotile riparia*) arrived on April 20th.

Tree Creeper (*Certhia familiaris*). Found nest, six eggs, at Ingleby on May 22nd.

Siskin (*Chrysomitris spinus*). One seen at Tees-mouth October 9th. (C.B.)

Lesser Redpole (*Linota rufescens*). During July, August and September an immense number of these birds were to be seen, either flying south, or frequenting the woods and plantations near Middlesbrough.

Snow Bunting (*Plectrophanes nivalis*). A mature female, in summer plumage, was shot at Tees-mouth on September 21st. (C.B.) No more of these birds were seen until the second week in October.

Hooded Crow (*Corvus cornix*) arrived at Linthorpe on October 1st.

Rook (*Corvus frugilegus*). Nests with full clutches on March 18th.

Swift (*Cypselus apus*) arrived at Ormesby on May 6th.

Kingfisher (*Alcedo ispida*). Found nest with one egg near Great Ayton on May 6th. There were no fish bones in this nest, the eggs being laid on the bare soil. A number of kingfishers appeared at Tees-mouth and in the

streams near Middlesbrough after the nesting season, and were, as usual, relentlessly persecuted by the shooters.

Cuckoo (*Cuculus canorus*) arrived on April 24th.

Barn Owl (*Strix flammea*). Found nest with three eggs at Acklam on May 12th. This nesting hole had been previously occupied by a pair of Stock Doves, which reared four broods per season.

Tawny Owl (*Syrnium aluco*). Found nest, three eggs, at Ingleby on April 3rd, and another nest at Gunnergate with one young on May 7th.

Sparrowhawk (*Accipiter nisus*). Nest at Gunnergate on April 29th; birds shot off nest a few days later.

Merlin (*Falco oesalon*). As usual, a pair reared young on the moor above Ingleby.

Peregrine Falcon (*Falco peregrinus*). One seen at Teesmouth on December 12th. It struck a mallard, which fell quite close to my informant, C. Braithwaite.

Kestrel (*Tinnunculus alaudarius*). Found nest with five eggs in hole of tree at Easby on May 22nd.

Sheldrake (*Tadorna cornuta*). Took egg of this bird at Tees-mouth on May 14th. Four pairs reared young here this year to my knowledge. A nest found on the north side of the river was placed in the long marram grass, not in the sand. The number of sheldrake breeding at the mouth of the Tees varies in different seasons. Some years five or six pairs breed and in others, two or three only.

Shoveller (*Spatula clypeata*). Found two nests of this bird in June at a certain place near the mouth of the Tees; the young had been hatched from both nests. About a dozen pairs reared young here this season.

Pintail (*Dafila acuta*). Saw a male bird at Tees-mouth on April 2nd.

Tufted Duck (*Fuligula cristata*). A pair bred near the mouth of the Tees this year.

Water Rail (*Rallus aquaticus*). Flushed a brood of five from a reed bed at Tees-mouth on August 19th. The eggs of this bird have been taken at this particular spot.

Spotted Crake (*Porzana maruetta*). Saw a bird of this species at Tees-mouth on August 23rd. Mr. C. Braithwaite caught a female, which was injured on May 25th, and, upon our skinning it, imagine our surprise in taking from the body a full-formed and well-marked egg. This was also at the mouth of the river, where this bird breeds.

Corn Crake (*Crex pratensis*) arrived on April 29th.

Dotterel (*Eudromias morinellus*) A pair of immature birds obtained on September 16th at the mouth of the Tees.

Ringed plover (*Ægialitis hiaticola*) Nests with full clutches at Teesmouth on May 4th.

Grey Phalarope (*Phalaropus fulicarius*). One obtained on November 19th at Teesmouth. It was exceedingly tame and allowed us to get within six yards of it before it was procured.

Snipe (*Gallinago cœlistis*) Found nest with two eggs at Teesmouth on May 28th. About four pairs bred on the "slem" this season.

Dunlin (*Tringa alpina*) An example of the small form was shot at Teesmouth in January. It had the grey back of winter and the black breast

of summer plumage. A nest with four eggs in it was found by the writer, and Mr T. H. Nelson, M.B.O.U. at the above place on May 23rd.

Ruff (*Machetes pugnax*) An immature female shot on August 27th (C.B.) Two shot out of a flock of eight on September 23rd at Teesmouth.

Green Sandpiper (*Helodromas ochropus*) One shot on September 23rd at Teesmouth.

Redshank (*Totanus calidris*). Nests with eggs in on April 13th at Teesmouth.

Greenshank (*Totanus canescens*). A bird of this species was flying about with the breeding redshanks at the above place on June 11th.

Little Auk (*Mergellus alle*). One was picked up exhausted in a field near Teesmouth on December 15th. (C.B.)

Little Grebe (*Tachybaptus fluviatilis*) A pair reared young on a pond at Gunnergate this year. Found a nest with one egg in it at Marton on May 10th.

ORNITHOLOGICAL NOTES FOR 1899.

BY R.G.CLAYTON

At the club excursions, which I attended, but little wild life was visible, except the ordinary inhabitants of our district. Indeed there are few opportunities, nor is there much likelihood, of making interesting observations, unless the Ornithologist can get away from the highroads and footpaths into little frequented places, where our feathered friends may hope for quietude during the period of their housekeeping.

The ramble along the Tees bank from Yarm to Worsall revealed nothing but hedge sparrows, blue tits, thrushes and the like, although the neighbourhood seemed a promising one. A herring gull was flying over the river, which caused me to recollect that, during the past few years, gulls of several species seem to go further into the country than was formerly the case. My attention was called to this fact by several farmers, as well as other friends in various parts of Cleveland.

There seems to have been an increase in the number of carrion crows last spring on the Moorlands. Several were killed, where they had not been noticed for a considerable period.

On August 26th a white bullfinch was shot at Saltburn. I examined this bird and found it was a pure *albino* with the characteristic pink eyes. The faint shadings discernible in the white plumage gave it a pretty effect.

On the 3rd November I purchased (off one of the game dealers in the town) a curiously plumaged grouse (male) *Lagopus scoticus* which had come with other game from a local moor. The colour varied from cream to brown, but, principally, was of a sort of rufous tint, almost devoid of the beautiful pencilling usual with the normal feathered bird. Variations of plumage amongst red grouse are somewhat exceptional, hence I mention this specimen.

In the same month a grey phalarope (*Phalaropus fulicarius*) was shot at Redcar. These birds are becoming rarer in their visits now.

In December, Mr. T. H. Nelson had the good fortune to secure a thick knee, or Norfolk plover, (*Oedicnemus crepitans*), and, as the incident is so uncommon for these parts, I give the account of it which appeared in the "Field" of 10th March 1900:

"On December 16th last, during stormy and wintry weather a live example of the stone curlew was brought me by a man whose dog had caught it on the sand-hills, east of Redcar. I endeavoured to keep it alive, but it was very poor in condition and had evidently been shot at and slightly wounded. It only lived a few hours after capture. The appearance of stone curlew in Cleveland is, at any time, of rare occurrence but to find one in mid December is so unusual as to be worthy of record."

As a comment, I may say that I lately saw a communication in one of the Journals that a pair of these birds had been observed two years in succession upon a Yorkshire moor but I cannot find the note.

In February 1900, a number of little auks put in an appearance on the Coast, no doubt as a result of the exceptionally severe weather and winter in the North of Europe.

BIRD NOTES, 1899.

By R. LOFTHOUSE.

APRIL 2nd Wheatear (*Saxicola oenanthe*) noticed in garden at Linthorpe.

APRIL 20th. Willow Wren (*Phylloscopus trochilus*) appears.

APRIL 23rd. Sand Martin (*Cotile riparia*) appears.

APRIL 29th. Redstart (*Ruticilla phoenicurus*) appears. Whitethroat (*Sylvia cinerea*) heard.

APRIL 30th. Cuckoo (*Cuculus canorus*) heard. .

MAY 2nd. Corncrake (*Crex pratensis*) heard. Sandpiper (*Totanus hypoleucus*) noticed near Broughton. Tree pipit (*Anthus trivialis*) and Grasshopper Warbler (*Locustella naevia*) both heard near Broughton.

MAY 4th. Spotted Fly-catcher (*Muscicapa grisola*) noticed at Saltburn.

MAY 7th. Sedge Warbler (*Acrocephalus phragmitis*) sung.

MAY 18th. Swift (*Cypselus apus*) appears.

NOTE Owing to the very cold and inclement weather prevailing during April, the Spring Migrants were nearly all noticed later than the average date.

SEPTEMBER. Curlew Sandpiper (*Tringa subarctica*). One shot near Redcar, also a Richardson's Skua (*Stercorarius crepidatus*) in immature plumage.

NOVEMBER. Great Spotted Woodpecker (*Dendrocopus major*).

One found lying dead near Easby Hall, by Mr. Emerson's gardener, on Sunday, November 12th. It had probably flown against the wires, which

convey electricity to Easby Hall. The Rev. J. Hawell, from whom I had this information, saw a specimen at Ingleby a few months ago.

DECEMBER 10th. Grey Wagtail (*Motacilla melanope*). One noticed near Acklam.

DECEMBER 14th. White-fronted Goose (*Anser albifrons*).

Mr. Mussel, Bird-stuffer, of Middlesbrough, had two (young birds) sent to stuff by Mr. Emerson, shot, I understand, near Swainby.

DECEMBER 16th. Wild Swans (*Cygnus sp----*?). About this date, the weather being very wintry, a herd of 21 wild swans were seen passing Redcar by Mr. T. H. Nelson. One or two were also seen at the Tees Estuary. About this date Mallard (*Anas boschas*) Wigeon (*Mareca penelope*) and Teal (*Nettion crecca*) occurred in some numbers.

ORNITHOLOGICAL NOTES FROM CLEVELAND AND TEES-MOUTH, 1900.

By C. MILBURN.

Missel Thrush---Found a nest at Acklam on April 11th, with the very unusual number of seven eggs. I am led to believe, from the large size of the nest and the one type of colour in the eggs, that it is one bird's laying only.

Redwing---First arrivals noted at Tees-mouth, September 28th.

Fieldfare---Arrived at Tees-mouth, October 4th.

Ring Ousel---Saw one feeding in Marton Hall grounds, on February 25th. As I had it under observation for over an hour there can be no question of correct identity. This species was breeding in good numbers on the moors between Swainby and Osmotherley on May 19th.

Wheatear---Arrived on March 30th at Tees-mouth. A nest found at Port Clarence, on May 20th, had six eggs half incubated.

Whinchat---Arrived on May 5th.

Stonechat---Found a nest with young and one addled egg near Pinchingthorpe, on June 16th. This is the second nest of this very local and uncommon bird that I have found in this district.

Redstart---Arrived on April 30th. Was very plentiful this year.

Whitethroat---Arrived on May 2nd. Found a nest with six eggs at Ingleby on June 4th.

Gold Crest---Found a nest with nine eggs at Marton on May 18th.

Chiff Chaff---Arrived on April 18th. Saw nest with six eggs on May 11th

Willow Wren---First seen on April 20th. Nests with full clutches on May 24th.

Wood Wren---Arrived on May 5th.

Sedge Warbler---Arrived May 5th.

Grasshopper Warbler---First heard "reeling" at Whinstone Dyke on May 6th. Found a nest near Thornaby, on July 17th, with five eggs.

White Wagtail---This bird seems to be a regular spring migrant to this district. I saw it first on May 6th this year, and at intervals until July, at a place near Middlesbrough. I saw a fine male at Osmotherley, on May

19th. The eggs of the Osmotherley pair were taken in 1899 and were shown at the Exhibition (Y.N.U.).

Pied Wagtail---Nest with five eggs at Tees-mouth on June 24th.

Grey Wagtail---A pair at Ingleby after several unsuccessful efforts to rear young in a wall, brought off a brood in an old thrush's nest.

Yellow Wagtail---Arrived on April 22nd.

*Blue Headed Wagtail---Three seen in company with Yellow Wagtails at Tees-mouth, on May 6th.

Tree Pipit---Arrived on April 21st.

Great Grey Shrike---Saw a single bird at Tees-mouth, on November 17th.

*Red Backed Shrike---A young friend of mine, named Telford took a nest of this bird at Gunnergate, in June 1898. It had two eggs, which were taken, and I can testify to the eggs being genuine. This is, I believe, the first record for Cleveland, and perhaps the most northerly record for England of late years.

Spotted Flycatcher---First noticed at Ingleby on May 10th.

Swallow---Arrived at Middlesbrough on April 20th.

Martin--- Arrived on April 28rd.

Sand Martin---Noted on April 19th.

Tree Creeper---Saw a nest with young at Kildale on June 4th. A few yards away a Viper was busy devouring a brood of Coal Tits, but a stone soon put an end to its marauding. Both the old Coal Tits and Creepers were perched on a branch, quivering their drooped wings as if paralysed.

Hawfinch---I am pleased to be able to record the fact that about sixteen pairs of these birds nested at one place in Cleveland during 1900; In all I saw over a score of nests, but, of course, this gave no clue as to the numbers about, as they deserted the nest if it was touched and built another one. Over eight pairs are known to have reared young successfully. As usual, when the habits of a bird are found out, I had no difficulty in finding four more places where the Hawfinch had reared young during 1900 in Cleveland. For very good reasons I will not disclose the localities. Hawfinches have one enemy already, and I will not help to make another.

Crossbill---I heard and saw a single bird of this species in a wood near Great Ayton, on August 18th. It was in the red plumage.

Magpie---Saw two nests with eggs at Gunnergate. Is very common in S.E. Durham.

Jay---Is still fairly common in a few woods in Cleveland. Found a nest with the unusual number of seven eggs on May 18th, at Gunnergate.

Hooded Crow---Arrived at Teesmouth on October 9th.

Shore Lark--- Was fairly common at intervals between October and December at Tees-mouth. A few were shot.

Kingfisher---Often seen behind the Albert Park between September and December. Very few near the coast this year.

Long-eared Owl---Two nests with young seen at Kildale on June 4th.

Short-eared Owl---First noted on September 8th, at Teesmouth.

Tawny Owl---Nested in an old Magpie's nest at Gunnergate.

Barn Owl---Saw first nest on April 18th with three eggs at Gunnergate. An old Magpie's nest was utilised by the Owls. Is increasing.

Buzzard---One was shot at Kildale on September 8th, which had been noticed for nearly a year before it was procured (Mussell). Another was shot at Tees-mouth N., on November 1st.

Kestrel---One, which was shot at Tees-mouth on October 13th, has only one leg. The other had been shot off previously, but the wound had healed up wonderfully.

Merlin---Nested near Kildale, and also near Swainby.

Sheldrake--- A pair nested in Bell's slag bank at Port Clarence. Three more pairs reared young at Tees-mouth.

Shoveller---For some reason, probably the coldness of the spring, which retarded the growth of the reeds, this bird was scarce, where in 1899 several pairs reared young. Two pairs, however, nested and brought off young, and the rest bred inland, as I often saw them flying over at dusk to the estuary.

Tufted Duck---A number of these birds stay for a short time in May, along with the migrating Widgeon, Teal, &c., at Tees-mouth. A pair usually stay and breed at a preserve, but did not this year.

Water Rail---Made several attempts to find the nest at Tees-mouth, and although I located more than one pair and flushed them often I failed. It certainly breeds.

Spotted Crake---Flushed a pair in June, which I knew were breeding at Tees-mouth, one of which was carrying a young one in its feet.

Coot---Nest with seven eggs on June 10th, at Cowpen.

Ringed Plover---Several nests, with eggs on April 22nd. This bird is still holding its own at the part of Tees-mouth of which I write.

Woodcock---A nest with four eggs near Swainby on April 15th. I believe this is the first recorded Cleveland nest of this bird.

Jack Snipe---Arrived at Tees-mouth on November 10th.

Dunlin---Only saw a single bird at Teesmouth, which was nesting.

Curlew Sandpiper---Saw one in full summer plumage at Tees-mouth on June 24th. A few noticed in September.

Ruff---One shot out of a flock of eight at Tees-mouth on September 10th.

Sandpiper---Arrived at Linthorpe on April 19th. Found nest and young at Glaisdale on July 7th.

Redshank---Is increasing at Tees-mouth. A bird allowed us to lift her off her nest and put her on again without making an effort to escape.

Leach's Petrel---One was picked up at Coatham on October 19th (Mussell).

Little Grebe---Nested on several ponds near Middlesbrough. A pair which were systematically robbed of their eggs laid over forty eggs, and, never laid in the same nest after being robbed twice before they gave it up, and built a new one.

Great Crested Grebe---Saw a pair in full breeding plumage at Tees-mouth on April 8th.

MAMMALIAN NOTE

BY C. MILBURN

Pine Marten---As the note in the "Naturalist" (which was extracted from my note in the "Northern Weekly Gazette ") -did not give the date of capture, I take the opportunity of doing so here. Its presence was discovered by its footprints in the snow, and, being an "unknown" to the keepers, traps were set for it. It fell a victim to one of the traps on Friday, March 9th, 1900, and was at once sent to Mr. Mussell, the Taxidermist, who let me examine it in the flesh. It is now in the possession of Mr. Emerson, of Tollesby Hall, near Middlesbrough, on whose estate at Swainby it was obtained.

NOTES: 1900---By R. G. CLAYTON, AND OTHERS.

From various causes I was unable to be present at more than three of the Club's Excursions (those in the early part of the season), when nothing special in the Ornithological line was observed, and during the winter I have not had any opportunity whatever of getting out, nor have I received any specimens.

Mr. Milburn's notes are very full, and may be taken as comprising all that could be noted for our district.

One feature I should like to mention is the increase of Hawfinches. I have been long aware of their visiting us, but not until now are such a number recorded. This, I think, points to a gradual extension northwards of several species, which has been observed and commented upon in various journals.

Although the weather throughout the year was principally of an unpleasant nature, cold and rain predominating, there were no severe storms of duration long enough to disturb migration or the general seasonal movements of birds, hence unusual species have been absent.

The capture of a Marten in Cleveland is very exceptional. It must be many years since such an animal occurred with us. An occasional specimen is seen or taken in the Lake District and further North. Had this wandered down or across country to meet the usual melancholy end?

A Seal was captured in February in the Tees.

Little Gull (*Larus minutus*) at Redcar---I picked up an immature bird of this species on September 29th, 1900, washed in by tide (quite fresh), near Redcar Jetty, on the Yorkshire side of the Tees estuary. It was in length 12 inches. The upper parts were mottled with dark brown and white, and a band of sooty shade was at the tip of the tail. The tail was very slightly forked; the primaries were black on both webs next the shafts, and white on the remainder of the inner webs. The under wing was white, the bill was blackish, and the feet were yellowish pink---

T. ASHTON LOFTHOUSE, Linthorpe, Middlesbrough.

Fulmar Petrel (*Fulmarus glacialis*)---One was washed up on the beach at Kettlecess on September 2nd, 1899---J. H. WILSON, "Naturalist," Jan. 1901, p. 7.

Porbeagle or Beaumaris Shark (*Lamna cornubica*)---A large one was captured by Thos. Langlands in the herring nets off Huntcliff, on October 11th, 1898, and brought into Whitby Harbour. It measured between 7 feet and 8 feet in length---"Naturalist," Jan., 1901, p. 9.

A FEW NOTES ON LEPIDOPTERA THAT HAVE BEEN RECORDED FOR THE CLEVELAND DISTRICT DURING PAST YEARS.

By T. ASHTON LOFTHOUSE.

In looking up old records in connection with a list of Cleveland Lepidoptera which I am preparing, I have come across several species for which no recent records exist, so far as I am aware, and I thought it would lead to some work being done by Lepidopterist members of our Club and others if a list of these insects were published, with localities recorded, and a few notes appended as to likely habitats, and plants that each species is likely to affect, and by this means gain the assistance of our members to work up these particular species and see if they still exist in Cleveland.

It is probable that a good many, if not all, of them, may still be found by diligent working (excepting, of course, such species as *Antiopa*, *Quadra*, etc., which are distinctly migratory species as far as this locality is concerned), but in the very short time in the summer months at our disposal, and with the limited number of members who work at this branch, it is necessarily slow work hunting up these recorded species. But the work that has been done by our Lepidopterist members during the past season or two has resulted in several species being added to our Cleveland list; and I have great hope that by their assistance most, if not all, the species enumerated may be found.

In writing a few years since to a gentleman at Great Ayton for a list of insects likely to be taken there (in connection with a Yorkshire Naturalists' Union proposed excursion to the district), he, after naming a few species that he had taken in the district, said that "several of the kinds have become scarce of late years, I think on account of the many artificial manures now used. It is only my idea, but I may be right." How far this is true I am not prepared to say, but I have no doubt that the great alteration made in agricultural methods in recent years has had a good deal to do with the disappearance of some species, One example is the way hedges are being perpetually cut down, often right to the roots; and this of itself must account for a very large destruction of insects in the ova and larval stages.

Another cause of disappearance of species, especially butterflies, and also the tendency of certain insects to become much darker than the original type, is, I think, due to the changed meteorological conditions, but this is a matter that can be better worked out by meteorologists, it being only an assumption on my part that the years seem to be getting more of an equable temperature, instead of what our elders talk of as the old-fashioned cold winters and hot summers. The alteration of the weather in the way mentioned, *i.e.* having cold and warm snaps of weather during the winter months, would, in the case of the warmer spells of weather, tend to bring insects out in the earlier stages before their time, and then a cold snap comes and there is an end to the venturesome species, perhaps a total eclipse for the district affected.

Good ground for working is by railway embankments, where it is often more sheltered, and the vegetation is more in a wild state, not being troubled by agriculturists; but these also have their drawbacks, such as the sparks from a passing engine occasionally setting the herbage on fire, and, of course, destroying everything with it. And then there is also the difficulty of working railway embankments without being liable to the penalty of the law.

Before commencing the list of species, I should like to ask members and others who are working up the Lepidoptera of the district for their assistance in the preparation of a list of the species that occur in Cleveland, and it would be much more useful if they would at the same time let me have the earliest and latest dates on which the various species occur, together with any notes as to the variation, habits, local distribution, etc.

I should also be glad to receive from non-Lepidopterist members any insects, larvæ, etc., for the purpose of naming, and all assistance would be very acceptable, the work not being one that can be accomplished by one person.

I have included a few species in [brackets] that have not been recorded for the Cleveland district, but are likely to occur, having occurred in adjacent districts.

Diurni. *Colias edusa*---This insect is, of course, as far as this district is concerned, migratory, and thus of only very occasional appearance. Stokesley-Reported some years since.

This species has occurred recently in some numbers all over the country. I should be glad of all records with data as far as possible.

Frequents clover fields and railway banks and is fond of flowers.

Argynis selene. *Argynis euphrosyne*---Some species of small fritillaries were taken in the Great Ayton district some years ago. It is probable that one or both of these species would be taken. Both species are recorded in the Durham and Northumberland list---Robson.

The larvæ of both these species feed on dog and sweet violets. The imago flies in woods about June.

Argynis aglaia is given as fairly plentiful at Whitby (Yorks. list, Porritt, p. 8). Whitby is situated just outside the Cleveland boundary, but insects given for there may have been taken in Cleveland, seeing that the boundary extends to within about three miles of Whitby. Larvæ feed on dog and sweet violets and wild hearts-ease, on hillsides and sand hills. Imago flies in June and July affecting hill-sides, coast sand-hills, etc.

Argynis adippe---Great Ayton (W.H.). Open spaces in woods, fond of flowers of *Centaurea*. July-August.

Larvæ feed on dog and sweet violets.

Argynis paphia---Great Ayton (W.H.) Open spaces in woods. July-August. Larvæ feed on dog and sweet violets.

Argynis paphia var. *Valezina*---Recorded as having been taken at Whitby (B. Lockyer Young, Nat., Jan., 1887).

Vanessa C-album---Great Ayton (B.H.) Also recorded common at Whitby (Yorks. list, Porritt, 9).

Imago. August- September. This species should certainly occur in Cleveland as the principal food plant, elm, is common in most of our Cleveland woods. It is, however, a butterfly that seems to have vanished from most of the Northern woods, for no other reason so far as I can see, but the altered climatic conditions.

Vanessa antiopa---This species being only a migratory one, it is not to be expected that it will occur except on exceptional occasions. It has been recorded as having occurred at Middlesbrough, Saltburn, and Roxby Moor, the latter about 1876, by the late Captain Turton.

I should be glad to have particulars of any records of this species having occurred in the Cleveland district.

Imago will come to sugar during daytime.

Pararge megera---Great Ayton (W.H.), Larvæ feed on grasses. Imago frequent lanes, banks, walls. May and August.

(*Satyrus semele*)---This butterfly has not been recorded for Cleveland, but should occur on the sand-hills along the coast, it occurring abundantly at Scarborough, and also in places along the Durham coast.

Imago flies during August: Larvæ feed on couch grass, etc., on seashore sand hills, etc.

(*Chortobius typhon [=davus]*.)- This butterfly should certainly occur in Cleveland on the great expanse of moorland that we have. Imago frequent grasses in damp places, on moors, during July.

Thecla quercus-- -Given as taken at Whitby abundantly (Yorks. list. Porritt). I was present when one was taken by Mr. W. Hewett at Sandsend on the occasion of the Yorkshire Naturalists' Union visit in September, 1894. Seeing the great quantity of oak woods in the Cleveland district the insect should be taken all over. It flies over the tops of oak and ash in the sunshine, and rests on the leaves at night and in dull weather.

(*Lycæna astrarche*) (= *agestis*)---This insect occurs commonly on the Durham Coast and should occur at Saltburn, seeing that the food plant (*Helianthemum*) occurs there, Imago flies June---July.

(*Lycæna argiolus*)---No record is given for this district but this butterfly should be looked for wherever the holly grows plentifully, about the end of May.

Nocturni. *Acherontia atropos*---This species has occurred in many places in this district, and is taken more or less abundantly at Middlesbrough almost every year. I should, however like records from as many Cleveland localities as possible, with dates of appearance and if in larva, pupa, or imago stage. I specially want records of the occurrence of the insect in the spring or early summer.

Sphinx convolvuli has occasionally occurred, specimens having been taken at Saltburn, Redcar, Yarm, and Middlesbrough. Comes to flowers at dusk, especially the flowers of the Tobacco plant.

Sphinx ligustri---Imago taken at Hutton Gate some years since. Larva feeds on privet, ash, guelderose, &c.

Chærocampa celerio---Middlesbrough, single specimen, 1870. (Yorks. list, Porritt, p. 18).

Sesiidæ--- With the exception of *Crabroniformis (bembeciformis)* none of this family of insects have been recorded for the Cleveland district. As there are eight species in addition to the one already mentioned recorded in the Yorkshire list, I consider that by specially working at the proper season some of these might be turned up in the Cleveland district. The best way would be to work for the larvæ in the spring in the various trees affected by these species.

Gnophria quadra---One recorded taken at Redcar in 1875. (Yorks. list, Porritt, p. 25). This species occurred all over the country about that period, and there must have been a partial migration.

Gnophria rubricollis Guisborough (Stainton's Manual, p.140).

An Ayton gentleman informed me he used to take a black footman fairly commonly in that district, which would probably be this species. Imago flies in the sunshine in July over trees, &c. Larvæ feed on lichens, on larch, &c.

Emydia cribrum-- -The "speckled footman" was given to me in a list for the Great Ayton district as being pretty common, but I am afraid this must be a mistake for some other species. The larvæ feed on heath, but I do not know of its having occurred anywhere in the North. It is certainly not mentioned in the Yorkshire list.

Cossus ligniperda---Great Ayton, rare (W.H.). I am under the impression that I have seen one or two larvæ that have been taken in the Middlesbrough district during past years. The larvæ feed in the trunks of large trees of ash, willow, elm, &c., feeding on the wood seldom 5 feet from the ground.

Trichiura cratægi---Between Ayton and Stokesley (T. Meldrum). Larvæ feed on hawthorn, elm, willow, &c., in May, and are often to be found on dense and closely cropped hawthorn hedges bordering roads.

Dicranura bicuspis--Guisborough, several (W. Jeffrey, Ent. W. Int., Sep.11, 1858). Middlesbrough (Zool., 1857, xv., 5825). Yarm, empty cocoons (W. Lister, Entom., 1869, iv., 231); between Ayton and Stokesley (T. Meldrum). This insect should certainly be turned up again in this district (it is taken, I believe, every year in the Scarborough district), seeing that its main food plant, alder, is one of the commonest trees in Cleveland, occurring everywhere. Imago appears in May-June. Larvæ on alder, July-September. Pupæ, October-April, spun up on alder trunks, rarely above 2 ft. from the ground. Resemble a Brazil nut.

Noctuæ. *Acronycta alni*---Guisborough (W. Jeffrey, Ent. W, Int. iv. 188). This species occurs frequently in the Scarborough district, and I think it is only a question of searching well for it to be turned up again in Cleveland.

The larvæ feed on a number of trees including alder, willow, oak, willow, birch, &c.

Axylia putris---Redcar (J. Sang, Yorks. list, Porritt, p. 73).

It would be interesting to know if this species still occurs at Redcar. Imago appears in June, and would probably come to sugar.

Tryphœna interjecta---Redcar (J. Sang), Saltburn (G. T. Porritt).

Taken at Saltburn in August at tansy flowers, &c.

Tryphœna orbona (=subsequa)---Redcar, July 1875 (Yorks. list, Porritt, p. 81).

Dianthœcia carpophaga---Redcar (J. Sang). Larvæ feed on seed capsules of *Silene inflata*.

Chariclea umbra (*Heliopsis marginata*)---Redcar (J. Sang). This Insect occurs commonly in the Hartlepool district, and should be turned up on our coast wherever the rest harrow (*Ononis arvensis*) occurs on the sand-hills on which plant the larvæ feed in August very freely.

Geometræ. *Cleora lichenaria*---Between Ayton and Stokesley (T. Meldrum). Imago appears in July, and may be taken on lichen-covered oak trunks, &c. Larvæ feed on lichens, and should be taken in May.

Acidalia dimidiata (*scutulata*)---Redcar (J.S., Yorks. list, Porritt).

Acidalia imitaria---Redcar (J. Sang). Imago August. Larvæ feed on bedstraw (*Galium*). May and June.

Most of the records have been taken from the Yorkshire list by Geo.T. Porritt, F.L.S., published in 1883 by the Yorkshire Naturalists' Union.

The information as regards time of appearance, food plant, &c, has been mostly taken from the excellent Lepidopterists' Calendar compiled by Joseph Merrin.

CLEVELAND LEPIDOPTERA IN 1899.

By T. ASHTON LOFTHOUSE

The notes following on Cleveland Lepidoptera include those received from Messrs. W. Sachse and Frank Elgee, which, to prevent repetition and also to curtail space, I have thought well to incorporate in one list, along with my own notes.

With reference to the season, Mr. Sachse states that it has not been a particularly good one for him, as far as species new to the district are concerned. Some of the insects recorded by him were got out at an early date by forcing. He, therefore, had the insects coming out at a time when there is very little outside work possible. He considers this an excellent plan to get a good series of a common insect, which emerges naturally at a time when the collector rarely has room for it on his setting boards.

The season, according to Mr. Frank Elgee's experience, was a fairly good one. He noted 117 species, two or three of which have not been hitherto recorded in our Proceedings. He states that the weather was unfavourable in May and in the autumn, but the summer was very fine indeed and insects were exceedingly numerous, especially during July,

when sugaring was exceedingly productive, the moths in this month simply appearing by the hundred every night. On the evening of July 17th, at a small stretch of sugared palings at Ingleby Greenhow, there were no less than 500 moths. The Large Yellow Underwing (*T. pronuba*) was represented by 273 individuals in fine condition.

Several common species are only noted in the following list, on account of occurrence in localities in which they have not hitherto been recorded in our Proceedings.

Diurni. *Pieris brassicæ*---Ingleby Greenhow, May 9th and August 12th (F. Elgee).

Pieris rapæ. Ingleby Greenhow, April 21st, October 17th (F. Elgee).

Pieris napi. Ingleby Greenhow, May 5th (F. Elgee).

Euchloe cardamines. -Ingleby Greenhow, July 4th and 8th. Late dates for this butterfly (F. Elgee).

Vanessa urticæ. -Ingleby Greenhow, May 6th. (F. Elgee).

Vanessa atalanta. - Ingleby Greenhow, July 11th. (F. Elgee.) This butterfly was common in the district during the autumn, several occurring in the garden at Linthorpe.

Epinephele janira. Ingleby Greenhow July 8th (F. Elgee).

**Epinephele hyperanthus.* -Kilton Woods several on July 15th (W. Sachse).

Cœnonympha pamphilus. -Ingleby Greenhow (Elgee,).

Polyommatus phlœas. -Ingleby Greenhow (Elgee).

Lycœna icarus. -Ingleby Greenhow, July 4th (Elgee).

Nisoniades tages. -Hilton, June 10th (Sachse).

Nocturni. *Acherontia atropos.* -A full-grown larva was brought to me that had been taken off potatoes in a garden near Thornaby on August 25th. It pupated on August 27th, and the imago appeared on November 19th the pupa having been kept in a warm place and frequently damped. The moth when touched gave off a clear clicking sound.

Smerinthus populi. -Ingleby Greenhow. Bred May 20th (F. Elgee).

Macroglossa stellatarum. -This species occurred abundantly all over the country during the summer of this year. My notes of its occurrence in this district are-June 4th Thornaby, single specimen; June 10th, three or four on moors near Great Ayton; July 21st, August 23rd and September 1st, single specimens hovering over flowers in garden at Linthorpe, Middlesbrough. Mr. J. M. Meek informed me that two or three had been noticed at Redcar.

Arctia caia. -Larvæ at Ingleby Greenhow, May 28th.

Spilosoma lubricipeda. -Middlesbrough, bred (W. Sachse).

Spilosoma menthastri. -Middlesbrough, bred (W. Sachse). Ingleby Greenhow, May 11th (F. Elgee).

Hepialus humuli. -Ingleby Greenhow, July 5th (F. Elgee).

* *Hepialus sylvanus.* -Several taken in garden at Linthorpe, resting on netting at end of tennis lawn, after dusk, during the month of August.

Hepialus velleda. -Took two females in Kilton Woods on July 1st. One laid a number of ova, which were white when laid, but turned quite black within twenty-four hours. Ingleby Greenhow, July 7th (F. Elgee).

Hepialus hectus. -Kilton Woods, July 1st (W. Sachse).

Orgyia antiqua. -Numbers of larvæ near Eston Grange, August 16th. First bred September 2nd (F. Elgee).

* *Pœcilocampa populi*. -Specimen (female) bred from cocoon found in Kilton Woods (W. Sachse).

Eriogaster lanestris. -At Ingleby Greenhow, on July 4th, twelve nests of larvæ were found on hawthorn and sloe (F. Elgee).

Bombyx quercus. -Ingleby Greenhow Bred June 15th (F. Elgee).

Saturnia pavonia. -Ingleby Greenhow. Bred May 25th. Larvæ noticed on moors on July 11th (F. Elgee).

* *Dicranura furcula*. -Larva in Middlesbrough Park, on August 16th (F. Elgee).

Dicranura vinula. -May 21st. Bred from 1897 larvæ. Larvæ noticed at Ingleby Greenhow on July 18th (F. Elgee).

Lophopteryx camelina. -Ingleby Greenhow (F. Elgee).

* *Notodonya dictœoides* – A pair taken at Ingleby Greenhow on May 22nd; female laid about 100 eggs, which hatched on Jun 4th (F. Elgee)

Phalera bucephala – Kilton Woods, bred March (W. Sachse)

Noctuæ. *Thyatira derasa*. -Two specimens taken at sugar in Kilton Woods on July 1st (W. Sachse).

* *Cymatophora duplaris*. -A good specimen beaten out of woods near Great Ayton, on July 14th.

Bryophila perla. -Ingleby Greenhow (F. Elgee).

Acronycta psi. -Ingleby Greenhow June 19th and July 8th (F. Elgee).

Acronycta rumicis. -June 20th, July 10th (F. Elgee).

Leucania conigera. -Ingleby Greenhow, at sugar July 24th (F. Elgee).

Leucania lithargyria. -Middlesbrough, July 13th. (W. Sachse)

Leucania comma. -Ingleby Greenhow, July 1st (F. Elgee). Kilton Woods, July 1st (W. Sachse).

Leucania pallens. -Kilton Woods, July 1st (W. Sachse). Ingleby Greenhow, July 11th, at sugar, both the type and a reddish variety (F. Elgee).

Xylophasia rurea. -Middlesbrough June 16th. Ingleby Greenhow (F. Elgee).

Xylophasia monoglypha. - Type and variety *infuscata*, at sugar, Ingleby Greenhow, July 3rd (F. Elgee). Kilton Woods (W. Sachse)

Xylophasia lithoxylea. -Ingleby Greenhow (F. Elgee)

Xylophasia hepatica. -Ingleby Greenhow (F. Elgee).

Cerigo matura. -Specimens of this moth occurred at sugar (mostly in moderate condition) in garden at Linthorpe Middlesbrough, on July 25th, 28th, and Aug 1st 2nd 4th and 9th,

Mamestra abjecta. -Single specimens of this rare moth taken at sugar, in garden at Linthorpe on July 28th and August 8th.

* *Mamestra sordida*. -Single specimens on sugar in garden at Linthorpe, on June 21st and July 13th.

Mamestra brassicæ. -Kilton Woods (Sachse) Ingleby Greenhow (F. Elgee)

Apamea basilinea. -Kilton Woods, July 1st (W Sachse) Middlesbrough, June 16th (Elgee).

Apamea gemina. -Kilton Woods, at sugar July 1st(W Sachse) Ingleby Greenhow (Elgee).

Apamea unanimitis. -Kilton Woods, at sugar, July 1st (W. Sachse).

Apamea didyma. -Ingleby Greenhow, at sugar, July 26th (F. Elgee).

Miana strigilis. - Middlesbrough, June 20th (F. Elgee). var . *Æthiops* at Kilton Woods, July 1st (W. Sachse). I find the commonest form in this district to be blackish brown, more black than brown, but not intense black. This I take to be the type form. The completely black form var. *Æthiops* is also taken sparingly, whilst the light form var. *proæduncula* (broadly white at hind margin) is rare. I took two specimens at sugar this year in garden, Middlesbrough, on June 27th, and I also have specimens taken some years since at Middlesbrough.

Miana fasciuncula. -Kilton Woods, July 1st. (W. Sachse). Middlesbrough, June 19th (Elgee).

Miana arcuosa. -Ingleby Greenhow (F. Elgee).

**Grammesia trigrammica*. -Single specimen, at sugar in garden, Linthorpe, Middlesbrough, on June 27th.

Caradrina morpheus. -At sugar in garden, Linthorpe, on July 3rd and August 3rd.

Caradrina quadripunctata. -Kilton Woods, July 1st. (W. Sachse) Middlesbrough, June 16th, and at Ingleby Greenhow (F. Elgee).

Rusina tenebrosa. -At sugar in garden, Linthorpe, on June 26th and July 10th.

Kilton Woods, July 1st. (W. Sachse).

Agrotis segetum. -Kilton Woods, July 1st (very dark forms) (W Sachse). Middlesbrough,

June 5th. Ingleby Greenhow (F. Elgee).

Agrotis exclamationis. -Kilton Woods, -July 1st (some nearly black) (W. Sachse). Middlesbrough, June 15th. Ingleby Greenhow, July 1st (Elgee).

Agrotis strigula. -Kilton Woods, July 1st, at sugar (W. Sachse). Ingleby Greenhow, on heaths (F. Elgee).

Noctua augar. -Ingleby Greenhow (F. Elgee).

Noctua plecta. -Kilton Woods, July 1st, at sugar (W. Sachse), Middlesbrough, June 17th,

Ingleby Greenhow, July 3rd at sugar (F. Elgee).

**Noctua stigmatica (Rhomboidea)*. -Ingleby Greenhow Jul 30th, at sugar (F. Elgee).

. This record is interesting seeing that the insect is not included in the Durham and Northumberland list and that there are only two localities given for it in Porritt's Yorkshire List.

Noctua brunnea. -Ingleby Greenhow (F. Elgee).

Noctua festiva. -Kilton Woods, July 1st (very striking forms) at sugar (W. Sachse). Ingleby Greenhow (F. Elgee)

Noctua umbrosa. -Occurred at sugar in garden at Linthorpe Middlesbrough, on August 2nd, and throughout the month in good numbers. I never noticed it commonly here before.

Noctua baja. -Ingleby Greenhow (F. Elgee).

Noctua xanthographa. -Ingleby Greenhow (F. Elgee).

Triphæna comes. -Ingleby Greenhow (F. Elgee).

Triphæna pronuba. -Kilton Woods, July 1st (very dark forms) (W. Sachse). Ingleby Greenhow (F. Elgee).

Mania typica. -At sugar, Ingleby Greenhow July 10th (F. Elgee).

Mania maura. -At sugar, Ingleby Greenhow (F. Elgee).

Tœniocampa gothica. -Middlesbrough, bred February (W Sachse), Ingleby Greenhow, April 20th (F. Elgee).

Tœniocampa incerta. -Middlesbrough, bred February (W Sachse).

Tœniocampa satbilis. -Ingleby Greenhow, March 18th (F. Elgee).

Scopelosoma satellitia. -A female taken at sugar in garden at Linthorpe, on April 24th, laid a quantity of ova on April 27-8, which hatched out on May 19th, and first specimens were bred from same on August 31st.

Xanthia circellaris. - Middlesbrough, bred March (Sachse). Larvæ at Linthorpe, June 7th; first bred from same August 10th (F Elgee).

Polia chi. -Occurred at sugar in garden, Linthorpe, on August 18th, etc.

Polia chi, *Var. olivacea*. -Two specimens of this variety taken at sugar, at Linthorpe, on August 25th.

Aporophyla lutulenta. -*This* insect was recorded for the first time for this district by Mr. Sachse in the 1898 Proceedings, but seeing that only one locality is given for it in Mr. Porritt's Yorkshire list, I think it is worth while to record the specimens taken this season. The first specimen occurred at sugar in garden, at Linthorpe, Middlesbrough, on August 28th; further ones occurred on August 31st, September 1st, female, 4th, 5th (2), and 13th, September 4th, one (Sachse).

* *Euplexia lucipara*. -Ingleby Greenhow, at rest on wall, on July 3rd, also at sugar, on July 4th (F. Elgee).

Phlogophora meticulosa. - Kilton Woods, July 1st, at sugar (W. Sachse). Ingleby Greenhow, July 3rd (F. Elgee).

Aplecta prasina. -Kilton Woods, July 15th. A female taken, which laid ova. These hatched out in due course, and I reared the larvæ indoors, and forced them on as much as possible with the intention of preventing their going into hibernation. When food became scarce in December I fed them on slices of apple, with the result that they all had pupated by the end of the year (W. Sachse).

Ingleby Greenhow, dark form, July 3rd (F. Elgee).

Aplecta nebulosa -Kilton Woods, July 15th. A female taken which laid ova, which, when hatched out, were treated same as previous species, but they took less kindly to the process, fed up much slower, and I only obtained six pupæ (W. Sachse).

* *Hadena glauca*. -Occurred at Eston Hills on May 30th and June 6th, and also at Great Ayton on June 3rd and 10th. Females, taken on the 3rd and 6th, laid large quantity of ova. Ova laid on the 8th hatched out on the 17th June. The larval from these and other batches, amounting to 200 or 300 in all, fed up very rapidly, but when full fed they seemed to take some disease, and all died off but two or three. I tried changing their quarters, food, etc., but all to no purpose. I may say that the weather about the time was very hot, and that may have had something to do with it.

Two batches of ova were found laid on sprigs of heather, on Eston Hills on June 6th.

Hadena dentina. -Ingleby Greenhow (F. Elgee). Linthorpe, at sugar, on June 21st.

Hadena oleracea. - Kilton Woods, July 1st, at sugar (W. Sachse.) Ingleby Greenhow (F. Elgee).

Hadena pisi. -Middlesbrough, bred (W. Sachse).

Hadena thalassina. -Kilton Woods, July 1st, at sugar (W. Sachse). Ingleby Greenhow (F. Elgee).

Calocampa vetusta. -Hybernated female taken at Middlesbrough on June 11th, which laid about 100 ova, which towards the end of August produced about 40 splendid insects (W. Sachse).

Calocampa exoleta. -Middlesbrough at sugar April 27th (F. Elgee).

Gonoptera libatrix -Single specimens, in good condition, taken at sugar in garden at Linthorpe all June 12th and 20th. Noted on account of date. This moth was again taken on September 12th.

Habrostola tripartita. -Taken at Valerian flowers in garden. Middlesbrough, on July 19th.

Plusia gamma. - Ingleby Greenhow (F. Elgee).

**Plusia interrogationis*. -Ingleby Greenhow (F. Elgee). Took two specimens off walls on moors near Great Ayton on July 22nd. Although this moth has not been previously recorded in our Proceedings, I have taken odd specimens of it in previous years at Great Ayton and Eston Hills.

Anarta myrtilli---Ingleby Greenhow, July 10th (F. Elgee).

Phytometra viridaria. -Occurred commonly near heaths at Great Ayton on June 3rd, 10th and 17th, dashing about in the sun.

Zanclognatha grisealis -Kilton Woods, July 1st (W. Sachse).

Hypena proboscidalis. -Ingleby Greenhow, July 13th (F. Elgee).

Geometræ. *Uropteryx sambucaria*. -Ingleby Greenhow (F. Elgee).

Rumia luteolata. -Ingleby Greenhow (F. Elgee).

Metrocampa margaritaria. -Ingleby Greenhow (F. Elgee).

* *Eurymene dolobraria*. -Single specimen taken off fir tree trunk near Kildale in June.

Odontopera bidentata. -Ingleby Greenhow bred May 15th (F. Elgee).

Crocalis elinguaris. -Ingleby Greenhow, larvæ, May 6th (F. Elgee).

Amphidasys betularia. -Type specimen bred from *Doubledayaria* female, taken at Kilton last year. Took a *Doubledayaria* variety on June 17th, near Great Ayton (*male*), just emerging, at 2 pm., from chrysalis at foot of oak tree. As far as I remember this is the only *Black* var. I have taken in this neighbourhood (Ayton), although I have occasionally taken the type.

Boarmia repandata. -Ingleby Greenhow (F. Elgee).

**Asthena sylvata*. - Taken in Kilton Woods on July 1st

Asthena blomeri. -Taken in Kilton Woods on July 1st (W. Sachse).

Acidalia fumata. -Taken in Kilton Woods on July 1st (W. Sachse). Ingleby Greenhow (F. Elgee).

Acidalia aversata. -Ingleby Greenhow (F. Elgee).

Cabera pusaria. -Ingleby Greenhow (F. Elgee).

Halia vauaria. -Ingleby Greenhow, July 23rd (F. Elgee).

Strenia clathrata. -Ingleby Greenhow, July 2nd (F. Elgee).

**Panagra petraris*. -Occurred commonly among bracken fern near Great Ayton, on June 3rd and 10th; also noticed on Eston Hills on May 26th, and June 6th, and at Battersby on June 17th.

**Scodionia belgiaria*. -Great Ayton, July.

Ematurga atomaria. -Ingleby Greenhow (F. Elgee); bred in January by forcing, from Great Ayton ova (W. Sachse).

Abraxas grossulariata. -Ingleby Greenhow larvæ on May 6th (Elgee).
Abraxas sylvata. -Hilton on June 10th (W. Sachse).
Lomaspilis marginata. -Ingleby Greenhow, July 18th (F. Elgee).
Hybernia marginaria. -Near Middlesbrough Park, April 22nd (F. Elgee).
Cheimatobia brumata. - Ingleby Greenhow (F Elgee).
Larentia didymata. -Ingleby Greenhow (F. Elgee).
Larentia cæsiata. -Ingleby Greenhow, among bracken, July 3rd (F. Elgee).
* *Larentia salicata*. -Taken near Battersby on June 24th.
Larentia viridaria. -Ingleby Greenhow, July 4th (F. Elgee).
Emmelesia alchemillata. -Bred on July 1st from pupæ got at Kilton.
Emmelesia albulata. - Ingleby Greenhow (F. Elgee).
* *Emmelesia decolorata* - Taken at Acklam on June 19th, and in garden at Linthorpe on June 20th.
Eupithecia castigata. -A few specimens noticed near Easby in Cleveland.
* *Eupithecia minutata*. - Taken in fir wood near Great Ayton on July 22nd.
Melanthia bicolorata. -Ingleby Greenhow (F. Elgee).
Melanthia ocellata. -Ingleby Greenhow, July 3rd (F. Elgee).
Melanippe sociata. -Ingleby Greenhow, July 3rd (F. Elgee).
Melanippe montanata. -Ingleby Greenhow, July 3rd (F. Elgee).
Camptogramma bilineata. -Ingleby Greenhow, July 4th (F. Elgee)
Cidaria miata. -Eston Hills, April 3rd (F. Elgee).
Cidaria truncata. -Ingleby Greenhow (F. Elgee).
Cidaria prunata. -Ingleby Greenhow, July 24th (F Elgee).
Cidaria fulvata. -Ingleby Greenhow, July 21st (F. Elgee).
Eubolia limitata. -Ingleby Greenhow (F. Elgee).
Tanagra atrata. -Ingleby Greenhow, July 2nd (F. Elgee).
* *Scoparia angustea*. -Taken at sugar in garden at Linthorpe on September 12th.
* *Phycis fusca*. -Several specimens noticed on moors near Great Ayton on June 16th and July 22nd.
Grapholitha penkleriana. - Taken near Ingleby on occasion of Yorkshire Naturalists' visit on August 7th.
Grapholitha geminana. - Taken at Ingleby on occasion of Yorkshire Naturalists' visit on August 7th.
* *Semasia rufillana*. -Taken near Carlton-in-Cleveland, on occasion of Y.N.U. visit on August 5th.
* *Cerostoma costella*. -Taken near Carlton in-Cleveland, on occasion of Y.N.U. visit on August 5th.
* *Argyresthia curvella*. -Taken near Carlton-in-Cleveland, on occasion of Y.N.U. visit on August 5th.
* *Argyresthia gœdartella*. - Taken near Carlton-in-Cleveland, on occasion of Y.N.U. visit on August 5th.

1900

Into the following notes on Lepidoptera noticed in Cleveland during 1900, lists supplied by Messrs. W. Sachse and Frank Elgee have been incorporated.

Mr. Sachse appends note as follows, "The extremely bad weather prevented me from doing more than a very little outside work in the late autumn." Mr. Frank Elgee reports that he took, during the season, 199 species, many new to our list, and some rather uncommon, the principal of which are noted below.

Diurni * *Colias edusa*. -The Clouded Yellow. " This uncommon butterfly was caught by Mr. A. G. Withington, of Great Ayton, between that place and Guisborough on August 16th. It was a male in perfect condition. Mr. C. Milburn, of our Ornithological section, states that he saw one on September 11th in Grange Road, but failed to secure it. The same happened when I also saw one in a clover field, at Linthorpe, on the 12th. Another was obtained at Redcar, about the same time by a collector residing there." (F. Elgee).

* *Argynnis selene*. -Small Pearl-bordered Fritillary. A single worn specimen taken near Ingleby Greenhow on July 25th (F. Elgee).

**Thecla W-album*. - White letter Hair-streak. I took a very battered specimen of this butterfly, in Kilton Woods, on August 11th. Mr. Frank Atkinson obtained a specimen in Friarage Woods, at Yarm, some years since (1890 ?)

Thecla rubi. -Green Hairstreak. Single specimen near Battersby.

Nocturni. *Acherontia atropos*. -Larva, Grangetown. 25th August (F. Elgee). Two larvæ, 21st September, at Kildale, and pupa, 13th October, Redcar (W. Sachse). Dr. Veitch also had several larvæ sent from Marton, South Bank and Middlesbrough.

**Sphinx ligustri* -Larva, 29th September, at Ingleby Greenhow, found feeding on privet (F. Elgee).

Macroglossa stellatarum. - Two at valerian flowers in Ingleby Station on August 1st. (F. Elgee) Kildale.

June 16th, also heard of several specimens being noticed at Glaisdale.

Trochilium crabroniformis. -Took several on poplar trunks, early in the morning, July 10th, Middlesbrough (F. Elgee).

* *Ino staites*. -Occurred commonly in June, near Great Ayton, flying in the sun similar to the Burnets. I also have a specimen taken near Cross Keys, Nunthorpe, some years since

* *Hylophila prasinana*. -Great Ayton, June 9th (W. Sachse).

Pœcilocampa populi. -Larva, Thornaby, 15th June (F. Elgee), Several noticed at gas lamps at Yarm-on-Tees, on November 23rd, and two caught (F. Atkinson).

Eriogaster lanestris. -Bred 31st March. Only one emerged out of thirty pupæ, the rest remaining over until 1901. Several fine and healthy looking ichneumon flies were also obtained from the same species in June and July (F. Elgee).

Pseudo-bombyces . -*Dicranura bifida*. -Took two larvæ off a small poplar tree in garden at Linthorpe, Middlesbrough, at end of July.

Dicranura vinula. -Female specimen taken at Redcar on May 1st. This is an early date for this district. A pair was taken in garden at Linthorpe, on June 17th, and several larvæ were noticed on poplars and willows in garden during July.

* *Pterostoma polpina*. - Larvæ on tree trunk at Kildale, 1st September (W. Sachse).

Notodonta dictœides. - Bred July 2nd, 17th and 19th, Ingleby Greenhow (F. Elgee).

Notodonta dromedarius. - Larvæ on alder. Eston Nab, Sept. 22nd (W. Sachse).

Notodonta ziczac. - Took a specimen off a gate pier at Linthorpe, on the 26th August, in good condition.

Phalera bucephala. -Glaisdale, July 7th (W. Sachse)

Noctuaæ. **Acronycta ligustri*. -Single specimens were taken off sugaring, near Kildale.

Leucania conigera. -At sugar, in garden, Linthorpe, Aug. 24th.

Nonagria fulva. -On grass stems at night, September 17th Linthorpe (F. Elgee).

Neuronia popularis. -One taken at light, Linthorpe, August 28th; also occurred at light, Glaisdale, about same time.

Charæas graminis. -August 20th, bred (F. Elgee).

**Stilbia anomala*. -Caught near Ingleby Greenhow, on July 29th and 31st, This moth is scarce in Yorkshire, only one or two records being given in Porritt's list (F. Elgee).

Agrostis vestigialis. -Redcar, July 28th.

Agrotis saucia. -Middlesbrough, October 8th and November 1st (F. Elgee.)

Agrotis tritici. -Redcar, August 11th (F. Elgee) Middlesbro'.

Agrotis agathina: -Larvæ on heather, near Battersby, on May 26th. Two of them fed up, and emerged from pupæ on August 17th and 18th. Larvæ also taken in same locality by F. Elgee.

Noctua glareosa. -At sugar, in garden, Linthorpe, August 24th. Kensington Road, Middlesbrough, August 24th (F. Elgee).

Noctua C-nigrum. -At sugar, Oct. 8th, Middlesbrough, (F. Elgee), probably second brood.

Triphœna janthina. -Female, taken in Kilton Woods, Sept. 15th, laid ova; larvæ now feeding up (end of December), on ivy (W. Sachse) Middlesbrough.

**Triphœna fimbria*. -Ingleby Greenhow Church, July 29th (F. Elgee).

Mania maura. - Very abundant at sugar, Glaisdale (F Atkinson). July 16th, bred, Middlesbrough Park (F. Elgee), August 22nd. Sugar, Middlesbrough September 27th, ova (from Glaisdale), hatched and larvæ now (end of Dec.) feeding upon ivy (W. Sachse).

* *Panolis piniperda*. -A single specimen taken off fir trunk on Eston Hills.

* *Pachnobia rubricosa*. -Common on sallows at Saltburn, April 17th, also occurred at Linthorpe during April.

Tœniocampa incerta. -A good and variable set emerged during February by forcing (W. Sachse).

**Tœniocampa gracilis*. - Single specimen at sallows at Saltburn, on April 17th.

Tœniocampa pulvurentula. -At sallows in garden, Linthorpe; also at Saltburn during April.

* *Anchocelis lunosa*. -At sugar in garden, Linthorpe, on September 4th.

**Cerastis vaccinii*. -Two on ivy bloom at Ingleby Greenhow, October 12th (F, Elgee).

Scopelosoma satellitia. -Plentiful at Yarm, and a very variable set caught by Mr. Frank Atkinson, at sugar, Middlesbrough, (F. Elgee). Linthorpe, several.

* *Xanthia citrigo*. -On lime tree trunk near Ingleby Manor (W. Sachse).
Xanthia fulvago. -Bred Acklam (W. Sachse). Glaisdale.
Xanthia fulvago var flavescens. -Bred from catkins, Acklam, Middlesbrough. At sugar (W. Sachse). Glaisdale as common as type (F. Atkinson).
Cirrhœdia xerampelina. -Took a worn specimen at Acklam during the latter part of August. I also took a specimen some years since at Linthorpe. No doubt it would be taken freely if well looked for, seeing that the ash on which it feeds is such a common tree in the district. Mr. Frank Atkinson took two specimens at Glaisdale.
Calymnia trapesina. -Ingleby Greenhow, July (F. Elgee).
Polia flavicincta. -Middlesbrough, September 17th (F. Elgee). Linthorpe, September 27th.
Aporophyla lutulenta. -At sugar, Kensington Road, Middlesbrough on September 3rd, 8th and 12th. Gunnergate, September 6th (F. Elgee). Took twelve specimens at sugar in garden at Linthorpe, Middlesbrough during August and September, all males but two.
* *Cleoceris viminalis*. -. Larvæ on willow, near Great Ayton, on June 4th, which gave both the type and *var obscura*, about the middle of July (W. Sachse). Kildale.
* *Agriopsis aprilina*. -Taken off oak tree trunk at Ingleby Greenhow, on September 29th (F. Elgee).
Aplecta prasina. - During January, a splendid set was bred, reared from ova laid by a female caught in Kilton Woods. By keeping the young larvæ warm, they fed right on and took very kindly to slices of apple (W. Sachse).
* *Aplecta occulta*. -A few specimens of this fine Noctua occurred in the Cleveland district during this summer. The first specimen taken by me occurred at sugar in the garden at Linthorpe, Middlesbrough, on August 28th. I also took a worn female at sugar on the 31st. This laid a quantity of ova, which, unfortunately, proved infertile. Mr. Sachse took a specimen on the 30th of August, also at Middlesbrough. Two specimens were taken off sugar, at Glaisdale, and about this time, another three or four were seen, by Mr. Frank Atkinson.
Aplecta nebulosa. -Larvæ of this insect treated same as *prasina*, but out of about twenty I only obtained four specimens, emerging between end of March and early May. They fed up much slower than *prasina*, and in this case did not appear to adapt themselves so well to forcing.
**Hadena audusta*. -Taken at sugar in June, near Kildale.
**Hadena protea*. -On oak trunk, near Eston, September 13th, also at Ingleby and Gunnergate during the month (F. Elgee). Mr. Frank Atkinson took an exceedingly dark specimen at Glaisdale during August. I have taken the type at Great Ayton in previous years.
* *Xylocampa areola*. - Larvæ on honeysuckle in Kilton Woods, June 2nd (W. Sachse).
Habrostola tripartita. -Several larvæ on nettle, August 4th, Ingleby Greenhow. (F. Elgee).
* *Plusia fistucæ*. -Specimen taken off valerian flowers, Linthorpe, Middlesbrough, at early dusk, on July 20th.

Plusia interrogationis. -July 24th, several on moors, Ingleby Greenhow (F. Elgee).

* *Euclidia mi.*-Near Great Ayton, flying in sun over grass fields, on June 4th (F. Elgee).

Geometræ . *Epione apicaria*. -This pretty geometer was taken freely by Mr. F. Atkinson, at Glaisdale, at end of August and early in September; Linthorpe, Middlesbrough, September 17th (F. Elgee).

* *Venilia macularia*. -Plentiful at Great Ayton on June 4th (W. Sachse).

Ellopiæ prosapiaria. -Eston Nab, July 28th; a female laid ova, which hatched, but the larvæ would not feed on the fir supplied, and died (W. Sachse).

Tephrosia biundularia. -A very good set taken at Geat Ayton, on May 24th, including some finely marked ones (F. Elgee). Kilton Woods, June 2nd, light form (Sachse)

* *Iodis lactearia*. -Kilton Woods, June 23rd and 30th (W.Sachse and F. Elgee).

Asthena luteata. -Kilton, June 23rd; Glaisdale. July 7th (W. Sachse).

Asthena candidata. -Kilton, June 23rd (W. Sachse). A single specimen at Great Ayton, on June 9th; also occurred commonly near Kildale during June.

Eupisteria obliterata. -Kilton Woods (W. Sachse).

**Cabera exanthemata*. -Kildale and Middlesbrough.

Strenia clathrata. -Occurred near Kildale in June, and near Nunthorpe about 12th July.

Abraxas sylvata. -Linthorpe, Middlesbrough and Glaisdale (W. Sachse). Kildale.

* *Hybemia defoliaria*. -Near Park, Middlesbrough, September 12th (F. Elgee). Bred, Kilton Woods, November 8th (W. Sachse). Yarm.

Anisopteryx æscularia. -Linthorpe, Middlesbrough, March 20th (F. Elgee).

Oporabia dilutata. -Abundant on ivy bloom at Ingleby Greenhow, during October (F. Elgee). Pinchinthorpe (W. Sachse).

Larentia salicata. -Near Great Ayton. May 20th (F. Elgee).

**Eupithecia exiguata*. -Great Ayton, June 4th, (F. Elgee) Kildale.

* *Eupithecia rectangulata*. -Ingleby Greenhow, July 28th, (F. Elgee).

* *Thera juniperata*. - Worn specimen taken on tree trunk, at Acklam, near Middlesbrough, October 8th, (F. Elgee).

Melanthia ocellata. -Common, Eston, July, (W. Sachse).

Melanthia albicillata. -Plentiful in Kilton Woods, June 23rd, (W. Sachse).

• *Antidea nigrofasciaria*. -Great Ayton.

**Cidaria silaceata*. -Kilton, June 30th. (W. Sachse). Glaisdale, July 7th.

Cidaria dotata. -Eston Hills (W. Sachse).

* *Eubolia cervinata*. -A very fine specimen of this moth taken at gas lamp, in Yarm Station, about end of September (F. Atkinson).

* *Chesias spartiata*. -Numerous among broom bushes near Eston, on October 12th (F. Elgee).

* *Pyralis .farinatis*. -Middlesbrough (F. Elgee).

* *Scopula ferrugalis*. -A finely marked specimen taken off sugar in garden at Linthorpe, on August 29th.

**Tortrix heparana*. -Bred July 11th, from larvæ taken in garden at Linthorpe.

* *Tortrix costana*. - Bred June 28th, from larvæ taken in garden at Linthorpe.

* *Tortrix ministrana*. -Taken at Kildale on June 9th.

**Penthina betulætana*. -Taken at Glaisdale on July 7th.

Pœdisca profundana. -Noticed on heaths, Eston Hills, on August 6th.

* *Tinea tapetzella*. -Taken at Middlesbrough during July.

* *Adela degeerella*. -Flying in sun at Kildale, during June.

LEPIDOPTERA NOTICED IN SOUTH DURHAM DURING 1900.

By W. SACHSE.

Lycœna astrarche and var. *artaxerxes*. -Taken near Hart.

Odonestis potatoia. -Larvæ found near Hartburn, Stockton.

Dicranura bifida. -Freshly emerged on poplar trunk at Dinsdale, on June 16th.

Ino geryon. -Near Hart

Eugonia alniaria (*tiliaria*). -At street lamp, Darlington, on September 11th

Anticlea nigrofasciaria. -Near Dinsdale.

Cidaria corylata. -Near Dinsdale.

Cidaria immanata. -At Stockton and Norton

A NASCENT SPECIES

By W. SACHSE

From the enormous powers of increase possessed by all organisms, and the consequent struggle for existence among them; further, from the occurrence of great individual variation, combined with the hereditary transmission of such variations, necessarily arises, as Darwin termed it, "the preservation of favoured races in the struggle for life." The ever-changing conditions of life will either be favourable or unfavourable to the existence of living beings, and it is evident that those organic forms whose variations are such as to benefit them more than other forms, will have a much better chance of maintaining themselves. Again, by preserving and accumulating those variations, they will become much improved, so that their constant improvement must lead to their gradual advancement in organisation, and their rapid reproduction. This again must be the cause of displacing individuals, which have not varied to the same extent, by step by step diminishing their numbers and finally exterminating them altogether. For, taking into account the enormous destruction of life, only such organisms will be able to survive as can produce their kind in proportionate numbers. Thus large groups of organisms will be formed as long as their modifications tend to bring them into harmony with the conditions of their existence. The continuous action of the struggle for existence, under the ever-changing conditions of the universe, must lead to the development of new species and the extinction of some of the old. Thus the fittest will survive.

An illustrative instance of this, although only due to protective colouring, seems to take place at present in the case of the so-called "Peppered Moth," *Amphidasys betularia*, or rather of its variety *Doubledayaria*. The type is of a mottled grey, whereas the variety is almost black, whereby it perhaps better escapes its enemies. This black variety appears to be of comparatively recent origin, since it was first recorded by the late Mr. Doubleday, after whom it is named. Not so very long ago it used to be considered rare, and only few collectors could boast of a specimen, while now it almost appears to be more common than the type. England was formerly the only country where it occurred, but in recent years it has turned up on the Rhine and elsewhere, and bids fair to supersede the type altogether.

My first specimen of this interesting variety emerged from a pupa I found some years ago in Kilton Woods, near Loftus. It was an intermediate form of striking appearance, the fore wings being black with a few white dots near the outer margin, while the hind wings are beautifully washed with silvery white near the costa, the white part having a narrow black band, which is continued in white on the black part. It is a male, and although I have bred many others since, I have not succeeded in getting anything like it, either by the application of heat or by crossings. Some three years ago I again visited Kilton Woods in company with Mr. T. Ashton Lofthouse, of Middlesbrough, who then took a black crippled female sitting on a tree trunk, which afterwards laid a large quantity of fertile ova, half of which Mr. Lofthouse kindly gave to me. These duly hatched and produced splendid larvæ in all tints of protective colouring, from green to brown, according to the plants I fed them on, and I had thus an opportunity of verifying Mr. Poulton's experiments upon these larvæ. They all fed up and pupated in the autumn. The next spring I forced the pupæ out by heat slightly before their time, and they gave a good assortment of black and mottled grey imagines, the black, however, preponderating considerably, but, with the exception of one or two, there were no intermediate forms as described above. I allowed the bulk of them to copulate as they emerged, which the black forms did immediately, and I thus conclude that this variety is the most vital. The grey males were the most sluggish, and from their pairings I only obtained very few fertile eggs; in fact to induce copulation at all I had to put several males to a female, and a great many grey males declined the invitation altogether. It is, however, possible that the fact of their being forced out before their time may have been the cause of this, as the development of the genital apparatus in that case does not appear to keep pace with the rest of the body, although this should have equally applied to the black varieties. However, I was fortunate enough to obtain all possible combinations, viz:-

Black in copulation with Black.

Black in copulation with Grey.

Grey in copulation with Black.

Grey in copulation with Grey.

The black females laid the greatest number of ova. All eggs, however, hatched, and I kept all kinds separate with a view to ascertain the result of these crossings, but unfortunately the small number of larvæ from the grey varieties, and their evidently impaired vitality, proved a serious obstacle, and I

only got the black varieties as far as the pupal stage. I hope, however, to continue my experiments at some future time with more success.

I have observed that the progeny of black males and black females still have an atavistic tendency, but that the atavistic forms do not seem to possess an equally high degree of vitality, in fact they frequently refuse to reproduce in kind. The grey forms are therefore liable to be exterminated in the course of time, and the great increase in the black forms, within a comparatively short period, seems to indicate the way in which new species are formed. A similar example appears to be afforded by another moth, *Miana strigilis*, with variety *Æthiops*, the latter being almost black, and which at least in this district seems to come to sugar in shoals, while the type is only seen in single specimens and is almost rare.

REPORT ON COLEOPTERA OBSERVED IN CLEVELAND.

By M. LAWSON THOMPSON

1899

In this Report it will be found that a number of additions have been made in 1899 to the list of Beetles at present known to inhabit Cleveland. Notes on the range of other and better-known species are included, making up the full record of work during the year in this order of insects.

COLEOPTERA.

Carabus catenulatus, Scop. - On Castleton Moors in September.

Carabus nitens L. -On Stanghow Moor in May

Bradycellus cognatus, Gyll. -Common on the Moors at Castleton in September.

Calathus flavipes. Fourc. - On the Moors at Castleton in September.

Bembidium rufescens, Grier. -By the stream in Saltburn Wood.

Bembidium femoratum, Sturm. -On the coast at Saltburn In May.

Dromius meridionalis, Dej. -At Middlesbrough in March.

Cercyon quisquilius. L. -On the sea banks at Saltburn by sweeping.

Oxypoda nigrina, Wat. -At the foot of the sea banks in April.

Tachyporus brunneus, F. -Saltburn Wood in July.

Megacronus analis, F. -Saltburn in April.

Philorhinum sordidum, Strph. -On whin near Saltburn in June.

Tychus niger, Payk. -Common at Saltburn by evening sweeping in June.

Bryaxis fossulata, Reich. -Common at Saltburn by evening sweeping in June.

Neuraphes elongatulus, Müll.-One specimen at Saltburn by evening sweeping in July.

Neuraphes angulatus, Müll.-on the sea banks at Saltburn. One specimen by sweeping in July.

Necrophorus mortuorum, F. -Saltburn Wood in a dead rat (June).

Necrophorus vespillo, L. -Saltburn, in dead fish (June).

Necrodes littoralis, L. -On Stanghow Moor in a dead sheep (June).

Hister succicola, Thoms. -Saltburn in decaying fish (June).
Saprinus nitidulus, Payn. -On Stanghow Moor in dead sheep, and at Saltburn in dead fish (June).
Coccidula rufa, Herbst. -At Castleton in September.
Epuræa deleta, Er. -Saltburn, by sweeping in July.
Rhizophagus perforatus, E. -In Saltburn Wood by sweeping. One specimen, in July.
Corticaria fulva, Com. -Common, in a house at Middlesbrough (April).
Cryptophagus cellaris, Scop. -In a house at Middlesbrough (March).
Byrrhus fasciatus. -On Stanghow Moor, under a stone. One specimen in May.
Aphodius contaminatus. Herbst -Common, in dung on Castleton Moors in September.
Geotrupes stercorarius, L.-On Stanghow Moor in dead sheep (June)
Dascillus cervinus, L. -Saltburn, on herbage in July.
Macrocara livida, F. -Saltburn, on herbage in damp places (July)
Rhagium bifasciatum, F. -In Kilton Wood, in June (W. Sachse).
Strangalia armata, Herbst. -In Kilton Wood in July (W. Sachse).
Hedobia imperialis, L. -Saltburn (in July).
Sermyla halensis. L. -Castleton in September.
Longitarsus pusillus. Gyll. -At Castleton, on the edge of the Moor (September).
Haltica ericeti. All. -On the Moors at Castleton in September.
Plectroscelis concinna, Marsh. -At Castleton in September.
Psylloides marcida, Ill. -On the coast at Saltburn, on *Gakile maritima* in July.
Rhinosimus ruficollis, L. -At Middlesbrough in March.
Apion nigritarse, Kirby. -Saltburn in June.
Apion onopordi, Kirby. -Castleton in September.
Strophosomus lateralis Payk. - Castleton in September. On the Moors at Castleton
Strophosomus retusus, Marsh. -Castleton, on the edge of the Moor, by evening sweeping (September).
Sitones lineatus, L. -Middlesbrough (March).
Ramphus flavicornis, Clairv. -Saltburn, by sweeping (July)
Anoplus plantaris, Naz. -On young birches near Saltburn in June
Gymnetron labilis, Herbst. -At Saltburn in June.
Cryptorrhynchus lapathi L. -A pair was taken at Hilton in June (W. Sachse).
Cæliodes quadrimaculatus, L. -Castleton in September.
Scolytus destructor, Ol. -At Middlesbrough.

The Rev. J. Hawell M A possesses a small collection of beetles, taken on various occasions, at Ingleby Greenhow and in the immediate neighbourhood. He has kindly allowed me to examine these insects and draw up the following list of them for this report

Cychrus rostratus, L.
Carabus catenulatus, Scop.
Notiophilus palustris, Dupt.

Notiophilus biguttatus, F.
Nebria brevicollis, F.
Nebria Gyllenhalii, Scp
Loricera pilicornis F
Clivina fossor, L.
Pterostichus madidus F
Pterostichus vulgaris, L
Pterostichus niger, Sch.
Pterostichus striola F
Calathus melanocephalus, L.
Olisthopus rotundatus, Payk.
Bembidium littorale Ob.
Bembidium nitidulum Marsh
Haliplus flavicollis St.
Platambus maculatus, L
Quedius molochinus, Grav
Leistotrophus nebulosus, F.
Staphylinus erythropterus, L.
Necrophorus mortuorum F
Silpha nigrita. Cr.
Coccinella 10-punctata, 1.
Halyzia 14-guttata L
Adalia bipunctata, L
Triplax ænea, Seh.
Byturus tomentosus, F.
Attagenus pellio. L.
Elmis volkmari Pan
Aphodius fossor, L
Aphodius fimetarius, L.
Geotrupes stercorarius, L.
Hedobia imperialis, L
Anobium domesticum, Fou.
Rhagium bifasciatum, F.
Chrysomela staphylea L
Chrysomela polita, L
Hydrothassa marginella, L.
Rhinosimus ruficollis, L
Pyrochroa serraticornis, Scop.
Ottorrhynchus picipes, F.
Otiorrhynchus rugifrons, Gyll.
Strophosomus lateralis. Payk.
Phyllobius urticæ, De G.
Barynotus elevatus Mar
Hylobius abietis, L.
Cionus scrophulariæ, L.

On the occasion of the Excursion of the Yorkshire Naturalists' Union to the Cleveland District early in August for the investigation of Carlton-in-Cleveland, I met with a large number of Coleoptera, considering the time of year. In the

list of these beetles, given below, *Trichopteryx grandicollis* is the most interesting insect. Two specimens were taken in the dung of sheep, on Carlton Bank.

Helophorus brevipalpis, Bedel.
Cercyon hæmorrhoidalis, H.
Homalota sordida, Marsh.
Tachyporus obtusus, L.
Tachinus rufipes, L.
Tachinus marginellus, F.
Bolitobius trinotatus, Er.
Leistotrophus nebulosus, F.
Stenus similis, Herbst.
Stenus nitidiusculus, Steph.
Oxytelus rugosus, Grav.
Oxytelus sculpturatus, Grav.
Oxytelus tetracarinatus, Block.
Anthophagus testaceus, Grav.
Adalia obliterated, L.
Anatis ocellata, L.
Coccinella 7-punctata, L.
Coccinella 10-punctata, L.
Halyzia 14.guttata, L.
Halyzia 22-punctata, L.
Trichopteryx grandicollis, Mann.
Brachypterus pubescens, Er.
Brachypterus urticæ, F.
Meligethes æneus, F.
Enicmus minutus, L.
Byturus tomentosus, F.
Dolopius marginatus, L.
 Helodes minuta, L.
Malthodes marginatus, Latr.
Cis boleti, Scop.
 Longitarsus luridus, Scop.
Crepidodera transversa, M.
Crepidodera ferruginea, Scop.
 Plectroscelis concinna, M.
Deporaüs betulæ L.
Apion apricans, Herbst.
 Apion dichroum, Bedel.
Apion nigritarse, Kirby.
Apion violaceum, Kirby.
 " **humile, Germ.**
 " **ervi, Kirby.**
 " **virens, Herbst.**
Polydrusus pterygomalis, Boh.
Phyllobius calcaratus, F.
Phyllobius argentatus, L.
 " **viridiæris, Laieh.**

Sitones puncticollis, St.
Orchestes rusci, Her.
Anoplus plantaris, N.
Cœliodes 4-maculatus, L.

1900.

The following Report on Beetles is, with slight exception, from observations made during 1900.

COLEOPTERA,

Oxypoda lentula, Er. -Saltburn, at the edge of a pond, (July, 1898).
Gyrophæna affinis, Mann. -In a bunch of small fungi on a post at Saltburn (July).
Agaricochara lævicollis, Er. -In boleti at Saltburn. One specimen in 1898.
Homalium concinnum, Marsh. -In a dead bird on the shore at Saltburn (September).
Bythinus curtisi, Denny. -By evening sweeping in a valley at Saltburn (June).
Anisotoma parvula, Sahlb. -By sweeping in Saltburn Wood. One specimen in July.
Choleva longula, Kell. -Saltburn Wood, Ill a large fungus cast on a path (August).
Chilocorus bipustulatus, Ill. -By sweeping in a valley at Saltburn (June).
Meligethes brunnicornis, Sturm. -By sweeping at Saltburn.
Cryptophagus affinis, Sturm. -By sweeping at Saltburn.
Melolontha vulgaris, F. -Kildale in June (W. Sachse) also occurs at Saltburn.
Throscus dermestoides, L.-Common in Saltburn Wood, by sweeping herbage.
Lampyris noctiluca, L.-This species, the Glow-worm, was found at Danby, Battersby and Great Ayton.
Clytus arietis, L.-At Saltburn in June.
Grammoptera ruficornis, F. -On whitethorn in Saltburn Wood (Common).
Bruchus rufimanus, Boh. -At Thornaby-on-Tees, in beans from Egypt, common.
Hydrothassa marginella, L. -By sweeping in marshy places at Saltburn.
Crepidodera rufipes, L. -Runswick (Cleveland Naturalists' Field Club Excursion in May).
Crepidodera aurata, Marsh. -At Saltburn, on shallows (June).
Salpingus castaneus, Panz. -By sweeping under fir trees at Saltburn (July).
Nacerdes melanura, Schmidt. -On the wharf at Thornaby-on-Tees (July).
Meloe proscarabæus, L. -Common, in a meadow at Saltburn in April, also at Kildale (W. Sachse).
Sitones suturalis, Steph. -By sweeping at Saltburn.
Cionus scrophulariæ, L.-Common on Scrophularia at Saltburn.
Acalles roboris, Curt. - By beating oak in Saltburn Wood. One specimen at the end of August.

Ceuthorrhynchus pleurostigma. M. -(sulcicollis, Gyll). Common, on Cruciferæ at Saltburn.

Rhinoncus pericarpus, L. -On Polygonum in Saltburn Wood.

Phytobius quadrituberculatus F. -Saltburn Wood, by sweeping on the border of the stream. One specimen in July.

When the Yorkshire Naturalists' Union visited the district for the investigation of Mulgrave Woods near Whitby on September 15th, 1900, I met with the following beetles in that locality.

Leistus rufescens, F.		Cryptophagus affinis, Sturm
Leistus fulvibarbis, Dej		Atomaria fuscipes. Gyll
Dromius linearis, Ol		Atomaria atricapilla Steph
Homalota depressa, Gyll		Chrysomela polita, L
Conosoma lividum, Er		Chrysomela didymata, Scriba
Bolitobius exoletus, Er		Plectroscelis concinna, Marsh
Tachyporus pusillus, Grav		Rhinosimus planirostris, F
Xantholinus linearis, Ol		Apion loti, Kirby.
Stenus impressus, Germ		Apion pallipes, Kirby
Stenus similis. Her		Otiorrhynchus picipes, F
Oxytelus tetracarinnatu,	Block	Sitones lineatus, L
Sciaphilus muricatus, F		
Proteinus brachypterus, F		Hypera nigrirostris, F.
Megarthus denticollis,	Beck	Rhamphus flavicornis, Clairv
Sitones hispidulus, F		
Coccinella 10-punctata, L		
Rhizobius litura, F.		
Micropeplus staphylinoides, Mar		
Ceuthorrhynchus assimilis, Payk		
Coninomus nodifer,	Westw	
Enicmus minutus., L		

Mr. O. C. Hudson, of Middlesbrough, has collected beetles in various parts of Cleveland and kindly furnished me with the following list of species (with the locality) met with during this year

Notiophilus aquaticus, L	Eston
Leistus rufescens, F .	Middlesbrough
Clivina fossor, L	Stainton
Stomis pumicatus, Panz .	Stainton
Pterostichus vulgaris, L	Middlesbrough
Pterostichus vitreus, Dej	Ingleby Greenhow
Amara bifrons, Gyll .	Middlesbrough
Agabus nebulosus, Forst	Middlesbrough
Leistotrophus nebulosus, F	Middlesbrough
Silpha thoracica, L	Kildale
Silpha rugosa, L	Kildale
Anatis ocellata, L	Kildale
Mycetophagus quadri pustulatus, L	Middlesbrough
Byrrhus pilula, L	Middlesbrough

Geotrupes sylvaticus, Panz	Kildale
Melanotus rufipes, .Her	Eston
Corymbites pectinicornis, L	Carlton
Corymbites cupreus, F	Carlton
Corymbites holosericeus, F	Carlton
Cassida viridis, F	Stainton
Lagria hirta, L.	Redcar
Polydrusus micans, F.	Ingleby Greenhow
Barynotus elevatus, Marsh	Middlesbrough
Hypera punctata, F	Eston

THE RAINFALL OF CLEVELAND,

By REV, JOHN HAWELL, M.A. F,G.S,

Since the beginning of 1884 I have kept a daily record of the Rainfall in the Vicarage Garden at Ingleby, and I herewith give the totals for the various years and, for comparison, the amounts registered in the Albert Park Middlesbrough as kindly furnished by Mr. Amos Hinton

	INGLEBY GREENHOW	MIDDLESBROUGH.	DIFFERENCE,
1884	26.95 in	17.16 in	9.79in
1885	33.54 in	21.29in	12.25in
1886	39.64 in	24.44 in	15.20 in
1887	29.74 in	20.71 in	9.03 in
1888	28.55 in	21.00 in	7.55 in
1889	30.55 in	23.06 in	7.49 in
1890	30.61 in	25.42 in	5.19 in
1891	33.18 in	24.32 in	8.86 in
1892	30.48 in	28.97 in	1.51 in
1893	27.38 in	19.29 in	8.09 in
1894	28.61 in	24.66 in	3.95 in
1895	32.64 in	29.44 in	3.20 in
1896	32.93 in	24.15 in	8.87 in
1897	28.82 in	25.26 in	3.56 in
1898	27.31 in	19.81 in	7.50 in
1899	31.08 in	28.40 in	2.68 in
1900	38.02 in	33.33 in	4.69 in
Totals	530.03in	410.71 in	119.32 in
Average	31.18 in	24.16 in	7.02 in

It would be interesting in a future number our Proceedings to discuss more at length the Rainfall of Cleveland as a whole, bringing together all the available observations from every part of the District. The fall at Ingleby Manor, half a mile nearer to the hills than the Vicarage, is

regularly less than the amount registered at the Vicarage, while the fall at Easby Hall is less. At the time of his death I was in correspondence with the late Mr. G. J. Symons with a view to the establishment of a gauge in the vicinity of Botton Head—the highest point of Eastern Yorkshire

CLEVELAND NATURALISTS FIELD CLUB

SECRETARY'S REPORT 1899--1900

It is with pleasure that I have to report that the past season has been one of uninterrupted progress, and its work in every way has exceeded what has been done in previous years as far as I am aware. The membership of the Club has been greatly added to since the last Annual Meeting, when it stood at 62. During the past season 28 new members have been elected, the total membership now standing at 87, after deducting three withdrawals, the nett increase being 26. This is a very satisfactory result on the year's working, and one for which I think we are in some measure indebted to the interest awakened in Natural History subjects by the excellent course of lectures delivered by Mr. W. Keeble in this town.

While congratulating the Club on the large increase of members during the past season, I think the membership is scarcely what it should be in the district, which our Society represents. I think that all persons interested in any department of Natural History or Archæology throughout Cleveland should join our Society, and if not able to take an active part, they would still get the transactions for their very nominal outlay; and I am of opinion that there are a good many gentlemen in Middlesbrough and the Cleveland District who could very materially assist us by contributing notes of interest that should be recorded in our transactions.

The number of excursions on the programme for 1899, exclusive of Yorkshire Naturalists' Union was seven, and on the whole they were much better attended than last season.

The first excursion was held on MAY 8th at Yarm and Worsall, the day being fine but cold, and was attended by some 29 members. The members interested in Archæology visited Yarm Church, where the party were met by the Rev. V. G. Daltry, a member of our Club, who kindly conducted them and explained what there was of interest to be seen in the Church. Owing to the lateness of the season very little of interest was noted in any of the branches of Natural History dependent on the weather for revealing themselves, vegetation generally being in a very backward state.

Seven members attended the Yorkshire Naturalist's Union excursion to Dentdale at Whitsuntide, but the weather, on the whole, was very unfavourable, there being snow on the hills on the Whit Monday. The visit will be specially remembered by two of the party who walked from Hawes to Dent, a distance of about fourteen miles and were accompanied by drenching rain, which came on just after starting and continued without ceasing until the end. The visit proved to be very interesting especially to Geologists.

. On MAY 28TH, the members to the number of 28 visited Pinchingthorpe where they were met Mr. A. E. Pease who kindly showed the party his excellent collection of game trophies etc and also what, to some of the members, was more of local interest, a young badger. Later in the afternoon, when accompanying the party towards Hutton, he pointed out some badger earths in the hills, opposite his residence. [I consider it would be very interesting and very valuable if we could prevail upon Mr Pease to contribute a paper to our Proceedings on the introduction and distribution of badgers in Cleveland, stating whether he considers the badger to be indigenous or whether it has been wholly introduced into Cleveland during the past few years]. The party, after leaving Mr. Alfred Pease, visited the grounds of Sir Joseph Pease, by permission, and little work was done by the Geologists.

On JUNE 10TH, Hilton and Weary Bank Woods were visited. The party attending this excursion, which was by brake numbered 34, including friends. The club was indebted for permission to visit the above Wood to the owner of the estate, who kindly granted permission, through his agent, Mr T G Fawcett. The ground proved to be interesting and I believe some good botanical work was done

JUNE 24TH. - The Excursion was to Staithes, via Grinkle Woods, and was attended by 16 or 17 members.

JULY 8TH. -Danby and Fryup Dale were visited when upwards of 20 members were present. It was a very fine day but very little work was done of any importance. I know that, as far as the Lepidopterists were concerned, in spite of the very fine day, it proved a perfect blank.

JULY 22ND. -Excursion from Newport to Billingham, covering ground which will very probably be much altered in the near future, and ground it is important that a Society of this kind should work up to get records of species of plants, etc., which, through the introduction of slag, etc., may soon be exterminated.

The Yorkshire Naturalists' Union visited Carlton, Stokesley and Ingleby Greenhow district from August 5th to 7th, when several of our members acted as guides. We were represented on the Saturday by seven or eight members, and by about fourteen on the Monday. The Geologists seemed to have the best time, under the guidance of the Rev. J. Hawell, who showed them almost everything of Geological interest in this part of Cleveland. By the Entomological Section, of which there were three to four workers present, very little was done, although the weather was fine. The district is one, which has proved disappointing as a collecting ground at this time of the year, appearances not being realised, but one is not able to form a correct opinion of the worth of a district by what may be practically called a flying visit.

AUGUST 19TH. -This was the most unfavourable day of the season (the past season having been very good on the whole), and the Excursion to Loftus for Hummersea was only attended by four members. This was very unfortunate, as Dr. Veitch had kindly consented to lead a Geological party. It is to be hoped, however, that the members may have the pleasure of his guidance at

one of the meetings to be held during the coming summer, when I trust we may be favoured with better weather.

WINTER MEETINGS. -During the Winter season a series of meetings were held, as suggested at the last Annual Meeting, and which, I think, have proved to be entirely satisfactory. *Four* meetings were held in all, the first being on October 21st, when members were invited to bring microscopes and slides, also any objects of interest to Naturalists Miss Young and Messrs. T. F. Ward, J. W. R. Punch and Hy. Simpson lent microscopes and slides. The following exhibited Natural History objects: -Mr. R. G. Clayton, a Badger taken in the Cleveland District; F. Elgee, a case of Lepidoptera, collected in the Cleveland District, including some very interesting specimens; C. Milburn, case of Eggs, principally taken in the Cleveland and South Durham District by himself, including some specially good examples; J. W. R. Punch, a selection of Fossils; and H. Simpson some very interesting living examples of Sea Anemones, etc. The meeting was attended by about 20 members, and the Club is indebted to the above members for kindly providing material for a very interesting Exhibition. It is to be hoped that in future we may have assistance from a good many more of the members at meetings of this description, when members may bring specimens of interest, or that they want identifying, and the members may be of mutual advantage to one another.

The second meeting was held on November 18th, when T. H. Nelson, Esq., M.B.O.U., of Redcar, delivered an exceedingly interesting lecture on the "Migration of Birds" illustrated by means of Lantern Views. The Lecture was attended by about thirty members, in spite of the weather being very unpropitious. We were indebted to the Camera Club for the loan of the lantern at this and the subsequent meeting, at both of which Mr. West kindly manipulated it for us.

On DECEMBER 18TH, a night of a very wintry character an interesting paper was given by the Rev. J. Hawell, M.A., F.G.S., one of our Vice-Presidents, entitled "the Collection and Study of Fossils," of which Mr. Hawell exhibited a few specimens as types. This meeting was attended by upwards of 20 members.

The fourth and last meeting, held during the winter season, was on February 3rd, when a lecture was delivered in the Literary and Philosophical Society's Hall, by Mr. F. W. Keeble, M.A., entitled *Some Natural History Studies*, illustrated by means of Lantern Views. This meeting, being open to friends, was attended by upwards of 100 members and friends, and in point of numbers proved to be the most successful meeting of the winter session. Mr. Keeble described some of the investigations he had recently made into the life history and habits of the shrimp and other marine creatures, illustrating very clearly the thorough nature of his researches.

The whole of the lectures held during the last Winter Session were given voluntarily, and no expense has been incurred outside the sending out of notices for these, except for gas for lantern, the lantern being very kindly provided by the Cleveland Camera Club, to whom the thanks of the Club are

due. Our thanks are also specially due to Mr. Nelson, Rev. J. Hawell, and Mr. F. W. Keeble (who came over from Newcastle purposely, at his own expense), for their great kindness in giving us papers during the past winter season, and, I trust we may have the pleasure of their assistance again at some future day.

Our thanks are also due to the Lit. and Phil. Council for the loan of the Room, both for these meetings, and for the Committee Meetings and Classes.

PROCEEDINGS. -During the past season, a volume of our Proceedings was published, and sent out to the members, which, as far as I know, was a great improvement on anything we have hitherto published, and contained some valuable records of Natural History, and other notes relating to the Cleveland district. Among the principal contributions were Dr. Veitch's paper entitled "Prehistoric Middlesbrough" and a List of Mollusca contributed by the Rev. J. Hawell

The volume was very favourably reviewed by the *Naturalist*. I may say that the photograph which forms the frontispiece was taken by my brother, Mr. A. W. Lofthouse, and that our President (Mr. W. H. Thomas) kindly provided the block free of charge. Our thanks are due to Rev. J. Hawell, M.A., for kindly editing the publication.

I have not received any papers for the next Proceedings as yet but know that there are some in hand, and I have no doubt that with the assistance of the members, and if the expense of publication is not a bar, we may get material together for a volume for this season equal to, if not surpassing our last effort. This part of the work of the society is, I consider, one of the most valuable and I think that we should have much more assistance from the members (even contributions of small notes being acceptable). This part of the work should not fall altogether on to the Sectional Officers.

There are also a good many outside the Society who, if they could be prevailed on to join, could give us great assistance in this branch of our work.

CLASSES -A suggestion made at the last Annual Meeting was also carried out partly; that was the forming of Classes in different Natural History subjects. Reply Post Cards were sent out to the whole of the members, and, as a result, it was decided to form classes in Botany and Geology.

The Botany Class, which upwards of 30 members joined was kindly taken by Miss Young, and was very well attended throughout, and proved of use to a good number of the members. I do not know whether it is the intention of this Section to continue these Classes in the coming spring.

With reference to the Geology class only two or three meetings were held, and they were not so well attended as the above.

As a result of a discussion at the last Annual Meeting, *re* the Park Committee being asked to set a portion of the Park apart for cultivating British

wild flowers (and labelling them) the Botanical Sectional Committee were appointed a deputation to see the Park Curator and Chairman of the Park Committee but as far as I know nothing definite resulted.

On the recommendation of the members at our Annual Meeting, the Yorkshire Naturalists' Union were invited to hold their Annual Meeting at Middlesbrough in 1900. This invitation I forwarded to Mr. Roebuck, the Secretary, and at the Annual Meeting, held at Harrogate, the invitation was accepted. Therefore the next Annual Meeting of the Y.N.U. will be held at Middlesbrough, probably during the first week in November next. Arrangements will have to be made for rooms for the meetings, also an Exhibition, &c.

I have received during the past season a copy of the Transactions of the Hull Naturalists' Field Club. Mr. Keeble gave us some copies of publications of his which I believe are in the hands of the President. It is a question as to what should be done with these contributions, so that they may be available to the members.

Another matter is with reference to the Museum. I think as a society, we should be in some way connected with this, and be doing something to further the existence of this Institution in Middlesbrough. By working together for the improvement of the collection, which in its present position may not be very satisfactory, we may, through our members and the influence of them cause greater interest to be taken in this Museum, which, in the not far distant future, may lead to a special building being erected for this purpose.

1900-1901

In placing my report before you for the season just ended I may say that while a good deal of work has been done by a few of the members, I regret that the advance in the position of the Society has not been such as I anticipated from our previous season's working. Of course, during the past year, various causes have been in operation which no doubt have somewhat interfered with our work, especially in the Winter session.

SUMMER MEETINGS. -During the summer months nine Meetings were held, these including three, which were held in conjunction with the Yorkshire Naturalists' Union. The attendance at our various excursions was a little below the average attained last year, the threatening weather on four occasions at least, interfering materially with the attendance.

The opening excursion of the year was held at Kettlewell, on May 5th, in perfect weather, when upwards of 20 members attended. The party walked from Kettlewell to Runswick, the Geologists especially having a very good day under the able guidance of one of our Vice-Presidents, Dr. W. Y. Veitch, who will, I trust, be able and willing to act as guide at some of our meetings in the coming season. Work was done in other branches, but nothing of special interest was noticed unless it was that vegetation was very backward owing to

the continued prevalence of cold weather. The cuckoo, sedgewarbler, whitethroat, and other migrants were noticed by the Ornithologists.

A notable feature of interest to many of our members were the unfortunate effects of the landslips that had taken place during the previous winter, the results of which have been to place several of the buildings at Runswick in a very precarious condition.

The second meeting, held at Battersby, on May 26th, the weather again being fine, resulted in the best attendance of the season, there being some 30 members present. The district proved interesting, and the members of the various sections did some little work. A notable find by the Botanists was the Green Hellebore, which was in flower at Ingleby. The Geologists did a little hammering near Bilsdale Head, but were hampered owing to lack of time. The Lepidopterists of the party worked round by Gilsey Wood and Turkey Nab, but the afternoon coming in both dull and cold, very little was noticed, the principal find being a pretty *Noctua* larva (*Noctua agathina*) taken on the heather.

The next meeting was in connection with the Yorkshire N.U., at Askham Bog, on Whit-Monday, June 6th, when four or five of our members attended. These meetings are both interesting and useful in that they bring persons together from different parts of the country working in the same subjects, to the mutual benefit of all concerned.

The fourth meeting was held on June 9th at Sexhow, when the party, which, owing to the threatening state of the weather only consisted of seven or eight members, walked from there to Stokesley

The fifth excursion held on June 23rd was from Guisborough to Saltburn by the valley. The attendance again suffered, owing to the threatening state of the weather, but the members who took part in this excursion were fortunate in having fair weather until after they reached Saltburn, although it rained in Middlesbrough and most parts of the district during the afternoon. The valley travelled between Guisborough and Saltburn is a very fine one, and it proved very interesting especially to the Botanists present, and would, no doubt, do so to other sections if worked.

The Club were indebted to the Earl of Zetland's Agent Mr W J Moscrop for permission to go through the Earl of Zetland's grounds *en route* to Saltburn.

On July 7th, the 6th excursion of the season took place from Glaisdale to Egton, when, the day being fine, although cold for the time of year, some 17 members turned out. The district proved interesting, and it would be well worth a visit again, when, the weather being favourable, should be done in this part of Cleveland very little worked by our members. On this occasion a moth was taken that had not hitherto, been recorded in our Proceedings

At the Y. N. U. Meeting, held in Arkengarthdale on Bank Holiday I only heard of two members being present, and this is not to be wondered at seeing wretched weather that prevailed in the district about that time.

On August 25th, the eighth meeting was held, when a party of eight walked from Newport Ferry to Billingham, in spite of the cold and wet weather that prevailed. It was noticed that the new railway and road from Stockton to Haverton Hill were already making great alterations in the locality. A few plants of an interesting character were noticed, and also three or four of the commoner species of Lepidoptera, which can stand anything in the way of weather

It would be well if some of the members, individually or collectively, would work this ground during the summer months for aquatic and other plants, and also insects and shells (the ground being easily accessible from Newport Ferry), and can contribute the results of their working to our Proceedings.

The last excursion was to Sandsend and Mulgrave Woods, in connection with the Y. N. U., when upwards of 12 of our members attended.

WINTER MEETINGS. -Up to date, only two Meetings have been held during the Winter Session, owing to my not being able for various reasons to get the papers from members whom we expected to contribute. I am sorry that we have not been able to hold more Winter meetings, but it rests entirely with the members as to whether we can continue these or not. There should be no difficulty in arranging for papers from our members, or scientific gentlemen in the district, to carry us through from four to six meetings in the winter months, and I should be glad to hear from members who would assist.

A similar Society at Hull holds 12 meetings in the winter, at which the papers are contributed almost entirely by members.

Of course, Lecturers could be engaged, but to do this would involve raising the present subscriptions very considerably, as at present they are barely sufficient to cover the season's expenses.

The first meeting was held on October 26th, when, at our invitation, the Yorkshire Naturalists' Union held their Annual Meeting in the Literary and Philosophical Society's Hall (kindly lent for the occasion by the Council of that Society). In honour of their visit we held a *Conversazione* and Exhibition in the evening, when the President of the Y.N.U. (Mr. G. T. Porritt) delivered his Presidential Address, the chair being occupied by Colonel Sadler, M.P., who kindly undertook the duty at the invitation of our Society. The attendance, although pretty good, would have been much better if the evening had not turned out to be one of the worst experienced during the year. We were indebted for exhibits to the following members, most of whom assisted in the arrangement of them on the evening, Mr. Clayton in particular spending a great deal of time: Dr. Veitch, Messrs. Milburn (who exhibited a remarkably good selection of local birds' eggs), R. G. Clayton, Frank Elgee, R. Archer, W. Sachse, F. Atkinson, R. Lofthouse, and T. A. Lofthouse. One or two non-members of the Society also kindly lent exhibits, among them being Mr. C. Waterfall, of Hull, who exhibited some excellent sheets of Plants, Mr. T. H. Nelson and Dr. Sorby, F.R.S., who lent some very fine photos of marine

objects, and the Geological Committee of the Yorkshire Naturalists' Union, who lent six volumes of photos.

A feature of the evening, also, was the display of microscopes and objects, the arranging of which was kindly looked after by Miss Young, and Messrs. Simpson and Jones, who lent microscopes, as also did Messrs. J. E. Stead, D. Thomas, T. Brown, J. J. Burton, Dr. Veitch, - Stevens, and others, the Society being specially thankful to many non-members for loan of instruments and objects. Mr. Barnes, of Harrogate, also came over especially with a microscope and his very interesting series of slides.

Our Society is also very much indebted to one of our members, Mr. S. Lithgow, who undertook to decorate the Hall, and furnish tables for exhibits, etc., free of cost, and we must congratulate him on the generous and excellent way in which he carried this out.

Our Society also arranged for Special Excursions on the Saturday in connection with the Y.N. U. visit, but these were also very much interfered with by the weather. Seven or eight visited Guisborough, where permission had been granted by Sir Bernard Samuelson & Co. to visit the Spa wood Ironstone Mines. We were indebted to Mr. Charlton for drawing up the programme for the above, and he also kindly met and conducted the party on arrival.

Another party journeyed to Redcar, from whence it was proposed to visit the Tees mouth, but, owing to the state of the weather, this was impossible, and the time was spent in inspecting Mr. T. H. Nelson's Collection of Birds and Eggs.

The only other meeting held during the Winter took place on March 2nd, when an interesting paper was delivered by Mr. W. Sachse, entitled "The Care of Insects for the Preservation of their Species," illustrated by lantern views. The lecture was attended by upwards of twenty members and friends.

MEMBERSHIP. -The membership of the Club now stands at 80, which includes one Honorary Member-a decrease of seven members as compared with last year. During the year 11 new members have been elected. This is considerably below the number elected in the previous year, which was 28. On the other hand, four members have died and eight resigned, some of them having left the district, and six have been struck off the rolls for non-payment of arrears of subscription.

The *Death Roll* included some very prominent members, among whom were the Rev Canon Atkinson, well known to all of us as an Author, Archæologist and Naturalist of repute. He was elected an Honorary Member of our Society some years ago in acknowledgment of his service rendered to Natural History, Archæology, etc., by his many publications, and especially so with reference to the Cleveland District. The Club, in its early years, was also, I believe, indebted to him for reading papers and acting as guide at one or two excursions, one of which, I believe, was at Guisborough Abbey. The last

occasion on which he was with the club was on its visit to Kildale in the spring of 1893, on which occasion the keeper wished to turn him out of the Woods.

Another prominent gentleman and member, Mr. J. G. Swan, J. P., of Upsall Hall, passed away in December of last year. He was greatly interested in Ornithology, and at one time, I believe, made a very good collection of Birds. He was a member of the Free Library Committee, and took a great deal of interest in the formation of the Museum.

Dr. R. T. Manson, also deceased, was only a recent addition to our membership, but he was well known in the district as a Geologist of some note, and also as author of "Zig-Zag Ramblings" in the vicinity of Darlington. He attended our excursions on one or two occasions.

The other member who died during the past season was the Rev. V. G. Daltry, Rector of Yarm, a member of four or five years' standing, although I only remember him being at one meeting. That was at Yarm two years ago, when he kindly conducted our members over the Church.

PROCEEDINGS

-No Proceedings have been published during the past year. Owing to the 1899 papers only being got together late in 1900, it was decided to publish the 1900 papers along with them, and I am pleased to say that ample material has been got together to form a volume equal to, if not superior to anything we have hitherto published. It is in the hands of our Honorary Editor, the Rev. J. Hawell, M.A., and will, I hope, be published before the commencement of the summer season. I consider that this section of our work is not nearly as well supported by the general body of members as should be the case. It should not be left to the few to provide material for our publications. I am quite sure there are a good number of our members who could, if they chose, contribute very much to this portion of the work of our Society.

The Cleveland District is a very extensive one, and in it there is room for any number of workers. Contributions need not necessarily be long, as it is always useful to have short notes on anything of interest in Archæology or Natural History. I have only to point to the Transactions issued for some years by such Societies as the Tyneside, the Norfolk and Norwich, &c., to show the value of this work, the back Transactions of these Societies being much valued by Naturalists, especially those interested in the country distribution of species.

There are a good many gentlemen who could assist us in this work outside our membership, and it would be well if we could enlist the support and assistance of as many of them as possible. I have no doubt a good many might be enrolled as members of our Society by the influence of those of our members who are personally acquainted with them.

LIBRARY. The following Publications have been sent to the Club during the past year: -Parts 22 23 and 26 of the "Yorkshire Naturalists' Union Trans.", "The Naturalist," Vol. 1, No. 1 of the "Weardale Natural History Soc. Trans.",

and Vol. 1., No. III, of the "Hull Naturalists' Field Club's Proceedings," the latter a very excellent number indeed. Also a reprint of a Paper contributed to the Yorks. Geological Soc's Trans. by the Rev. J. Hawell, M.A., presented by the author.

There is a question as to what it would be best to do with Publications sent to the Club from time to time so that they may be accessible and of use to our members and I think this should have consideration. An idea of mine is that an application be made to the Free Library Committee for permission to place them (on loan) in the Reference Department of the Free Library, and, if permission be obtained that arrangements be made with Mr. Baker Hudson to let them out to our members, and also, in return for housing, to others who might apply for them.

COMMITTEE MEETINGS. -During the year, eight Committee Meetings were held, with an average attendance of five. The Club are very much indebted to the Council of the Lit. and Phil. Society for permission to use rooms for Winter Meetings and Committee.

MUSEUM. -At our last Annual Meeting some discussion took place with reference to this, mainly as to whether the Club could be of any use in furthering the development of this Institution, but it has not yet been found practicable to take any further steps.

If the Museum was well housed, I am quite sure that a number of our members would be very willing to make the collection in many of its branches very much better than it is. I only trust that the Memorial, which is proposed to be raised, will take the form of a Museum and Art Gallery, a very suitable site for which, in my opinion, is the vacant land at the Linthorpe Road entrance to the Albert Park. English towns are very much behind many of the Continental towns, especially those in Germany, often much smaller than Middlesbrough, where they have perfectly equipped Museums, and these take a very important part in the educational development of the district. During the past year, one of our Members, Mr. R. G. Clayton, has been added to the Free Library Committee.

In conclusion, I should be glad if our members would do all in their power to extend the scope and usefulness of our Club, especially in the way of making our Publication a Record which will be looked back to in the future years as one of some considerable value. I also hope that they will assist to bring the membership up to a number commensurate with the population of the district. Members, by contributing papers to Winter Meetings, might, and probably would, be the means of starting others to make investigations in paths in which there is plenty of scope for earnest workers.

Before bringing my Report to a close, I have one other suggestion to make, and that is that the members of our Club interested in Microscopy (of which there are a good number, form themselves into a section, and that they hold Meetings in the winter for Microscopic work. A section of this kind would be of great use, both to Microscopists and also to workers in other sections

who wished for their aid; it would also probably be the means of adding both to the membership and the usefulness of the Club.