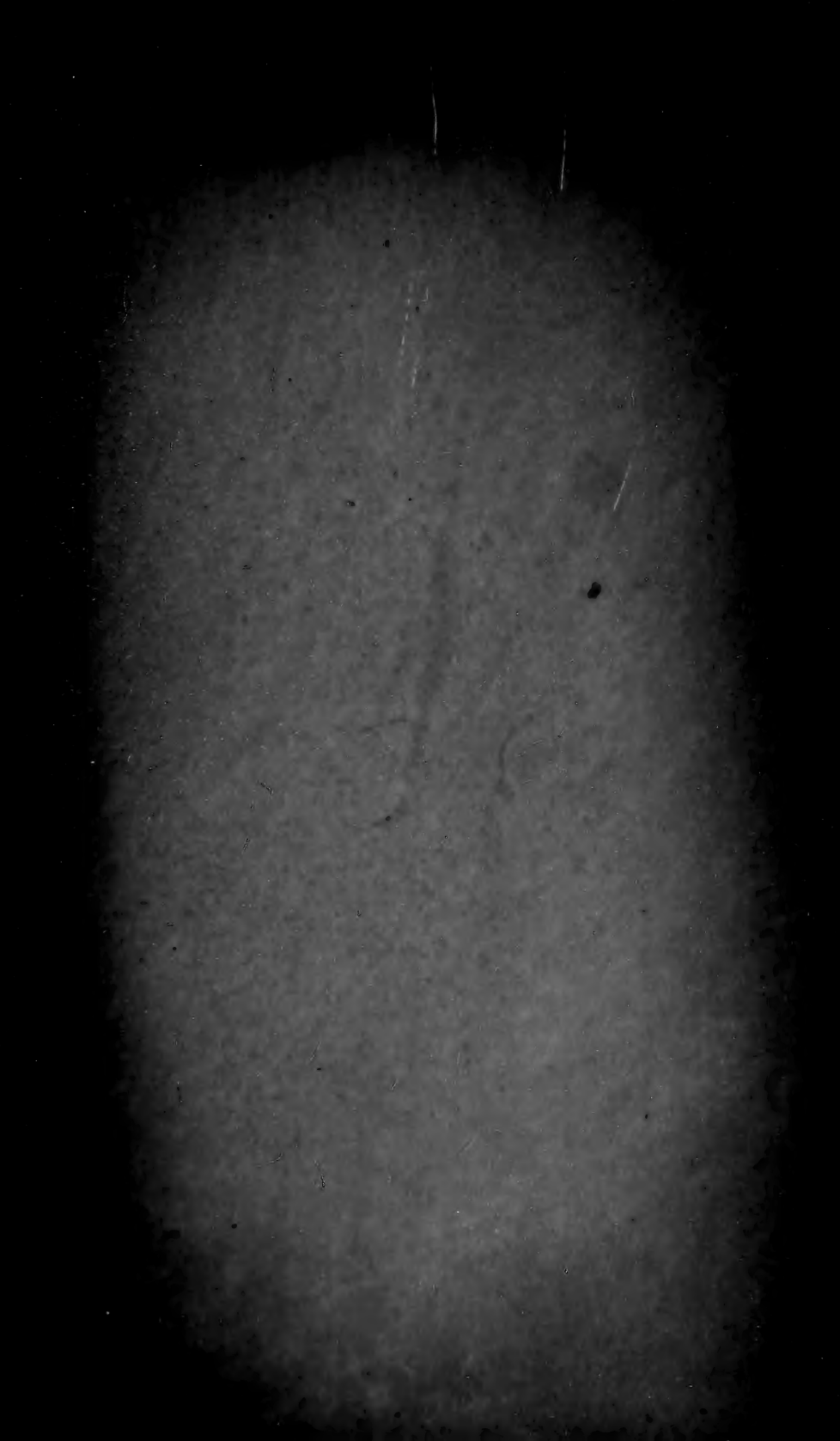


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A VERTEBRATE FAUNA OF LAKELAND

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A VERTEBRATE FAUNA OF LAKELAND

INCLUDING CUMBERLAND AND WESTMORLAND
WITH LANCASHIRE NORTH OF THE SANDS

BY THE

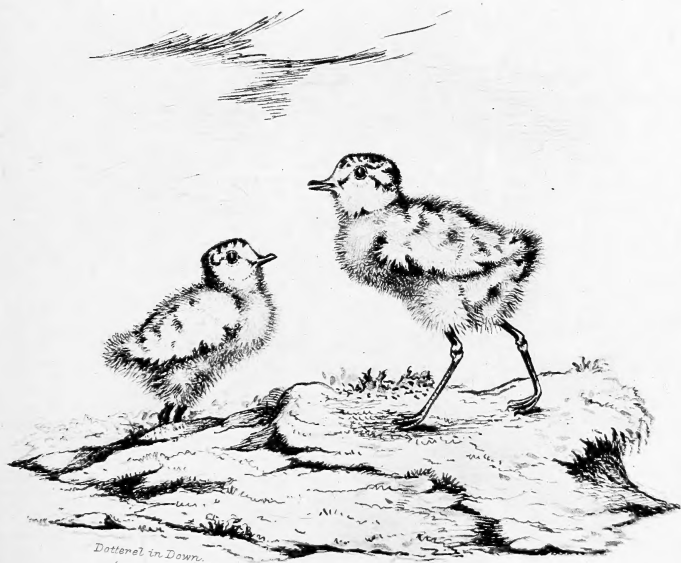
REV. H. A. MACPHERSON, M.A.

MEMBER OF THE BRITISH ORNITHOLOGISTS' UNION, ETC. ETC.

WITH A PREFACE BY

R. S. FERGUSON, F.S.A.

CHANCELLOR OF CARLISLE, AUTHOR OF 'A HISTORY OF CUMBERLAND,' ETC. ETC.



DAVID DOUGLAS, CASTLE STREET, EDINBURGH

1892

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P R E F A C E

No collection of books is more calculated to fill with amazement the mind of a visitor to the library that houses it, than a collection of 'County Histories' of the old-fashioned type. The information contained between their massive boards ranges over almost every branch of human knowledge: from pedigrees to ethnology; from agricultural statistics to heraldry and architecture; and from natural history of all sorts to family gossip. Dip into them where one will, one can hardly fail to be amused and edified. But let the reader beware of being bitten by a mania for the formation of a library of 'County Histories:' in these days when the agents of wealthy libraries at Chicago and San Francisco compete in the English book-market with the buyers of County Histories, such books run to much gold, as would-be purchasers of Nicolson and Burn's *History and Antiquities of Westmorland and Cumberland*, or of Hutchinson's *Cumberland* speedily find. High, however, as are the prices attained by the few copies that do come into the market, the demand is not sufficient to induce publishers to undertake the risk of reprinting or of publishing volumes of so expensive a character. Unless the speculation is taken up by a syndicate of antiquaries and patriotic persons, as is now the case in the neighbouring county of Northumberland, the time has gone past for producing a history of Cumberland, or of any county, on the old-fashioned lines and scale. 'The work is now sub-divided; the *Fauna* and the *Flora*, the

Pedigrees and the Geology, the Ecclesiology, and the everything else, are dealt with by specialists in little volumes devoted exclusively to one subject. A few years ago, one or two ponderous tomes supplied a country gentleman with all that was in print concerning his county, whereas nowadays a whole bookcase is required to house the more portable and numerous volumes that are in vogue.¹ One such volume is now presented to the reader by the Rev. H. A. Macpherson on *The Vertebrate Fauna of Lakeland*. But though this volume is a mere octavo of some six hundred odd pages, its contents, in order to do justice to its own special subject—*The Vertebrate Fauna*, are almost of as catholic a character as the contents of the old County Histories it and its fellows are destined to supersede. Thus the bibliography of the subject, and the personality of the various local writers thereon, have required much research, and occupy a considerable portion of the *Prolegomena*. Ancient charters, monastic records, parish registers and accounts, have all of necessity been consulted: the valuable results extracted thereon would seem to be as suitable to the pages of the journal of an antiquarian society, as to a book on natural history. But so it always is; one branch of learning overlaps another, and the well-informed Lakeland naturalist should be able to read mediæval handwriting with facility, to take part in a discussion on the age of the Bewcastle Obelisk, and to blazon most of the local coats of arms.² Further, he must have at his finger's ends *The House Books of Lord William Howard*,³ and *The History of the Cumberland Fox Hounds*; it is hard to say what he need not have learnt or read. Little wonder then that

¹ *A History of Cumberland*, by Richard S. Ferguson. London, Elliot Stock, 1890. See the Preface. At the end is a classified list of works relating to Cumberland.

² See *infra*, sub voce *The Squirrel*, p. 76.

³ Published by the Surtees Society, vol. lxxviii.

Mr. Macpherson has thought it necessary to impose upon another the task of defining 'Lakeland.'

'Lakeland,' for the purposes of this book, comprehends the counties of Cumberland and Westmorland, and that part of Lancashire known as Lancashire Over-Sands, or Lancashire North of the Sands: it is, in fact, the present diocese of Carlisle *plus* the parish of Alston, which, though in the county of Cumberland, is part of the diocese of Newcastle. The most northerly point of Lakeland is the Scotch Knowe, otherwise called Lamyford, situate on the Kershope Water, in an angle between the counties of Northumberland and Roxburgh, the one English, the other Scotch. With the exception of four miles, defined by a bank of earth between the rivers Esk and Sark, the whole of the western boundary of Lakeland is water-washed: by fresh water for a comparatively short way, that is, starting from Scotch Knowe, by the rivers Kershope, Liddell, Esk, Sark, and Esk again. From the mouth of the Esk the Solway becomes the boundary as far as the lofty cliffs of the North Head of St. Bees, the most westerly point of the district. At this point the 'running,' if one may so call it, is taken up by the Irish Sea, as far as the south end of Walney Island, the most southerly part of the district: round the corner of Walney Island, Lakeland is bounded along one half of its southern border by the waters of Morecambe Bay. This long line of sea-coast, nigh 100 miles long, is broken by many estuaries: the estuaries of Esk and Eden, of Waver and Wampool, of Irt, Mite, and Esk, of Levens, and of Kent, and of other minor streams, whose sands, creeks, and marshes, feeding and sheltering innumerable flocks of sea-fowl, are happy hunting-grounds alike for the sportsman and for the naturalist. Great changes have at various times taken place in these estuaries: thus the joint estuary of Irt, Mite, and Esk, once, in Roman and later times, a noble harbour, is now so silted up on the bar,

that nothing drawing over 6 feet can enter. As a port it is now deserted and impossible. In Morecambe Bay large areas have at various times been reclaimed from the waters; but the waters have frequently reasserted themselves: thus in 1828 the Levens washed away the West Plain estate, a farm of great extent, which had been reclaimed in 1807-8, and was at the time of its destruction let for £750 per annum. The East Plain estate, reclaimed at the same time, escaped destruction. Several reclamations, made when the railway was formed, have so far survived. What effect these changes have had upon the sea-fowls, in numbers or kind, must be left to Mr. Macpherson to deal with:—in all probability but little compared with more extensive changes wrought by the enclosure and drainage acts of the end of the last century. This great quantity of sea-water, said to be warmed by a special branch-off from the Gulf Stream, has a most material effect upon the climate of the coast it laves. The temperature is mild, frost unfrequent, snow rarely lies, while fuchsias and other delicate plants flourish in the open all the year round. Fish abound in these waters, and their pursuit in the open sea has bred up a race of hardy sailors, while their capture in the estuaries and rivers has been the subject of much legislation, of many charters, and of frequent litigation, among whose dreary and jejune records the legal antiquary finds much *pabulum*, and the naturalist not a little.

If the western boundary of Lakeland is mainly water, its eastern one is moor and mountain, defined, now by some mountain stream, now by a watershed, here and again by currocks, or little piles of stones, while a big boulder, like Tom Smith's Stone, marks a salient or a re-entering angle. The fells it traverses are part of the great range that runs from Tweed to Derbyshire, losing itself in the Midlands. This boundary finds its most easterly point at Ray Cross,

upon Stanemoor. Some way south of this point it makes a great re-entering angle to the west and south, so as to exclude Sedbergh and Dent from its ambit. Turning again due west, it runs below Kirkby Lonsdale and Burton-in-Kendal to the sea in Morecambe Bay, which it enters at a point just south of Arnside Knot. Along this line no kindly branch of the Gulf Stream mitigates the rigours of the east wind: nay, one part of the district, Cross Fell, possesses a phenomenal and diabolical east wind of its own, known as the Helm Wind, which blows persistently at some seasons of the year, and which parches the skin, chills the blood, congests the liver, and plays the plague with tender lungs.

The area enclosed by the boundaries just described is irregular in outline. The south-west portion is occupied by mountains and fells, and forms the Lakeland of the tourist; these mountains and fells extend eastwards as far as Penrith and Shap, at which last place they almost coalesce with the eastern fells: northwards they reach to Caldbeck and Binsey, while on the west a narrow slip of plain, widening as it goes to the north, separates them from the sea. These mountains and fells include such famous heights as Scawfell, Helvellyn, Skiddaw, Bow Fell, the Pillar, Saddleback, Black Combe, Langdale Pikes, Coniston Old Man, etc., and the lakes of Ulleswater, Bassenthwaite, Derwentwater, Crummock, Wastwater, Thirlmere, Ennerdale, Buttermere, Loweswater, Windermere, Coniston, Rydal, Grasmere, and Haweswater, as well as many smaller lakes and tarns. The east is occupied, starting from the south by Shap Fells, Stanemoor, Alston Moor, and other fells, ending in the north with Spadeadam Waste, and Bewcastle Fells. The eastern and western fells approach very closely at Penrith, and between them, widening up to the north, lies the great plain of Cumberland which sweeps round westward by the alluvial flats of the

Solway to join the strip of plain between the western fells and the sea.

The western fells, the Lakeland of the tourist, send their waters mainly westward and westward by south to the sea: the principal of these rivers, starting from the north, are the Elne, or Ellen, the Derwent, with its affluents the Greta and the Cocker, the Calder, the Eden, the Irt, the Mite, the Esk, the Duddon, the Levens, and the Kent. From the eastern side of these same fells issue the Eamont, Petteril, and Caldew, all emptying themselves into the great river of Lakeland, the Eden, which, rising in Westmorland, runs northwards along the eastern side of the plain of Cumberland, and then turns westwards to the Solway. Its many tributaries drain the eastern fells, while Esk and its tributaries carry the waters from the northern fells to the Solway: Waver, Wiza, and Wampool drain the alluvial flats south of that Firth. With the exception of the three last, the rivers of Lakeland are rapid, bright and clear; shallows and pools alternate: they are not navigable, except the Eden, and that only for a short way.

It must then be apparent to the reader that the Lakeland, whose boundaries and physical characteristics have been under discussion, must embrace a great variety of climate and country: heathery grouse moors in the far north, saltings, bogs, and mosses, along the Solway and the Irish Sea: highly cultivated arable and pasture land in the plain of Cumberland, richly-wooded river valleys and sheltered combes, mountains, meres, tarns and fells, rocks and cliffs, calculated to attract and shelter a widely varied *fauna*. This *fauna* must have been much affected by the changes drainage and cultivation have wrought. Scaleby, Solway, and Bowness mosses, and Wedholm Flow, are but puny and degenerate survivals of vast morasses which once covered the alluvial flats bordering on the Solway, and stretched eastward

from the vicinity of Rockcliffe along the north of Carlisle for many miles. In the time of Charles II., great part of the district was forest, and covered with dense scrub of oak, ash, thorn, hazel, and birch, whose stocks are frequently found buried beneath the peat, while the scrub itself remains in many places in the low bottoms. The frequent occurrence in peat and elsewhere of the antlers of Red Deer, many much larger than at the present day, shows that the deer must have had abundance of 'browse,'—that is, 'scrub,'—for their support in times past, extending over a wide range of country. Modern changes must, too, have greatly affected the *fauna* of Lakeland; up to the end nearly of the last century, thousands of acres in Lakeland were lying waste in open common. Enclosure acts were obtained, and between 1780 and 1820 thousands of acres of heathy hill and rushy swamp were enclosed, and converted into cultivated fields and verdant meadows. Many tarns, such as Tarn Wadling, Gibb Tarn, etc., have been drained, and the corn now waves in rich profusion, where fish once swam. Large areas, long ago denuded of their ancient 'scrub,' have been replanted. Such changes must have affected largely the *fauna* of Lakeland, and it is for our author to trace out their effects:¹ there is an archæology in natural history as in all other things.

R. S. F.

1892.

¹ See *The Birds of Cumberland*, p. xvii, for a careful summary of changes in the Avifauna.

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THE NATURALISTS OF LAKELAND.

NEARLY two centuries have elapsed since the Fauna of Lakeland Dr. Robinson. first attracted the attention of Dr. Robinson, a learned divine, who amused himself with making observations on the habits of Rooks and other commonplace incidents. The *Essay towards a Natural History of Westmorland and Cumberland* appeared in two small volumes, published in 1709. They do not contribute anything of interest to our literature, or show much knowledge of zoology, but the author writes with a self-confidence that often affords diversion. He deserves all credit for having made an effort to touch the subject, however superficially.

James Clarke, a native of Ulleswater, possessed little more James Clarke. scientific knowledge than Dr. Robinson, but he was a shrewd and painstaking observer. Nobody can afford to speak lightly of one who could say with sincerity: 'For my own part, I am never wearied with researches into nature.'¹ Clarke was a land-surveyor, and lived at Penrith. His earliest years must have been passed at no great distance from the shores of Ulleswater. The Rev. T. Lees, F.S.A., believes that Clarke was born in the neighbourhood of Watermillock. It is probably to this circumstance that we owe the mention of the Osprey, of Eagles, and other animals in the appendix of the important folio work which he launched in 1787, entitled *A Survey of the Lakes of Cumberland, Westmorland, and Lancashire*. Clarke enjoyed the reputation of an unconventional character, devoted to exploring alone the mountains of his native district, yet by no means averse to sharing the good-fellowship of his acquaintances. One of the best-known stories regarding James Clarke represents him as absenting himself from home for many months, while engaged in collecting the materials required for his book. His wife consoled her anxiety by informing the neighbours that news

¹ *Survey of the Lakes*, p. 191.

had arrived of the decease of her roving spouse. The sympathetic townsmen of Penrith organised a subscription to assist the bereaved widow. The fund had just been completed when Mr. Clarke reappeared, and forthwith took charge of the provision thus happily provided for his grief-stricken household, on the strength of which he is supposed to have caroused somewhat merrily.

W Richardson.

It was in the year 1793 that the Rev. W. Richardson first drew up a quasi-scientific paper on the Fauna of a district of his native county. Like Clarke he belonged to the neighbourhood of Ulleswater, not improbably to Pooley Bridge. That he already enjoyed some local reputation as a scholar and a naturalist is rendered certain by the fact that the Editors of the *History of Cumberland*, which Hutchinson published in parts between 1794 and 1797, expressly remark upon the services which he rendered to their undertaking. Not only were they indebted to Richardson for a catalogue of Cumberland plants: 'He also favoured us with the description and natural history of Ulleswater, his native place, and many valuable articles and observations in every department of the work.'¹ Richardson was no doubt hampered by conditions of space in the notice which he supplied of the Ulleswater district. He must have been a delightful outdoor companion, judging from his wide reading and trained powers of observation. Meagre and sadly incomplete his paper must be admitted to be, even allowing for the disadvantages under which he laboured. Yet, in spite of the slightness of his work, it shows quite as good quality of tone as that of Dr. Heysham, although, of course, far less ambitious. We owe to Richardson an authoritative statement (independently corroborated ten years later) that the *Golden Eagle* nested in Martindale in 1787 and in 1789. But if Richardson failed to make his mark as a Lakeland naturalist, it was because his importance was dwarfed by the sturdy genius and strong originality of Dr. John Heysham, his own contemporary. Dr. Heysham came to the border city in the year 1778, to practise surgery upon the natives, having previously served his apprenticeship of 'bottle-washing' with Mr. Parkinson of Burton, and studied medicine at Edinburgh.

Dr. Heysham.

¹ *History of Cumberland*, vol. i. p. 39.

He was only in his twenty-sixth year when he commenced to practise in Carlisle, having been born at Lancaster on November 22, 1753. Notwithstanding his comparative youth, Dr. Heysham at once gained a position of some weight in the little city, which then included a population of only 6000 inhabitants. His first year of residence was signalled by his taking a prominent part in establishing a public subscription library. Four years later he achieved a notable success in establishing the Carlisle dispensary, in which meritorious venture Heysham derived much assistance from his friend, Dr. Percy, then Dean of Carlisle. The zeal with which Heysham entered upon duties of a public character was more than justified by his actual performances; but though always a devoted servant of the public, labouring in every way to advance the health and to secure the increased happiness of his fellow-townsmen, it was only in 1808 that he became a magistrate, being then in his fifty-fifth year. Thenceforward he found a congenial occupation for his declining years, sitting in court at the Globe Inn with a brother magistrate, to adjudicate upon conjugal amenities, as well as to hush the altercations of rival washerwomen. The unflinching determination with which Dr. Heysham and his colleague invariably mulcted one side, and frequently both sides, in costs (which had to be paid forthwith), was scarcely calculated to increase the popularity of the bench; but the chief grievance which rankled in the minds of the offenders seems to have had its origin in the fact that the sitting magistrates *themselves* appropriated the fines inflicted. There can be no doubt that the sort of rough-and-ready justice meted out at the Globe Inn was well adapted to advance the morality of those whose misdeeds came within its cognisance. At all events the active mind of the venerable doctor found a satisfaction in the performance of these judicial duties up to the very end of his career.¹ There are still some living who can recall Dr. Heysham attending St. Cuthbert's Church,

¹ A summons for small tithes, kindly lent by Mr. Tom Duckworth, cites Richard Bell, of Old Grapes Lane, in the parish of St. Cuthbert's, Carlisle, to appear before the Justices of the Peace at the Globe Inn. It bears the names of Thos. Lowry and John Heysham, and is dated the twenty-first day of May, in the sixth year of the reign of His Majesty King George the Fourth.

or shambling along the streets with the gait of an aged man. His fondness for both snuff and sweetmeats lingers, as such personal traits will ever linger, in the minds of those who were boys and girls when this distinguished man had far exceeded the ordinary span of human life; nor has the impression of a kindly hospitality dispensed to his friends at a house in St. Cuthbert's Lane altogether faded from the pages of memory. But we are more concerned with his pursuits as a naturalist. Evidence as to this must be sought for in the writings of Dr. Heysham, because the time when details regarding his zoological work could be obtained from his associates has long passed by; and the only recollection of his researches into nature that I have come across was narrated to me by an aged pauper, whose father had seen Dr. Heysham standing up to his waist in a muddy pool, fishing, as was supposed, for aquatic animals. Dr. Heysham was proposed as a member of the Linnean Society in 1788, but without his own knowledge. He was only thirty-five when he received this unsolicited honour, but he had already given valuable help to Latham regarding the plumage of the Hen Harrier at the time that Latham was writing his supplement to his *History of British Birds*, and had thus earned some title to public notice. That Dr. Heysham commenced to study local ornithology within a very short time of his arrival in Carlisle is certain, because it was as early as 1781 that he killed a female Peregrine at her nest near Gilsland, after waiting five hours to secure a shot. Two years later he visited Lowther to study the habits of the Pied Flycatchers, which annually nested in the grounds of that beautiful park. In the same season he employed his ingenuity to trap Merlins at Rockcliffe Moss, and made notes on the Hen Harriers which then nested on Newtown common. His marriage with Miss Coulthard took place in the year 1789, and I question whether he did much field work after this date, although his active habits and unflagging energy remained unchanged throughout a long and successful career. It seems likely that he began to entertain the idea of writing his *Catalogue of Cumberland Animals* in the year 1795, because most of the notes on ornithology relate to 1796, although the Catalogue was not completed until 1797.

Most of the avian observations of 1796 are extremely trivial, and such as a schoolboy could make; but Dr. Heysham was well aware that occasions may arise when the most trite notes become useful, or even valuable. Nor did he shrink from bestowing careful labour on his pursuits while working in the study. Thus, in the year 1796, when Dr. Heysham was studying the development of the Salmon, he took the trouble to dissect 198 'brandlins.' He further tells us himself that the printing of sheet 32 of his Catalogue 'was delayed a considerable time to give me an opportunity of examining fry the present season, viz. 1797.' Dr. Lonsdale has hazarded an amiable conjecture that Dr. Heysham accomplished much zoological work subsequently to the appearance of his Catalogue.¹ It is perfectly true that Heysham continued to make notes of birds, e.g. of a Turnstone shot on Ulleswater in 1801. At the same time I feel tolerably certain that the pressure of public business, together with the multifarious duties of married life, latterly imposed a barrier between Dr. Heysham and his taste for natural history.

Dr. Heysham tells us, in his *Catalogue of Cumberland Animals*, that he then (1796-7) possessed specimens of the birds included in his list, with very few exceptions. Some of the skins remained in his own hands during his lifetime. The Honey Buzzard, for example, shot near Carlisle in June 1783, fell into the hands of T. C. Heysham upon his father's death. But Dr. Heysham, at a comparatively early period, acceded to a request of Dr. Law, bishop of Elphin, that he should place his collection of mounted birds in the deanery at Carlisle, probably in order that the specimens might thus be examined by many besides the doctor's personal acquaintances. On the death of Dean Milner, these specimens fell into the hands of Dr. Barnes. What precisely befell the collection during its long stay at the deanery is open to conjecture, but probably some specimens came to grief in the interval. The *Carlisle Journal* of March 29, 1834, commenting upon the death of Dr. Heysham, took occasion to make the following remark: 'The remnant [of his collection of stuffed birds] is now in a room at the House of

¹ *The Life of Dr. Heysham*, p. 93.

Recovery.' The House of Recovery was afterwards pulled down; but what became of the 'remnant' of Dr. Heysham's birds on that occasion is unknown.

Dr. Heysham's closing years were cheered by the devotion of his family, and especially by the pious care of the son to whom he had transmitted his own enthusiasm for natural history. He died in his own house on Sunday, March 23, 1834, in the 81st year of his age. Mr. T. C. Heysham took charge of his father's papers. They are not now forthcoming. Had they contained much unpublished matter, it seems probable that T. C. Heysham would have published them.

John Gough.

While Dr. Heysham explored the zoology of Cumberland during the latter years of the eighteenth century, the Fauna of Westmorland occupied to a lesser extent the attention of John Gough of Kendal. This remarkable man was born at the capital of Westmorland in 1757, and built up a reputation such as ordinary men may well envy, by the force of his mathematical powers and talent for teaching. He became blind from smallpox at a very early age, a misfortune which prevented his prosecuting to the full the fine genius for the study of natural history which he undoubtedly possessed. The labours of 'the Blind Philosopher' upon lines of a general character are too well known to require mention here. That he was an excellent botanist has also been widely recognised. But up to the present time no one seems to have perceived that John Gough was an acute and painstaking zoologist. This circumstance is to be explained by the fact that he wrote little regarding birds. Indeed, the only paper of any intrinsic value to us that John Gough printed was one published in the second volume of the *Memoirs of the Philosophical Society of Manchester* in 1813. The private papers of Thomas Gough include an interleaved copy of this little essay, entitled, 'Remarks on the Summer Birds of Passage, and on Migration in General, by Mr. John Gough,' dated from Middleshaw, Westmorland, Feb. 21, 1812. This was communicated to the Literary and Philosophical Society of Manchester by Dr. Holme, and was read to the members of that body on March 20, 1812. If this paper failed to contain any novel information, it was, nevertheless, a pleasant

contribution to the literature of the day, and as the work of one afflicted with blindness, showed a remarkable insight into the principles of avian migration. The annotated copy just referred to contains a few simple observations, as, for example, the following: 'The Cuckoo arrives in Westmorland about the end of April, when the mean temperature is about 49°, and the noon-tide heat frequently higher than 60°. This circumstance seems to indicate that a considerable degree of temperature is necessary to this bird, but I heard one crying merrily on the evening of the 23d of May 1814, when the thermometer stood at 41°: the hills were covered with snow, and the wind blew strong from the N.E.' That John Gough was fully alive to the interest attaching to the occurrence of rare birds is evidenced by a few notes which he contributed to Graves' *British Ornithology*. Of the Little Owl, he wrote to Graves: 'A pair took up their abode in a barn in that village [Middleshaw] in the spring of 1811, one of which died by some accident. Another pair bred in a chimney in the same neighbourhood a day or two before. They frequently fly by day, and do not court the shades of night so much as the other species.¹ Whether the species was correctly identified by the blind naturalist from the description of others is not known. If such was the case, the birds had probably been introduced and liberated by some gentleman residing in the neighbourhood. Graves states of the 'Little Awk' (*sic*): 'Mr. Gough of Middleshaw informs us that one was caught, apparently much exhausted, in a brook which runs through his garden, Nov. 21, 1807.' Of the Goldeneye the same author remarks: 'Mr. Gough informs us that some were seen on the rivers in Westmorland, Nov. 9, 1798, which was considered a very unusual circumstance.' He states regarding the Dipper: 'Mr. Gough of Middleshaw informs us that November is the season of full song, and that these birds are exceeding quarrelsome among themselves. They usually build in February, and have eggs early in March, at least that is the general time of breeding in Westmorland.' Strange to say, however, the only personal notice of John Gough as an *ornithologist* that I have discovered so far was furnished by Professor

¹ *British Ornithology*, vol. ii., not paged.

Griscom, a distinguished American chemist. This gentleman visited Gough in 1818 or in 1819, and was much impressed by the remarkable accomplishments of this blind genius: 'He [Gough] walked with us to Kendal,' writes Griscom, 'to dine with me at the house of a brother-in-law. On the way I discovered that, in addition to the sciences I have mentioned, *he is an excellent ornithologist*. He enumerated the different species of migratory birds, he knows their respective periods of approach and departure, and can easily distinguish them by the sounds they utter.'¹

T. C. Heysham. A certain confusion of persons has long existed in the minds of some naturalists, who have failed to distinguish between Dr. Heysham and his eldest son, Thomas Coulthard Heysham. The younger Heysham was born at Carlisle on the 21st of September 1791. His youth and early life appear to have been uniformly passed in Carlisle. He does not appear to have been educated for any learned profession, but was constantly associated with his father, whom he assisted in the transaction of magisterial duties, as well as the management of his private affairs. Whether he showed an early taste for zoological studies is unknown. Like his father he was fast nearing the threshold of middle life before he published any papers on natural history. At no period of his career was T. C. Heysham a voluminous writer. He certainly printed a few summaries of his annual notes on local ornithology in the scientific magazines of the day, commencing in 1829 with a paper contributed to the *Philosophical Magazine*, followed by others which appeared in the *London and Edinburgh Magazine*, in Loudon's *Magazine of Natural History*, and in Charlesworth's *Magazine*, during the 'thirties,' for T. C. Heysham ceased to write in public prints prior to 1840. The paper which attracted more notice from the public than any other of Heysham's essays, was an article on the habits of the Dotterel, which will be found in the second volume of Charlesworth's *Magazine of Natural History* (pp. 300-303). It will be obvious that had the claims to distinction which this naturalist possessed depended in any important degree upon his writings, T. C. Heysham would never have been acknowledged as a high

¹ *A Year in Europe*. New York, 1824. Vol. ii.

authority upon any branch of zoology. Whether he ever intended to publish a work on the ornithology of Cumberland is a matter of entire uncertainty. There can be no doubt that he felt keenly the poverty of the Avifauna of his county, and considered that it possessed far fewer features of interest than such a fortunate county as Norfolk, which has yielded a perfect wealth of rare British birds. Thomas Armstrong, an entomologist and oologist, now advanced in life, was more or less intimately acquainted with T. C. Heysham during the 'fifties.' He has always maintained that Heysham wrote a MS. history of the birds of Cumberland, and that this and other papers fell into the hands of T. C. Heysham's relatives at his death. Whether this surmise be correct or not, there can be no doubt that Heysham prepared a work on *The Land and Freshwater shells of Cumberland*, because there still exist the estimates of the publishers to whom he applied in the spring of 1845. The total cost of producing the book with coloured figures was estimated by Messrs. Reeve Brothers at £350. This Heysham considered a more expensive outlay than the probable demand for such a monograph could justify. It will be understood from this incident that Heysham was a conchologist as well as an ornithologist. He was in fact one of the most versatile naturalists that Great Britain has ever possessed. A man of active habits, enjoying ample leisure, inheriting also a handsome competency, he was able to furnish his library with every European work of importance in all the branches of Natural History. But Heysham did not rest content with the acquisition of a fine library. He was essentially a collector, priding himself on possessing large series of rare insects.¹ Nor was he one whit less eager to add specimens of rare birds and their eggs to his own fine collection and those of his friends. Had this been all, Heysham might well have lived in comparative obscurity. He won his way to general recognition by the industry which he devoted to his favourite pursuits, as well as by the untiring energy with which he initiated and carried on

¹ Heysham wrote to Stephen Calverley in June 1846: 'The truth however is, that I have done little or nothing in entomology for the last ten years.'

an enormous correspondence with *collectors* in all parts of Great Britain and Ireland. It was a collecting age, and collecting was then more excusable than at the present time, because naturalists were fewer, and rare birds were more plentiful and less persecuted. T. C. Heysham exchanged specimens with naturalists far and wide; nothing gratified him more than to receive a Kite from Monmouthshire, or a Bewick's Swan from the coast of Norfolk. The most eminent ornithologists with whom Heysham corresponded, all since deceased, were Hewitson, Hancock, J. H. Gurney, Henry Doubleday, John Gould, and William Yarrell. The last-named zoologist especially benefited by the liberality with which Heysham communicated to him all available information regarding the birds and fishes of Cumberland. Our knowledge upon this head is chiefly supplied by such draught copies of his own letters as Heysham happened to preserve. Thus, on the 9th of January 1834, we find him writing to Henry Doubleday in the following strain: 'From a variety of circumstances I fear that it will be some time before I can avail myself of your polite and exceedingly kind invitation to spend a few days with you at Epping. Nothing, I assure you, could possibly give me greater pleasure than to accompany you to all your favourite haunts in the forest, but the truth is that at present I cannot leave home for any length of time, owing to the great age and daily increasing infirmities of Dr. Heysham, now in his eighty-first year, and which in fact prevents me from inviting many of my kind ornithological friends.' The same letter alludes to *Machetes pugnax*: 'The Ruffs you have been so exceedingly kind as to send me, are extremely interesting, as exhibiting the very great varieties of plumage in these birds, but I really doubt much whether any of them will mount; in fact, I strongly suspect that they were all at one time intended for the table, their wings being partially cut, and I fear, therefore, that you have deprived some epicure of a *bonne bouche*.' Heysham first met Yarrell in 1837, as appears from a letter addressed to Henry Doubleday, dated 29 Norfolk Street, Strand, September 23, 1837. In this he observes: 'I had the pleasure yesterday of seeing your friend Mr. Yarrell for the first time, who was so extremely kind as to

accompany me to the Surrey Zoological Gardens; indeed I feel myself under very great obligations to him for his kindness and politeness to me.¹ Heysham long continued to correspond with Yarrell, to whom he invariably reported such facts of avian interest as came under his notice. Thus a draught addressed to Yarrell on November 14, 1845, referred to the immigration of *Loxia bifasciata* into Lakeland. 'Since my last note,' writes Heysham, 'I have seen the White-winged Cross-bill killed in this vicinity on the 1st inst. It is apparently a female, of the 2d or perhaps of the 3d year; the patches of white on the wings being of considerable size.' Heysham possessed an extraordinary knowledge of specimens of birds and eggs, considering that he spent almost his whole life at Carlisle, rarely visited London, and never apparently saw any continental museums. His experience appears to have been derived to some extent from the large series of specimens sent for his inspection by such dealers as Robert Dunn or Mr. William Proctor. It was Dunn who wrote to Heysham on the 13th of April 1842, to offer him two skins of the Great Auk. The letter in question commences, 'Having just received two uncommon beautiful skins of the *Alca impennis* shot in Iceland last year and beautifully got up for stuffing, and as I consider them cheap, I thought it my duty to acquaint you among the rest of my customers.' Dunn asked the sum of £7, 10s. a-piece for his skins of the Great Auk, but Heysham did not secure them. Mr. Proctor wrote from Durham University Museum on February 18, 1840, to submit a price list of some eggs which were then expected to arrive from Iceland, *via* Copenhagen. One of the last items in this list is brief, but speaks volumes: 'Great Auk, £3. A draught of one of Heysham's letters to Proctor shall here be quoted verbatim, in order to show the stores of information which the *Carlisle Naturalist* brought to bear upon European oology.

'CARLISLE, July 20, 1841.

'SIR,—It was not my intention to have unpacked your eggs

¹ Yarrell paid a surprise visit to Heysham in September 1838, but found him out. Heysham was greatly chagrined when he found his friend's card lying on his table.

until I heard from my friend in the West of England, but being confined to the house from indisposition, and wet weather, and having a little spare time, I looked them over this morning. I have little doubt that the eggs which you suppose to be those of the Hooded Merganser, are nothing more than those of the Red-breasted Merganser, as I find that the bird (*M. merganser*) is sometimes called *Toppond* by the natives of Iceland, as well as the Goosander; in fact these two birds have three or four different Iceland names. I have the Iceland, Lapland, and Greenland names of nearly the whole of the Birds that are ever met with in these countries, which I now and then find of some use in ascertaining the names of any eggs that chance to be marked with the Provincial names. The Iceland Goldeneye of your list is, I presume, Barrow's Duck (*C. barrowii*, Rich.), which is common in Iceland, and I make no doubt that the eggs which you sent me some time ago also belonged to this bird, and not to the Common Goldeneye. If there is any doubt on the subject, you must be aware that they are of little value in a scientific point of view.¹

‘Are you quite sure that the two eggs which you state to be the eggs of the Bean Goose really belong to this species? There are, I believe, four different species of the Genus *Anser* that breed in Iceland, viz. :—

Anser segetum.

„ *albifrons.*

„ *leucopsis.*

„ *ruficollis.*²

‘I shall feel obliged if you can conveniently give me any satisfactory information on this subject, and I beg to remain,
Yours greatly obliged, T. C. HEYSHAM.’

¹ Barrow's Goldeneye continued to be considered the only Goldeneye found in Iceland, until the researches of the Rev. H. H. Slater proved beyond doubt that both the species of Goldeneye are found in Iceland, though the first mentioned is the dominant species.

² The inclusion of the Red-breasted Goose was a mistake. Proctor informed Heysham that both the Barnacle and Pink-footed Goose nested in Iceland, whence he had received skins and reputed eggs. It should be borne in mind also that in 1862 the Rev. C. W. Shepherd, F.Z.S., proved that the Grey Lag Goose bred in Iceland (cf. *North-West Peninsula of Iceland*, p. 141).

The limits of space unfortunately render it impossible to give a more detailed account of the merits which this north-countryman possessed as a scientific ornithologist. His singular proficiency in every department of zoology was equalled, if not surpassed, by the devotion with which he sought to advance the labours of some of his contemporaries. Thus, when Denny published his *Monographia Anoplurosum* in 1842, he included information derived from Heysham, who sent him parasites taken from the Little Auk, Bewick's Swan, Whooper, Shoveller, Scaup, Common Buzzard, Great Grey Shrike, and fourteen other species. Nor should it be forgotten that this singular man was an excellent botanist. An undated draught is couched in the following words: 'Mr. Heysham presents his compliments to Sir William Hooker, and has taken the liberty to enclose him a specimen of the Whorled Caraway (*Carum verticillatum*), which he gathered a few days ago on a Heath in the vicinity of Carlisle, and which in all probability is the first specimen of this plant Sir William Hooker has yet seen.' This record does not appear to have been published at the time. Many years later Mr. William Duckworth re-discovered the Whorled Caraway on King Moor, and was not a little surprised to learn that his researches had long been anticipated by Heysham. Similarly, Heysham wrote to his old and valued collector, Cooper, on September 29, 1840: 'During the early part of the month I made a short excursion to the Lakes in search of a few Ferns, etc. The weather as usual proved unfavourable, and I did not meet with much. I, however, contrived to reach the summit of Skiddaw, and fell in with *Hymenophyllum wilsoni*; and as I believe this is a plant you have not yet seen, I have enclosed you a specimen.' That T. C. Heysham's researches in middle life were hampered by physical indisposition is rendered certain by the allusions to ill health which occur in some of the draughts of his letters, as well as to the encroachments on his time of family business. Thus, when Newman wrote to him in October 1842, asking that he would furnish a table of the arrivals of migrating birds to the *Zoologist*, then upon the eve of its birth, Heysham denied the request. 'A few years ago,' he replied, 'I paid great attention to this subject, and annually

sent the results of my observations to the Editor of the *Philosophical Magazine and Annals*; but since the death of Dr. Heysham, engagements have devolved upon me which obliged me to relinquish this pursuit. The truth is, it required no little time, as well as considerable exertion to make out anything like an accurate list. From the latter end of March to the first week in May I was almost constantly on my legs, often walking from 30 to 40 miles a day, and frequently without seeing the species I was looking after, so that I was sometimes obliged to go over the same ground for several days before I succeeded in doing so; in short, I had generally to walk between 500 and 600 miles every year to fill up my list. . . . Some day or other I will perhaps make out a conclusive list with remarks, &c., and send it to you, but at present I do not feel disposed to work much with my pen.' He remained faithful to his first love, and wrote a good many letters about zoology during the last decade of his life. Thus he wrote to Dr. Bell in 1850:

'DEAR SIR,—I feel much obliged to you for the trouble you have taken in sending me a copy of the Notes made by Mr. Dickinson in your vols. of Yarrell's *British Birds*. Some years ago Mr. Harris of Papcastle informed me that a Rose-coloured Ouzel or Pastor had been shot near Brigham, when associating with some Starlings, but the person who killed it most unfortunately allowed it to perish.¹

'Can this be the specimen observed by Capt. Bethune at Flimby? I lost no time in delivering your message to Dr. Lonsdale. . . . I trust General Wyndham will not forget to fulfil the promise made to make a further search after some additional remains of the Thick-toothed Grampus, which I hope will be attended with success.—Believe me, Your obliged,

'T. C. HEYSHAM.'

Heysham wrote again to his Cockermouth correspondent on November 26 of that year. In this he referred again to the Grampus: 'I was fully led to hope, and indeed did expect from what General Wyndham said at our last interview, that he would have made a further search for some additional bones of

¹ The wings of this bird were sent to Heysham by J. W. Harris.

the Thick-toothed Grampus before this, but I strongly suspect, *entre nous*, that he has a much greater "penchant" for the "human form divine" than for fossil jaws or antediluvian bones.' This letter concludes, 'Trusting you will bear the *old jaws* in mind, and again thanking you for your note, Believe me,
Your obliged, T. C. HEYSHAM.'

That T. C. Heysham continued to enjoy the study of zoology to the close of his life is, may be, exemplified by alluding to the Crofton Surf Scoter mentioned at p. 305. The note regarding the trachea of this bird is the latest fragment of T. C. Heysham's handwriting that has so far come to light. He had long lived a retired existence, little understood by his fellow-townsmen, who were far from being competent to form a correct estimate of the researches of this remarkable man. Only recently, one of the most distinguished of modern Cumbrians replied to an inquiry regarding T. C. Heysham, that the great naturalist led the life of a recluse, at the same time hinting that a man who could expend his days in exploring the country on foot in search of shells or insects, and who was content to spend his evenings among his specimens, could hardly be looked upon as a perfectly rational member of society. But though the citizens of Carlisle failed to recognise the splendid versatility of Heysham's mental powers, and though the fragments of notes brought together in this volume are all that he has left to the naturalists who followed him, there can be no question that the caution and scientific precision which Heysham always brought to play upon his collecting reacted favourably upon those with whom he corresponded, and that he was able to teach them many things, and thus to influence, indirectly but certainly, the labours of those who were his contemporary naturalists. His death took place at his house in Fisher Street, Carlisle, on the 6th of April, 1857. Although the end came suddenly,—his housekeeper entered his room as usual on the Monday morning, to find that he had quietly slept away during the night,—he had long suffered indifferent health, and for several weeks had felt seriously unwell. Had he lived until the following autumn, he would have completed his sixty-sixth year.

Thomas Gough. During his later years, T. C. Heysham enjoyed the friendship of Mr. Thomas Gough of Kendal, whose tastes and talents bore a close resemblance to his own. John Gough, the father of Thomas Gough, did not marry until middle life, but he lived long enough to mould the character of the lad who was his constant companion up to the time of his death. It was thus that Thomas Gough came to develop an enthusiastic love of nature, which never forsook him. When Thomas Gough had passed fifty, he still looked back with affectionate interest to the early lessons in field zoology which his blind father sought to impart. On one occasion, when lecturing at Kendal, he remarked that 'of all objects connected with Natural History,' he cared most for Birds, adding that he found 'a personal charm in attending to the form and habits of the most familiar species, in connection with some of the brightest incidents of early childhood.' 'A *bird*,' he said, 'was my first lesson in Natural History, and tho' the species happened to be somewhat unsuitable (for it was rather rare), yet the instruction was not the less impressive. The garden with its bushy *Arbor Vitæ*, which harboured the little stranger, the strict silence enjoined whenever its babbling note was repeated, the anxiety to couple these notes certainly with the individual, the capture of our prize, and then the excitement upon examining a new warbler, and comparing it with Montagu's newly published description; its form, weight, and colour harmonising with author's specific characters; and lastly, the burst of joy with which this feathered visitor, at that time less known to British naturalists than at present, was pronounced to be the Lesser Whitethroat; all these incidents remain indelibly impressed upon my memory.' Dr. Gough, or *Mr.* Gough, as he preferred to be called, lectured on various occasions to his fellow-townsmen at Kendal, and it is in these lectures that such avian notes as he has left to us are to be found. His lectures were all popular in treatment, and therefore contained much that to a scientific ornithologist is a vain repetition of the A B C of the science. Happily they include some capital notes regarding the birds around the Kendal, and the only fault that can be found with them is that they are not more abundantly represented. Dr. Gough, it should be understood,

never limited his researches to any one branch of science. An intimate, indeed lifelong, friendship with Professor Sedgwick led Dr. Gough to expend a large amount of his leisure upon geological research, and that a large measure of success attended his investigations no one can deny. It has always been recognised that he accomplished excellent results. Thus Mr. H. W. Cookson wrote from St. Peter's College Lodge, Cambridge, 5th January 1871: 'It will give me great pleasure to receive a copy of your Cryptogamic Flora of the Kendal district when it is ready. I know how much science is already indebted to yourself, and to your fellow-labourers in the field of geology, in years gone by. But for yourself and others the Silurian groups of strata and fossils near Kendal would not have been known so early as they were, and certainly would never have been made fully known to the world by the brilliant labours of M'Coy. Kendal now holds a prominent and very honourable place in all palæontological works on the Upper Silurian strata of England, and in our Catalogues here in Cambridge especially.'

Late in life Mr. Gough's friendship with Mr. Braithwaite induced him to pay considerable attention to the *Salmonidæ*, upon which Mr. Braithwaite wrote a little book. He delighted in collecting shells and in exchanging his duplicates with T. C. Heysham and other friends. *Foraminifera* had a singular charm for him. He acquired a copy of Blackwell's great work on Spiders, and studied those species which he found in Westmorland with loving interest. But birds were his first love. So, though he noted for years the first flowering of the blackthorn,—he was an accomplished botanist,—and while the appearance of a Tortoiseshell butterfly, newly roused from its winter sleep, afforded him year after year the same genuine pleasure as before, it was to *birds* that he devoted his best lectures, and of *birds* that he wrote with the greatest felicity. The materials preserved do not contain any notes on Wildfowl or Waders.

Dr. Gough knew many of the shore birds, but his acquaintance more particularly concerned the small birds which frequent situations in the interior of Westmorland. Take, for example, this note upon the Ring Ouzel:—

'My acquaintance with this bird for many years, on Rowland

edge and the higher hills of Longsleddle, led me to suppose that its time of arrival was about the middle of April. But a more favourable opportunity of watching its habits has brought me to a different conclusion. I will therefore give you an extract from my notebook which contains the latest information.

‘1858, March 27, Ring Ouzel arrives. This migrator appears much earlier on Reston Scar than in any other mountainous situation with which I am acquainted. It would seem that its arrival is tolerably steady as to time. In 1856, March 26th, and in the present year (1858) March 27th. On each of these occasions a flock has been met with, never amounting I think to a dozen. They remain hereabouts, most of them at least, during the whole season. For some days (8 or 10) the only note heard is a harsh clatter, “check-check-check,” ending in a hurried manner. About the commencement of the second week after their arrival, the male birds sing freely, but mostly in the evenings. In the early part of May 1857, at 9 P.M., I heard five birds singing at one time, and all within the space of a mile or a mile and a half. In September the young birds visit our yew trees, morning and evening, and feed on the yew-berries along with the Missel Thrushes and Song Thrushes. The early appearance of the Ring Ouzel in this situation may be attributed to the shelter and food found about the springs and boggy places on the south-west side of the scar.’

Of the Waxwing, Gough wrote in the following strain: ‘Five instances of its occurrence in our district have come under my notice. The first specimen was killed in the early part of this century in Underbarrow by Mr. Richd. Willison, in whose possession I met with the bird many years ago. The second was taken at Cark, near Flookborough in Jany. 1829, and came into my possession for a while, for preservation. It was a male bird in beautiful plumage, and therefore I had a coloured drawing made from that specimen after it was mounted. At the end of the same month a female was killed not far from the town, near Lowgroves; indeed, one of the specimens now before me in our collection. *This*, also, I had an opportunity of dissecting and mounting. The flesh was rich and tender eating. On opening the stomach I found a quantity of half digested

hips and several hard seeds. A fourth example, a male bird, was shot about the same time still nearer to the town, about Gillingrove: this also belongs to our museum. And a fifth was taken alive in Novr. 1841, near Newby-bridge. When caught the bird appeared to be much exhausted. On being put into a cage it ate (*sic*) a few haws of the evergreen thorn, rejecting the seeds; but this stranger died during the night.' It is hardly necessary to quote Dr. Gough's description of the habits of the Blackcap or the Rock Pipit, because, though prettily conceived, they do not supply any facts that are absolutely new to us. With regard to his experience of the birds of prey the case is different. These species are fast perishing from Lakeland, if not already extinct, and Dr. Gough's local experience is therefore of permanent value.

Of the Merlin, Gough says: 'At one time writers supposed this species to be migratory, visiting Britain in October, remaining the winter. . . . Later researches have, however, proved that it is only partially migratory, some few pairs remaining with us during the breeding season, especially in the northern counties of England. Such is its habit in this district. I have had the young in confinement, taken from a nest placed among heath and rushes by the side of a watercourse on Hay-fell.'

Dr. Gough had a somewhat limited acquaintance with the Peregrine: 'Three instances have occurred to me of this bird having been captured in this neighbourhood, the specimen before me being one of them; all were killed on Whitbarrow. When botanising once, on the side of Goatscar in Longsleddle with my late friend Mr. Haslam, we observed a large bird of prey advancing on wing towards us. At a distance, the underparts appeared to be white; but the bird flying over us at a height of about sixty feet, soon enabled us to recognise distinctly the black bars across the feathers of the abdomen.'

Strange to say, although Dr. Gough was born early in our century he seems to have known little of the Harriers: 'The *Common Harrier* is not, as far as my researches go, an inhabitant of our neighbourhood, though specimens of Hawks have frequently been sent to me as this species; but they invariably turned out to be nothing more than female Sparrow Hawks.

The *Marsh Harrier* occurs on marshy moorlands, places congenial to the animals upon which it lives; these are Water-fowl, Water-rats, Lizards, and Frogs. The bird is an inhabitant of this district, and is known by the name of Moor Buzzard. I have seen it about Buckbarrow and Goatscar, in Longsleddle.'

Very special interest accompanies Dr. Gough's acquaintance with the Kite: Among the Buzzards we have the Common Kite, in the present day a rare bird. Should you have the good fortune to meet with a specimen you will know it at once by its forked tail, short bill, in shape rather like that of the Eagle, and its short tarsi. And then pray remember our museum, which does not contain a specimen. But the Kite was formerly an inhabitant of this neighbourhood. When a boy [he was born in 1804] I well remember seeing one that frequented the N.E. end of Benson Knot. And you will recollect that, in one of the characteristic letters of our late friend and contributor, Mr. William Pearson, mention was made of a pair that built for many years in a tree near the Ferry House on Windermere. The reason why the Kite has become so scarce (extinct almost I fear in this district) is probably owing to its depredations among poultry, a whole brood of chickens having been carried off from time to time by this pest of the farmyard. Hence, in self-defence, the farmer never omitted an opportunity, on the return of the breeding season, of marking the Kite's nest, and destroying both old and young birds.

One of his lectures, written on Dean Swift's *mot*, 'All the product of all this will be found a manifest incoherent piece of patch-work,' includes an amusing notice of a Lesser Black-backed Gull. This bird entered Mr. Gough's possession as a young bird and exercised a tyranny over its companion, a Herring Gull. But *Larus fuscus* was also 'in the habit of having an occasional contest with another denizen of the garden, a Common Buzzard, which was tethered by a chain. The cause of contention was food: and our *Pet* was always the aggressor. If the Hawk had a dead rat or a piece of offal in his claws, the Gull ventured within chain reach, and laid hold of the spoil.

A tug ensued; one of the combatants exerting his muscular thigh and foot, the other relying upon the grasp of his bill and the strength of his neck. But the Buzzard was always victorious. Had it been a mere trial of strength, I think the Gull would have been successful. But a severe grasp on the back of his head from the Buzzard's spare foot compelled him to let go his hold. "Gulliver" was never but once completely beaten by any bird in open combat. A female Red-headed Goosander was his opponent, he as usual being the assaulter: but her tact was too much for him. Like a modern lancer she went full speed with neck and bill nearly horizontal, and catching his side under the wing, threw him over on his back. They had but two encounters; and our old friend fared so ill in both, that had not this amazon made her escape in the night, we should have been concerned about his future peace and safety.'

It will be seen from this playful note on the Lesser Black-backed Gull, that Dr. Gough united to his taste for scientific research much sympathy with the character traits of animals. Once indeed, when recovering from a severe illness, Dr. Gough employed himself in writing a charming pamphlet, entitled *Personal Reminiscences of the Habits of Animals*, regarding which he wrote to his friend Professor Sedgwick in the following terms:—

'MY DEAR PROFESSOR SEDGWICK,—I venture after a long silence to trouble you once more with a letter. The accompanying pamphlet is partly an apology for this intrusion. During the past spring I had a severe attack of rheumatism, which made me reluctantly bid adieu to my profession. The attack left me with partial loss of power in the left arm and shoulder, and the pain and sleepless nights also entailed upon me a shattered condition of brain. . . . During a tedious recovery, it was necessary for me to have some other employment in addition to reading. I set to work and strung together a few sketches of the habits of animals, especially those which had been among my pets in former years. The publication now sent contains these reminiscences. And as the little book is dedicated to the younger members of our Nat. Hist.

Soc. I should not have troubled you with a copy; nor do I expect you to have your time occupied with having the contents read to you. But as I had twice introduced you into the scenes, it seemed only right to apprise you of the liberty taken without permission.'

Cornelius Nicholson, the author of the *Annals of Kendal*, and a well-known antiquarian, was another attached friend of Dr. Gough. In the summer of 1835 they took counsel together regarding the desirableness of establishing a Natural History and Scientific Society in Kendal. By their efforts the Kendal Literary and Scientific Institution became established. It was the Council of this Institution that in 1855 instructed their secretary to send to Dr. Gough a complimentary letter, as 'a public recognition of the services' which Mr. Gough had 'so long and indefatigably rendered to the society.' Dr. Gough was for many years a hard-worked medical man, but wherever he went he was sure to observe the flowering of favourite plants or the migratory movements of summer birds. He used to scrutinise with care wildfowl brought from Morecambe Bay to the 'Fish Stones' market at Kendal, ever anxious to acquire a fresh specimen for the local museum. His health became indifferent with advancing years, but he still found amusement in fishing the becks in Kentmere. Like the younger Heysham, Dr. Gough took an honest pride in possessing a good reference library, including some expensive works bought in order that he might be competent to arrange the geological specimens in the Kendal Museum. It was a sorrow to him that so few north-countrymen took a genuine interest in his own scientific pursuits, but he worked on with unvarying resolution, always glad to add a rare local specimen of 'fish, flesh, or fowl' to the Kendal Museum.

Unlike the majority of naturalists, Dr. Gough was entirely unselfish in his collecting, caring nothing for private ends, and finding an unceasing satisfaction in the improvements which he wrought out in the Kendal Museum. Mrs. Harry Arnold of Arnbarrow tells me that in early life she assisted her father in pressing many species of wild-flowers, just as she skinned his birds for him at a later period. Diatoms delighted him, and he worked a great deal with his microscope. He was always

youthful in a certain sense, for even late in life his mind was always open to receive and assimilate fresh impressions of nature. Latterly he took a walk in the forenoon, and spent the afternoon in a pleasant saunter after bird or flower. He delighted in returning day after day to any particular spot in which the first arrival of one of our summer birds was likely to be noticed.

While the evening of life came to T. C. Heysham in the solitude of his bachelor home in a narrow town street, his friend Dr. Gough spent his latest years in the home of his married daughter, surrounded by those who sympathised with his scientific interests and supplied every wish. The last home of Dr. Gough is situated on the shores of Morecambe Bay. Away to the north the hills which he loved so tenderly raise their peaks in the distant background. Immediately to the east, and at the head of the Kent and Levens estuary, the eye catches the long line of Whitbarrow Scar, the former haunt of Red-legged Choughs, whose clear-drawn notes and graceful forms would at one time have repaid a traveller for a long excursion to that loose scree of white and crumbling limestone in which the Peregrine has also reared her brood of 'Red Falcons.' Immediately in the foreground at Arnbarrow are the extensive sands of the estuary, over which career flocks of loudly 'purring' Dunlins, and many another long-winged, shrill-voiced Wader. It was amid such scenery, and almost within earshot of the grey 'cranes,' whose traits of character afforded such pleasure to his retirement, that his spirit went forth to join the ranks of the distinguished naturalists whose labours in their several generations command the respect and reverence of those who follow them. He died on July 17, 1880.

THE EXTINCT MAMMALS OF LAKELAND.

OUR knowledge of the larger animals which formerly inhabited the interior of Lakeland is partly based upon such remains as have been discovered in peat formations and alluvial deposits. Hitherto the subject has been very imperfectly explored. Indeed, the only man who has shown any enthusiasm in this department of research is a working chair-maker, Mr. Beecham, of Kendal. This enterprising individual, whose unpretentious labours the townsmen of Kendal may well be proud to acknowledge, conceived the idea that remains of extinct animals might probably be found to exist in the limestone fissures of Helsfell, a knoll of rising ground with an easterly aspect, situated immediately north of Kendal. Having obtained leave of the lord of the manor to excavate the likely fissures, Beecham commenced work in or about the summer of 1880. On the first evening,—his cave digging was accomplished at the conclusion only of his day's work,—Beecham obtained the assistance of a neighbour in removing a mass of clay, which his single strength was insufficient to dislodge. Having thus secured an entrance to the interior, Beecham dispensed with further aid. He revealed his intentions to no one, but worked on with dogged pluck for five continuous summers, only suspending his self-chosen task when he had reached fissures which could not be opened without blasting. The fissures varied in size, but were generally twenty feet deep. This involved the removal of a great quantity of earth, which was patiently carried out in a bucket, carried to a neighbouring spring, and carefully washed, in order that no small bones might be overlooked. When Beecham completed his labours, the bones which he had found were identified by Professor Boyd Dawkins. They included those of the Hedgehog, Wolf, Bear, Fox, Wild Cat, Polecat or Fomart,

Otter, Pine Marten, Wild Boar, Horse, Red Deer, Roe, *Bos longifrons*, Sheep, Goat, House Mouse, Short-tailed Field Mouse, and Rabbit. Some of these no doubt are comparatively recent. Unfortunately, no levels were taken. Generally speaking, the smaller bones were found in the accumulated earth, while the most important remains rested in a deep fissure, filled with pebbles and fine clay, some twenty yards from the entrance.¹ The clay at the top was very tenacious. Beneath, it was dry and almost of the consistency of lime. After his specimens had been identified, Beecham desired that a complete series of them should be placed in the Kendal Museum. This was accomplished by their purchase, and they now form the most interesting exhibit of those possessed by the Kendal Literary and Scientific Institution.

Order *CARNIVORA*.

Fam. *CANIDÆ*.

THE WOLF.

Canis lupus, L.

It is to John Beecham that the credit belongs of having proved the former existence of this animal in Westmorland. That our 'place-names' point to this conclusion is perfectly true. '*Wolfer Ghyll*,' for example, seems to be the Saxon rendering of the French '*Gorge du Loup*.' If we bear in mind that Wolves have been killed in recent times in the Forest of Fontainebleau, where I first met with this expression, we shall not have much difficulty in convincing either ourselves or others that the former presence in our midst of 'the wolf of the evening' is something more than mythical. But Beecham actually obtained many lupine bones and teeth in the fissures of Helsfell. Further, he found the entire skeleton of a full-grown Wolf. The poor brute, feeling, no doubt, that its end was approaching, had retired behind a large rock, and there had died in self-imposed solitude. Its fellows respected its remains, which remained undisturbed until the explorer discovered it *in situ*, the bones lying close together. These were

¹ In describing the Helsfell deposits, I am giving information supplied to me by Mr. Beecham himself.

collected and mounted. The perfect skeleton is contained in the Kendal Museum. At that time we may fairly conjecture that the whole of Lakeland was infested by packs of wolves, which doubtless preyed upon the herds of the prehistoric men who then tended their goats and cattle on the pastures of our dreary uplands. How long the wolf continued to carry consternation into the sheep-folds cannot at present be stated with any exactitude. Probably the wolf had become rare, if not extinct, in this region by the end of the thirteenth century. In Saxon times wolf-hunting must have been a common event.

In the summer of 1865 I had the privilege of examining two adult wolves which had been taken a few days before in a pitfall in the Ardennes. Their gaunt, emaciated frames and cowed carriage told a sad tale of hunger and brutal ill-usage, but their appearance with their rough-looking captors in a country town made a strong impression on my mind; young child as I was at the time, I still possess a most vivid recollection of these poor animals, and have often thought in later years that such a sight must frequently have been witnessed in the village communities of our island-home during the first few centuries of the Christian era.

Quite a considerable literature has gathered round the nucleus of lupine lore which Pennant first provided, when he narrated the terrorism once exercised by 'that grey beast the wolf in the weald,' as the Saxon minstrel described the ghoul which preyed upon the bodies of the warriors that lay upon the battle-field awaiting the rite of sepulture which would commence with the first promise of approaching dawn. Mr. J. E. Harting has done more than any one else to trace the former distribution of the wolf in Britain, but he has failed to discover, or at any rate to publish, any fresh information regarding the Wolves of the Lake district. Every Cumbrian has read the tale concerning a lady of the Lucy family being destroyed by a wolf. 'According to one version,' wrote a distinguished antiquarian, now deceased, 'this catastrophe occurred on an evening walk near the castle; whilst a more popular rendering of the legend ascribes it to an occasion on which the lord of the manor, with his lady and servants, were hunting in the forest; when the

lady, having been lost in the ardour of the chase, was after a long search and heart-rending suspense, found lying on a bank, slain by a wolf, which was in the act of tearing her to pieces. The place is distinguished by a mound of earth, near the village of Beckermeth, on the banks of the Ehen. The name of Woto Bank, or Wodow Bank, as the modern mansion erected near the spot is called, is said to be derived by traditional etymology from the expression to which, in the first transports of his grief, the distracted husband gave utterance, 'Woe to this bank.'¹ The authority just cited has bequeathed to us his opinion regarding the monumental figure of the Lady Lucy preserved in St. Bees Abbey Church: 'On the breast of the lady is an unshapely protuberance. This was originally the roughly sculptured limb of a wolf, which even so lately as the year 1806 might be distinctly ascertained. These figures were formerly placed in a horizontal position, at the top of two raised altar-tombs within the church. The tomb of the lady was at the foot of her lord, and a wolf was represented as standing over. The protuberance above mentioned on the breast of the lady, the paw of the wolf, is all that now remains of the animal. About a century since the figure of the wolf wanted but one leg, as many of the inhabitants, whose immediate ancestors remembered it nearly entire, can testify.'² Another vague tradition was placed on record by the late Dr. Gibson, who wrote in the following strain: 'If it be about the end of the week, you will probably fall in with my friend Dan Birkett, "t'heead captain of Seathwaite Tarn-heead mines," who will not require much pressing to take a glass of grog, and whose varied conversation may amuse you, whilst your ham and eggs are being cooked. Amongst other matters, he will tell you that, in the Longhouse Close, on the side of Walna Scar, with which you shall be made acquainted bye and bye, are to be seen the remains of an ancient British town, consisting of the remains of several stone-built huts, and a large enclosure, where Dan says they secured their flocks from the wolves.'³ West

¹ White's *Lays and Legends of the English Lake Country*, p. 230.

² *Ib. cit.*, p. 231.

³ *Ravings and Ramblings round Coniston*, p. 48.

wrote in 1774 to much the same purport: 'Whilst the villains of Low Furness were employed in all the useful arts of agriculture, the woodlanders of High Furness were charged with the care of the flocks and herds, which pastured the verdant sides of the fells, to guard them from the *wolves* which lurked in the thickets below.'¹ Mr. Mitchell states: 'By some ancient grants also recited by West (*Antiq. of Furness*, 1774) it appears that *wolves* . . . were common in that district.'² Mr. Mitchell was perhaps led astray by memory. At all events I can find no allusion whatever to the Wolf in any of our old grants or charters. However this may be, it is right to say that, according to one Furness tradition, the last local *Wolf* was killed at Humphrey's Head. In Cumberland, Bowscar, near Penrith, can boast of a similar distinction. Having hunted wearily through many dry volumes for local records of the Wolf in Lakeland, I was compelled to seek the aid of an expert, Mr. Hubert Hall, whose great kindness in making a special search at the Rolls House has placed me under a pleasant obligation. Mr. Hall reported the result of his investigations in a letter of December 14, 1891: 'I have looked in many places, but find it impossible to get anything for Westmoreland. The fact is that Westmoreland, in the days when Wolves yet were, was a sort of no-man's land, as to which few notices exist, *e.g.* in the Records of the Court and Law Courts, which are the chief source of our information here.'

'I do find the following, which may fairly apply to western amongst other counties:—

"(1) *Patent Roll of Ed. I.*, M. 2 :

John Giffard of Brymmesfield (Co. Glouc.) has license to hunt the wolf in all the King's forests within the kingdom.

"(2) *Ibid.*, M. 20 [? Salop]:

Peter Corbet has license to take wolves throughout the King's forests in divers counties (Glouc., Worc., Heref., Salop, Staff.)."

'Many similar entries could be found on the Edwardian

¹ *Antiquities of Furness*, p. xlv.

² *Birds of Lancashire*, p. xiv.

Patent Rolls at least, usually for licence to hunt the wolf, fox, and wild-cat.

'I also find in the Tasta de Nevill and Red Book of the Exchequer, p. 141^d, North^t, that Richard Engayne held land in Witteslaye and Laxtone by the service of hunting the wolf.

'There is no doubt that the whole West of England, from S. Wales to Strathclyde was infested (well into the 13th century) with wolves. In 18 Edw. I., a certain tenant had a park made at Farley, co. Worc., and stocked with "wild beasts" (*i.e.* deer), given him by the Earl of Clare. The wolves came and "destroyed" the whole of them. (*Plac. coram Rege Trin.*, 18 Edw. I., Rot. 50.)

'I wish I could help you further, but have no opportunity now to search outside this office.'

Order *CARNIVORA*.

Fam. *URSIDÆ*.

BROWN BEAR.

Ursus arctos, L.

Whether the bears that reached the city of the Empire from Great Britain had been captured in any instances among the caves of Lakeland is unknown. It seems not an unlikely contingent, if we remember that these animals could easily be shipped from Ravenglass, which was then an important port, as well as a military station. I have not detected any historical allusion to the former presence of the Brown Bear in Lakeland. Remains of this species were found in a cave half-way up the north-west side of Arnside Knot. The cave in question was discovered by the late J. Ruthven in the summer of 1844. 'He entered through a low archway into a cavern 20 feet in length, and from 4 to 5 feet high. In the floor were several holes, down one of which a candle was lowered, and a deep chasm was discovered, running into the hill in a south-eastern direction. Mr. Ruthven let himself through the hole and succeeded in safely descending to the bottom, which was formed of angular fragments of limestone cemented together with stalagmite. The roof and sides were beautifully covered with

calcareous depositions (*sic*), clothing the rocks with drapery and hanging from the roof in long translucent stalactites. Six yards from the entrance the fissure swells out into a cave six yards in length, three yards in width, and five yards high. At the further end is a narrow passage five yards in length, terminated by a wall of rock, preventing all progress in that direction. On the left side of the passage a hole was discovered, through which Mr. Ruthven squeezed himself into a beautiful circular chamber, the arched roof covered with transparent stalactites, and the floor with stalagmites rising towards the roof in the most fantastic shapes, the whole forming a most beautiful natural grotto. Last week Mr. E. Whitwell and Mr. Ruthven visited the cave and commenced a diligent search for bones. They were successful in finding several beautiful specimens of the bones, claws, and teeth of extinct animals. Some of the teeth have been sent to Professor Owen for examination.¹

It was of this cave that Newman furnished a description, stating, 'in a long gallery, the floor of which is covered with *debris*, have been found a number of bones. Some of them are pronounced to be those of the hyæna, the wolf, and other animals now extinct in this country.'²

I fancy that Newman was wrong about the Hyæna being represented in the Arnside cave. Sir Richard Owen says nothing about that genus in the brief notice which he furnished of this find. 'I have,' says he, 'received remains of a Hog, associated with bones of a Brown Bear (*Ursus arctos*), and other existing species of Mammalia, which were obtained by Mr. Whitwell of Kendal from a limestone cavern at Arnside Knot, near that town.'³

In this connection it should be observed that Mr. Beecham obtained ursine remains at Helsfell, including the basal portion of the cranium of a young Bear, and at least two large bones. Professor Boyd Dawkins has referred these relics to *Ursus priscus*, but I should think that the species represented at Helsfell is probably identical with that found at Arnside Knot.

¹ *Kendal Mercury*, August 24, 1844.

² *Zoologist*, 1844, p. 709.

³ *British Fossil Mammalia*, p. 429.

Order CETACEA.

Fam. BALÆNOPTERIDÆ.

COMMON RORQUAL.

Balenoptera musculus (L.).

Although there is no evidence of any Finner Whale having been stranded in recent times upon our coast, yet it would be unwise to ignore the fact that Sir William Turner has referred a caudal vertebra, from the Silloth excavations, to *Balenoptera musculus*.¹ In this connection mention may be made of a notable find in Morecambe Bay. Some few years ago, after a heavy gale, which caused some change in the sands of the estuary, a local fisherman discovered the remains of a large animal imbedded in a thick deposit of clay near Ulverston. Having with great labour extracted these bones from their resting-place, the fisherman carted them home and showed them to a reverend doctor of divinity, who was then residing in the neighbourhood. This gentleman unhesitatingly pronounced the bones to be those of a Mammoth. As such they were exhibited at Ulverston some days later, and attracted much attention. Some time afterwards a single vertebra fell into the hands of Mr. W. Duckworth, who sent me a sketch of it. The Mammoth then resolved itself into a Whale of the present family.

Order CETACEA.

Fam. DELPHINIDÆ.

THICK-TOOTHED GRAMPUS.

Pseudorca crassidens.

There can be no doubt that this rare cetacean has once occurred in Lakeland, although the evidence regarding it leaves us in doubt as to whether it was recent or in a fossil state. It was found about the year 1850 at Cockermouth, and was probably represented by a recent jaw. If we remember the tastes of the epicures of the seventeenth century, we shall be tempted to surmise that the animal was sent to Cockermouth Castle from the neighbouring coast as an acceptable addition to the larder of that establishment. But there is no positive proof of

¹ *Proc. Ryl. Phys. Soc.*, vol. viii. p. 336.

this. It may easily have been exhumed in excavations on the coast. Of the identity of this animal Mr. T. C. Heysham speaks with absolute confidence in his letters to the late Richard Bell, Esq., M.D. The first mention of it occurs in a letter of October 19, 1850, in which he expresses his former expectation that General Wyndham would have made 'a further search for additional remains of the Thick-toothed Grampus.' On the 26th of November he again reminded Mr. Bell of his desire for 'a further search for some additional notes of the Thick-toothed Grampus.' On the 29th of March 1851, Heysham wrote again: 'It is now so long since I heard anything relative to the old jaw of the Thick-toothed Grampus, that, to tell you the truth, the subject had entirely escaped my recollection, and the first glance of your obliging letter of the 28th instant startled me not a little. On running my eye over the commencement, "In re *Orca crassidens*," I at once concluded some limb of the law had dragged me into the Court of Queen's Bench, or into that still more abominable hole, the Court of Chancery. However, I rejoice to say that the contents of your letter soon dispelled my delusion. I am glad to find that General Wyndham has at last commenced his improvements, although greatly disappointed that no additional remains of this animal have so far been discovered. Should nothing further be found, I shall be inclined to think that this jaw has been met with at some remote period on the coast, and conveyed to the castle for some purpose or other.' When referring to the remains of bones, afterwards proved to be those of the Red Deer found at St. Bees, Heysham wrote to Dr. Bell on the 22d of December 1851: 'I take it for granted you have heard of the enormous bones that have lately been found in the vicinity of St. Bees. If the account is really true, the *Old Jaw* at the castle will be quite thrown into the shade, not only as regards size, but also with respect to antiquity, etc.' In T. C. Heysham's time, this species was supposed to have been long extinct; but recent records of fresh specimens have disproved this hypothesis.

PILOT WHALE.

Globicephalus melas (Trail).

Shoals of this small Whale have on several occasions within living memory received a record in our local papers as having visited the Solway Firth. I have no moral doubt that specimens have been obtained in both the English and the Scottish Solway, but in the absence of material to prove this positively, the species has been excluded from the body of this work. It is, however, noteworthy, that a lumbar vertebra belonging to the genus *Globicephalus* was found in the Silloth excavations. In the summer of 1889, an entire skeleton of this animal was unexpectedly disinterred in a back yard in Caldewgate, Carlisle. Had information been sent to me at once, a perfect skeleton could have been secured for the local museum. Unfortunately, I did not hear of the find for two days, when I hurried to the spot and found the skeleton broken up. The cranium was not much injured, but the boys of the neighbourhood had seized the opportunity of practising a little amateur dentistry, and had extracted every tooth from the head of the animal. There can be no reasonable doubt that this animal must have been taken in the waters of the English Solway, but at what period, no man can positively decide.

Order UNGULATA.

Fam. SUIDÆ.

WILD BOAR.

Sus scrofa, L.

In early times, when the savage men who once tenanted the remote fastnesses of the Lake mountains were accustomed to slay their quarry with bone arrow-heads,¹ the Wild Boar must have wallowed in many of the miry sloughs of our lower grounds. The Rev. J. Wharton assures me that Bran-pow, the name of a Westmorland stream, should be rendered Brawn's pool, *i.e.* the place where the wild swine came to wallow. No doubt this animal was early domesticated. I imagine that some at

¹ A bone arrow-head was found in the Helsfell fissures.

least of the teeth of an animal of this genus, found plentifully in the Helsfell fissures, belonged to domesticated animals. Indeed, a glance at the pretty little teeth collected by John Beecham suggests at once that the prehistoric Wolf had an ugly knack of forestalling prehistoric breakfasts, trotting home to the fissures of her race in the limestone cliffs with the burden of a shrieking porker, that might well have been destined for a kinder fate than to be devoured by the whelps of its savage captor. 'Grise,' observe Nicolson and Burn, 'is a common name for swine, and it may well seem to have taken its name from being frequented by wild boars, which are beasts of the forest. Unto which the large rock called *Stybarrow* on the west side of Ulleswater may have some allusion.'¹ 'Swinedale,' they add [probably in error], 'may be so called from Wild Boars having frequented there; as there are Grisedale, Boredale, Stybarrow, in the neighbouring parish of Barton; and Wildboarfell [well known to Pennant] in Ravenstonedale.'²

The Rev. J. Wilson has kindly pointed out to me a passage in the Pipe-Rolls of 16 Henry II., which appears to refer to the capture of Wild swine in Inglewood Forest: 'Geodefrid' de Karleton redd. comp̄ de i. m̄' p porcis captis in forest. In thro (*thesauro*) libavit. Et Quiet' (*quietus*) est.' '*Godfrey de Karleton renders account of one mark for hogs taken in the forest. He has paid it into the treasury. He is free.*' Two similar entries follow. That the Wild Boar inhabited Lakeland at the time of this entry is independently rendered certain by an interesting tradition which the pen of Bishop Carleton has bequeathed to us. He traced Bernard Gilpin to the family of '*Richard Gilpin, who in the Reign of King John was enfeoffed in the Lordship of Kentmire hall by the Baron of Kendall for his singular deserts both in peace and warre. This was that Richard Gilpin who slew the wilde Boore, that raging in the mountaines adjoining, as sometimes did that of Erimanthus, had much indammaged the Country-people: whence it is that the Gilpins in their Coate Armes giue the Boore.*'³

¹ *Hist. and Antiquities of Westmorland and Cumberland*, vol. i. p. 409.

² *Ib. cit.* vol. i. p. 479.

³ *The Life of Bernard Gilpin*, p. 1.

Order UNGULATA.

Fam. CERVIDÆ.

RED DEER.

Cervus elaphus, L.

In prehistoric times the Red Deer of our mountains must have lived as patriarchs in their favourite corries, wandering at their will across the mountains. There is abundant evidence of this in the fine antlers which have been found in peat deposits all over Lakeland, from the borders of Scotland to the moors round Kirkby Lonsdale. The sands of the estuaries, north and south alike, yield remains of magnificent heads, some of which have passed through local auctions as horns of the Irish Elk. Their proportions and beauty far surpass those of the present Martindale Deer, among which 'royal' heads are scarce, and were for a long time entirely absent. The Roman deposits upon which the modern city of Carlisle stands, are full of the horns of Red Deer, such as had been thrown away, usually after a portion had been sawn off for some practical purpose. At the present time it often happens that shed antlers of the Fallow Deer of Levens find their way into the sands of Morecambe Bay. But a large number of Red Deer in the course of ages perished, torn by Wolves or swept away by some waterspout on the fellside. The 'spates' which are so common in this region sweep large bodies before them, and doubtless many of the remains of Red Deer found in the sands of our estuaries had travelled a considerable distance before they became imbedded in their last resting-place. A 'horn' which had been found near St. Bees, and to which local opinion attached some value, was sent to Mr. T. C. Heysham in January 1852. He replied to Dr. Bell on the 24th of February 1852: 'I have now to inform you that Brindle's horn has been carefully examined by competent authorities, as well as compared with specimens in the British Museum, and the result is that it belongs to the Common Red Deer, the *Cervus elaphus* of Linnæus. The animal must have ceased to exist in the beginning of summer, at all events before its horns had acquired their full growth, portions of the "velvet" being still visible, which is the

only notable circumstance about it.' The Royal Society printed in their transactions 'An Extract of a Letter from Mr. Hopkins to Mr. John Senex, F.R.S., concerning an extraordinary large Horn of the Stag Kind, taken out of the sea on the coast of Lancashire. 'This Horn was drawn out of *Raven's Barrow Hole*, adjoining to *Holker Old Park*, by the Net of a fisherman, on the 27th of *June 1727*. The Tide flows constantly where it was found, and the Land is very high near it. This Horn is now in the Possession of Sir *Thomas Lowther, Bart.* of *Holker* in *Cartmell* in Lancashire.'¹

Order UNGULATA.

Fam. BOVIDÆ.

O X.

Bos taurus, L.

The deposits of Lakeland include remains of two species, or, more properly perhaps, two *varieties*, of Ox. The smaller of these is that known to antiquarians as *Bos longifrons*, the '*Celtic Shorthorn*.' To this animal Professor Boyd Dawkins referred, no doubt rightly, the jaw-bones and other bovine fragments obtained by Beecham at Helsfell. Mr. R. Lydekker has most kindly examined a single horn core of an Ox, obtained in the foundations of the Carlisle market at a depth of twenty feet from the surface.² He tells me that I am quite right in referring this to *Bos longifrons*. Among the deposits of Roman origin recently unearthed in the foundations of Tullie House, Carlisle, under the superintendence of Chancellor Ferguson, F.S.A., I was pleased to recognise a portion of the frontal bones of the same animal, bearing the cores of the horns in a fairly perfect state of preservation. Although remains of this ox have not apparently been recorded hitherto from Lakeland, there can be little doubt that it was the common British Ox, at one time found everywhere.

Much greater interest attaches to the remains of *Bos primigenius*, the extinct Auroch; and none the less because our

¹ *Phil. Trans.*, vol. xxxvii. p. 257.

² I am indebted to Mr. Joseph Leavers, the governor of H.M. Prison, Carlisle, for this specimen.

text-books have hitherto overlooked the former presence of this animal in Lakeland. The earliest notice of a 'find' of the remains of this animal occurs in the account of the parish of Asby, Westmorland, furnished by Nicolson and Burn. They state: 'In digging of peats within this manor, nigh the east end of Sunbiggin Tarn, about 40 years ago [say in 1737], were found the horns of two large bulls, jumped together in the position of fighting, one of them probably having pushed the other into



THE AUROCH (the Howgill Castle Ox).

the mud, where they had both sunk. The rest of the skeletons could not be recovered by reason of the water oozing in. One pair of these horns was carried to Howgill Castle, where they are yet to be seen.¹ The Rev. J. Wharton showed me some remains of the horns of an Ox obtained in Sunbiggin Tarn, with

Antiquities and History of Westmorland and Cumberland, vol. i. p. 512.

the assurance that such bovine fragments have been found there on several occasions. The head sent to Howgill Castle hangs in the hall of the house to this day. The last time that I saw it, Mr. Thorpe had most kindly accompanied me, for the express purpose of obtaining some photographs of this head. He was much impressed by the fine sweep which the horns of this old bull possess. The lower jaws are unfortunately missing. We should probably refer to the Auroch the skulls of two other Oxen, discovered within the limits of the English Solway. 'In excavating on Burgh marsh,' says a local print, 'at a depth of seventeen feet from the surface, a skull, supposed to belong to an animal of the *uri* species (now extinct) was turned up. The horns measure 6 feet from tip to tip, and are curved so that the points come within a few feet of each other, a space of 2 feet being the extreme distance between them in the inside. They measure 16 inches in circumference at the root. Some Buck [? *Red Deer*] horns were also found at the same place.'¹

The catalogue of the sale of the Crosthwaite Museum, dispersed by the hammer at Keswick, April 7th, 1870, mentions a similar skull to the last mentioned, the two having been obtained within a very few miles of one another. 'Lot 84, Skull and other remains of Wild Ox, dug out of a peat-moss at a depth of four feet, at Broadmire Moss, in Thrustonfield, near Carlisle. One of the ribs had been broken, and had united again.'²

During the years 1883 and 1884, while the North British Railway Company was engaged in excavations connected with the formation of a new dock and a new gas-holding tank at Silloth, remains of *Bos primigenius* were discovered. Sir William Turner obtained these remains for the Museum of Science and Art at Edinburgh. He has given an interesting account of these bovine remains, although he was under a slight misapprehension when he wrote that the 'right lower jaw of the *Bos primigenius*' found on this occasion was apparently 'the only specimen of the lower jaw of this animal which had been found in Britain.'¹ The fact of its rarity induced Sir William Turner

¹ *Carlisle Patriot*, December 21, 1850.

² *Catalogue of Crosthwaite Museum*, p. 19.

to compare its dimensions and characters with those of the corresponding part of the lower jaw of the Hamilton Wild White Ox in the Anatomical Museum of the University of Edinburgh, when the following measurements were obtained:—

	Fossil.	Hamilton Ox.
Extreme length,	18 $\frac{1}{4}$ in.	15 $\frac{5}{8}$ in.
From angle to tip of coronoid,	8 $\frac{1}{2}$	9
From angle to top of condyle,	7 $\frac{1}{4}$	6 $\frac{7}{8}$
Height of coronoid,	1 $\frac{3}{4}$	2 $\frac{3}{4}$
Length of molar alveoli,	6 $\frac{5}{8}$	6
Height behind last molar alveolus,	3 $\frac{1}{4}$	3 $\frac{1}{4}$

‘The Mandible,’ continues Sir W. Turner, ‘exactly fitted the large skull of the fine *Bos primigenius* in the Anatomical Museum of that university, described by me in 1859; it belonged, therefore, to a full-grown animal. Three true molars and the last premolar were in place, the other premolars and the incisors were absent, although their sockets were present. The molars were so far worn down that a section through the external accessory lateral column was in the grinding surface of the crown. In its general configuration this bone corresponded closely with that of the Hamilton White Ox, though the latter had a longer and more attenuated coronoid process; in its length, however, the fossil considerably exceeded the recent mandible, and obviously belonged to a much larger animal. . . . The left humerus of *Bos primigenius* was perfect except that the two tuberosities were injured. Its length from the head to the radial articular surface was 15 $\frac{3}{4}$ in.; the breadth at the condyles was 5 $\frac{1}{4}$ in. It was a more massive bone than the right humerus of the same species described by me in 1859. The right tibia was perfect, and a massive bone; its extreme length was 19 $\frac{1}{2}$ in. . . . The right metatarsal was perfect; its extreme length was 12 $\frac{1}{4}$ in. . . . These long bones were not rubbed, but their muscular ridges and articular surfaces were sharp and well defined as in a recent bone; their dimen-

¹ The series of skulls of this animal exhibited at the Natural History Museum, South Kensington, includes at least two lower jaws. One of these belongs to a cranium obtained in the *Scottish Solway* faunal area, presented by the Earl of Selkirk.

sions, however, were considerably greater than in the skeleton of the Hamilton Wild White Ox.¹

The only other bovine remains at present authenticated from Lakeland deposits are identical with a skull obtained in the Ravenglass estuary by Joseph Farren the fisherman. This was found in the sand of the river Irt, but Farren told me that he thought it must have been washed out of a peat deposit. It was at once claimed by the lord of the manor, and has remained ever since at Muncaster Castle. In the spring of the present year Mr. Thorpe accompanied me to Muncaster, in order that we might take advantage of Lord Muncaster's kind permission to reproduce the head in this work.



THE AUROCH (the Muncaster Castle Ox).

Having submitted copies of Mr. Thorpe's photographs to Mr. R. Lydekker, I had the pleasure of receiving the following criticism from that gentleman: 'The two photos,' he wrote, 'which I am very pleased to have, indicate a very good skull of *B. primigenius*. The specimen belongs to the so-called "trochoceros," or curved-horned form, in which the horns are more

¹ *Proc. Ryl. Phys. Soc.*, vol. viii. Part II. pp. 333-338. See also a paper by J. Leitch, M.B., C.M., entitled *Notes on the Geological formation and fossils of the Silloth New Dock*, printed in the Transactions of the Cumberland and Westmorland Association, No. ix. pp. 169-174. Some of the bones are figured by Dr. Leitch.

curved inwards than in the typical form, as exemplified by the skull figured in Owen's *British Fossil Mammals*. You are doubtless aware that *B. primigenius* is now regarded as a variety of *B. taurus*, and that its proper vernacular name is the Auroch.'

Mr. Thorpe assisted me in taking careful measurements of both the Muncaster and Howgill Castle heads. We may compare these together with the dimensions of one of the two skulls found at Silloth, as furnished by Dr. Leitch :

	Muncaster.	Howgill.	Silloth.
	ft. in.	ft. in.	ft. in.
Distance inside between points of cores,	2 6	2 7	2 3
Breadth of forehead between cores,	1 0	0 10 $\frac{1}{2}$	0 10
Circumference of core at base,	1 1 $\frac{1}{2}$	1 3	1 0 $\frac{1}{2}$
Breadth of forehead between orbits,	0 11 $\frac{1}{2}$	0 11 $\frac{1}{4}$...
Length of curve of core,	2 3 $\frac{1}{2}$	2 4 $\frac{1}{2}$...

From the inferiority of the measurements of the head recorded by Dr. Leitch, we may perhaps infer that it belonged to a cow Auroch. Whether the white wild cattle of Thornthwaite were the degenerate descendants of the Auroch, or represented the reversion of some domesticated breed of Oxen to a wild state is of course entirely an open matter. At the present time the latter view is that which appears to find most favour with those best qualified to decide this moot point.

Order *RODENTIA*.Fam. *CASTORIDÆ*.

B E A V E R.

Castor fiber, L.

The only evidence of the former existence of this animal in Lakeland was brought to light by Mr. J. G. Goodchild. The following note includes all the information regarding this important find that he has as yet placed on record: 'A few years back [*i.e.* prior to 1883] the people at the Cross Keys Inn, Cautla, between Ressondale and Sedbergh, had on the mantel-piece of their sitting-room the skull of an adult Beaver. This was obtained from some alluvium in the bottom of the Ressondale valley, near Clouds, and is worth recording as one of the few instances, if not the sole instance, of the former occurrence of this animal in Westmorland.'¹

BIRD BONES FROM THE ROCK FISSURES OF
HELSEFELL, WESTMORLAND.

WE owe to the splendid industry of John Beecham the only avian remains discovered, so far as my present information goes, in the Lake District. They were uniformly obtained from Helsefell. Some of them were placed, undetermined, in the Kendal Museum. Others, including remains of *Buteo*, turned up when I searched Mr. Beecham's private collection. Having obtained the loan of the bones belonging to the Museum through the kind offices of Mr. Joseph Severs, I sent the whole series to Mr. R. Lydekker, who has made the subject of Fossil Birds peculiarly his own. The results of this examination are admittedly small, but they show the desirability of further research in the same direction. The following is Mr. Lydekker's report:—

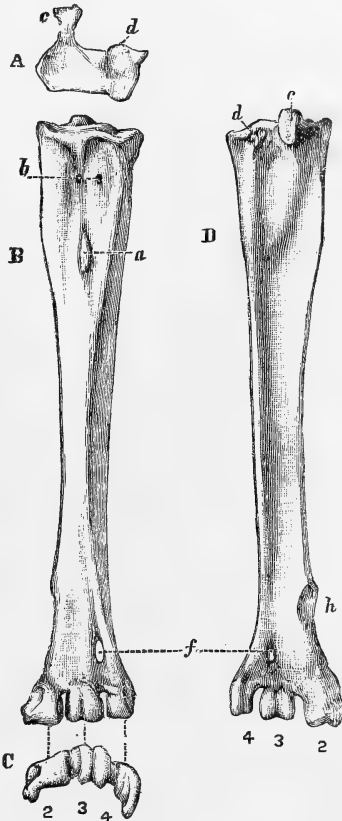
'The bird bones submitted to me from the caves and rock fissures of the Lake District are eleven in number, and belong to four species, viz., seven to a Goose, one to a Fowl, two to a Buzzard, while the eleventh is a radius which I am unable to deter-

¹ *Trans. Cumb. Assoc.*, No. viii. p. 213.

mine. *Buzzard*.—So far as I am aware, the only fossil remains referable to the Buzzard (*Buteo vulgaris*) hitherto recorded from British deposits are three specimens in the British Museum, obtained from Brixham Cave, near

Torquay,¹ in association with remains of extinct mammals. It is, therefore, interesting to find this species represented in the prehistoric fauna of the Lake District. The specimens referable to this species are a tarso-metatarsus and ulna, both of the left side, and probably belonging to a single individual. The former bone, of which four views are given in the accompanying woodcut, may be recognised at a glance as that of an Accipitrine bird. Some of the characteristic Accipitrine features are to be found in the triangular shaft, with its sharp ridge in front and deep groove behind; in the laterally expanded contour of the upper surface, with the two prominent condyles of the talon; and in the nearly even line formed by the three trochleæ at the lower end for the articulation of the toe-bones.

The tarso-metatarsus of the genus *Buteo* is shorter than that of *Circus* (Harrier), and larger than that of *Milvus*



Upper (A), front (B), lower (C), and back (D), views of the left tarso-metatarsus of the Buzzard (*Buteo vulgaris*). *a*. Tubercle for insertion of tibialis anticus; *b*. perforation in the extensor fossa of the digits; *c*. inner condyle of talon; *d*. external do. (broken); *f*. foramen between third and fourth metatarsals; *h*. facet for the hallux.

(Kite). The present specimen agrees in all respects with the corresponding bone of a

¹ See *Cat. Foss. Birds Brit. Mus.* p. 21 (1891).

recent skeleton in the British Museum. The ulna calls for no remark.

‘*Fowl*.—A right tibia belongs to a species of fowl of somewhat larger size than the wild Asiatic *Gallus sonnerati*. Since there is no evidence of the former existence of any wild *Gallus* in England, it appears probable that the specimen belonged to a domesticated race. This bone is peculiar in having a distinct tubercle on the outer side of the bridge over the groove for the exterior tendons, the Gallinæ generally showing no trace of this tubercle, although it is always more or less marked in fowls.

‘*Goose*.—The remains referable to Geese are seven in number, and belong to three immature individuals. Five of them are tibiæ, all of which have lost the epiphysis, and all but the astragalus at the lower end. Two of them are pairs. The other bones are a pair of tarso-metatarsi, belonging to the same birds as one of the pair of tibia. Since the tibia to which the astragalus still remains attached is larger than the corresponding bone of the skeleton of a Grey Lag Goose (*Anser ferus*) in the British Museum, I am disposed to consider that the Kendal bones are referable to a domesticated race.—R. LYDEKKER.’

MR. FRANCIS NICHOLSON, F.Z.S., ON THE
PINE MARTEN.

Martes sylvestris, Nilss.

THE interest attaching to this animal as a native of Lakeland is of such a special character that an apology is hardly needed for inserting here a valuable communication sent to me by Mr. Nicholson. It is only fair to say that Mr. Nicholson's remarks were forwarded to supplement the article upon this species furnished in the body of the work (pp. 17-26).

‘The Marten,’ writes Mr. Nicholson, ‘is found on all the hills round Keswick, and I never pass over certain parts without seeing “Fox Cork” and “Mart Cork.” I have been in at the death of several Marts. A few years ago a lad caught two

Marts alive within a few days of one another in Newlands, one of which I sent up to the Zoological Gardens. A relative caught one a year or two ago in the woods above Little Crosthwaite, near Bassenthwaite Lake, on one of the hills of the Skiddaw range. The Marten, though very fond of Rabbits, is much more varied in its food than the Polecat, for if you pull the "corks" or dried excrement to pieces, you will find remains of mice and birds quite as often as rabbit fur. The country Martens' follow is more away from the game-preserving country than the haunts of the Polecat, and that perhaps is why they have held their own better than the Polecat, which frequents the neighbourhood of Rabbits and of hen roosts.' The remainder of Mr. Nicholson's remarks are included in the following article, which he communicated independently to the *Manchester Guardian* of March 20, 1884:—

'It is evident that the Pine Marten is imagined to be of greater rarity than is actually the case, for, although nowhere numerous as a species, it is found in small numbers in suitable localities over most of the north of England, but more particularly in the Lake District. The Sweet Mart, as it is called in contradistinction to the Foulmart (foulmart) or Polecat, is a great wanderer, often turning up in localities where it was supposed to be extinct, and found again after a long interval frequenting the same spot as in former times. Severe winters may no doubt have some influence on their movements in causing them to wander and extend the area of their hunting-grounds, and also the abundance or scarcity of food. It occurs occasionally in the mountainous parts of Northumberland, Durham, Westmoreland, and the Furness district of North Lancashire; but in Cumberland, where it is most numerous, it is hunted with fox-hounds, and a few are killed every winter. They make a capital hunt, and hounds are very keen when on their scent. They usually make at once for the rocks and crevices, going at a great pace at first, but are soon run into unless they succeed in reaching some hole in a crag where hounds and huntsmen cannot follow. They fight desperately with both claws and teeth. When before hounds on level and snow-clad ground they proceed with a succession of astonishing long leaps, often six or seven feet

apart. They do not usually come down to the woody parts of the country except for breeding purposes, but the greater part of the year they follow the screes and higher fell ground. Though they generally come down to the woods in the valleys in April and May to have their young ones, selecting some old magpie's nest or squirrel's dray for a home, still they sometimes breed in the rocks near the tops of the highest hills. It is only at such times that the Marten is easily trapped, for unlike the Polecat, it does not approach a given spot by one track. They do not seem so suspicious of traps as some wild animals, or as the Polecat. If you find traces of or see the latter about a building, you will most likely find a run near which it frequents, and a trap has only to be set, and it will be taken; not so with the Marten Cat, as it is only by accident that it is captured in this manner, and they never approach buildings. The cause of the sudden decrease of the Marten in some localities is principally owing to their unsuspectingness of a baited trap. They are very fond of Rabbits, and where these are numerous, and are systematically trapped, if there are any Martens about they are almost certain to get accidentally into the rabbit traps. It is said they are not so common as formerly, but the writer does not think their numbers are much lessened during the last twenty years in the Lake District. In other parts of England they occasionally occur, but as woods disappear so does the Marten. In large woodlands, which are unpreserved for game and not much disturbed, they may roam at will without their presence being suspected, which accounts for their having been taken many times during the last few years in Lincolnshire and Norfolk; and in December 1872 one was shot in Hertfordshire, within twenty miles of London. They still maintain their ground in the wilder districts of North Wales, Ireland, and Scotland. There is still a divided opinion amongst zoologists as to whether there is really a specific difference between the so-called Pine Marten and Beech Marten, or whether they are only different forms of the same species or races. The present writer has seen specimens from various localities in the British Isles, and all, without any exception, were Pine Martens (the yellow-breasted variety), and not one the Beech Marten (the white-

breasted variety). The Beech Marten may probably be entitled to be considered a distinct species, on account of the difference in breadth of skull and the shape of the upper molar; yet it should not be included in the British fauna until an authentic British specimen has been produced. The Beech Marten seems to be a more southern species than its congener, for it does not appear to go farther north than Denmark and the Baltic provinces on the Continent, and is not a native of Sweden.'

THE DESTRUCTION OF WILD ANIMALS.

Mole. FEW things are more interesting than to work out and register the vicissitudes experienced by the mammals of a faunal area. Certain species seem to be almost proof against any amount of persecution. The Mole, for example, has defied centuries of persecution at the hands of Lakeland agriculturists. The Rev. A. Warren tells me that when he was instituted to the living of Bondgate, Appleby, in 1880, the parochial mole-catcher claimed as his perquisite a sum of seven shillings for trapping Moles on the Glebe lands; alleging that his father and *his* father before him, had constantly enjoyed the prescriptive right of trapping Moles for the vicar of the parish. Similarly, I find entries in the Martindale books of payments for Mole-catching. In the accounts of this parish for 1854-55, an entry stands: 'Mole sess. 2s. 0d.' The *special* fee of one shilling has often been exacted for trapping some sacrilegious Mole which had commenced to tunnel in a churchyard. Thus, an entry stands in the payments of the Martindale churchwardens for the year 1826-27, 'Paid for catching a Mole, 1s.' The Rev. T. Hodson, vicar of the adjoining parish of Barton, assures me that on one or two recent occasions he has paid the customary fee of a shilling for the life of a Mole, trapped in his churchyard.

Wild Cat. The Wild Cat appears to have become scarce in Lakeland long before the Badger had begun to lose its footing among us. At all events, records of the Wild Cat are difficult to find in Lakeland registers, a fact which strengthens my belief that this fine animal had been driven to seek refuge from its persecutors among the clefts and hiding-places of the rocks as early as the closing years of the seventeenth century. That it continued to

maintain a precarious footing among our scars and precipices for the greater part of the last century cannot be doubted. The last mention of this species in the Kendal parish books occurs in 1727: 'pd. Jonathan Newton for a Wild Cat £00, 00s. 04d.' But this does not prove that the species was on the eve of extinction. The churchwardens of Kendal decided in 1729 to withdraw the rewards previously offered for the heads of Wild Cats and some other animals. That the old race of *Felis catus* still lingered on our hills is placed beyond the reach of all cavilling, by the discovery of entries chronicling the decease of no fewer than *forty-eight* Wild Cats, in the parish book of Barton, Westmorland. Some few of these entries refer to Barton, which embraces a large extent of hill pasture; but the majority apply to the Chapelry of Martindale. These records run from 1706 to 1755, and we learn from them that though a 'kill' of a Wild Cat did not occur every year, even in this remote and inaccessible region, yet every few years such an event actually took place, while in one year no fewer than five Wild Cats perished, all possibly belonging to the same family. The interest attaching to the former residence of the Wild Cat in the north of England is accentuated by the comparative scarcity of reliable data. Hence the desirability of printing in full such data as are here printed, for the first time, from the accounts of Barton parish and its quondam chapelry of Martindale:—

1706.	Martindale.	'ffor a wild Catt,	£0	1	0'
1710.	Martindale.	'To Mich. Tyson and Tho. Cookson for killing of two wild Cats and a badger,	0	3	0'
		'Isaac Wright for killing a Wild Catt and a young raven,	0	1	2'
1711.	Martindale.	'ffor two Wild Catts,	0	2	0'
1712.	Martindale.	'To Thomas Cookson for a wild Cat,	0	1	0'
	Barton.	'To Edward Sisson for a Wild Catt,	0	1	0'
1713.	Martindale.	'One Wild Catt kild by Mich. Tyson,	0	1	0'

1714.	Martindale.	'For wild Cats by tho. Cookson,	£0	2	0'
1715.	Martindale.	'To him [Mychall Tyson] for a wild Catt,	0	1	0'
	Barton.	'To Edw. Sisson for killing two foxes and a wild catt,	0	7	8'
1720.	Martindale.	'the same [Michall Tyson] for a wild Catt,	0	1	0'
	Barton.	'To Josiah Smith for killing a wild catt,	0	1	0'
1721.	Martindale.	'the same [Michall Tyson] for two wild Catts,	0	2	0'
1722.	Martindale.	'a wild Catt killing,	0	1	0'
1724.	Barton.	'To Josiah Smith for killing a wild cat,	0	1	0'
1725.	Martindale.	'tow wilde Catts,	0	2	0'
1726.	Martindale.	'5 wild cats killing,	0	5	0'
1727.	Martindale.	'two wild katts killing,	0	2	0'
1728.	Martindale.	'One Wild Cat,	00	01	00'
	Barton.	'One Wild Cat killing,	00	01	00'
1729.	Martindale.	'2 wild cats,	0	2	0'
1730.	Martindale.	'3 wild Cats,	0	3	0'
	Barton.	'One Wild Cat killing,	0	1	0'
1732.	Martindale.	'2 wild cates,	0	2	0'
1733.	Martindale.	'2 wild Cats,	0	2	0'
1736.	Martindale.	'2 wild cats,	0	2	0'
1739.	Martindale.	'1 Wild cat,	0	1	0'
	Barton.	'George Mason for 1 wilde cat,	0	1	0'
		'William Sisson for 1 wilde cat,	0	1	0'
1754.	Barton.	'for a wild Cat,	0	1	0'
1755.	Barton.	'John Bewsher for wild Catt,	0	1	0'

It must be borne in mind, *apropos* of the last entry, that no accounts are at present forthcoming for Martindale between 1742 and the present century.

Fox.

Some animals appear to be proof against any amount of persecution, and none more notably so than the Fox. Almost every parish in Lakeland has at one time or another paid head-

money for Foxes, chiefly during the seventeenth and eighteenth centuries. Packs of fox-hounds were maintained in our midst at a much earlier period of history. For example, the Pipe-Rolls of the third year of King John supply the following entry:—

‘Riç fit Truite redd comp̃ de j. ñ. p. hñd Canibus ad leporē 7 uulpē. In thro libaut. Et Quiet’ est.’

‘Translation—

‘Richard the son of Truite returns account for one mark paid for dogs for hunting hares and foxes. He has paid it into the Treasury. He is quit.’

During the earlier years of the present century the parish of Martindale owned a pack of hounds, or at all events contributed to their keep. Thus in the year 1826-27 we have an entry in the churchwardens’ accounts: ‘Three stone of meal for dogs, 8s. 2d.’ In the year 1827-28 we have an entry: ‘To feeding Hounds, 4s. 0d.’ It is repeated in the year 1830-31: ‘To Rd. Mounsey feeding Hounds, 9s. 0d.’ In the year 1834-35 we read: ‘To Fox Heads and Keeping Dogs, 11s. 8d.’ The year 1835-36 furnishes another entry: ‘To Wm. Greenhow fetching Hounds, 1s. 6d.’ The accounts paid on October 19, 1837, include: ‘To Wm. Jackson for feeding Hounds, 8s. 9d.’ The price of the meal required for the pack is named in the year 1824-25: ‘To Dog Meal, 6 st. at 2/2—13s. 0d.’ In some cases keepers killed Foxes to save their Hares; yet this vulpicide was gravely charged for. The Greystoke books supply two entries of the kind. Thus in 1767: ‘Aug. 15. To the Game Keeper at Graystock Castle for 3 Fox Heads and 2 Cubs, £00, 10s. 0d.’ Again in 1780: ‘April 23rd. To Richard Holme, gamekeeper, for a ffox head, 3s. 4d.’ But it was the enterprise of private individuals, coupled with their love of sport, that supplied most of the parish wiseacres with Fox heads. The reward was sometimes disputed by the churchwardens. The Rev. J. Wilson informs me that the order-book of the Rolls of Quarter Sessions, held at Carlisle in July 1704, furnishes a decision on the liability of the wardens to pay such rewards: ‘Upon the peticon of Thomas Watt setting forth that he had killed fowerteen foxes, and ought to have fowerteen shillings for soe doeing, and praying to have the same paid him.

—It is ordered by this Court that ye Churchwardens and overseers of ye poore of ye pish of Brampton doe forthwith pay unto the said Thomas Watt the sume of fowerteen shillings for killing ye sd foxes according to Law.' The duty of disbursing the reward for a Fox head occasionally fell on unlikely individuals. Thus it happened in the year 1779, in Patterdale, that Thos. Holme, constable, paid the following bill to Thos. Dawson: 'Scholars ale, 1s. 6d. Two Foxes and 3 Cubs, 9s. 8d. To one Fox and one Cub, 4s. 4d.' But oftenest of all the payment was claimed by one or other of the huntsmen. Such was the case in Martindale in 1713, when the clerk entered: 'Two ffoxes kild by Mich. Tyson and his fellowes, £0, 6s. 8d.' The quaintest entry in the Martindale books occurs in a bill settled by John Jackson the 'chaplewarden,' Aug. 23, 1818: '6½ Fox Heads at 3s. 4d. each, £1, 1s. 8d.' It seems possible that the 'half' of a Fox may have been a cub. The men of Bondgate, Appleby, were at one time devoted to hunting Foxes, and killed many on Murton Pike, at Dufton, and elsewhere in the neighbourhood. They had a weakness, too, for killing cubs, but never entered them as the 'halves' of Foxes. It is written that on the 20th of April 1734 the wardene paid: 'for 6 foxes, 5 whereof was cubs, £0, 3s. 6d.' In April 1737 they paid: 'for 4 foxes and one cub, £0, 4s. 6d.' They acted similarly in 1739: 'for 2 foxes, 1 old one, 1s.—a young one (total) £0, 1s. 6d.' In 1757 they paid for 'Four Fox Heads, 1 Old one and 3 cubs, £0, 1s. 6d.' In 1758 they paid for nine Foxes: 'Fox Heads, viz., 5 old ones and 4 cubs, £0, 11s. 6d.'

According to present information, the practice of paying head-money for Foxes seems to have become obsolete about the same time in both Cumberland and Westmorland. I have shown (at p. 14) that the claim for a reward for killing a Fox was finally disallowed by the Greystoke vestry in 1856, just thirty-six years ago. The wild parish of Asby in Westmorland supplies a rather later date of payment. An analysis of the accounts of Asby proves that the total number of Foxes paid for in that parish during half a century, from 1814 to 1864, amounted to a total of fourteen, at the cost of £1, 13s. 6d. The following are the last entries of vulpicide for which the Asby churchwardens

were responsible: 1863. 'Fox head, 2s. 6d.' 1864. 'Ralph Johnson, fox head, 2s. 6d. James Sowerby, fox head, 2s. 6d.'

The Pine Marten, unlike the Fox, has always been a local animal in Lakeland too sparsely represented, even in its most favoured haunts, to be the object of a uniform persecution. Very few parishes return any records of the destruction of Marts; only in fact those of Martindale, Patterdale, Greystoke, and Kendal, according to the information at present available. In Patterdale there are only two entries; or rather, one entry occurs both in 1779 and 1780: 'To two Marts, 2s,' showing that a shilling was the sum then paid for a Pine Marten in that parish. In Kendal parish the head-money offered for this animal was originally fourpence, as the following entries exemplify:—

1684. 'Sept. 6. Paid to churchw. of Helsington for 2 Clean Marts,	£0 0 8'
1685. 'April 21. pd. to ye Churchw. of Longdale [=Longsleddall] 1 brock and 2 Clean Marts and 1 Catt on foule mart,	0 1 8'
'Oct. 20. To ye churchwarden of Longs- leddall for 2 ffox heads and 1 clean mart,	0 2 4'
1687. 'March 29. Pd. to ye churchwarden of Sleddall for one Brockhead and 2 Clean Marts,	0 1 2'
'June 29. Pd. to William Postlethwaite for one Clean Mart,	0 0 4'
'Oct. 18th. Payd to Daniel Best of Strick- landgate for 5 foule marts and 1 Clean Marte,	0 1 2'
1688. 'April 17. pd. to ye Churchwarden of Underbarrow for one Clean Marte,	0 0 4'
'April 17. pd. to ye Churchwarden of Sleddall for 2 Clean Marts,	0 0 8'
'April 17. pd. to William Postlethwaite for 1 Clean marte,	0 0 4'

In point of fact the total number of Martens killed in the far-reaching parish of Kendal in the decade most favourable to their destruction, viz., 1679-1688, only reached a total of

seventeen slain. The price paid for Mart heads had reached a shilling at Kendal in 1794, our latest record for this parish. The accounts of Martindale, kept during the first fifty years of the present century, inform us that half-a-crown was the price set upon the head of this outlawed animal by the local wise-acres, but it was rarely demanded. In the year 1822-23 we find entered: '2 Foxes and 2 Marts, £1, 0s. 0d.' In 1823-24 there is a similar note: 'Three Marts, 7s. 6d.' We read in 1824-25: 'To 9 Foxes and one Mart, £2, 7s. 6d.' In 1837 we have another instance of the two species being lumped together: 'To Mr. Thomson a fox head and a Mart, 7s. 6d.' But the best point in these fragmentary accounts must be admitted to be the reappearance of the old term '*Marterne*,' employed by John Manwood as early as 1598. This has unexpectedly come to light in the Martindale accounts for the year 1825-26: 'Two Martern, 5s. 0d.'

Foulmart.

Rewards of payments for the heads of Foulmarts or Polecats were paid by the parish of St. Lawrence, Appleby, but especially by Kendal parish. I can find no returns of Foulmarts in the accounts of Bondgate, Appleby, nor in those of Crosthwaite, Keswick. They are absent from the books of Greystoke, Dacre, Barton, Shap, Orton, Hawkshead, Penrith, Martindale, Asby. These ranked formerly among the largest and wildest parishes in Lakeland. No accounts are available for the remote parishes of Alston and Bewcastle, which might have been expected to yield valuable returns. The accounts of St. Lawrence, Appleby, commence in 1765, and, like the Kendal entries, are slightly exasperating by reason of the frequency with which the payments for different animals are lumped together under the titles of 'Vermens,' 'Verment Heads as per bill,' or 'Verment Heads Bill.' The first entry of 1765 mentions the present species: 'Jos. Bewsher, 2 Raven heads, 1 Foulmart, £0, 0s. 8d. Jno. Foster, 1 Foulmart, £0, 0s. 4d.' One of the last entries is for 1830, and runs: 'for two foulmart heads, £0, 0s. 8d.' The species paid in the interval between 1765 and 1830 are Ravens, Foxes, Badgers, and Foulmarts. The reward of fourpence never varied. Thus we read in 1811: '4 fox Heads, £1, 0s. 0d.; 8 foomt do., £0, 2s. 8d.' The largest sum paid for vermin in this parish was £2, 5s. 11d.,

expended in 1770. The figures even of Foulmarts are very scanty, and yield absolutely no figures that can bear comparison with those of Kendal. The only quaint feature they reveal is this, that the townsmen of Appleby sometimes sent a maid-servant to claim a payment of fourpence for a Foulmart's head at the Easter vestry meeting. Thus we read in 1766: 'Mr. Chris. Harreson's maid, 1 foulmart, £0, 0s. 4d. Thos. Marton, Taylor (=taylor)'s servant, 1 ditto, £0, 0s. 4d.' In Kendal parish four books of accounts have been preserved. The first of these runs from 1658 to 1687. The second book runs from 1688 to 1732. The third book covers the period between 1733 and 1776. The fourth book continues the story down to the year 1849. The formal decisions of the parochial representatives to exterminate the *feræ naturæ* of their district, are stated in successive judgments. The first was passed on January 19, 1679: 'We doe likewise order that touching Virmin-heads, such prices shall be paid by the churchwardens as is hereafter p'ticularly limited and sett downe, viz^t. a fox head, 12d.; a brocke, 6d.; an otter, 6d.; a clean mart, 4d.; a foul-mart, 2d.; a wild-catt, 4d.; a raven, 2d. (if come to flying); provided alway that no such Virmin-heads shall come, but shall be presented by the churchwarden or churchwardens of every respective Hamlett wthin the said p^rish of Kendal, and that upon p^remptory days only and every y^r said Virmin-heads to be brought in the first peremptory day next after such Virmin-heads be killed, and alsoe to be brought in wth the haire or downe on. And euery churchwarden soe p^resenting these heads in maner and according to conditions aboue mentioned shall receiue for such head or heads according to y^r p^rticular rates or prices abouesaid, to be paid to the p^rty who kild any such head or heads, and the said heads to be brused and carryed to the Kent side and thrown into middle of the water.' This order held good for forty years; but on June ye 29th, 1718, it was 'ordered then by the Generall consent of the Churchwardens at their publick meeting in Kendall Church that hereafter nothing be paid for any virmin-heads except for Foxes and Ravens, which are to be continued as formerly, viz., for every Fox Head brought in upon any Peremptory Day, one Shilling; and every Raven Head, two

pence.' This edict was not strictly acted upon. For example, twenty-four Foulmarts were paid for in the year 1725-26. But the active reformers passed a fresh regulation, this time proscribing the Otter as an outlaw, to which fact we owe the circumstance that seventy-five Otters were killed between 1733 and 1742, both years inclusive. The following was the text of the new order: 'Dec. 27th, 1729. Ordered there by ye general consent of ye Church Wardens at their Publick Meeting in Kendall Parish Church, That Hereafter nothing be paid for any virmin Heads Except for Foxes, Otters, and Ravens, viz.: for every Fox head, 5s.; Cubb, 2s. 6d.; Otter head, 1s.; Raven, 2d.' This decision appears to have held good for many years. A new generation at length sprang up, and the ancient custom of paying for Foulmarts revived in 1774. The disbursements for the year 1794 furnish the last and most remarkable details of a general slaughter of the wild animals that haunted the hills round Kendal. On this occasion the return of the slain included four Foxes, eight Ravens, four Pine Martens, and the extraordinary number of one hundred and seventy-three Foulmarts. While the price for Martens had risen from fourpence to a shilling, Foulmarts were still valued at twopence each.

The Badger.

Under the title of 'Brock,'¹ this interesting but ill-used animal figures in the lists of the victims of our hill-men with tolerable frequency, though the Kendal tale of slaughter is at present unsurpassed. There are certain holes on Orton Scar known as 'Pate holes.' The elder Gough offered the comment a century ago, that 'Pate' was an obsolete name for the Badger. After searching many folios of parish accounts, often difficult to decipher, I have at last discovered this name in one of the books of Penrith parish. It occurs as far back as the year 1658: 'payed for Killinge a ffox £00, 02s, 06d. payed for killinge of two *paytes*, £00, 02s. 00d.' The irony of fate compels me to withdraw an unlucky remark, made on p. 42, that 1741

¹ Professor Skeat derives 'Brock' from the Celtic *broch*, which is identical with the Gaelic *Broc*. He adds: 'It is most probable, as Mr. Wedgwood suggests, that the animal was named from his white-streaked face; just as a trout is, in Gaelic, called "*breac*," i.e. spotted' (*Dictionary of the English Language*, p. 78).

is the first date at which I have found the name of 'Badger' applied to *Meles taxus* in Lakeland.¹ It appears to have been first recognised locally towards the close of the seventeenth century. The Dacre parish book contains an entry, 'To Lancelot Holme of Penerath [Penrith] for Killing of a badger, £00, 00s. 06d.' This payment was registered in 1690. Seven years later, in 1697, the Penrith wardens made an entry of their own: 'To John Salkeld for a Badger Head, £0, 0s. 6d.' The Barton parish book includes an entry made for the Chepelry of Martindale in 1706: 'To Mich. Tyson and Tho. Cookson for killing of two wild Cats and a badger, £0, 3s. 0d.' In 1715 an entry occurs in the Barton parish book: 'To Lord Lonsdale's Huntsman for a badgher, £0, 1s. 0d.' In the Dacre parish the word 'Brock' continued to be used in preference to the term 'Badger' for the first few years of the eighteenth century, a remark that is equally true of Barton; but the modern term soon supplanted the older synonym. The records of Badgers butchered in Dacre parish between 1685 and 1750, a period of sixty-five years, yields a total mortality of thirty-six individuals. This includes an entry for the year 1736, in which the chronicler records the death of ten of these harmless creatures in a single year. Perhaps the saddest feature of this exterminating policy lies in the fact that no mercy was shown even to the tender young. Among the disbursements of the churchwardens of Dacre for 1694 you may read this shameful entry: 'Imprimis for 6 Brock heads 4 old and 2 young, £00, 05s. 00d.' The Barton book is equally guilty in asserting the slaughter of such innocents. In 1731 it records, 'One old Badger, £00, 01s. 00d., 3 young Badgers £00, 01s. 00d.' The same thing recurs in 1732: '3 ould Badgers, £00, 03s. 00d., 2 young Badgers, £00, 00s. 08d.' Truly a '*pittisome*' affair this!

¹ Professor Skeat says that in Middle English [1200-1460] 'this animal had three familiar names, viz., the *brock*, the *gray*, and the *bawson*, but does not seem to have been generally called the *badger*' (*Dictionary of the English Language*, p. 47). He adds that the name is a sort of nickname derived from the Middle English *badger* or *bager* = 'a dealer in corn.' This fanciful origin is verified by the fact that the French equivalent '*blaireau*' is derived from the French *blé*, corn.

VARIATION OF COLOUR IN ANIMALS.

POPULAR opinion has long attached an artificial value to the occasional appearance of individual birds or beasts presenting such a marked variation of colour, or negation of colour, as to justify criticism. Instances of leucotism occurring among our Mammalia are tolerably numerous. Moles perhaps exhibit white and buff phases more frequently than any other Lakeland Mammals. Ben Batey, a border mole-trapper, tells me that 'a breed' of white Moles has existed in a certain field near Barron Wood ever since he can remember. The only white Bat that is known to have occurred in Lakeland frequented the 'Nunnery;' this was probably a Pipistrelle. No white Otters or Badgers have ever been killed in Lakeland. Such 'white' Foxes as I have traced out were merely light-coloured examples. Leucotism is fairly common among the Rodents. The *Carlisle Patriot* of August 13, 1839 refers to a 'beautiful White Hare,' which had 'for some time been seen in the park in front of Lowther Castle.' This animal was unfortunately killed with a scythe. Its deficiency of pigment recurred in one of its descendants. The *Carlisle Patriot* of July 15, 1842 mentions that a second white Hare had appeared at Lowther: 'It is a fine full-grown Leveret and perfectly white.' Nor are pied Hares entirely unheard of. In November 1884 a prettily-pied Leveret was killed in East Cumberland. It was a red Hare, but the forehead, muzzle, the sides of the head, the two forepaws and one hindpaw were all pure white. Of the smaller Mammals, it may suffice to say a piebald race of Short-tailed Voles frequented a field near Carlisle within the memory of Mr. William Duckworth. I have seen very similar examples, stated to have been taken in Northumberland. White Weasels

have been killed near Keswick on one or two occasions. Mr. J. W. Harris secured such a specimen from that district. Melanism is comparatively rare among British Mammals. In September 1884 Mr. Tom Duckworth observed a 'black' Squirrel near Rose Castle, which in many parts of the Continent would have been considered no uncommon event. Mr. J. Cairns assures me that Major Irwin's keeper recently killed a black variety of the Weasel at Lynehow. Unfortunately it was not preserved. A poacher from the west of Cumberland volunteered that he had once seen a black Leveret, and that the animal in question changed hands in Cockermouth market. Black Rabbits frequently do duty as examples of melanism. Such specimens have occurred to me in localities very dissimilar to one another, *e.g.* on Walney Island, and on the top of Whitbarrow. On the whole, perhaps the most reasonable interest attaches to the various types of colour exhibited by the Fallow Deer of our private parks. Allusion has been made (at p. 71) to the occasional occurrence of milk-white Fawns at Levens. Three such animals have been produced there in the last ten years. That at present tenanting the park is a Doe, bred from a dark Doe. The difference between the white Fallow Deer occasionally dropped at Levens, and somewhat similar individuals bred at Edenhall, lies in the fact that the white Fallow Deer at Edenhall are cinnamon in colour when first born, but become white gradually during the first four or five years of their existence. The same remark would probably apply to the white Fallow Deer which belong to Mr. Banks of Highmoor, Wigton. On the other hand, the milk-white Deer of Levens are constantly of the same shade of colour during their entire existence. Though the dark form has long been preserved at Lakeland (see p. 71), *this* variety did *not* compose the original stock of the Levens Deer, as is generally supposed. At least Mr. T. W. Holme of Sedwick stated, upwards of thirty years ago: 'There are two kinds of Fallow Deer in Levens Park; what they style their old or *original* stock are the Spotted Deer. There are now but very few of these left in the park; the greater number being the brown [*i.e.* "black"] Deer.'¹ The greatest amount of individual

¹ *Kendal Advertiser*, December 25, 1863.

variation in the colour of our Lakeland Fallow Deer is to be seen in Mr. Bank's park at Wigton, probably due to the herd having been made up by draughts of other herds procured from different parts of England. The Fallow Deer kept at Muncaster are chiefly of a light sandy type, with black tail and conspicuously white hind quarters. Those kept at Dallam Tower are most conspicuously spotted.

Birds.

With regard to white and pied varieties of birds, those enumerated in the *Birds of Cumberland* would cover most of the abnormalities procured in Lakeland, since these tend to recur again and again. Among certain species leucotism is almost to be termed common: the House Sparrow, Starling, and Rook are instances. Genuine albinism on the other hand is extremely uncommon. Last year Mr. H. E. Rawson found two White Willow Wrens in a nest in his garden at Windermere. These were true albinos, with eyes 'like rubies.' Similarly, Mr. C. W. Smith has written to inform me that, a few years since, he took two albino House Sparrows from a nest in a haystack and reared them. The interest commonly attached to white examples of the Raven dates from classical times. Johannes Caius supplies the first mention of white Ravens in Lakeland: 'Anno domini, 1548, Augusto mense, corvos duos candidos ex eodem nido vidi et contrectavi istic in Cumbria nostræ Britanniae, apud ejusdem provinciae comitem natives, atque ita ad aucupium factos ut accipitres. Nam et brachio falconarii quiete insidere, et soluti ad ejus vocem atque signum vel e longinquo quam celerrime advolare docti errant.'¹ Sandford's record of a white Raven at Ravenglass may be compared with the foregoing, as well as John Evelyn's remark on the white Raven—'bred in Cumberland'—which he saw in London.² White game birds have often been noticed. The Red Grouse is occasionally much pied or variegated. A female bird which Leslie received from Alston was shown to me on October 13, 1888. Two of the primaries in each wing were pure white, as was the right side of the breast. The underwing coverts were chiefly white. The *Carlisle Patriot* of August 27, 1858 furnishes the following

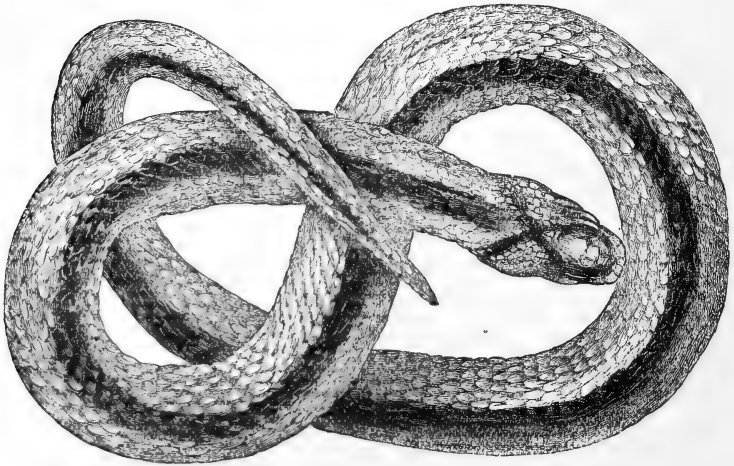
¹ *De rariorum animalium et avium stirpibus.*

² Cf. *Birds of Cumberland*, p. 60.

note: 'A fine specimen of the white grouse was shot on Monday by Mr. John Hasell of Dalemain. It has been sent to Mr. Hope of Penrith to be stuffed.' Cooper, the head keeper on Lord Hothfield's Appleby estate, assures me that the brace of nearly white Grouse, mottled with brown, recorded (*P. Z. S.*, 1884, p. 45) as shot on his master's ground in 1883, in his opinion bore in flight a considerable resemblance to Ptarmigan. A bird considered at the time to be a Ptarmigan, and perhaps the last of the race, was shot on Roman Fell early in the present century by an ancestor of my friend the Rev. J. Wharton. It is possible that this was a similar variety of the Red Grouse to that last named. Partridges with white horse shoes are far from uncommon in Lakeland. The 'blue' Partridge, with pale buff head, is rarer than the last, but I have examined local examples from both the north and the centre of Lakeland. The gamekeeper at Levens possesses a curious Black Cock. The tail feathers and the tips of the wings are speckled with white, so distributed as to suggest that the bird had been powdered with flour. The Waders are generally true to the colour of the species that they represent, but the Lapwing has a tendency to develop pied flight feathers. Mr. Richard Mann kindly gave me a prettily-pied Peewit, which had been picked up dead in one of the fields near Allonby. The head unfortunately was useless. A pretty variety of the Woodcock, which Dr. Heysham obtained on October 8, 1786, was of 'a fine ash colour, with frequent bars of very delicate rufous.' A loose note of his son records that a cream-coloured Common Snipe was shot near Carlisle in the autumn of 1847, and stuffed for Mr. Losh of Woodside. A very pretty bird which exhibited the usual markings of this species on a sandy ground, was shot near Stapleton, November 7, 1888. Cooper, the obliging and observant head keeper at Appleby, assured me that a white Jack Snipe was repeatedly seen on a moor in that neighbourhood in the early winter of 1890. He tried hard to secure it for his master, but it managed to escape destruction. I once bought a Snipe in Carlisle market, which was quite as dark as some of the reputed examples of the variety known as Sabine's Snipe, though not a typical specimen of that rare form.

Reptiles.

The only local reptile that seems to show a tendency in the direction of variation is the Common Viper. Most of the Lakeland Vipers are grey or brown in ground colour, regardless of their sex. The only instance at present known to me of the capture of a 'red' individual within our limits, relates to a Viper which Joseph Boadle presented to the Whitehaven Museum. 'Instead of being grey and black, it is a dull ferruginous red, and the zigzag markings are a dark mahogany colour.'¹ This animal had been caught near Rig House, Dean, West Cumberland. The late Mr. Kirkby of Ulverston once met with the very remarkable Viper here figured. He showed



VARIETY OF THE COMMON VIPER.

it to me a short time before his death. It was taken with his own hands in the neighbourhood of Ulverston, where he lived so long. It was unique to his experience. The ground colour of this snake is uniformly olive grey. The curious feature is that the usual zigzag dorsal pattern is entirely absent, and has been replaced by the even, ribbon-like black band depicted in the woodcut, which has been drawn from a photograph of the specimen.

¹ *Whitehaven Times*, December 3, 1874.

HYBRID BIRDS.

HYBRIDISATION among birds has not hitherto received much attention from British ornithologists. This may, perhaps, be accounted for by the fact that cross-breeding is extremely rare among wild birds. The females of any given species will often ostensibly make up a love-match with males of another species in confinement, but they seldom permit such males to perform the functions of generation even under strictly artificial conditions, and if at all, generally in response to the challenge of males of their own kind. It is obvious that if birds are reluctant to accept strange mates in captivity, they are still less likely to choose unnatural loves in a state of freedom. Nor should it be forgotten that the eggs of birds of different species mated together usually prove sterile, while cross-bred young are well known to be extremely delicate during their earlier stages of development. There is one story of a Blackbird and Song Thrush having paired and reared hybrid young, that specially relates to Lakeland; but, in the absence of evidence to show that the female bird was properly identified, it does not seem desirable to cite it here. That the Goldfinch, Linnet, and Greenfinch are, all of them, given to occasional cross matches in a wild state, no one can dispute. Two male hybrids between the Goldfinch and Linnet were caught near Carlisle in November 1885, not, indeed, together, but only about twelve miles apart. One of them lived for several years in the possession of the late James Fell, on whose death his widow sold it to a bird-fancier. The other was purchased from the birdcatcher by John Addison of Denton Holme, Carlisle. He gave £1 for it, and won some prizes by its exhibition before he parted with it. They both sang lustily.

Mr. D. L. Thorpe lately acquired a hybrid between the Goldfinch and Greenfinch, caught near Carlisle in the autumn of 1891. This wears the usual plumage of such female hybrids, and tried to build a nest in the spring of 1892. A much rarer hybrid than any of those mentioned hitherto is that resulting from the union of a male House Sparrow and a female Tree Sparrow. On two different occasions I have myself seen wild birds which presented all the appearance of having been bred from a male Tree Sparrow and female House Sparrow. In coloration they closely corresponded with a Sparrow which was living in an aviary at Norwich in August 1887. Its owner, Mr. Otty, assured me that it had been reared in his aviary from the union of a male Tree Sparrow and a female House Sparrow, a statement which its plumage fully indorsed. This bird, a male, had the crown red; occiput tinged with lead grey; cheeks greyish white, centred with dusky black. The black gorget was more extended than is usual in the Tree Sparrow.¹ In general coloration this bird bore most resemblance to the Tree Sparrow, while in size and shape it agreed closely with the House Sparrow. Its back appeared to be of the same colour as that of the House Sparrow. Its actions were much clumsier than those of a Tree Sparrow. These remarks may appear somewhat irrelevant here, but they have been introduced that the reader may be the better able to judge of a male hybrid between the House Sparrow and the female Tree Sparrow. During the summer of 1891 a cock House Sparrow mated with a hen Tree Sparrow at Aiglegill, where the two species frequently meet in the farmyard. They built a nest, but were disturbed and left. Presumably they bred somewhere in the neighbourhood. At all events a male hybrid Sparrow appeared at Aiglegill early in the spring of 1892. It was closely observed by Mr. R. Mann, with whom I had often discussed the question of such hybrids. In its actions it appeared to be a Tree Sparrow. After a few days of observation the bird was shot, and shown to me. After carefully comparing the specimen with examples of the House and Tree Sparrow, I felt it quite impossible to resist the force

¹ I took down a rough description of this bird as it flew about the aviary, but had not the advantage of holding it in my hand.

of Mr. Richard Mann's opinion that it was a male hybrid between the cock House Sparrow and female Tree Sparrow, a view in which Mr. Johnson and Mr. Thorpe concurred. Knowing by experience how readily my friends in Lakeland accept my opinion on avian questions as final, I judged it best to secure an outside criticism, and therefore despatched 'Phillip Sparrow' to my old friend Mr. O. V. Aplin, whom I knew shared my own strong interest in the hybridity of birds. Mr. Aplin replied on the 24th of May 1892: 'The hybrid Sparrow arrived safely. I have compared it with a series of skins of both species, and have made the following notes upon it. The beak is that of *P. domesticus*, but is a little smaller. Head intermediate in shape, and of the size of that of *P. montanus*. Whole size rather shorter than that of *P. domesticus*. Markings of head of the *pattern* of *P. domesticus*, but quite distinct in colour, and quite peculiar to itself. Nape strangely grey, mixed across the narrow part with tan. Whole upper parts curiously cold in tint; unlike either species in this respect. The mantle most nearly resembles that of *P. montanus*, lower back and upper tail coverts even greyer than *P. domesticus*, which in turn is greyer there than in *P. montanus*. As to the wings, the brown edging of the hybrid's quills is paler and colder than either. Small coverts have the large amount of white seen in *P. domesticus*, and want the exposed black seen in *P. montanus*. The greater coverts want the white tips which make a second white line across the wing of *P. montanus*. The black on the chin and throat *barely* exceeds in amount that of *P. montanus*. It is brownish and poor in quality; and it is considerably *less* extensive than in *P. domesticus*, and does not extend down to the upper breast or spread out below, as it does in *P. domesticus*. I am certainly of opinion that the bird is a hybrid between *Passer domesticus* and *P. montanus*, and a most interesting specimen.' (The comparative scarcity of the Hooded Crow within the limits of Lakeland renders the occurrence of hybrids between this well-marked species and the Carrion Crow an uncommon event. The only two examples of cross-bred Hoodies that have come under my notice in this part of England have already been recorded. One of the two, which

shows a preponderance of Hoodie blood, was shot in Wastwater.¹ Reports of hybrids between the Common and Red-legged Partridges reached me from the north of Cumberland, but were not authenticated by the necessary production of at least one specimen of the supposed cross. A male hybrid between the Red and Black Grouse has already been recorded from Cumberland.² A similar bird was reported to me as having been killed on the Crossfell range in 1887, but it is said to have been too hard shot for preservation.³ The younger Kirkby of Ulverston received for preservation a local example of the hybrid between the Pheasant and Black Grouse in 1887.

No instances of hybridisation among any species of Wild-fowl have as yet come to light in Lakeland as regards free birds. It may be opportune, however, to remark that two Canada Ganders, kept at Moorthwaite, paired with domestic Geese in the spring of 1889. The eggs resulting from this cross proved fertile, but the hybrid offspring, while still small, were killed by rats.

¹ *Birds of Cumberland*, p. 58.

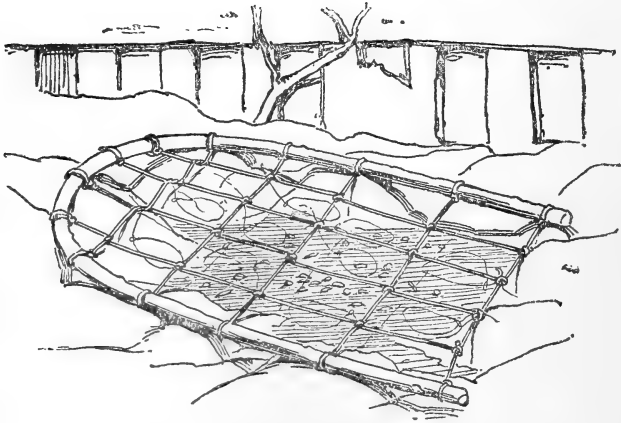
² *Ib. cit.*, p. 124.

³ If Lakeland sportsmen would take the trouble to look out for hybrid Grouse, it is quite possible that this cross might prove to be less excessively rare than has hitherto been conjectured.

BIRD FOWLING.

DEVICES for snaring various species of Wildfowl have probably employed the ingenuity of the native Lakelanders since pre-historic times. I have not, however, met with an earlier reference to the subject than that supplied by one of the Pipe-Rolls of King John. In this we find notified a payment to William the Fowler ('Willo aucupi'), due as his wages, and for the keep of his dogs. Mr. William Timperon, a living example of the fine type of yeomen for which Cumberland is so justly celebrated, and now on the verge of completing his seventy-eighth year, tells me that he perfectly remembers the time when it was considered quite a correct proceeding to *net* the Partridges which the dogs had found in the stubble fields. Any that escaped the net might be shot, but there were few men who shot *flying* birds in his youth. It seems not unlikely that 'Will the Fowler' was retained to render such service as that just indicated. The poorer folk could not perhaps always afford nets, and were wont to employ their winter evenings in making horsehair nooses. The manipulation of these varied. The country lads were in the habit of catching small birds with the 'Guelder.' The 'Guelder' simply consists of a few cross-strings run across a hoop or a bent stick, such as that shown in the accompanying woodcut. The cross-strings served to secure numerous nooses of horsehair. When a fall of snow induced the Linnets, Larks, Snow Buntings, and other small birds to gather in the farmyards in search of food and shelter, the moment for employing the 'Guelder' had arrived. Accordingly, a space was swept clear of snow, and a few handfuls of grain were thrown down. The 'Guelder' was placed on the ground above the grain, and the birds noosed themselves in their endeavours to reach the corn below. The practice of eating the small birds thus secured was general two

hundred years ago, and until recently it still prevailed in the neighbourhood of Allonby. Small birds were also taken with the riddle, with trap-cages, with bat-fowling nets, and with bird-lime. Clap-nets, on the other hand, are a comparatively recent innovation. The method generally employed for using bird-lime has hitherto been to place the prepared twigs (tied around the base with dry twigs) on the tops of the hedges, at various distances from the caged call-birds. Some Whitehaven bird-catchers employ dummy Linnets to attract the wild birds.

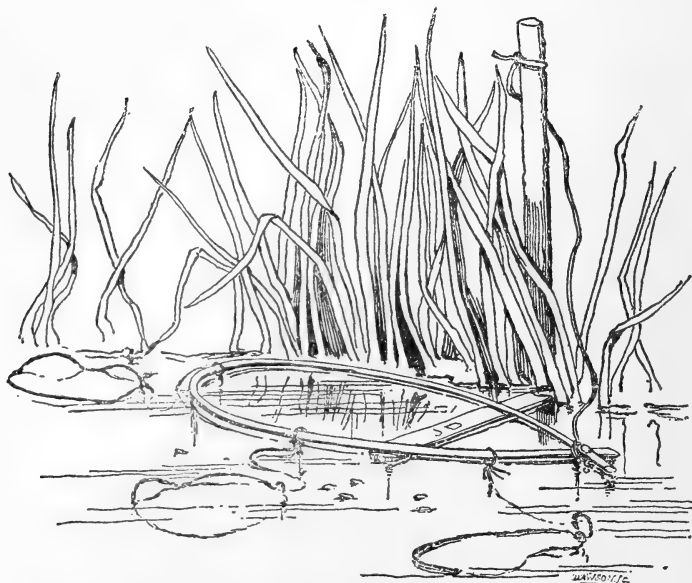


THE 'GUELDER.'

These roughly-stuffed dummies answer much the same purpose as the 'stale' or stuffed Chaffinch used by the Club Row bird-catchers when pursuing their favourite pastime of 'pegging' for Chaffinches. The difference is, that while the stuffed Chaffinch is an object of animosity to the wild bird, the stuffed Linnets only encourage the live birds to join their company on the lime twigs. The shy habits of Wildfowl necessitate the use of greater craft in their capture than is required for the destruction of unsuspecting dickey birds. Our country histories are uniformly silent upon the fascinating subject of duck decoys. Whether this method of fowling was ever extensively employed on the numerous sheets of inland water which supply the natural title of this work, is more than I can say. Recent

inquiries have only brought to light the fact that decoys existed at Muncaster Castle, and at Lowther Castle, probably as lately as the close of the eighteenth century. The names are all that now linger, but some of the stakes of the Lowther decoy were still standing in the water a few years ago. The decoy pond at Lowther no doubt attracted the Wildfowl of Haweswater and those of the Eden valley. The decoy pond at Muncaster must at one time have proved fatal to many of the Wigeon that annually haunt the rivers which discharge the over-flowing waters of the becks and springs of the mountains into the Irish Sea at Ravenglass. The original decoy pond at Muncaster is now grown over with vegetation. Tall trees, not less than a century old, have rooted in the basin of the former lakelet. A casual inspection suffices to show that once upon a time the accumulated waters of this decoy burst the dam which pent them in, and pouring away to the low grounds, left the decoy a natural hollow watered by a little stream. Judging that this disaster was fatal to the success of the decoy, the lord of Muncaster constructed a smaller sheet of water, and there his new 'pipe' was laid. This held water, but it must have been too small for practical purposes, and local tradition affirms that it was recognised to be a failure. In the neighbourhood of Allonby a large number of Wild Duck used to be taken in the 'wile,' represented in the following woodcut. A quiet, slow-running watercourse was generally chosen for the operations of the country folks who used 'wiles,' a brook that possessed sufficient depth of water to enable the Ducks to feed with their heads beneath the surface. The 'cross-piece' of the 'wile' was forced into the bank side on a level with the water. The horse-hair nooses, shown in the diagram, were then arranged in such a manner that they floated on the water, or at least hung over it. A few handfuls of wheat or barley were then scattered on the mud immediately beneath the 'wile.' It was in the endeavour to reach the grain that the Ducks were caught. The tall peg shewn upon the bank was driven firmly into the ground, in order to anticipate the contingency of a noosed Duck flying away with a 'wile.' Mr. Richard Mann, from whom I had first the pleasure of hearing of this method of fowling, tells me

that the practice of setting 'wiles' for Ducks became obsolete about the year 1865, at least in the neighbourhood of Allonby. The only 'wile' that he ever himself set, caught a Wigeon, but it proved to be a pinioned bird which had escaped from his own farm. His relative, Mr. William Timperon, assures me that he caught many Ducks in 'wiles' set on the 'runners' of the mosses. He enjoys the pleasure of reciting how he caught a loafing fellow in the act of stealing Ducks out of his own snares, with the result that the offender was promptly soused in the beck. This incident happened fifty years ago. The pranks of such

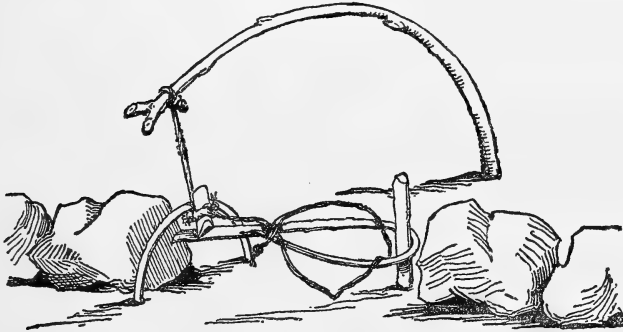


THE 'WILE.'

light-fingered gentlemen were generally frustrated by the custom of marking every 'wile' with the initials of its owner.

Allusion has already been made to the practice of *snares* Woodcock, as described by Pennant in 1772 (see p. 371). When staying at Rusland Hall, I had the pleasure of hearing a description of the practical working of the 'sprint' used in Lakeland, from the lips of Richard Holme, gamekeeper to Mr.

Archibald. Mr. C. F. Archibald has favoured me with a completely equipped sample of the 'sprint' made by Richard Holme, together with a minute description of the working of the trap. He says also that the 'sprints' are (or were) set on moonlight nights, on such spots as the birds are known to feed. In setting 'sprints' for Woodcock, a 'walk' is formed of rough stones, making a barrier a few inches high, and the snare is arranged in a gap. Woodcock object to walking over the stones, and follow them alongside until they find an opening: they are therefore easily conducted to the desired spot. Richard Holme



THE 'SPRINT.'

used to set scores of sprints when a boy; the prices he obtained in Ulverston were threepence for a 'Nanny' Snipe, and three halfpence for a 'Jack.' He has himself taken an old Black Cock out of a 'sprint,' and has known a Fomart to be captured in the same manner. This last was caught by the hind leg, and so strung up, that it could just reach the ground. It had scratched up a heap of earth like a mole-hill in its struggles to escape.' Richard Holme has known the Wood Pigeon to be taken in considerable numbers in 'sprints,' but Woodcock and Snipe are the birds for which the 'sprint' is most commonly set.

Residents at Kendal and other towns near Morecambe Bay tell me that they occasionally see considerable numbers of Common Scoters, and a few Scaups also, hawked for sale through their scats. These are the birds taken upon the cockle-beds in nets suspended on small stakes, hung some fifteen inches

above the sands. They have been figured by my friend, Mr. F. S. Mitchell, in the *Birds of Lancashire* (see p. 151). Neither Mr. Mitchell nor I have seen them at work. The fact is that they are only used occasionally, and then only in the winter months. But they have been described to me by the Flookburgh fowlers, and no fault can be found with Mr. Mitchell's account. The same remark applies to the Flight-nets used upon the north coast of Lancashire for taking Oyster-catchers, Dunlins, and other seafaring birds. Flight-nets have never taken a proper footing on the Cumbrian coast. They were used for a few years at Haverigg, near Millom, whence a few Terns, which had meshed themselves in the nets, were sent to me. The last time that I inquired about them, I was told that their owner was dead. On Walney Island such nets were used by Troughton, who caught great numbers of Oyster-catchers. This species, together with Knots, Peewits, and Dunlin, constitutes a large proportion of the birds netted by the Flookburgh fowlers. I have seen these nets at work likewise on the shores of the Scottish Solway, but the idea of using them was introduced from Lancashire, I believe; at all events, it had a foreign origin.

Last, but not least in interest, allusion must here be made to the obsolete custom of capturing Guillemots and Razorbills in nets, while the birds perched in rows upon the ledges and pinnacles of the Sandwith precipices: 'And Ther is fowles ther builds in the St. Bees Rock: it is called: these fowles as bigg and swift of wing as duck and mallard: And builds in the Rock they hangs over the see: and They Let downe a broad nett from the Topp of the Rock And frights The fowles of ther nests, and the netts cacth them: They cannot flye when they are half a mile from the sea.'¹ There does not appear to be any documentary evidence that Guillemots have been netted at their breeding stations on any other part of the British coasts. The only notice of the kind that I have as yet been able to discover appeared in an unsigned article, entitled 'A Fortnight in Faroe,' contributed to No. lxxx. of the *North British Review*. The writer was evidently an ornithologist, and his essay contains

¹ Sandford ms., p. 18.

several references to the employment of nets for capturing Guillemots and Puffins at the Faroes. Thus, for example: 'Sometimes four men will go in a boat under the cliffs, where the young birds [Common Guillemots] who have not yet begun to breed, sit on the lower ledges, and then with nets at the end of long poles, two of the crew catch the birds, either as they sit or as they fly past.'

INTRODUCED SPECIES.

Mammals. ALTHOUGH several species of Mammals have become extinct in Lakeland during the last hundred years, it does not appear that a single species has been successfully acclimatised. Indeed, the Fallow Deer appears to be the only quadruped that we can claim with positive assurance as having been introduced into Lakeland, since the heavy tramp of the Roman legion ceased to awake reverberating echoes among the crags which crown our mountain precipices. There is some reason, however, to suppose that *Lepus variabilis* has been turned down in Lakeland. The late Jerry Smith assured me that General Wyndham turned down some blue hares on Skiddaw. It may well be, that this, or some similar experiment, gave rise to Murray's statement that the animal in question 'is sometimes found [in the south of Scotland and] even in Cumberland.'¹ The Romans might very well have introduced the Fat Dormouse (*Myoxus glis*) into our coverts, just as they acclimatised *Helix pomatia* at many of their British stations; but they seem to have had too serious fighting in Northern Britain to spend much time on the pleasures of the table.

Birds. Several attempts have been made to introduce American species of birds into Lakeland. For example, a consignment of three hundred eggs of the Pinnated Grouse (*Cupidonia cupido*) reached Liverpool from the States of Ohio and Illinois in June 1874. Some of these are said to have been sent to the late Mr. Jackson Gillbanks of Whitefield House, near Ireby, as well as to the then Lord Bishop of Carlisle.² There does not at present seem to be any information regarding the fate of these eggs, but we must conclude that the experiment proved a failure. The Vir-

¹ *Geographical Distribution of Mammals*, p. 252.

² *Whitehaven News*, July 2, 1874.

ginia Quail (*Ortyx virginianus*) has been shot in Cumberland in a couple of instances, near Carlisle and near Allonby. I have examined both specimens, and they appeared to be in adult plumage. It is not known who turned them down. Possibly the late Mr. Jackson Gillbanks may have attempted to introduce them. The late Sir F. Graham, Bart., obtained Scotch eggs of the Capercaillie (*Tetrao urogallus*) in more than one season. Several young birds were reared, but they never established their race in the Netherby coverts. One fine male lived for some time in the neighbourhood of Longtown, where he was well known to the public from his fearlessness. The late Jerry Smith told Mr. Senhouse and myself that he had heard old men say, when he was a boy, that the Capercaillie had once upon a time inhabited the pine forests which clad the naked mountains of Lakeland before so many trees were cut down for shipbuilding and for charcoal-burning. It is by no means unlikely that bones of this species may yet be discovered among the animal remains which lie hidden in the fissures of the limestone rocks of Westmorland. The Purple Gallinule (*Porphyrio cœruleus*) appears to have been shot at Grange in September 1876, and the probability is that this bird had been artificially introduced. The specimen was shot by a man named Allen, who afterwards died in America. Mr. E. T. Baldwin investigated the history of the bird a few months after it had been killed. To his thoughtful kindness I owe the opportunity of quoting the accounts of it furnished by the younger Kirkby, who mounted the bird, and by Allen, who killed it. James Kirkby states in his letter of August 2, 1877, that 'there was not any appearance of [its having been] an escaped bird, it seemed to be in full plumage (of a very dark purple), the bulk of the bird would be about the size (*sic*) of a large coot, the beak and forehead being of a bright crimson, the legs very long.' Writing from Castlehead Lodge, near Grange, on the 8th of August 1877, the keeper, Allen, informed Mr. Baldwin that he believed his bird 'to be called the Sultana bird or Hyacinthi Gallinule, a native of South Africa.' He saw it frequently for a month before he shot it. The first time that he noticed the Gallinule, 'it was in Company with a very large Covey of Partridges in the stubbles. When at a dis-

tance I first thought them Pheasons, and he looking like the old Cock among them, but as soon as I came nearer to them the Part^g. took wing into the turnips, and he run some distance from me, and then flew Across two fields into the reeds in the old pool where the river Winster had formerly run. He frequently was with the same party, but always made for the Reeds when disturbd; it has no marks whatever to indicate that it had ever been in confinement, as the man that stufed it and myself examined it minutely, legs being free from any mark, and feathers all sound and fine glossy plumage in the various Colours. At the time I shot it, I was not expecting or looking for it, but it Arose in the reeds at A long distance, about fifty yards off, when I made a very quick shot and killd it dead, one shot having enterd back of head and coming out at the eye. I have the bird still in my possession and [it] may be inspected by any that have the curiosity to do so.' It would be interesting to know the present whereabouts of this *Porphyrio*. Both Mr. Gurney and myself have endeavoured to trace it, but without success up to date. The Egyptian Goose (*Chenalopex ægyptiaca*) and the Canada Goose (*Bernicla canadensis*) have occasionally been shot in Lakeland. I am not aware that the former species has become established as a breeding species within our faunal area. The Canada Goose may perhaps be considered to have become acclimatised. Mr. H. E. Rawson kindly tells me that two pairs of this bird breed every year upon Rydal Water. There are many nooks and corners in Lakeland where such species as the Gadwall, the Pochard, and Tufted Duck might breed in peace and security, such as Seathwaite and neighbouring tarns, if our local proprietors possessed sufficient interest in natural history to introduce a few pairs of pinioned birds. The fact that a pair of pinioned Pintail bred for several years at Ambleside should itself encourage landed residents to show some enterprise, both for the sake of those who have developed a capacity for enjoying the patient study of wild birds, and for the sake of their own rough shooting.

Reptiles.

In the summer of 1886 a fine Lizard of Ethiopian origin was captured on the edge of a heath to the north of Carlisle, and taken to Mr. Parker, the chemist of Rickergate. Having no knowledge

of any but the European Reptiles, I took the specimen to Mr. Boulanger of the Natural History Museum, South Kensington, who readily identified it as *Pseudocordylus microlepidotus*, a native of the interior of South Africa. At that time this species was so rare in European museums, that its occurrence as a waif in Lakeland would have been thought extremely improbable. There can be no doubt, however, that it had been intentionally imported alive, and that it had escaped from some travelling show. On the other hand, the introduction into our midst of *Gecko mauritanicus*, was a pure accident. It had dropped into a box of oranges in the packing-shed, had been overlooked, and travelled safely to Carlisle, where it was discovered in full health and vigour. Mr. William Duckworth, whose interest in zoological matters has so materially assisted local progress, secured the Gecko as a specimen, and sent it up to me for determination.

The introduction of fishes into new localities is of such great importance, and, moreover, occurs so very frequently, that angling associations as well as private owners of fisheries should endeavour to record their operations in print as often as possible. Undoubtedly, the most interesting addition made to our fish-fauna of late years was the introduction of the Grayling (*Thymallus vulgaris*) into the upper waters of the Eden. Particulars of this will be found at pp. 518, 519. Considering the relative abundance of the Grayling in many Yorkshire streams, it is a matter for some surprise that this game fish had so long remained a stranger to the waters of Lakeland.

REVIEW OF THE FAUNA OF LAKELAND.

Mammalia. OUR present knowledge proves that a total number of 421 species of vertebrate animals have at one time or another occurred within our faunal limits. The Mammals are represented by six orders and fifty species. They include such interesting forms as the Auroch (*Bos primigenius*), the British Beaver (*Castor fiber*), and, in particular, the Thick-toothed Grampus (*Pseudorca crassidens*), an animal of very considerable rarity. Of present residents, the Red Deer (*Cervus elaphus*) not only survives in a wild state in Martindale, but is also abundantly represented in several of our parks, notably in those of Muncaster, Crofton, High Moor, and Gowbarrow, in Cumberland, as well as at Lowther, on the borders of Westmorland. I have personally inspected both these animals, and most of our park Fallow Deer (*Cervus dama*), but was content to accept the authority of a friend for the existence of Fallow Deer at Naworth. Let me take this opportunity, then, of apologising for the inadvertent mention of Naworth (at p. 71) as the home of Fallow Deer. That some outlying bucks are still to be found there is probable, but they are no longer kept in the park, which has therefore ceased to be a Deer park.

The other localities mentioned (on p. 71) as the home of Fallow Deer can be implicitly relied upon. As to the micro-mammals, the Bank Vole (*Arvicola glareolus*) has so far been obtained only in the Cumbrian plain. The Dormouse (*Muscardinus avellanarius*) is chiefly found in the Lancashire portion of this region. Thus, in Cartmell, Mr. W. Duckworth finds that the Dormouse is well known; only last year he himself discovered three nests of this species in the woods near Ayside.

Birds. The 262 species of Birds here recorded from Lakeland represent sixteen orders, in the following proportions:—

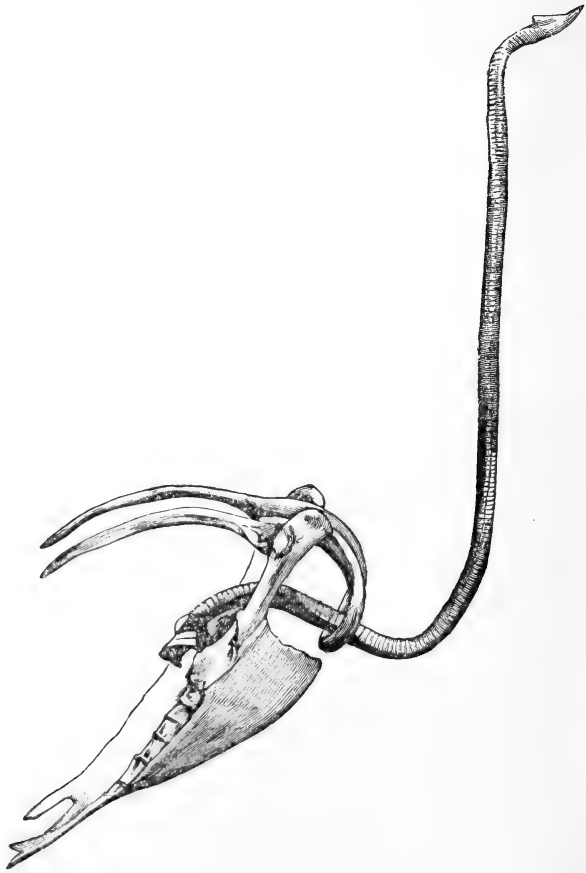
Passeres, 87 species; Picariæ, 11 species; Striges, 7 species; Accipitres, 18 species; Steganopodes, 3 species; Herodiones, 8 species; Anseres, 31 species; Columbæ, 4 species; Pterocletes, 1 species; Gallinæ, 8 species; Fulicariæ, 7 species; Alectorides, 2 species; Limicolæ, 36 species; Gaviæ, 20 species; Pygopodes, 13 species; Tubinares, 6 species. But, if the so-called Parrot Crossbill (*Loxia pityopsittacus*) and Pallas's Great Grey Shrike (*Lanius major*) are considered good species, our census rises to 264. *Lanius major* is a good Siberian species, but it is not easy to decide the parentage of all the intermediate forms of these Shrikes which are obtained in Great Britain. The Spotted Eagle, which was found on Walney Island in 1875, had been lost sight of for some time, even when Mr. Mitchell recorded the species on the authority of Mr. Durnford in the *Birds of Lancashire*. Mr. Durnford referred the bird to *Aquila naevia* in his list of 'Birds found in the neighbourhood of Walney Island.' Mr. Mitchell referred it to *Aquila clanga*, but he had never had an opportunity of examining the bird. I have given a little additional information concerning this rarity, and provisionally accepted the determination of Mr. Mitchell, who told me he had corresponded about the bird with Mr. Durnford. But *which* form of Spotted Eagle this bird really represents does not appear to be certainly known. My efforts to trace it locally have so far proved futile.¹

In assigning full specific rank to the Polish Swan (*Cygnus immutabilis*), I have taken up the same position as Yarrell, Macgillivray, and Dresser. Should any critic think that I have gone astray in this matter, he will at least admit that I have erred in good company.

The accompanying cut, which should be compared with the figure of the sternum of the Mute Swan furnished in Yarrell's *British Birds* (fourth edition, vol. iv. p. 656), has been drawn from a preparation made by Mr. D. L. Thorpe, and by him photographed for the use of this work. He kindly lent me his

¹ The offer of a reward by advertisement in the local press only resulted in an Osprey being reported. I have great pleasure in acknowledging the kind assistance of the Rev. T. Edge Wright, Vicar of Rampside, who has obligingly supplemented my own inquiries at Barrow by an active search for this lost bird.

valued assistance in dissecting the bodies of the two Polish Swans mentioned on p. 252. It appeared to us that both these examples showed a marked divergence of structure from the Mute Swan. I allude to the method by which the trachea is



TRACHEA OF POLISH SWAN.

inserted into the thoracic cavity. The trachea of the Mute Swan enters the body without any contact with the furculum. The tracheæ of the two Polish Swans passed downwards below the furculum, then turned upwards, and, ascending through the

base of the furculum, soon entered the lungs *from below*. To quote the exact language employed by Macgillivray in his description of the anatomy of the Polish Swan, 'the trachea, on reaching the infrafurcular space, forms a slight curve outwards, and then directly enters the thorax.'¹

It appears to me, that those who decry the validity of the Polish Swan have yet to explain away the striking cranial characters of the bird. The fact that Polish Swans have hitherto visited this country only, as I believe, in small flocks, and at the winter season, appears to strengthen the position of those who incline to regard the Polish Swan as a northern form of the Mute Swan. That the Mute Swan has produced white offspring appears to me to be a fact without any direct bearing on the validity of the Pole. Species should be founded as far as possible on real structural characters. It is said that tame Mute Swans occasionally show some of the external characters of the Pole. If, as I believe, both the Polish and Mute Swan owe their origin to one and the same ancestor, it is only natural to expect that recently-acquired characters should sometimes be replaced by disused characters and *vice versâ*. This, then, is an argument for the validity of the Polish Swan. Mr. J. E. Harting formerly recorded Bonaparte's Gull (*Larus philadelphia*) as having been once obtained 'on one of the English Lakes.'² This statement was founded on the much more indefinite remark of Yarrell, that such a bird had been killed 'on one of the lakes in England.'³ Such a bird was apparently killed, as reported by Yarrell; but at a very great distance from Lakeland. With regard to the position of the Great White Heron (*Ardea alba*), reported as obtained in Cumberland by Dr. Heysham, the exclusion of this species from his catalogue of 1796-7 goes far to suggest that he had discovered a flaw in its pedigree. When Mr. J. H. Gurney lately revised the claims of British Great White Herons, I pointed out to him that in my opinion Dr. Heysham's entry of it should be regarded as unsound. The White-eyed Duck (*Fuligula nyroca*) must also be removed from

¹ *British Birds*, vol. iv. p. 656.

² *Handbook of British Birds*, p. 173.

³ *British Birds*, third edition, vol. iii. p. 555.

the Lakeland list; since it turns out that the gentleman on whose authority the reputation of the reputed Cumbrian specimen depended, is the owner of a treacherous memory, and cannot be implicitly relied upon.

Reptiles.

The Reptiles of Lakeland are too few to call for much criticism, but attention may be drawn to the local distribution of the Ringed Snake (*Tropidonotus natrix*). This species, so abundantly represented in southern England, is fairly numerous in certain of the woods in the Lancastrian portion of Lakeland; nevertheless, it becomes extremely uncommon to the north of the Lake mountains, which appear to have offered a barrier to its travelling into the Cumbrian plain from the south-west.

Amphibians.

Two species of Newts have been included in the text of this work. I am thankful to add that the Palmated Newt (*Triton palmipes*) is also present. It appears to be so rare, or at least so local, that its existence in our midst was only ascertained at the eleventh hour. On the 15th of June 1892, a young lad named R. M. Dixon invited me to inspect 'two efts and a minnow' which he had just caught in a pool near Carlisle. The 'minnow' was an eleven-spined variety of *Gasterosteus pungitius*. In the 'efts,' I was delighted to recognise my old favourite, *Triton palmipes*, male and female. Mr. C. A. Witchell, of Stroud, most kindly sent me two pairs of Palmate Newts to compare with the first examples of this pretty little species obtained in Lakeland. The specimens agreed in all the external characters, but the Carlisle specimens were the largest and the brightest in colour. It will be noticed that care has been taken to prove that the Natterjack Toad (*Bufo calamita*) exists locally in Westmorland and Furness, as well as in Cumberland.

Fishes.

The exploration of a marine fauna cannot be adequately conducted by a naturalist residing forty miles from the open ocean; but so far as circumstances have permitted me to investigate our fish fauna, the results are not entirely discouraging.¹ For example, the occurrence of *Sciæna aquila*, *Orcynus germo*, and *Thynnus pelamys* upon any part of the British coasts would be worth chronicling; in the present instance, the facts possess a value of their own, as materially extending the dis-

¹ The fishes of Lakeland are represented by 97 species.

tribution of these species. Perhaps most interest attaches to the *Salmonidæ* of our inland waters. The Vendace (*Coregonus vandesius*) is believed to exist only in Bassenthwaite and Derwentwater. The late Mr. Braithwaite had the misfortune to quote Dr. Davy, as saying that he had taken this fish in Windermere. His slip has been copied by Professor Seeley and other writers. The Gwyniad or 'Schelly' (*Coregonus clupeioides*) is peculiar to Haweswater and Ulleswater; unless it be true—as asserted by Braithwaite (and copied without inquiry or acknowledgment by Dr. Day),—that there are 'Schellies' in Red Tarn on Helvellyn. Should such be the case, they have probably been artificially introduced by one of the numerous gentlemen who at one time or another have amused themselves with experimenting on the local *Salmonidæ*. The Charr now (*Salmo alpinus*) exists in Windermere, Coniston, Haweswater, Crummock Water, Buttermere, Ennerdale, Wastwater; but is believed to be extinct in Ulleswater. There are no Charr in Derwentwater, though Dr. Day unfortunately records them from that lake. Nor do they exist in Esthwaite or Bassenthwaite, but I believe that they do exist in one or two of the mountain tarns. The Charr of Haweswater are usually small. Those of Windermere appear to run the largest. The late T. C. Heysham alludes to the Charr in a letter sent to the late Dr. Bell of Cockermouth, February 24, 1852: 'I am afraid,' he says, 'your brother M. D., who resides at Keswick, will find some difficulty in procuring Charr from Derwentwater. I have never been able to obtain any from this quarter, but as he resides constantly on the spot he may be more successful. The largest I have received during the last eight or ten years was sent to me from Coniston.' He had previously written to Dr. Bell on the 15th of the same month: 'Perhaps you will also be kind enough to inquire whether there be any chance of procuring a few Charr from the adjoining lake next summer. During the last I had occasion to examine some from Ennerdale Lake, and found them much infested with a species of *Filiaria*, and I am rather anxious to ascertain whether this is accidental, or prevails in Charr in all the lakes.'

CONCLUSION.

BEFORE taking leave of this fascinating subject, I desire to express, however inadequately, my warm appreciation of the good-fellowship with which my brother naturalists in Lakeland have always sought to strengthen my hands. The names of Messrs. C. F. Archibald, W. Duckworth, W. Nicol, R. Mann, and several others occur so often in the text, that they would hardly perhaps thank me for enlarging on this topic. The fact is, that I have never failed to secure the assistance of my friends on any single occasion. On the contrary, I have found them ever ready to back me up in investigating matters of local interest. An old college friend, Mr. H. Patricius Senhouse, M.B.O.U., placed at my disposal more than twenty letters of the late T. C. Heysham, which carried the observations of that lamented naturalist down to a much later date than his private papers. To the liberality of Mr. Harry Arnold I owe the privilege of having been able to quote the unpublished notes of that lovable scientist, the late Dr. Gough. I have to thank my brother clerics in the Diocese of Carlisle for the hearty welcome which they gave me, to ransack the unpublished archives of the oldest and most mountainous parishes. The late beloved Lord Bishop of Carlisle always expressed a warm interest in my attempts to stir up an interest in zoology in the different parishes of his diocese. On the last occasion that it was ever my privilege to meet our deceased friend—in the drawing-room at Bowness vicarage—he remembered my hobby, and with the *bonhomie* which ever characterised his relations with his juniors, offered his spontaneous congratulations on the addition to our list of the Frigate Petrel; an incident which seemed to interest him thoroughly, trivial as most persons would have considered it. Let me take this opportunity of

thanking the subscribers to this work for their kindness in ordering advance copies. The only worrying circumstance connected with the publication of this book was the difficulty of beating up subscribers. After addressing eight hundred circulars with my own hand, the number of copies ordered in response was so limited that the work might have remained unpublished, had not such friends as C. F. Archibald and F. P. Johnson worked hard to get the book taken up by the county men. I have the greater pleasure in thanking those who, like Mr. Harvie-Brown, not only encouraged me to persevere in the face of a discouragement which made me disposed to abjure the printing press altogether, but themselves subscribed for *supplementary* copies. My personal friends have shown me the kindest possible attention in this uninteresting matter. The illustrations are not perhaps as successful as they might have been, but they have the advantage of being based on photographs taken on purpose for this work.¹ I owe the existence of these last to the energy of Mr. Thorpe, whose presence in Carlisle during the printing of this book, has enabled me to obtain the opinion of a keen local ornithologist on all that I have written. Mr. Thorpe is much more than a local ornithologist, and his criticism is always valuable. His devotion to my interests induced him to carry his cameras over the hill-tops of Lakeland, sometimes joining Mr. H. E. Rawson and myself in visiting the breeding-grounds of the rare and decreasing Dotterel—sometimes sliding down slippery screes of rock in nimble pursuit of the Red Deer, which lent a deaf ear to all the blandishments of their admirer, and defied his efforts to take their photographs. The eyries of the Sea Eagle at Wallow Crag, Haweswater, and Buck Crag, Martindale, proved difficult to photograph, because, in each instance, the birds nested in the shadow of a great rock, so that no gleams of sunlight could reach their gloomy eyrie. Our artist, Mr. Kinneard, has ventured upon a slight anachronism in representing the old Eagles in the act of returning to their eyrie at Buck Crag; the cap of grey cloud, shewn hovering daintily over the breast of the precipice, is highly characteristic

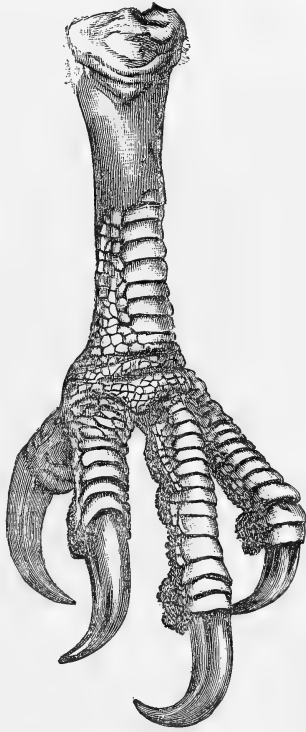
¹ The coloured plates of the Isabelline Wheatear and Frigate Petrel are portraits of specimens unique as British.

of the locality. The woodcuts of the *Prolegomena* were drawn by Miss E. C. Woodward, whose faithfulness in delineating her subjects deserves a hearty acknowledgment. Nor must I forget to thank Mr. R. Lydekker, at whose suggestion several of the figures were drawn, for his very valuable aid. The courtesy and kindness of my publisher, Mr. William Douglas, have materially lessened the anxieties inseparable from the issue of a scientific work.

Having thus discharged my conscience of personal explanations, which could not well be omitted, let me utilise the scanty space remaining by a brief reference to the past 'Ornis' of Lakeland. It may interest some readers to know that the Hen Harrier nested regularly on Wedholm Flow down to about 1840. Mr. William Timperon well recollects the days when the 'blue glede' used to try to carry off the wild ducks from his snares; he himself saw several nests of this Harrier on Wedholm Flow. He knew the Marsh Harrier, and describes its plumage, but it never nested in the 'English Solway' to his knowledge. A more interesting reminiscence attaches to Kelswick Mire, near Abbey. This locality has long been valuable arable land, but it was not drained until about 1820. When William Timperon's father was born in the farmhouse which stood beside the Mire, about 1780, the locality was a natural morass; the home of many a Snipe, and 'a serious place for Ducks.' Here, a pair or two of Bitterns nested every year. On a moonlight night you had only to stand at the door of grandfather Timperon's house, to hear the '*bump, bump*' of this retiring bird. As the summer advanced, the young lads of the family used to wade out into the reed beds in search of nests. Sometimes they came across the unfledged brood of the 'Miredrum.' Such an event was hailed as an opportunity for making the captives '*spew paddocks*.' This interesting consummation was obtained by spurting water into the gullets of their discomforted prizes. Our last reference concerns the Sea Eagles of Lakeland. The kind and valued assistance of Major Parkin has at length resulted in my tracing the right foot of the Sea Eagle killed at Buck Crag, to the possession of Mrs. Sisson of Clibburn. This good lady recollects Edward Sisson, who

shot the Buck Crag Eagle, as being an active elderly man, when she first met him in 1843. He was vigorous enough to shoot Wild Duck on Ulleswater with the ponderous muzzle-loader which now adorns the kitchen ceiling of Mistress Sisson. As early as 1785 he had been paid a shilling for killing some Ravens that haunted the crags of Barton parish. I have reason to believe that he shot the Buck Crag Eagle between 1793 and 1806. The foot was in his possession at the time of his death in 1844, and has remained in the care of the family until now. The Barton book records a payment on the death of an Eagle in the same district in 1736. 'To William Lancaster for killing an Eagell, £0, 1s. 0d.' In 1750, there is a still briefer entry, 'for an Eagle £0, 1s. 0d.' By the kind help of Mr. John Birkett, I have ascertained that Mr. Christopherson purchased the two other feet of Sea Eagles, now temporarily in my possession, at the sale of the Crosthwaite Museum. The largest of these probably belonged to the bird sent to Greystoke from an eyrie near Buttermere (p. 191).¹ The other may have belonged to a male Sea Eagle killed in Borrowdale.

With this explanation, I must furl canvass and let go the anchor. How far our voyage has been a success or failure may safely be left to the judgment of a generous and impartial public. I am not conscious of having neglected my duties in any way. On the



Foot of Sea Eagle, $\frac{1}{2}$ nat. size,
killed at Buck Crag.

¹ The Buttermere Sea Eagles nested on a shelf of rock in the centre of a great mural precipice, between High Crag and High Stile. This eyrie faced east; that of Buck Crag had a northerly aspect. The Wallow Crag eyrie faced west.

contrary, every pains has been taken to secure as high a standard of scientific accuracy, as can fairly be expected from one who resides in what the late Dean Stanley designated as 'the wilds of Cumberland,' and who has often felt the inconvenience of living at a great distance from town. Information has been hewn, so to speak, from the native rock. It is only now and then that the worker hits upon a valuable seam, and months often elapse before this can be tapped. But so far as circumstances have permitted, the facts here gathered together have been uniformly set forth in chronological order. If my critics pelt me with hard words, I shall plead with Hubert, 'An your highness were to hang me, a man can but do his best.' That I have won, and retained the unswerving allegiance of the Lakeland naturalists, is in itself a reward for much fruitless labour. The question of success or failure lies outside the field of my binoculars.

'No ; it must oft fall out
That one whose labour perfects any work
Shall rise from it with eye so worn that he
Of all men least can measure the extent
Of what he has accomplished. He alone,
Who, nothing tasked, is nothing weary too,
May clearly scan the little he effects ;
But we, the bystanders, untouched by toil,
Estimate each aright.'¹

Postscript.—Since the foregoing passage was printed, I have performed the melancholy task of disinterring the remains of a Ruddy Sheldrake (*Tadorna rutila*) from the bottom of a manure pit. This fine bird had been shot on the river Wampool, July 18, 1892, and thrown away as valueless. It was one of a pair, and undoubtedly of wild origin.

¹ Robert Browning, *Poetical Works*, vol. iii. p. 67.

Book First.

M A M M A L I A.

Order *CHIROPTERA*.

Fam. *VESPERTILIONIDÆ*.

BARBASTELLE.

Synotis barbastellus (Schreb.).

THE only examples of this Bat that are known to have occurred in Lakeland were captured many years ago in the neighbourhood of Carlisle. They were skinned for the collection of Mr. T. C. Heysham. At the sale of his specimens they were purchased by the late Mr. F. Bond, at whose house I had the pleasure of examining them in March 1886. Their presence in Cumberland can only be accounted for by the supposition that they had migrated into Lakeland as summer visitants. There can be no doubt that some species of Bats *migrate* seasonally. In April 1891 I observed a small flight of large-sized Bats migrating through one of the passes of the Pyrenees. These animals were not hawking, but kept in a fairly compact body, and flew with the same definite purposeness that one is accustomed to remark in Swallows pressing forward on the return journey to their breeding quarters.

LONG-EARED BAT.

Plecotus auritus (L.).

This species is less evenly distributed than the Pipistrelle, but in some places it is almost as numerous. The late James Fell informed me that, while following his trade as a slater, he had on several occasions found large colonies of this species in the roofs of old buildings.

NOCTULE.

Vesperugo noctula (Schreb.).

The Great Bat is so familiar to me as a London resident, and I have spent so many summer evenings in watching its lofty flight above the Serpentine, that had it been of general distribution in Lakeland it could hardly have eluded my search. Mr. Tom Duckworth, however, almost satisfied himself that several large Bats, which frequented Bowness on Solway in July 1888, were Noctules. His careful description of their flight favours this view, but he did not obtain a specimen. The Noctule ranges at least as far north as our most southern limits. Several specimens were taken near Carnforth some few years ago, and carried to Mr. Murray for identification.

PIPISTRELLE.

Vesperugo pipistrellus (Schreb.).

This small Bat is fairly common in many parts of Lakeland, and may often be seen hawking actively on a mild afternoon in winter. Its numbers certainly fall short of those that one is accustomed to meet with in the southern counties; yet in some localities it might be termed tolerably abundant.

DAUBENTON'S BAT.

Vespertilio daubentonii, Leisler.

I have examined a specimen of this Bat, formerly belonging to Mr. T. C. Heysham, and labelled as captured on the Carlisle Canal, near Beaumont, in 1852. It was taken in the month of August. Mr. W. Borrer procured Daubenton's Bat 'in July 1863, from Ulswater, where, as I am informed by a friend, as well as at Grasmere, they do not fly till late at night over the lakes.'¹ I have never myself procured a fresh specimen, but it must not be inferred from that circumstance that the species is very rare in Lakeland. No doubt it is local, but I have on several

¹ *Zoologist*, 1874, p. 4128.

occasions seen a species which I supposed to be Daubenton's Bat. Thus on November 16, 1889, between half-past four and half-past five, I watched three Bats at Whin's Pond, which appeared to be identical with this species. They flew actively over the water, frequently dipping, sometimes two or three times in succession, apparently feeding, their shadows being reflected as they hovered over the water, and the motion of their wings recalling the flight of the Common Sandpiper. They flew uniformly low over the water. Sometimes one would approach the margin of the lake, but they seemed to obtain most of their prey in the centre of the lake.

REDDISH-GREY BAT.

Vespertilio natterii, Kuhl.

Early in August 1886 a numerous colony of this Bat was discovered by Mr. A. Smith to have become established in an outhouse, in immediate proximity to the chimney of the gas-works at Castletown. Of three living specimens sent up to me one happened to escape in a room during the afternoon of its arrival, and flew restlessly to and fro with a light and petulant flight. Although, of course, entirely unaccustomed to its new and strange environment, this bat constantly and with considerable dexterity avoided coming into contact with any external body, until it happened to reach the window-panes, when it appeared to be spurred with the hope of escape, fluttering against the panes with all the eagerness of a bird that fails to understand the substantiality of the transparent barrier opposed to its desired exit. Subsequently resuming its interrupted flight, the Bat gyrated freely in all directions, usually flying at a height of 10 or 12 feet, and wheeling to and fro with enviable grace and buoyancy.

Mr. Duckworth subsequently observed an example which had strayed into a room at Castletown, probably one of those previously evicted from the outhouse.

The species has not been met with since in the neighbourhood of Rockliffe, but as its discovery in 1886 was accidental, the probability is that it still frequents the neighbourhood.

Mr. T. C. Heysham independently obtained a specimen of this Bat in Cumberland, but it does not seem to have been procured in Westmorland.

WHISKERED BAT.

Vespertilio mystacinus, Leisl.

The late Mr. Bond showed me a specimen of this Bat from the collection of T. C. Heysham. The label is in Heysham's handwriting, and describes the example as having been found adhering to the side of a house early in August 1852. Another specimen was obtained near the Eden, October 11, 1885. A third was captured near Carlisle on the 26th of September 1889. Mr. Tandy has recorded another specimen, taken near Penrith. This he brought to me in the first instance.

Order *INSECTIVORA*.

Fam. *ERINACEIDÆ*.

HEDGEHOG.

Erinaceus europæus, L.

Fossil remains of the Hedgehog have been found in the fissures of Helsfel, from which it becomes evident that the small quadruped which we meet with so frequently in the hay-fields and on the skirts of our pheasant covers, inhabited its present haunts when wolves and bears roamed through the virgin forests which then covered many parts of Lakeland. Whether the 'urchin' was ever the subject of *general* persecution in our country parishes has not yet transpired. That it was sometimes outlawed appears from the accounts of Orton parish. In this wild part of Westmorland the price usually set on the head of the Hedgehog was twopence. The spelling of the word varies. Thus we read in 1637, 'item for a hedghogg ij d.' In 1653 an entry occurs, 'ffor a Eddhogg £00, 00s. 02d.' In 1660, the Hedgehogs were all lumped together: 'Item for Hedghogs £00, 03s. 06d.' An entry follows in 1661: 'Disburst by him to Robert Whitehead for 17 hedghoggs £00, 02s. 10d.' Three entries stand together in 1662: 'to Chas. Bland for 9 Hedghoggs £00, 01s. 00d. To ye Clerk son

for 2 Hedgehoggs & 5 Pyats £00, 00s. 09d. To *myself* for 5 Hedghoggs £00, 00s. 10d.' Only six of these animals were killed in 1675. Possibly they were becoming less plentiful. It is a little surprising that the grown men who killed Wild Cats and Brocks in precipitous and dangerous places were not ashamed of slaughtering the harmless Urchin. That such was actually the case may be instanced by another Orton entry, for the year 1674: 'To Anth. Ward 1 brock head 2 hedgehoggs £00, 01s. 04d.' Mr. Coward informs me that he has on several occasions come across remains of the Hedgehog in the larder of the Foumart. This fact was independently brought to my notice by Mr. George Dawson, whose experience is precisely similar.

Order *INSECTIVORA*.

Fam. *TALPIDÆ*.

M O L E.

Talpa europæa, L.

When we remember the unremitting warfare waged against the Mole during the autumn and spring months, the perseverance with which it contrives to maintain its footing among us is really astonishing. In former times the destruction of the Mole was sometimes compassed by private owners. On other occasions it was accomplished at the public expense. It is to the first system that we owe the following extract from Lord William Howard's accounts for 1612: 'April . . . 25. To George Berton for spreading moale hills, vj s. vj d.' The necessity for this outlay, which at the time must have been considered less trivial than it now appears to us, was no doubt suggested by the difficulty experienced in cutting hay with the scythe in fields studded with mole-hills. The accounts of Hawkshead parish supply an entry which deserves attention as illustrating the remarks which follow: '1795, May. To John Middlefell for catching Moles at Poor house two years, 2s. 0d.' The evidence of the authors of the *Agricultural Survey of Cumberland* shows that the practice just instanced prevailed extensively when they wrote, in 1797: 'For destroying Moles—a most excellent practice is prevalent here, for every parish to let the taking of their Moles for a *term of years*, at a certain yearly

sum, which is raised in the same manner as the parochial taxes, and does not now exceed a halfpenny an acre; which, they justly observe, was much cheaper than they could have the ground *scaled for*, were the moles not destroyed in this manner. It is a pity but there was *a law* to oblige every parish in the kingdom to destroy their moles in the same manner; which is done so effectually here, that we scarce ever saw a mole-hill upon the enclosed grounds of most parts of Cumberland.’¹

Pringle writes regarding Westmorland about the same date: ‘The mole-hills are carefully spread in most parts of the county, and the fields are cleared of moles at the rate of 3d. an acre, where they have not been caught before; 2d. an acre are paid the second year, and a penny or three-halfpence yearly thereafter.’²

William Kitchin, a native of Kentmere, who has followed the occupation of a mole-catcher among the native dales for the last thirty-five years, tells me that he is usually paid for his labour by the farmers, who generally pay by the acreage for a term of years. From him I learn that it is still the custom in some parishes for the residents to club together to pay the mole-catcher, the rate paid being the same. Kitchin remarks that though no trapping is required on the higher fells, yet a few individuals often work their way up far above the dales, generally travelling along the grassy banks of fell becks. When snow lies in heavy wreaths and drifts on the highest grounds, the Moles frequently tunnel their way through the snow in their endeavours to descend to the lower and more sheltered regions. Mowdywarp, Moudiwarp, and Mowdywark are slightly different variations of the title ordinarily applied to the Mole in different parts of Lakeland.

Order *INSECTIVORA*.

Fam. *SORICIDÆ*.

COMMON SHREW.

Sorex tetragonurus, Herman.

This Shrew is quite common in most parts of Lakeland, but from its retiring habits is little noticed by the majority of

¹ *Agricultural Survey of Cumberland*, p. 237.

² *Ib. cit.* p. 293.

persons, unless the mortality which so often occurs among Shrews in autumn happens to arrest their attention. It frequents the banks of the hedges which enclose our hayfields, and its shrill cry can often be heard on a summer evening. This small animal appears to be more active in the gloaming than during the earlier hours of the day.

LESSER SHREW.

Sorex minutus, L.

This Shrew has only been sent to me for identification from two localities, but as these are wide apart it is quite possible that the species may be thinly distributed over Lakeland. Mr. W. Duckworth kindly forwarded a specimen of this Shrew from Ulverston. Mr. Richard Mann favoured me with another specimen, procured near Allonby, in the English Solway district.

WATER SHREW.

Crossopus fodiens (Pallas).

Both the black and the pied forms of this Shrew frequent the ditches and smaller becks of Lakeland. Judging from my own experience, I should have supposed that this small mammal must be comparatively rare, but this is refuted by the fact that they are often obtained by their natural enemies. House cats more frequently bring them to notice than any other animal, but their skulls occurred somewhat numerous in the pellets of the Barn Owl taken in the neighbourhood of the Eden. Mr. Bailey of Cummersdale brought to me specimens of both forms. The last of these was all black, and had been obtained on the Caldew, its capture being due to the loud cries with which it challenged attention on a summer evening. Mr. W. Hodgson, A.L.S., states that whether stationed at Aspatria, Frizington, or Watermillock, during the last fifty years, he has ever found them in respectable numbers: 'They are entirely aquatic in their habits, and in drougthy seasons, such as those of 1859 and 1868, suffered severely from the drying up of little rills or water-courses.' During the summer of 1842 our old friend had almost daily opportunity of studying a brood of five

young Water Shrews, which with their parents disported in an artificial pond, formed by damming up a little brook which flowed through his garden: 'When the sun shone out brightly their glossy submerged coats glistened like frosted silver—arising, I am informed, from the innumerable bubbles of air that cover their velvety coats. Their watery gambols strikingly reminded the spectator of those of a brood of ducklings at play. Nor is their gamesomeness confined to the water. In 1876, while botanising on the Frizington Parks estate, I was an interested spectator of their frolics on *terra firma*. Here again the family consisted of five members, exclusive of the parents. At the termination of a drain, where it opened into an open water-course, was the entrance to their burrow. The field was in grass at the time and depastured with cattle. In a semi-circle round their hole were a number of grass-covered runs, artistically arranged with the view apparently of forming a first-class recreation ground. A number of paths, wide enough only to accommodate a single Shrew, radiated from the burrow as a centre, each extending about 7 or 8 feet in length. These were crossed by parallel semicircular tracks about a foot apart, the entire ground-plan giving much the idea of a geometric spider's web cut in half. Along these tracks, lengthwise and crosswise indiscriminately, the youngsters chased each other with almost lightning speed. Should any two of their number chance to "forest" each other, there was a squabble and much shrill recrimination ensued. When tired with racing, they would suddenly scuttle into the burrow, only to return in a few minutes and renew their frantic exertions.'¹ From Mr. Hodgson's description of this Shrew as 'white beneath,' I infer that he has not met with entirely black specimens. They are no doubt of less frequent occurrence than the particoloured form.

Order *CARNIVORA*.

Fam. *FELIDÆ*.

WILD CAT.

Felis catus, L.

Although little has been said in recent years of the former existence of the Wild Cat in the Lake district, and though

¹ *Trans. Cumberland and Westmorland Assoc.*, No. xi. pp. 38, 39.

the memory of its quondam presence no longer survives among the venerable dalesmen whose grandfathers were the chief instruments of its extinction, yet fortunately we possess satisfactory evidence that at one time it was to be found in many of the wilder portions of Lakeland. It is not probable that it was ever *numerous* during the historical period. But that it ranged over the Scottish borders is no less certain than that it inhabited the great wastes of eastern Westmorland and the heart of the Cumbrian mountains. Our first note of its presence is supplied by an entry among 'My Lord's Parcels' in Lord William Howard's accounts for 1629: 'Maye . . . 6. For a wilde cattskinne iijs.' A fox skin was priced at the same time at three shillings, so that the pelage of the cat was evidently the scarcest and the most difficult to procure.

A graphic description of the country between Naworth and the Scottish march, as seen about the middle of the last century, appears in the seventh edition of Defoe's *Tour*. The writer observes regarding Christenbury, "It has at present no Inhabitants but Wild Cats, of which there are many, the largest I ever saw."¹ The information thus embodied by Defoe was first printed in the *Gentleman's Magazine*. It appeared in the month of November 1754, and it seems not unlikely that the tourist paid his visit to Bewcastle in August that year. Wild Cats do not appear to have been sufficiently numerous to figure frequently among the victims of church rates. I have discovered entries of *ten* Wild Cats in the parish books of Kendal and Orton, and have little doubt that additional research would increase the number of known entries. The churchwardens of Orton, near Appleby, gave a shilling apiece for the heads of Wild Cats. Entries of heads of Cats occur singly in the years 1649, 1650, 1661, and 1672. In 1670 we find two separate entries of cats' heads. The first runs thus: 'To Robt. Wilson for a wild cat head, £00, 01s. 00d.' The next is similar: 'To James Ward for a wild catt, £00, 01s. 00d.' There is a more general entry in 1672: 'for a wild Cat and other vermine, £00, 01s. 05d.' The Kendal parish books

¹ *Tour through Great Britain*, 7th edition, vol. iii. p. 333.

supply a few similar entries. Thus in 1703, 'Dec. 27. To Anthony Wilson for one Wild Catt head, £0, 0s. 4d.' The next entry that I have detected occurs in a long list of the 'vermin' paid for at the Easter vestry meeting of the same churchwardens, April 1713: 'and for one Wilde Catt Head, £0, 0s. 4d.' At Easter 1726 the Wild Cat crops up again: 'pd. Robt. Rutson for a Wild Cat Head, £0, 0s. 4d.' These animals were very probably killed in that eastern portion of the parish which borders on Shap, forming part of the same great stretch of moorland as that included in the neighbouring parish of Orton.

But it must not be supposed that these animals only tenanted the wastes of the dreary moors that flank our faunal area to the north and east. They existed in the heart of the Lake mountains. Clarke states that twelve Wild Cats were killed in the neighbourhood of Ulleswater at Whitsun-week 1759; while, in describing the vicinity of Keswick, he alludes to the wooded rocks, Catt-gill and Catt-cragg, 'so named I supposed from the wild catts which inhabit there.' The same writer states in his Appendix: 'The Wild Cats here are of different sizes, but all of one colour (grey, with black strokes across the back); the largest are near the size of a fox, and are the most fierce and daring animals we have; they seem to be of the tyger kind, and seize their prey after the same manner; they cannot be tamed, their habitation is amongst the rocks or hollow trees.' It was of the Windermere district that Pennant remarked, 'Wild cats inhabit in too great plenty these woods and rocks.' Gilpin made a personal tour through the Lakes in 1772, and this is what he says: 'The thickets among these mountains (Helvellyn and others adjacent), and indeed many other parts of the country, are frequented by the Wild Cat, which Mr. Pennant calls the British tyger, and says it is the fiercest and most destructive beast we have. He speaks of it as being three or four times as large as a common cat. We saw one dead, which had been hunted on the day we saw it; and it seemed very little inferior, if at all, to the size he mentions.'¹ Mr. Housman contributed to Hutchinson's *History of*

¹ *Picturesque Beauty of the Lakes*, vol. i. p. 173.

Cumberland this note regarding Wastdale, Netherwastdale, and Eskdale: 'On the summits of these mountains are many wild cats, foxes, and martins.' Richardson wrote from Ulleswater in 1793 a note that may or may not imply that the animal was still abundant, but Dr. Heysham negatives the idea, manifestly believing that Wild Cats were dying out [1796], as no doubt they were: 'very few wild cats are now to be met with in any of our woods, except those bordering on the lakes, and even there they are far from being numerous.' Mr. Dickinson furnishes another passage: 'In 1843 the late Mr. John Walker of Ullock told me that about fifty years before Joseph Pearson of Ullock, with the aid of his mastiff, killed a wild cat in Watern Woods, Loweswater, after a long chase and severe fight. The cat weighed seventeen pounds. These animals had been numerous in most of the wooded and rocky parts of the country; and had been very destructive to game, and occasionally to young lambs; and from their great activity and ferocity were more than a match for any but a very strong dog, single-handed. Pearson and his dog killed many.'¹ That veteran, Mr. W. Hodgson, says, 'the Wild Cat lingers among the fells of Cumberland only by tradition. The last I ever heard of was captured in Great Mell Fell early in the present century by the famous pack of hounds maintained by the squire Taylor of Baldhow of that day, from whom I derived my information more than forty years ago [1885].'²

The *Carlisle Express* of March 4th, 1871, states that Walter Graham, keeper for Mr. Standish of Brackenhill Tower, caught a Wild Cat in one of his rabbit-traps, upon the 27th of February that year. It had been 'viewed' for years about Whitesyke, but had always previously escaped. The animal was stuffed by Mr. Plenderleath of Longtown for Mr. Richard Wright, a well-known wrestler. I have no faith whatever in this animal having been a *true* Wild Cat. Specimens of very large cats, which had been killed in Patterdale and in other wild districts, have come under my notice from time to time, but no one of the number could be referred to *Felis catus*.

¹ *Cumbriana*, p. 166.

² *Trans. Cumberland and Westmorland Assoc.*, No. xi. p. 27.

Order *CARNIVORA*.Fam. *CANIDÆ*.

FOX.

Canis vulpes, L.

Westmorland is too mountainous to be a great fox-hunting country, but the sister county offers good opportunities for sport, especially in the Cumbrian plain. The anonymous author of an admirable pamphlet, entitled *The Cumberland Foxhounds*, tells us that fox-hunting (in the sense understood, say, in Leicestershire) dates its inauguration as a Cumbrian sport from the year 1827. However that may be, there can be no doubt that the Foxes of our fells have been hunted with such dogs as those of the Patterdale pack from time immemorial. At one time the pelage of this animal enjoyed considerable repute. The monks of Lanercost included among their chartered privileges a tenth of Fox skins: 'decimam totius venationis prædicti Roberti de Vallibus et hæredum suorum, tam in carnibus, quam in coriis et pellibus vulpinis ubicunque per totam terram suam in Cumberlanda venabuntur.'¹

A good day's sport was generally followed by a 'jollification' at some favourite inn. The country gentlemen recognised the sport of their poorer neighbours as a useful assistance to their shepherds. Thus Sir Daniel Fleming includes in his accounts for May 12, 1673, 'Item, to some Ambleside men who had killed a spotted fox, £00, 00s. 06d.' The same sum was also forthcoming to the same men in the following year. Similarly, Lord William Howard's accounts for 1612: 'Nov. 27. To Mr. Skelton's man caching a fox, v s.' Perhaps this Fox had proved to be a Tartar; he may have inflicted some audacious outrage on the Naworth hen-roosts. At all events the price was a high one for the beginning of the seventeenth century. The churchwardens of most of the parishes among our mountains gave an unstinted support to vulpicide, but the figure set upon a fox's head varied in different times, and rose gradually in nearly all

¹ Dugdale, *Monasticon*, vol. vi. p. 237. In the seventeenth and eighteenth centuries our fell folk were in the habit of gathering together from far and near to hunt the 'vermin.'

the parishes. In the parish of Orton, Westmorland, only a shilling was given for a fox's head between 1636 and 1670. The Cartmell accounts for June 13, 1653, show that half-a-crown was the rate paid for every Fox whose mask was produced before the wardens: 'To Willm Kilner for killinge of foxes, £0, 10s. 0d. Pd to Tho. Atkinson and Edwa. Newbie for the like £0, 2s. 6d. Pd for drinke to ye hunters for killinge a foxe, £0, 0s. 6d.'

Some question of the rate of head-money to be given must have arisen at this vestry meeting, because it supplies a special memorandum: 'A.D. 1653. It is ordered and agreed that Willm Killner shall paye to the hunters for killinge of foxes xxj d., and likewise that the Churchwardens shall paye to them xxij d. more furth of ye xx^{tie} (twenty) M'ke Caste, and that the hunters shall have v s. for eache olde foxe and for every younge one xij d.' Canon Bardsley cites a few entries from the accounts of Ulverston parish, which prove that five shillings was commonly paid for these animals in the next century: '1728 . . . to one ffox head, 5s. 1729. A fox cub, 5s. 1741. Jan. 12, paid Saml Gawith for ffox heads, 15s. 1742. ffeb. 13, to Thomas Postlethwaite for killing fox 5s.' The zeal of the churchwardens abated at the close of the last century; but among various entries in the accounts of the churchwardens of Dalton in Furness for 1789 we have an item: 'Killinge 1 old fox and 3 young ones, £0, 5s. 6d.'

Numbers of Foxes were killed in the wild dales which Kendal parish once included in its area. From 1700 to 1718 the price claimed for a fox head in this part of Westmorland was a shilling, subsequently it rose to five shillings. Thus at Easter 1732: 'April 11. Pd. to Leo Cowperthwaite, chape lwarden for Overstaveley, for a fox head, £0, 5s. 0d. Pd. James Garnett for a Cubb hd., £0, 0s. 6d.'

The Keswick men at one time tried *cub-hunting* for a few seasons. In 1723 they killed thirteen cubs and only three old foxes. In 1725 they claimed head-money for twelve cubs and only one old fox. But they soon found that killing cubs was unremunerative. The churchwardens of Crosthwaite Church at this period gave three shillings and fourpence for an old fox,

while a cub was only worth a shilling. Consequently the entries which follow in succeeding years refer almost exclusively to full-grown foxes. An analysis of the moneys expended by the Greystoke churchwardens, upon the encouragement of vulpicide, shows that the total number of Foxes paid for at Greystoke, during the fifty years from Easter 1752 to Easter 1802, was ninety-one. This included eleven cubs and eighty full-grown animals. The moneys expended upon their destruction during the half-century amounted to £13, 16s. 8d. Twenty-four of these Foxes, including seven cubs, were paid for between 1752 and 1762. Twenty-one heads were presented in the next decade, including those of two cubs, which for some unexplained reason were disallowed. The numbers killed in the three decades which follow amounted to fifteen, eleven, and twenty respectively. The price usually paid was a shilling for a cub and three shillings and fourpence for an old fox. Thus : ‘[1799] May 15, To Materdale people A fox head, £0, 3s. 4d.’ Nor was the custom of paying for fox heads discontinued at the end of the century. At Greystoke it only became obsolete in 1856. ‘On entering this church,’ says the Rev. T. Lees, ‘on Easter Day 1856, I was startled to find the door disfigured by a grinning fox’s head, and a chaplet of ravens’ heads nailed up. According to the ancient custom, 3s. 4d. for the cub’s head, and 4d. each for the raven’s heads, were demanded at the vestry the following week.’¹ These charges were disallowed for the first time, on the ground that the *keepers* who claimed the reward were paid by their employer to kill vermin, and therefore were not entitled to a subsidy from church rates. But though instances of churchwardens continuing to pay head-money for the Foxes of our fells in our own time are exceptional, there can be no doubt either as to the serious losses which these animals inflicted upon the flock-masters, or the real necessity for keeping their numbers in check. About sixty years ago, ‘the shepherds and others, resident at Crosthwaite, Watermillock, Patterdale, and Martindale, presented a handsome silver cup to John Taylor, Esq. of Baldhow, for his indefatigable exertions in destroying foxes by his excellent pack

¹ *The Parish Church of St. Andrew, Greystoke*, p. 13.

of hounds. In the course of the last two years these dogs have killed fifty-six foxes.¹

In some cases it was found necessary to supply the funds previously expended by the churchwardens from private subscription. In 1847 a society was voluntarily established in Cartmell 'for the express purpose of extirpating all the foxes in that district. The members were staid yeoman and farmers, servants and young men being declared ineligible. The scale of payment was £1 for every vixen, and 5s. for dog foxes and for cubs. Mr. John Atkinson killed five cubs and their mother, for which service he received £2, 5s. from the newly formed society.'²

Almost all that has been said of the *vulpicide* practised among the crags of the Lake mountains will seem disagreeable reading to any south-country fox-hunter, but the truth should be told. The fact is notorious that animal life is so scarce on our hill-sides, that unless the Foxes helped themselves to 'lamb' occasionally, they could hardly exist. On the other hand, these animals often make their 'earths' in precipitous places, where the gun and the steel trap must be employed to keep their numbers in check.

One day last autumn we visited an ancient dame, dwelling alone in an ivied cottage on a lonely height above Ulleswater Lake. There she had lived for sixty years, and her only trouble was the apprehension of a visit from the Fox. When she lay awake in bed in the still night, she frequently heard his short, shrill bark, and trembled for the safety of the hen-roost, which had so often been desolated. The farmers on the lower grounds are equally loath to lose their fattened geese. Only a few weeks ago a Fox killed eight geese on one farmstead. So public opinion maintains the warfare against Reynard as a public enemy. If the outlaw will afford good sport, he gets fair play, but when he lies up in a lair among steep recesses of the weathered cliffs, the dalesman has obviously no choice but to enforce the reduction of a vulpine family by harsh measures. Thus it has come about that the people in the dale are

¹ *Carlisle Journal*, January 10, 1829.

² *Carlisle Patriot*, May 21, 1847.

strangers to such feelings of mingled regret and pity as those which once came over me on a moor near Crossfell. We were tramping along on a fine summer evening, when suddenly a beautiful red vixen sprang out of the heather close to our feet. When my terrier dashed off in pursuit, we saw with sorrow that one of her dainty 'pads' had been cruelly crushed in the heavy iron trap which was dangling from the extremity of the broken limb. So little does a native of these parts appreciate the criminality of destroying Foxes in cold blood, that he has no scruple in advertising the success of the strategy employed for the safety of the hardy Herdwick sheep, by exposing the carcasses of his victims to the public view. When the Rev. T. P. Hartley visited Mardale in 1888, he came across three defunct Foxes suspended in a row from a small tree, the hind-legs having been trussed together to improve the artistic effect of the exhibition. Old sportsmen love to argue about local breeds of Foxes. Most of the number maintain that the 'terrier' Fox is an animal that lives on the lower grounds. The 'greyhound' is, of course, the Fox of the hills. Captain Kinsey Dover, who long resided at Keswick, used to maintain that the Foxes paid for by the Crosthwaite churchwardens of bygone days were 'of what we used to call the "greyhound" breed; they had much longer legs than the present race, and with no black upon them; the face was also much longer—in fact, it was larger in every way than the black-footed Irish one. It is now quite extinct in this district [1882], and has been for many years past. I knew the animal well.'

Little has been said of the Foxes which have their earths in our larger coverts. The individuals which take to life on the mosses are often troublesome to nesting birds, such as wild ducks engaged in the duties of incubation. But they afford grand sport on occasion, not perhaps furnishing such heroic tales as those which are best recited at the fireside of the shepherd's lonely house on Skiddaw, but still affording a lively interest to those who have the good luck to follow them across country.

¹ *Zoologist*, 1882, p. 108.

Order *CARNIVORA*.Fam. *MUSTELIDÆ*.

PINE MARTEN.

Martes sylvestris, Nilss.

Although the 'Mart' has long enjoyed a pleasant reputation among the sportsmen of the Lake mountains, it fell to the lot of a stranger to be the first to record the existence of this animal in Westmorland. John Manwood gave his account of the matter in the year 1598: 'The Marterne, or Martron, as some old Foresters, or Woodmen, do call them, being the fowerth beast of chase, whereof we have no great store in these forests on this side Trent, but yet in the County of Westmerland in Martendale there are many.'¹ The district thus indicated is appropriately named; not that 'Marts' are more numerous in that dale than in others, but because it is situated in the *centre* of the region across which this mountainous species chiefly roams. Outlying 'Marts' are killed from time to time on the skirts of our faunal area. A keeper named Solomon killed a 'Mart' in Barron Wood in 1880, and sent it to James Fell, at whose house I examined it some few years afterwards. Mr. Lindsay was once sent for to kill a 'Mart' which had worried a sheep near Broughton; he also killed the only 'Mart' ever known to have visited Blackcombe, about the year 1847. Clements of Tebay showed me a fine specimen killed in 1889, remarking that he thought it must be '*the last* of the Westmorland Sweet Marts.' This Marten had at some previous period lost one of its feet in a trap. It was killed in a very unromantic way, for, having found its way into a barn, it was worried by the farmer's cur-dog. Other instances might be cited to show that Martens occasionally appear on low grounds, on mosses, and in woods at a distance from their usual haunts; but they happen very seldom. Mr. J. A. Harvie-Brown once wrote of the Marten as 'not uncommon in the east of Cumberland.'² I am not aware that any specimen of the Marten has *ever* been heard of, far less taken, in that part of Lakeland to which Mr. Harvie-Brown referred, though Thomas Knox trapped a stray Marten on

¹ *A Treatise of the Forrest Lawes*, p. 26.

² *Zoologist*, 1881, p. 162.

Great Barrock Fell, April 1857.¹ In prehistoric days the Mart no doubt enjoyed a much more general distribution; possibly it ranged through the forest lands of the Cumbrian plain and the bottom of the valleys. Its existence in our midst in those early times has been proved by the discovery of teeth, in a fine state of preservation, obtained from the fissures of Helsfell. The 'Marts' of the present century frequent the high mountains of Central and Western Lakeland, including Kentmere, Long Sleddale, Hawswater, Mardale, Martindale, Patterdale, Grasmere, Kirkstone Pass, in Westmorland; Borrowdale, Eskdale, Ennerdale, and Wastdale, in Cumberland; Ulpha and Coniston, in North Lancashire. 'Marts' have been hunted in all these districts, but they appear to have been most numerous for the last sixty years in Eskdale and Wastdale. 'Gay smittle ground is Coniston,' quoth old Lindsay; adding, a moment later, that he thought Ennerdale almost as good.

The Marten is almost compelled to live on the roughest and most broken ground that it can find, because on an open, level plain it could easily be run down even by a fast cur-dog. On a fine day the Marten is generally to be found *sunning* itself, half-hidden among the briars and ling of some lofty crag. The animal travels almost exclusively by night, when it wanders considerable distances in search of carrion, upon which it largely subsists. It is fond of feeding on birds, but, curious to say, the most attractive bait that can be used for the Marten is *fish*. Shepherds sometimes complain of individual Martens worrying sheep, but it rarely happens that any such loss is inflicted on the farmers, whose worst enemies are the Foxes. Mr. Lindsay can vouch only for two cases, within his personal knowledge, of Martens *worrying* sheep. In one case the 'Mart' had killed an old ewe. In the second instance, a 'Mart,' which had worried two lambs, was hunted and killed in the 'scree,' Wastdale.

Daring as are the leaps which these small animals venture to make when hard pressed by dogs, Mr. Lindsay remembers only one involuntary fatality. The Marten in question tried to leap from one ledge to another, but missed its footing and was dashed to pieces.

¹ *Carlisle Journal*, April 24, 1857.

The Marten brings forth from two to three young ones in the month of May. Once, and once only, has Lindsay known this limit to be exceeded. Four was the number then produced. He has found the young in holes in the crags on several occasions, not at the end of deep and tortuous passages, as might be expected, but 'only a laal bit in,—*any I found.*'

Mr. A. H. Cocks, whose valuable researches into the life-histories of British quadrupeds are well known, obtained a litter of three cubs from a Cumberland Marten, after she had lived six years in his possession.

'An adult female Pine Marten, sent to me from Cumberland in May 1876, had for the last two, if not three, years, shared a cage with a male of the same species, without showing any signs of breeding, until about eleven P.M. on April 7, 1882, I heard the unmistakable whimpering or squeaking of young ones proceeding from one of the bed-boxes in this case; I had fed the Martens about six o'clock, and feel certain that no young were then born. I at once shut off the male animal, not knowing how he might treat the youngsters. On the morning of the 10th I ventured to take out one of the young. It was about 6 inches long, including the tail, which was about, or nearly, $1\frac{3}{4}$ inches long, and appeared out of all proportion in so young an animal. It will, I believe, be a surprise to others, as it certainly was to me, to learn that this species is at first quite *white*; the coat being, of course, fine and short.'¹ Mr. Cocks adds that his young Martens were quite full-grown by the following autumn.

The Marten usually prefers to live on the *sunny* side of a fell. Foxes and Martens do not flourish very well on the same ground. 'When foxes is rank, marts is scarce.' The dalesmen only hunt Martens in the winter-time, and generally find the quarry hiding up 'in a brossen rock where there is a deal of heather.' The 'foil' of the Mart is sweet, but all dogs are willing to follow it. Some dogs will hunt Otters but not 'Foumarts;' others will hunt 'Foumarts' and not Otters, but as to 'Marts' there is no difficulty.

Mr. W. A. Durnford has furnished so picturesque a description

¹ *Zoologist*, 1883, p. 203.

of a 'Mart' hunt that no apology need be made for quoting it *in extenso* :—

'The meet,' he says, 'was at Wastdale, one of the grandest and most secluded valleys in the Lake district. Long before daybreak we were awakened, at the little inn, by the voice of the huntsman who had arrived with six couple of hounds, varying in size from a beagle to a foxhound, together with three wire-haired terriers. As the mist still hung like a wet blanket on the hills, and the day had not yet broken, it was decided that we should begin by trying our luck on the low ground at the head of the valley, and thither we accordingly bent our steps. We proceeded thus for nearly an hour, and though an occasional whimper from one of the hounds led us to think that something had passed that way during the night, if it had done so we were quite unable to hit off its line. Being particularly anxious to show some sport, the huntsman now resolved to take to the hills, notwithstanding the mist; and, having received instructions to keep well together, we commenced the ascent of Yewbarrow, a mountain rather over 2000 feet in height. It soon became evident that something was on foot; the hounds showed evident signs of excitement, eagerly examining every nook and crevice, and stopping now and again to drink in, as it were, the scent from all the rocks. Still they seemed at a loss, until an old dog, which had been steadily hunting at a little distance from the rest, suddenly commenced to give tongue. The others made a rush towards him, and the whole pack was quickly off full cry up the face of the mountain, raising a chorus which resounded from crag to crag across the valley below, and was re-echoed again and again from the rugged sides of Scawfell and the adjoining heights. The object of our early start now became manifest; the knowing ones proclaimed that it was a Mart which we were in pursuit of, and that we were probably close upon it, having no doubt taken it unawares before it had returned home from its nocturnal rambles. The hunting now commenced in earnest—no easy galloping over well-kept pastures, no awaiting one's turn to pass through a crowded gate or well-worn gap, no convenient check at a pleasant covert-side, but downright hard work, not unaccompanied with the spice of

danger—at one time clambering on hands and feet up a perpendicular precipice, at another crawling through a narrow crevice between two high boulders; now running across a sea of stones, which gave way at every step and render it impossible even to think of standing still; now stepping from ledge to ledge, and trusting one's life to the sturdy alpenstock with which each one has armed himself before setting out. The hounds meantime are clambering up with an agility which would astonish their relations further south, resembling a party of squirrels rather than members of the canine race, as they vie with one another in their anxiety to be to the fore.

'About an hour of this sort of work brought us to what was, comparatively speaking, level ground, and here we for the first time met with a check. The Mart had considered discretion the better part of valour, and had taken refuge in a deep crevice in the face of a rock. As the efforts of the terriers were of no avail, artificial means were now brought into requisition in order to dislodge the varmint. We all set to work to collect as much grass as the locality afforded; the huntsman produced from his capacious pockets a box of matches, a little gunpowder, and an old newspaper, and in a few minutes a fire which consisted of smoke rather than flame was burning as far down the crevice as the fuel could be thrust. We had not long to wait. All stood back, and in less than three minutes a long dark object was seen scampering over the rocks above our heads, having escaped out of a hole a little distance off.¹ Away we went again, both hounds and men more excited than ever, leaping from crag to crag, and performing acrobatic feats from which any one would have shrunk in cold blood. The ground now became of a rather less difficult nature, and we were able, without imminent danger of destruction, to take a glance at the surrounding scenery. The rising sun had dispelled the mist, and the atmosphere had by this time become quite clear, though a few clouds hung on the summit of the higher peaks. From our elevated station we

¹ Tobacco has sometimes been employed as fuel in lieu of grass and heather. Occasionally the hunters 'rolled' the 'Mart' out of its hiding-place with fragments of rock.

looked across to the rugged face of the Screes, one of the grandest hills in the district. Beneath us Wastwater lay like a duck-pond, the cultivated fields at the head of the lake contrasting well with the dark sides of the surrounding heights. Towering above, Lingmell, Great Gable, and Scawfell Pikes, seemed to watch over the scene, while away to the west the waves of the Irish Sea sparkled under the rays of the morning sun. Close to us a pair of ravens and a buzzard, attracted by our presence, were doubtless wondering who it was that had ventured to invade their domain. But it would not do to linger; already the hounds were out of sight, and nothing but their baying would enable us to follow in their track. Another check, this time amongst a quantity of loose boulders, extending for some hundreds of yards in each direction. Again the terriers were set to work, and again the 'Mart' continued on his way unharmed. It was, however, the beginning of the end. We were now on the summit of the mountain, and before us extended a grassy plateau, only here and there broken by fragments of rock. The quarry was evidently making for the Pillar Mountain, which stood out in the distance, a notable stronghold for birds and beasts of prey, and which, if once reached, would afford a certain protection. Bravely the little creature raced on, no longer stopping to take refuge in the rocks, which it knew could not give it shelter, but staking all on its swiftness of foot. On the level ground, however, it had no chance, though it managed to head its pursuers for about a mile after leaving the rocks. The actual circumstances of its death need no description; in fact, the hounds alone were present at the critical moment.¹

Such was the royal sport enjoyed by the dalesmen when 'Marts' were more plentiful.² The hounds still hunt their old

¹ *Field*, 6th December 1879; reprinted in the *Zoologist*, 1891, pp. 406-408.

² It is always pleasurable to draw out a venerable sportsman on the subject of his darling hobby. I once asked old Mr. Jackson of Martindale, then in his eighty-sixth year, whether he had hunted 'Marts.' The face of the veteran lighted up as he replied: 'We oft hunted "Sweet Marts" at different places—they were very common onceover. They were paid for out of church rate—"Marts," Foxes, and Ravens. I can't mind of anything but Foxes and "Sweet Marts" and Founmarts of that tribe.'

ground, and occasionally kill a 'Mart'; this, however, is *now* a much rarer event than formerly. But it must not be imagined that the hounds *ever* killed *many* 'Marts' in a season. It was never so known in Lakeland. Any large figures should be discounted liberally. Lindsay says that he never remembers more than five or six being killed in Eskdale in a single winter, even when the animal was comparatively plentiful.

An aged native of Boarsdale, who had often hunted 'Marts,' doubted if as many as five or six were ever killed in a season in Martindale, Patterdale, and the country round. In Wastdale 'not more than four to six are killed by the hounds each year,' wrote Dr. Parker rather more than thirteen years ago.¹

Yet it must not be supposed that Martens are or were obtained only with the fox-hounds and otter-hounds. The last that was caught among the crags at the head of Martindale had had the misfortune to stray into an ordinary steel trap set for rabbits, a circumstance by no means very rare. Indeed, the keepers whom the tourists thoughtlessly persuaded to procure specimens of the Marten generally take them in steel traps baited with carrion. One old method was identical with the species of trap known a 'deadfall.' The animal was of course crushed by the 'dead-fall.'

Fifty years ago a dog 'Mart' fetched 6s. 6d. at Kendal for the sake of his skin. A bitch fetched 5s. 6d. for the same purpose. On the other hand, plenty of men about Whitehaven and elsewhere in the west were at that time only too glad to purchase live Otters, 'Foumarts,' and 'Marts' for their dogs to kill. Though the poor 'Mart' could not fight as ferociously as the Foumart, yet it was considered game enough to show good sport. Accordingly a 'Mart' that was caught '*wick*,'—the term applied locally to all 'vermin' caught alive,—readily commanded ten shillings. The trap, therefore, devised to take the 'Mart' '*wick*' was constructed on the same principle as the schoolboy's 'brick trap.' In lieu of bricks the trapper employed three long flags of nice grey stone, covered by a fourth, and set in the haunts of the 'Mart.' It was sometimes baited with carrion, or with a dead bird, but the most successful bait was fish. A salt

¹ *Zoologist*, 1879, p. 171.

herring which had been steeped in water was very frequently employed.

During the last nine years I have conversed with many persons who have hunted 'Marts,' or who had received them from Lakeland for preservation, but I have met no one who in a knowledge of 'Marts' could compare with the intimacy of that keenest and gamest of old hunters, Tommy Lindsay of Eskdale; accordingly I have drawn fully on his experience. But he begs me to say that his old friends Cookson and Tommy Dobson are or were quite as successful hunters as himself, and are equally qualified to speak authoritatively. The average weight of a dog 'Mart' runs from 4 lbs. to 5 lbs. It is curious that so interesting a species as this Marten should have been ignored by early local writers. Dr. Heysham only tells us that 'the Martin is much less frequent than the foulmart. It inhabits woods, and its smell is rather agreeable than otherwise.' The Doctor seems on this occasion to have copied Richardson, who had written that the '*Clean Mart*' occasionally afforded good sport to the hunters in the woods and about the rocks, and that its skin was in much estimation. The author of the *Observations, chiefly Lithological*, visited Keswick in 1803. He there drew up this note: 'The foul and sweet Marts (as is the provincial expression for the Martin) are very common here, and are valuable on account of their skins. The first sells for eightpence in the market, and the latter for four shillings and sixpence.' The Pine Marten does not seem to have been paid for as 'Vermin' in many of our parishes. The only references that I have been able to discover exist in the parish books of Patterdale, Greystoke, and Kendal. The entries in the first two of these are most meagre, and relate only to four or five animals, described as 'Marts.' For example, I find an entry in the Greystoke accounts for 1825: 'Novr. 5. To Jno. Ubank for 2 Marts, £0, 5s. 0d.' Even the number mentioned in the Kendal books is inconsiderable. The largest number ever paid for, separately at any rate, in one year, was only five, though the northern portion of the parish included some of the strongholds of this species, such as the crags of Kentmere. If the reader will take the trouble to compare the following figures from the Kendal parish books with those of

the Fomarts, he will find the relative rarity of the Pine Marten evidenced in the first years of the last century : '[1700]. June 29. Pd. to ye Churchwarden of Overstaveley for Tow Clean Marts, £0, 0s. 8d.' '[1701] Oct. 18. Pd. to ye Churchwarden of Under[barrow] for 5 Clean Marts, £0, 1s. 8d.' Dec. 27. Pd. to Wm. Towars for 8 foule Marts, one Clean Mart, 2 Ravens and one Brock, £0, 2s. 6d.' '[1704] April. To Geo. Wilson for one Clean Mart, £0, 0s. 4d.' '[1705] April. Paid to Alec Jackson for one Marte and one Brock heads, £0, 0s. 10d.'

In Lakeland the Pine Marten is often called the 'Sweet Mart' nowadays, but I have never heard the term 'Clean Mart' employed. It has probably become obsolete. Old hunters usually speak of the Marten simply as '*the Mart*,' but sometimes as the 'Crag Mart.' The latter expression is used in distinction to the 'Pine Mart,' which is locally supposed to be a darker animal, lacking the yellow tinting considered characteristic of the 'Crag Mart,' and more at home among trees. Any 'Mart' will ascend tree after tree like a squirrel if hotly pursued by dogs and men. On such occasions an old Magpie's nest often offers a temporary shelter, of which the 'Mart' is not slow to take advantage. Otters, if to be caught '*wick*' (*i.e.* alive), must be 'tailed'; if a 'Mart' is to be secured without injury to itself or its captor, it must be 'clicked' by the neck. On looking over my notes, I find the following specimens of the Pine Marten mentioned among others that have come under my scrutiny of late years: One killed in 1888 near Crosby Ravensworth, where two others had been trapped by the same keeper a short time before; one killed in the Patterdale district in 1889; two killed in the Windermere country in December 1890, and January 1891; yet another was killed at Hawswater, and sent to Hope on May 6, 1891. Mr. F. P. Johnson informs me that a dog and bitch were killed at Wallow Crag, near Keswick, in November and December 1891. Those presented by Mr. J. W. Harris to Tullie House were obtained in the Keswick district. It should be remembered that though the haunts of this animal are remote and difficult of access, its numbers have of late years greatly decreased. 'Marts' are so much scarcer than they used to be, that our sportsmen might well take a pride in preserving

a brave quarry that has inhabited their fells from the Pleistocene period.

WEASEL.

Mustela vulgaris, Erxl.

This game little quadruped is still sufficiently plentiful about our hedgerows to contribute in an important degree to the destruction of the Brown Rat. If our good neighbours on the Borders would only encourage Weasels and Owls, in place of exterminating their best allies, we should hear less of plagues of Rats and Field Mice in the Scottish Lowlands. Weasels have a weakness for young birds, but any harm that they do is limited to a few weeks in the year, while they are always doing good in season and out of season.

The hateful Brown Rat has no more determined foe than the Weasel, and a pair of these animals will, if encouraged, exterminate a large colony of Rats. That Weasels and Stoats take to water readily is a fact of common knowledge, but instances of the former species crossing large sheets of water voluntarily appear to be rare. A Weasel was once killed when swimming across Ulleswater at a point where the lake is three-quarters of a mile broad.¹

STOAT.

Mustela erminea, L.

Trapping has latterly checked the increase of the Stoat, and though its weakness for leverets cannot be denied, it should be accredited with rendering useful service in keeping down the Brown Rat. Mr. T. Coward tells me that he has come across large packs of Stoats on several occasions, always in the fall of the year. They appeared to consist of the young of the year, and were probably performing a partial migration. The Rev. T. Lees informs me that he once saw a pack of Stoats hunting a Hare in Gowbarrow Park. He stood still and saw both the Hare and its pursuers pass within a very few yards of him. The Stoats were in full cry. Stoats do not appear to vary as much

¹ *Carlisle Patriot*, Dec. 29, 1843.

* in size as either Martens or Fomarts. The largest Stoat that I have seen in the flesh was killed on our northern border in March 1885, a male, in the ordinary brown pelage. The head and body of this animal, irrespective of the tail, measured 13 inches, thus exceeding the figures given in Bell's *British Quadrupeds* by more than 2 inches.

POLECAT OR FOMART.

Mustela putoria, L.

Within the last thirty years the Polecat has become very scarce in Lakeland. Formerly it was to be found in almost every dale, and on all the mosses, seldom venturing to seek shelter among the crags and boulders behind which the 'Sweet Mart' lodged, but enjoying a very general distribution from the mosses round Morecambe Bay to the wild wastes which march with the Debateable Land. The active yeomen, to whom this animal was an object of admiration from the sport which it afforded to their hounds and the determination of its defence, early learnt to call it the Foul Mart, in contradistinction to the Clean Mart or Sweet Mart. Latterly the name of Foul Mart has been shortened by the contraction into Fomart, under which it is still well known on all our country-sides, though now very scarce in most parts of the Lake district. My inquiries about Fomarts commenced about nine years since, and were made from likely individuals in all quarters. At that time the Fomart had nearly disappeared from all the dales which it formerly frequented, and had become almost extinct on most of the lower grounds. A few individuals lingered in the Eden valley, while others haunted sedgy fields and rough meadows on our northern border. The real stronghold of the species in the Cumbrian plain was then, and still is, a narrow strip of timbered and marshy country extending from Carlisle to Wigton, Maryport, and Bowness; that tract, in fact, which lies between the Solway Firth and the Maryport and Carlisle Railway. But before we discuss the latest details in the history of our Fomarts, it may be convenient to consider the distribution which this animal formerly enjoyed. Up to the middle of

our century the Foumart was numerous in the Alston valley, and about the villages which lie at the foot of the Pennine range. It was plentiful in the woods near Keswick. The stone walls of the Coniston district afforded many a safe hiding-place to this nocturnal animal, especially near the lake side. In the higher dales it was always less common, because food grew scarce in the upland valleys, but still it long maintained its footing. Mr. Jackson, who has lived all his life in Martindale, and has passed his eighty-fifth birthday lately, assured me that a few Foumarts were always to be found in Martindale in his younger days. His son showed me the exact spot on which the *last* Martindale Foumart known to him was killed, about the year 1859. In the beginning of the eighteenth century the Foumart was more numerous in Lakeland than has been the case at any subsequent period. The accounts of Kendal Parish Church afford us many entries of payments by the churchwardens for the heads of Foumarts. From this source I supply some statistics, in reference to which it should be remembered that Foumart hunters generally commenced their amusement after the first frosty night or two in November. The heads of the animals killed up to Christmas were tendered to the wardens on a 'Peremptory Day,' generally about two days after Christmas. The accounts were then settled, and the sport was carried on with additional enthusiasm in the months of February and April, the animals' heads procured during these spring months having to be accounted for at the Easter Vestry meeting. Commencing in the year 1700, we find that the Kendal vestries passed the following accounts: '[1700] Dec. 27. Pd. to Tho. Dodgson son for 2 ffoule marts and one Raven, £0, 0s. 6d. Pd. to Dan. Best for 4 ffoule marts, £0, 0s. 8d. Pd. to ye Churchwardens of Grayrigg for 4 ffoule marts and one Raven, £0, 0s. 10d. Pd. to Wm. Parker for 5 ffoul marts, £0, 0s. 10d. Pd. to Tho. Hodgson son of Birkhagg for 5 foule marts, £0, 0s. 10d. Pd. to Tho. Dodgson son for 6 ffoule marts and one raven, £0, 1s. 2d.' At the Easter Vestry in April 1701 the following moneys were ordered to be disbursed: 'Pd. to Tho. Hudgson for one ffoule Mart, £0, 0s. 2d. Pd. to ye Churchwardens of Underbarrow for 15 foule Mart and one Raven, £0, 2s. 8d. Pd.

'to ye Churchwarden of Strickland Roger for 19 foule Mrt., 1 Clean Mt., and 1 Raven, £0, 3s. 8d. Pd. to Edw. Hallithown for 14 ffoule Marts and 3 Ravens, £0, 2s. 10d. Pd. to ye Churchwarden of Whiterwell for 3 ffoule Marts, £0, 0s. 6d.' In the early winter of this year, 1701, a Vestry meeting held on December 26 passed the following accounts: 'Pd. to Matthew Wilson for 4 foule Marts, £0, 0s. 8d. Pd. to ye Churchwarden of Stricklandroger for 22 foule marts, £0s. 3s. 8d.' At the Easter Vestry in April 1702 no fewer than *fifty-one* Foumart heads were produced and paid for. At the Vestry meeting held at Easter 1704 some of these trophies of hunting prowess appear to have been overlooked, because there occurs a special entry on the 3d of August: 'Pd. to ye Churchwarden of Greyrigg for 11 ffoule marts, being due ye last year, £0, 1s. 10d.'

At the Easter Vestry 1705 only sixteen Foumarts appear to have been specified by name, the heads of ten of the number having been presented on the 18th of December 1704, and the remaining six in the ensuing April. In 1705 a Peremp-tory Day was held on Dec. 27th, when the following accounts were discharged: 'Pd. to ye Churchwarden of Croke for 12 ffoule Marts, £0, 2s. 0d. Pd. to James Cock for 14 ditto, £0, 2s. 4d. Pd. to Robert Smalwood for 2 Ravens and one ffoule Mart, 6d.' The price never varied. Twopence was the head-money set on every Foumart in this far-extending parish, and this sum was paid, whether the supply of vermin was great or small, until 1718, when its discontinuance was ordered. The practice of paying for the heads of Foumarts did not, however, become obsolete at once, because I find that eleven Foumart heads were produced, and were duly paid for by the wardens on the 27th of December 1725.

No doubt the sport repaid to venturesome spirits by this fleet and game little animal was in itself a sufficient inducement for its organised destruction. A local journal supplies a description of a Foumart hunt among the Westmorland hills, which, though high-flown in metaphor, appears to be an accurate narrative of 'A Grand Foumart Hunt' that took place nearly half a century ago 'on the barren hills between Esthwaite and Windermere.' The date fixed for the meet was the 7th of

February, at which time the male Fomarts had begun to run in search of their mates. 'Long before the appointed time (ten o'clock at night) lots of hunters and hounds had appeared, and a large fire was light up (*sic*) till all who were expected arrived. At the time mentioned not a cloud was above the horizon, nor a breath of wind upon the hills: the great and little Bears were swinging round the polar star that marked the north, whilst the grand constellation of Orion was shining in all its brightness, and the glorious Jupiter glittering in silvery magnificence over the western hills. The hounds threw off above Colthouse, and soon a merry cry proclaimed that game was stirring, and over the hills flew the hounds, the hunters following as fast as they could, over ice and rocks, sometimes up and sometimes down, but on they went regardless of every difficulty, for the wilder the danger the sweeter the chase. The hounds ran the game merrily through part of the plantation of H. Curwen, Esq., and to Pete Crag; then they scaled the Scale, where the hunters looked down upon Windermere flowing majestically through the valley beneath, while the amphitheatre of hills on the eastern side combined to make a noble and interesting landscape; from hence they ran through the Sawrey valleys, where the hounds made a turn near Sawrey, and ran to a place called Old Intack, where the Foulmart holed, and as the hunters did not wish to destroy the creature which had afforded this "glorious chase," it was left undisturbed, and as the morning was now far advanced, each took his way home, to dream over again the pleasures of the night.'¹ It is probable that on this occasion a junction had been arranged of the Ambleside and Kendal hounds and those of the late Mr. George Romney.

The sport when pursued on our lower grounds must have lacked the pleasurable risk of slides and falls over rocks and 'screes,' which enhanced the enjoyment of night-runs over the fell lands, but the pace was more severe.

Mr. T. Coward of Carlisle, who, as an enthusiastic Lakeland sportsman, has taken the *kindest* interest in the present essay, estimates that he killed about 250 head of Fomarts in different parts of the Lake district during a period of five-and-twenty years.

¹ *Westmorland Gazette*, Feb. 15, 1845.

Sometimes he had the good luck to kill two dog Fomarts in a day, but this was a rare occurrence, and generally happened in February, or the first week in April. He considers it unsportsmanlike to kill a bitch Fomart. When residing at Ulverston, Mr. Coward saw a good many Fomarts killed in that neighbourhood, as well as on Blawith Fell, and about Broughton Beck. At that time the Fomart was common on mossy ground near Windermere, and on the borders of other Westmorland lakes. There were many Fomarts on the mosses round the Duddon. They abounded at one time on Muncaster Fell. During the 'sixties,' the Fomart still existed on mosses at Scaleby, Hayton, and Cumwhitton, immediately to the north of Carlisle, while Captain Johnson had at an early period hunted Fomarts in the Brampton district, once a great stronghold of the race. The country, however, immediately west of Carlisle, contained fewer proprietors who trapped their ground. Many of the property owners in this district were comfortable statesmen, farming their paternal acres, sharing with their nearest neighbours in the common shooting rights of the adjacent moss. Such was the case at Bowness Moss; so long as it continued the Fomart continued to show sport—in fact, down to the middle of the 'seventies,' after which Fomart-hunting rapidly declined, though hardly yet entirely obsolete. Mr. Coward took part in many excellent runs until about sixteen years since, when he gave up the Otter-hounds. The chase, as already hinted, might either be pursued by moonlight, as that keen old hunter, 'Billy Little,' prefers, or at break of day, as Mr. Coward thinks best sport. A few Fomarts were generally killed during the last two months of the year, but the sport was followed up most enthusiastically from the beginning of February until the end of April, the dates varying with the severity or mildness of the season. The reason why the best runs occurred in spring was that the male Fomarts were then rutting, and travelled long distances in search of mates. At this time their 'foil' or scent is so strong that it hangs about a run for many hours, so that the dogs will follow a trail in the early morning left by a Fomart the previous evening, perhaps ten hours earlier.

Mr. T. Farrall has described the Fomart as frequenting 'the

sandy slopes of the Solway.¹ This is so far correct, that Fougarts often visited the sand dunes in search of rabbits, and even now occasionally do so. I have a note of one shot very recently under such circumstances. But the Fougart does not make its home among the sandhills permanently. It prefers to lie up in damp woods and mossy flows, in rough meadow lands, or on the skirts of the salt marshes, generally near water. The sexes live entirely apart. Fougart-hunting, be it understood, does not originate in dislodging a Fougart from its stronghold, and then following the animal in hot pursuit across the country. The Fougart has generally left its hole some hours before the dogs are put on to the scent. Hence the runs are frequently prolonged. Mr. Coward on one occasion laid the hounds on to the scent at five A.M., and the run lasted until half-past one in the afternoon, the distance covered in following the trail of the animal being about forty miles.

The largest number of Fougarts that Mr. Coward ever knew to be killed in this district in a season was thirty-nine.² Their skins were sold to be sent to London for the use of the furriers, who converted their pelage into boas and muffs. They used to fetch about half-a-crown a piece, and were sold for the poorest of the hunters. Old Storey once assisted in killing forty-two Fougarts in a season, but that was fifty years ago, when Fougarts were common even in the neighbourhood of Carlisle. Mr. Coward has seven fine Fougarts of the local breed, two of which, being bitches, are considerably smaller than the rest. A bitch Fougart in good condition weighs about $1\frac{3}{4}$ lbs., whereas an average dog weighs about $2\frac{3}{4}$ lbs. Mr. Coward possesses the head of an enormous Fougart, which weighed $4\frac{3}{4}$ lbs. This was a dog of exceptional size, the largest and finest that he ever saw.

¹ *Field*, May 5th, 1883.

² Mr. T. Lindsay, who has had a large experience of Fougarts, remarked to me the other day that there were no Fougarts left in Lakeland, except in the Abbey Holme: 'It was steel traps that killed Fougart.' He generally killed about a score of Fougarts in a season during the 'fifties.' He had leave to trap, and got 'many out of Muncaster Woods.' As for Muncaster Fell, 'it was never clear of them.' Drigg Common was a stronghold of the species. Five Fougarts were trapped there on the first night that traps were set for rabbits.

Male Fomarts are ferocious at close quarters, and if driven to ground will fight every inch of their fortress, backing and giving battle to hound or terrier at every turn. If desperate, a male Fomart will fly straight at the nose of a dog, and hold on tenaciously, unless shaken off, or nipped by its assailant behind the forelegs, where pressure upon the heart causes death. An old Fomart-hunter once walked into Carlisle exhibiting a live Fomart which he had taken out of its hole uninjured. Mr. Coward knew a native of the Coniston district who made a practice of capturing Fomarts alive. After a capture he summoned those who wished to test their terriers, and the animal being released in an old tree stump or other retreat, the dogs did their best to show sport. Mr. Coward tells me that a Fomart's home is generally furnished with several entrances, one of them often close to the water, so that the animal may leave no scent as it returns home. The nest includes several chambers, a privy—for these animals are cleanly in their habits,—a larder, and a sleeping compartment. It is in the last that the bitch Fomart produces her young in May and June, the number dropped varying from five to seven. Mr. Isaac Stordy once reared a young bitch, which became well known in the Thurstonfield district as a great pet, but which never crossed with a ferret during her captivity.

Fomarts are destructive to poultry, and will kill full-grown rabbits, but with us they feed largely on birds of the Thrush tribe, such as redwings and fieldfares. Old Lalor, who was a keen Fomart-hunter as a young man, assured me that he once found a dead sparrow-hawk in a Polecat's larder. But frogs and eels constitute a large proportion of their dietary. Mr. Coward thinks that the well-known propensity of this animal for storing food is due to its lying up in the hole to a considerable extent in winter; but the Fomart often sallies forth in search of prey, either when snow is lying on the ground or at a break up of frost. On one occasion Mr. Coward came across the track of a Fomart which had carried an eel from a loch to its lair. Those present tracked the animal over the snow, and on opening the nest discovered that the larder contained five fine eels, three of them still alive. The fishes were taken to

a neighbouring inn, and when cooked afforded an excellent meal to the hungry hunters. Mr. Coward is disposed to think that a few Fomarts might still be found in their old haunts, if searched for with otter-hounds or a scratch pack. He is no doubt correct in saying that the breed still exists in very small numbers. I examined a very fine Fomart belonging to Mr. Cairns, trapped on Weddholm Flow in October 1888, when two others were killed. In December 1889 two were killed near Silloth. One of these was preserved by Mr. Ismay, who found the second lying dead, and too decomposed to preserve. In 1890 another (but a small one) was killed by a keeper at Brayton. I was assured about the same time that a very few still exist near Stapleton.

When the Berwickshire Naturalists' Club visited Gilsland in 1880 they found the remains of a gibbeted Fomart. 'On coming to the vicarage at Lanercost,' writes Mr. Hardy, 'the feet and tail of a polecat were observed to be affixed to the stable-door,—the relics not unlikely of one of the last of its race in that vicinity, for in the Brampton district it occurs now very occasionally.'¹ Of the accuracy of this latter statement there is unfortunately no room for doubt. The same may be said of most parts of Lakeland. It is true that I have notes of specimens taken in localities widely apart during the last nine years, but they are few in number. The era of steel traps has well-nigh swept away the race of Fomarts, whose game ancestors afforded such good sport to the hunters of the last century.

The skins of Fomarts were largely utilised, even within my own recollection, for muffs, boas, and other articles of feminine attire. Those killed by Lindsay in the 'fifties' went to Kendal, who made about £5 a year by the skins he sold. The prices that he used to receive at Kendal were eighteenpence for a dog Fomart's skin, and a shilling for that of a female. The pelage varies in condition seasonally. It is ragged and poor at the end of the breeding season, and is in the finest condition about the end of the year—*e.g.* in frosty weather. Considerable variations will be found to exist in the colours of any large series of Fomart's skins; there is also some difference in texture, the

¹ *B. N. C.*, vol. ix. p. 236.

pelage of the Fomarts of the fells being rough, and more harsh to the touch than that of animals killed on the low ground, just as some difference was supposed to exist between the furs of Fomarts killed on open mosses, and such animals as had led a purely silvan existence. Any reader interested in such distinctions should consult the paper 'Des races et des variétés dans l'espèce *Mustela putorius*,' published in the *Bulletins de L'Académie Royale du Belgique*, vol. xiv. pp. 365-368 ; par Adolphe Duon fils. M. Duon recognises two races,—a black race, which frequents dry places and the neighbourhood of houses, and a yellow race, which lives in wet situations. He considers the black race to be longer in the body than the yellow form, and to have shorter legs, and its disposition is much more fierce than that of the yellow variety. The most ordinary form he considers to be 'le putois brun-jaune,' the result originally of a cross between the two strongly marked races, typical specimens of which he considers rare. I have the more pleasure in referring to M. Duon's paper because his observations were based upon an examination of no less than 200 individuals. He had himself trapped no fewer than 108 specimens. The other 92 specimens were brought to him by the 'gardes-chasse.'

OTTER.

Lutra vulgaris, Erxl.

It would be difficult to name any part of Britain as better adapted to the tastes and requirements of the Otter than the English Lake district. With rivers and becks of every size at his disposal, the Otter enjoys the life of easy plenty, and pursues his marauding expeditions in all the salmon waters, from the Kent and Crake to the most northern streams. The only serious check upon the Otter's increase is effected by those who surreptitiously trap these fine animals. This winter, for example, 1891-92, no fewer than seven Otters met with an untimely fate, being trapped on the Petteril near Penrith. Four of the number were young ones. The destroyer had better a thousand times have spared the cubs to sport with their fond old dam in that easy-tempered stream of their birth,

exercising their lithe and sinewy limbs in wrestling contests until the day arrived when their craft and high courage should be tested in a struggle for life with gallant hounds and dare-devil terriers. Long ago the Otter ranked as 'vermin' in some parts of Lakeland. At the commencement of the last century an Otter's head fetched sixpence in Kendal parish: '[June 29 1704] Pd. to Joseph Smalwood for Tow Otter Heads £0, 1s. 0d.'

A shilling was the grant allowed for every Otter killed on the Kent between 1731 and 1770. No fewer than thirteen Otters were paid for in the year 1731-2. This was exceptional, because it rarely happened that more than two or three Otters were killed in a season. Whether these Otters were hunted *with hounds* I do not know, but probably they were. Richardson described Otter-hunting on Ulleswater a hundred years ago in much the same language as has been employed times out of number to record the doings of local packs of Otter-hounds in our own day. The chief distinction between the old method and the new is that the barbarous use of a *spear* in hunting Otters has happily fallen into desuetude. The old method was to strike at the Otter, whenever an opportunity offered, with an 'otter-grains or barbed spear.'¹

Otter-hunting was originally carried on by the enterprise of a few enthusiasts, each of whom kept two or three hounds, which he could use with the same facility for hunting Fomarts and Otters. After a time separate ownership of hounds ceased. Such dogs as happened to be available were used to form the nucleus of a regular pack. The 'Carlisle Otter Hounds' assumed a public character in this fashion; so did the 'West Cumberland Otter Hounds' and the Kendal Hounds. The latter were recently sold to be hunted in Cheshire. Previous to their removal, these dogs had hunted the Lune and the Kent, and had made many good kills on the former river, especially in the neighbourhood of Tebay. The 'West Cumberland' pack hunt the rivers Greta, Cocker, Ellen, and Derwent. They meet sometimes at Buttermere, and occasionally 'kill' in the neighbourhood of that lake. Their waters are greatly inferior to

¹ Hutchinson's *History of Cumberland*, vol. i. p. 448.

those of the Carlisle Hunt; consequently they seldom kill more than four or five Otters in a season.

The Carlisle Otter Hounds have meets during the summer on the Esk, the Lyne, the Liddell, the Irthing, Petteril, and other rivers. The Eden affords the finest sport, especially about Wetheral, Armathwaite, and Appleby. These dogs generally kill ten or eleven Otters during the season, which often commences in May, but is regulated by weather and the condition of the rivers. In 1887 they killed no fewer than sixteen Otters on the various rivers which they visited. Tom Parker, the huntsman, is a local oracle, whose judgment regarding Otters enjoys an honest reputation. From him I learn that female Otters usually vary in weight from 14 lbs. to 17 lbs. when full-sized. The largest female Otter that he ever saw scaled 21 lbs. He once weighed a bitch Otter of 20 lbs. But these last weights are rare in Lakeland. Dog Otters are considerably larger than the bitches, and weigh, in condition, from 22 lbs. to 26 lbs. Otters of 27 lbs. have been killed on both the Esk and the Lyne in recent years, but they were very big fellows. The heaviest and longest Otter that has been killed by the Carlisle Hounds was drowned in the Eden opposite the Ambrose Holme. This grand dog Otter scaled 31 lbs., and is preserved in the possession of Mr. Wilson of Carlisle. The Otters do not seem to be quite as fine in West Cumberland. The largest that Lindsay ever killed on the Irt was 25 lbs.: 'A gay smittle river is Duddon, but Irt is smittlest, and worst to get.'

The dogs should be laid on to the 'foil' of the Otter as soon as possible after daybreak. If the sun shines powerfully, the 'foil' leaves the gravel-beds, and checks occur. Otter-hounds hunt by nose, and sometimes work on the 'foil' of an Otter for four or five hours before they view the animal. *Young* Otters are often found by the hounds in the summer; indeed, the bitch Otter may produce cubs at any time. I examined a baby Otter which a terrier had 'snapped' on the Eden in June 1889. Mr. J. Bolton found a tiny cub on the banks of the Cocker, July 26, 1880. Mr. Tom Coward recollects seeing a litter of small cubs on the 1st of August. The supply of Otters varies

considerably. This is to be partly accounted for by illicit trapping; not entirely so.

It has been noticed that Otters are scarce on the Eden in seasons which have been preceded by heavy floods in the previous twelve months. It is thought that, owing to the extreme rapidity with which our rivers rise, the female Otters are sometimes unable to remove all their cubs to a place of safety before the 'fresh' reaches them, and that a percentage thus perish in infancy. Young Otters are far less apprehensive of danger than their experienced companions. It is not long since a fine young Otter was caught quite uninjured on Hawes-water (where the rocks supply fine cairns), and sent as a pet to Lowther Castle. Fly fishermen often observe Otters in the gloaming and in the early hours of day. In the dark they hear the whistling of the Otter with dislike, for his arrival frightens the fishes and reduces the chance of their feeding. Otters live more on the banks of rivers than many persons are aware of. When snow is lying on the ground an expert should have no difficulty in recognising the 'spur marks' or 'pad marks' of the Otter in the fields near the water-side. Only this last January [1892] R. Raine traced the 'footings' of an Otter for a long way across the meadows, and found that the animal had eaten a dead rabbit. He and Parker agree that Otters live chiefly on eels, 'skellies' [= chub], and other coarse fish, on the Eden at any rate. I have seen a nice grilse lying on the Eden side, out of which an Otter had taken his favourite cut; so probably have most people. But I believe that the Otter renders valuable service in keeping down the numbers of worthless fish. The distances covered by Otters in a single night often extend into the teens of miles. If a stream is too strong to allow the Otter to make headway comfortably, the animal lands and travels along the bank. An Otter cannot travel as fast as a hound on a dead level, but it can worm its way through a wood more rapidly than any dog. When a river is low, or its dimensions happen to be small, a hunted Otter often prefers to continue the chase on land, and long defies the exertions of a pack in a thick wood. Otters perform considerable *land journeys* when desirous of changing their fishing-grounds. The Otters of the

Lyne often cross to the Liddell, near Newcastleton.¹ Those which frequent the Wampool occasionally travel to the head waters of the Caldew. The lower reaches of this river are probably too much disturbed to please an Otter. At all events it is never visited by any members of the tribe. Strange to say, a fine old dog Otter of 26 lbs. was run over by an express when crossing the line at Little Salkeld Station, M.R., one morning last October [1891]. Otter skins were in great request at Keswick in 1803. They fetched fourteen shillings each, and were used in the manufacture of hats, perhaps as a substitute for Beaver.²

B A D G E R.

Meles taxus (Schreb.).

That Badgers held their strongholds among the Westmorland hills in prehistoric days is evidenced by the fossil remains which have been found near Kendal. Their descendants long tenanted the ancestral chambers of their race. For sixteen centuries of the Christian era the Lakeland Badgers maintained their footing without having, so far as we know, to resist any organised plan of extermination. It is clear from parish records that in the seventeenth century the dalesmen developed a murderous propensity for slaughtering all the wild animals whose presence supplied a charm to their bleak and forbidding mountains. Among the species included under a bann of proscription was the poor Badger, which, although apparently better able to resist its enemies than some of the smaller animals, yet ultimately succumbed to the devices employed for its extermination. When the war against 'vermin' broke out, Badgers had their earths in Inglewood Forest and among the mosses of the Solway, no less than in the heart of the Lake mountains. Such place-names as Brockbanks and Brockholes survive in many parts of Lakeland, attesting that Badgers once existed in districts from which all tradition of their former presence has long died out.

¹ Mr. Lindsay once 'dragged' an Otter on the West Cumbrian Esk. It left that river and raced across country six miles to the Duddon, which it gained in safety.

² *Observations, chiefly Lithological*, p. 59.

The extermination of these poor Badgers was accomplished under the religious sanction of pious churchwardens. It is to their accounts that we owe the fullest evidence of the crusade against the 'brock,' which they so unfortunately subsidised.

If we extract the accounts regarding Badgers from the Kendal parish book for a period of only eight consecutive years, ranging from April to April, it will be found that no fewer than seventy-three Badgers were separately paid for within that short period. This does not include the full quota of the victims of a mistaken zeal, because in several instances the heads of Foxes and Badgers were paid for collectively. But the figures subjoined tell their own pathetic tale of the fierce encounters which took place between the Badgers and their assailants:—'Disburst since March 25th, 1668, as follows: Paide to Wm. Blakelm for one Brock head, £00, 00s. 06d. Paide to Lawrence Edmonson for 3 Brock heads, £00, 03s. 00d. Paide to Miles Lancaster for a Brock head, £00, 01s. 00d.' The total number killed in these twelve months was only five. But the number of victims soon rose. Among the sums disbursed after April 13, 1669, the following entries appear: 'Paide to Tho. Lickbarrow of Steddall for 3 Brock heads, £00, 03s. 00d. Paide to John Low of Natland for a Brock head, £00, 01s. 00d. Paide to Lawrence Edmonson for a Brockhead, £00, 01s. 00d. Paide John Todd of Sleddall for a Brock head, £00, 01s. 00d. Paide Lawrence Edmonson for 3 Brock heads, £00, 03s. 00d.' Thus nine were killed this year. A heavier blow followed, no fewer than nineteen Badgers biting the dust during the next year: 'Disburst since April ye 5^t, 1670, as follows: Paide to Christopher Airey of Sleddall for 2 Brock heads, £00, 02s. 00d. Paide to Thomas Lickbarrow of Sleddall for 2 Brock heads, £00, 02s. 00d. Paide to Richard Beacham for one Brockhead, £00, 01s. 00d. Paide to Lawrence Edmonson for 2 Brock heads, £00, 02s. 00d. Paide to Wm. Rowland and another for 2 Brock-heads, of Grayrigg, £00, 02s. 00d. Paid to Thomas Busher of Underbarrow for 3 Brock-heads, £00, 03s. 00d. Paid Tho. Hick for 2 Brock heads, and one he brought at Easter, £00, 03s. 00d. Paide Thomas Brackin of Strickland Roger for a Brock head, £00, 01s. 00d. Paid Henry Postlethwaite for a Brock

head, £00, 01s. 00. Paid Tho. Hick for 2 Brock heads, £00, 02s. 00d.' These deaths appear to have thinned out the Badgers of Sleddale, Grayrigg, and Underbarrow. Only five appear to be accounted for in the expenditure of the year dating from Easter 1671 : Paid Christopher Airey of Sleddall for a brock head, £00, 01s. 00d. Paid Tho. Lickbarrow of Sleddall for 2 Brock heads, £00, 02s. 00d. Paid Tho. Audlin of Hutton for a Brock head, and Wm. Harrison for another, £00, 02s. 00d.' But a good season recruited the number of the Brocks, and 11s. were expended in remunerating the dalesmen for killing that number of Badgers between April 1672 and the ensuing Easter : 'Paide to Robert Sympson of Selside for 3 Brock heads, £00, 03s. 00d. Paid to Tho. Lickbarrow of Sleddall for 2 Brock heads, £00, 02s. 00d. Paid Tho. Kilchin and John Wilson for 6 Brock heads, £00, 06s. 00d.' There were other Badgers killed this year, because a supplementary entry accounts for 9s. as expended 'for ffox heads and Brock heads.' From the last settlement to Easter 1674, the dale people contrived to kill eighteen badgers : 'Paide Tho. Gregson for 5 Brock heads, and Rich. Bulfell for 2, £00, 07s. 00d. Paid for 7 Brock heads before Chmas., £00, 07s. 00d. Paid Ric Bulfel of Natland for 4 Brock heads, £00, 04s. 00d.' The only two entries for the next year are these : " Paide Anthony Borwick of Grayrigg for 2 Brock heads, £00, 02s. 00d. Paid John Todd of Sleddall for 18 ffox heads and Brock heads, £00, 18s. 00d.' There is only one entry in the year commencing Easter 1676 : 'Paid to Lawrence Edmonson for 4 brockheads at 6d. apiece, £00, 02s. 00d. This last entry proves that the price set on the Badger's head had dropped from a shilling to sixpence. The dalesmen were not a whit discouraged, but continued their guerilla warfare against the Brocks. Between 1700 and Easter 1701 fifteen Brocks perished : 'Pd to James Warriner for 6 Brock heads, £0, 3s. 0d. Pd. to Dan Best for Tow Brock-heads, £0, 1s. 0d. Pd. to ye churchwarden of Natland for one Brock head, £0, 0s. 6d. Pd. to Henry Hudgson for Three Brock Heads, £0, 1s. 6d. Pd. to ye churchwarden of Whinfell for 3 Brock heads, £0, 1s. 6d.' The Badgers had evidently been thinned out by the beginning of the eighteenth century, and the

notices of their deaths occur only in very small numbers thereafter in the Kendal books. The Kendal men were no worse than their neighbours either. In 1673, the churchwardens of Kirkby Lonsdale spent £2, 7s. 3d. upon the heads of Badgers, and paid for eleven heads in Middleton alone three years earlier. In the neighbouring parish of Orton it appears that one or two Badgers were destroyed every year; two were killed in 1661, 1670, and 1675, while single animals were paid for in 1673 and 1674. The entry of 1661 is this: 'for 2 brock heads, the one to John Cobry of Sunbigin, the other to Jo. Fothergill, £00, 02s. 00d.' Canon Bardsley quotes one or two similar entries out of the accounts of Ulverston parish (which happened to be a good Badger country, and one in which there were a few of these animals at the beginning of the present century): '1728. To Thomas Adison for brock head, 6d. 1741. Jan. 12. For a badger head, 4d.' This date of 1741 is the first at which I have found the present species to be locally entitled by the modern name of Badger. There seems to be no doubt that the animal was early known as the 'gray.' Nicolson and Burn remark that the manor of Grayrigg was 'probably so called from being frequented by badgers, brocks, or grays, as on the east side of the river Lune, opposite thereto, is a place which yet bears the name of Brockholes.'¹

Our local faunists have unfortunately neglected to tell us anything about the Badgers of Lakeland. Richardson is silent. Dr. Heysham says little: 'Badger-baiting is a common diversion in the north of England.' The old gentleman might as well have confessed at once that his friends and neighbours in Carlisle were as fond of baiting Badgers as any men in the north of England. Probably *he* enjoyed the entertainment heartily, for he was a man of the times, and lived in an unsentimental age, when the public thought little about the sufferings of the lower animals. Be that as it may, there can be no doubt that Badger-baiting was a common amusement of the Carlisle citizens for the first half of the present century. Indeed, the practice revived a few years ago, but has since died out. The plan adopted for drawing the Badger was a simple one. The contest took

¹ Vol. i. p. 110.

place in a wooden structure something like an old-fashioned clock-case in appearance. It measured in length from 7 to 8 feet. The depth and height were about 3 feet. One extremity of this case was partitioned off for the Badger's den. This recess was entered by a hole, either round or square, through which the dog had to seize the Badger and drag it forth. The case was of necessity strongly built, and barred above. The Badger had the palpable advantage that he could present a pair of formidable jaws, strongly articulated to the glenoid cavity, to his opponent, and probably came off best in many of the encounters. Some wily old Badgers got to understand the game, and would allow the dogs to draw them with the least possible show of fight. Such cunning individuals had to be replaced, as circumstances permitted, with fierce, fresh-caught Badgers. One of the best of the local tales of Badger-baiting is that of the long-headed Cumbrian who, having wagered £5 that his cur-dog would draw a Badger, proceeded to win the event by introducing the hind quarters of an astonished sheep-dog to the mouth of the Badger's den, from which the owner rapidly emerged holding on like grim death to the haunch of his *soi-disant* assailant.

When Mr. W. Hodgson was a young man, he knew a local worthy named Billy Foster, who lived at Melkinthorpe, and enjoyed nothing more than narrating to his acquaintances his experiences of catching Badgers in the last century. 'The village lads of Lowther and Melkinthorpe,' writes Mr. Hodgson, 'used to go to their haunts provided with empty sacks, the mouths of which were kept open by wooden hoops. The sack's mouth, so extended, was placed over the entrance to the burrow, and steadied between the knees of the holder, means being taken at the same time to drive the Badger from his lair. The dread of a bite from the animal's formidable jaws was so great that my informant's knees 'doddered' (*i.e.* trembled) against the rim of the sack. It is sad to think that all this ingenuity was exerted for the cruel purpose of baiting the animals so captured.¹

The late Mr. W. Dickinson, who must have enjoyed the most ample opportunities for collecting information about Lakeland

¹ *Trans. Cumberland and Westmorland Assoc.*, No. xi. p. 36.

Badgers when surveying our fell lands, only furnishes a brief note: 'Badgers are now [1875] extinct in the wild state in Cumberland, but were not scarce till about the end of the eighteenth century. . . . There were brock holes in Eskat Woods, near where the cottage now stands, and these animals being fond of basking in the sun, a hedger came suddenly upon two of them sleeping, and, making a quick stroke with his bill-hook, he wounded one, but both got into their hole and were never seen again. These were the last known in that part.'¹

Whether the Badger really became quite extinct in Lakeland within the limits of the eighteenth century is a difficult point to settle. On the whole, the balance of evidence seems to favour the belief that this species lingered on the fells of Cartmell and Windermere for at any rate the first thirty years of our own century, a view favoured by Mr. T. Coward. Mr. T. Lindsay was crossing Birker Fell, Eskdale, on the 24th of February 1850, when his hounds detected the presence of an animal, which proved to be a Badger, among the rocks. It was fierce, and made a plucky fight for life. Tradition had long associated the locality with the Badger, but none of those then living in Eskdale had ever seen a wild Badger on the fell before, though they had heard the old people talk of them. This was a Badger of 23 lbs. weight. Another was trapped in the middle of the present century near Bridekirk, by Richard Chapman, the celebrated wrestler. Another was caught by the Newtons near Broughton-in-Furness, between 1850 and 1860. It was proposed to sell this Badger for baiting, but the men fell out about the sale, and being unable to agree about its disposal, they settled their difference by drowning the poor Badger. Another was dug out at Dearfields, Grasmere, in February 1863. It weighed 15 lbs. The capture of this Badger elicited from the *Westmorland Gazette* the remark that 'the old hunters say that the last Badger caught in Westmorland was in 1823.' It would be easy to extend the list of Badgers captured in Lakeland within a comparatively recent period. The late Mr. George Mawson recorded that a large Badger was caught in a wood near Cockermouth in February 1867, adding that from whence or

¹ *Cumbriana*, p. 172.

how the animal had come into that neighbourhood there was not the slightest evidence to show.¹ A dog Badger was caught on Whitbarrow in 1872, and another Badger of 19 lbs. weight was caught in a trap at the Heads Lyth in May 1874.² During the summer of 1885 a Badger took up its quarters among the rocks above Gowbarrow, and this was possibly the animal killed by the Blencathra Hounds in the vale of Naddle, St. John's, Keswick, in the following year.³ A Badger killed on Lazonby Fell, and two others which were obtained near Edenhall, had, as I understand, been intentionally introduced by a private landowner with the laudable intention of restoring the breed. Mr. F. P. Johnson believes that a similar experiment has actually succeeded, and that a few Badgers are now permanently established near Castlesteads; but they are *colonists*, not aboriginal Badgers. Clements of Tebay stuffed a large Badger which was killed near Tebay in 1889. Tebay is quite the country for Badgers, but I have no doubt that this and all the Badgers killed in Lakeland during the last forty years had escaped from confinement. This view is that held by all the older men whose opinion is worth anything: indeed, I am not aware that any one would dispute it. A regular trade in live Badgers is carried on through a London paper. These animals often escape from confinement, and the fact that, so far as I know, all the recently taken Badgers have been *dogs*, except one of the Edenhall specimens, is quite in favour of their having escaped from those who kept them for 'baiting.' Of course modern 'baiting' very rarely crops up, but so do the Badgers. As recently as the year 1889, my friend Mr. Bailey was asked to assist in capturing '*a strange wild beast*,' which had gone to earth in a garden at Cummersdale. On repairing to the spot he found that a Badger had strayed thither, having escaped from the garden of a Carlisle gentleman who liked to keep a Badger among other pets. None of the villagers 'ever seed sic a thing afore.'

¹ *Zoologist*, 1867, p. 822.

² *Kendal Courier*, May 13, 1874.

³ *West Cumberland Times*, May 8th, 1886.

Order *CARNIVORA*.Fam. *PHOCIDÆ*.

COMMON SEAL.

Phoca vitulina, L.

Seals are decidedly rare on our coast; perhaps the sandy character of our foreshore and the absence of rocks and islands to some extent account for the fact. Odd ones occur at irregular intervals both in Morecambe Bay and in the main channel of the English Solway. The last known to have been captured on the Lancashire Sands became entangled in the salmon nets near Chapel Island. The animal was not preserved, but Mr. W. Duckworth saw it in the flesh, and sent me a description of it. It was caught in the autumn of 1889. I did not hear of another local specimen until December 1891, when a solitary straggler turned up near Port Carlisle, and was shot by a fisherman. Two of the fishermen belonging to that village caught a Seal in their Haaf nets in July 1877. I have only one note of any Seal being killed in the English Solway between 1878 and 1891. The animal in question was a very young one, and was killed on the Esk.

Seals were occasionally dressed for the table of Lord William Howard, but whether they were obtained on our coast is unknown. Most probably they came from the east coast.

GREENLAND SEAL.

Phoca grænelandica, Fab.

Although a common form in northern latitudes, and one with which, as I understand, the Dundee whalers are especially familiar, this Seal has rarely been identified as a wanderer to any part of the British coasts. That it has been detected in a single instance on the north-west coast of England is due to the scientific acumen of the late Dr. Gough, who announced its occurrence in the following words:—

‘*Capture of a Seal in Morecambe Bay.*—On Thursday, the 23d of January [1868] the Messrs. Crossfield shot a seal near the viaduct on the Lancaster and Ulverston Railway, near Arnside.

When first discovered, its dark-coloured head, alternately bobbing above and ducking under the surface of the water, was taken for a duck. But a nearer approach soon made known the prize which the marksman had to secure. A discharge of shot wounded the animal severely, and repeated blows on the muzzle and head rendered it a helpless captive. This monster of the deep was conveyed to Kendal on the following Saturday, and was purchased for the Museum of the Literary and Scientific Institution. We had an opportunity of examining the specimen soon after its arrival. Its length was six feet from the tip of the nose to the points of its hind toes; circumference behind the fore feet forty-three inches; colour of the head dark brown, rather dark on the back, the rest of the body grey, blotched with brown spots.' After pointing out that he recognised the species by the arrangement of the grinders and the comparative length of the first and second fore toes, Dr. Gough expressed his opinion that the animal was 'a young male, probably in the imperfect clothing of the third or fourth year. An examination of the contents of its stomach proved that this wanderer had fared badly in the bay; for we found nothing but a moderately-sized pulpy mass, mixed with the bones of small fish.'¹

The accuracy of Dr. Gough's judgment, in considering this Seal to represent *Phoca groenlandica*, was subsequently confirmed by Professor Turner.²

This specimen is still preserved in the Kendal Museum.

Order CETACEA.

Fam. PHYSETERIDÆ.

SPERM WHALE.

Physeter macrocephalus, L.

A Whale of this species was washed ashore on our coast near Flimby, on the 21st of April 1840. The length was 58 feet, breadth across the tail 14 feet, height 8 feet, and girth 26 feet.³

¹ *Westmorland Gazette*, Feb. 1, 1868.

² *Journal of Anatomy and Physiology*, vol. ix. pp. 163-165.

³ *Carlisle Patriot*, April 24, 1840.

Local tradition affirms that another example of the same species was washed up many years ago near Whitehaven. That a large Whale was actually stranded in the neighbourhood there can be no doubt, but its specific identity must remain doubtful.

COMMON BEAKED WHALE.

Hyperödon rostratum (Chemnitz).

In August 1887 an example of this Whale was washed ashore in a decomposed state near Maryport. It was carefully examined by the Rev. R. Burn and J. B. Baily, prior to being buried by the coastguards. I believe that this animal has occurred a good many times on our coast. Newspaper reports leave much to be desired, but the following extract seems to suit the dimensions of a large specimen of this Whale:—

‘On Thursday the 31st was caught at Cockin-in-Furness a grampus, which was discovered by Mr. J. Clark of that place, when he rode into the water and drove it on shore. It measured 8 yards and 2 feet in length; its tail was 8 feet broad, its snout or nose 2 feet long; was thought to weigh about 4 tons, and computed to yield 3 hhd. of oil. It was sold by Mr. Clark to Mr. Butcher of Ulverston for four guineas.’¹

‘Dr. Gray also mentions one [under the synonym of *H. latifrons*] taken in Morecambe Bay, Lancashire.’²

Order *CETACEA*.

Fam. *DELPHINIDÆ*.

GRAMPUS.

Orca gladiator (Lacép.).

Judging from the dimensions of the cetaceans that have been stranded on the sandy shores of the north-west of England at one time or another during the last seventy years, I should be disposed to infer that the Grampus had occurred on our coast in half-a-dozen instances. Some of the newspaper reports refer to

¹ *Carlisle Journal*, May 19, 1804.

² Bell, *British Quadrupeds*, p. 426.

Morecambe Bay, others to the English part of the Solway Firth; but in no case does the identity of the animal appear to have been decided by an expert. When taken alive, the unfortunate animal has invariably been destroyed by its captors. Thus, in September 1828, 'two living porpoises' were stranded near Allonby. 'They were first discovered by a boy, who promptly gave information, when a number of carpenters and others rushed to the spot, and, after a furious set-to with axes, pitchforks, etc., by which the defenceless animals were dreadfully mangled, succeeded in capturing them; one measured 20 feet in length, the other 18 feet.'¹

The only recent occurrence that I can positively vouch for was stranded near Skinburness in July 1876. It was examined by Mr. Nicol, who remembers it well, and assures me that it measured about 16 feet in length. Another friend extracted a tooth from the same animal. This I showed to Professor Flower, F.R.S., who kindly satisfied me that it had belonged to an adult specimen of *Orca gladiator*. This is all the more interesting, because Dr. Heysham had recorded the species from Cumberland in the following words: 'The Grampus is very rarely met with on the Cumberland coast. One was thrown upon the shore, in the district of Abbey-Holme, about twenty years ago,' *i.e.* just a hundred years before the Skinburness specimen, and on the confines of the adjoining parish—a curious coincidence.

PORPOISE.

Phocæna communis, F. Cuv.

The Porpoise is often mentioned in Lord William Howard's accounts, but whether the animals of this species served up at his table belonged properly to the North Sea, or to the Irish Channel, is not easy to say. Schools of Porpoises are often seen off Whitehaven; to watch their aquatic sports from the cliffs at Sandwith is enjoyable on a fine day. Stragglers are occasionally killed in Morecambe Bay and in the waters of the English Solway. Such remains as I have seen washed ashore

¹ *Carlisle Patriot*, Sept. 12, 1828.

on Walney, and also on the sandy shores of Cumberland after wild weather, have belonged to the common species. It is quite possible, however, that some of those which have been killed by our fishermen may have belonged to one or other of the rarer species. They are usually converted into oil within a few hours of their capture.

Order *UNGULATA*.

Fam. *CERVIDÆ*.

RED DEER.

Cervus elaphus, L.

During the Roman occupation the wild Red Deer roamed without let or hindrance over the mountain-tops traversed by the military roads of the foreign legionaries, which doubtless included in the ranks of their fighting men and camp-followers not a few intrepid and eager hunters, men of the vigorous stamp that Horace had in mind when he traced those sparkling lines :

‘ Manet sub Jove frigido
Venator teneræ conjugis immemor,
Seu visa est catulis cervæ fidelibus,
Seu rupit teretes Marsus aper plagas.’¹

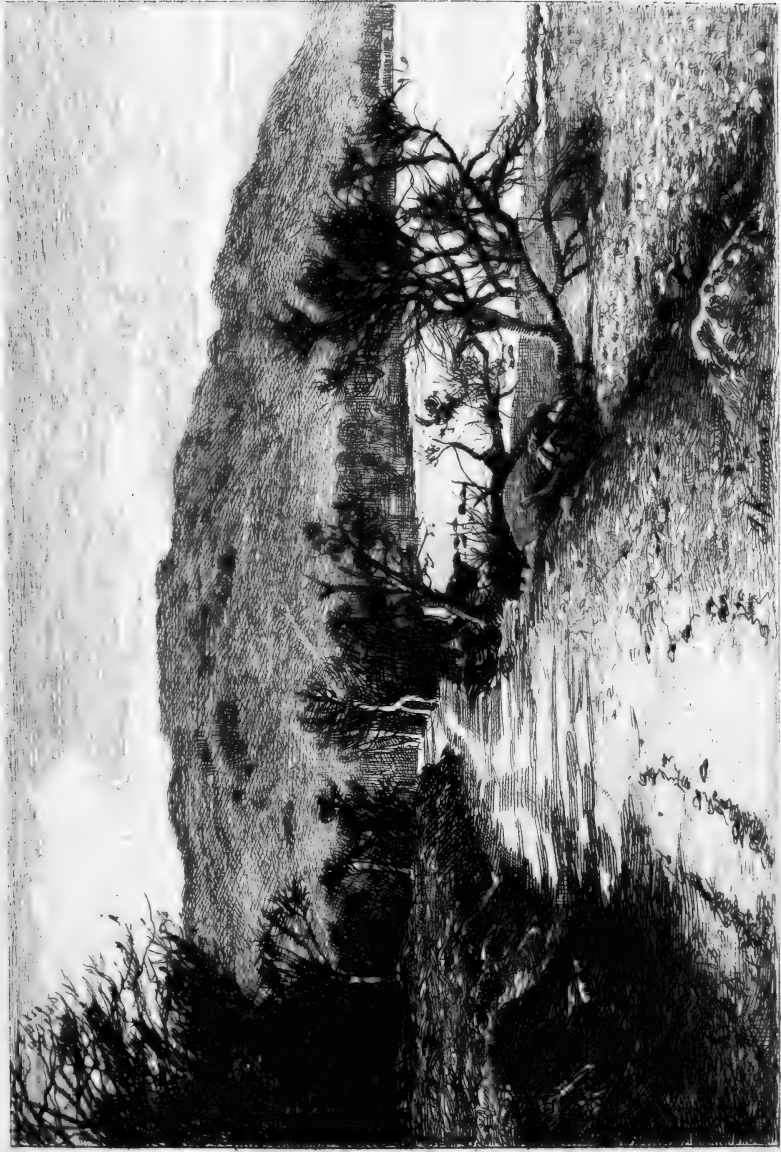
That the strangers not only enjoyed our venison, but converted the antlers of the Red Deer into domestic utensils of a rude kind, is rendered certain by the remains which are found from time to time beneath the modern city of Carlisle.

Of the hunting forays which must have been frequent in *Saxon* days, no information is apparently forthcoming.

With the arrival on British soil of that Norman Duke who ‘loved the tall deer as if he were their father,’ the forests became the object of jealous affection. Doubtless the great nobles were glad to emulate their liege in the rigour with which they sought to enforce their rights.

Nor were the great religious communities of Lakeland loath to accept the goodly venison which the estates of their benefactors were so well able to furnish. Thus in 1210-12, Aliz de

¹ 1 *Carm.* i. 25-28.



GOWBARROW PARK. THE ANCESTRAL HOME OF RED DEER.



Rumeli, daughter of William, son of Dunekan, in her viduity, for the safety of her soul, and the souls of all her ancestors and successors, and of her husbands of good memory, Gilbert Pippard and Robert de Curtenai, grants to the abbot and monks of Furness in frank almoigne, all Borchedale (Borrowdale), with hart and hind, boar and sow, goshawk and sparrow-hawk, and venison and all beasts of game to be found there.¹

We learn from another charter that the same grey monks obtained hunting rights on the Furness fells (Montana de Furnesio):

‘Prædicti vero Gilbertus et Helwysa uxor sua concesserunt, et quietum clamaverunt prædictis abbati et monachis de Furnesio cervum et cervam et accipitrem, et omnem omnino libertatem, quam ipsi Gilbertus et Helwisa habuerunt in illa parte Montanorum, quæ ad ipsos Monachos pertinet, amodo absolute et quiete.’² At a later period, namely, in 1338, the Abbot of Furness was licensed to impark his woods of Ramshead (Rampside), Sowerley, Hagg, and Millwood in Low Furness, and of Claife and some other parts of the fells. Shap Abbey obtained forest rights in Swindale and a tithe of venison, by the generosity of Robert de Veteripont, who declares, ‘Dedi etiam dictis canonicis omnes decimas mihi pertinentes omnium molendinorum meorum, de tota Westmeriâ, et omnes decimas novationis bestiarum, quæ captæ erunt, de cætero in omnibus forestis meis in Westmeria per me, vel per homines meos, de domo, vel de maneriis meis, sive per arcus, sive per canes.’ Another of the Shap charters defines one of their territorial boundaries as travelling down to the bottom of a hill,—‘usque ad magnum lapidem ubi homines solebant facere Lestablie.’ Nicolson and Burn comment on this: ‘*Stable-stand* was where the men stood with bows or clogs ready to shoot or course; and tenants were in some places bound, at the summons of the lord, to assemble *ad stableiam faciendum*, which was called the buckstall.’³

Reference to hounds recalls the fact that the enclosures

¹ *Calendar of Documents relating to Scotland*, vol. i. p. 97.

² Dugdale, *Monasticon*, vol. v. p. 249.

³ *History of Westmorland and Cumberland*, vol. i. p. 470.

known as hunting 'hays' existed in Lakeland no less than in other parts of England. One 'hay' in particular was noticed repeatedly in lawsuits. In 1208 a case pending between Uctred de Sokebrede and Agnes his wife, plaintiffs, and Robert de Curtenai and Alicia his wife, defendants, was decided on the morrow of St. Andrew by Adam de Port and other justices in the King's Court at Carlisle. The tenants of Robert and Alicia were then required to make and repair at their own cost the hunting fence in Carrock *with* the men of Kaudebec. In 1256, Gilbert de Halteclo agreed in Court that he and his heirs, with Alan and Alicia's men of Kaudebek, should for the future make and repair the hunting 'hay' of Alan and Alicia of Karrok, when needful.¹

Where private parties were concerned, mutual courtesies anticipated difficulties by sagacious foresight. Thus, when a final decision was given in the King's Court at Westminster between Alan de Muleton and his wife Alicia, plaintiffs, and Lambert de Muleton and his wife Amabilis, concerning the moiety of the manors of Egremunt, Aspatic, Caudebek, and Braythwayt, a clause was inserted expressly stipulating that if a deer should be roused on the lands of Lambert and Amabilis, their huntsmen and hounds should have the right to follow and take it in the land of Alan and Alicia without hindrance, and *vice versa*.² Provision was made for the punishment of servants who abused their employer's privileges. Thus a grant to Furness Abbey expressly stipulates that should any servant of the monks break bounds, and do damage in the granter's forest to her beasts of game, and be duly convicted, he must be dismissed from their service, and lose his wages.³

The area occupied by Red Deer at one time included almost the whole of Lakeland, from Furness and Mallerstang Forest to the Scottish borders. The forests which survived into the Elizabethan period were those of Inglewood, Ennerdale or Coupland, and Walton, in Cumberland, and Martindale in Westmorland. When the monks of Lanercost enjoyed a tithe of the venison of Walton Forest, the quarry ranged through the

¹ *Documents relating to Scotland*, vol. i. p. 400.

² *Ib.* vol. i. p. 203.

³ *Ib. cit.* p. 97.

border country from Brampton to Christenbury.¹ How long the Forest of Walton was recognised as a deer-preserve I cannot discover; but the fact of a chase existing on our northern march in the reign of Queen Elizabeth has been emphasised by the attractions which it possessed for the Scottish nobles, who availed themselves of the privileges of sport enjoyed by their neighbours with scant courtesy, until the liberties which they took were suppressed with a heavy hand. Sir Robert Carey was the Englishman who came into contact with the Scottish hunters, after being appointed Warden of the Middle March.

'The next summer after,' says the Warden, 'I fell into a cumbersome trouble, but it was not in the nature of theeves or malefactours. There had beene an antient custome of the borderers, when they were at quiet, for the opposite border to send to the Warden of the *Middle Marsh (sic)* to desire leave that they might come into the borders of England, and hunt with their greyhounds for deere, towards the end of summer, which was never denied them. But towards the end of Sir John *Foster's* gouernment, when he grew very old and weake, they took boldnesse upon them, and without leaveasking would come into *England*, and hunt at their pleasure, and stay their owne time; and when they were a hunting, their servants would come with cartes and cutt down as much wood as every one thought would serve his turne, and carry it away to their houses in Scotland.' Carey wrote to '*Fernherst*, the Warden over-against mee, to desire him to acquaint the gentlemen of his *March* that I was no way unwilling to hinder them of their accustomed sportes to hunt in *England* as they had ever done, but withall I would not by my default dishonour the Queene and myselfe to give them more liberty than was fitting: I prayed him therefore to let them know, that if they would, according to the antient custome, send to mee for leave, they should have all the contentment I could give them; if otherwise they would continue their wonted course, I would do my best to

¹ Lysons says that Thomas de Hextoldesham, elected Prior of Lanercost in 1357, was compelled by his bishop to make a solemn promise that he would not frequent public huntings, or keep as large a pack of hounds as he had done previously.

hinder them.' Finding them defiant, he sent out a party of troops, who surprised the hunting party on a fresh foray, 'broke all their cartes, and tooke a dozin of the principall gentlemen that were there, and brought them to mee to *Witherington*, where I then lay. I made them welcome, and gave them the best entertainment that I could. They lay in the castle two or three dayes, and so I sent them home, they assuring mee that they would never hunt there againe without leave, which they did truly performe all the time I stayed there; and I many times mett them myselfe, and hunted with them two or three dayes; and so wee continued good neighbours ever after. But the King complained to the Queene very grieveously of this fact. The Queene and Council liked very well of what I had done; but to give the King some satisfaction to content him, my two officers were commanded to the Bishop of *Durham's*, there to remaine prisoners during her Majesties pleasure. Within a fortnight I had them out againe, and there was no more of this businesse.'¹

When the last of the antlered stags disappeared from the domains which this honest Warden protected so effectually, we do not know. The old race lingered long enough at any rate to afford sport to that grim baron, Lord William Howard, who, by the way, spent his nights as well as his days in 'fishing' for outlawed men.

The Lansdowne MS. tells us of a visit which certain stray gallants paid to Naworth. These officers, being forced at first to seek entertainment 'in a very poor cottage in his liberties,' were pleased to meet with 'lucky entertainment, to wit, a cup of nappy ale, and a peece of a red deere pye, more than we thought fit to acquaint his Lordship with.' The lord of Naworth was not, however, niggardly of venison. He sent many presents to his friends in office. There exists an entry in his Accounts for 1619: 'March 28. 2 padlocks for the 2 hampers with dear pyes, xiiij d.' I borrow from the same source an entry made in 1633: 'July 30. To Jo Grayme of the Woodheade in the Batable lande, who informed my Lord who killed his Lordship's deare, xx s.' That the Red Deer of this district were destroyed

¹ *Memoirs of Robert Cary, Earl of Monmouth*, pp. 129-135.

during the troubles of the Commonwealth is far from improbable.

The Royal Forest which enjoyed the greatest reputation was that of Inglewood, which extended along the western side of the Eden valley, from Penrith almost to Carlisle. The game of this Forest was strictly cared for, and the Bishop of Carlisle (who himself enjoyed hunting rights) was bound to mulct offenders for trespasses. It was upon the confines of this Forest that the monks of Holme Cultram cut their timber; here they kept a stud of horses, and reclaimed portions of waste. In 1225 the Abbot of Holme Cultram agreed to make a fine of twenty marks with Henry III., in return for which he was allowed to assort and cultivate, during the King's pleasure, ten acres of the border of the King's wood, next the Abbot's land, held of the King next Caldebec. This arrangement involved a special proviso, that 'on the side of the said lawn of Wernayl towards the forest, they shall make a low hedge, that the deer may enter and go out; and on the other side, next the waters of Caldew and Caldebec, they shall make a high hedge, and a good one, so that the King's deer may not get out of his forest by that hedge.'¹

On another occasion the same Abbot protested to the Sovereign that certain commoners were clearing and enclosing tracts of land, to the hurt of the King's Forest, and to the injury of his monks. In consequence of this complaint, the King ordered Robert de Veteripont to cause the newly-made enclosures to be destroyed. The Bishop, the Earl of Carlisle, and other notables, enjoyed from time to time Crown grants to kill stags and bucks in Inglewood. The Scottish nobles were partial to English venison, and paid frequent visits to Cumberland on hunting forays. The oft-quoted story of Hartshorn Tree, preserved in the distich,

' Hercules killed Hart-a-Greese
And Hart-a-Greese killed Hercules,'

owes its existence to this Scottish custom of hunting the Penrith country. I shall only quote the account of the event furnished

¹ *Calendar of Documents relating to Scotland*, vol. i. p. 162.

by the Countess of Pembroke, because all the others already exist in books easy of access, and are really worn too threadbare to stand in need of repetition here.

'This summer,' writes the lady who played such a spirited part in local history, 'by some mischeivous people, secretly in the night, was broken off and taken down from the Tree, near the Pails of Whinfield Park (which for that cause was called the Harts-horn Tree), one of these Harts' horns which, as mentioned in the summarys of my auncestors Robt. Lord Clifford's Life, were set up in the year 1333 at a Generale Hunting, when Edward Bal-ial, then King of Scotts, came into England by permission of King Edward the third, and lay for a awhile in the said Robt. Lord Clifford's Castles in Westmoreland, when the said King hunted a great Stag which was Kill'd near the said Oak Tree, in memory whereof the Horns were nail'd up in it, growing as it were naturally in the tree, and have remained there ever since, till that in the year 1648 one of these horns were broken down by some of the army, and the other was broken down as aforesaid, this year, so now there is no part thereof remaining, the tree itself being so decayed, and the bark of it so peeled off that it cannot last long.'¹

The Scottish hunters were not over-scrupulous about limiting their game to the number of head allotted to them by grant, but any excess was noted and reported by the foresters of the English King.

Thus in 1353, just twenty years after the exploit of Harts-horn Tree, Edward III., at the request of his cousin Edward de Balliol, granted pardon to the nobles and others who had hunted with him on various occasions in Inglewood Forest, and had slain fourteen stags, two bucks, eleven hinds, and sixteen red deer calves in summer, and sixteen hinds, fifteen red deer calves, twenty-one bucks and does, and seventeen fawns in winter; these facts being attested by indenture between the King and William Lengleys, chief forester of Inglewood.² Just two years later, on the 3d of December 1355, we find Edward III. again granting pardon to the same parties, who

¹ Countess of Pembroke MSS.

² *Calendar of Documents relating to Scotland*, vol. iii. p. 288.

on this occasion had killed nineteen harts, fourteen hinds, seventeen calves, two bucks, four 'sourells,' thirteen does, a 'priket,' and two fawns.

These offences were exactly what had occurred in Edward I.'s reign. For example, in 1285, Robert de Brus, lord of Annandale, and John de Seytone his knight, were indicted before the justices itinerant on pleas of the Forest of Cumberland; the charge formulated against them being that, when hunting in Inglewood, they had taken a doe and a red deer 'priket' in excess of their allowance. One of the most curious cases of the day was that in which a beneficed priest figured as a lawbreaker. In the year 1258 Robert de Veteripont appeared in a suit against Walter, parson of Newbiggin Church, and Walrand of Soureby, in a plea *why* they entered his park of Whynefel (Whinfell) and there took staggs and bucks without his leave.¹

Inglewood Forest long remained a royal chase, and as such receives incidental notice in various public documents. Thus it is mentioned among divers woods, lands, and tenements 'wherein his Ma^{tie} hath a right and title which is by some persons of late controverted,' in a Treasury warrant issued from Whitehall, on July 21, 1668.²

Even after the accession of the Prince of Orange, 'the Town and Manor of Penreth and the Forest of Inglewood' were held 'of her pr'sent Majesty the Queen Dowager as Lord thereof.'³ William III. soon granted the Manor of Inglewood to the Duke of Portland, who sold it to the Duke of Devonshire in 1737.

I have failed to ascertain the *precise* date at which this magnificent chase ceased to be the home of the wild Red Deer. 'Edward Hasell, who owned Dalemain from 1794 to 1825, inherited the family sporting tastes, and with his hounds assisted at two occasions, which may be called historical, the capture of the last stag on Whinfell, and the capture of the last stag in Inglewood Forest, when those two famous and ancient chases were disforested. The Dalemain hounds continued to find stags in Martindale, where the Countess of Lonsdale, in the glories of a

¹ *Documents relating to Scotland*, vol. i. p. 420.

² Palgrave, *Antient Kalendars and Inventories*, vol. iii. p. 441.

³ *Forty-first Annual Report of Deputy Keeper of Public Records*, p. 18.

carriage and four, and outriders, would not unfrequently be seen gracing the meet.¹

Another ancient Cumbrian Deer Forest, which existed contemporaneously with that of Inglewood, continued to flourish until the later years of the eighteenth century, and receives mention under the names of Coupland Forest, Wastdale, and Ennerdale, owing to the great extent of the wild hill-country over which herds of these animals moved, descending no doubt from the hill-tops to more sheltered situations when hard pressed by frost and snow during the earlier months of the year. In one of the charters which William de Meschin, the founder of the religious house of St. Bees, granted to the members of that community, he assigns to them a tithe of venison: 'decimas piscariarum mearum de Cauplandia, necnon et decimam porcorum, et carnis venationis meæ, per totam Cauपालandiam.'² The property belonged to the Earl of Northumberland at the beginning of the sixteenth century. There still exists, among the MSS. of Lord Muncaster, an award of Henry Earl of Northumberland, granting to Sir John Penygton, knight, and John Lamplugh, Esquire, the 'office of maistir forstership' of all his woods and game within his lordships of Eskdale (Esshedaille) and Wastdalehead (Wasedaillhed). Neither was to exercise his office without the assent of the other.³

The Earl of Northumberland's Household Book, published in 1827, contains 'An Account of all the Deer in Parks and Forests in the North, belonging to the Earl of Northumberland, taken in the 4th year of Henry VIII. Anno 1512.'

From this we learn that the Earl possessed in Cumberland a total of 1463 head of Red and Fallow Deer. The number of Red Deer in Wastdale was computed at 230. Of park Deer there were 456 head at Langstrothdale Park; 307 at Adylthorp Park; 205 at Adylthorp Old Park, and 319 in Helagh Park, these numbers including both Red and Fallow Deer.

'Above Irton,' writes John Denton, about the year 1610, 'in

¹ *The Cumberland Foxhounds*, pp. 8, 9.

² Dugdale, *Monasticon*, vol. iii. p. 577.

³ *Hist. Manuscripts Comm.*, vol. xli. p. 228.

the fells and mountains, lies a waste forest ground full of Red Deer, which was called the Wastdale, now Wasdale, the inheritance of the Earl of Northumberland.¹

This is all that we hear of the Coupland Deer for fifty years.

At the close of the year 1660 a Westmorland magnate, Sir Daniel Fleming, Bart., became sheriff of Cumberland. In the following year he apparently had to entertain the Judges on Assize, and venison was of course in requisition. Accordingly, we find from his private accounts that he obtained bucks from Lowther, Muncaster, Naworth, Workington, Millum, and Kirkby. The only *Red Deer* venison forthcoming was supplied from Wastdale and Martindale; the stags sent from these, the two last surviving, deer forests being respectively entered (under date of August 25, 1661): 'Item, a stag from Innerdale, £00, 10s. 00d.'; and, 'Item, a stag from Martindale, £00, 05s. 00d.'²

In the Survey of Cumberland which Sir Daniel Fleming drew up in 1671, there appears the brief note, '*Ennerdale*, a fforest well stored with deer.'³ He alludes also to '*Wastall*, a large forest or wast ground replenished with Red Deer.'⁴

Sandford, writing about 1675, refers to 'the mountaines and fforest of Innerdale, wher ther is Reed dear, and as great Hartts and Staggs as in any part of England: if you can get vs a warrant from y^{or} brother of Earle of Northumland for a Brace of Staggs. The bow bearer is a brave gentleman: I have been at his house in the Lower end of Enerdale: a seat for any gentleman: his name Mr. Kelleway, and we will hunt that dear gallantly; and eat it more brauely for y^{or} sake.'⁵

How much longer the 'great Hartts and Staggs' roamed over 'the mountains and fforest of Innerdale,' can only be stated approximately; probably not much more than a hundred years after Sandford proposed a gallant hunt. Hutchinson states in his account of 'the mountain Scofell or Scowfell,' in the chapelry of Eskdale, that 'within this century, several red deer were there,

¹ Denton mss. p. 20.

² Rydal mss. p. 388.

³ *A Survey of Cumberland*, p. 9.

⁴ *Ib. cit.* p. 4.

⁵ Sandford's ms. p. 1.

one was chased into West-water and drowned, within the memory of several persons living [*circa* 1794].'¹

Housman says: 'Nicolson and Burn make mention of a large forest of deer, which extended from hence (Wasdale Head) to Sty-head in Borrowdale; but I neither saw nor heard any account of deer in my passage over that alpine tract.'²

Dickinson found traditions of the Red Deer of Ennerdale still existing among the dalesmen of his young days. He states that in the early part of the present century a reliable old dalesman told him that before the Red Deer were destroyed in the Crown Forest of Ennerdale, sheep used occasionally to venture upon the Pillar Stone in search of a chance bite of grass, while the Deer occupied the surrounding forest during the latter half of the previous century. Some of the old stags also chose the same elevated stand as a look-out. If they found a sheep or two in possession they invariably forked them over the side, treating them to a fall of about 200 feet. To prevent such losses the shepherds assembled at the place, and handed stones from one to another along the dangerous entrance neck, and had a wall built high enough to prevent the ingress of sheep and deer.³

I am indebted to the Rev. Joshua Tyson, the present vicar of Ennerdale, for kind assistance in ascertaining whether any traditions of the Red Deer are current in Ennerdale in 1892. Mr. Tyson finds that an aged parishioner named Daniel Walker, a native of Loweswater, but who has resided in Ennerdale for the last sixty years, has a clear recollection of hearing the old folk of his youth talking of the Red Deer which once lived on their fells. According to Mr. Walker, the Red Deer used to be plentiful once on what is called '*The Side*,' then thickly wooded, but now all cut down. This is situated on the south side of Ennerdale Lake, and their depredations almost ruined the farmers at Gillerthwaite, at the top of the lake, and also at Mire-side Farm on the east side, and they had to put old scythes and pitchforks in the gaps and open places in the fences to keep them out of the crops. '*The Side Wood*' joined Coupland, and ran up to Wasdale Fell, and was under the lord of the manor of

¹ *History of Cumberland*, vol. i. p. 580. ² *Ib. cit.* vol. i. p. 580 note.

³ *Cumbriana*, p. 178.

Egremont. Mr. Tyson ascertained from his parishioner that he could give no date for the dying out of this herd of Red Deer. This strengthens my belief that it took place about 1780, as nearly as one can guess. That is only rough approximation; but I do not think that it is more than ten years too early, or too late, whichever the case may be.

The only ancient forest which still continues to afford shelter to the antlered monarchs of the glen, and to supply a grateful bracken-shade to the young calves carpeted on the delicate fronds of the parsley fern, which grows luxuriantly in these wilds, is that of Martindale. This is the one surviving centre now possessed by the descendants of the lordly stags that bellowed hoarsely to their loves on the pathless hills above the lake, in the days when the various wild creatures enjoyed the company of their natural mates in a peace and seclusion only broken when *man* first appeared upon this lovely scene.

When Thomas Pennant visited the Lake district, he was told that the Red Deer, which still ran wild in Martindale Forest, sometimes strayed down to the neighbourhood of Windermere.¹ This forest is only noticed in Saxton's map of 1576, as 'Markendale chapel.' Our knowledge of its early history is derived from an unpublished portion of the Machel MS., quoted by Nicolson and Burn, by Clarke, and other writers. Thus Hutchinson states: 'Mr. Hazel of Delmain is possessed of the *Chace of Markendale*, which borders on the lake [Ulleswater], and includes most of the heights which lie on the eastern side. The lands of his manse being of customary tenure, are attended with this badge of servility, the tenants are bound to attend their Lord's hunt within this chase once a year, which is called in their court roll a *Boon Hunt*. On this occasion they have each their district allotted on the boundaries of the chase, where they are stationed to prevent the stag flying beyond the liberty.'²

Clarke says that Martindale was a separate and independent manor until Queen Elizabeth granted it to the Earl of Sussex as parcel of the barony of Barton, reserving to herself and her successors for her pad when she came to hunt there. Under this tenure it was bought by Sir Christopher Musgrave, along

¹ *Tour in Scotland*, vol. ii. p. 41. ² *An Excursion to the Lakes*, p. 82.

with the rest of the barony of Barton. The manor consisted of small tenements. 'The forest lands are held on the common forest tenure, the tenants having what grass they can take with the scythe. They likewise covenant not to drive the lord's deer out of it at any time of the year. In summer, however, the deer seldom come there, they being mostly red deer, which always frequent the tops of the mountains in that season. Whenever the lord goes to hunt the stag, the Bailiff summons all the tenants before sunset the preceding night, to attend to their *strones* or stations. These stations are at two places, viz., Bampkin and Bannerdale, where the deer chiefly lye, and where the tenants stand with their dogs, to prevent the deer escaping to the mountains. This service, which they are to render once a year, is called a *Boon Day*, and for this every tenant has his dinner and a quart of ale. It is also a custom here that the person who first seizes the hunted deer shall have his head for his trouble. It is remarkable that the first buck taken here was seized by a woman: she, for the sake of his head, laid hold on him as he stood at bay upon a dunghill, threw him down, and getting upon his neck, held him fast. The late Mr. Hassel frequently called upon the tenants for this service.'¹

The Rev. W. Richardson, writing in 1793, informs us that 'Stags still range the hills of Martindale, and are the property of Edward Hassel, Esq. of Dalemain. Old people speak of the noble diversion of hunting the Stag; and they describe, with peculiar pleasure, Philip Duke of Wharton, riding on a gallant steed, after travelling in his coach and six as far as he could, preceded by a running footman in white. Sometimes the Stag is driven into the lake, and taken up by boats. There were many noble stag-chases about four years ago [1788-9], when Mr. Hassel sold some of the breed, which were afterwards hunted in the county of Surrey.'²

The oldest inhabitants of Martindale and the neighbouring valleys still recall the days when 't'auld Squire Hasell' entertained his friends at Dale Head, in a house which was eventually burnt down. They like to descant on the extraordinary merits

¹ *Survey of the Lakes*, p. 34.

² Hutchinson, *History of Cumberland*, vol. i. p. 449.

of the huge pasty always provided for the guests, and the excellent qualities of the liquor which slaked the thirst of those who assisted in driving a Stag from the hill to the lower ground. Once at bay, the animal was secured alive with ropes, in order to afford sport in the annual celebration of the Inglewood Hunt. Sometimes the quarry was obtained from Gowbarrow Park, which the Martindale stags occasionally chose to visit, swimming the lake near Howtown. As lately as October last I paid a visit to both herds. This was all the more interesting, because the arrival of the pairing season had induced the older stags to join their seraglios. As soon as we entered Bannerdale a stag commenced bellowing hoarsely on the Nab, and a few minutes later we saw thirteen on the top of Rampsgill, standing out in clear relief against the sky-line far above us on the left.

Climbing the nearest face of the Nab,—the hill was slippery from a frost which was fast melting in the sunshine,—we soon saw three hinds gazing intently at us. A little more walking brought us up to a fine stag accompanied by five hinds, and then nine hinds appeared with a stag, whose weight was guessed at 18 stone. After crossing a small ridge, we scrambled along a small knoll on the wet hillside, and saw between sixty and seventy head, old and young, beneath us, grouped together in every possible variety of attitude. Some of them appeared to be disconcerted by our appearance, and trotted hastily out of sight. One or two of the older stags advanced a few yards towards us, but they soon decided to retire, following in the wake of the hinds and calves. For many years the breed remained pure, but the present owner has recently introduced a Scottish stag and a few young hinds, in the hope of improving the heads. They are very wild during the summer; as Clarke says, they are not fed in winter, at least the majority are not. Some of the younger animals are learning to avail themselves of the provision lately made for them in severe weather, by the erection of feeding-troughs; a judicious arrangement, and one well calculated to prevent a recurrence of the heavy losses experienced by their owner in some seasons of long protracted frost and snow. The hardy Herdwick sheep character-

istic of the district graze on the same hills as the Deer, and no doubt depreciate the character of their food. Clarke tells us that 'the Stag sometimes, in harvest, in the dead of the night, leaves the mountain and comes into the cornfields. . . . If he stays two or three days, he so over-eats himself that he is easily run down.' At the present time it is not unusual for the Stags to visit fields of turnips during hard weather. When oats were more extensively grown, the damage done by outlying stags was often considerable. It was partly in consideration of the heavy damage inflicted on their growing crops by Deer, that Edward III., in 1363, granted the men and tenants of Penrith, Salkeld, and Soureby, in Englewood Forest, right of common pasture for all their animals therein for ever.¹ But the stags do not wander as much to the lower grounds as formerly. The deer-keeper makes it his business to look out for outlying animals, and to hound them back to Martindale with a cur-dog specially trained to perform that duty. The animals are increasing, and well they may, for only five stags are shot annually. There are of course more hinds than stags or calves. Possibly more female calves may be dropped than males, but the deer-keeper tells me that the male calves have a harder struggle for existence. The stag is jealous of a male calf in the rutting season and drives it away from the hind, thus weaning it at six months, and depriving it of a mother's care during its first winter. The hind calves follow their mothers throughout the winter, and have thus a better chance of obtaining food and shelter than the male offspring of the herd. No disease has ever been known to break out among these animals. They die either from old age, or from gradual inanition, due to a deficiency of food during the early spring months. In winter a good many Red Deer cross over to Place Fell, on the top of which they find a fine strong growth of heather.

¹ *Documents relating to Scotland*, vol. iv. p. 20.

FALLOW DEER.

Cervus dama, L.

Whether the introduction of this Deer into Lakeland was effected by the officers of our Roman colonies in the days of Hadrian, or was only accomplished by our Saxon forefathers, has never apparently been settled. Although I should naturally have favoured the former hypothesis, truth compels me to state that all the early remains of antlers discovered in Lakeland that I have yet seen appeared to have belonged to the Red Deer. In the thirteenth century there was a good stock of bucks and does in Inglewood Forest, as we learn from the earliest of our local historians: 'Eodem anno [1280] tertio idus Septembris (Sept. 11) venerunt dominus Edwardus rex Angliæ et regina Alienora apud Lanercost, et prior et Conventus obviabant eis in cappis in porta. Item, rex obtulit pannum sericum; rex autem in venatu suo, ut dicebatur, cepit tunc ducentos, cervos et cervas in Ingelwod.'¹

Henry III. had already bestowed hunting rights upon the Bishop of Carlisle and his successors: 'liceat eis cum venatoribus et canibus suis feram vel feras suas sequi per forestam nostram et capere, sine impedimento et disturbance forestariorum vel quorumcunque ballivorum nostrorum vel eorum ministrorum, et cum venatione sua et venatoribus et canibus, vel si forte venationem non ceperint, cum venatoribus et canibus, licite et sine impedimento ad propria redire.'² Three years after his hunting experiences in Cumberland, Edward I. commanded Geoffrey de Neville, keeper of the king's forest *ultra* Trent to give Robert de Brus, Earl of Carrik, twelve bucks in Inglewood, a species of grant that was frequently renewed. Thus in July 1319 Edward II. commanded John de Crumbwell, the keeper of Inglewood, to give John Bishop of Carlisle twenty-four fawns, one half hinds and the other does, to stock his park of 'la Rose,' which had been destroyed by the Scots.³

This reference to Rose Castle reminds us that Edward I.

¹ *Chronicon de Lanercost*, p. 106.

² Nicolson and Burn, vol. ii. p. 544.

³ *Calendar of Documents relating to Scotland*, vol. iii. p. 123.

induced many of his nobles to keep Deer, both Red and Fallow, by the liberality with which he granted charters of *imparking*, an example followed by his two successors. A large proportion of these lay between Kendal and Morecambe Bay. Leland observes, 'There be about Kendall divers fair woodes, as Master Parris Park, and many other.'¹

Saxton's map of 1576, embracing both Westmorland and Cumberland, shows Mallerstange Forest as unenclosed. It includes two parks in the neighbourhood of Kirkby Stephen, those of Smardale and Hartley Castle. Other Westmorland Parks are Brigster, Syserghe, Kendall, Watlande, Camswick, Colnhead, Seggewicke, Firbank, Croscrake, Barborn, and Middleton, all near Kendal. Whinfield Forest is shown to be enclosed, as is Leke in Lancashire. In Cumberland, seven enclosed parks are figured on this map, those of Wethermlake, Grastok Castle (with a stag stalking about in it), Stainton, Barren Wood, Blencrake, Widehope, and Broughton near Cockermouth. Of the older Westmorland parks, the only one still tenanted by Fallow Deer is Levens, which Thomas de Strickland imparked in the reign of Edward III. Dallam Tower was enclosed only in 1720. Several other ancient parks could be mentioned—Hartley Castle, Crosby Ravensworth, Whitfield, Thornthwaite, and Troutbeck among the number. Naworth is shown as unimparked, but Lord William Howard made a park of it. Gowbarrow, included in this map under the old name of 'Wethermlake,' possesses the special interest of being the home of many Red Deer, which, though not so shy as those of the Martindale fells, yet roam over an enclosed stretch of similar country, under perfectly natural conditions, except that they cannot escape unless by breaking bounds or swimming Ulleswater Lake. Stags have occasionally been known to cross from Martindale to Gowbarrow. This great park is not mentioned in Saxton's map as 'Gowbarrow,' but under the older, and now forgotten, title of 'Wethermlake.' Saxton also shows that Barron Wood was enclosed in 1576. Peculiar privileges often attached to parks of Fallow Deer. Thus, an award of the second year of Richard III. decided that Anna, late wife of John

¹ *Itinerary*, vol. v. p. 130.

Fleming, should enjoy, for her dower, lands in Claughton in Lonsdale, and one tenement in Coningston, and yearly during her life, one buck or doe out of Coningston Park.

Some parks were destroyed or depleted of their Fallow Deer during the civil wars, while in other localities the Deer were probably neglected or allowed to become impoverished for want of change of blood. In 1512 the number of Fallow Deer in the Forest of Westward was computed to consist of 225 individuals. Some sixty-six years later the herd had dwindled down to 92 head. The following extract from a 'Survey of Westward Forest,' dated the 14th of April 1578, tells its own story:—

'There is at this present, within the said forest or chase, the number of fourscore and twelve fallow deer or thereabouts, which, if the frith and grounds aforesaid were enclosed and preserved, would soon increase, and plenish to a convenient number, and without the same provision there can never be any increase, by reason the grounds (being suffered and used as common) are depastured so bare in summer that the deer (especially the fawns and old deer) die and perish in winter, so many (and sometimes more) as commonly do increase in the summer.'

That no pains were taken to preserve these Deer appears from Sandford, who wrote about 1675: 'And over a more wher the Coles are got, north westward yow come into westward; and a quondam park full of fallow deer: but now vanquisht.'

Denton, writing about 1610, tells us that 'Mr. Hudleston, the present Lord of Millum, and diverse of his ancestors, have made there a park enclosed for deer, which yet to this day is called Uffbay.' The herd of Fallow Deer which existed at Millum in Denton's time continued to flourish for two hundred years. 'Millum Castle,' says the scribe, 'the antient seat and capital mansion of this manor, is placed at the foot of the river Dudden, and through length of time threatens ruin. Howbeit the lords thereof make it still their dwelling-place and abode, holding themselves content, that the old manner of strong building there, with the goodly demesns and commodities which both land and sea afford them, and the stately parks full

of huge oaks and timber woods and *fallow deer*, do better witness their antient and present greatness and worth, than the painted vanities of our times do grace our new upstarts.' Many a haunch of venison reached Sir Daniel Fleming from his cousin at Millom between the years 1656 and 1688. Generally, the present consisted of half a buck or half a doe; but when the Judges were entertained at the Carlisle Assizes in 1661 an entire buck was sent for the banquet all the way from Millom. Good-fellowship ran strongly in those days, and the Cumberland Gallants were as welcome to hunt at Millom as at Naworth, or any other great baronial seat. John Kirkby wrote to his nephew, 'D.[aniel] F.[leming]' at Rydal, on June 22d, 1657: 'I have had some discourse with your cousin Kirkby concerning the "intended progress of hunting" of the Cumberland Gallants. When you go to Naworth, you may tell them that Sir William [Hudleston]'s absence need not hinder their hunting at Millom. Your cousin Kirkby, who has command of the game in Sir William's absence, will shew them all sport for the killing of a brace of bucks, and give them such accommodation as his little house will afford.'¹

Dickinson has given a somewhat full account of the *end* of the Fallow Deer at Millom, asserting that, at the end of the last century, the Earl of Lonsdale decided to dispark this estate, partly in consequence of complaints of outlying bucks damaging crops, partly because in hard weather the Deer diminished the grazing available for cattle: 'The herd numbered about one hundred or a little over, and, when the order came for their destruction, a sale was effected with a speculator from Darlington at a pound a head.' He assures us that an attempt to capture the Deer in nets having failed, the herd was shot down *seriatim* by five of the neighbouring yeomen, who persevered in the work of slaughter 'till only two remained of the herd. These were long watched, until one was brought down, but the other was too wily to allow of being shot. At last the hounds were collected, and he was hunted and broke bounds, and afforded a few capital runs before the last of the herd was finally torn down. And so ended the race of the "harts and hinds, wild

¹ Rydal MS., p. 22.

boars, and their kinds, and all aviaries of hawks," reserved by De Boyville in the reign of Henry the First, when he gave all the parishes between Esk and Duddon to the Abbey of St. Mary at York.¹ As early as 1690 Ferdinand Hudleston had cut down 'a large forest' to further the manufacture of iron, and to build a ship of considerable burthen; but he had spared the Deer. Jefferson tells the story of their extinction more curtly than Dickinson: 'So lately as 1774, when Nicolson and Burn wrote, the park was "well stored with deer." It was disparked by the present Earl of Lonsdale about the year 1802, when 207 deer were killed, and the venison was sold in Ulverston Market and elsewhere, at from 2d. to 4d. per pound.'²

Some idea of the management required for a herd of Fallow Deer may be gathered from the entries in the Household Book of Lord William Howard. The home stock of park Deer was recruited chiefly by the introduction of young animals, whether Red or Fallow. In like manner, fawns were sent from Naworth to other properties. Thus in 1612 we have the following entries: 'Junij . . . 6. ij hind calves to H. Geldart's men, iiij s. . . . To H. Geldart's men carrying ij hind calves to Thornthwate, iiij s. July . . . To the keeper of Graystock bringing ij fawnes, v s. To Mr. Rumney's son bringing ij other, v s. . . . Mr. Penington's man, bringing 2 fawnes and 6 hems, x s.' This last refers to animals sent from Muncaster, a long ride, but distance was lightly esteemed in those days. Presents of venison came to the Baron's table from far and wide; equally welcome whether it came from a near neighbour or was brought by Mr. John Preston's man all the way from Furness Abbey. The courtesy of the times bestowed gifts of venison with fine generosity even on the poor prisoners languishing in the jail at Carlisle. Thus an entry occurs in 1621: 'Sept. . . . 15. To Rob. Burthom, carrying venison to the prysoners, xii d.'

The young Howards were fond of buck-hunting, and the cost of their amusement is duly entered in the Accounts. In 1618, for example, 'Dec. 20. To Sr. Francis, for his journey to Keswick to take dear, iiij s.' But there was no need for the young men to

¹ *Cumbriana*, pp. 163-165.

² Jefferson, *Allerdale Ward*, p. 163.

leave home in search of sport, for in one season they killed 120 bucks out of their father's parks. The younger animals required some attention in several winters. In 1619 there is entered, on January 25th, 'ij boyes getting yvie for the deer, iiij d.' The Deerhouse was littered with bracken. Thus in 1620 was paid on Aug. 28th, 'For getting xl thrave of brackins for the dear house, vis. viij d.' Another requisition for the comfort of these animals is mentioned in 1621: 'Janu. 9. To Wm. Ridley, for iij dayes making vij troughes for deer at Gelt, iiij s.' Another duty is mentioned in 1612: 'May . . . 8. To Ch. Elliot, for watching the orchard for deare iij nights, xviii d. . . . Junij . . . 5. Watching the orchard for deare, vi d. . . . Nov. 4. Watching the deer in the orchard one night, vid.' Sir Daniel Fleming records that his family seat of Rydal Park 'was replenished with deer, until the great-grandfather of the present owner thereof [Sir Daniel himself] caused all the Deer to be killed.'¹

This park, like so many, owed its title to Edward I. Sir Daniel Fleming often enters payments made to the servant-men who brought 'a fouch,' or 'a side of venison' from his relatives and acquaintances. Occasionally this applies to live animals, as in 1659: 'Aug. 18. Given unto my cosen, Andrew Hudleston's man, for bringing a young fawne, £00, 02s. 00d.'

Busy public man as he was, Sir Daniel was no cynic, but found time to share the pleasures of the chase with his neighbours:

'[1657] July 25. Spent and given att Hutton when I was a-hunting with my Lord Howard there betwixt the 20th and the 25th of July, £00, 16s. 00d.'

Nor did he forget the duty of attending to the creature-comforts of humbler sportsmen:

'[1668] Sept. 17. Given to my brother Roger for the buck-killers to drink, £00, 05s. 00d.'

'[1661] Sept. 11. Given amongst the tenants to drink att the hunting att Conistone with Sir George Fletcher, £00, 10s. 00d.'

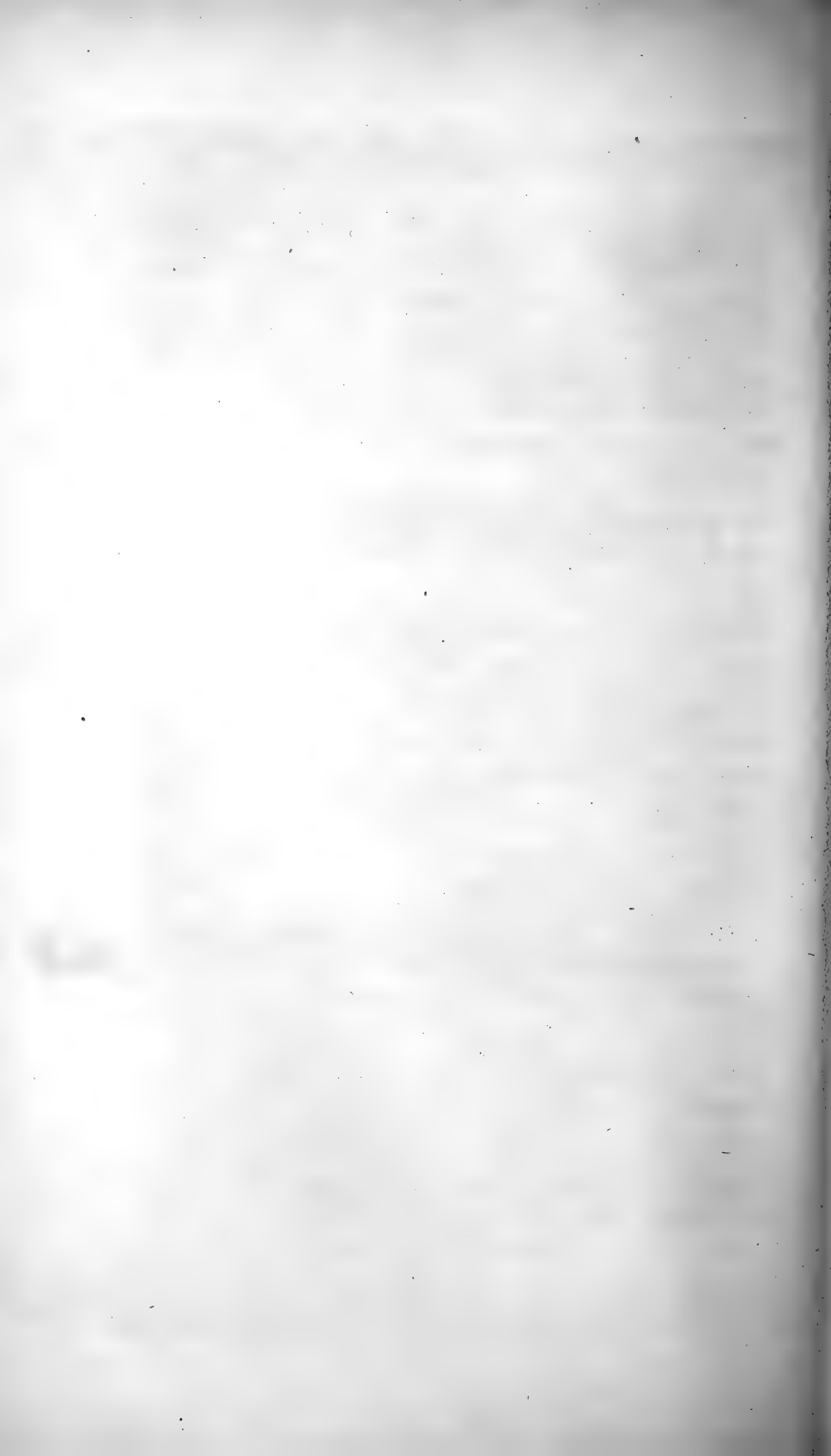
'Sept. 12. More to the hunters to drink, £00, 02s. 00d.'

Such an event as a christening was an excellent excuse for a

¹ *A Description of Westmorland*, p. 17. †



LEVENS DEER PARK.



jovial family gathering, and of course, if venison was in season, venison must garnish the table :

‘[1659] Aug. 9. Paid unto my brother William, which hee had given and spent when hee gott us some venison against the christening, £00, 03s. 00d.’

Alas, that a touch of truest pathos should attach to one of the last items entered in the Naworth Accounts of 1640!—‘August 23. To the keeper at Graystocke for killinge a doe against my Lord’s burial, v.s.’ A grand, soldierly spirit had gone home.

It is not my intention to enlarge upon the *present* distribution of park Deer in Lakeland. To do so might seem ungenerous to Mr. J. Whitaker, who has informed me privately of his intention, announced also in print, of furnishing a complete return of all the Fallow Deer at present confined in English parks. But, without forestalling Mr. Whitaker, I may venture to remark that Fallow Deer exist at Naworth, Crofton, High Moor, Ravenglass, Armathwaite near Cockermouth; at Greystoke, Gowbarrow, and Edenhall in Cumberland; at Dallam Tower, Levens, Rigmaden, and Lowther in Westmorland; at Holker in North Lancashire. The Earl of Lonsdale has a very fine herd of Red Deer in Lowther Park, which has recently been extended for the use of these animals, and affords them a magnificent range of the forest kind; very unlike that of the Gowbarrow Deer. The brightest and most beautiful Fallow Deer that I have seen in Lakeland are kept at Holker. Levens has the peculiar merit of having long preserved the dark form of Fallow Deer without change of blood. The does of this herd, on some rare occasions, have dropped milk-white fawns. I saw one there. The Fallow Deer at Edenhall have just received a change of blood by the addition to their numbers of one or two bucks from Dallam Tower. This herd at present numbers between 170 and 180 head. There are usually a few white bucks and does, but not of the milk-white type dropped at Levens. Curiously enough, a small herd of Fallow Deer were formerly kept by the Hasell family in Martindale—not of course on the fells, but in the bottom of the valley. This herd dwindled away gradually, and is believed to have become

extinct early in the 'forties.' Some of our herds are, or were, of purely modern origin. Thus a local paper made this announcement some forty-two years ago: 'Lord Brougham is about to convert some of his fine lands near Brougham Hall into a Deer Park, the high walls of which are making rapid progress towards completion. It will be stocked by deer from Lowther. On Monday last, bold Tom Yarker and his assistant caught ten fine deer for that purpose, which, with the like number taken on a previous occasion, will be conveyed to the new park at Brougham Hall.'¹

Forty years afterwards, in 1890, it was decided to give up the Brougham herd, and the animals were carted back to Lowther, as the original home of their progenitors.

ROE DEER.

Capreolus capræa, Gray.

The Roe in prehistoric days must have wandered through the coppices of the Duddon valley, across Whitbarrow, and through many other parts of Lakeland. We know that it was numerous in Westmorland, because its bones occur plentifully in the cave-fissures, especially those near Kendal. Singleton may have had some tradition of its former distribution in mind when he wrote in 1677 that there existed in a house in Melmerby a coat of arms which included three Roebuck heads. At that time the range of the Lakeland Roes appears to have become restricted to our northern borders. In the neighbourhood of Brampton this animal was sufficiently plentiful to supply Lord William Howard with many opportunities of sending Roes and Roe pies to his neighbours and acquaintances. Thus, among the 'Law Causies,' in May 1620, I find an entry, 'For careing roe pyes to my Lord Chancellor's, xvij^d.' In 1634 there is an entry of August 12th: 'Wm. Grayme and Tho. Mulcaster, ther charges at Carlisle, goinge with a roe kidd to Judge Cawlye, xij^d.'

The fame of the Roe of Naworth had long since reached the Court of Charles I. As early as 1618 a consignment of live Roes had been sent to the Metropolis. This we learn from an

¹ *Carlisle Patriot*, April 20, 1850.

entry of September 27th: 'Making a pannell for Jo. Bodwell, for carrying iij rey kidds to London, xx^d.' This experiment was followed by no fewer than thirty-two young Roes being despatched to London in 1633. First of all, we have an entry of the remuneration bestowed on the men who caught the Roe kids. This is dated the 29th of June: 'To severall persons for takeing 31 roe kidds, as appareth by bill, vii^{li}. xii^s. vj^d. . . . To Micha. Fidler for 1 kide, v^s.' Under the heading of Husbandry we have an entry on 'Julye 1^o. To Rowland Hewthwaite for makeing a payre of cart wheeles for the roes, x^s.' On the 16th of this month we read of another necessary charge: 'To Wm. Lancaster, the smith, for bindinge 3 payre of wheeles with iren which carried roes to London, vi^{li}. xvj^d.' (there is probably a mistake in the sum charged). The August accounts tell us who the worthy was to whom the duty of conveying the Roe to London was delegated: '21. Richard Crofte's charges to London (with 6 menne and 7 horses cariinge roes to Kinge Charles), ther and home againe, per bill, xxii^{li}. iij^s. ix^d.' The wear and tear of the long stage-journey, across Shap Fell and all through the midland counties, entailed some damages, which were prudently repaired when the party returned from London: 'For repairinge 3 cartes sent with roes to London to Kinge Charles, thether and home againe, xv^s. x^d.'

So far as we can judge, the Naworth Roe Deer ranged at their pleasure over the mosses and woods round Brampton. When their venison was wanted, a deer-keeper was sent out to shoot the number required. Thus, we have entered on the 12th of March 1618: 'To Lionell Geldart for his charges at Brampton, iij nightes to kill ij roes, ij^s. vi^d.' The younger animals were probably picked up in the woods by the country-folk, and taken to the castle, as in 1622, when we find entered on June 11th, 'To a boy bringing a rey kidd, vj^d.'

The descendants of those very Roes whose kids were sent to Charles I. still haunt the coverts of the border-land. A few exist near Naworth, and a few more wander through the plantations of the Netherby property. On some rare occasions these animals have been known to cross the Eden, and even to wander up the valley of that river into the neighbourhood of Penrith.

A solitary Roe frequented some plantations near Cotehill for several seasons. In 1868 one of these animals strayed into the neighbourhood of Rockcliffe, and was shot at Crookdyke on the 5th of June. 'Where the animal came from is mere conjecture, as one of the kind has never been seen before in the neighbourhood, but the probability is that he had strayed from Thornhill, or some other of the Duke of Buccleuch's Border preserves. He was first seen feeding in a garden on the edge of Solway Flow on Sunday morning, from whence he set off in the direction of Castletown.'¹

Similarly, a strayed Roe frequented King Moor, near Stanwix, for several months in 1883.

Order *UNGULATA*.

Fam. *BOVIDÆ*.

WILD WHITE CATTLE.

Bos taurus, L.

That this fine animal once enjoyed an extensive range through the forest-lands of Westmorland is highly probable; but all that we positively know of its former existence in Lakeland relates to a herd which was preserved at Thornthwaite, near Haweswater, at the commencement of the seventeenth century. 'Thornthwaite,' says Sir Daniel Fleming, 'was the antientest land belonging to y^o Curwens of Workington in Cumberland, it being possessed by that family from the Conquest until S^r Hugh de Curwen, Kn^t, sold the same unto y^o Lord William Howard of Naworth Castle in Cumberland, who gave it to S^r Francis Howard, his younger son, whose son and heir, Francis Howard of Corby Castle in Cumberland, doth now enjoy it.'² When Lord William Howard effected this purchase he acquired the Wild Cattle, which had probably been driven by disforestation into this remote corner among the hills, and had been protected by the Curwens for several centuries. It has been suggested that these animals were in the habit of ranging into Martindale, but to those who know the ground it appears more natural to conjecture that these

¹ *Carlisle Journal*, June 8, 1868.

² *Description of Westmorland*, p. 25.

animals had ranged from Thornthwaite to Mardale than that they tenanted the bleak hills round Martindale, which formed no part of Lord William's purchase, but belonged to a different proprietor. The herd had been for some years the property of the Howards, before it occurred to Lord William to draft some of the animals to Naworth, no doubt with a view of creating a second herd. The idea took a practical form at the beginning of January 1630. The reason for accomplishing the removal of the beasts at such an inclement season may perhaps have been that the animals were tamed to some extent by scarcity of provender, and could be surrounded and secured more easily than in the summer-time. At all events we possess an entry of the actual expense incurred in the removal: 'Januari 9. To Anthony Bearper, George Bell, and William Halle, for ther charges and paines, in bringinge wild cattell from Thornthwate, v^s. iiij^d.'¹ After an interval of a few years a death took place in the original herd, and the hide of the animal was accounted for in the receipts of 1634: 'June 22. Rec. for 30 sheep skinns soulede at Thornthwate, xx^s. Rec. for two kine skinns there, xiiij^s. Rec. more of him for one wild kowe skine, iiij^s.'² In the same year we find entered: 'August . . . 23. To Mr. Thomas Howarde's manne bringinge one quarter of a wilde calfe to my Ladie, v^s.'³ Nothing further is heard of the Wild Cattle of Thornthwaite, and the date of the extinction of the herd is shrouded in obscurity. Those kept at Naworth did not long survive their removal from Haweswater. In 1675 Sandford alludes to the 'White wild Cattell with black ears,' as having formerly existed at Naworth, without a hint of the source from which they were supplied, or a suggestion as to how the race had become a memory of the past.

My endeavours to rake up further evidence regarding the Wild Cattle of Lakeland have proved ineffectual hitherto. It is true that Cornelius Nicholson alludes to these animals having once inhabited Mallerstang Forest, but not one shred of evidence has been produced to fortify his vague statement.'⁴ Mr. Joseph

¹ *Household Book of Lord William Howard*, p. 264.

² *Ib. cit.* p. 284.

³ *Ib. cit.* p. 318.

⁴ Mallerstang Forest and the Barony of Westmorland.

Bain prints, as an abstract of an old grant, the following passage: 'The K. allows Andrew de Harcla, earl of Carlisle, to take 6 *wild cattle* and 6 deer in Englewood Forest.'¹ But a correct translation of the original, which I owe to Mr. J. P. Hore's great kindness, proves that the Wild Cattle of Mr. Bain derived their supposed existence from the lively fancy of a copyist. The translation is the following: 'The King to the Keeper of our forest on this side of the Trent, or to his lieutenant in our forest of Inglewood—greeting. We command you to permit our dear and faithful Andrew de Harcla, Earl of Carlisle, or his people in his name, to take and have six *bucks* and six *does* in our said forest of Inglewood of our gift. Given at Newcastle upon Tyne the 19th day of September [1322]. By the King himself.'

It is melancholy to reflect that, as Edward II. executed Sir Andrew early in the following year, these bucks and does must have been the *last* which the gallant Earl hunted in Inglewood.

Order *RODENTIA*.

Fam. *SCIURIDÆ*.

SQUIRREL.

Sciurus vulgaris, L.

It is difficult to conjecture with any degree of nicety the period at which the Squirrel first colonised our forests. The Rev. T. Lees reminds me that this animal is represented on the Bewcastle Cross, but it would be unsafe to hazard a positive opinion upon such slender evidence. Mr. J. A. Harvie-Brown is disposed to infer that it has long been known among us, from its occasional appearance in the armorial bearings of county families: 'The family of Hasell of Dalmain bears three hazell slips; crest, a squirrel feeding on a hazel nut. The family of Mounsey of Castletown bears a Squirrel.'²

In an able paper on this species, Mr. George Tait, F.G.S., offers the following remarks: 'Whether squirrels are indigenous

¹ *Calendar of Documents relating to Scotland*, vol. iii. p. 145.

² *Proc. Royal Phys. Soc.*, vi. 35.

to the *Borders*, or existed there in ancient times, is doubtful; the climate is evidently not unsuited to them; and it is possible that the extensive destruction of forests and woods, from the period of the Norman Conquest till the accession of James I. to the English throne, may have caused the extirpation of the original breed; but of this there is not evidence. The skins of Squirrels, as well as of cats, foxes, hares, rabbits, kids, and lamb, were articles of commerce in the district [Berwick] in 1377, when, according to a charter for pontage, one hundred of them was charged a toll of one halfpenny on passing over Alnwick Bridge; but such skins may not have been grown (*sic*) in the district.¹

A little more than a hundred years ago the Squirrel was certainly well established in our midst. Clarke volunteers the suggestion that *Swirls-gate* 'signifies, I believe, Squirrels-gate, as the word Swirl is in this country used for a Squirrel. The situation of this hill (near Thirlmere) indeed argues as much, as it was within these last few years covered with wood of various kinds, and was the resort of those nimble animals.'²

Dickinson ignores this suggestion in his Glossary, and supplies 'Con' as a synonym for the Squirrel commonly employed in Cumberland. This name is also recognised by Mr. W. Hodgson, A.L.S., who has enjoyed exceptionally favourable opportunities for studying the habits of Squirrels. Among other points arrived at by my old friend is his conviction 'that the Squirrel does *not* hibernate, as I have been taught almost from infancy to suppose; for even during the terrific snowstorm of March 1881, and others scarcely less severe in the seasons immediately preceding it, their visits to my back door were never intermitted. Only when the hazel-nuts were ripe and fairly abundant would they disappear for a few weeks at a time.'³

Mr. F. P. Johnson, one of the most observant and experienced field-naturalists in Cumberland, writes to the same effect: 'With regard to the hibernation of Squirrels, which is just now receiving attention in the *Zoologist*, I would mention that here,—in

¹ *B. N. C.* 1863-8, p. 441.

² *Survey of the Lakes*, p. 117.

³ *Trans. Cumberland and Westmorland Assoc.*, No. xi. p. 27.

this part of the country at any rate,—I would undertake to find the traces of the Squirrel in the snow whenever the ground is covered with it. My belief is that Squirrels dislike damp and wet much more than cold.’¹

Order *RODENTIA*.

Fam. *MYOXIDÆ*.

DORMOUSE.

Muscardinus avellanarius (L.).

The Dormouse occurs sporadically in a few of the most densely planted portions of Lakeland, from the Rusland valley up to the slopes of the fells at the southern end of Windermere. Dr. Gough recorded it in 1861 as not infrequent in the neighbourhood of Kendal, but I have not heard of its recent occurrence there. Mr. T. N. Postlethwaite wrote in 1885 that he had frequently met with the Dormouse in the neighbourhood of Millom: ‘One was shown to me, some winters ago, frozen to a piece of wood; and last year, while trout-fishing, a boy with me found one amongst the rocks on the banks of the stream.’²

I have never yet been able to trace the Dormouse in the eastern parts of Cumberland or Westmorland. Mr. Ben Jonson caught two Dormice in his garden at Dalston in 1880, about which time Mr. W. Hodgson obtained a specimen in the same neighbourhood. Dr. Heysham recorded the Dormouse as found in the Cumbrian portion of Ulleswater, and this is fully borne out by modern evidence. Mr. Hodgson resided in the parish of Watermillock, Ulleswater, as the village schoolmaster, for a long series of years. He tells me that he repeatedly came across the Dormouse during the extended excursions which he was accustomed to make in search of wild-flowers.

¹ *Zoologist*, 1891, p. 152. During the fall of the year this Squirrel shows a marked partiality for Fungi as an addition to its usual dietary. Mr. Tom Duckworth tells me that it especially prefers the red-fleshed mushroom (*Ammonita rubescens*) and the variable mushroom (*Russula heterophila*).

² *Zoologist*, 1885, p. 211.

Order *RODENTIA*.Fam. *MURIDÆ*.

HARVEST MOUSE.

Mus minutus, Pall.

This diminutive quadruped is extremely rare in Lakeland. Many years ago a typical nest of this mouse was found by Mr. Duckworth of Blackwell, an observant and painstaking naturalist of the old school. The species reappeared in 1888, because in the autumn of that year a specimen was secured near Silloth by Mr. J. H. Doeg, as I learnt from that gentleman himself at the time. Strangely enough, there does not at present appear to be the slightest proof that the Harvest Mouse exists anywhere in the south of Lakeland. It is possible that both the above-mentioned instances relate to cases of accidental introduction of the species, possibly among seeds or plants sent from the south of England.

LONG-TAILED FIELD MOUSE.

Mus sylvaticus, L.

This Mouse is of general distribution throughout Lakeland, and commits serious acts of devastation in kitchen-gardens. It is a very charming little animal nevertheless. Though timid, it is easily tamed, and lives longer in captivity than any of the Voles. Some specimens which I procured for a friend lived upwards of two years in confinement, a considerable period for so small a mammal.

HOUSE MOUSE.

Mus musculus, L.

This generally distributed pest possesses the redeeming feature that it is easily tamed, and readily learns to confide on those whose kind offices induce it to lay aside its natural distrust of men.

Several residents in Carlisle have succeeded in winning the regard of wild mice; among the number Mr. Eales, who assures me that at one time he derived great pleasure from watching the

lively antics of a tribe of mice which frequented his workroom, fed at his call, and in every way recognised the friendship of their benefactor.

BLACK RAT.

Mus rattus, L.

An incidental allusion to this Rat, as established at Rydal in 1686, is furnished by an entry in the Accounts of Sir Daniel Fleming: 'Dec. 13. Paid unto Thomas Loftos of Rufford, near York, ratcatter—besides 2s. 6d. I am to give at Easter next if he kill the rates for a year—£00, 01s. 00d.' It seems a little curious that the ratcatcher should have been a stranger, because at that time the Black Rat was no doubt of general distribution. Yet so rapidly did this species die out in Cumberland after the *immigration* of a stronger species, that even in 1796 it had become, in the words of Dr. Heysham, 'very rare, having been expelled from this country, in great measure, by the brown rat.'

Although I have inquired for this Rat of many ratcatchers, no information as to its surviving in any Cumbrian localities has ever been vouchsafed. Thomas Armstrong obtained a piebald specimen at Coathill on the 6th of January 1859.¹ It may be inferred from this that some individuals lingered about the farm-houses and cottages. Mr. H. P. Senhouse recollects a small colony as existing near Cockermouth in 1876. A strict search might possibly bring other occurrences to light, especially in the fell districts. In Westmorland this Rat seems to have existed quite recently. It was only in 1883 that Mr. J. Goodchild wrote, from an intimate acquaintance with the north-east borders of Westmorland: 'It may not be generally known that the Black Rat yet lingers in small numbers about the fell-side farms in Westmoreland. It is no uncommon thing for specimens of this species to be captured in the barns and outhouses, at Milburn, for example; but the species is every year becoming rarer, and will doubtless soon be as entirely supplanted by its foreign congener there as it has been elsewhere.'²

¹ *Zoologist*, 1859, p. 6442.

² *Trans. Cumberland and Westmorland Assoc.*, No. viii. p. 218.

A 'watcher' belonging to Walney Island, who undoubtedly has been in the habit of killing a great many Rats in the winter-time, recently volunteered the remark that a few Black Rats still existed on the island, but he has not confirmed this statement by forwarding any specimens. The Black Rat recently existed in Furness. Mr. W. A. Durnford obtained an adult female and her young ones at Barrow in 1879.¹ That *this* breed has been introduced into the port by foreign vessels is highly probable.²

Dr. Heysham furnishes 'Ratten' as the Cumbrian for Rats. Dickinson spells the same word 'Rattan' in his Glossary.

BROWN RAT.

Mus decumanus, Pall.

This destructive animal is one of the few mammals which have not inhabited Lakeland from prehistoric times. Within fifty years of its arrival, the Brown Rat extirpated all but a few individuals of the Old English Rat, and asserted its obnoxious superiority in many ways. Latterly its numbers have increased owing to the policy adopted by farmers and keepers of exterminating with trap and gun the birds and animals that would naturally have held this injurious species in check. I never shall forget the mistaken pride with which a Cumbrian farmer's wife showed me the body of a poor Barn Owl. It was still warm and bleeding; indeed, we had heard the discharge of the gun with which the farmer shot the 'fancy bird,' as he called it, so that the deed was only just complete. This was in the middle of the 'close-time.'

This rat is quite as much at home in the burrows which it has tunnelled in the hedge-banks of Walney Island as in the farmers'

¹ *Zoologist*, 1879, p. 234.

² Mr. T. Lindsay, whose extensive acquaintance with the 'ground vermin' of Lakeland has already been noticed, was asked whether he had ever come across the Old English Black Rat at any of the remote farmsteads of the fells. He at once replied that 'the only breed' of *black* rats that he had ever heard of swam ashore at Seascale, from the wreck of a foreign fruit vessel. This occurred about 1866. For the time they became established at Seascale.

ricks of corn, or in the semi-aquatic quarters which it shares in summer with the harmless Water Vole.

Order *RODENTIA*.

Fam. *ARVICOLINÆ*.

WATER VOLE.

Arvicola amphibius (L.).

The Water Rat is common throughout Lakeland from Furness to the Scottish borders, upon which it is especially numerous. At Ravenglass these animals have runs among the sandhills, and burrow in the sand in many directions, thus showing a curious divergence from their usual choice. The black variety is rare in Lakeland; indeed, it is only known to me by report. It is said to have occurred in two instances in the Eden valley. The late Mr. Grayson of Whitehaven told me that a few Black Rats frequented a small beck in that neighbourhood. Mr. W. E. Beckwith informs me that Black Water Voles occur on Rydal Water and Windermere, but no *resident* in the district appears to have seen them. If they still exist they must be very rare, because my local inquiries have been well directed. A 'black rat' reported to Mr. G. A. Hutchinson as having been killed on the Kendal Canal, but not preserved, was probably a black Water Vole.

COMMON FIELD VOLE.

Arvicola agrestis, De Selys.

The Short-tailed Field Mouse has increased in most districts of late years, in consequence of the destruction of owls and kestrels. It frequents our hills no less than the low grounds. Under some circumstances this Vole appears to approach dwelling-houses in search of food. Among the MS. notes by the late Dr. Gough I find this amusing little paragraph: 'A company of these voles had made their way into a storeroom indoors during the autumn; and in the winter about half a dozen of them were found dead among the syrup of gooseberry-jam,—a sweet kind of death for a novice.'

RED FIELD VOLE.

Arvicola glareolus (Schreb.).

This species was first ascertained to be resident in Lakeland in March 1887, when Mr. Richard Mann forwarded to me for identification a fresh specimen, which had been 'turned by the plough' at Aigle Gill, near Allonby. Mr. William Duckworth previously felt confident that he had *seen* the species on King Moor, near Carlisle, as did his brother, Mr. Tom Duckworth; but they had never been able to fortify their opinion by securing a specimen for examination. In December 1887 Mr. R. Mann favoured me with additional specimens of the Bank Vole. Two of these I kept alive for some weeks, at the end of which I found that our special favourite had been killed and scalped by his companion, a mouse of sullen and untameable disposition. The deceased was a Vole of charming temperament, always gay and cheerful, delighting to exercise his muscles on a 'wheel,' working at it with all his might, his tail straightened with pleasure. When a little tired he would whisk out of the 'wheel,' and refresh himself with a nibble at an apple before he returned to his gymnastics. He often amused himself thus during the day, but it was generally about half-past one in the morning that he became most active. His practice then became so noisy as to deprive me of sleep, and eventually I was compelled to fix the wheel before retiring. In January 1891 I received three more Bank Voles from my friends at Aigle Gill. These had also been captured in the centre of the heaps of turnips among which they lie up for the winter. They are only found on one part of the farm, a dry and fairly elevated situation, and are partial to the skirts of a small wood. I have not hitherto met with any Bank Voles during my rambles through Westmorland or Furness. The species is in all probability extremely local in Lakeland, but is sure to be found sooner or later in additional localities.

Order *RODENTIA*.Fam. *LEPORIDÆ*.

H A R E.

Lepus europæus, Pall.

Hares are now comparatively scarce on many Lakeland shootings, a matter of regret to ardent sportsmen, but easily accounted for by the Ground Game Act. Where leases favour the increase of this animal, the Hare is still numerous. It is from such preserves as those of Netherby and Edenhall that the country-side receives a supply of stray Hares, since these animals travel long distances during the night, and will at times desert their favourite parks in order to lie out on the open salt marsh, or to visit a field of clover. Mr. W. Hodgson, A.L.S., whose retentive memory enables him to speak with accuracy of his youthful experience, considers that Hares have been decreasing in Cumberland for the last sixty years. Dr. Heysham wrote at the end of the last century that this Hare was 'plentiful everywhere' in Cumberland, a remarkable statement when we remember how common the founart and other 'vermin' were in the old Doctor's time. Lord William Howard must have been keenly alive to the merits of hare-soup, if the number of this species purchased for his kitchen be allowed to serve as a criterion. The price never varied. Sixpence was always given for a full-grown Hare. A Leveret fetched threepence. How the Hares supplied by the neighbourhood were procured is open to conjecture. The probability is that they were snared or netted in the fashion still in vogue among our local poachers. It is not unlikely that some of them were 'traced' when snow was lying on the ground, illegal as the practice had recently been declared to be. But there can be no doubt as to the sport openly enjoyed by county worthies of the seventeenth century. Singleton wrote regarding Melmerby in 1677, that the 'bedds of whinnes (or furs as in the south you call them),' were 'for the hunters' recreation, being a receptacle for the hares.¹ Sir Daniel Fleming notes [1685-6]: 'Jan. 5. This day *an hair* was started near Grasmere-mill, and was followed by three hounds, which hair came by the Rydal stable door and run into the Hall

¹ Machel ms. vol. vi., not paged.

Court, and she being followed into the court by my sons Michael and James, they and some other of their brothers did take her in Rydal Hall Court.’¹ That Hare-hunting enjoyed popularity in Cumberland a century ago is certain. ‘But a Cumberland hunt,’ says a local writer, ‘there undoubtedly was during the last century, and a relic of it is now before me in the shape of its button, a large flat button of plated silver, on which is engraved the figure of a Hare at full speed, and over, the words ‘The Cumberland Hunt.’²

R A B B I T.

Lepus cuniculus, L.

The coast-line of the north-west of England is singularly well suited to the habits of this animal; indeed, our Cumbrian warrens have been famous for many centuries. The Furness monks preserved a fine warren. That belonging to the Abbot of Holme Cultram was valued, together with some fishing rights, at the annual rate of £2, 6s. 8d.;—‘warenn’ cuniculorum,’ it is termed, in a roll of 30 Henry VIII. The author of a ‘Letter giving an account of a Survey of the N. West Coast of England in August 1746,’ informs his readers that ‘the Grune is a remarkable head of land, whose position the common maps have widely mistaken. It is now only a rabbet warren, and hardly any vestige left where an antient chapel stood, called the chapel of the Grune. . . . Hence [from Dubmill] we have a low coast till you pass the Blue-dial; then the shore begins to be bankey, and rises by degrees to the *Bankend* point, with a skirt of low ground under the banks for rabbet warrens. The sea-sand is full of stones, some pretty large. The coast all along from *Skinburn-naze* is entangled with sea-holly, and very few other herbs, save the serpyllum and rest-harrow. When we get to a single house called the *Boin*, the coast elbows round, and the whole track from thence to *Derwent* mouth is a low benty soil, so broken with rabbets that ’tis almost impossible to ride it after night falls.’³ Dr. Heysham in 1796 alluded to the importance

¹ Rydal MS. p. 404.

² *The Cumberland Foxhounds*, p. 6.

³ *Gentleman’s Magazine*, 1748, pp. 1-5, 291, 292.

of the Cumberland warrens, while in the following year there appeared a note that 'some narrow tracks of light sandy soil along the coast, from Harrington to Abbey-holm, are occupied by rabbits. There are also warrens in the parishes of Wyberthwaite, Drig, and Heskit.'¹ Mr. Pringle adds a note regarding Westmorland: 'A few rabbits are kept in the neighbourhood of Brough and Orton, and there is a small warren in Ravenstone-dale, but it is rare to see them in any other part of Westmorland.'² But though local in distribution in Westmorland even as recently as the close of the last century, the Rabbit has long been numerous in many parts of Cumberland. A warrener was constantly employed as one of Lord William Howard's outdoor servants at Naworth. There is an entry in 1622, which shows this worthy to have been proficient in ferreting: '*Tho. Warriner*. Feb. 4. A wallet for the ferrets, viij^d. Corde, viij^d. An yron for his staffe, xiiij^d. A hanck of yarn for mending his net, vi^d.'³ But he also caught the conies in traps, because we find an entry to this effect in August 1634: '11th. To Rowland Hewthwate for 8 dayes' woorke in makinge trapps for the warraner, and mending waynes, vi^s. viij^d.' Apparently he was paid by piece-work; for example, in 1622, we find that he was paid eight shillings for rabbiting: 'Feb. 19. To the warriner for xij jurneys to Peatwath to kill conyes, viij^s.' He was employed also in improving the warren. The following entries refer to 1634: 'March 6. For castinge borroughs in the cunnie warren, xij^d. April 5. For makeinge cunnie bourrowes in the warren, xvj^s. 20. More to the warraner for makeinge cunnie burroughs, xxij^s. April 28. More to the warraner for makeinge cunnie burroughs in the warren, x^s.'

It would be idle to enlarge upon the habits of this animal, but to some an instance of its occasional longevity may be of interest. In 1883 there was living in Carlisle a wild Rabbit which had entered on its eleventh year, and still enjoyed rude health. It was a household pet, and showed a strong predilection for drinking tea.

¹ *Agricultural Survey of Cumberland*, p. 216.

² *Ib. cit.* p. 290.

³ *Household Books of Lord William Howard*, p. 179.

Book Second.

A V E S.

Order *PASSERES*.

Fam. *TURDIDÆ*.
Sub-Fam. *TURDINÆ*.

MISSEL THRUSH.

Turdus viscivorus, L.

The Mountain Thrush or 'Shrite' is fairly distributed over Lakeland in the breeding season, and many individuals cross the mountain tops on their autumnal migrations. Notwithstanding the courage which this bird displays in defence of its young, at other times it is frequently plundered by the Starling, which finds it less laborious to snatch the earthworms of the garden lawn from the Missel Thrush than to subsist by its own exertions.

SONG THRUSH.

Turdus musicus, L.

This species is known all over Lakeland as the Throstle, a term of some local antiquity, since we find it mentioned in the Naworth Accounts as early as 1612: 'A curlue, vj d. Another and iij throssels, viij d.' Probably few of the general public realise the extent to which this delightful songster is an immigrant, arriving in our midst during the early part of the year, and commencing to practise the summer songs in the month of February. Mr. W. Duckworth forwarded to me a wing of the Song Thrush, with the information that the ss. *Topic*, Captain M. Ferguson, fell in with a large flock of migrating birds when

running from Belfast to Ulverston in February 1890. The night of the 21st was very foggy, with a south-easterly wind. On the morning of the 22d the deck of the *Topic* was strewn with dead and wounded birds. The crew picked up about sixty birds, chiefly Song Thrushes, together with a Snipe and a few Blackbirds, Starlings, and Skylarks.

RED WING.

Turdus iliacus, L.

During the months of October and November we often hear flights of Redwings passing over the border city between 11 P.M. and 1 A.M. Farren of Ravenglass tells me that when fishing off that coast he has often recognised in the dark the cries of parties of Redwings travelling along the seaboard. Many individuals cross the Lake hills. In bad weather you may see them in the dales, aimlessly drifting about the fields as if at a loss to find shelter from the showers of driving sleet which descend in such blinding squalls from the mountain side. During protracted frost Redwings seek the neighbourhood of sheep, or congregate on the river-banks; a few individuals haunt the exposed edges of our tide-worn salt marshes in the struggle to adapt themselves to their altered environment.

FIELDFARE.

Turdus pilaris, L.

A solitary entry of January 1620 shows that the trivial name of this Thrush was then in use in Lakeland: 'A felde fare, j.d.' Then, no doubt, as at the present time, vast numbers of Fieldfares occasionally visited Lakeland. The autumn of 1890 was a great year for this bird. The first droves that I heard of made their appearance on the fells near Kirkby-Stephen before the end of September. Three weeks later the country was fairly inundated with swarms of these birds, the greater number of which passed away to the westward, possibly to Ireland.

B L A C K B I R D.

Turdus merula, L.

The Blackbird is mentioned in the Naworth Accounts as worth one penny, a comparatively high price for the times: '4 black birds, iiij d.' Nowadays the species is ubiquitous, or nearly so, in Lakeland, having regard of course to suitable cover. It varies less in its choice of nesting sites than most birds; hence one might have supposed that the eccentric conduct of the female Blackbird which, in the year 1883, built her nest and laid in a waterspout above the porch of a private house, would have remained unique.¹ But history repeats itself even in the domestic economy of the Blackbird. My friend Mr. J. C. Dove, a few years later, observed an exact repetition of the performance on the part of another hen Blackbird. This bird built in a spout under the roof of a house at Stanwix.²

R I N G O U Z E L.

Turdus torquatus, L.

A few Ring Ouzels enliven many of our fell lands with their cheery presence during the summer months, frequenting rough ground varied with rocks and heather, by preference. At the same time they may often be seen flitting about the stone walls of the Pennine range. Their gestures when disturbed are full of vigour and animation. Their wild rich song is well calculated to harmonise with the lonely regions which they share with the Raven and Red Grouse. The last days of March witness the return of the Ring Ouzels to their upland home. They nest in April and May, generally beside one or other of the numerous becks that have scored such long, deep furrows on the hillsides, by reason of the rain and snow which descend in winter-time. I have known the young of the Ring Ouzel to leave their nest as early as the 26th of May, but most of the first broods fly during the second week of June, at least in the majority of seasons. They begin to gather into small flocks about the end of July, and for the remainder of their stay they rove about in

¹ *Birds of Cumberland*, p. 3.² *Field*, May 14, 1887.

search of food, sometimes challenging danger by entering gardens in search of fruit, *e.g.*, near Alston; elsewhere content to feed on wild berries, as, for example, those which hang in gay festoons from the branches of the rowan-tree in such situations as Honiter Pass. They leave us at the end of September. Some birds may linger into October, but I have not as yet obtained any proof that the Ring Ouzel *winters* in Lakeland. I have sometimes remarked with surprise upon the precision with which the Ring Ouzel repairs direct to its breeding-ground, rarely appearing on our lower grounds even on vernal migration. There are of course exceptions to this. Thus in 1890 a solitary Ring Ouzel made its appearance in a field near Aigle Gill on the 30th of March, and there rested a few days. On the 14th of April the same year Mr. W. Hodgson saw a fine Ring Ouzel on the beach at Workington, which, as he wrote to me, 'might have passed for a common Blackbird, had not his loud *tac, tac, tac* induced a closer scrutiny, when his white gorget was distinctly seen.'

W H E A T E A R.

Saxicola oenanthe (L.).

This Chat, the first of our spring immigrants, makes its appearance almost simultaneously upon our higher fells and the low grounds near the coast, the influx being often noticed over a wide area. Thus in 1888 the Wheatears arrived all along the breadth of Cumberland, from Wright Green to Gretna, within three days. The first to appear were a few males, which arrived at Aigle Gill on March 28th, followed on March 30th by a fresh influx, this time including both males and females; at Wright Green a few males were seen on March 30th, and many had arrived at Skinburness on the morning of the same day. Some few of these birds were observed during the day to cross the Wampool and Waver estuary, and the day following none could be seen, the majority having evidently shifted their quarters during the night; possibly these were the identical birds that I noticed near Carlisle and Gretna on the 1st of April. At that season many Wheatears haunt the salt marshes of the English Solway, not frequenting the centre of the cattle-run, but flitting

about the broken edges of the salt marshes. It is a little surprising that the Wheatear does not breed on our salt marshes, since the broken turfs above the water-line afford many suitable niches for its nest, while *food*, in the shape of small beetles, is undoubtedly plentiful. But though the Wheatear crosses many portions of our area, as from Grange to Kendal, it does not usually breed on the sea-level, except on Walney Island and elsewhere along our open coast, as at Ravenglass and among the sand-hills and turf-covered banks near Silloth. The birds that breed inland may often be seen in early spring on ploughed lands, but they soon go up into the high grounds, breeding commonly throughout the more elevated portions of our faunal area.

There can be no doubt that this bird is just as characteristic of the bleakest fells as of the golden sands that break the force of our south-westerly gales; the pale blue eggs are equally familiar to the long-line fisherman, and to the shepherd in the most remote dales of Westmorland. Everywhere the Wheatear exhibits the same characteristics, always a bright joyous bird, at one moment carolling blithely on the wing with fond half-hovering flight, at the next balancing its slight form on some conspicuous vantage-point, or chasing away a rival in mock anger from its nest.

When crossing Melmerby Fell one summer day we stumbled across a little colony of breeding Wheatears. They were evidently nesting in the holes which the rabbits had excavated in a light sandy soil; but, curiously enough, these birds persistently *perched* on the tops of some tall hawthorn bushes, though stone walls, such as they usually affect, were quite as near. In autumn the migrating birds occasionally rest on telegraph-wires. An individual which haunted the Willow Holme for ten days in September 1888 constantly perched on the hedgetops. The autumnal movements of this Chat chiefly affect us in the months of August and September, when many birds appear in the fields and on the salt marshes, as well as on the open coast. This autumn (1891), I found quite a score of Wheatears flitting about the beach on the north-west side of Walney Island on October 20th. It is a trifle unusual to see more than a single straggler when the season is so far advanced.

ISABELLINE WHEATEAR.

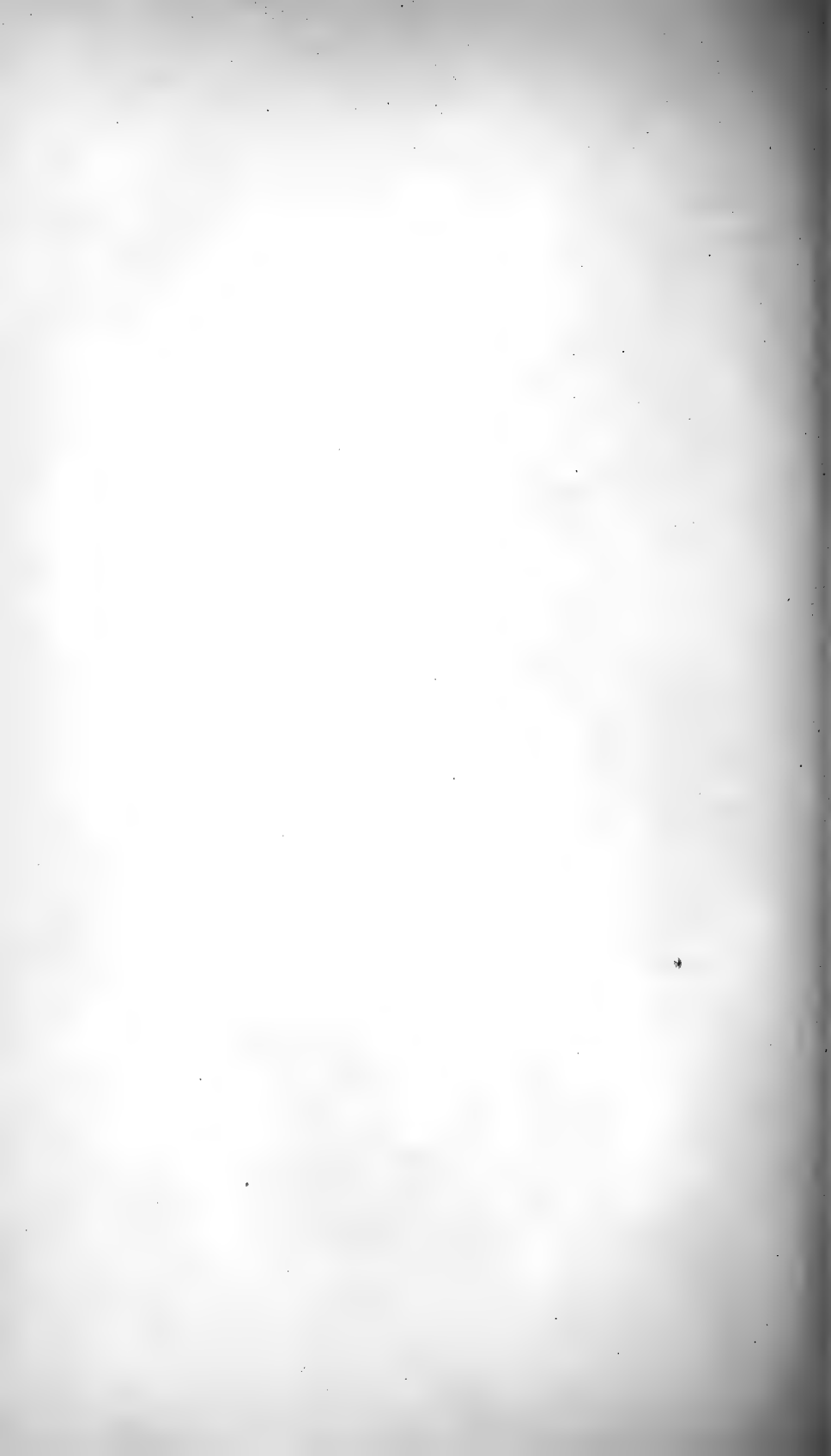
Saxicola isabellina (Rüppell).

The National Collection includes the only example of this Chat which has hitherto been obtained in Great Britain. I sent to the *Ibis* of January 1888 the following notice of its occurrence: 'I have pleasure in stating that an example of the Isabelline Wheatear (*Saxicola isabellina*) was shot at Aigle Gill, near Allonby, Cumberland, on the 11th of November 1887. The bird was first observed on that day by Messrs. Thomas and Richard Mann, tenants of Aigle Gill farm. The weather was fine, but dull, with a slight wind from the north. The bird made its appearance in a field which Messrs. Mann were sowing with corn, and was quite alone. It perched upon clods of earth, after the habit of *S. ananthe*, but appeared to be less lively in its movements than that species. It was unsuspecting of danger, and was easily approached. Having had a visit from Mr. Senhous and myself only six days earlier, when I begged my friends to continue to search for doubtful Wheatears, and struck by the light colour of this late bird, Messrs. Mann decided to shoot it for me. It was therefore shot by Mr. Thomas Mann, and posted to me the same day. I received the bird the following day in fine condition, and [not having any Chats by me at the moment] took it to Mr. Howard Saunders, who [was just then writing the Chats for his *Manual of British Birds*, and] kindly pointed out to me its identity with specimens of *S. isabellina* in his possession. The bird was also examined in the flesh by Dr. R. B. Sharpe, but especially by Mr. Seebohm, who compared it in my presence with his extensive series of *Saxicolinæ*. Mr. Harting saw the specimen before skinning, so did Mr. G. E. Lodge, who made a coloured sketch of it [now in the possession of the family at Aigle Gill]. The bird was also exhibited on my behalf by Mr. Howard Saunders at a meeting of the Zoological Society of London on Dec. 6th [1887]. It proved upon dissection to be a female, and the retention of some delicate bars upon the lower breast seems to indicate that it is a bird of the year. The irides were dark hazel, legs and bill black. Total length, 6.5 ins.; wing, $3\frac{3}{4}$ ins. The stomach was empty. . . .



Hanhart lith

ISABELLINE; WHEATEAR (See p. 92.)



The Isabelline Wheatear is new to Western Europe. Its range eastward and southward is extensive, including Somaliland and Nubia, Palestine, Asia Minor, Greece, the Caucasus, Afghanistan, and the N.W. Provinces of India; in Russia, Mr. Seebohm received eggs of this Chat from Sarepta; he has also two skins from Krasnoyarsk, Siberia. It visits the region of Lake Baikal on migration, breeds commonly in Daüria, and was obtained by Père David in the neighbourhood of Pekin. It has been recorded from Madagascar.'

It only remains to add that Prejevalsky pronounced this Chat to be an exquisite songster.

WHINCHAT.

Pratincola rubetra (L.).

The sweet song of this common summer visitant may be heard in most of the less elevated districts of our faunal region, especially where extensive meadow lands afford plenty of rough cover. I have met it numerously near Kendal and Windermere; it abounds in one or two localities near Carlisle, and is very plentiful near Drumburgh, but becomes rather more scarce in the west of Cumberland. The Whinchat is one of those species that often betray their young by their fussy agitation. In August, when migration has set in, the immature birds chiefly appear singly, as though they preferred to perform a part at least of their journey southward in solitude. At that season I have sometimes noticed the Whinchat actively foraging for insects in the bean fields.

STONECHAT.

Pratincola rubicola (L.).

Dr. Gough did not consider the Stonechat a common bird at Kendal. It has always appeared to me to be of tolerably general occurrence on our moorlands, at an elevation of a few hundred feet above sea-level. It occurs all along our coast-line from Drumburgh to Skinburness, and westward to Maryport, Whitehaven, and Walney Island.

Mr. Archibald has taken its eggs in the last-named locality, where it winters, as on other parts of our coast. During severe frost the resident Stonechats are sometimes sadly pinched for food. In December 1890, for example, a pair of Stonechats haunted the roadside near Skinburness in forlorn condition; all the spruceness of their summer airs forgotten, they hopped round us as wistfully as any Redbreast, peering pitifully out of their bright eyes, their feathers ruffled out, and their wings drooping despairingly, affording a striking contrast to the jaunty birds that nest in the yellow gorse coverts around the deep cutting that leads to Sandwith Lighthouse. When studying this Chat during the winter months, I have been surprised to see single males feeding out in the very middle of grass fields; their movements seemed so unlike the usual habits of the Stonechat, that some little trouble was taken to place their identity beyond a doubt.

REDSTART.

Ruticilla phœnicurus (L.).

Comparatively scarce in the neighbourhood of our coast-line, where it is chiefly to be met with on migration, the Redstart becomes numerous where timber affords it suitable nesting-places. Ascham Bridge, on the Westmorland border, is one of the prettiest localities that this species specially affects. It straggles as far up the fells as trees or brushwood are found, and breeds sparingly even on low grounds, as in the Cumbrian plain, though not at any time very abundant in the west of our faunal area. In autumn it occurs on migration chiefly as a solitary straggler. Its soft 'weet' resounds plaintively from our hedgerows, especially in the month of August, when young birds are on the move.

BLACK REDSTART.

Ruticilla titys (Scop.).

There seems to be no doubt that a pair of Black Redstarts were really shot near Scotby in the spring of 1876. The late Mr. Dickinson states in an annotated copy of Yarrell's *British Birds*,

belonging to Mr. H. P. Senhouse, that he met with individual Titys Redstarts in Lakeland in three different springs. Mr. J. W. Harris tells me that he once saw a single Black Redstart in Borrowdale, but he has forgotten the date. By far the most satisfactory occurrence is that of a single bird, undoubtedly a Black Redstart, which was identified by Mr. Tom Duckworth and others in November 1886. This bird appeared at Holm Head, near Carlisle, at the period of autumnal migration, and frequented some heaps of manure in quest of food—a proceeding completely in character with the general habits of this bird.

REDBREAST.

Erithacus rubecula (L.).

The Redbreast breeds numerously in the larger woods, as well as in our gardens. In autumn a few stragglers frequent the creeks of the salt marshes. The intolerant character of the Redbreast is equally well known with its most attractive traits. In September 1883 a pugnacious Robin was repeatedly worsted by a Tree Pipit, which finally drove its rival off the field. The contests between the two were not a little diverting while they lasted.

Sub-Fam. SYLVIINÆ.

WHITETHROAT.

Sylvia cinerea (Bechst.).

On its first return in April this warbler is shy and silent, furtively searching for insects among the bare branches of the smaller trees, and so little conspicuous that only naturalists would detect its presence. After a day or two of warmer weather the Whitethroat breaks into song, but does not at first display its full vigour, unless the season happens to be genial. In 1891, it was not until the 27th of May that I noticed the Whitethroats chorusing loudly in flight, singing as they started into the air, and descending to the hedges with the tail depending at an angle; this occurred near Cockermouth in bright sunshine, which no doubt stirred into life their latent amatory

instincts. Had the day been raw, with an easterly wind, the Whitethroats would probably have been contented to sing in cover.

LESSER WHITETHROAT.

Sylvia curruca (L.).

Though aware that this warbler visited the neighbourhood of Kendal, Dr. Gough catalogued the species as 'not a common one.' I have rarely met with it in Lakeland. The first pair that I identified near Carlisle were seen at Rose Hill; curiously enough, a bird killed *there* by James Barnes appears to have been the only one noticed by T. C. Heysham. He remarks in a private note: 'Mr. Barnes of Botcherby this day showed me a specimen of this bird which he had shot near Rose Hill, when singing on the 11th of May 1849.' Mr. W. Duckworth considers the Lesser Whitethroat to be almost exclusively a passing spring migrant to Lakeland, and this view is probably the right one. At the same time it should be understood that the species continues to nest in one or two favourite localities, near Keswick for instance, and at Kendal. Mr. H. E. Rawson assures me that he finds several nests of this species every summer at Windermere. Another brother Ibis, Mr. E. W. Holdsworth, volunteers that he has searched for it near Oxenholme for several seasons without even hearing its familiar song.

BLACKCAP.

Sylvia atricapilla (L.).

Upon its first arrival, in the month of April, the male Blackcap flits demurely about the shrubberies and elder-trees; but, after a short rest, this warbler breaks forth into the rich song which is heard *pianissimo* even in July. Nowhere in Lakeland can the Blackcap be accurately termed a very numerous bird. Yet every recurring season finds it re-established in its favourite haunts. The cock-bird appears to share the duties of incubation. In May 1891 Mr. F. P. Johnson found a bird in full *male* plumage, lying dead upon a nest containing five eggs,

at Castlesteads. The sex of this specimen was not determined by dissection, but the dress agrees exactly with that of the adult male. We do not often enjoy an opportunity of hearing the Blackcap's song in autumn, but Mr. A. H. Macpherson heard a Blackcap singing at Keswick, on the 26th of September [1890].

GARDEN WARBLER.

Sylvia hortensis (Bechst.).

The anonymous writer 'X. Z.' tells us that, when visiting Arnside in 1793, he fell in with 'that variety of the *Motacilla Trochilus*, called in Westmoreland a Strawmear.'¹ Dr. Gough has independently shown that this name (which may have been suggested by the light fabric of a Warbler's nest) is applied in Westmorland to both species of Whitethroat and the Garden Warbler. The latter was probably the species referred to by 'X. Z.' Its shy habits render it easy to under-estimate the numbers of this Warbler, which is fairly distributed in Lakeland, though hardly as abundant as the Blackcap. It is seldom seen on the English Solway littoral. Indeed, Mr. Richard Mann never met with it near Allonby until August 1890, when a single bird was shot for identification as it skulked in a hawthorn hedge.

GOLDEN-CRESTED WREN.

Regulus cristatus, Koch.

The Goldcrest is far from uncommon in our gardens and plantations. It even nests in a solitary clump of small wind-twisted firs in the middle of one of our mosses, and its affection for particular spots is stronger than that of most small birds. At no time during the last seven years has a Goldcrest omitted to build in a certain tree at Rockcliffe, although of course the elevation of the nest has varied considerably. A good many Goldcrests flit about our hedges in the winter-time, but the spinnies of young larches and firs are their chief haunt. Sometimes they take very kindly to the river-side. I once saw a

¹ *Gentleman's Magazine*, 1794, p. 326.

large tree on the banks of Eden fairly alive with Goldcrests ; this was on a bright frosty day, and very attractive the little midgets looked as they actively prospected the finer twigs in search, I suppose, of hibernating insects.

FIRE-CRESTED WREN.

Regulus ignicapillus (Brehm).

I have paid considerable attention to the annual immigration of the Goldcrest into our spinnies and plantations, without ever detecting the presence of the Firecrest among the Goldcrests. In the beech woods of Navarre we found it easy to identify the Firecrest, and even to distinguish a female of this species on the wing. In the neighbourhood of Kendal a sharp look-out has been kept latterly for Firecrests, but only Goldcrests have been procured. No doubt can reasonably be entertained as to the correct identification of a male Firecrest killed with a stone at Rose Hill, near Carlisle, by Mr. Graham, in 1845. It was only identified as a Firecrest after a careful reference to the figure and description of this *Regulus* in Yarrell's *British Birds*, which was then in course of issue. Mr. Graham is an accurate, painstaking observer of birds, and recollects the circumstances perfectly. He allowed Story, the bird-stuffer, to have the specimen. Story most likely disposed of it either to T. C. Heysham or Mr. Losh of Woodside. I have not been able to ascertain in whose possession it finally rested. Mr. Graham's impression was that Heysham most likely secured it, but his transaction was only with Story. It is possible that Story sold the bird to one of his customers at Newcastle.

CHIFFCHAFF.

Phylloscopus rufus (Bechst.).

As long ago as the year 1831 we find T. C. Heysham writing to his friend Doubleday : 'The Lesser Pettychaps, I have reason to believe, seldom visits the immediate neighbourhood of Carlisle ; indeed, I have only heard its note once, and that some years ago. The Wood and Yellow Wrens are abundant.' Sixty years have passed, and still this *Phylloscopus* is only sparsely

distributed over Lakeland as a summer visitant, scarce in the sheltered valleys of the south of this area, such as Rusland (where Mr. Archibald meets with it only in small numbers), and seldom noticed in Cumberland east of the Eden valley. Mr. Tom Duckworth found two nests of Chiffchaffs, full of young birds, in an afternoon's stroll near Gilsland, during the present summer [1891].

WILLOW WREN.

Phylloscopus trochilus (L.).

The Grune Point, near Silloth, is a long shingled beach, covered with scrubby gorse, which affords fair shelter to small birds resting on their travels. Here, accordingly, a good many Willow Wrens halt on the spring passage, shy and voiceless, until the fatigue of their last long flight has passed, and they find themselves able to renew their northward journey with fresh vigour. In autumn their movements are less exclusively nocturnal; the young birds, conspicuous by reason of their brighter tints, then appear pretty freely in our hedgerows. Like the Goldcrest and the Whitethroat, this small *Phylloscopus* has occurred on migration at St. Bees Lighthouse. It is of course numerously diffused throughout our woods as a breeding bird.

WOOD WREN.

Phylloscopus sibilatrix (Bechst.).

The Wood Wren is just sufficiently local with us for some interest to attach to its presence; but granted a sheltered situation and a good supply of old timber, you may find a pair or two of Wood Wrens in most parts of Lakeland. Their numbers, like those of the Grasshopper Warbler, fluctuate from season to season. Yet even such an isolated plantation, as that which clothes the banks of the Aigle Gill beck, will, on examination, be found to hold a pair or two of these charming little warblers. I have listened to its shivering song in many pleasant places—in the park at Holker, in the Windermere Woods, on the banks of the Lowther river near Penrith; but there is no more certain 'find' for the Wood Wren than King Moor, where the citizens of Carlisle used to hold their race meetings.

REED WARBLER.

Acrocephalus streperus (Vieill.).

A few years ago I drew attention to the rarity of the Reed Warbler in Lakeland, stating that the only satisfactory proof of its occasionally visiting us was supplied by the fact that Mr. Graham took a nest and eggs of this species on the Eden in 1840, and that a single bird had once been shot at Bassen-thwaite. Since then I have searched for it in the extreme south of Lakeland with the same lack of success as elsewhere, although quiet reedy nooks, such as the Reed Warbler loves, are by no means rare. Mr. Hindson writes from Kirkby-Lonsdale: 'This warbler I have never seen to be certain about, but I once found a nest attached to four or five reeds at Terra Bank Tarn, about 15 inches above the ground.'

SEDGE WARBLER.

Acrocephalus phragmitis (Bechst.).

Though evincing a more marked predilection for nesting in hedgerows at a distance from water than is common in the south of England, the Sedge Warbler is pleasantly associated with the willow beds and rushy pools of Lakeland, among which you can hear its song any summer's day as the birds flit restlessly from one branch to another, occasionally hopping across the bare ground under a screen of furze or other close cover.

Once, in Germany, I made the acquaintance of an eccentric Sedge Warbler which sang steadily in the top of a tall tree, exposed to anybody's view. Our Lakeland Sedge Warblers are much more retiring birds. One day, last May [1891], a Sedge Warbler took up his position on a bare spray of bramble close to where I was crouching in the hedge. The little fellow had not the least idea that he was being interviewed, and proceeded to pour forth an earnest love-song, little thinking that every vibration of his tiny throat was closely scanned through a pair of binoculars. The lateness of the spring assisted this observation, for had the leaves been fully expanded, my little friend would most assuredly have sung under cover. I have always

imagined that Mr. Cordeaux must have had the Sedge Warbler in mind when he penned his description of what he *calls* 'the little reed wren,'—'rattling away at its own wild song, and, not content with that, appropriating the notes of many another bird, then quietly at rest in the woods of Silverhow.'¹

This reminds me that it is during the sympathetic twilight of a summer's night that the lay of the Sedge Warbler can be heard to the best advantage, in Lakeland at all events. Throw a stone into a clump of willow bushes at any time, and your action will provoke a polite rejoinder from a Sedge Warbler; but that is nothing to the interest of a full choir of Sedge Warblers chorusing in noisy emulation during the first minutes of the new-born day. Strolling along the top of the sandstone cliffs known as Etterby Scar, one lovely night in May [the 21st, 1889], I felt constrained to halt and listen for a while to the lays of many Sedge Warblers, aye rehearsing afresh their oft-told professions of love, while the silver moonbeams glanced fitfully on the restless flood of Eden's fast-gathering waters. Suggesting to a passer-by that he too should pause and listen for a moment to the Sedge-bird's story, that enlightened individual assured me with portentous gravity that the weird burden of sound produced by the mixed Babel arising from so many tiny throats was '*only* the clocks of Carlisle striking twelve!'

GRASSHOPPER WARBLER.

Locustella naevia (Bodd.).

None of the summer birds are more whimsical in choice of haunts, or fluctuate more in number from year to year, than the Grasshopper Warbler. Yet it nests sporadically over most of this area, from the mosses of Lower Furness to Newbiggin Fell and the shores of the Solway Firth. Mr. Archibald finds that a few pairs nest in the Rusland valley. The late J. Hindson wrote in his MS. notes: 'I have only heard the song of this little warbler twice, once in a bed of furze, near Huttonroof, again in a thick part of the hedge in Casterton Lane.' These

¹ *Zoologist*, 1867, p. 870.

localities just mentioned are in the south of Westmorland, but the bird breeds also in the centre of the county. J. B. Hodgkinson annexed a full clutch of the eggs of the Grasshopper Warbler, which he found near Windermere Lake in 1890.

Rambling all over Cumberland, I have heard the song of the Grasshopper Warbler at a good many points, especially in the north of the county, but it becomes rare in the west. At Wright Green, for example, Mr. Dickinson considers it a rare breeding bird. Mr. Tom Duckworth has paid great attention to the habits of this bird,—the 29th of April is the date which he considers about the nearest approximation to the arrival of the male birds. He has found complete clutches of eggs as early as the 14th of May, and as late as the 6th of August. The song of this Warbler can be heard to the greatest perfection in the dusk of the evening, and again during the early hours of day. The Rev. R. Wood of Rosley has enjoyed a close acquaintance with this species for many years; so abundant is the species, comparatively speaking, in some seasons in his parish that he once counted fourteen different Grasshopper Warblers singing during an evening's walk. It does not of course follow that the songsters were all males. William Little showed me a Grasshopper Warbler which he felled with a stone while the bird was in the act of 'burring' in the hedge in full view of him. On dissection the specimen proved to contain a perfect egg ready for exclusion. Mr. Wood fully shares my experience that this bird sings a good deal during the day. I have noticed this especially during the last few seasons. For example, on the 19th of July [1890] I happened to be crossing some fields near Whitrigg with a friend, who doubted if the Grasshopper Warbler really sang during the day. Hearing one of these birds singing in the hedgerow, I took out my watch and found it was half-past eleven in the forenoon.

Sub-Fam. *ACCENTORINÆ*.

HEDGE SPARROW.

Accentor modularis (L.).

From the hedgerows of Walney Island to the stone walls of our eastern fells, the Dykey, or Creepy-dyke, is a well-known

bird. Bewcastle folk call it the Hemplin, a term applied in West Cumberland to the Linnet, though the Hedge Sparrow is dubbed the Hempie in many districts of southern Scotland. It is an early breeder; it often happens in a *late* spring that the first eggs are chilled in consequence of the leaves not having expanded sufficiently to save the nest of this small bird from the inundations of April showers. The earliest brood that came under my notice this year [1891] hatched out on the 15th of May. From the first they were partially invested with a covering of black down. By the 24th day of the same month they had feathered nicely, and could chirrup strongly to their parents. In 1888 I found a brood which did not leave the nest until the 8th of September.

Order *PASSERES*.

Fam. *CINCLIDÆ*.

DIPPER.

Cinclus aquaticus, Bechst.

Dr. Gough described the Water Ouzel as common on the rocky parts of Kent, Mint, and Sprint. Mr. W. Duckworth finds that his favourite bird nests as regularly beside the quiet streams near Ulverston as on the gills and becks of the more remote fell sides. No river perhaps offers greater attractions to the Dipper than the Eden, the banks of which, from Wetheral upwards, assume an irregular and often precipitous character, affording many of those ledges, overhanging the deeper pools, upon which the Dipper loves to frame its nest. Though a shelf or wall of rock most frequently supports this structure, a few pairs nest beneath bridges and in the roots of trees. Singularly aberrant was the conduct of the pair of Dippers which, for several seasons, nested in the branches of a tree at Corby. Yet no sooner had the fact been reported than other instances of the Dipper nesting in trees appeared in the public press. A novel departure in the Water Ouzel's arrangements is *lining* the nest with *feathers*. For thirty years Mr. Tom Duckworth had examined many nests every season without finding a single trace of feathers. In 1890 he found, for the first time, a nest partially lined with feathers. Verily, it is *parlous* to dogmatise too nicely about the practices of wild birds!

Last autumn I found that the Dippers on Ulleswater and up in Martindale were singing lustily in the last days of October. The Duckworths have overheard the Dipper singing in all the summer months. In May 1891 I listened to a Dipper singing on the Saark; but its notes are most often uttered in frosty weather. The Dippers enjoyed a good time in the sharp frost of January 1891, when other birds were shivering and weak for want of food. On the 7th of that month a friend and I crossed the meadows between Edenhall and Langwathby, forced our way through the alder grove, where Redpolls nest in the summer-time, flushed a 'cock' as we tore our way through the hawthorn hedge, startled the gaily dressed Mallards from a hole still open in the frozen 'runner,' left behind us the scrubby bushes in which Blue Tits, Coal and Great Tits, were hunting eagerly; so reaching the open banks of the Eden, to at once espy the hardy Dipper squatting on a great hummock of ice, whence he was pouring forth a strong, shrill burden of song, as though in defiance of the 'Ice King.' Undisconcerted by our near approach, he sang on and on, his shadow reflected in the water, at the brink of which he perched, all absorbed in his own delicious melody. At last he paused, rose, and flew a few yards, alighted upon the chilling waters, so floated along in the stream's current, until a rock that took his fancy coming into view, he flitted across the stream for a moment, poised himself gracefully on the boulder, and then disappeared in the recesses of a favourite pool. Nor is the gaiety of the Dipper subdued by damp and foggy days. On a recent Christmas Eve (1890), I walked up the Eden banks in a thin and raw fog: a sudden thaw had set in. When the haunts of the Dipper were gained a thick and lowering mist invested the landscape, but the joy of the Ouzels seemed unabated: curtseying sedately on the rocks, they pursued their usual avocations with zest and spirit. One individual hopped after a quaint fashion about a sandbank. Another in merry sport chevied its mate along the stream. Whether the loosened ice floats down the river, ever increasing as it journeys on, or the flowering of the pilewort in the hedge-side afford an omen that the present is the time to love, the Dipper is ever a perfect embodiment of grace combined with

indomitable energy. He at least retains a spirit unsoured and unchafed by the petty disappointments of life. Nothing seems ever to come amiss to him. When the Redwing hops dolefully across the snow-drift, and famishing Rooks fall tooth and nail upon weaker fowl, the Dipper preserves his equanimity intact; nay, more, he manages to secure an easy competency. The only time at which the Dipper finds it difficult to enjoy a good 'square' meal is when a succession of heavy 'spates' have unduly swollen the lower waters of the larger rivers. If this occurs, the habits of the Dipper are modified for the nonce. Last year, for example,—the 24th day of January,—the Eden was running very high, owing to a thaw setting in suddenly in its head waters. Near Cargo, but on the opposite bank, I watched a Dipper foraging for food after a method new to me. It was hopping like a thrush over the grassy sods upon the bank, now upright, now wading into the shallows of some sippy ground, frequently inserting its bill into the loosened soil. Although it hopped like a thrush, it was *not* of course feeding *by ear*, like that bird, but was patiently boring into the ground in every direction, evidently in the hope of being able to appropriate some unconsidered trifles.

Order *PASSERES*.

Fam. *PARIDÆ*.

WHITE-HEADED LONG-TAILED TITMOUSE.

Acredula caudata (L.).

A review, which Dr. R. B. Sharpe contributed to *Nature* in 1886, took exception in a friendly spirit to a suggestion that this Titmouse, so familiar to many of us as a *continental* species, might occur some winter in Cumberland. A very few years have sufficed to justify my supposed rashness. On the 26th of November 1891, that accurate and cautious naturalist, Mr. Tom Duckworth, came across a drove of about a dozen Long-tailed Titmice in a lane between Orton and Thrustonfield. The morning was bright and frosty; the light was excellent. Three of the Tits were conspicuously distinguished from the rest of their companions by their *pure white heads*. They were not at all wild, and permitted of a close inspection. Mr. Duckworth

followed the birds up and down the lane for some time, endeavouring without success to knock down one of the white-headed birds. Having thus failed to obtain a specimen, he came to me to see a skin of the continental bird, to ascertain whether the tints of the body-colour were precisely identical. He assures me that such was the case; but whether the strangers had yellow eyelids could not of course be ascertained. The fact of *three* individuals occurring together materially strengthens the evidence of this excellent ornithologist.

BRITISH LONG-TAILED TITMOUSE.

Acredula rosea (Blyth).

I have never come across this Titmouse in any of the more exposed portions of Lakeland, but it occurs in very tolerable numbers throughout the plantations of sheltered valleys; frequently, also, beside our becks and watercourses, in the neighbourhood of which it appears to find a plentiful supply of the tiny caterpillars which it prefers to any other insects. Mr. W. Duckworth considers it fairly common in the country round Morecambe Bay. Dr. Gough catalogued the species as 'common' near Kendal. The newly-fledged young are especially attractive, as they flit about the low bushes or perch in rows on the branches of trees beside the river, overflowing with zeal to secure the larvæ of *Geometræ*, their long rectrices streaming through the air as they follow their fellows in undulating flight.

GREAT TITMOUSE.

Parus major, L.

This species and the Blue Tit frequent the trees of our older parks, such as Holker or the fine avenue of oaks at Levens, the timber there affording many nest-holes, and hecatombs of tiny caterpillars, which, if unchecked, would devastate the foliage. In the last days of June, often earlier, the old birds forage actively for their newly-fledged broods. It is pretty to see them encouraging the youngsters to persevere in their first aerial efforts. Both species nest in every manner of situation; a hole

in a cottage wall, a freshly-painted pump, a letter-box, or a cranny in the church tower, are all eligible sites; but the Great Tit on the whole perhaps is rather more partial to tree holes than the Blue Tit. Public opinion appears to be divided as to whether the Great Tit really inflicts much injury on hive-bees. A man named Camm, of Keswick, wrote to T. C. Heysham in 1835: 'We have got a bird which we call a *Bee-eater*, owing to the Bird Being a great destroyer of that insect.'

BRITISH COAL TITMOUSE.

Parus britannicus, Sharpe and Dresser.

Wherever extensive plantations of coniferous timber are found, the Coal Titmouse asserts a numerical superiority over the other members of the genus. It is numerous, for example, in the woods which extend over Penrith Beacon, and follows the young firs up the sides of the fells: its distribution depends on the relative abundance or scarcity of the food-supply, and not perceptibly on altitude. During the colder months of the year the Coal Tit often joins company with allied species, and shares in the feasts of cocoa-nuts and other dainties which some good souls remember to hang around their window-sills for the benefit of the giddy sprites, that hang with heads towards the ground in every variety of attitude.

MARSH TITMOUSE.

Parus palustris, L.

The Marsh Titmouse is much the most local of the family in Lakeland; not that it can be termed rare, but rather that it does not enjoy the ubiquity of hardier species. At one time or another this Tit has occurred to me in most of the more sheltered districts; for example, on the mosses in Furness, in the Windermere woods and those of Penrith. Nor is it absent from the more open parts of the country, since a few small flocks visit the open country of the English Solway in the winter time. As a nesting bird the Marsh Tit is far less common; yet a fair sprinkling of pairs appear to breed every year in Lakeland.

BLUE TITMOUSE.

Parus cæruleus, L.

Not the least entertaining idiosyncrasy of the Blue Tit is that of occasionally appropriating the nests of other birds.¹ Mr. F. P. Johnson recently discovered a pair of these Titmice occupying the nest of a Greenfinch, in which the female Tit had laid eleven eggs. The finches built a new nest near their original habitation. Two careful observers, Mr. Plenderleath and Mr. A. Smith, independently discovered two different couples of Blue Tits occupying the nests of Hedge Sparrows. I examined the nest of one pair, a typical nest of the Hedge Sparrow, built in a hawthorn hedge at Castletown. T. C. Heysham found that a pair of Blue Tits appropriated the nesting hole of a pair of Pied Flycatchers. A note appeared some years ago of a Marsh Tit which I happened to see hunting the lamp-posts at Oxford for such insects as might chance to be resting on the glass panes. The Blue Tit does the same. On November 5th, 1889, I spied a Blue Titmouse alight on a lamp-post in Carlisle, and proceed to scrutinise its four sides. Before the bird crossed the road to try another post, I saw him deliberately squint through the round hole left for the gas-burner, in order to assure himself that no insects were left lurking in the interior. In districts where trees are scarce or absent, little parties of Blue Tits are often to be seen flitting about the stone walls which replace the hedgerows of the lower valleys.

Order *PASSERES*.Fam. *SITTIDÆ*.

NUTHATCH.

Sitta cæsia, Wolf.

When calling on Turner, the Penrith bird-stuffer, on October 18th, 1848, Mr. T. C. Heysham was assured that the Nuthatch had occurred on the banks of the Eamont, and was common about Lowther. The Nuthatch has been reported to me once

¹ Readers interested in the vagaries of nesting birds should consult a most interesting treatise by Dr. Paul Leverkühn, entitled *Fremde Eier im Nest*.

or twice of late years as seen in the same district, but not by any one possessed of an intimate acquaintance with the bird. As long ago as 1782 a pair of Nuthatches were shot at Armathwaite. Most likely they had intended to breed there. At all events they were sent to Dr. Heysham on the 11th of May. There is some reason to think that a single Nuthatch visited a garden near Silloth on and after September 24th, 1889. The description given by those who saw it agreed closely with the appearance of the Nuthatch. I mention the circumstance, not because the identification was complete—no *ornithologist* saw it—but merely as a hint to local observers, who should look out for the bird. It is a little surprising that the Nuthatch of the north of Europe, *Sitta europæa*, has not been detected as a rare visitant to the British Isles. Its addition to the British list is probably merely a question of time, but like other rare birds it is much more likely to occur in the eastern portions of Britain than among the mountains of Lakeland.

Order *PASSERES*.

Fam. *TROGLODYTIDÆ*.

W R E N.

Troglodytes parvulus, Koch.

Abundant throughout our faunal area, the Common Wren is nowhere perhaps more thoroughly at home than at St. Bees, where its loud and cheering song rings lustily along the sandstone precipices, especially where the broken cliffs slope gradually towards the sea, affording considerable shelter for small birds. Many unlikely spots hold a Wren's nest. The materials used are also very various. Not the least curious is one found near Cumwhinton in the spring of 1891, by Mr. Little. This nest is of the usual shape and proportions, but the material used for the exterior portions is exclusively *stout* straw, with a slight addition, *in the crown*, of common hay. This nest gives the impression of one run up in a hurry of the nearest materials; perhaps the bird filched all the materials from a stable or farm-yard. The straws used are remarkably large and coarse to have been employed by so small a bird.

During the autumn solitary individuals haunt the smaller

creeks of the Solway, particularly in the month of October, when the edge of the marsh is also favoured in the same way. *These* birds appear to be only resting on migration; but some individuals undoubtedly spend all the winter among the sandbanks to the west of Silloth, in company with a few Skylarks and Meadow Pipits. Furze is generally absent from these sanddunes, and the only cover is that of the bents, which grow plentifully. In bad weather, therefore, the Wrens take shelter in the rabbit-holes, which honeycomb some portions of the bank above the beach.

Order *PASSERES*.

Fam. *MOTACILLIDÆ*.

WHITE WAGTAIL.

Motacilla alba, Linn.

Whether the White Wagtail visits Westmorland or Furness on vernal migration I cannot say. It is one of the few points which still remain to be determined by those who live in the southern portion of our area. Its presence has not been ascertained as yet by any of my ornithological acquaintances, but its detection will come in time. I had not the least difficulty in finding this species resting on vernal migration in Cumberland, in which county it has repeatedly occurred to our most competent observers. T. C. Heysham, for example, wrote to Yarrell, in February 1837, expressing his conviction that *Motacilla alba* would be found in the southern counties of England occasionally as soon as its specific characters became widely known. In a letter of June 1st, 1842, also addressed to Yarrell, Heysham states: 'About a fortnight ago a fine male White Wagtail of the Continent (*M. alba*, Lin.) was killed near Carlisle, and another was seen in a different locality a week or two previous. This I believe is only the second instance of the capture of this bird in England.' He wrote to Doubleday on July 23d, 1842: 'In April last I had the pleasure of seeing for the first time a specimen of the Pied Wagtail of the Continent alive about ten miles from this place, and soon afterwards another was killed about a mile from Carlisle, which I saw after it was shot.' Loose notes of the same naturalist record that he saw a White Wagtail

on the banks of the Ellen, near Maryport, in the last week of April 1848; and that Dodd, a Carlisle bird-stuffer, shot a specimen on the Eden at Carlisle, May 2d, 1848. Of later occurrences, Mr. Dickinson saw two White Wagtails on the Irthing in the spring of 1850. Mr. F. D. Power saw two White Wagtails near Cleator Moor on April 11th, 1874. Mr. W. Hodgson identified a White Wagtail near Hutton John in April 1880. I saw a White Wagtail on the Caldew in April 1883, and another at Rose Castle in the following April. I have since seen several others. Indeed, since the attention of the Messrs. Mann was called to the distinction between this and the Pied Wagtail, they have recognised White Wagtails near Allonby almost every spring. But though the fact that the White Wagtail visits at least the Cumbrian portion of our area every spring has been abundantly proved, its appearances are almost exclusively limited to the vernal passage. The only autumn occurrences known to me are those of a single bird which I observed on Burgh Marsh, September 5th, 1885, and of another which Greenwell shot at Alston in the autumn of 1866.

PIED WAGTAIL.

Motacilla lugubris, Temm.

A few Pied Wagtails haunt our river-banks at every season, but the species is chiefly a summer visitant. The birds which breed with us only represent a small proportion of the numbers which visit us *en passage* in autumn, many of the latter being young birds. In the spring of the year the old males are the first to arrive, generally in March, in which month I have observed their appearance (in fresh, clean plumage) in such outlying districts as Shap Fell, Murton, or the skirts of the Bewcastle district, single individuals being the first to penetrate into these regions. In the fall of the year they are highly gregarious, travelling by day, and often roosting together in considerable numbers. For example, on the 10th of September 1890, a friend and I watched a flight of this *Motacilla* come in to roost near Floriston. Shortly before dusk they came up from the north; attracted, no doubt, by the neighbourhood of the Esk,

they dropped with one accord to rest in a small patch of rushy land. A large proportion of individuals thus migrate across country, while their fellows follow the western coast-line in their southern journey.

GREY WAGTAIL.

Motacilla melanope, Pall.

The Grey Wagtail is a common bird in Lakeland, nesting on the Kent, the Duddon, the Gelt, the Caldew, and most of our rivers, generally in the haunts of the Water Ouzel. The nest is constructed in a variety of situations, in a hole in a stone wall, in a tree root, or in some niche of rock close beside the salmon pool. Dry stems, a few fine roots, and a little horse hair, with us generally white, made up the materials of all the nests that I have myself seen. Anxious and fearful of intrusion are the old Grey Wagtails, perching with a pretty concern in the nearest trees, if their eggs be examined in their view. Individuals pass the winter in the central and western districts of Lakeland, but this Wagtail is chiefly a summer visitant.

YELLOW WAGTAIL.

Motacilla raii (Bp.).

Dr. Gough included this Wagtail as 'common' at Kendal, an error, in my opinion, since Ray's Wagtail is a decidedly scarce summer visitant to Lakeland. It is true that Thompson met with it both at Hawes-water and at Windermere in July 1835, but Mr. Cordeaux, an equally good observer, never met with the bird at all during three weeks spent at Grasmere. A few pairs breed sporadically in Cumberland. One pair nested this year [1891] at Monkhill Lough, and another reared their young on a piece of rough ground just outside the Goods Station at Carlisle; but it never occurs in any numbers, not even on migration. The Messrs. Mann, who are well acquainted with this species, closely observed a belated Yellow Wagtail in their farm-yard, on the unusually late date of November 27th. We searched for it together the following day, but it had left. They were quite

certain that it was *not* a Grey Wagtail—a species constantly under their observation—but ‘a summer Yellow Wagtail.’ This occurred in 1890.

MEADOW PIPIT.

Anthus pratensis (L.).

The Meadow Pipit is the commonest of birds on our hills during the summer-time. Whatever fell you choose to cross, you are equally certain to disturb this restless bird from the heather or tussocky ground, to watch its jerking flight across the moor, and to hear its short, squeaking call-note uttered on the wing. Nor is it confined to the high grounds, since it rears its young upon the beach of our western seaboard, only a few feet above high-water mark. A good many pairs breed also on our mosses and in rough meadows recently reclaimed. On the coast I have often been pleased to see the activity and grace with which the Meadow Pipits pursued small flies and other insects on the tangles deposited on our sea sands after a heavy gale—so closely does this Pipit approach the Rock Pipit in some of its habits. The numbers of Meadow Pipits which pass through Lakeland in March and April on vernal passage appear to exceed the number that nest on our moors, common as the species is.

TREE PIPIT.

Anthus trivialis (L.).

The Tree Pipit is not as abundant in the north of Lancashire or the southern parts of Westmorland as the presence of large parks full of old timber and sunny slopes would lead us to expect. In 1891 I found several pairs established at Heversham, and others at Levens and Rampside, but the species seemed to be distinctly scarce. I do not think, however, that the species was up to its usual numbers last season, even in Cumberland, which includes many favourite haunts of this arboreal Pipit. It is not in any true sense a bird of the high fells, but it does breed thinly all along the base of the east fells, at any rate from Appleby northwards. It was in the hay-fields

near Appleby that I first found out that this Pipit sings as merrily on the ground as when sporting on the wing. It is pretty to watch a slender Pipit so engaged, threading its way furtively through the stems of the thin hay crop, while pouring forth in snatches a volume of sweet melody.

RICHARD'S PIPIT.

Anthus richardi, Vieill.

Mr. H. P. Senhouse possesses an interleaved copy of Yarrell's *British Birds*, in which the late Mr. W. Dickinson entered a description of two examples of this Pipit which he had met with. He has also left on record a statement in print: 'In the spring of 1843, as I was engaged in the enclosure of the extensive commons of Castlerigg and Derwentwater, it was necessary to travel over and examine every portion of the surface; and whilst on the upper range of Barrow Side, I noticed a pair of strange birds wandering about on the stony ground. They appeared of the size and figure of the Skylarks. By a little cautious manœuvring I got within about thirty yards, when they arose and flew off a hundred yards or so. By walking off and not seeming to notice them, I again came near enough to see their pink legs and long hind claws, and to know they were larks of a species I had not seen or heard of. They did not appear alarmed, and I retired and rounded again. They did not crouch as our lark does, but stood upright or ran on a little before flying; and not wishing to disturb them, I left and saw them no more. Their general colour was nearly like that of our Skylark, only a little paler, and their figure was a trifle less bulky, but longer. No crest was visible, and no note heard. On since referring to Morris's Plates, I have no doubt of their being that very rare British visitant, Richard's Pipit.'¹ There can be no doubt that this large Pipit occasionally straggles to Lakeland—indeed, I am satisfied that it has occurred on the fly-line of the English Solway in three recent instances. In April 1889, Mr. Richard Mann and his brother, Mr. Tom Mann,

¹ *Rem. West Cumberland*, p. 14.

closely observed a Richard's Pipit on their farm at Aigle Gill, of which they gave me an excellent description both in writing and orally. They would have shot it at once, had the day not been a Sunday. They postponed shooting it until the following day. Richard Mann rose early on Monday, but could not find the bird. When at last it was flushed by their dog, it rose wild and flew out of sight. In October 1889, Mr. Nicol saw a Richard's Pipit, as he assured me, on Skinburness Marsh. Having watched it for some minutes, he was about to fire, when the bird flew across a large creek and he lost the opportunity. Again, in September 1891, I flushed one of these Pipits twice on the coast at Bowness on Solway. It was twice marked down, and once it rose almost at my feet, so that the Rev. F. O. Pickard-Cambridge had a good view of it as well as myself. We marked it down, as we thought a third time, but when the only 'gun' in the party came up with us the Richard's Pipit had disappeared. It was a very different bird from a Skylark, long and slender in shape, and much brighter in colour. The tail of this Pipit looks long in flight. Most likely this Pipit had arrived in a flock of Wheatears which frequented the same ground. When I worked over the identical bit of rough marshy ground two days later, I found that both the Wheatears and the Richard's Pipit had disappeared.

ROCK PIPIT.

Anthus obscurus (Lath.).

There is only one bit of marsh in the English Solway district that holds a pair of Rock Pipits in the breeding-time, at least so far as I have been able to discover. This is a little surprising, because the species is common in the winter-time. You can hardly visit any of the more extensive saltings between October and March without noticing a few Rock Pipits flitting about the creeks. But these birds are winter visitants only, and withdraw in spring to other breeding haunts. Nor is this Pipit plentiful on Walney Island in the summer-time. It breeds there, but only in very small numbers. The chief haunts of our Rock Pipits in summer must be looked for upon the red sand-

stone cliffs at Sandwith, where it nests on grassy ledges of the rocks, among the sea-pinks and other wild-flowers. If you happen to row on a spring morning along the shore from Whitehaven to St. Bees, you will find many Rock Pipits darting actively about the huge and irregular masses of rock which have become detached from the face of the parent cliff by the action of frost and rain, and now lie piled together above the beach in rude and tumultuous disorder.

Order *PASSERES*.

Fam. *ORIOOLIDÆ*.

GOLDEN ORIOLE.

Oriolus galbula, L.

I have failed to trace the Golden Oriole in either Westmorland or Furness. It is a far rarer visitor to the north-west of England than to the southern and south-west counties. Dr. Parker identified a single specimen in female plumage, shot at Irton in Cumberland in 1857. Mr. H. P. Senhouse assures me that several Golden Orioles, probably a small flock *en voyage*, made their appearance near Lorton, in the summer of 1878. A specimen in female or immature dress was killed some years ago in the Caldbeck district. Apparently only one individual, in full male livery, has ever been killed in Cumberland. This last was shot near Penrith, and mounted by the elder Hope, to whom I am indebted for this information. It was taken to Hope as a Golden Thrush.

Order *PASSERES*.

Fam. *LANIIDÆ*.

GREAT GREY SHRIKE.

Lanius excubitor, L.

Although locally considered a very uncommon bird, and varying in degree of scarcity from one season to another, few winters pass without the occurrence of individual specimens in one or other part of Lakeland. Content to lead a solitary life in its winter quarters, this Grey Shrike frequents such hedges as happen to enclose pasture lands, often remaining within a few miles' radius for several weeks together. Its quiet, unobtrusive

character at this period of the year forms an amusing contrast to the animated and even noisy demeanour exhibited upon its Continental breeding-grounds in the season of love, when its vehement chuckling and vivacious gestures can hardly escape the recognition of the most careless. Although suspicious of danger, it is not a very difficult bird to approach whilst intently engaged upon the approach of a Mouse, a Shrew, or a small bird. The temerity which it exhibits, in striking at the decoy linnets of our bird-catchers, occasionally results in the Shrike itself being held captive by the treacherous 'twigs.' Its flight is sometimes lofty and sometimes low, but is always swift and undulating. As regards distribution, it is least common in the southern portion of Lakeland.

Dr. Gough stated, in 1861, that this Shrike must be looked on as a rare visitor in this part of the north [Kendal], only one specimen having been obtained in his neighbourhood, *i.e.* at Middleton. Nine years later we find that he had examined three additional specimens, shot respectively on Barbon Fell, on Brigsteer Moss, on the 7th October 1870 at Meathop. A more recent Westmorland bird is the specimen which Woodburn of Ulverston shot near Oxenholme, on October 13th, 1886. This has a single white alar bar; the white breast shows very slight trace of the vermiculations, which are rarely entirely absent from the Grey Shrikes killed in Lakeland. In January 1887 one of these Shrikes made its appearance in the Rusland valley. Having been shot, it was identified by Mr. C. F. Archibald, who has recently received from the keeper at Rusland Hall another specimen, shot about the end of November 1891. When we enter Cumberland the occurrences of this Shrike become rather more frequent, though chiefly upon the main lines of migration. Among our dales it is always rare, but the Keswick Museum contains a fine bird procured in the heart of the Lake district. In the west of Cumberland the Great Shrike seems to turn up at pretty frequent intervals. Near Whitefield a Grey Shrike was killed in October 1865. Captain Johnson possesses a Grey Shrike killed near Egremont in 1880. The late Mr. W. Dickinson recorded two specimens killed near Workington. Several have been taken near Whitehaven. Mr. Harris has

more than once seen living individuals near Cockermouth. Dickinson of Wright Green showed me two birds procured in the vicinity. The late George Mawson obtained an example shot at Dovenby Hall in December 1882. Near Maryport, a bird-catcher named Fletcher caught a Great Grey Shrike with his limed twigs in November 1860. At Wigton a handsome two-barred Shrike was shot on the 14th of April 1866. Time would fail me if I were to set forth every single occurrence of this Shrike in the north of Cumberland. One of the finest adult males that have been secured in Lakeland was shot at Kirkclinton in December 1883, and was shown to me in the flesh by the late Sam Watson, who stated that two or three others had previously passed through his hands. I observed a single bird in the Willow Holme in January 1883; this was unfortunately shot.

Another very blue example came under observation in February 1884, when I found the suspended remains of a Fieldfare which it had impaled in a wood near Carlisle. Dr. Heysham had met with three or four examples prior to 1796, and T. C. Heysham knew the species well. The latter wrote in 1829 that, during the previous five or six years, the Cinereous Shrike had visited the neighbourhood of Carlisle pretty regularly, scarcely a winter passing without one or more having been either seen or obtained. 'Its arrival,' he says, 'apparently is very irregular, as it has occurred during the above period in almost every month from October to April. On the 11th of April 1828 I saw one near Stainton, and on the 7th of March it was observed close to Burgh-by-Sands, and pursued nearly the whole day, but without success.'¹ In 1844 he notified to Mr. Gurney the capture of a Grey Shrike in October that year; one of his loose notes records another, killed at Etterby in November 1848. More recently a single-barred bird was shot by Mr. W. Little in November 1888 near Cotehill, where he saw another exactly a year later. In the neighbourhood of the Solway, Mr. Ffloukes killed a Grey Shrike at Rockliffe prior to 1883. At Burgh, Mr. Tremble's grandfather shot two of these Shrikes, which had been compelled by very severe weather

¹ *Phil. Mag.*, ii. pp. 110, 111.

to seek for food in a pig-trough. At Skinburness a bird, in Mackenzie's collection, was caught in the autumn of 1886, as was a single-barred bird at Drumburgh in December 1888. Eastward, Mr. Parkin obtained a Grey Shrike near Brampton in 1880. A keeper named Crow caught one of these birds in a pole-trap, in December 1884, near Bewcastle. A keeper named James shot a handsome two-barred male near Slaggyford, on the early date of September 13, 1884. At Penrith a fine Shrike, now in Mr. H. Thompson's collection, was shot in January 1888. Mr. Raine shot a double-barred Shrike on October 9, 1891, near Edenhall. Having thus furnished brief particulars of numerous Grey Shrikes obtained in Lakeland, I may remark that a large proportion of these possessed single white alar bars. Yet only a single bird, retained in the Museum at Keswick, appears to possess the distinctive characters of the adult male of Pallas's Great Grey Shrike.

Although the visits of this Shrike to Lakeland only extend, under ordinary circumstances, from autumn to spring, yet the presence of stray specimens in the breeding season, although strange, is not entirely unheard of. That good naturalist, Dr. Parker of Gosforth, wrote to me on the 10th of June 1888: 'I saw the Great Grey Shrike *last week* on my farm, Brunt House, near Netherwasdale.' It is just within the bounds of possibility that such a bird, seen in summer, in reality represented the Lesser Grey Shrike, and *not* the Great Grey Shrike.

I have never had the good luck to obtain a Great Grey Shrike *alive* in Lakeland, although a couple of individuals have entered my possession within recent years. In January 1892, for example, a very handsome, indeed typical, example of *Lanius excubitor* was sent to me from Dover. On its first arrival it proved to be extremely wild, but, by the end of three weeks, it had become quite attached to me, flying to the side of the cage to meet me as soon as I entered the room in the morning, and pecking playfully at my fingers, fluttering its wings all the time like a young bird, and eagerly taking a mouse or a bird from my hand,—showing manifest delight at my company.

RED-BACKED SHRIKE.

Lanius collurio, L.

The Red-backed Shrike is one of those species which would surprise a south-country naturalist, visiting Lakeland, by their extreme scarcity at the present time, although formerly not very uncommon. There is no reason to suppose that this Shrike was a regular visitor to the *north* of Lakeland at any recent period. As long ago as 1835, at any rate, Mr. T. C. Heysham pronounced it to be very rare near Carlisle, though cognisant of its breeding then (as now) in the neighbourhood of Keswick. Dr. Gough wrote in 1861 that this Shrike was a summer visitant to the Kendal district, but not frequently met with, though partial to the hedges near the castle. In 1870 the same naturalist observed in his notes that this bird had *formerly* been *not* uncommon near Kendal. Mr. Hindson, whose experiences carry us into the 'seventies' at any rate, has left a note describing the Red-backed Shrike as found 'about Kirkby-Lonsdale, but not common.' Mr. Murray of Carnforth tells me that, when collecting insects with Mr. J. B. Hodgkinson, near Witherslack, a few summers ago, they closely observed a pair of these Shrikes which had evidently a nest close by; that is the only occasion upon which he has met with the species in Lakeland. Mr. Tom Duckworth found a nest of this Shrike near Carlisle many years ago; an incident repeated in 1884, when a nest and eggs of this species were taken near Scotby.

WOODCHAT.

Lanius pomeranus, Sparrman.

The occurrence of this Shrike in Lakeland rests on the authority of the late Mr. Dickinson. He states: 'On April 11th, 1872, I saw a Woodchat Shrike near Stainburn tannery. It sat on the wall several minutes, while I stood within twenty yards of it, and saw the pure white body, with red-brown back, very distinct. This was the only one I ever saw. Mr. George Mawson asserts that a pair had a nest near Braystones a year or

two earlier.¹ The point which Mr. Dickinson mentions, of the white body, is a very good one. In the spring of 1891, Messrs. Johnson, Chapman, and myself met with hundreds of these Shrikes in Spain, and I often pointed out the bird to my companions at such long distances that the Shrike appeared to be a small white object resting on the outside of a bush. Mr. Hodgkinson is under the impression that James Cooper once saw a Woodchat Shrike at Woodside. His memory is so good that this is probably correct, especially as Cooper must have seen specimens in T. C. Heysham's collection.

Order *PASSERES*.

Fam. *AMPELIDÆ*.

W A X W I N G.

Ampelis garrulus, L.

My acquaintance with the Waxwing as a Lakeland bird extends from the winter 1882-3, in which half-a-dozen examples were obtained in the north of Cumberland between the 18th of December and the 26th of February, to the winter of 1891-2, in which a single bird was killed, on the 3d of February, near Wetheral. The number obtained during this decade has been extremely small, scarcely exceeding a dozen specimens in the whole of Lakeland. This circumstance is not to be accounted for by the supposition that the Waxwing is a solitary species by habit, because it is in fact highly gregarious. The true explanation lies in the fact that it is only once or twice in every five or six years that a few Waxwings cross our eastern fells into Lakeland. This was the opinion held by the late Mr. W. Dickinson, who wrote that 'flights of the Waxwing have occasionally visited the vales of Bassenthwaite and Keswick. I saw one which was shot by Mr. John Crosthwaite, near Thornthwaite. They do not come every year, sometimes at intervals of several years.'²

The species has occurred all over Lakeland during the last hundred years. The early months of 1787 and 1867 witnessed the only two important immigrations of the Silktail into Lake-

¹ *Rem. West Cumberland*, p. 21.

² *Ibid.* p. 23.

land as yet ascertained, the interval of eighty years between these two dates producing probably a lesser number in the aggregate than the droves which frequented our hedgerows in either of those two seasons. Dr. Heysham examined some of the birds shot in 1787. Many of the individuals shot in the winter of 1867 have come under my own notice, especially in the Alston district. For example, I distributed among my friends seven skins of Waxwings shot on that occasion by the late B. Greenwell, who preserved many others. Mr. J. Walton of Garrigill still possesses a handsome case of the Waxwings which fell to his own gun on that occasion. Then, as in most other seasons, this species occurred chiefly on the favourite fly-lines from the east coast, yet several were shot near Windermere in January 1867, when a single bird was killed on Cartmel Fell. This species is rarer in Westmorland than in Cumberland, but even in the former county is well known as an occasional winter visitant. Several were shot in Westmorland in January 1850, and sent to Newcastle for preservation. Philip Turner mounted two Waxwings shot near Askham at the same time. Dr. Gough knew of specimens obtained near Kendal prior to 1861. The species likewise wanders into the west of Cumberland, as witness two birds shot near Maryport in December 1859, and December 1863; others have more recently visited Wigton. It is a matter for regret that nothing has been ascertained regarding the habits of the Waxwing in Lakeland, further than that it usually appears, if it comes at all, in small droves or family parties, between the months of November and February. These frequent the taller hedgerows, feeding greedily on wild berries (especially the seed-vessels of wild roses), and sometimes admit of a tolerably close approach, so that they may be observed raising and depressing their elegant crests, occasionally uttering the peculiar trilling note familiar to those of us who in bygone years kept Waxwings in captivity. The earliest arrival of this species reported to me was the 12th day of October—in 1884. On that date William Little (who had shot a couple of specimens the previous winter) closely observed a single Waxwing near Cotehill. On the other hand, this bird has not been observed in Lakeland later than the middle of March. As early as 1803, the author of *Observa-*

tions, chiefly *Lithological*, found a local specimen of the Waxwing preserved in Hutton's museum at Keswick.

Order *PASSERES*.

Fam. *MUSCICAPIDÆ*.

S P O T T E D F L Y C A T C H E R .

Muscicapa grisola, L.

This species travels to its breeding-grounds more leisurely than most of the summer visitors. Consequently the majority of the warblers have commenced the labours of incubation before the low song of the Spotted Flycatcher enlivens our orchards and shrubberies. It must be considered rather a scarce bird on our western coast-line, owing to the paucity of timber. Elsewhere in Lakeland it is generally common, most abundant in sheltered gardens and low bushy hollows, yet represented in many remote spots by a single pair. It generally builds its nest against an ivied wall, in the face of an old quarry-pit or some kindred situation. The choice of an individual pair occasionally verges on eccentricity. One of the prettiest nests of this species that I have seen was built in the interior of a small china cup. On another occasion a Song Thrush built a nest on a hanging bough of a spruce fir, where she hatched and brought up four young ones. When Mr. Tom Duckworth examined the apparently deserted nest a month later, he found that a Flycatcher had built a beautiful nest inside, where she was sitting on four eggs.

P I E D F L Y C A T C H E R .

Muscicapa atricapilla, L.

The constancy of purpose with which this little Flycatcher annually crosses the Mediterranean, hurries across the hot plain of Spain, threads its way through the mountain passes which debouch into Southern France, and, skirting that great continent, boldly steers its course across the Channel, in order to rear a dusky brood in one of the Lakeland glades, among which the sweet songs of many generations of Pied Flycatchers have won the affections of coy helpmates, or roused the passion of envious rivals,—this same constancy of purpose has been well known to

our ornithologists for about a hundred years. The earliest local notice of this Flycatcher is furnished by 'X. Z,' who, when visiting Levens Park in 1793, found that the banks of the Kent, 'as far as we had yet traversed them, were frequented by the Pied Flycatcher.'¹ Dovaston tells us that, in 1823, he 'saw several [Pied Flycatchers] in Gowbarrow Park, Cumberland, on the banks of Ulleswater.'²

The anonymous 'G.' visited Patterdale in May 1830, and there enjoyed 'a sight of that beautiful bird, the pied flycatcher (*Muscicapa luctuosa*, Temm.): it is most plentiful in the mountainous districts of Cumberland, and is often shot in the woods at Lowther.'³ Hewitson, E. T. Booth, and other good naturalists, now deceased, came to Lakeland to study this Flycatcher. It was almost the only species worthy of pen and ink that Mr. J. Cordeaux fell in with during a residence of three weeks in Westmorland. He found a male Pied Flycatcher in the plantations skirting the foot of Silver-how. 'A little higher up on this fell side [I] found a male and female with four young ones: the parent birds were hard at work catching insects for their family, perched on the adjoining bushes: one little fellow was bathing himself in a pool of water below the tall fern fronds, seemingly deriving intense pleasure from the operation.'⁴

The fact that this Flycatcher was abundant in Levens Park, in 1793, is important, because it implies that the species has since changed its breeding-grounds. I searched for it at Levens all one afternoon, in June 1891, without finding a trace of its presence. Dr. Gough, as long ago as 1861, included the bird as a *rare* summer visitant to Kendal, in which neighbourhood Mr. Hutchinson has seen only one nest, *i.e.* at Spindlewood. Dr. Heysham was the earliest of our home naturalists to find the Pied Flycatcher breeding in Westmorland. His notice of the fact is unfortunately meagre: 'The pied flycatcher appears about the same time as the spotted, but is not so common: they breed at Lowther. On the 12th of May 1783 I shot there two pair. They make their nests in the holes of trees.' The old timber

¹ *Gentleman's Magazine*, 1794, p. 112.

² *Mag. Natural Hist.*, vol. v. p. 83.

³ *Ib.* vol. iv. p. 302.

⁴ *Zoologist*, 1867, p. 868.

which once attracted the Pied Flycatcher to Lowther no longer exists; yet, as recently as 1884, I found the species most abundant there, as T. C. Heysham had done fifty-five years earlier. 'In some parts of Westmoreland,' he wrote in 1829, 'it [the Pied Flycatcher] is very plentiful, especially in the beautiful and extensive woods surrounding Lowther Castle, the magnificent and princely residence of the Earl of Lonsdale, where we have seen it in very great numbers, and where it has bred unmolested and almost unknown for years. On the contrary, we have reason to think it has not resorted to the vicinity of Carlisle more than five or six years, and as far as we have yet been able to ascertain, only to one locality, where it is evidently on the increase. In this situation the males generally arrive about the middle of April, the females not until ten or fifteen days afterwards; they commence nidification early in May, and the young are excluded about the first or second week of June. We have hitherto invariably found their nests in a hole of a tree, sometimes at a considerable height, occasionally near the surface of the ground, and for two successive years in the stump of a felled tree. In texture and formation the nest is very similar to those of the greater Pettychaffs, Blackcap, and Whitethroat, being only slightly put together, composed almost entirely of small fibrous roots and dried grass, always lined with a little hair, and generally a few decayed leaves on the outer side, but entirely without moss. Their eggs vary in number: we have found their nests with five, six, and now and then with seven; their colour [is] a pale green, and so greatly resemble[s] the eggs of the Redstart that it is frequently very difficult to distinguish them unless contrasted together: they are, however, far from being so elegantly made, of a rounder form, and rather less, weighing from 23 to 30 grains. The males, soon after their arrival, should the weather be at all favourable, will frequently sit for a considerable time on the decayed branch of a tree, constantly repeating their short, little varied, although far from unpleasing song, every now and then interrupted by the pursuit and capture of some passing insect. Their alarm-note is not very unlike the word *chuck*, which they commonly repeat two or three times when approached, and which readily leads to their

detection. The manners and habits of the Pied Flycatcher have considerable affinity to those of the Redstart; they arrive about the same time, associate together, and often build in the same holes, for which they will sometimes contend. On one occasion we found a dead female Redstart in the nest of a Pied Flycatcher containing two eggs; and at another time, when both these species had nests within a few inches of each other, upon the Redstarts' [eggs] being removed, the female Redstart took forcible possession of the Flycatchers' nest, incubated the eggs, and brought up the young. We have now (August 26th) two young Pied Flycatchers taken from the nest on the 21st of last June, and should we succeed in our attempts to domesticate them, we may, in all probability, on some future occasion, make a remark or two upon the change of their plumage from youth to maturity.' Heysham was so well aware of the comparative scarcity of this Flycatcher in the south of England, that, with a view to its naturalisation, he sent fresh eggs to his contemporary, Sweet. Writing from Pomona Place, June 10th, 1829, Mr. Sweet says: 'I feel much obliged by your kindness in sending me the eggs of the *Muscicapa atricapilla*, which unluckily met with bad treatment in their journey; three of them were broke before they arrived, the others were so shook that none of them have come to perfection, though I set them under a Redbreast immediately.'

T. C. Heysham replied to this letter in another of June 19, 1829: 'I have now two nests of this bird (which I have inspected since the receipt of your letter, although they are nearly twelve miles from this place); one with young which will be able to leave the nest in a few days, the other with eggs, which I expect will hatch in a day or two, and I think a pair of the old birds might be obtained without much difficulty.' T. C. Heysham certainly antedated the arrival of the Pied Flycatcher when he said that it reached Lakeland 'about the *middle* of April,' just as Dr. Gough postdated its arrival when he wrote that it appeared about the 8th of May. The usual date for its first appearance with us is the 25th of April, but for the first few weeks after their arrival many of these Flycatchers appear to be very unsettled. Heysham apparently only knew of two colonies, including Lowther. At the present day a few Flycatchers breed

on a small stream near Appleby, on the Croglin, on the Petteril, on the Eden, on the Liddell, and in various wooded nooks among the Lake mountains, though no longer known in the neighbourhood of Morecambe Bay.

When I visited Edenhall this year, May 28th [1891], I found that most of the favourite trees and trunks of the Pied Flycatcher had been cut down ; hence such few pairs as elected to breed on the old ground were compelled to nest in tall trees, owing to the dearth of less ambitious sites. Mr. Carr and I watched a pair of Flycatchers flitting about the alder-bushes, full of affection for one another, though not apparently nesting like their neighbours. A good many pairs nested here in former years. In 1888, for example, there was one nest in a birch-tree about seven feet from the ground. Another couple had taken possession of a hole high up in one of the dead limbs of a tall Scotch fir ; another nest was placed in the base of an oak-tree, almost level with the ground, slightly raised by the fact of its having been built on the top of an old nest. The next was in a birch-tree, and the next in a hollow branch of an ash-tree, while another was in a dead branch of a second Scotch fir. It sometimes happens that the fissure into which this Flycatcher has crept closes, so that the nest must be placed elsewhere. Otherwise, these Flycatchers often occupy their favourite holes season after season. Sometimes a decayed thorn-bush holds a nest of this species for many years. But the birds are not confined to timber for their nesting holes ; it frequently happens that they nest in loose stone walls. The males are jealous little fellows ; after the flocks have paired off, there are always some bachelors left unmated, a frequent cause of subsequent commotion. One afternoon last May I chanced to stroll along the Ladies' Walk beside the Eden, near Langwathby, and found a pair of Pied Flycatchers and a single male flitting about the thorn-bushes which overhang the river. The males sang cheerily, particularly the young one. Once the old cock came and perched on a green spray just over my head, as I crouched all but motionless on the grass. Several sharp tussles occurred between the two males ; the paired female looked quietly on, admiring the prowess of her champions. In 1888 a nest of this bird was

required for the National Collection. It was really difficult to choose a suitable tree. The choice of our party rested eventually with a small birch, and then the eggs had to be watched until they hatched out on the 11th of June. A week later the nestlings proved to be fairly feathered; when we came to saw the tree in two, the stronger chicks tried to fly. The odd thing was that the old Flycatchers proved to be rearing a little Redstart with their own brood. As Heysham has remarked, Redstarts and Pied Flycatchers (as also Blue Tits) often nest in similar holes, and the second party to arrive sometimes evicts the rightful owner, and incubates her own eggs together with those of the evicted tenant. Whilst this nest was being secured, the old birds incessantly uttered their alarm-notes, that of the male suggesting the sound produced by two pebbles being knocked together. Their young proved upon dissection to have been fed on caterpillars and small beetles. In 1887 Mr. W. Duckworth spent several consecutive hours in watching a pair of Pied Flycatchers feeding their young. He found that they visited the nestlings thirteen times in thirty minutes, the female making nine visits to the male bird's four visits. 'By keeping very quiet,' he wrote, 'and moving slowly, I got to within four or five yards of the nest. The male and female have two quite distinct alarm-notes. That of the male is exactly like the *tit-a-tit* of the male Redstart (when it has young), but is not quite so loud. The note of the female is identical with the *wit-wit* of the Chaffinch.' The actions of the old birds are at all times sylph-like and graceful; the males sway their tails amorously when in full song. One of the nests that I examined on the 1st of June 1889 (and which had been occupied the year previous), was in the stem of an ash-tree, containing three chipped eggs and three newly hatched young. Animated by anxiety for the safety of their progeny, the old birds hovered round with much solicitude, flitting restlessly from spray to spray, calling incessantly, shuffling their wings and jerking their tails. When I withdrew, the male flew off, but soon returned with a caterpillar which he carried to the nest, to the orifice of which both birds made frequent visits, clinging tenaciously with their claws to the bark around the nest.

The Pied Flycatcher does not delay the commencement of its southern journey long, after the young are strong on the wing and have exchanged the speckled nest-feathers for the inconspicuous garb of their first winter. This Flycatcher is almost unheard of in the neighbourhood of our coast-line. Stragglers have been obtained near the Solway Firth in a few instances; at Silloth, for example, and near Allonby.

Order *PASSERES*.

Fam. *HIRUNDINIDÆ*.

S W A L L O W.

Hirundo rustica, L.

The return of the Swallows to Lakeland always affords a pleasurable interest, just as we feel a pang of regret when they hawk in busy swarms above the cornfields *prior* to their departure. Before telegraph wires were introduced, this Swallow chiefly roosted in the trees which grew beside our ponds and becks, indeed there can be little doubt that this species was originally *arboreal* in its choice of a breeding site. On September 4, 1888, I was amused to see a meddling Rook completely routed by a party of Swallows. The Rook desired to visit the trees in which the Swallows had gathered; but as often as the Rook approached, the Swallows turned out and mobbed him. He repeated the manœuvre again and again, but always fled from the attacks of his tiny adversaries, and ultimately flew away in sulky discomfiture. The earliest arrival of this species as yet substantiated in the Lake district was a bird shot near Whitehaven on April 2, 1837. Mr. T. C. Heysham wrote to the late Mr. R. Bell, on April 15, 1852: 'I have been informed, on what I consider very good authority, that a House Swallow, *H. rustica*, was seen in this neighbourhood [Carlisle] on the 26th and 27th of March, a very early arrival.'

M A R T I N.

Chelidon urbica (L.).

The House Martin appears to have been a special favourite with Dr. Heysham, who fills near a column with notes on the Martin's

nests which he had examined, pointing out that the species is double-brooded, and disclaiming against the idea that it ever *hibernated* in this country. Although the Sparrow has checked the increase of this charming bird, many colonies are established in the neighbourhood of farms and country houses. At Aiglegill the buildings are full of Martins. In 1888 a pair of these birds hit upon an ingenious device to exclude the Sparrow. The nest was not entered by an orifice of the usual kind, but by a small clay funnel, along which the Martin crept into her nest, Miss Mann has often reared young Martins. In 1890 Mr. Richard Mann picked up two late Martins which had fallen out of their nest. On the 4th of December that year I called to see them, and found them lively and vivacious. A sharp spell of frost had set in during the last week of November, but the Martins had not suffered any inconvenience. House flies and midges were devoured eagerly as long as they could be procured, but 'bluebottles' were refused unless no other insects were forthcoming. Though a little shy of a stranger, they liked to perch on the hand of their mistress, and to nestle on her shoulders. They were always anxious to wash, fluttering their tiny wings impatiently whenever they saw water placed on the table. They were jealous of one another, and had many tiffs. The male sang early and late, especially when the room was lighted up at night. They succumbed to the severity of January 1891.

SAND MARTIN.

Cotile riparia (L.).

The Sand Martin does not seem to visit the wilder dales of Westmorland; otherwise its distribution is pretty general throughout the Lake district. Duglinson of Cockermouth shot a Sand Martin on the 25th of March, which is about the time at which this bird begins to frequent the Eden, near Carlisle and Rockcliffe, where we first observe its return every year. A nice colony exists in the sandstone cliffs near Maryport. The nests which Dr. Heysham used to examine were burrowed in two banks of sand, formed by Mr. Graham of Edmund Castle, when

making some pieces of water near his house. In 1890 I was surprised to find one pair nesting in a ridge of sand near the Carlisle water-works. The bank did not exceed eighteen inches in height, and was situated on a flat meadow. It would have been interesting to have seen the little birds rear their young in such a position, but they were driven away by the public. A quarry near Castleton, in which these birds nested, was much infested by stoats in 1889. The nests were placed in a sandy slope, easy of access to the stoats, which entered them in search of eggs or young birds. The labourers were anxious to protect the birds. Their foreman killed no less than four Stoats, being attracted by the excitement evinced on each occasion by the Sand Martins. A great number of these birds perished *all over Lakeland* in May 1886, in consequence of want of food and sharp weather. On the 15th of that month Mr. William Duckworth visited Rockliffe, and 'beneath the cliffs the ground was thickly strewn with dead birds, *H. rustica*, *C. urbica*, and *C. riparia* being in almost equal numbers. Many of the colonies of the Sand Martin have been cleared out, not a single bird being left.'¹

Order *PASSERES*.

Fam. *CERTHIDÆ*.

TREE CREEPER.

Certhia familiaris, L.

The Creeper is fairly common in the woods of Lakeland, and may often be seen hunting for insects about the larger trees, both alone and in company with other small species. It generally nests behind rafters or loose pieces of bark. A nest examined on the 28th of May this year [1891] was snugly stowed away behind the bark of one of the elms at Edenhall. It was only about twenty-four inches off the ground, and contained two young ones nicely feathered. The space between the trunk and the bark was so contracted that the nest was closely compressed; indeed, the two little birds were tightly packed into the interior. When we broke off a bit of bark, and took one of the young birds out, the other attempted to escape.

¹ *Trans. Cumberland and Westmorland Assoc.*, No. xi. p. 148.

Tender as its age, it clung to the bark tenaciously with its fine but strong claws. I have never myself observed this Creeper at a distance from the woods. Yet it *might* at any time adapt its habits to life among the treeless moorlands of our eastern division. Mr. Heywood Thompson this summer [1891] showed me a *stone wall* (bordering one of his plantations) *in which* a pair of Tree Creepers had reared their young. They nested in this wall early in spring, but their first nest came to grief. They were not discouraged, but built a new nest in another interstice among the loose stones of the dyke, and this second experiment proved successful. Stone walls on the barest fells shelter so many spiders and small insects as to afford a plentiful subsistence for Creepers.

Order *PASSERES*.

Fam. *FRINGILLIDÆ*.

Sub-Fam. *FRINGILLINÆ*.

GOLDFINCH.

Carduelis elegans, Steph.

Fifty, or even thirty years ago, the Goldfinch was comparatively common in Cumberland and Westmorland. From the Solway to the shores of Morecambe Bay, the 'flinch'—as Cumbrian bird-fanciers call it—nested freely in gardens and orchards, not merely in the east and west of this area, but at Keswick and other places in the heart of the Lake district. Men who have passed their lives in their native village and are hardly grey-haired have frequently assured me that, when they were young, Goldfinches were plentiful. At the present time the stronghold of the Goldfinch is the Eden valley. I have not met with the species on the S.E. border, but Mr. Hutchinson considers that it is slightly increasing at Underbarrow. At Milnthorpe Mr. Bell took a nest of Goldfinch eggs a few years ago. It was a common bird in the west of Cumberland before bird-catchers were so numerous. Now it is uniformly a very scarce bird. Mr. Parker of Skirwith Abbey wrote to me in December 1888, that whilst riding to the meet, or driving about, he had often seen flocks of from twenty to a hundred individuals flying about and feeding in the fields near the road.

Such an experience is now very rare. Unfortunately the local bird-catchers are only too well acquainted with their feeding grounds, and catch a large proportion of the young during the first months of autumn. As I contributed lengthened articles on the habits of the Goldfinch to the *Field* of 1887 and of 1890, it may be sufficient for present purposes to describe a single colony as seen at home. On the 18th of June [1891] I visited a large walled kitchen-garden to look for Goldfinches. R. Raine told me that on June 17 and 18 he had seen eleven young Goldfinches flying in the gardens together, and flitting about the fir-trees; early birds, considering the lateness of the season. The old birds were already busied with fresh nesting operations, or at least one pair were, for they had a fresh nest in one of the higher branches of a standard apple-tree, and flitted about as though watching over its safety. It was built of moss and fibres, but was not yet lined. There was another pair in the garden, and these had pen-feathered young, partly naked, but invested with a few flakes of white down on the upper parts, so tiny and withal so brown that a novice would hardly have guessed that the five chicks that were packed so tightly together into their nest were Lilliputian Goldfinches. Their nest, composed of moss and fine fibres, was difficult to distinguish from the leaves of the apple-tree. The parent birds were absent when we examined their young, but they soon returned, and for half-an-hour we had three pairs of old Goldfinches flitting about close to us. One of the males sang from the top of a stake supporting a raspberry cane, in a way that reminded me of the southern lands, in which Goldfinches often sing from vine stakes. The males on the present occasion sang in snatches, swaying from side to side and repeating 'lippetty-swippet' many times. One bird began rather quaveringly 'wi, wi—chiowit, chioweet, kiowitt,' while his little mate listened approvingly. The couple which owned the unfledged young presently flitted off to their apple-tree, and we soon heard the male *swearing* in Goldfinch language as he alighted, probably because he found a young one, which we had displaced, sprawling on the top of the rest of the family. The pair nearest to us perched on the top of an apple-tree just opposite their

unfinished nest. Perhaps they were tired of flying restlessly to and fro in the adjoining park since the hours of early morning. At all events they were now so still, that you would hardly have thought that they could be so near; only their little heads kept moving to and fro, as they exchanged glances of mutual endearment. A pretty picture they made, in this quiescent mood! When they turned away, all that was visible was the cinnamon back, jetty crown, and wings of gold set in ebony. Then, as they fidgeted, you could distinguish the crimson zones and white breasts clouded with cinnamon. Meantime the third pair alighted on the bare ground, and proceeded to trip over the garden mould, searching for chickweed and groundsel. There was another nest in the garden beside the Hall. Four or five pairs were nesting in the vicinity. R. Raine says that he saw a single pair of Goldfinches all through the winter of 1890-1, feeding on 'horse-knops,' but that the other pairs appeared in the month of March. The Goldfinch does not remove the *faeces* of the young from the outside of her nest, as some birds do: hence the need of a *new* nest for the second brood. The nest that was unlined on June 19 would probably be completed by June 21. A day or two would probably lapse before the bird began to lay. Granting that the female Goldfinch began to sit on June 28, the young would presumably hatch about July 10, and fly about the 24th of July, which is just the time when most of the second broods of Goldfinches do leave their nests; at least in my experience, which is pretty extensive, but mainly continental.

SISKIN.

Chrysomitris spinus (L.).

The earliest reference to the presence of the Siskin in Westmorland is apparently identical with Bolton's well-known but improbable story of Siskins nesting in Westmorland in juniper bushes. It appears to be at all times a rare visitant to the Westmorland and Furness portions of Lakeland. Thirty years ago Dr. Gough included this species among the species of the Kendal district, but only as an occasional winter visitant. Mr.

Metcalf of Kendal reminds me of the following notice of its presence, as furnished by Mr. H. E. Dresser: 'Mr. Metcalfe informs me that it [the Siskin] is, as a rule, a rare winter visitant in Westmorland and Cumberland, but that, in November 1872, a cottager at Kendal brought one to him which he had knocked down with a sod out of a flock which were feeding on the groundsel in his garden.'¹ In Cumberland it is very local, but one or two localities in the neighbourhood of Carlisle are frequented by Siskins every winter,—a fact well recognised by our bird-catchers, who always resort to the most favourite feeding-grounds of these birds to capture a few of their number. In the autumn of 1866, extraordinary numbers of Siskins appeared in the neighbourhood of Allonby, a phenomenon that has never since been repeated in the experience of Mr. Mann. The greater part of these large flights passed on westwards, but a few birds spent the winter near Allonby. Mr. T. C. Heysham wrote that, 'on the 26th of March [1829] some males [Siskins] were observed in full song, and repeatedly chasing the females; so it is possible a few may occasionally remain and breed. A few were seen on the 5th of April.' Though I have seen Siskins in pairs as late as Heysham did, I have had no better success in my search for local nests than fell to his share. Yet this species bred for several years at Netherby. James Plenderleath, the head keeper on the estate (a *bird-fancier* as well as a good outdoor observer), informs me that he has not known any Siskins to spend the summer in the plantations round Longtown since 1885. He believes that the local 'breed' was 'caught out' in February of that year. But, for several years prior to *this*, he had always noticed about three pairs in summer, in different parts of his woods. Once he watched a female Siskin busily employed in building a nest at the end of one of the topmost branches of a Scotch fir. He subsequently sent a boy up the tree, but the nest was empty, and he thought that the eggs must have been shaken out by a violent gale. At any rate, the old birds reared a brood, because, later in the same season, he came across the male Siskin feeding at the roadside in company with four newly-fledged birds.

¹ *Birds of Europe*, vol. iii. p. 543.

GREENFINCH.

Ligurinus chloris (L.).

There are, of course, many parts of Lakeland so wholly unsuited to the habits of this Finch, that, practically, the bird rarely or never visits them. I allude to the wild moors of our eastern fells, especially those of Westmorland. Elsewhere the 'Greenie,' as our bird-catchers call it, is generally a common bird, nesting in our gardens and in our hawthorn hedges. The species is especially abundant in Furness and in the open country round Carnforth, where its numbers are stronger than in most districts of Cumberland.

HAWFINCH.

Coccothraustes vulgaris, Pall.

The earliest record of this species in Lakeland is furnished by a letter addressed by T. C. Heysham to Mr. W. C. Aikin, dated Carlisle, November 19, 1833: 'The past season here has been an extremely barren one with us as regards ornithological rarities, and the only novelty of any consequence that has come to my knowledge is a specimen of the Hawfinch, which was repeatedly seen in the months of Janry. and Feby. last in the pleasure-grounds of a lady, about four miles from the city, who, however, would not allow it to be killed. This is the only instance, that I am aware of, that the Hawfinch has been observed in Cumberland.' The lady in question was the accomplished Miss Losh of Woodside, who, as a matter of fact, called Mr. Heysham to task for having sent out Cooper to try to kill the bird on her property; 'its able defence seemed to merit it a secure retreat, but it must either have been shot, or flown to a distance, as it has never been seen since.' Strange to say, the Hawfinch has never to this day become a settled colonist in Cumberland. No doubt the young one, which Mr. Sutton shot out of a family party at Bridekirk, in August 1882, had been bred in the neighbourhood.

There is a specimen in the Keswick Museum, which was caught in the neighbourhood and kept alive for some years. Some few

years ago a female Hawfinch was shot up on the top of Cross-fell, *migrating across country*.

All the other specimens that have been noticed in Cumberland occurred in the winter months, and sometimes quite in the west of the county, as, for example, a Hawfinch shot near Muncaster in February 1860.

It is stated, in the fourth edition of Yarrell's *British Birds*, that the Hawfinch has been recorded from every county in England except Westmorland. This is a slight misconception. Mr. Hindson shot a Hawfinch near Kirkby-Lonsdale in December 1841; while Mr. Rip shot a Hawfinch near Appleby in 1855. It is still a rare bird in Westmorland, but a pair of Hawfinches nested at Dallam Tower in 1890, for an unfledged nestling was caught by the roadside and brought up by hand. When I saw it, it was in full plumage—a charming tame bird which fenced with one's finger, and was full of play. The Hawfinch again nested at Dallam Tower in 1891. A village boy climbed a tree and caught the old hen upon her nest. He had caged her for a week, when she fell a victim to a cat. Two were killed at Burton, in the same neighbourhood, in the winter, 1890-91. Mr. Murray preserved two more Hawfinches, shot near Carnforth in the spring of 1891.

HOUSE SPARROW.

Passer domesticus (L.).

In olden days Sparrows appeared at the tables of '*la noblesse*,' as well as on the boards of their humble dependants. Thus I find an entry in the Naworth Accounts of October 1621: 'Sparrows, 2 dozen, iiij d.' In December of the same year there occurs another note: 'Larkes and sparrows, three dozen [and] ten ix d.' The chief merit of the Sparrow is its extraordinary fondness for two domestic pests, house flies and 'black beetles.' I do not think that the injury which the Sparrow inflicts on farmers is compensated for by the quantity of 'grub' that it destroys, but some practical men hold a different opinion. The Rev. C. Swainson states that the name of 'Craff' applies to the Sparrow

in Lakeland.¹ It *may* be so, but I confess that I have never heard it used.

TREE SPARROW.

Passer montanus (L.).

The Tree Sparrow is unaccountably scarce in Lakeland. Of this I am quite certain, having searched for it in all parts of Lakeland. Our portion of Lancashire swarms with Sparrows, but not a single Tree Sparrow could be detected among the number examined. Mr. Archibald, Mr. Rawson, Mr. Holdsworth have all tried *in vain* to find this species in Westmorland and Furness, though just as familiar as myself with the habits and appearance of the bird. A pair of Tree Sparrows which Mr. W. Duckworth found nesting near Kirkoswald in 1871, and another couple which I came across near How Mill in 1888, are all the birds which I can vouch for as having nested in the interior of Lakeland. The only local colony that can be considered permanent exists near Allonby, but this merely consists of a few pairs. Stray Tree Sparrows are sometimes caught alive near Carlisle. Three Tree Sparrows were caught among about five hundred House Sparrows at Warwick Bridge in January 1890. I have seen several others which had been captured with limed twigs, always in the winter-time.

CHAFFINCH.

Fringilla coelebs, L.

This finch is well known in Lakeland under one or other sobriquet, notably those of Pinkie, Spink, Scopy, Scobby, Shell-apple Shiltie. Dickinson furnishes a name, as in use in Cumberland, which I for one never heard, namely, 'Flecky flocker,'—a term apparently suggested by the gregariousness of this bird in winter. Although most abundant among our plantations, feeding eagerly at the Pheasant-coops, yet, even where high stone walls replace the hedgerows of more sheltered districts, the Chaffinch puts in an appearance; building its nest in one of the ash-trees

¹ *Provincial Names of British Birds*, p. 60.

that grow beside the fell homestead, and perching on the stone walls as familiarly as a Redstart or a Wheatear.

BRAMBLING.

Fringilla montifringilla, L.

Bramblings are tolerably regular winter visitors to the Solway Plain and the Eden valley, but in the south and south-west of Lakeland they appear to be decidedly uncommon. In frosty weather their harsh chirrup often serves as the first intimation that they have joined the yellow Buntings and other small birds that are seeking food in the court-yard of the roadside farm. During the daytime these finches forage in the fields and plantations, returning shortly before dusk to their favourite roost. They rarely prolong their stay after the middle of April. T. C. Heysham thought otherwise, boldly stating in print that he thought there could not be the least doubt that a few Bramblings occasionally remained in England during the summer. Probably his judgment on this point was warped by the reflection that 'the late ingenious Mr. Bewick states that he had seen them on the Cumberland hills in the month of August.' Mr. Holdsworth tells me that the Brambling lingers in the neighbourhood of Oxenholme until the second week of April, and that he has heard an individual bird chanting the summer song, with which he is as familiar as any one, before its departure.

LINNET.

Linota cannabina (L.).

Among our local bird-fanciers the Linnet is generally known as the 'Grey,' occasionally as the 'Whin-grey.' But in the west of Cumberland the species is 'nowt'else but a Hemplin'; the term being identical with that employed to designate the Hedge Sparrow in the Bewcastle District. This species, of course, nests plentifully in many parts of Lakeland, and considerable numbers 'flight' upon our coast in autumn. The largest assemblage of Linnets that I ever noticed were found clustering on the telegraph-wires at Port Carlisle, on the 3d of September

1889. A few Greenfinches accompanied the Linnets, but the latter species enormously predominated. There must have been several thousands of them. I never saw such a number together before.

MEALY REDPOLL.

Linota linaria (L.).

This Redpoll is rare in Lakeland. Indeed, I have never come across it anywhere in England myself, but others have been more fortunate. Mr. Holdsworth tells me that some few springs ago he stumbled across a considerable flock of Mealy Redpolls near Crummock Water, which permitted of a very close examination, being devoid of fear. Mr. Holdsworth has such an excellent knowledge of this finch, obtained during several visits to Norway, that no one could be more competent to recognise the species. Dr. Gough mentions, in his private notes, a Mealy Redpoll, caught on Kendal Fell in November 1861, and still alive in his possession in May of the ensuing year. He saw another at the roadside near Scalthwaite in October 1862. The late B. Greenwell gave me a skin of this Redpoll, obtained out of a flock near Alston.

LESSER REDPOLL.

Linota rufescens (Vieill.).

In the neighbourhood of Morecambe this Redpoll is rather uncommon; indeed, I only noticed its presence twice during a whole week's hard work in the neighbourhood of Ulverston. It becomes rather more numerous as you go inland. Mr. Archibald showed me a lovely nest which he had taken in the Rusland valley, from which the species extends up into the heart of Lakeland as a breeding bird. Dr. Gough obtained young Redpolls from the neighbourhood of Kendal in 1864, and again in 1866. Mr. G. A. Hutchinson has eggs from Stainton, Lupton, Hay Fell. I found it breeding near Windermere in July 1890, but failed to observe its presence at Tebay or at Carnforth. In the Appleby district it seems to be scarce, but I found it breeding at Dufton, Millburn, Newbiggin. On our eastern fells it is a scarce bird, but a pair nested at Renwick in 1887;

while, if we cross this range of hills, we can find it breeding in the Alston valley, whence George Borrow sent eggs of this finch to T. C. Heysham as long ago as 1835.

Elsewhere in Cumberland I have noticed this Redpoll breeding sporadically or gregariously in many places, near Stapleton, Brampton, Longtown, Bowness, Carlisle, Aspatria, Cockermouth, Bassenthwaite, Keswick, and Penrith,—generally, in fact, throughout the county, with the exception of the neighbourhood of our most western sea-board. It does not much affect moorland districts,—preferring nursery gardens, hedgerows, and the skirts of woods. The first eggs are laid in May. The materials of the nest vary. One which was built in a beech hedge last summer, near Drumburgh, consisted of fibres of plants, dry grass, and moss, lined with a little cow's hair and the down of the cotton grass. Many of those which breed with us migrate away in autumn, but large flocks of Redpolls often visit us in winter. On the 1st of December 1890, some friends and I came across a flock of about a hundred Redpolls in a rough field near Burgh. I had never seen such a number in a single flock before. The males of this Redpoll often breed in female dress, *i.e.* previous to acquiring a pink breast.

T W I T E.

Linota flavirostris (L.).

The Twite nests thinly on the Pennine range, as also upon some of the mountains in the centre of Lakeland. Nevertheless, in wandering over the wildest of our moors, I have often marvelled at its absence, missing the lively notes and sprightly gestures of a species which has elsewhere occurred to most people in considerable plenty, as for example in the Hebrides. The Twite does not breed on the Furness Mosses, nor does it nest generally on the wet 'flocs' in the vicinity of the English Solway. Toddles Moss, however, has long been a favourite breeding station of the Twite, one in which the eggs have often been taken, a remark which is equally true of the Solway Flow. In a paper written by the elder Gough, dated from Middleshaw, Westmorland, on the 21st of February 1812, a passage occurs

relating to the Twite, which, considering that it was written eighty years ago, deserves a place here: 'The Twite (*Fringilla montium*) breeds on the hills of Yorkshire and Westmorland, but does not remain all the year in its summer habitation. For Twites congregate in multitudes about the beginning of October, and disappear; but large flocks of them are seen at that time, or not long after, in the south of England. Thus are the two retreats of this migratory finch pretty well ascertained.'¹

BULLFINCH.

Pyrrhula europæa, Vieill.

The Bullfinch nests commonly in all our larger woods and gardens, while single pairs occasionally rear their young in some of the more remote dales of Lakeland. Very charming is the confidence which this bird often displays in nesting close to human habitation. In June 1891 I saw a hen Bullfinch sitting upon seven eggs in a thick evergreen that grows close beside a cottage door. The inmates of the house passed and repassed many times a day, but the Bullfinch heeded not, faithfully brooding over her precious charges. I have often wondered that none of the naturalists who live in the eastern parts of England have detected the presence of *Pyrrhula major*, the Northern Bullfinch, as a winter immigrant. It is common enough in Southern Sweden in the dead season, and as Mr. G. E. Lodge tells me, the males then fly in large droves. The addition of this species or sub-species to the British List is probably only a question of time. It should therefore *be looked for*.

CROSSBILL.

Loxia curvirostra, L.

A small clump of fir-trees, still standing near the village of Cumwhinton, possesses a local interest for ornithologists. Here it was that the eggs of the Crossbill were *first* taken in Lakeland, the year before T. C. Heysham died. The person who found the nest of this species was the late James Fell, from whose lips

¹ *Mem. Manch. Phil. Soc.*, Second Series, vol. ii. p. 463.

I often heard the facts of his discovery in later years. In the early spring of 1856, Fell happened to be working at his trade as a slater. While passing to and from his work he frequently saw a pair of Crossbills flying about the fir-trees in question. After a short interval, he watched them building. At last, on the 20th of March, he climbed up to the nest, and found that it contained four fresh eggs. He took the nest and its contents. Heysham called at his house soon afterwards and purchased the nest and two eggs. The other two eggs were disposed of to Thomas Armstrong, and have remained ever since in his cabinet. The Crossbill had previously reared its young in Lakeland, near Brampton, and in the neighbourhood of Alston. In the latter district a nesting Crossbill was shot with the two parents on April 13, 1839. The elder Hope assured me that eggs of the Crossbill were taken in the fir woods of Penrith Beacon in 1865. Not having examined any eggs taken on that occasion, I am unable to vouch, of personal knowledge, for the authenticity of the eggs then ascribed to this species. There can, however, be little doubt that after large immigrations of this species, a few pairs have repeatedly bred in the Lake district. At the very time when Fell took the above-mentioned nest, Mr. T. C. Heysham wrote to Mr. Bell of Cockermouth, under date of February 16, 1856: 'The Common Crossbill has been unusually abundant in the north of England this winter, great numbers having been killed in various parts of Cumberland, Westmorland, and Northumberland.' As regards Westmorland, Dr. Gough included the Crossbill as an occasional visitant to Kendal, mentioning Cowanhead and Crosthwaite as localities in which it had occurred, and he subsequently recorded in his private notes that a female was killed out of a flock of eleven at Bisk-lane, July 24, 1868. Though there is more abundant evidence of the presence of Crossbills in Cumberland than in Westmorland or Furness, there can be little doubt that the Crossbill has occurred as frequently in the southern portions of our area as in the north. For example, in 1888, when many Crossbills appeared in such favourite localities for this species in Cumberland, as the woods at Cotehill, Edenhall, and Newby Cross, I received information of birds shot near Grange, Milnthorpe, Barrow in Furness, Kendal,

and Appleby; showing the general diffusion of the flights of Crossbills. I have also many notes of Crossbills shot in Furness and in the heart of the Lake district, as near Keswick and Windermere; in the west of Cumberland, as near Gosforth, near Cockermouth, near Wigton. The species is perhaps least often met with in the neighbourhood of the Solway, a fact easily accounted for by the the scarcity of suitable timber; yet even here a few Crossbills occur from time to time, as I can personally bear witness. But, scarcely less noteworthy than their arrival in the Lake district, is the almost complete departure of the birds within a year or two of their advent. Many of the birds that appeared in the Lake district in 1888, stayed with us during the summer of 1889, but scarcely any were seen in 1890, nor could any be traced in 1891. T. C. Heysham, in a draught dated March 14, 1840, alluded to 'the great number of Crossbills that were observed in the various parts of this [Cumberland] as well as some of the adjoining counties during the months of February, March, and April 1839.' In a letter written to the late Mr. J. H. Gurney, dated April 1, 1840, he added: 'I have every reason to believe that the Crossbill has entirely left the northern counties this year; at least I have not been able so far to see or hear of a single specimen in Cumberland, Northumberland, or the south of Scotland.' In an earlier letter written to John Gould, and dated July 8, 1837, Heysham states: 'On the 17th of June last a small flock of Crossbills was seen in a fir plantation a few miles from this place, which is, I believe, about the earliest period they have been observed in this country.' But, *pace* T. C. Heysham, it seems almost certain that the Crossbill is a resident in the Lake district to a limited extent. Great irruptions of this species only occur at considerable intervals of time, but a few individuals would seem to be almost always present in one or other of their favourite haunts. These are long stretches of pine woods, in the depths of which the presence of the Crossbill might often pass undetected, were it not for the cheery call-notes and lively actions of this engaging bird, which, whether occupied in extracting the seeds of fir-cones, while clinging with its strong claws, head downwards, or perching sedately on a tree-top, singing and preening its bright dress, is usually so

devoid of fear as to permit of a close acquaintance. Few species are more sociable than this Crossbill. Although single stragglers are not quite unknown among us, in the great majority of instances this bird appears in large or small droves. It has generally been supposed that the well-known red plumage was peculiar to the male sex, an error due to neglect in dissecting specimens. On examining an apparent male in red feather, shot in October 1888, Mr. Tandy found that it contained a very distinct ovary. The stout-billed Crossbill, generally separated from the common bird, as the 'Parrot Crossbill,' does not appear to have been noticed in Westmorland or North Lancashire. The late Mr. Proud shot two birds identical with this form on the river Irthing many years ago. James Barnes of Carlisle has two adults and a young bird of this form, which he shot at Newby Cross in December 1865. Their distinction from the common bird was noticed by Mr. J. B. Hodgkinson, who saw them at the time they were obtained.

TWO-BARRED CROSSBILL.

Loxia bifasciata (Brehm).

The first notification of the appearance of this Crossbill in Lakeland was transmitted to the late T. C. Heysham in the following letter :—

'DEAR SIR,—I take the liberty of addressing these few lines to you to inform you that I have had the good fortune to fall in with the whitewinged crossbill on the First Inst. I had for some time observed about eight or ten Redpoles pass in the direction of Cambeckhill Woods. Thinking the Mealy Redpole might be among them, I followed and was fortunate enough to procure a fine female Whitewinged Crossbill. I did not observe any more. I think the others were all the lesser Redpole.—I have the honour to be, sir, in haste, your obt. servant,

'THOMAS TAYLOR.

'HEADSWOOD, Nov. 8th, 45.'

This bird appears to have been sent to the late Mr. Hancock. At all events Mr. Taylor pencilled on the margin of his copy of Sir W. Jardine's *Birds of Great Britain* the note : 'Nov. 1st, 1845.

—I have shot the White-winged Crossbill.' There can be little doubt that a flock of Two-barred Crossbills had previously arrived in the neighbourhood of Brampton. At any rate, individuals of this species were observed by others besides Mr. Taylor during the winter which ensued.

Mr. Taylor observed two more of these Crossbills on the 10th of January [1846], on the 19th of which month a gamekeeper named Proud met with two specimens, one of which he shot, a bright red male. The other which escaped was in female plumage. February passed without event, although a watch was maintained for additional specimens. On the 25th of March a gardener named Leslie, lately deceased, observed a flock of these Crossbills fly into some tall larches at Castlesteads, since cut down. He fired into them and dropped nine birds; five of their companions flew away scathless. These lingered a short time longer in the vicinity, because an MS. note of the late Mr. Proud chronicles the fact that he heard the note of the White-winged Crossbill on the 11th of April. It is hardly necessary perhaps to detail here the subsequent history of all the specimens obtained. I have examined the greater number. Curiously enough, only two of the eleven specimens preserved had assumed the red plumage of the adult male. Of these males one is preserved at Edenhall. The other, a very beautiful bird, is retained by the Proud family. James Cooper received from T. C. Heysham two female birds, of which he says, in a letter dated April 6th, 1846, 'Of course I examined them when skinned, and they both proved to be females. The one worst mauled was somewhat indistinct, but the other was quite perfect, though the germ was very small, not much larger than herring roe. They had no appearance of having bred lately, nor in my opinion were they likely to breed for some time.'

Sub-fam. *EMBERIZINÆ*.

CORN BUNTING.

Emberiza miliaria, L.

This Bunting was formerly common in many districts, but has of late years shown a tendency to disappear from its

favourite breeding-places, reappearing unexpectedly in unlooked-for situations. In the neighbourhood of Allonby it has long been abundant, for the last thirty years at any rate. Two or three pairs nest annually near Carlisle, Tebay, Kendal, and some other centres. It has often cheered me by its simple droning song uttered from a dock-weed, the top of a stone wall, or the upper branches of a tall tree. I found it nesting on Walney Island, at St. Bees, on Tyndal Fell, and in a good many other scattered localities. It is well known as a spring and summer visitant to the Alston valley, where it is popularly called the 'Grass Bunting.' The Corn Bunting is *not* an early breeder. In 1891 I saw more than a hundred individuals flying in company near Floriston as late as the 13th of May.

YELLOW BUNTING.

Emberiza citrinella, L.

In the meadows round Ulpha, and elsewhere in the north of Lancashire, the Yellowhammer occurs numerously, nesting in the hedge-banks and in clumps of furze, upon the edge of mosses and waste lands. It breeds so late that both eggs and young are often found in the nest in September. It is as abundant in the open country about St. Bees as in most parts of the interior of this region.

REED BUNTING.

Emberiza schoeniclus, L.

I have never seen the Reed Bunting in Lakeland in the same numbers that we used to meet with it on the eyots of the Thames and its tributaries ten or eleven years ago. Yet it is not at all an uncommon bird, either on our mosses or beside the lesser water-courses and small pools of standing water, at least in the summer-time. The Sark river is one of its most cherished haunts. In the winter-time its presence with us is sufficiently familiar at the water-side, but not to the same extent on the coast. I noticed about a score of Reed Buntings flitting along the beach near Allonby in January 1890, but smaller parties are more frequently seen.

LAPLAND BUNTING.

Calcarius lapponicus, L.

The late Mr. S. H. Haslam furnished to the *Zoologist*¹ the following 'Note on the Occurrence of the Lark Bunting near Milnthorpe. I am glad to have it in my power to record the capture of a fine specimen of the Lark Bunting (*Plectrophanes lapponica*) near this place, about ten days ago. This very scarce bird was brought to me by a *professional* bird-catcher, who, though he was evidently aware he had fallen in with a *rara avis*, knew nothing more about it than that it was a bird he had never seen before. He described it as having been very wary, and difficult of approach, but after a whole day spent in the attempt, was enticed into a trap-cage. . . . The bird in question exhibits the sombre plumage of the female, as described by Selby and Yarrell; but should it ultimately assume the more varied garb of the male, I shall be only too happy to record it in the *Zoologist*.' The postscript of a letter from Dr. Gough to T. C. Heysham, dated August 28th, 1843, contains the fortifying remark of the writer: 'My friend Mr. Haslam has in his possession a living specimen of the Lapland Bunting, which was captured somewhere in this neighbourhood by one of our bird-catchers. I hope to see the bird shortly, which is doing well.' The only other known instance of this Bunting visiting Lakeland occurred in the autumn of 1890. Mr. Archibald and I fell in with a solitary Lapland Bunting on the 17th of October that year when shooting on Walney Island. I saw the bird alight upon the beach, coming in from the north-east, and pointed it out to Mr. Archibald. It was in immature or female dress. When it rose again Mr. Archibald fired at it. The bird towered, was caught by a violent gust of wind, and being borne down the channel, was soon lost to sight.

¹ *Zoologist*, 1843, p. 316.

SNOW BUNTING.

Plectrophanes nivalis (L.).

On the 12th of January 1892, Mr. R. Mann wrote to me to report an immigration of this species quite unprecedented in the vicinity of the English Solway. 'It may interest you,' he says, 'to know that an immense number of Snow Buntings appeared in this neighbourhood during the end of last week. None of us have ever seen anything like the numbers before. Not *hundreds*, but *thousands!*' This is the more remarkable because the Snowflake is by no means a numerous visitor to the north-west coast of England in ordinary seasons. A few appear in the district in which Mr. Mann resides every winter, but I have never myself seen a larger flock on any of our salt marshes than one of thirty birds, and smaller numbers are the rule. In 1840 this pretty Bunting appeared on our seaboard in hundreds. James Irwin reported that at Bowness, in November, he saw 'not less than three hundred in one flock.' A flock which visited Abbey in November 1890, was estimated by Mr. Nicol to consist of at least one hundred and fifty birds. A good many individuals visited the coast near Ravenglass at this time, and one of the number was reported to me as being pure white throughout its plumage. Upon the fells which divide the most northern counties a few Snow Buntings appear at the beginning of every winter, and in 1873 large numbers frequented the high grounds above Renwick. An early straggler appeared on the 26th of September, in 1886, but the date is a very exceptional one for the interior of Lakeland. A few individuals of this species generally appear on the tops of the Lake hills in early winter, but the species is always much scarcer on the west side of the Eden valley than on the fells, and in the dales of the Pennine range. The larger flocks of this Bunting are usually restless and difficult to approach, but individual birds sometimes evince a charming disregard of mankind. When visiting Silloth one winter day, I was amused to see a small urchin endeavouring to capture a couple of Snow Buntings under his cap. The 'snow-birds' were tripping tamely over the village green, and allowed their persecutor to approach repeatedly within a few feet.

Order *PASSERES*.Family *STURNIDÆ*.

STARLING.

Sturnus vulgaris, L.

Although the Starling was a scarce breeding bird in Lakeland at the beginning of the present century, and has only grown enormously numerous during the last thirty years, it is *not*, strictly, a modern settler in our midst. An entry occurs in Lord William Howard's Household Book, between May 18th and 25th, 1621: 'A pig, a capon, and young starlins, ij s. iij d.' The wonderful augmentation in the numbers of this bird is due in our case to the changes which have been brought about in the character of the country. So long as dense forests or wild moorlands prevailed, the Starling had little chance of increasing; but since skill and capital converted the wet flocs and heather-covered wastes into rough pasture or arable lands (again transformed into grazing land), the increase of insects which feed on grass crops has been accompanied by a corresponding increase in the numbers of the Starling. Nowadays the Starling nests everywhere in the woods, in the hay-stacks, under the eaves, in loose stone walls, or even in the burrows of Sand Martins, as I observed at Maryport in 1888. In the month of May the shrill discordant cries of the unfledged Starlings jar upon a sensitive ear, but they soon grow strong and flock together, while the old birds in many cases rear second broods. While catering for their young in the nest, Starlings generally fly with their plunder in a direct bee-line across the fields to their nurselings. Many birds never breed at all, so far as can be ascertained, but frequent the salt marshes gregariously during the summer months. Such birds are probably males which have failed to find mates, and are thus devoted to an existence of single blessedness. The finest Starling roost with which I am personally acquainted in Lakeland is that which has become established at Murrell Hill, near Carlisle, since 1881. This roost is the resort of Starlings from all the country round. As early as the second week in June these birds begin to frequent their favourite rendezvous; by the end of July their numbers are reinforced largely, and so continue until the third week of October, after which the army

breaks up and migrates in detachments, until by the 1st of December you listen in vain for the voices of myriads of Starlings that babbled of their adventures in the fields with so strange and vehement an earnestness; all that you can hear in winter is the rehearsing concert of the select few which elect to spend the frosty nights beside their summer friends. While they are with us, it is a wonderful sight to see their evening flights. At first they assemble in small squads or dense black columns in the fields a mile or so round, and after practising drill for a short space, flock after flock crosses the town, coming in at a considerable height from all the quarters of the wind, shooting down like showers of parachutes into the trees in which they intend to pass the night. This return passage is not performed hastily; if you sit and watch the roost you will see a constant flow of birds rolling in during an unbroken period of three hours, drove after drove arriving from outlying and often treeless districts, to claim the hospitality of their friends, whose kind toleration permits these birds to indulge their whims without interference.

ROSE-COLOURED STARLING.

Pastor roseus (L.).

A small ash-tree, which stands alone in a roadside hedge near Allonby, has often been pointed out to me as the identical tree out of which Robert Dawson shot a Rose Pastor about the year 1877. The month of its occurrence is not known, but the specimen is in the bright, clear rosy plumage of midsummer. Prior to this the species had not occurred in Lakeland for twenty years. At least I do not know of a more recent occurrence than the bird which the late Mr. Anthony Mason told me was shot in Cartmell in 1855. It was feeding on elder berries. Only some half-a-dozen examples had been killed in Lakeland prior to that. The earliest obtained was shot near Alston in June 1837. T. C. Heysham tried to buy this bird through Greenwell the birdstuffer, but the owner retained it.

Order *PASSERES*.Fam. *CORVIDÆ*.

C H O U G H.

Pyrrhonorax graculus (L.).

Our earliest reference for the existence of this Chough in Lakeland is furnished by Dr. Stanley, who in 1829 included it in his local list as 'rare' in the neighbourhood of Whitehaven. Rare it continued to be. Indeed, its existence on the precipices at Sandwith was known to very few, including M'Comish of Stranraer, from whom I learnt that two or three pairs of Choughs nested near St. Bees until about the year 1860. Possibly the colony was exterminated by the Peregrines which from time to time frequented the same range of sandstone cliffs. At any rate, the younger Heysham can hardly have been aware of the Chough existing on our coast, or he would not have sent to the Isle of Man for Chough's eggs. Sir W. Jardine informed T. C. Heysham, that when he visited the Isle of Man in 1827, 'we were rather late to procure the eggs of the birds, which we regretted on account of the Red-legged Crows, a most abundant bird, but all with young.' Professor Newton included this Chough as having nested in Cumberland and Westmorland, on the authority of Mr. A. G. More, who kindly tells me that he received his information from C. S. Gregson, who assured him that this species nested at Whitbarrow, a range of limestone precipices commanding a fine view of Morecambe Bay. In reply to my inquiries, Mr. Gregson has recently written: 'I have a Chough in my collection of British Birds obtained at Whitbarrow. I was not aware there was any doubt about the Chough being there in the old time. I have not visited the place for some years.' The Rev. J. E. Kelsall most kindly undertook to call in person upon Mr. Gregson. He ascertained that Mr. Gregson's Chough was killed at Whitbarrow *between* 1862 and 1865. This date harmonises perfectly with the time at which this veteran naturalist informed Mr. A. G. More that the species bred at Whitbarrow. The only 'Solway' Chough that we know T. C. Heysham to have seen came under his notice in the Carlisle Market, November 20, 1849. This he

ascertained to have been taken in the neighbourhood of Dumfries. In very severe weather, about the year 1870, a single Cornish Chough was shot by a farmer while feeding out of a sheep-trough in a field near Longtown. A few years later a similar fate befell another Chough, killed near Wigton. Both these birds were obtained within a short distance of the Solway Firth. There can be little doubt that they had strayed from the precipices which their race then tenanted on the coast of the Scottish Solway.

J A Y.

Garrulus glandarius (L.).

Though less numerous than formerly, the Jay continues to maintain its footing in many of our larger woodlands. You may often hear this bird screeching in the trees that line the shores of Ulleswater, nor is it uncommon in the neighbourhood of Derwentwater or Windermere. On the contrary, a fair number of Jays nest in the heart of Lakeland, while the numbers of the residents are often augmented in winter by immigration from the Continent. Mr. Dickinson was perhaps the first to point out that flocks of Jays visit Lakeland from abroad: 'Twice, with some years intervening, I have known flocks of Jays moving over the country. Their resting-places may easily be detected by their droppings, which are of a jet black colour, at least during their flights.'¹

M A G P I E.

Pica rustica (Scop.).

The Pie's adaptiveness of character, which suggested the popular belief in 'Bush Magpies' and 'Tree Magpies,' has enabled this persecuted bird to maintain its footing in greater or lesser numbers in all parts of Lakeland, from the grasslands of Lower Furness to the stone walls of the higher fells. The present deerkeeper in Martindale exterminated all the Magpies of that dale some twenty years ago, and the species is generally much scarcer than it used to be. In the seventeenth century

¹ *Rem. West. Cumberland*, p. 13.

this bird appears to have abounded in some Westmorland parishes. Thus in 1675 the churchwardens of Orton expended three shillings and sevenpence on the destruction of sixty-two 'pyots,' more than two-thirds of the slain being young birds, for which a halfpenny was given, a penny a head being given for the old ones.

JACKDAW.

Corvus monedula, L.

Daws we have in plenty, rearing their young in cliffs, hollow trees, rabbit-holes, and church belfries. The *penchant* of the Daw for nesting in ecclesiastical edifices led to the destruction of a large portion of the Abbey of Holme Cultram. 'It so happened that, upon Wednesday the 18th of April 1604, one Christopher Harden [or Harding], carrying a live coal and a candle into the roof of the church, to search for an iron chisel which his brother had left there, and the wind being exceedingly strong and boisterous, it chanced that the coal blew out of his hand *into a Daw's nest* which was within the roof of the church, and forthwith kindled the same, which set the roof on fire, and within less than three hours it consumed and burnt both the body of the chancel and the whole church, except the south side of the low church, which was saved by means of a stone vault.'¹

CARRION CROW.

Corvus corone, L.

Fairly distributed through Lakeland from Furness to the border, the Carrion Crow maintains its footing pluckily against many enemies. Nor is it slow to attack a weaker bird. In the neighbourhood of Langwathby I once saw a very pretty performance of this kind. A couple of these black robbers singled a Peewit out of a flock, and made many ineffectual swoops at the quarry. At first the Peewit seemed rather dazed by the attack, which was unexpected, but it soon recovered its self-possession, and showed some good sport before it rejoined its companions.

¹ Hutchinson's *History of Cumberland*, vol. ii. p. 333.

HOODED CROW.

Corvus cornix, L.

When we remember the astonishing numbers of Hooded Crows which annually arrive upon the north-eastern coasts of England, and that this bird breeds commonly in the Isle of Man, it becomes a little surprising that it is scarce throughout Lakeland. Dr. Heysham knew it only as an occasional visitant to Cumberland, nor did Dr. Gough ever meet with a specimen in Westmorland until November 1842. Mr. Hutchinson says that it is as rarely seen near Kendal now as it was fifty years ago. Mr. Bell showed me an example killed near Milnthorpe as a rare bird. Mr. Rawson has never seen the Hooded Crow in Westmorland. Mr. Murray assures me that the Hoodie is very seldom procured near Carnforth. It is evident that no change has taken place in its habits during the last hundred years, but that, as now, so in the elder Heysham's day, it appeared sporadically in different parts of Lakeland in early winter; never arriving in flocks, but appearing singly or in couples and trios. In recording the presence of a Hooded Crow [probably a straggler from the Isle of Man] at St. Bees, on May 24, 1832, 'G[eorge] W[heatley]' finds occasion to remark that this species 'is said to have been common in these parts, which it may have been formerly, but it is not so now; for I remember having seen but three or four; one of them several years ago, near the large rookery at Isell Hall, a seat of Sir Wilfred Lawson, on the banks of the Derwent.'¹ Though almost exclusively met with during the winter season, a Hooded Crow was sent to me from Silloth as early as the month of September in 1884.

ROOK.

Corvus frugilegus, L.

In spite of the sentiment which attaches to the Rook in virtue of the homely associations of a bird which nests gregariously around our country-houses, which meets the wild-fowler as an old friend on the sands of Morecambe Bay or the

¹ *Mag. Nat. Hist.*, vol. vi. p. 200.

saltings of the Solway, beating across an estuary morning after morning in the teeth of a head wind, and despite the interest which attaches to every stage of its domesticity, candour compels me to confess that the Rook *is far too numerous* in every part of Lakeland; so numerous as to inflict grave losses on the long-suffering farmers, and to interfere seriously with the interests of sportsmen. Its injurious character has long been recognised. As early, at any rate, as 1620, the Rook was wisely proscribed at Naworth. An entry occurs in the 'Extraordinary Paiments' of that year: 'For killing xv crows, xv d., and for powder, ix d.' (The Rook is commonly known as the 'Crow' in Lakeland, the Carrion Crow being distinguished as the 'Dope' or 'Corbie'.) Such action has often been repeated. For instance, in 1807 the farmers of the Penrith district clubbed together to pay a reward of twopence for the head of every Rook that should be brought to them, in order to protect their turnips and seed crops.¹

RAVEN.

Corvus corax, L.

The Raven has long been identified in the public mind with some of the finest precipices in Lakeland. Wordsworth, among other writers, has placed on record a brief 'word picture' of this bird as seen at Ulleswater: 'Friday, November 9th [1805]. A raven was seen aloft; not hovering like the kite, for that is not the habit of the bird; but passing onward with a straight-forward perseverance, and timing the motion of its wings to its own croaking. The waters were agitated; and the iron tone of the raven's voice, which strikes upon the ear at all times as the more dolorous from its regularity, was in fine keeping with the wild scene before our eyes. This carnivorous fowl is a great enemy to the lambs of these solitudes. I recollect frequently seeing, when a boy, bunches of unfledged ravens suspended from the churchyard of H——, for which a reward of so much a head was given to the adventurous destroyer.'² Reflecting that

¹ *Carlisle Journal*, Dec. 26, 1807.

² *Description of the Scenery of the Lakes*, p. 122.

'H.' must represent Hawkshead, I wrote to the Vicar, who kindly furnished a list of the Ravens killed between 1731 and 1784, after which the custom of paying head-money for Ravens appears to have become obsolete. These notes cover a period of fifty-three years, but rewards for Ravens are only forthcoming for twenty-six years out of the fifty-three. The largest number of Ravens paid for in any year was eighteen, *i.e.* in the year 1769, at a cost of six shillings. The next largest numbers procured were in 1774, when fourteen Ravens were killed, at a cost of 4s. 8d.; and in 1772, when sixteen were killed, and fetched 5s. 4d. The smallest number ever killed in a year was a single bird, which happened in 1761, and again in 1762. The total number paid for in twenty-six years, between 1731 and 1784, was 174 Ravens, giving an annual average for these years of rather more than six Ravens. The price is named in 1731, '4 Ravens killing, 4d. p. piece, 1s. 4d,' and this sum appears to have been closely adopted during the half-century of accounts audited. But the price varied in different parishes. In Orton, where the Ravens killed were chiefly *old* birds, because they appear singly, or in twos, the price was at one time only a penny apiece, as in 1636: 'Ihm for two Raven heads . . . ij d.,' and in 1637, 'Ihm for a Raven head . . . id.' Eventually the price rose, because in 1661 we have an entry of '2 Raven heads —00s. 04d.,' and in 1670, 'to Robert Shepherd for a Raven head, £00, 00s. 02d.' The young fetched a penny when the old birds fetched twopence, because we have entries in 1649, 'for 2 Raven heads, £00, 00s. 04d.,' and 'to George Wilson for 5 Ravens heades, £00, 00s. 05d.' The five no doubt belonged to a brood reared somewhere on Orton Scar.

At the time that Ravens fetched fourpence each in Hawkshead, the price set upon these proscribed birds was settled in Cartmel, by an order of the 8th day of April 1751, fixed no doubt in view of early operations in the field, and entered in the Second Old Book of Cartmel Priory Church: 'The Day abovesaid it was ordered by the 24 and other present that for the future all ravens killed within this parish, the person who kills 'em by carrying them to Ch. or Chapell Warden shall have Twopence for each head, to be paid by sd. Ch. or Chapell

Warden they are to be brought to and allow'd in his the said Church or Chapl Wardens Accs.' To this passage Mr. Rigge appends the comment: 'There are no ravens now in the parish, 1883. The last I saw was about thirty years ago, flying and croaking near the foot of Windermere.'¹ In Patterdale, again, the head-money given for Ravens was fourpence. Here, as in Martindale and other parishes, the birds hung up on the old yew-trees beside the parish church within living memory. Mr. Jackson, who has not passed middle age, was himself in the habit of thus suspending the birds killed in Martindale.

Having analysed the records of payments for Ravens in Greystoke parish, I find that a total score of 966 Ravens were accounted for by the churchwardens during a period of ninety years, from midsummer 1752 to midsummer 1842. The cost of killing Ravens during this extended period amounts to a total of £16, 2s., fourpence having been given for each Raven head. If we divide the period into nine decades, the figures stand thus: first decade (1752-61), 154 Ravens; second decade (1762-1771), 204; third decade (1772-1781), 135; fourth decade (1782-1791), 116; fifth decade (1792-1801), 134; sixth decade (1802-1811), 80; seventh decade (1812-1821), 41; eighth decade (1822-1831), 63; ninth decade (1832-1841), 39. The largest number of Ravens killed in one year during the first decade amounted to thirty-six, paid for between July 5, 1760, and June 20, 1761. The largest number paid for during one year of the second decade was forty-eight, paid for between June 26, 1766, and August 15, 1767. It is only in the last three decades that I can find single years in which *no* Ravens were paid for by the Greystoke churchwardens. In the parish of Crosthwaite, Keswick, the Ravens paid for were nearly always *young* ones. Thus the disbursements of 1711 include, 'To Jno. Cass for two old ravens and 2 young ones, £0, 1s. 0d. To Miles Wilson for 3 young ravens, £0, 0s. 6d.' In 1751 we read: 'To Wythburn for 5 Young Ravens, 10d.; and to Borrowdale for 5 Ditto, 10d.—£0, 1s. 8d. To Crosthwaite and Under Skiddaw for 7 Young Ravens, £0, 1s. 2d.' We read in 1754: 'To St. Johns People

¹ *Cumberland and Westmorland Arch. Soc.*, vol. vii. p. 108.

and others for 21 young Ravens, £0, 3s. 6d.' There is an entry in 1755, 'For 10 young Ravens and 1 old Raven—£0, 2s. 0d.' Again, in 1756, 'For 2 old Ravens, 8d., and for 14 young Ravens, 2s. 4d.—£0, 3s. 0s.' Thirty-two Ravens, young and old, were paid for in Crosthwaite parish in 1791. Ravens were nothing accounted of in Kendal parish so long as Brocks and Foxes were plentiful. One entry stands alone in 1766: 'Paide to Isabel Hurdson for A Ravin head, £00s. 00s. 02d.' But *after* 1704 many rewards were paid for Ravens in this parish.

A curious story about Ravens was once noted by the late Dr. A. C. Gibson, regarding Kernal Crag, a huge mass of solid rock, with a fall of broken precipice, on the side of Coniston Old Man: 'On this crag, probably for ages, a pair of ravens have annually had their nest, and though their young have again and again been destroyed by the shepherds, they always return to this favourite spot; and frequently when one of the parents has been shot in the brooding season, the survivor has immediately been provided with another helpmate. . . . It happened, a year or two since, that both the parent birds were shot whilst the nest was full of unfledged young, and their duties were immediately undertaken by a couple of strange ravens, who attended assiduously to the wants of the orphan brood, until they were fit to forage for themselves.'¹ If the facts are correctly related only two explanations seem possible. Either the birds shot were two visitors, which the shepherds shot in mistake for the breeding birds, and the latter escaped; or the second couple may have been a pair which, having just lost their own young, felt moved by that natural affection which the Greeks defined as *στοργή*, to relieve the hunger of the brood left helpless by the loss of their natural protectors.

The foregoing notes refer to the Lake mountains, *i.e.* to the central and western portions of Lakeland, which have always constituted the chief stronghold of the Ravens: Dr. Parker of Gosforth wrote only a decade ago, 'This fine bird is still commonly to be seen and heard upon the Fells,' adding, 'the nest is placed on the ledges of rocky cliffs and precipices, generally

¹ *The Old Man, or Ravings and Ramblings round Coniston*, p. 101.

in some most inaccessible spot.' It would be unhandsome to jeopardise the safety of the eggs or young of any of our Lakeland Ravens by publishing the whereabouts of the precipices in which they rear their young. These are only too well known already to shepherds and keepers, who sometimes stone the fledgelings in the nest if they cannot be taken out alive. There are more Ravens in Westmorland than in Cumberland, if the whole of our area, from the Yorkshire border, be considered; though, when we leave the precipices of the Lake mountains proper, the cliffs and valleys in which they breed are highly isolated. Dr. Heysham commented on the tenacity with which Ravens adhere to their traditional breeding stations, a remark which is illustrated by a pair which have long bred in the neighbourhood of Alston. In a letter written to T. C. Heysham on May 9, 1831, William Dodd volunteers the remark: 'The Raven breeds upon Crossfell. I could send you a young one taken out of a nest there a week or so ago, if you request it.'

The Raven has made its mark for all time in the *place-names* of Lakeland; not only in those which are self-evident, but in some that are less obvious. Renwick, for instance, is a contraction of *Ravens' wick*. Mr. J. A. Harvie-Brown has elsewhere drawn attention to the habit which obtains in some regions, of Ravens assembling numerously to roost together in some favourite locality. A single hint that such a *rendevous* of Ravens may formerly have been adopted in Lakeland is supplied by a remark in Mrs. Howard's *Reminiscences*, in the course of which the lady remarks of Corby, 'the farthest point is called the Raven Clint, as Ravens flock there for shelter' (p. 98). The allusion recalls the fact that Ravens naturally nested in the larger trees of the Eden valley, until compelled by persecution to seek a safer asylum among the lofty crags of our mountain passes. This is not a mere conjecture. Sandford, writing about 1675, tells us that Crosbie Ravensworth was so called 'of the Rauens Timbring in the Timber Trees ther, but now not a timber Tree standing.'¹ The only point of the N.W. coast upon which Ravens ever nest is identical with the sandstone cliffs of Sandwith. A pair nested there in 1888; in 1891 they had left the locality.

¹ Sandford ms., p. 32.

During the spring days, when ewes are lambing, the Ravens often visit the lower fells; just as in winter they appear on many of the moors of our eastern border. Their presence in the Cumbrian plain is rare, and the same may be said of the lower grounds around Morecambe Bay. I saw a fine Raven which had been caught alive on Roudsea Moss in the autumn of 1890, and can vouch for another having been shot some years ago near Longtown. Both of these individuals had strayed a considerable distance from their usual haunts. It not unfrequently happens that young Ravens are taken from their nests on our precipitous scars, in order to be domesticated. Mr. J. H. Brown has for some years possessed an extremely fine Raven, which enjoys the run of a large garden, much affected by Rooks during the summer. On the 7th of June 1891 the tenants of the rookery nearly terminated the career of *Corvus corax*. It happened in this wise. Previous to this eventful day the Raven had given serious offence to his neighbours by the practice of his latest accomplishment,—a derisive rendering of their ‘cawing.’ On this particular morning the Raven found a young Rook dead upon the lawn. He proceeded to bolt the corpse in view of the sorrowing relatives. About two hours later a stir was noticed among the Rooks. Suddenly a large detachment of their number set upon the Raven, which threw himself on his back and showed a plucky defence. Three times the Rooks were driven off, and thrice they returned to the fray as soon as Mr. Brown retired. When rescued for the last time the Raven was nearly played out, and had help been delayed, must speedily have succumbed to the fury of his enemies.

Order *PASSERES*.

Fam. *ALAUDIDÆ*.

SKY LARK.

Alauda arvensis, L.

If the numbers of individuals sacrificed to the exigencies of the kitchen can be trusted to supply a criterion, the Sky Lark has long been a very abundant bird in Lakeland. The Naworth accounts include many mentions of this Lark being purchased from local fowlers. Thus, in 1612, there is an entry between

October 23 and 30 : 'Larks bought at Carlyle, xx^d.' A little later we read : 'Larks, 2 dozen, viii^d.' In 1618, between September 12th and 19th, there were booked '20 dozen of larkes, v^s.'; and a week later, '58 dozen of larkes, xiii^s. vj^d.' Between September 26th and October 3d, we have '60 dozen of larkes, xi^s.'; also '33 dozen of larkes, vj^s. vj^d.' Again : '40 dozen of larkes, vj^s. vj^d.' In 1621 we have an entry prior to September 29 : 'Larkes, 39 dozen d., x^s. iiij^d.' Before October 27 we read : 'Larkes, 21 dozens, v^s. iiij^d.' Under April 8, 1634, we find entered, '8 duzin of land larkes, by Richard Storye, delivered at Corkby, ij^s.' This Lark nests as freely on our salt marshes as in our fields, and the young leave the nest before they are fully fledged, relying instinctively on their protective colouration assimilating closely to the ground colour.

WOOD LARK.

Alauda arborea, L.

Some few years ago I found a charming little colony of Wood Larks established in the neighbourhood of Camerton. Subsequently I traced the species as an occasional breeding bird to St. Bees and Ravenglass. Since then I have seen it near Kendal, where Dr. Gough considered it to be rare in 1861, though not uncommon some years earlier. Mr. F. P. Johnson told me that a pair of Wood Larks nested at Castlesteads a few summers ago, and Mr. W. Hodgson thought that he recognised this species in Ulleswater. I fancy that it must be a very uncommon bird in Lakeland, otherwise my intimate acquaintance with the species must have produced a good many more localities for its presence. It is almost equally scarce as a winter visitant. T. C. Heysham recorded the capture of a Wood Lark taken near Carlisle, in February 1833. Others have been caught of late years at Ravenglass and Allonby in the winter-time. The only Wood Lark which the late B. Greenwell ever saw in Cumberland was shot by himself near Alston in March 1866. He gave me the skin of this bird a year or so before his death.

SHORE LARK.

Otocorys alpestris (L.).

The Shore Lark is quite unknown in the interior of Lakeland, but has occurred upon our coast in three or four instances. In February 1890 three Shore Larks frequented the brow-edge of Skinburness marsh for some days, until shot in fact for identification. They were passing wild, and generally flew off to the fields when disturbed. On the 29th of October that year Arthur Bolton shot three Shore Larks on his farm in Walney Island. He sent me one of them that I might identify the species for him. This was a male, but the two that he retained for himself appear from their plumage to be male and female. The birds which Mr. Nicol shot on Skinburness Marsh, as above mentioned, were two males and a female. Other specimens of the Shore Lark obtained in Lakeland are the following: one shot near Eskmeals many years ago, in the collection at Corney; another shot near St. Bees some thirty years since; and a third killed in the fields near Silloth, possessed by Mr. Routledge of that place.

Order *PICARIÆ*.Fam. *CYPSELIDÆ*.

S W I F T.

Cypselus apus (L.).

This Swift appears to be more independent of seasons, or rather of winds, than most of the summer immigrants, always appearing in Lakeland by the commencement of May, and generally a day or two earlier. Its passage is extended over a period of two or three weeks. In 1891 the species did not become numerous round Carlisle until the 14th of May. Though these birds are fond of hawking insects above our highest mountain-tops, they are generally noticed rather later on the fells than in warm and sheltered situations. Swifts do not cluster together before returning to Africa in August (and September), quite in Hirundine fashion, but they do congregate in the air socially before the final start is made. For example, on the 16th of this August [1891], I long watched between thirty and

forty individuals flying round together, rising and falling in graceful curves, and closely following, though never colliding with their fellows, evidently preparing to embark upon their common journey across the sea.

ALPINE SWIFT.

Cypselus melba (L.).

The only occurrence which can be accredited to Lakeland refers to the year 1842, and is thus recorded in the *Carlisle Patriot* of July 8th: 'On Monday [July 4th], at Low Mill House, Robert Brisco, Esq., shot a fine specimen of that very rare bird, the *Cypselus alpinus* (Alpine Swift).' T. C. Heysham heard of it at once, for he wrote to Henry Doubleday on the 23d of July: 'I have recently been told that a specimen of the Whitebellied Swift was obtained about ten days ago in the west of Cumberland, not far from Egremont.' James Cooper wrote to Heysham on the 4th of September that year: 'I had a letter from Mr. Reeves in which he mentioned the Swift you alluded to in your note of the 8 Augt., and from what he says I am inclined to think it may be the Alpine one, as he says it first attracted their attention from the largeness of its size before they noticed its white belly.' Mr. Robert Brisco, afterwards Sir Robert Brisco, Bart., deposited this bird for a time in the Carlisle Museum, as shown by an entry in the old catalogue. It is now in the possession of Sir Musgrave Brisco, Bart., of Crofton.

Order *PICARIÆ*.

Fam. *CAPRIMULGIDÆ*.

NIGHTJAR.

Caprimulgus europæus, L.

The Nightjar is not perhaps as abundant in Lakeland as in some of the southern counties of England, but it is known on most of our fells as the 'night hawk,' and would be a good deal commoner if spared by keepers. This Goatsucker, like many of the summer birds, is fond of nesting for several successive years on the same moss or moorland, usually where trees are thinly

planted. The breeding season is often extended into September, even in the north of England, but I have not seen unfledged young later than September, nor have I seen a full clutch of eggs earlier than the 26th of May. It breeds throughout our area, from the mosses which fringe the Solway Firth to the Westmorland moors that march with Yorkshire.

Order *PICARIÆ*.

Fam. *PICIDÆ*.

GREAT SPOTTED WOODPECKER.

Dendrocopus major (L.).

In the southern portions of Lakeland this Woodpecker is known only as a rare winter visitant from the Continent. Dr. Gough records in his notes a young bird killed near Gilpin Bridge, October 31, 1871. Mr. Hutchinson received a specimen shot on Cartmel Fell on November 29th, 1889. Mr. Duckworth examined another killed near Ulverston about the same time. In Cumberland the species occurs as rarely as a winter immigrant as in Westmorland; but a few pairs reside in one or two localities. Dr. Heysham only met with four local specimens prior to 1796. His son informed Yarrell in a draft of January 10, 1836: 'A few days ago a very fine specimen of the *Picus major* (a female) was shot in the neighbourhood, a bird seldom met with in the district.' The species is most firmly established at Edenhall (where some fine specimens of the *boring* of this *Dendrocopus* can be inspected *in situ*), but it has bred of late years near Brampton, Woodside, Corby Castle, and Warwick Bridge. Keepers are chiefly to blame for its rarity. A pair were shot at Corby in 1888, while on the 1st of June in the following year, I examined another bird from the same property, a fine old male. That it had taken its share of the duties of incubation was shown by the bare condition of the breast. The whereabouts of this Woodpecker is easily ascertained at the beginning of the breeding season. For instance, on the 25th of April 1889 I visited Woodside, and soon heard the sharp jarring sound of quickly repeated blows, followed by the appearance of the performer; the first tree he alighted in happened to be a

long slender fir; he alighted on a small bough, and proceeded to sidle *down* the stem of the tree, twisting round before he reached the base, and then flew to the next tree. Crossing the meadows, we soon heard another Woodpecker jarring in a different quarter. Conspicuous among a few straggling trees, which grew beside a small water-course, was a fine alder. To this the Woodpecker directed its undulating course, and proceeded to alight on an upright stem, clinging to it with tail spread flat against its surface, and head thrown back, hanging in easy elegance on the perpendicular. It again repeated its jarring, and we had scrutinised its pied plumage with the glass somewhat closely, before the shy fellow took alarm and flew away. About 25 feet up there was an old hole, and, above, two separate borings had been commenced, about 2 feet apart, the one just above the other. The early morning and the afternoon are the best times to hear the jarring of this Woodpecker. *How does this Woodpecker obtain shelter at night in the winter-time?* It roosts in old nesting-holes, to which it sometimes retires even during the day. On the 26th of January 1889, when wandering through the woods of Edenhall, we came upon the remains of a Scotch fir, a gaunt giant which had long survived its prime, and now only cumbered the ground as a dismembered witness of the past. It contained three borings of this Woodpecker. On our kicking the bark twice, a Greater Spotted Woodpecker flew out, and crossing a small clearing, disappeared in the recesses of the coverts.

LESSER SPOTTED WOODPECKER.

Dendrocopus minor (L.).

All endeavours to trace this species in Westmorland or Furness have hitherto proved futile. A pair nested at Edenhall in 1882, but were unfortunately shot for Shaw of Shrewsbury at his special request. A single bird was shot near Carlisle in the 'thirties,' and another at Paw Park. A pair were reported as seen at Dalemain in 1847. Blckett Greenwell obtained a specimen near Alston, but on the Northumberland side. It is evident that Lakeland lies outside the usual breeding range of this Woodpecker.

GREEN WOODPECKER.

Gecinus viridis (L.).

Dr. Heysham knew this bird as common in Yorkshire, but only an occasional visitant to Cumberland. Hutton's Museum in 1803 contained a local specimen. The late Mr. Dickinson has left a graphic description of two Green Woodpeckers which he observed near Lamplugh, the only specimens he ever saw.¹ Mr. M'Comish of Stranraer took a clutch of eggs in Blackwell Wood near Carlisle in 1840. R. Raine assured me that a pair nested at Edenhall in 1887. In Westmorland it appears to be of still more rare occurrence. Mr. Leslie showed me a Green Woodpecker in *nest* dress, shot near Appleby shortly prior to 1882. This is the best authenticated specimen that can be claimed for Westmorland.

Sub fam. *IYNGINÆ*.

WRYNECK.

Iynx torquilla, L.

The Wryneck affords an interesting example of the nearly complete disappearance of a regular summer visitant to Lakeland within the memory of a single generation. Dr. Heysham knew the species well, was familiar with its harsh cry, had taken a female on the nest, and was accustomed to meet with it every season, though he did not happen to find it in 1796. T. C. Heysham noticed its arrival at Carlisle in the 'thirties' regularly. Dr. Gough entered it in 1861 as a not uncommon summer visitant to the neighbourhood of Kendal. Captain Johnson well remembers that it used to breed about Castlesteads. For the last twenty-five years the Wryneck has only visited us as a chance straggler. James Fell took a nest at Rickerby in 1863, of which he often spoke, but he never met with it after that year. An odd bird was killed by a boy's catapult near Maryport in August 1888; a few individuals have been seen on passage in different parts of Lakeland. Probably the species was *always* very local. It is now *rare*.

¹ *Rem. of West Cumberland*, pp. 23, 24.

Order *PICARIÆ*.Fam. *ALCEDINIDÆ*.

KINGFISHER.

Alcedo ispida, L.

A few Kingfishers haunt our northern streams and backwaters, not ascending very frequently to the beckes which drain the 'snow-broth' from the fells; yet appropriating many quiet nooks on our salmon rivers. Mrs. Howard alludes to the presence of Kingfishers on the Eden in the first volume of her *Reminiscences* (p. 97), remarking that a spot, then called the 'blackbird's seat,' had previously been known as 'the halcyon bower' from the number of Kingfishers in the vicinity. Our anglers take a pride in the Kingfishers that share their sport in miniature. I believe that no men more heartily regret the Vandalism which destroys so many Kingfishers. But though the object of relentless persecution on account of its beautiful plumage, the Kingfisher is not so local as many persons imagine, a misconception chiefly due to the retiring habits of the bird. For although the 'Icebird' (as they call this species in Germany) especially frequents the banks of our larger rivers, yet in summer it often happens that a pair of Kingfishers withdraw from their usual haunts to rear their young in more complete retirement; nesting in the side of some half-dried-up stream, or near a stagnant unlovely ditch, where no one would suspect their presence. In the summer of 1890 Mr. W. Duckworth noticed on the sea-shore near Ulverston a cage containing seven young Kingfishers, to whose presence he was attracted by their (to him) familiar cries. Our joint inquiries ascertained that a man named Baxter had taken them out of a hole in the low cliff *immediately above high-tide mark*. The parent birds reared their young for about a week, feeding them chiefly on small shrimps. The experiment was at last spoilt by some mischievous boys who made a raid on the young birds. Whatever the attraction may be (I am not wicked enough to shoot these beautiful birds for dissection), Kingfishers certainly live for weeks on the creeks of our salt marshes. Not the least graceful of the actions of the Kingfisher is its habit of hovering occasionally like a Kestrel; *this* Dr. Heysham was one of the first to observe.

Order *PICARIÆ*.Fam. *CORACIIDÆ*.

R O L L E R.

Coracias garrula, L.

Pennant records that a Roller was shot at Dalton in Furness, May 26, 1827. Mitchell records another as shot on Walney Island in June 1860. In the year 1868 two examples occurred in Lakeland. Mr. Dickinson recorded one of the two as shot near Thornholm by Mr. J. Dalzell, a brewer of Whitehaven, who described it as a chattering, noisy bird, and not at all shy. I subsequently examined this specimen in the collection of Dr. Lumb. The second bird was shot on the 17th of July that year at Carleton near Carlisle. Sam Watson received it in the flesh, and found that its body contained beetles and caterpillars, some of them in a living state. It was subsequently purchased by J. B. Hodgkinson.

Order *PICARIÆ*.Fam. *UPUPIDÆ*.

H O O P O E.

Upupa epops, L.

Professor Newton once included Westmorland in a list of English counties which had not to his knowledge been stained with the blood of the Hoopoe. But even when he wrote, the species had occurred in most parts of Lakeland—generally, but not always, during the autumn. Of vernal occurrences may be mentioned a bird shot near Selside on May 1st, 1859, and a brighter-coloured bird killed on Walney Island in the spring of 1884. Specimens were shot at St. Bees in 1877, at Calder Abbey in 1851, at Middlesceugh in 1831, at Dalston in 1832, at Nether Denton in 1867, at Allonby and Loweswater. At Dalston two birds appeared together, but on all other occasions the Hoopoe seems to have straggled to Lakeland only as a solitary waif. A large flight of Hoopoes visited England in the autumn of 1889, and one or two individuals strayed to the north-west region. Bailie Walcot has favoured me with a printed notice of a Hoopoe which he and some fellow-tourists

observed near Shap Wells on the 14th of September. This bird happily escaped injury. An individual which Mr. Backhouse brought to me on the 12th of October had been less fortunate. The poor bird had been searching for insects in the light soil of a rabbit-warren at Bowness on Solway, when it entered a steel trap, which crushed its feet so severely that it was found necessary to kill it. Its plumage was that of a young bird, worn and frayed, as though the bird had been contending against adverse elements in its flight across the North Sea.

Order *PICARIÆ*.

Fam. *CUCULIDÆ*.

C U C K O O.

Cuculus canorus, L.

The time-honoured joke against the Borrowdale people, whom tradition accredits with building a wall to keep in the 'gowk,' is itself an illustration of the abundance of the bird upon the moors of the Lake district. Far up the mountain-side, where bird-life becomes scarce and little varied, you may generally hear the Cuckoo practising its song as it wanders in search of the caterpillars upon which it chiefly subsists. In default of insect-life, this Cuckoo sometimes swallows strange substances. Mr. Walton of Garrigill sent to me a quantity of dried grass which he had found in the stomach of a Cuckoo, swallowed no doubt to appease the pangs of hunger, and worked up into a round ball by physiological action. Among the nests in which the egg of this Cuckoo has been found in Lakeland, I may mention those of the Whinchat, Robin, Pied Wagtail, Reed Bunting, Chaffinch, Yellow Bunting, Hedge Sparrow, Linnet, and Twite. Mr. Heysham received from Alston a Twite's nest containing three eggs of that species and one of the Cuckoo, in June 1831. The late William Greenup found a Cuckoo's egg in a Twite's nest in May 1858. James Smith found a Cuckoo's egg in a Linnet's nest at Bowness on Solway in June 1891.

Order *STRIGES*.Fam. *STRIGIDÆ*.

BARN OWL.

Strix flammea, L.

This Owl was at one time a very common bird in Lakeland, nesting in such old ruins as those of Cockermouth Castle, in disused chimney-shafts, and occasionally in hollow trees. It has a *penchant* for rearing its young in dovecots, as at Corby Castle. A few pairs of Barn Owls breed in clefts in the red-sandstone cliffs above the river Eden. An examination of the pellets beneath one of their nesting-places showed that the birds were in the habit of feeding on the Water Shrew, the teeth of that small animal being easily recognised. Even upon Walney Island the Barn Owl is occasionally taken incidentally in rabbit-traps. Its visits to that island are doubtless prompted by the experience that the rats abound in the hedge-banks. Most naturalists are aware that the Barn Owl breeds almost throughout the year, but the fact is not equally familiar to the general public; hence the following note from Mr. W. H. Doeg of Botcherby, dated November 14, 1888, deserves reproduction here: 'The owls [a pair of wild Barn Owls] sit on my roof every night for hours, and snore loud enough to be heard in the house. Last night, at 9.30, I heard an unusual row, and went into the yard. The old Owls flew away, and a young one fell out of the hole to the ground. It could only hop and flutter. The old birds had reared two broods already.' But, though more prolific than most nocturnal birds of prey, the Barn Owl has decreased of late years in many parts of Lakeland, in consequence of the cruel thoughtlessness which dictates its destruction. In addition to the benefits which this Owl confers so lavishly on farmers, by the crusade which it constantly exercises against *Muridæ*, mention should be made of its feeding upon insects. This has been ascertained both by dissection and by external observations upon the habits of the bird. Thus, on the 12th of June 1889, when standing in a garden at Dalston, I watched a Barn Owl gliding noiselessly along the tops of the hedgerows, and also flying around the upper branches of the larger trees, evidently picking off insects. Once to our surprise the Owl alighted on

the very top of a tall tree, upon which it contrived to balance itself for a few moments before resuming the chase. At one time or another most people have seen this Owl mousing during the later hours of the afternoon. Mr. W. Hodgson and other members of the Carlisle Scientific Society were visiting Bewcastle, on April 29, 1889, when at mid-day they saw a fine Barn Owl skimming leisurely over the high pastures above Knorren Lodge on the Cambeck. The Barn Owl exhibits more determination in private life than might be imagined from its public appearances, as the following facts will show. Quite recently, an idle fellow caught a Barn Owl near Carlisle, and carried it alive to the house of one of my acquaintances. It was placed in an aviary already tenanted by three Tawny Owls. These last had lived together peacefully enough, but the arrival of the stranger introduced an element of discord, and desperate battles ensued. The Barn Owl fought bravely against its opponents, but was overpowered by numbers, and soon succumbed to the ill-treatment it had received. A second Barn Owl was produced to take the place of the deceased. Quarrels again broke out, but the new-comer thrashed its three opponents single-handed, and evicted them from the box in which they usually spent the day, which was thenceforth reserved for its sole use.

LONG-EARED OWL.

Asio otus (L.).

Opinions have always differed as to the relative abundance of the Long-eared Owl. T. C. Heysham states, in a letter of November 28, 1836, 'Although this bird breeds in the fir plantations in this neighbourhood, the eggs are exceedingly difficult to meet with, so much so, that during the last nine or ten years I have only been able to secure a single nest.' Dr. Gough, writing apparently at the end of the 'seventies,' remarks: 'I am inclined to think that this species is more abundantly distributed in this district than we have hitherto regarded. From an account given me of a large company of Eared Owls, in a wood of yew-trees on the east side of the [Morecambe] Bay, I came to the conclusion that they were the long-eared species.' He

adds a note of a bird killed in Barrowfield Wood, Kendal, in 1875, and that Mr. H. Arnold saw eight (and shot two) in Ulpha Wood. Bell of Milnthorpe considers it rather scarce in South Westmorland, but Mr. Hutchinson has preserved several specimens killed near Kendal, and kept two examples in captivity. Durnford recorded the species as plentiful near Barrow in 1876. For the rest, this Owl occurs sporadically in our larger plantations up to the very borders of Scotland; as well in Renwick and other fell districts, as in the large woods of the lower grounds. It suffers more from pole-traps than any other species of Owl.

SHORT-EARED OWL.

Asio accipitrinus (Pall.).

Dr. Heysham knew this Owl as a winter visitor to Lakeland, and as such it has occurred with some irregularity in most parts of our area. Captain Johnson told me that at one time he often flushed flights of these Owls in the turnip fields near Brampton. That this species visited Walney Island abundantly fifteen or sixteen years ago is evident from the experience of Mr. W. A. Durnford, who had seen as many as six birds together, beating the ground for mice between three and four in the afternoon. He adds that the species visited Walney in larger numbers than usual in 1876, the first flight arriving with the Woodcocks on October 28, but that in 1877 this Owl was as scarce in Walney as it had been abundant the previous winter. For my own part I have not met with this Owl in Lakeland except in very limited numbers; a good many appeared on Walney in the autumn and early winter of 1891. An odd pair of these Owls occasionally remains to *breed* in Lakeland. Probably the first known instance is that recorded without date by Mr. Hancock, who simply says that the late Mr. R. R. Wingate picked up a young individual of the Short-eared Owl near Brampton, Cumberland. Mr. Henry Kerr of Bacup writes in the *Field* of November 29, 1879: 'When on the northern border of Cumberland, in August last, I was told by an ex-gamekeeper that he had shot old and young birds of this species on the Bewcastle fells in Cumberland. My informant, who is a good

practical ornithologist, knows the bird well, and he told me he had found its nest and eggs on two occasions amongst the heather on the moors. Many years ago I captured a newly fledged Short-eared Owl in Dumfriesshire, on Lochar Moss.' Brennan of Ulpha volunteered that he had once found a nest of young Short-eared Owls on Foulshaw Moss about the year 1880. Mr. Durnford records, but with meagre particulars, an instance of this Owl breeding on the borders of Lancashire and Westmorland, in the *Field* of June 19, 1880. The late Jerry Smith produced a specimen of this Owl, which he had taken from a nest on Lowmoor, near Aspatia, and reared as a pet. It was accidentally poisoned, and he bitterly lamented its demise. James Smith found a nest of the Short-eared Owl containing two addled eggs and one young bird, in half-down, on the 11th of May 1889, upon one of the mosses in the neighbourhood of our coast. I had arranged for him to accompany me over the 'flow,' but the morning proving wet, I waited for the weather to mend, and my man started off without me. After crossing a broad expanse of flat moor and short heather, he came to a narrow strip of old heather, divided by a deep trench from a bed of bracken. Here his attention was attracted by seeing the old male Owl hawking on the wing. While watching this bird he saw his mate join him. The two birds then proceeded to fly around in great distress, while Smith searched for their nest. This was a scratching in the ground, measuring about 20 inches across, surrounded by dwarf willows and tall heather. When I visited the nest it contained only a few feathers and bones of the Sky Lark, but we found the remains of two very young rabbits about forty yards away. The male had evidently been in the habit of perching on a bare stump which projected from the summit of a hillock. Numerous pellets attested to the frequency with which the spot had been visited. About the third week in June the same year, while I was away in Scotland, a keeper in the same district happened to find another nest of this Owl. This fellow shot the old hen at the nest, and killed her six owlets. They were quite helpless, poor innocents, the youngest being only a few days old, while the eldest had not begun to exchange the yellow down, which at first invests the body of this Owl,

for feathers. This Owl seems peculiarly unfortunate in the treatment it receives from farmers and loafing gunners, but the old type of keeper is its worst enemy. I found no fewer than six Short-eared Owls all gibbeted upon the same tree near Cardunock.

TAWNY OWL.

Syrnium aluco (L.).

From Roudsea northwards this Owl endeavours to breed commonly in hollow trees, and though a good many are killed by keepers, the birds seem to hold their ground. Instances of the Tawny Owl nesting in the open are rare—indeed, the only one that can be recorded from Lakeland refers to a clutch of eggs which Mr. G. A. Hutchinson took on Lupton Moor in Westmorland, in 1886, having previously disturbed the old birds. These eggs were submitted to Mr. Bidwell. It is well known that this Owl nests in rabbit-holes in sloping banks, and also among rocks; but that it should attempt to rear its young on an open moor, like the Short-eared Owl, is a little surprising. The young are often reared as pets, and very charming they become, sometimes learning to come to be fed in answer to their owner's whistle. Their diet is naturally varied, including small mammals, fish, and occasionally small birds. Mr. Johnson has known a Tawny Owl carry a Willow Wren to her young. They will feed also on insects, particularly on the so-called 'black beetles,' to which domesticated birds are very partial. Mr. Edward Tandy kept a Tawny Owl which he used to supply with small birds. One day he gave the Owl a Snipe. The Owl, according to custom, nipped off the head and tried to bolt it. But the long bill defeated all his efforts to swallow the *bonne bouche*. The Owl proved equal to the occasion. He threw up the head, broke off the long bill, and bolted the cranium, now freed from its lengthy appendage.

TENGMALM'S OWL.

Nyctala tengmalmi (Gmel.).

Cumbrian ornithologists have long been aware that an example of this small Owl was obtained in the West of Cumberland in

the year 1876—indeed, the fact was recorded in the *Zoologist* by Mr. W. A. Durnford, as well as by Dr. Parker.¹ But a slight doubt as to the *exact* date upon which the bird was killed has hitherto existed; Mr. Durnford having referred its capture to the month of October, while the Gosforth naturalist assigned the same event to December. Believing that the specimen had always remained in the possession of its original owner, the Rev. C. Fullerton Smith, I communicated with that gentleman, and then learnt that the 3d of November 1876 was really the correct day of its occurrence. It was killed by a man named James Wright, keeper to the late A. B. Steward, Esq. of Newton Manor, Gosforth, and was shown to Mr. Fullerton Smith on the following day at Mill Cottage, then occupied by George Savage, keeper to Mr. Burns Lindow of Irton Hall. It was Savage who handed the bird to Mr. Fullerton Smith, *in the flesh*. Savage mounted the bird, and subsequently told Mr. Fullerton Smith that it was a female.

SCOPS OWL.

Scops giu (Scop.).

When visiting Mr. Joseph Whitaker of Rainworth, in June 1887, I examined an example of this small Owl, shot near Renwick on the 15th of May 1875, and acquired by purchase as soon as its occurrence was notified in the *Field* of May 22d. In June 1889 Mrs. Dryden of Renwick pointed out to me an ash-tree, standing in the middle of the village, out of which this poor wanderer was shot. It was Mrs. Dryden who first observed the bird towards evening, when it was perching in this ash-tree. She at once told her sons what she had seen. One of them—not Henry Dryden, but another brother who has since died—ran out with a gun. He disturbed the bird, which flew out of the tree, but returned to it after a short flight, and was promptly shot. Henry Dryden, who was also present, independently confirmed the correctness of his mother's statement.

¹ *Zoologist*, 1877, p. 277; *ibid.* 1879, p. 117.

LITTLE OWL.

Athene noctua (Scop.).

On a former occasion, Mr. H. P. Senhouse favoured me with the information that a Little Owl was once killed near Westward, and shown to his father in the flesh, but he was unable to furnish the date of its occurrence. Happily, he has since remedied this defect by forwarding a letter, written by Mr. T. C. Heysham to his father, which fixes the date.

In this letter of February 16, 1856, Mr. Heysham wrote as follows: 'I feel much obliged, and beg to thank you for your kind attention in sending me a notice of the capture of a specimen of *Strix passerina* at Westward. This bird is certainly a novelty in the North of England, and I believe the first instance of its occurrence in this county. I need scarcely tell you that *S. passerina* and *S. Tengmalmi* are so nearly allied, that frequent mistakes have been made as to their identity. You, however, are too good an ornithologist to commit an error of this description. Had it fallen into any other hands, I should most certainly have preferred an inspection, merely to satisfy myself as to the species. I fear the body has been thrown away, otherwise the sternum, etc., of this little nocturnal marauder would have been acceptable to me by way of a relic.' The last remark shows conclusively that this Owl was killed in 1856, probably at the beginning of February, a month in which, according to Mr. Harting, the species has repeatedly occurred in Great Britain. The specimen became the property of the late General Wyndham.

Order ACCIPITRES.

Fam. FALCONIDÆ.

MARSH HARRIER.

Circus æruginosus (L.).

Though long extinct as a breeding bird, the Marsh Harrier must *once* have nested quite commonly on the great wastes of Lakeland. Dr. Heysham seems to have possessed a personal acquaintance with this Harrier, from the descriptions which he

furnishes of the plumage of both old and young birds. He states explicitly, 'This bird is very frequent upon our moors. It lays four or five eggs of a dirty white colour, upon the ground, among heath or rushes.' No doubt the gamekeepers had commenced to decimate its numbers even at the close of the last century. By the time that the younger Heysham began to write the Marsh Harrier appears to have become rare. Indeed, it is quite problematical whether T. C. Heysham ever saw it *alive* in Lakeland. That he received fresh specimens from the Pennine range is evidenced by the following letters:—

‘ALSTON, 22 Nov. 1830.

‘Mr. Heysham.

‘SIR,—I have this day sent you two Hawks, which were brought to me by Mr. Jos. Dickinson, a Gentn. of this place who has usually taken every pains in trying to procure me anything of the kind which was likely to suit your purpose. It seems to me that they are what you call the Moor Buzzard, a bird not often met with here, but you'll have the goodness to say in your next whether my conjecture is right or not. I hope you will receive them safe. . . . I beg to subscribe myself, yours
Respty.,
‘WM. DODD.’

To this T. C. Heysham replied :

‘CARLISLE, Nov. 24, 1830.

‘Mr. William Dodd.

‘I have to thank you for the two Moor Buzzards which reached me safe the evening previous to the receipt of your letter. They are both young birds, although one is probably a year older than the other. The very old ones have the head, neck, and breast entirely yellowish-white. They, as well as the majority of hawks, vary much in the colour of their plumage, and it rarely happens that two are taken exactly alike. I beg you will present my compliments to Mr. Dickinson, and say that I feel myself greatly obliged to him for his kindness and trouble in trapping them for me.’

This Harrier probably maintained its footing longest in the wild *border* country. The late Mr. Proud recorded in his diary the capture of two in that district prior to 1846, and Captain

Johnson recollects that, when a young man, he himself met with the Marsh Harrier on several occasions in the same district. It is possible that a bird of this species, killed at Netherby some years prior to 1880, and preserved in the collection at Edenhall, was the last of the Marsh Harriers that had so long frequented the wild moors of our borders. That the species lingered longer among the wastes of Westmorland is far from improbable. Mr. Hindson, who must have been a contemporary of the Marsh Harrier, does not include this species in the Kirkby-Lonsdale list. Dr. Gough himself only alludes to it in his list of 1861 as 'Rare. Hay Fell.' Mr. Hutchinson believes that at one time the Marsh Harrier bred regularly on Hay Fell.

HEN HARRIER

Circus cyaneus (L.).

The wild moors around Tebay must always have been well adapted to this Harrier. Here accordingly we first have information of its destruction. The Accompts of the Churchwardens of Orton given at Easter 1645 include two entries of Harriers: 'Ihm to John Wilson for ringtails' heads, £00, 00s. 06d. Ihm to Edward Thornboro for ringtails' heads, £00, 00s. 04d.' Richardson of Ulleswater tells us that even a century ago this Harrier was only too well known in poultry yards by this name of *Ring-Tail*. His contemporary, Dr. Heysham, devoted nearly three columns to the Hen Harrier, and his account of the birds which nested at Newtown, near Carlisle, is infinitely the finest piece of writing that his pen has bequeathed to us. After discussing the question as to the disputed identity of the Hen Harrier and the 'Ringtail,' he goes on to say: 'In the year 1783, I had at the same time, and within 500 yards of each other, three nests of the ringtail and henharrier, upon Newtown-common, about a mile and a half from Carlisle, in some very young plantations of the late Mr. Davison:—the first had seven eggs, the second had six eggs, and the third had four young ones when I found them. A ringtail was upon each nest; but the henharriers did not appear. I visited them

again, a few days after, in the evening: at the nest with young ones, the ringtail was upon the nest, and the henharrier soon after appeared. They both flew about me and darted at my head; and particularly the henharrier came within a few inches of my head, twenty or thirty times, when I was handling the young.—They were both very clamorous and had the same note. On the nest which had seven eggs I found the ringtail, and one young bird was hatched, the henharrier came very soon, and the same scene took place, as I have described, at the other nest. A few nights after, Mr. George Blamire accompanied me. We first went to the nest with young ones: both birds darted at us with great fury; I desired him to shoot the henharrier; he fired at him, wounded him, but he got away and we never saw him more. We then went to the first nest, the ringtail was upon it, and there were now six young ones. The henharrier did not appear. When the young of the third nest were fit for taking, Mr. Blamire shot the ringtail for me. June the 27th, the Rev. Mr. Shaw went with me to the first nest, with six young, they were of considerable size but not feathered: the ringtail was upon the nest, and he shot her immediately: the henharrier did not appear. I left a rat trap near the nest. Next morning, viz. the 28th, I went again and found the trap had not been touched, but there were two birds, viz. a lark and a sparrow, in the nest. While I remained I did not see the henharrier, but as I was certain, from the small birds in the nest, that he had been there since the ringtail was killed: I went again at noon, and found one of the young birds caught by the neck in the trap. The lark and sparrow were gone, and in their place were two yellowhammers. I set the trap and baited it with one of the yellowhammers, and retired into a small plantation of fir trees, about sixty yards from the nest; I there lay concealed, and in less than five minutes, I both heard and saw the henharrier. He soon went to the nest, fed the young ones with what he had brought, then attempted to seize the yellowhammer in the trap, and was taken by the leg. I sent these birds to Mr. Latham.' Dr. Heysham does not furnish any notes on Harriers for 1784, but in June 1785 he 'had three nests upon Newtown-common, and had frequent oppor-

tunities of seeing both birds; which were henharriers and ring-tails; and which were almost all shot when flying about us at the nests. Since that time I have seen several other nests, but never observed either two ringtails or two henharriers at the same nest.' The credit of deciding the identity of the 'ring-tail' has been assigned to Montagu. Not only was he anticipated, however, by Dr. Heysham's personal examination of a number of Hen Harriers of both sexes, *shot* at their nests, but the Doctor also anticipated the Colonel in keeping young Harriers in confinement to observe the stages through which they passed. Two of the young birds taken at Newtown in 1783 lived nearly a year and three-quarters in captivity, and a change was noticed in the colour of the irides of the male. Allusion has hitherto been made to small birds only, as forming the food of this Harrier, but Dr. Heysham also found that it preyed upon and seemed fond of lizards.

The Hen Harrier must have been extremely common at that time, for the doctor tells us that by 1796 he had made 'accurate observations on upwards of twenty nests when filled with young; and invariably found each nest frequented by the henharrier and ringtail.' The Hen Harrier never sat upon the eggs, but will support the young after the Ringtail has been killed. Dr. Heysham himself shot a goodly number of Harriers in the interests of scientific research. The ruthless hand of the game-preserved pressed on the task of extermination. Already the Duke of Buccleuch's gamekeeper had destroyed some hundreds, and had frequently shot both male and female from the same nest. Lord Carlisle's gamekeeper had done the same. Information is unfortunately wanting as to Westmorland after Richardson's time, for both Mr. Hindson and Dr. Gough observe a discreet silence.

We cannot, however, doubt that this Harrier was then generally distributed in Westmorland and North Lancashire. In August 1888 Mr. Richard Mann pointed out to me a long stretch of gorse and whin called 'the hards,' situated between Allonby and Abbey Town. Here his late father, who was born in 1808, assured him that, as a boy, he had found the nest of 'the glead' for several successive years, no doubt prior to 1825.

The term 'glead' has not been restricted to the present species, but the local circumstances show conclusively that a Harrier was the species met with. It has already been remarked that the younger Heysham was in the habit of applying for specimens to persons in the Alston district. William Dodd wrote to him from Alston, on May 22, 1831: 'The person who chiefly supplies me with what I send you, while in search of a Dottrel nest, had the good fortune to meet with the nest of a Hen Harrier with one egg, which he supposes was laid on Friday last. Now if you have a particular desire to have the eggs sent, you must write by return of carrier, but if you want the cock bird, you must wait till they have young, as it is nearly impossible, I understand, to get at him before that time.' On the 30th of May in the same year Dodd writes again: 'With this day's carrier I have sent you the female of the Hen Harrier and the eggs belonging to her, the last of which I suppose would be laid last Wednesday.' But the male Harrier was also secured, as Dodd states in a letter of June 17th: 'He last night brought me the Cock Bird of the Ring Tail, which appeared to me not to have a wrong feather about him. . . It seems there are other gentl. collecting birds and eggs in Northumberland and Durham, who would like to have had both birds and eggs of the inclosed [Harrier], but nothing wd. induce him to part with them, otherwise than to me, though they certainly offered him more than I thought they were worth. . . . P.S.—The inclosed was killed yesterday morning.'

The Hen Harrier continued to breed for a few years at any rate near Alston, because J. Borrow writes from Alston, July 6th, 1835: 'I have seen both the Merlin and Hen harrier, but have not been so fortunate as to fall in with either of their nests as yet.' In the west of Cumberland the Harrier was already scarce. Mr. Hodgson wrote from Corney, Sept. 28, 1844: 'John Borrowdale has obtained a Ring-tail hawk, the female to the Hen Harrier. They were plentiful in this neighbourhood forty years ago [*i.e.* about 1804], my uncle has known different nests in our own woods, yet the last I saw flying in Corney upwards of twenty years ago.' This brings us to a period within the personal recollection of Captain Johnson, who has repeatedly

assured me that, when he was young, both the Hen Harrier and the Marsh Harrier nested in the Bewcastle country. An old keeper named Davidson, who had an intimate knowledge of Harriers, informed Mr. Tremble that he had come across a few Harriers in Bewcastle, say in the 'forties'; but that the best place to find a Harrier's nest was Solway flow. This is fully borne out by the fact that eggs in the possession of Mr. F. Taylor were taken from Solway flow only a few years prior to 1885. The only other eggs of this species still existing, and known to have been taken in the Lakeland district, belong to Mr. Edward Bidwell, and were taken at Newlands. But though 'gone' from our midst as a breeding species, and totally unknown to most local residents, an odd bird still appears occasionally in Lakeland on migration. I examined an adult female poisoned in the north of Westmorland as lately as April 1891. I had previously obtained from James Smith a fine pair of Hen Harriers, killed in the early part of 1886 in the neighbourhood of the English Solway. They had constantly quartered Weddholm and Bowness flows, feeding on Grouse and other birds. They were adult, and had appeared in the same locality in previous winters, but had never remained to breed. Smith noticed the spot in which they roosted in tall heather, and after watching them for several weeks, killed one, and then the other. In December 1888, a blue Hen Harrier made its appearance on Glasson flow. Smith desired to kill it, but spared it at my desire. It remained a few weeks, but then departed, and has never since returned to the same ground. Mr. Murray showed me a fine Hen Harrier in female dress, killed only a few years since, near Carnforth. Another female was trapped in Westward parish in January 1892. A fine old male in full blue dress was killed at Greystoke a few years since.

MONTAGU'S HARRIER.

Circus cineraceus (Mont.).

In Lakeland this species has always been the rarest of the Harriers. Mr. Hodgkinson recollects identifying a bird of this species killed near Carlisle prior to 1840, and his decision was

confirmed by T. C. Heysham. The collection of the late Sir R. C. Musgrave includes an adult female, which his MS. notes state to have been killed at Edenhall. In Westmorland an immature Harrier, which Mr. E. G. Waddilove refers to this species, was killed on a moor near Burgh in September 1890. Mr. Durnford obtained from Williams, the blacksmith at Barrow, a specimen which he ascertained to have been shot on Walney Island in the autumn of 1874.

BUZZARD.

Buteo vulgaris, Leach.

A native of this region even in Pliocene times, the Buzzard long held its own in many of the wilder valleys of Lakeland; at the present time a few pairs rear their young every year among our mountain solitudes. Alas, I have examined recent specimens killed over all the western portion of Lakeland, from Eskdale to the Eden valley, from Skiddaw to Kirkby-Lonsdale. In the days when a primeval forest clothed many of the dales with a dense growth of timber, the Buzzard reared its young in the larger trees, as its habit still is in Spain and Germany, instead of restricting its eyries to situations generally difficult of approach. The harmless character of the Buzzard did not always avail to save it from the persecution of indiscriminating churchwardens. Even in the wild moorland parish of Orton, in Westmorland, the Buzzard was an occasional item of expense to the parishioners. Thus we read in 1639, 'Ihm, for 2 Busard heads—iiijd.' Again, in the accounts for 1650-51, 'Ihm, ffor killing of a Bussard, £00, 00s. 2d.' Even when Clarke wrote, in 1787, the Buzzard's mournful wail must have been a characteristic sound on every fell-side, from Cartmel and the Rusland valley to Borrowdale and even Alston. Some idea of the numbers of Buzzards that formerly haunted Lakeland may be gathered from the fact that, as lately as 1841, a man named Haswell, who was keeper to General Wyndham, destroyed no fewer than fifty within a short time after his becoming keeper.¹

In the year 1827, the storming of a Buzzard's nest, in a posi-

¹ *Carlisle Patriot*, July 30, 1841.

tion previously deemed impregnable, was deemed a feat of no small prowess by the country folk. It was Isaac Colebeck, a Gosforth man, who scaled the Pillar rock that year, and triumphantly destroyed three young Buzzards in their eyrie.¹

But the Buzzard does not usually select such impregnable nesting haunts as the Raven or the Peregrine. There exists in Westmorland a certain low face of rock, overgrown with parsley fern and heather; *this* the Buzzard occasionally uses as a breeding station. It is so easy of access that even a child could reach it without incurring any risks, yet the Buzzard has nested there on two occasions within the last decade.

ROUGH-LEGGED BUZZARD.

Archibuteo lagopus (Gmel.).

Although the large flights of *Buteo lagopus*, which occasionally appear on their autumnal migration in Norfolk and other counties bordering on the German Ocean, are quite unknown within the confines of Lakeland, yet there can be no question that we receive occasional visits from single individuals. I cannot answer for a single specimen having been killed locally during the last decade; nor is this surprising, if we remember that Dr. Heysham himself never met with Cumbrian specimens until towards the close of his long career. Of those which he must have examined (because their capture was recorded by his son), the first was killed at Wreay, near Carlisle, in November 1824, while another was obtained near Bewcastle in February 1829. These were young birds, and so were two others which Blakett Greenwell stuffed in 1839. They were shot near Alston, on the 6th and 26th of November respectively. In recording that a specimen of this bird had been shot near Bishop-Auckland, the late Mr. Hancock took occasion to make the remark, that 'About that time several specimens occurred on both sides of the Tees and in Westmorland.'²

The lightest in colour of such local specimens as I have examined, not very many, was killed on Shap about a dozen

¹ *Carlisle Patriot*, Sept. 7, 1827.

² *Catalogue of the Birds of Northumberland and Durham*, p. 5.

years ago. One of the Edenhall keepers trapped a fine Rough-legged Buzzard in Barrow Wood, in December 1879. The other local specimen, preserved at Edenhall, is a bird which James Plenderleath killed on the Solway Flow a few years earlier. A Silloth gunner killed a Rough-legged Buzzard in rather an unusual way. He was wending his way home by moonlight, when he disturbed a large bird at roost. He shot it as it went away, and, on picking up his prize, found that he had secured a fine Rough-legged Buzzard.

SPOTTED EAGLE.

Aquila clanga, Pall.

The only occurrence of any form of Spotted Eagle that can be cited for Lakeland is that of a bird washed ashore on Walney Island in 1875. It was found by a fisherman named Richardson, who took the dead bird to Williams the blacksmith of Barrow. At his house it was examined by my brother Ibis, Mr. W. A. Durnford, who referred the specimen to *Aquila nœvia*. Accordingly, he recorded it as such in his 'List of the Birds found in the neighbourhood of Walney Island.' Mr. F. S. Mitchell included the specimen in his *Birds of Lancashire*, as he told me afterwards, on the strength both of Mr. Durnford's notice, and of a private communication that passed between them. Mr. Williams, who mounted the bird, has often repeated to me that it became the property of a man named Jackson. This individual kept the bird for a few years, but eventually got into difficulties, and was 'sold up.' I have never been able to ascertain who purchased this Eagle at Jackson's sale, though I advertised for information in a Barrow newspaper. The moral of which is, that all really rare or unique specimens of 'British Birds' should be deposited from the first in some public museum.

GOLDEN EAGLE.

Aquila chrysaëtus (L.).

The earliest local reference to Eagles as yet discovered appears in a description of the 'Manor of Lydel' on our northern border,

written between 1272 and 1307. From this we gather that 'Nichole foreste' was let, 'and they of the forest [the small tenants] must preserve the nests of sparrowhawks and eagles.'¹ This vague allusion states all that can be learnt until the seventeenth century, when materials begin to accumulate; very general in their character, it is true, but abundantly proving that Eagles then bred among the mountains of central and western Lakeland, notably in the region of the precipices (including Martindale, Patterdale, and Grizedale), at the head of Ulleswater Lake. On the 26th of March 1677, we find Thomas Machell writing from Queen's College, Oxford, to his friend Sir D. Fleming of Rydal: 'I am anxious to do what I can towards a history of Cumberland and Westmoreland. I have sent out queries in order to ascertain what families possess ancient evidences, and how things stand at this day in each parish.'² It is no doubt to Machell's efforts to collect materials from all quarters for his history, that we are indebted for the following facts. As regards the question of the birds nesting with us, Machell names two eyries of Eagles. Of Patterdale he says, 'And two miles further s. from hence (Deepdale) in a huge Rock w^{ch} is called Ling bone, and stands west from Hartsop about a mile are large eagles bred.' Of 'Grasmere. Eagles breed in B lea Crag.'³ He describes the capture of a couple of Eagles in the neighbourhood of Patterdale. 'In 1669 one William Thomas of Deepdale, Bridge End, being but a youth of 17 years old, encountered an Eagle on the like occasion, but she so seemeth was not able to flye by reason her feathers were mouted and spent by hatching her young ones, for it was about midsomer tide. He chased her several times round a stone; and at last took her by falling upon her, but not without some loss of blood.

'Mr. Mounsey, to whom she was brought alive, and who kept her a week and kild her afterwards by running a penknife into her heart: and gave the Coat of her to Thomas Smyth, a Newcastle merchant for 3^{li} of Tobacco.' As to the species, he says that it was 'A sort of Eagle called an Iron (or Earne or Erne) here. In Scotland a Naron, being of a Blackish brown colour,'

¹ *Documents relating to Scotland*, vol. ii. p. 64.

² Rydal ms., p. 135.

³ *Ib.* p. 135.

and gives the following dimensions: 'From the point of one wing to the other 6 foot 4 inches. From the end of the Beeke to the point of ye Tale 3 f. 4 in.' A similar capture of an Eagle occurred in the same country ten years later: 'Grisedale. About the year 1679 one Christopher Daws, 24 years of age, spying an Eagle in the bottom of this Dale, wh. was feeding on a sheep; and either for want of air to waft her, or by haueing fill'd her belly too full was not able to rise: he struck freely at her wth his *fell staff* and broake her wing; upon wh. she betook herself for shelter to a great stone, and thence made her salleys as she saw occasion, wounding him in the leggs wth her Tallons, and beating him briskely with her wings. But at last when he had no other shift, he fell down upon her wth his whol body; and took her alive.' No further evidence is forthcoming until Pennant's visit to the Lakes, when he wrote of the mountains at the head of Windermere: 'Among the birds which possess this exalted tract, the eagles are the first in rank: *they breed in many places.*¹ If one is killed, the other gets a new mate, and retains its ancient aery. Those who take their nests find in them great numbers of moor game:² they are besides very pernicious to the heronries: it is remarked, in the laying season of the herons, when the eagles terrify them from their nests, that crows, watching the opportunity, will steal away their eggs.'³ Nicolson and Burn recur to the eyrie in Patterdale: 'In the head of the dale, is a rocky mountain called Eagles Crag; and eagles to this day [1777] frequent and breed in the mountains thereabouts.' The Rev. W. Richardson tells us that 'A pair of the *Golden Eagles* had an aerie in Martindale two successive years; the first year the female was shot, and the male, after an absence of about three weeks, returned with another female. The next year, 1789, the male was killed, after which the female disappeared.'

When visiting Martindale, October 28, 1891, I walked to the

¹ The italics are mine.

² The fact that these Eagles fed on Grouse points almost certainly to the Golden Eagle, which would be certain to prey largely on Red Grouse in the absence of blue hares.

³ *History and Antiquities of the Counties of Cumberland and Westmorland*, vol. i. p. 410.

head of Bannerdale, and Mr. Jackson, junior, pointed out the former eyrie of a pair of Eagles, situated in the breast of the precipice known as Buck Crag. A few minutes later we ascended to the ridge of the 'Nab,' and when Fairfield and Helvellyn, Striding Edge and Matterdale Common stood forth in fine succession against the sky-line, St. John's Vale lying to the north, I thought involuntarily of the lordly birds that a hundred years earlier swept magnificently over the crests of the mountains, filling the shepherds with apprehension for the safety of newly dropped lambs. Subsequently I called on Mr. Jackson, senior, who for many years acted as deer-stalker to the Hasell family. Mr. Jackson is in his 86th year, and though in full possession of all his faculties, has some little difficulty in recognising the questions of a stranger. I therefore spoke to him through his son, and reproduce the dialogue which followed, *ipsissima verba* : 'Q. Do you mind of any Eagles?—A. There *was* Eagles onceover. They had a *nest* at Buck Crag. Q. I suppose somebody *shot* one? —A. Old Edward Sisson shot it. Q. Did you see him shoot? —A. No. It was afore my time. It was when my grandfather lived at Dale Head—maybe a hundred years sin'. Q. Did they take the young birds?—A. They hadn't brought out. I *believe* it was eggs.' He added in explanation that after Edward Sisson had shot one of the old birds, another man went over the rocks with a rope to take the young, but the young had not hatched out. He further volunteered, 'I have heard them say they went across into Gowbarrow and used to worry fawns,' a probable enough performance on the part of the Golden Eagle, though scarcely consistent with what we know of the habits of the Sea Eagle. He once saw an eagle *himself* : 'I yonce saw one that old Glossop shot at. It passed me at Lyulph's Tower. Tommy Yarker Lowther, keeper, followed it a good bit, but what became of it nobody knew.' I called the following day on another aged yet vigorous Dalesman, Mr. Greener, who is in his 85th year. He told me that he was well acquainted with Edward Sisson, who lived on his own property at Swarthbeck [nearer Pooley Bridge], and was 'a great shooter.' Mr. Greener himself was born in 1807. It is fair to assume, therefore, that his intimacy as a young man with Edward Sisson carries us down to 1830.

Supposing Edward Sisson to be then about seventy (as he recollected him as a vigorous sportsman, it is not likely that he was any more), it appears highly probable that Edward Sisson was the man who shot one of the identical Eagles mentioned by his contemporary Richardson. To return to Mr. Richardson, he further assures us that a bird of this species was shot 'with duck shot, only one of which went through his head; he measured eight feet three inches between the tips of the wings. The following year he shot another also on the wing, considerably less.' Clarke, a contemporary, states independently that the largest he ever knew to be shot measured 6 feet 8 inches between the tips of the extended wings; adding that he had seen Eagles at every season of the year, 'though they are seldomer seen in Summer than in Winter, when the snow forces them down to the valleys to seek provisions.' Mrs. Radcliffe writes that in Patterdale she heard of Eagles in 1794: 'We were told that the eagles had forsaken their aeries in this neighbourhood [Patterdale] and in Borrowdale, and are fled to the Isle of Man; but one had been in Patterdale the day before, which, not being at its full growth, could not have arrived from a great distance.'¹ Richardson definitely expresses this opinion, 'that most, if not all the eagles amongst these hills, are of the *Falco Chrysaetus*, or Golden Eagle species. Mr. Gray says, the Borrowdale Eagles are the *Erne* (*Falco Albiulla*). One has this year (1793) been caught alive, and is now in the possession of Mr. Thomas Hutton of Keswick, which is unquestionably the *Falco Chrysaetos*, or Golden Eagle.'² This was no doubt the bird which the author of the *Observations chiefly Lithological*, found stuffed in Hutton's museum on his visit to Keswick in 1803: 'This *Falco Chrysaetos* was a very young eagle, which Hutton had bred; he said he used to feed it with rats, cats, etc. The bird killed immediately, and then sucked their blood; this was the only drink he would ever take. The eagles have now [1803] entirely left this country; whether they are gone to Scotland, Ireland, Snowdon, or a longer journey, I have no opportunity of ascertaining.' At the sale of Crosthwaite's museum at Keswick, there was exposed among miscellaneous articles, 'Lot 258, upper bill and talons of a very large

¹ *Tour in 1794*, p. 423.

² *History of Cumberland*, vol. i. p. 450.

eagle which was bred at Buttermere, and died at Greystoke Castle.' This is quite as likely to have been a Sea Eagle as a Golden Eagle, but the bill cannot be found by its present owner, Mr. J. Richmond. We cannot carry the residence of the Golden Eagle to a later date than the last years of the eighteenth century. *It is highly probable that, as long as the species bred in Southern Scotland, the birds might from time to time cross the Solway Firth, to carry off lambs from the Cumbrian farmers.* In the spring of 1775, an Eagle, believed to have been a Golden Eagle, had carried off a number of Lambs, but was eventually shot in King Meadow, Carlisle.

Mr. R. Service kindly writes to me :—

'The Golden Eagle—so far as my information goes—bred in 1833 on Gameshope, a farm contiguous to Loch Skene, in Dfs.shire.

'In Kirk^{cbt}shire the last nests were towards the end of the '50s (I cannot be more precise). The Eagle presently kept at Cairnsmore House was taken at the clints of Dromore in 1850, and is lively as ever. An Eagle taken at the end of last century died at Cumloden Lodge in 1855.

'Definite information about the white-tailed Eagle is wanting, though doubtless this was the species which bred on Burrow Head and the Mull. Eyries are pointed out on islets in Lochs such as Grannoch and Skerrow in the Stewartry and Skene in Dfs.hire; but this eagle is so much mixed up with the Osprey that it is perhaps impossible now to unravel the matter.

'On Loch Macaterick, on the borders of Galloway and Ayrshire, eaglets were taken in 1812 by a young fellow who swam the loch, and this man was still alive in Dalmellington a couple of years ago, and may be so yet.'

In 1834, James Harrison, a keeper, wrote to Mr. T. C. Heysham from Hensel, Kirkcudbright, on the 17th of May :—

'I have been two journeys of 10 miles after the falcon and Eagle, the Eagles I saw in the mountains, they have left the place where they had^lbred for these last 30 years until these last two years. They have gone about 9 or 10 miles further into one Broughton Murrays of the Kelleys estate.' The same

man wrote again on the 26th of May: 'I am going a day's journey into the Wilderness in pursute of the Eagle.'

A Newcastle paper of November 1788 states: 'Last week a gentleman fowling on a mountain near Skiddaw perceived a very large brown eagle dart from a precipice and attack a well-grown lamb of this season, which he seized in his talons, and was just going to mount, when the gentleman fired and wounded him in the pinion of the left wing. He then approached the magnanimous bird, who held his prey, and, with a kind of menacing look, stared in his face for some time. The sportsman, willing to rescue the poor lamb, and equally loth to destroy so noble a creature, pulled a cord from his pocket, which he threw with some danger over the head of the Eagle;' and so secured the bird.

The local newspapers have recorded a few other Eagles from time to time, as, for example, a bird seen by Mr. Dunn of Leeds, and Wright, a Keswick guide, on Skiddaw, in May 1844.¹ Another was seen at Esthwaite in March 1845.² It is difficult to credit a statement independently furnished by Dickinson, that about this very time the late Fletcher Greenip of Portinscale saw three eagles in company, near the head of Bassenthwaite lake, during frost. The statement that Joseph Summers of Castlerigg saw seven eagles in company about the same period is an obvious invention. More weight attaches, no doubt, to the experience of Thompson, who wrote: 'In the more recent books on British Ornithology, there is not any notice of eyries, either of the golden or sea eagle, in England at the present time; but from my having seen two birds of one or other of these species (though not sufficiently near to be specifically determined), on the 13th of July 1835, about the English lakes, they most probably breed in that quarter. One appeared

¹ *Carlisle Journal*, May 11, 1844. Mr. T. Lindsay of Eskdale retains a vivid recollection of a solitary Eagle which frequented Scawfell for a period of about two years, 1844-46. It paid almost daily visits to Drigg Common in search of rabbits, and could often be seen crossing Muncaster Fell on the return journey to Scawfell. This was the only Eagle that Lindsay ever saw during a long lifetime spent entirely among our mountains.

² *Carlisle Patriot*, March 14, 1845.

near the eastern extremity of the vale of Newlands, not far from Keswick, and the other at Crummock Water. . . . When visiting all the lakes of Cumberland, Westmorland, and Lancashire, except Loweswater, Ennerdale, and Wastwater, in the month of July 1835, I saw Eagles on the one day only.¹ In January 1890 I made the acquaintance of an aged native of Keswick, Mr. Hodgson, then in his 96th year. This old gentleman assured me that, even when he was grown up, a pair of Eagles frequented Helvellyn, and he had often seen them, the only Eagles he ever saw flying wild, though he had seen caged Eagles, brought no doubt from Scotland. I mentioned the matter to the Rev. H. D. Rawnsley, who afterwards called on him and found that he remembered that a couple of Eagles were flying about Helvellyn for about three months, and the year, as nearly as Mr. Rawnsley could make it out, was 1836. This would explain the Eagles which Thompson saw, because there is not much difference between 1836 and 1835.

In a draught of July 11, 1843, T. C. Heysham inquired of Mr. John Dodgson of Roantrees what he knew about Eagles, remarking that a friend, who had passed Christenbury Craigs in Bewcastle *en route* for Scotland, had been told that a pair of Eagles bred there in or about the year 1824; that they reared their young, and that one of the old birds was captured. He was informed likewise that the old birds had committed some havoc among the lambs. Dodgson replied, that at the time indicated, in the month of either February or March, an Eagle had made its appearance in the district, and continued to haunt Christenbury Craigs and other mountains in the vicinity for several weeks, when it departed, having successfully eluded all attempts at its destruction. 'There was not a pair, and of course there was no nest or young.' Between 1833 and 1835, another Eagle visited the mountains near Christenbury Craigs, and was shot a few miles north of the Craigs by the keeper of the Duke of Northumberland, for whom it was preserved. The bird was 'one of the large eagles common in Sutherland and other northern counties in Scotland.' It was of 'a brownish colour.'

¹ *Natural History of Ireland*, vol. i. p. 29.

SEA EAGLE.

Haliaëtus albicilla (L).

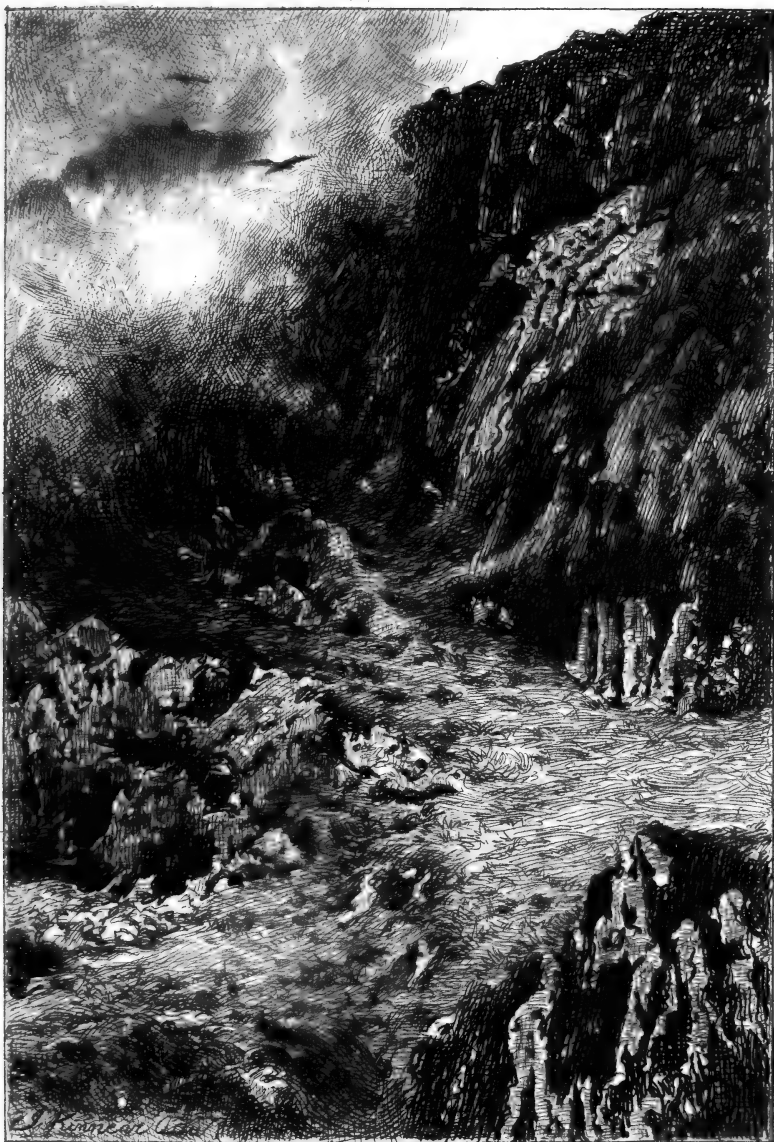
There can be no reasonable doubt that this Eagle tenanted the precipices of our mountains for many centuries, but the earliest trustworthy report of any eyrie occupied by this bird is supplied by John Aubrey. This authority sent his information to John Ray in a letter, dated London, December 15, 1692: 'Mr. Gibson of Queens-College, Oxon, of *Westmorland*, saith that in *Westmorland*, Eagles do breed in *Willow-Crag* in the Parish of *Bampton*.'

Clarke, who wrote in 1787, alludes to the same eyrie, saying, 'At the robbing of an eagle's nest at *Wallow Crag* near *Haws-water* in *Westmorland*, there were found 35 fish, besides 7 lambs, and other provisions for the young ones.'² He lays special stress on the fact that 'some of the eagle species are fishers, indeed most of them will occasionally catch fish; and, strange to tell! I have seen them fall quick upon the Lake and bring out a fish.'

Allusion has been made already to the fact that the Eagles which bred in *Patterdale* and *Martindale* were Golden Eagles, and that the Golden Eagles sometimes nested near *Keswick*. It must be considered extremely doubtful whether more than one pair of Sea Eagles nested near *Keswick* in the last century. Whatever may have been the case earlier, I think we must infer from the evidence at our disposal that only one pair of Sea Eagles nested annually in *Borrowdale* or one of the other eyries which the birds sometimes used. The *Crosthwaite* men seem to have harried the *Borrowdale* eyrie whenever they had the opportunity, but there is no reason to suppose that they spared other eyries, if such were tenanted in their large parish. But the reader had best form his own conclusions from the data which the Rev. H. D. Rawnsley has obligingly permitted me to copy out of his parish book. It will be observed that these entries run from 1713 to 1765, after which I could find no further

¹ Ray's *Correspondence*, p. 269. *Wallow Crag* is really in the Parish of *Shap*.

² *Survey of the Lakes*, Appendix.



EYRIE OF THE SEA EAGLE AT BUCK CRAG.

allusion to Eagles. The following entries occur among the disbursements of the Crosthwaite churchwardens:—

‘[1713.]

To John Jackson for Killing an Old Eagle, .	£0	1	0
To Widdow Harris' Sons for 3 young ravens,	0	1	0
To Edward Birket for a Young Eagle, . . .	0	0	6

‘[1719.]

To Miles Wilson for an Old Eagle, . . .	0	1	0
To John Jackson of Arnboth for an Old Eagle,	0	1	0

‘[1731.]

To Tho. Raven for 2 Young Eagles, . . .	0	1	0
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The *next* entry is—

‘To Tho. Birkett for 1 Young Eagle, . . .	0	0	6
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‘[1736.]

To John Youdall, Carpenter, for 1 old Fox & 1 Young Eagle,	0	3	10
---	---	---	----

‘[1741.]

To Jonathan Braithwaite for a young Eagle,	0	0	6
--	---	---	---

‘[1743.]

To John Harris for 1 old Eagle,	0	1	0
---	---	---	---

‘[1744.]

To John Birkett for 1 old Eagle, 2 old Ravens, and 1 Young Raven,	0	1	10
--	---	---	----

‘[1745.]

To the Same [Jos. Harris] for 1 old Fox and 1 old Eagle,	0	4	4
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‘[1747.]

To Hugh Workman for 1 young Eagle, . . .	0	1	0
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‘[1749.]

James Bowes' Man for one Old Eagle, . . .	0	1	0
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‘[1750.]

To James Bows for 2 young Eagles, . . .	0	1	0
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‘[1752.]

Pd. for 1 new Spade, 3s., & to William Wane for 1 old Eagle, 2s.,	0	5	0
To Isaac Gateskel for 2 Young Eagles, . . .	0	2	0

' [1755.]				
To Isaac Gateskel for a Young Eagle, . . .	0	0	6	'
' [1757.]				
For Foxes, 17s. 8d., Ravens, 2s. 4d. . . .	1	0	0	
More Foxes, 6s. 8d., One Eagle, 1s., 2 old Ravens, 8d., Bucket, 18d. (?) 1 Fox more, 3s. 4d.,	0	13	2	'
' [1759.]				
For Foxes, 15s., for Ravens, 3s., for Eagles, 4s.	1	2	0	'
' [1760.]				
To ale & victuals y ^e 4th of November, an Eagle, 1s.,	0	13	6	'
' [1762.]				
Court Fees and Expences,	1	16	2	
Foxes & Ravens, 0, 2s. 6d.,	1	18	8	'
Next line comes—				
' 2 Eagles, 1s., one Fox, 3s. 4d.,	0	4	4	'
' [1763.]				
Foxes & Eagles, £1, 6s. 6d., Court fees & Expences, £1, 19s.,	3	5	6	'
' [1765.]				
To Sundry persons for Foxes, Eagles, & Ravens,	1	4	8	'

Only four years after the last charge of Eagles in the Cros-thwaite accounts, the poet Gray enters this passage in his journal [on October 3d, 1769]: 'For me I went no further than the farmer's (better than four miles from Keswick) at Grange; his mother and he brought us butter that Siserah would have jumped at. Our farmer was himself the man that last year plundered the eagle's eyrie; all the dale are up in arms on such an occasion, for they lose abundance of lambs yearly, not to mention hares, partridges, grouse, etc. He was let down from the cliff in ropes to the shelf of the rock on which the nest was built, the people above shouting and hollowing to fright the old birds, which flew screaming round, but did not dare to attack him. He brought off the Eaglet (for there is rarely more than one) and an addle egg. The nest was roundish, and more than

a yard over, made of twigs twisted together. Seldom a year passes but they take the brood or eggs, and sometimes they shoot one, sometimes the other parent; but the survivor has always found a mate (probably in Ireland), and they breed near the old place. By his description I learn that this species is the *Erne*, the Vulture *Albicilla* of Linnæus, in his last edition (but in yours *Falco albacilla*), so consult him and Pennant about it.¹

Gilpin adds his personal testimony to the harrying of eyries about 1773, though his work did not appear until 1786: 'We left the Derwent in it's declivous course between two mountains. One of them, under whose shadow the torrent pours, is called Eagle's-cragg, as it's tremendous rocks are the chief habitation of these birds; and seem to be considered by them as a sort of castle, which from time immemorial they have possessed. It is a common species of traffic in this country to supply the curious with young eagles; in the taking of which the inhabitants are very expert. They observe the nests from the bottom; and judging of the age of the young birds, they catch the opportunity when the old eagles are abroad, and let themselves down by ropes from the summits of the cliffs. We saw one which had just been taken. It was only six weeks old; and was nearly of the size of a turkey-hen. It seemed to have acquired already a full share of ferocity; and screamed violently, if we offered to touch it.'²

Hutchinson refers to Eagles at Derwentwater in the following passage: 'In the cliffs in this part of the lake (near Bank Park) eagles built their nests, far removed from gunshot, and undisturbed by men; for no adventurous foot ever dared assail their lofty habitation. In the sight of the cottager, hither they bring the spoils of the fold, or the field, to feed their young, superior to the wrath of the injured.'³ Brown follows in the same strain: 'On the opposite shore you will find rocks and

¹ *Works of Thomas Gray*, vol. ii. p. 265.

² *Lakes*, vol. i. pp. 203, 204.

³ *An Excursion to the Lakes in Westmorland and Cumberland, in 1773 and 1774*, p. 149.

cliffs of stupendous height.' Again : 'On these dreadful heights the eagles build their nests.'

Mr. Clifton Ward's paper on Jonathan Otley furnishes a note about the Borrowdale Eagles, written, in 1852, by Mr. J. F. Miller of Whitehaven : 'From J. Dixon I learn that the eagles' nests in Eagle Crag were robbed by W. Walker and W. Youdale in 1772 or 3, and after that they got out a brood in Wything's Crag, above Stonethwaite, which was the last time they were known to build, probably about 1784, as stated in your account.'¹ Mr. Ralph Douglas told the late Mr. Dickinson that he went to live at Thornthwaite in 1783, at fifteen years of age. He remembered seeing Eagles frequently, and almost daily in the spring, sailing majestically overhead, and occasionally sweeping down to the ground, as if seizing prey, and then flying off with it towards Borrowdale, where they usually had nests. At that time a long and strong rope was kept in Borrowdale, by subscription, for the purpose of letting down men into the rocks to take the nests or young of the Eagles. Very many of the inhabitants used to assemble to hold the rope when a nest-robbing was projected. On one occasion, when the man was drawn up, it was with fear and trembling, till the man was safely landed with the prize of young birds, for they discovered that two of the three strands of the rope were chafed quite through by the sharp edges of the rocks. The rope was available for Buttermere, Langdale, Eskdale, and other dales, but kept in Borrowdale, and was in requisition there in nearly every year, and occasionally in other vales ; and the young Eagles were sold for high prices.² An unsigned statement, written prior to 1803, corroborates Dickinson : 'Among the most gigantic of the fells that form the great out-line of this astonishing prospect are Eagle-crag, Glaramara, Bull-crag, and Serjeant-crag. The first is a tremendous rock at the head of Borrowdale to the east, where the eagles have commonly made their habitation, and their nests. The young eagles are occasionally caught by the adventurous inhabitants of the vale, who, when standing underneath, observe the place where the nest is seated, and afterwards,

¹ *Trans. Cumberland and Westmorland Assoc.*, No. ii. p. 140.

² *Cumbriana*, p. 168.

from the summit of some cliff, let down by ropes one of the most hardy of their companions, to secure the nest while the old eagles are abroad.¹

Writing in 1819, Green comments, 'Eagle Crag is a grand towering rock, or collection of perpendicular rocks connected by horizontal spaces of variously covered vegetation. Its form is fine, and it is a majestic background to many pleasing foregrounds. On that part of Eagle crag which is opposite Greenup, the eagles occasionally built their nests. There [*sic*] birds were so destructive to the lambs, and consequently injurious to the interests of the shepherds, that their extermination became absolutely necessary; but their breeding places being inaccessible, by footsteps, a dangerous experiment was ventured upon. A man, at the hazard of his life, was lowered by a rope down the face of the rock, about sixty yards. A piked staff, such as is used by the shepherds when they travel the mountains, was the weapon with which this man defended himself against the attack of the parent bird while he was robbing their nests of the eggs or eaglets. If birds, their possession was to be his remuneration; but if eggs, every neighbouring shepherd gave five shillings. The nests of these birds were formed of the tender branches of trees, and lined with a sort of grass growing upon the bordering rocks. The number of young taken at one brood is not remembered to have exceeded two; and when not taken, and capable of flying, they were conducted by the old birds to a distant country and not seen afterwards. On the eagles being so frequently robbed of their young, in Greenup, they removed to the opposite side of the crag. At this place, they built two years, but left it for Raven Crag, within the Coom, where, after staying one year only, they returned to their ancient seat in Eagle Crag, where they built annually during the remainder of their stay in Borrowdale. On the loss of its mate, the remaining eagle left the country, but came back the following spring with another. His new consort was not only of a different species, but considerably smaller than his former companion. This pair built during fourteen years in

¹ *The Beauties of England and Wales*, vol. iii. p. 64. The writer appears to have been West.

Borrowdale; but thirty four-years ago [say, 1785] they finally abandoned it for Eskdale. At the last-mentioned place they were again disturbed, and the larger bird being afterwards shot, the other fled and never returned.'¹ The late Mr. Jonathan Otley used to say that Eagles bred in Cumberland up to 1791. The incident of the birds establishing themselves in Eskdale is separately reported by Housman, who states in a note, published in 1794, 'On the summits of these mountains [Wasdale, Netherwasdale and Eskdale], are many wild cats, foxes, and martins; some eagles. . . . An eagle's nest was taken about three years ago, and the eaglets were sent to Muncaster House.'² Green alludes also to the Eagles killing water-fowl on the Derwent in winter, to an eagle carrying a shepherd's dog into the air, and another Eagle wounded by that dog's owner near Langthwaite. Though Dr. Heysham must have been in communication with many persons who had seen the Eagles of the Lake district, he contents himself with recording that the '*Cinereous* or white-tailed Eagle, *Vultur albiulla*,' bred 'among the rocks, in the neighbourhood of Keswick, almost every year, and feeds, chiefly, upon land animals, but sometimes on fish. When taken young, and tamed, the tail does not become white till it is several years old. Dr. Law, the present bishop of Elphin, when he resided in Carlisle, received a young one from Borrowdale, upwards of twenty years ago. The tail did not become white till it was six years old. When his lordship left Carlisle, he presented it to Dr. Graham, of Clargill. It died in the year 1793, aged nineteen years.' The bird was therefore taken in 1774. If this note of the doctor be held to be disappointing, considering the ample opportunities he enjoyed for obtaining exact information, it must be confessed that T. C. Heysham treats the subject even more curtly than his father. At least, the only allusion that has come to light in his writings exists in a letter written to Henry Doubleday in 1833. He says, 'The Sea Eagle which used formerly to breed in the vicinity of the Cumberland Lakes has, I have every reason to believe, been extirpated for very many years.' Some twenty years later

¹ *Guide to the Lakes*, vol. ii. pp. 142, 143.

² Hutchinson, *History of Cumberland*, p. 581.

Miss Martineau wrote: 'We are unable to ascertain positively, amidst conflicting testimony, whether any eagles at all remain in the region. It appears that one has certainly been seen within ten years; and three gentlemen, two of whom are travelled men and not likely to be mistaken in such a matter, declare, that four years ago, they saw one sweep down from Scaudale Fell into Kirkstone Pass, and rest on a crag in the vale, some way above Brothers' Water. There is, however, a preponderance of disbelief of there being now any nest and settlement of eagles among the mountains of Westmoreland and Cumberland.'¹ Mr. Brown of Carlisle informed me in 1890, when in his seventy-first year, that as a boy he often heard the stories current on the country side as to Eagles carrying off lambs from the farmers in West Cumberland. I can only reaffirm my belief that such Eagles as visited the mountains of the Lake district during the first half of the present century had their eyries in Dumfriesshire and Kirkcudbright. Mr. J. Fisher Crosthwaite informs me that 'there was a very fine living Eagle belonging to the proprietors of Crosthwaite's Museum which was caught at Maryport, and was supposed to have come over from Scotland. The bird died of the moult. It was sent to a celebrated bird-stuffer, and he never returned it. The late Mr. Joseph Pockington, who built Barrow House, near Keswick, saw it in the collection of the person to whom it was sent. He identified it, and claimed it for the Crosthwaite's Museum, but it was never returned.'

Although the available information regarding eyries of Eagles refers to the central portion of the lake mountains, it is certain that stragglers have occasionally made their appearance in outlying districts.

The map of Westmorland by Robt. Morden, included in Camden's *Britannia*, second edition, vol. ii., 1722, prints an 'Eagle Scar' behind Dufton and Murton Pikes, near Appleby.

A keeper named Gill winged a young Sea Eagle near Alston in 1834. John Borrow reported to T. C. Heysham in April 1844: 'An eagle was seen at Withamston about 2 months since, near the place where Mr. Gill killed one a few years

¹ *English Lakes*, pp. 153-155.

since.' A shepherd captured another Sea Eagle on the top of Black Combe in 1838, and this is believed to have been the last Eagle captured on any of our mountains.

GOS HAWK.

Astur palumbarius (L.).

If Mr. Joseph Bain (the learned editor of the *Documents relating to Scotland*, published by the London Record Office) can be relied upon to distinguish correctly the species of hawks mentioned in old grants, we must infer that the Goshawk formerly nested in Lakeland. Not only is the species mentioned, FIDE Mr. Bain, in a grant which Aliz de Rumeli gave to the Abbot and monks of St. Mary in Furness, but an actual eyrie of the Goshawk is mentioned by the same authority. In the settlement of a lawsuit in 1256, before the five justices errant, Alan de Moleton commuted, among other privileges which he exchanged for an annual rent, his right to the 'eyry of goshawks' in 'Thomas' Wood in Bastonswayt.'¹

The only specimen of the Goshawk known to have been obtained in Cumberland in modern times is an immature bird, preserved at Edenhall. Mr. Hope, senr., who stuffed it, tells me that it was shot when striking a Wood Pigeon. It is said that a Goshawk was shot in a rookery at High House, Stainton, Kendal, in 1849.'² But whether the bird was rightly dubbed a 'Goshawk' is not known.

SPARROW HAWK.

Accipiter nisus (L.).

Common as this hawk must always have been in the Lakeland forests, and difficult as it is to train, early falconers appear to have held it in some estimation. For example, an Inquisition, held March 22d, 1270, regarding the lands of Hellwysa, widow of Richard de Vermine, decided that Gilbert de Fraunceys held of Hellwysa the Manor of Routhelclif, and paid yearly 2s. or one Sparrowhawk. As late as the fourth year of Queen Elizabeth,

¹ *Documents relating to Scotland*, vol. i. p. 398.

² *Carlisle Patriot*, March 10, 1849.

a Kendal jury found that George Middleton, Esquire, owed for tenements holden by him, a spar-hawk or 12d. Similar instances might be multiplied. The Sparrowhawk *maintains* its footing in our preserves. No fewer than eight nests of the Sparrowhawk were robbed of their eggs in the Carlisle district in 1891. Mr. E. W. Parker of Skirwith informs me that on a recent occasion his keeper shot a female Sparrowhawk off her nest of six eggs. He took one egg and left five. Three weeks later the same keeper shot another female Sparrowhawk off the same nest, which contained ten eggs,—the second hen having added five eggs to the five which she found in the nest.

The male Sparrowhawk, owing to its light weight, feeds chiefly on such hedgerow species as the Blackbird. In the autumn of 1891, Dr. Gibson was shooting on a Westmorland Moor, when he happened to wing a Grouse, which proved to be a 'runner.' Down swooped a cock Sparrowhawk, killed his quarry, and had already plucked some feathers off the back, when Dr. Gibson reloaded and shot him.

KITE.

Milvus iclinus, Savigny.

The only evidence that the Kite ever bred in the great woods of the Eden valley, or elsewhere in the *eastern* part of our faunal area, is supplied by Dr. Heysham, who says expressly that, in his time, it bred in the woods near Armathwaite, and was known in Cumberland as the *glead*. This refers to 1796.

Among our western mountains it undoubtedly held out until the early part of the present century. Robinson, as early as 1709, alludes incidentally to its presence. Ulleswater was certainly one of its strongholds, but it bred near Derwentwater and near Windermere. Clarke, whose *Survey of the Lakes* appeared in 1787, tells us that 'the Kite (or *glead*) is a native of this country and builds in trees, and, like both the aforementioned, has not more than two eggs at a time: they provide for their young, fish, flesh of any kind they can get, frogspawn, snails, etc. They are a dull, heavy, inactive bird, with longer wings and tail than the Buzzard.'¹

¹ *Survey of the Lakes*, p. 190.

About the same time that Clarke made his observations, the Kite nested in the neighbourhood of Windermere. Wordsworth, in a juvenile poem, 'An Evening Walk' (the scene of which is laid near Rydal), alludes to the presence of the 'silver'd kite,'—an expression suggested, no doubt, by the grey crown of an old bird. The late Mr. William Pearson of Crosthwaite stated in 1839, that when Isaac Walker lived at Sawrey, about 1790, a pair or two of Kites built their nests among a number of tall trees, near the Ferry Inn, on the west side of Windermere. Some of these birds were destroyed by idle fellows, who shot them at their nests. Isaac Walker reared a young Kite, taken out of a nest which had contained two young ones; it became very tame, and would sit on its owner's hand.¹

The late Captain W. Kinsey Dover made close inquiries about the former presence of Kites near Keswick. He learnt that a Mr. Gaskett and one John Graves harried a Kite's nest, built in some ivy on the west side of Castle Head, in 1809; up to which date only Mr. Pearson observed the Kite in Crosthwaite parish. The late Mr. W. Dickinson wrote that, 'since 1820 I have not seen a glead. Before then they were not plentiful, but not many days would pass without my seeing one, and seldom more, at a time.' Mr. Sawyer of Threlkeld showed me a fine Kite, which he bought for £2 at a sale. This bird had been shot by John Pearson at Portinscale near Keswick, in 1840, and is perhaps the last of the indigenous race of Kites that inhabited the Lake district from prehistoric times. Joseph Woof, a native of Watermillock, a yeoman, at whose house Mr. W. Hodgson lodged from 1840 to 1851, told the latter that the Glede or 'swallow-tailed kite' had, within his recollection, nested regularly at Priest's Crag, and occasionally at Birch Crag, near Gowbarrow.

Mr. Woof died in 1851, aged 88 years, so that his recollection of the Kite as a boy might date back (and no doubt did) to the time when Clarke wrote, and when Isaac Walker took the young Kite from the nest beside Windermere. Mr. Hodgson met other natives of Watermillock who well remembered the Kite nesting as described by Mr. Woof, and considers that the

¹ *Letters, Papers, and Journals of William Pearson*, p. 58.

bird had only recently become extinct *when* he went to live at Watermillock in 1840. Mr. J. W. Harris, whose experience carries us back as far at any rate as the 'thirties,' assures me that he perfectly remembers seeing Kites, which came down from the direction of Skiddaw to feed upon offal thrown out from the tan yards at Cockermouth. He was young at the time, but describes with wonderful accuracy (to one who has studied Kites with some care, though not in Britain) the fine flight of the species, the outspread tail, and general appearance of this Kite as viewed upon the wing. It is to be regretted that Richardson, who knew the Kite in Ulleswater at the time that it bred in Windermere, contented himself with remarking that it was a resident species. Dr. Heysham apparently took his cue from Richardson, whose paper he had seen, when he wrote that the Kite bred in *the woods near Ullswater*. With regard to the doctor's statement, as to the Kite breeding at Armathwaite in his time, we have no difficulty in accepting his word that it was so. He does not suggest that he had seen a nest himself, though possibly he had; but he was well acquainted with its eggs.

In his son's day the Kite had probably departed from the great woods which clothe the rocky banks of the Eden, near Armathwaite; because T. C. Heysham wrote to Doubleday, on January 8th, 1833, a letter, in which the accompanying passage occurs: 'As to the Kite, *I have never seen a recent specimen*, notwithstanding I am very credibly informed that one was killed a short distance from Carlisle five or six years ago.' At no subsequent period does the younger Heysham appear to have come across a *local* specimen of the Kite; unless, indeed, he may have seen the bird, recorded by Thomas Armstrong, in the seventh volume of the *Naturalist*, as having been killed near Carlisle, on the 13th of November 1856, a few months before his death. But no doubt he must have known many persons who knew the bird, since I have myself heard the species discussed by other eye-witnesses to its former presence besides Mr. Harris. In January 1890, Mr. Hodgson of Keswick, being then in his 96th year, told me that he well remembered the Kite as breeding in the district. When he was a young man you could see a pair (and no more) any day in the neighbourhood of Keswick.

The author of the *Observations, chiefly lithological*, tells us that he found an example of '*Falco Milvus*' in Hutton's collection of stuffed birds at Keswick in 1803. It is not known that any Kite has been killed in Lakeland during the last five-and-thirty years. Stragglers *do* sometimes revisit the hills around which their ancestors circled, in the good old days, before Wild Cats and Eagles had gone the way of all flesh.

The Rev. H. H. Slater saw two Kites in Patterdale in the autumn of 1880. A single bird was seen near Lorton in 1873, and another near Renwick in 1881.

The late James Fell used to say that the only Kite he ever saw alive was a bird which he saw flying over Carlisle. Curiously enough I had myself a similar experience. On the 11th of September 1891, my eye was caught by a distant speck in the sky which I knew from experience must be a large bird. Gradually it drew nearer and nearer, flying out of the north-east, until at last it descended, gliding down from an immense height to survey the streets, and affording to my binoculars an excellent view of as fine a Kite as any that I have seen on the Continent. But apparently it spied nothing to tempt it to delay its journey. In a few seconds it rose again to an immense height, at which it appeared to continue its journey in the direction of the Lake hills.

HONEY BUZZARD.

Pernis apivorus (L.).

A party of sportsmen were shooting a moor near Tebay in the autumn of 1879, when a large Hawk came flying overhead and dropped to one of the guns. It was taken to Mr. Clements, at whose house I recognised it as a fine Honey Buzzard, in a brown phase of plumage. This bird is still (1891) in excellent condition, and is interesting as the only example known to have been obtained *in Westmorland* during the present century. Dr. Heysham was informed that it made its nest in high trees, and bred in the woods at Lowther. This latter conjecture has never been confirmed; nor does it appear that the doctor ever met with any specimen, except a single female, shot near Carlisle in

June 1782, and still preserved in the cabinet of his son in 1832, as T. C. Heysham expressly records. In Cumberland some half-a-dozen specimens have been obtained, chiefly in the north and west of the country; but, with one exception, in autumn only. The exception was a female Honey Buzzard, which Greenwell received in June 1857 from the neighbourhood of Alston.

T. Armstrong records that a Honey Buzzard, shot near Penrith in 1855, proved on dissection to have its stomach filled with wasp grubs. Sam Watson informed me that a bird which he received for preservation, from the neighbourhood of Wigton, had been feeding in the same way. I have not been able to trace the Honey Buzzard in the neighbourhood of Morecambe Bay.

GREENLAND FALCON.

Falco candicans (Gmel.).

Mr. J. G. Goodchild has figured in the *Transactions of the Cumberland and Westmorland Association* (No. viii) a fine Greenland Falcon preserved at Edenhall. The MS. notes of the late Sir Richard Musgrave observe that this bird was killed by a blacksmith near Crosby Ravensworth in 1865. Mr. Hugh Harrison records its history: 'In February [1865] a fine specimen of the jerfalcon was shot in the act of devouring a grouse, at Crosby Ravensworth, near Appleby, Westmoreland. I made application for it and found it had already been placed in the collection of Sir George Musgrave of Edenhall.'¹ Mr. Raine well remembers the occurrence. A heavy fall of snow upon the fells had probably driven the grouse down to the ground on which it was killed. The late Baronet heard of the bird from Mr. Hope, sen., to whom it had been taken to be stuffed, and sent a keeper named Sawyer to purchase it. It was subsequently re-stuffed by Shaw of Shrewsbury.

ICELAND FALCON.

Falco islandus (Gmel.).

Some few years ago an example of this Jerfalcon was discovered in a farm-house in Westmorland by Mr. J. G. Goodchild,

¹ *Zoologist*, 1866, p. 30.

who ascertained that it had been shot by Mr. John Dodd of Harcla, at Winton, near Kirkby-Stephen, about the year 1842.¹ Mr. Goodchild obtained possession of the specimen and tried to remount it, but unsuccessfully. Mr. Hancock pronounced it to be a female bird of the first year. It has been figured as such. The skin is preserved in the Carlisle museum. A second female Iceland Falcon was shot upon our eastern border, near Crossfell, on Oct. 13, 1860. It was preserved by Blakett Greenwell, on whose information it was recorded by Mr. Duckworth.² Mr. Greenwell subsequently presented me with the sternum and some feathers of this bird, which had entered the collection of a Mr. Rothery. Mr. J. W. Harris informed me that an Iceland Falcon was taken at Deanscale in 1835, but this he thought was probably an escaped bird.

PEREGRINE FALCON.

Falco peregrinus, Tunstall.

There can be no doubt that the Peregrine Falcon has nested from time immemorial among the precipices of the Lake district, but the first distinct record of its presence is that of Dr. Heysham, and relates to the eastern division of Cumberland, in which the Falcon has always been a scarce bird. Dr. Heysham knew of birds which bred annually near Gilsland, either in a rock near the cascade, or in another locality six miles distant, on the road between Carlisle and Newcastle.³ He shot a female at her nest in the latter locality in May 1781, and observed that, after the female was shot, the male fed the young ones in the nest. For all that we know to the contrary, the doctor's experience of Peregrines was confined to the Gilsland birds. At all events, he does not allude to any other individuals. The younger Heysham had also a limited experience of the

¹ *Trans. Cumberland and Westmorland Assoc.*, No. vi. p. 161.

² *Ib. cit.*, No. viii. p. 206.

³ The Peregrine long continued to breed near Gilsland. Michael Walton of Greenhead wrote to T. C. Heysham, March 23, 1840, that he hoped to procure for him eggs of the Peregrine, adding, 'There is one pair comes to breed near Gilsland, and two pairs about five or six miles from here.'

Peregrine. In a letter of January 8, 1833, he wrote to Henry Doubleday: 'The Hawk tribe which you appear most anxious to have are extremely difficult to get here, and several of those you mention have never to my knowledge been obtained in the district. Since I have paid any attention to ornithology, I have only been able to get hold of a single specimen of the Peregrine falcon, which I presented to a friend.'

After alluding to the local scarcity of the Long-eared Owl, in a letter of 1836, T. C. Heysham continues: 'The eggs of the Peregrine are still more difficult to get hold of in this neighbourhood.' In a letter of June 19, 1841, the late Blakett Greenwell informed Heysham that he had failed to obtain for him any eggs of the Peregrine, to which the latter replied in a draft of June 26: 'I regret to find that you have not been able to procure any eggs of the Peregrine falcon this spring. I must confess that I am somewhat surprised at this, because I have some reason to believe that several pairs annually breed within ten or twelve miles of Alston. At the same time, I must admit that their nests are often very difficult to get at. I hope, however, that you will be more successful another year.' The reason for Heysham's failure to procure Falcon eggs is obvious. The Pennine range, or that portion which is included in Cumberland, affords comparatively few suitable breeding-places for the Peregrine, which has always found its stronghold among the Lake mountains, though even fifty years ago it was cruelly persecuted, as appears from the confessions of one who assisted in its extermination. The *Carlisle Patriot* of April 3, 1840, contained an announcement that 'a fine specimen of that rare bird, the *Falco Peregrinus* of Lin., was lately shot at Warlock Crag,' and this elicited a further statement from John Yarker of Swinedale, dated April 7, 1840. The writer states: 'When it was known to Mr. Graham and Mr. Cowart, gamekeepers to the Earl of Lonsdale, that a pair of these destructive birds had made their appearance in Swinedale, they met at my house on the 14th of March last, and as they were very anxious to have them killed, in consequence of their being so destructive amongst the Grouse, I accompanied them with my gun to assist in trying to kill them. We went to a rock called Hannah Crag, a short

distance from my house, and were so fortunate as to fall in with both cock and hen. The keepers fired at the hen and killed her; they both claimed the bird, and I have no doubt but both hit her. She measured from the bill to the end of the tail nineteen inches, forty-two inches from tip to tip of the wings, and weighed 3 lbs. As we had no chance at the cock that evening, we assembled on the evening of the following Monday. We stationed ourselves at about half a mile distance from each other, and then had some boys to beat the rocks, in order to drive the bird past where we lay in ambush. I had not been long at my station, till he came flying past me; I gave him the contents of one barrel, and succeeded in bringing him down. He measured seventeen inches from the bill to the end of the tail, thirty-seven inches from tip to tip of the wings, and weighed $1\frac{1}{4}$ lb. I have had him stuffed by Mr. James Leighton of Shap, who has had considerable experience in preserving birds, etc., for the cabinet. A great number of people have been to Mr. Leighton's to see him, and allow him to be a most splendid bird. He is remarkably fine in his plumage, and none damaged by being shot. The two keepers above named have killed together, young and old, not less than eighteen of this species, but are of the opinion that these two are the finest specimens they ever saw.'¹

No species could increase in the face of such destructive measures; but up to 1878 a few pairs continued to breed in the east of Cumberland and in East Westmorland, but especially in the heart of the Lake district. Whitbarrow Scar has occasionally been tenanted by breeding birds. So has a fine headland near St. Bees, where I studied the actions of a pair of Peregrines beside their nest in 1885.

A pair of Peregrines always frequented Skiddaw until 1883, when they were destroyed. It was in Thirlmere that the Rev. C. F. Smith robbed an eyrie of the Falcon in 1880; plundered also by other visitors, under the guidance of local men, who would otherwise have robbed the nest themselves. One pair nested annually from 1883 to 1889, either at Iron Crag or Falcon Crag. The Rev. H. D. Rawnsley informed me that in

¹ *Carlisle Patriot*, April 10, 1840.

1883 this pair nested at Falcon Crag, and their two young ones were taken. In 1884 they nested at Iron Crag, and one young one was taken. In 1885 the old birds returned to Falcon Crag, and were robbed of their eggs on the 3d of April. They bred in another locality the year following, but their young were taken. In 1887 they nested at Iron Crag, and their eggs were taken. In 1888 they nested in the old place, and the young were removed. Similar treatment has been meted out to other pairs. Sometimes the birds have succeeded in bringing off their young from an eyrie in some inaccessible rock. In 1864 and 1865 a pair bred undisturbed in a precipice flanking Helvellyn, but in 1866 the nest was stormed by a Grasmere stone-mason, and the two young ones taken.¹ The destruction of the old birds in the breeding season is a much greater misfortune than the loss of eggs or of young. The finest pair of Falcons that I have locally examined in the flesh were trapped in Eskdale a few springs ago at the nest. There can be no doubt that the injury done by Falcons to Grouse is far less than keepers imagine, but the appearance of a falcon on any of the lower grounds in autumn is sure to challenge measures of destruction. The punt gunners naturally dislike the Falcons which occasionally visit the shores of the English Solway in winter, because they disturb the Wigeon and make them wild. The game preserver has less reason to complain, because a hungry Falcon is more likely to strike down a plump Mallard or a passing Gull than to engage in a stern chase after an old cock Grouse. At St. Bees the Peregrines fed on Stockdoves and Pigeons whenever they could get them. Although most of the Peregrines that visit our coast-line are immature, I have seen several beautiful old females among them, as in the autumn of 1890, when one such bird was killed on Walney Island and another near Gretna. These no doubt are passage Falcons (*Wanderfalk*), shot when following Wildfowl in their annual journey to their winter-quarters. Hutton of Flookburgh once contrived to catch a Peregrine in his flight nets. At few years ago the head keeper at Edenhall winged a young Peregrine, which soon recovered from its injury and became as docile as could be

¹ *Zoologist*, 1867, p. 866.

desired, though it has never obtained full power of flight. Other Falcons have from time to time frequented the same fine stretch of coverts, probably attracted by the abundance of Wood pigeons.

H O B B Y.

Falco subbuteo, L.

This beautiful little hawk so rarely straggles to the N.W. of England that I can only recall examining two local specimens. They are in adult male dress, and were killed in Cumberland. Mr. Sawyer of Threlkeld shot one of them at Castle Rigg in 1864. The second Hobby was shot in the neighbourhood of Edenhall. The Hobby has not been detected in Westmorland, nor has it been recorded from Furness.

M E R L I N.

Falco æsalon, Tunstall.

Within a comparatively recent period the Merlin was still a common bird on many moors in the centre of Lakeland, as well as on the equally attractive wastes of the Debateable Land; *mais nous avons changé tout cela*. Even during the last nine years the species has lost ground rapidly, for there are few shootings upon which this high-plucked Falcon is not treated as 'vermin.' Upon Walney Island or the Saltings of the English Solway you may sometimes see a pretty flight of the Merlin, which in autumn feeds on Dunlins and the smaller marsh birds. In the breeding season the birds feed their young almost exclusively on such moorland species as Yellow Buntings, Wheatears, Meadow Pipits. They possess a strong attachment for the hereditary breeding-places of their kind. One small moss used to hold a pair of Merlins every year. If you went there in March, you might see them toying playfully together. At the end of May the female had generally begun to lay her red or orange eggs in a scratching in the heather, which she usually lined with a few stems of dry grass. Very picturesque are most of the Merlin's haunts. Take, for example, a large moss near the Solway Firth, on which the Merlin tries to breed every year. Most of the moss is decorated with Butterfly Orchids; the Cross-leaved

Heath abounds, growing very pale when overshadowed by a strong growth of common heather ; but the palm of beauty must be given to the White Water-Lilies with their broad, buoyant leaves and gilded centres, floating restfully on the still surface of the pools, from which the wakeful Mallards rise at your approach, leaving behind them only the unfledged Gulls that are skulking among the rushes. The flow is a dead flat of mossy tussocks, varied by banks of heather, skirted by a thin line of trees ;—too wet to reclaim remuneratively, therefore preserved from the tender mercies of enterprising engineers. The deep drains, half choked with water-cress, are happy hunting grounds of water voles, remains of which may be observed with those of field mice in the pellets thrown up by the owls that haunt this region. Elsewhere, the bones of fish, heaps of dried shrimps, remains of the carapaces of small crabs, bear abundant evidence of the gastronomical predilections of the local gulleries. Not many small birds are to be seen here ; only a few Meadow Pipits, Skylarks, Linnets, come in view during a morning stroll. This paucity of commonplace ‘dicky-birds’ may be accounted for with some fairness by the brood of young Merlins which, at the time of our visit, have feathered nicely ; two of the number you may see, perhaps, perching on the bushes which have to do duty for the ledges or boulders of rock on which the ‘Stone falcon’ prefers to rest. Here the Merlins are reared from the time that they hatch out into the world, covered with a scanty integument of whitey-grey down (which soon expands into a warm and cosy quilting), until the day arrives when they leave the moorland home to inaugurate a roving life on their own account. The Merlin tries to breed on the fells of Coniston, on Skiddaw, and many of the lake mountains, no less than on the moorlands of the Pennine range. But alas, unless some change takes place in game preserving, the Merlin will soon have ceased to confer a wild charm by its beautiful flight to the sportsman’s tramps across the hills. It is going more rapidly, as a breeding species, than most people are at all aware of. Yet those who systematically destroy our poor Merlins on their nesting-grounds *must know* that the damage which the Merlin inflicts upon a Grouse Moor is infinitesimally *small*? Surely

future generations will bitterly regret the short-sighted policy at present in fashion!

KESTREL.

Falco tinnunculus, L.

The sandstone precipices which stretch away westward from the heights which rise above the town of Whitehaven are constantly tenanted by several pairs of Kestrels, which appear to be quite as much at home among the clefts of the sea cliffs as when rearing their young in the wooded valleys of Lakeland. Public opinion has begun to recognise that the injury which the Kestrel inflicts on game preserves is exceedingly small. On the other hand, the farmer gains enormously by the services which the Kestrel renders in the destruction of field mice.

OSPREY.

Pandion haliaëtus (L.).

That the Osprey was always rare in Lakeland, as a *breeding* species at any rate, there can be no doubt; but I think that any one, who will take the pains to consider the chain of evidence which I propose to supply with anything approaching to judicial impartiality, should concur in the conclusions at which I have at last arrived, after many years' close study of the raptorial birds of this region. We owe our first information regarding the bird to Francis Willughby, who stated that 'the Sea-Eagle or osprey, *Haliaëtus* sive *Ossifraga*, which preys often upon our rivers; there is an aery of them in *Whinfield-Park*, Westmorland, preserved carefully by the Countess of Pembroke.' I can find no reference to this in the diary of the Countess, but she was a woman of fine character, and just the sort of person to take a pride in caring for the eyrie of a rare bird. Professor Newton, whose unvarying kindness I gladly acknowledge, has explained to me very fully his reason for identifying the Osprey of Whinfield Park with the White-tailed or Sea Eagle. But Professor Newton had no acquaintance with the breeding-grounds of this species in Lakeland, nor had

he examined the evidence regarding our local Eagles gathered together in this volume for the first time. Still less had he considered the physical character of Whinfield Park. Whinfield Park was originally a wild heath or moss. It is situated in a low-lying district, between the waters of the Eamont and the Eden Rivers. It is at least twenty miles, even in a 'bee-line,' from the nearest haunts of the *Cumbrian* Eagles, twelve miles from a former eyrie of the Sea Eagle in Hawswater, and at least sixteen miles from the former eyries of Eagles in the Ulleswater district. *It is not*, therefore, '*in an Eagle country*;' and it is eight or nine miles in a bee-line from the nearest of our lakes. The rivers in the neighbourhood are comparatively small, and I am entirely unaware of any evidence that this Eagle ever supports itself or its young by fishing in the streams of such moderate dimensions. The park is represented on Saxton's map as enclosed in 1576. We know that it had long been imparked and was full of deer. It is hardly likely that the Countess of Pembroke would preserve an eyrie of Eagles in her deer park. The Ulleswater Eagles often lifted fawns from Gowbarrow Park a century ago. The fact that Willughby speaks of the Osprey of Whinfield Park as *Halictus sive Ossifraga*, renders it probable that *he* supposed the species to be really the Sea Eagle. Is this surprising? I hardly think that it is. Not only had he never seen a dead specimen of the Whinfield Park birds in the flesh, but he had not seen them on the wing. He had not visited the locality. He derived his information from some Westmorland worthy, who told him from common report that the Osprey bred at Whinfell and fished in the Eamont and Eden, as no doubt it did. Willughby knew of *no* true Ospreys nesting in *any* other part of England: hence, relying on *oral* information alone, he identified the Whinfell birds with the true Sea Eagle. Had he taken the trouble to prosecute his inquiries more thoroughly, he would have learnt that the Sea Eagle only nested upon the most precipitous ledges in Lakeland. This view becomes more certain when we remember that Machell, a contemporary of Willughby, expressly mentions, among the 'greater rarities' of Westmorland, the species which forms the subject of this essay. Machell was the vicar of the parish of

Kirkby Thore, which is in the same district as Whinfell, and only a very few miles away. It is therefore only reasonable to say that when he wrote of 'Orspreys' as distinct from both 'Herins' and 'Eagles or Vultures,' the species which occur in the same passage, he was clearly thinking of the Ospreys in Whinfield Park. The birds probably nested in some tall tree, but possibly on the walls of some dismantled cottage occupied by a former keeper, because there must have been some one living on the spot when the park was first enclosed. Clarke, though not a professed naturalist, and entirely unacquainted with the writings of Willughby, was a good observer, and rambled all over Lakeland before completing his folio work, the *Survey of the Lakes*, published in 1787. He volunteers a good deal of information about Eagles. He knew less about the Osprey, but what he tells us is entirely to the point.

'The Osprey I have seen,' says he : 'there was a nest, a few years ago, of this bird in Whinfield Park : they seem to be of the Hawk kind, and are about the size and colour of a Magpye ; in what manner fish are charmed by them let others tell, for I cannot : I saw one fly into the rock at the Giant's Cave, and on its crossing the river there, the fish sprang to the top and remained six or eight seconds as if intoxicated.'¹

This is the case, for the Osprey having nested at Whinfield Park, as separately stated by Willughby's informant, by Clarke, and as hinted at by Machell. It is supported by every local circumstance, and I submit that Willughby having only tentatively identified the bird from the information of one who himself called it the 'Osprey,' and apparently alluded to its fishing in the neighbouring rivers, there can be no excuse for adhering to the original blunder of that excellent naturalist, in the face of the fact that *our* White-tailed Eagles *only* nested in lofty cliffs, many miles removed from this eyrie of the Osprey. That the Osprey frequented Ulleswater, and nested in the precipices overhanging the Westmorland side of the lake, is rendered probable by the fact that Dr. Heysham appears to have heard of it. Dr. Heysham says, 'I am not certain whether the Sea Eagle breeds at present in Cumberland or not, but a few years ago there used

¹ *Survey of the Lakes*, p. 190.

to be an annual nest in the rocks which surround the lake of Ulleswater, and the great trout of that lake has been taken out of its nest, upwards of ten pounds weight ; it however frequently visits this country.'

There is not the least reason to suppose that Dr. Heysham spoke from personal observation. But he distinguishes the White-tailed Eagle from the species just referred to, and treats of them *separately*. He had kept the White-tailed Eagle in confinement from its youth up, and consequently possessed an accurate knowledge of its changes of plumage. As, according to Heysham, who treats his Sea Eagle as a distinct species from the White-tailed, the bird which bred in the Ulleswater district was *not* the same species as he had obtained from the Keswick district, we have no alternative but to believe that the bird reported to him from Ulleswater *was* the Osprey. It cannot have been the Golden Eagle, since fish were found in its eyrie. This conjecture receives additional support from the evidence of the Rev. W. Richardson. Richardson was a good naturalist, a painstaking botanist, and a keen observer of birds. He was as well acquainted with the ornithological writers of the day as Dr. Heysham. In his search for rare plants he had visited many parts of Lakeland, but of course he was best and most minutely acquainted with Ulleswater, and the notes on Ulleswater which Dr. Heysham furnishes are generally copied from Richardson, whose account of the natural history of Ulleswater was drawn up in 1793, and must have been in Dr. Heysham's hands in a printed form when he wrote in 1796-1797. Richardson proves that he had identified the Osprey by quoting Berkenhout's description of *Falco haliæetus*, the Osprey or Fishing Eagle, to which he adds the result of his own observation from boyhood : 'The Osprey, or Fishing Eagle, is frequently seen fishing ; he is very bold, and in pursuit of his prey will dart down within forty yards of a man.' This is my case for the proposition that *the Osprey was formerly resident in Lakeland*. The individual links in the chain of evidence may not be considered to be final, when any single one is taken *alone*, but all legal-minded men will, I believe, admit that, *when taken together*, they fairly prove my case. The inherent improbability of the

White-tailed or Sea Eagle having ever nested at Whinfield Park is self-evident to any one who knows the physical character of the country. Of 'present-day' Ospreys there is not much to say, because the visits of this fine bird to the former fishing-grounds of its kind are irregular, and occur chiefly of course at the seasons of migration. Mrs. Howard tells us, in a little work written about 1831, 'that an old oak standing on the banks of the Eden, in the grounds of Corby Castle, was known as the "Osprey Eagle tree," so called from having been the resort of these voracious birds which feed on salmon.'¹ An Osprey appeared on the Eden at Rockliffe on September 27, 1883, and was mobbed by Rooks. Another was trapped in Barron Wood, near the Eden, in September 1869. It was caught in a pole trap, and was described in all the local newspapers as 'a fine brown eagle.' Whin's pond, Edenhall, has on several occasions attracted the attention of travelling Ospreys, and it was there that a fine female Osprey was shot in 1848, curiously enough in the middle of summer. Another Osprey was killed at Clifton, close to the former eyrie of the Osprey at Whinfell, on the 27th of September 1890. The man who shot it wounded it in one of the wings; the maimed bird fought for life so gamely that he had great difficulty in overpowering the poor thing. In the west of Cumberland Mr. J. W. Harris obtained an Osprey shot on the Derwent, and Dr. Parker secured another example at Gosforth in 1881. I have not traced the Osprey on Windermere or any of the lakes near Morecambe Bay, but Durnford notes that an Osprey was shot near Barrow, on the 11th of May 1877, and I have information of one or two other Ospreys having been killed on the same part of the coast.

Order *STEGANOPODES*.

Fam. *PELECANIDÆ*.

CORMORANT.

Phalacrocorax carbo (L.).

Although the Cormorant does not breed on our coast, it visits several of the lakes of the interior at frequent intervals, and

¹ *Reminiscences*, vol. i. p. 97.

from early autumn until the beginning of summer frequents our estuaries, from Morecambe Bay and the north end of Walney to Ravenglass and the flat sands of the Solway Firth. Its food consists largely of flounders, but it probably consumes some trout and a good many eels. So familiar is its presence on the Solway that the fishermen call it the 'Water crow.' Sometimes a score of these birds voluntarily associate together as a fishing community. You may often see a dozen of them at once, even in December, sitting bolt up in a long line at the edge of the ebbing waters, drying their stiffly-extended wings, and looking for all the world like so many scarecrows. They are methodical in their habits. Those which haunt the estuary of the Irt and Mite at Ravenglass fly every evening to St. Bees, to roost upon one of the lower ledges of the headland, returning to their fishing ground soon after daybreak. They are strong, if heavy, fliers, and generally contrive to keep out of shot even when travelling across country to some favourite pool. Among stories of this bird, few probably are better known than Dr. Heysham's tale of the Cormorant which was sacrilegiously shot upon Carlisle Cathedral about the year 1766.

SHAG.

Phalacrocorax graculus (L.).

Dr. Heysham pronounced the Shag to be 'a scarce bird' in Cumberland. It is in fact of rare occurrence on the coast of Lakeland, and *does not breed* even at Sandwith. Mr. Hindson records in his MS. notes a bird killed on the Lune at Kirkby-Lonsdale. Stragglers have been killed to my knowledge in Morecambe Bay, but I have only once seen a Shag in the waters of the English Solway—on January 6, 1885. It has nevertheless strayed up our rivers in a few isolated instances. For example, a young bird was caught upon the Caldew, near Carlisle, Oct. 2, 1856, its chase affording no little amusement to the operatives at Holm Head. Mr. R. Service includes the Green Cormorant as 'very scarce' on the coast of the Scottish Solway. Mr. Armistead, another excellent Scottish observer, assured me in conversation that he had only once seen and shot

the Shag on the north side of the Firth prior to 1890. There is, therefore, little room for surprise that its visits to our waters should be few and far between.

GANNET.

Sula bassana (L.).

Dr. Heysham had only seen one specimen up to 1796, and naturally considered it rather an uncommon bird. Bearing in mind the comparative shortness, to a Gannet, of a flight from Ailsa Craig to the Cumberland coast, the species is not so often seen as might be expected; indeed it is seldom noticed on the English Solway east of Maryport, though adult birds are occasionally washed up dead at Silloth. George Bell informed the younger Heysham in a letter of November 2, 1842, that Gannets were then common on the Whitehaven coasts, and frequently taken. The present generation of fishermen tell me that they have not seen them in any numbers of late years, nor do they generally fall in with them unless they are fishing a few miles from land. Immature birds are decidedly in the minority. Curiously enough, this oceanic species often occurs far inland. A Gannet was caught asleep in a field between Hayton and Allonby in November 1874. Mr. Jackson caught a very handsome three-year-old Gannet when crossing the fells from Martindale to Mardale in October 1886. A fine adult bird was captured in a gill near Crossfell in September 1885, and taken to Joseph Walton of Garrigill. In October 1891 a young Gannet which had been captured near Curthwaite was recorded in a Carlisle paper as a 'Bittern'; while a similar individual, shot at Arnside about the same time, was chronicled in a Kendal newspaper as 'A fine Great Northern Diver.'

Order *HERODIONES*.

Fam. *ARDEIDÆ*.

HERON.

Ardea cinerea, L.

The Heron has always been numerous, if somewhat local, in Lakeland, and at one period seems to have been in considerable

request for culinary purposes. The Naworth Accounts prove that it was often served up at the table of Lord William Howard, its name being variously entered as 'hernshew,' 'hernshow,' 'heronsue,' and 'heronshew,' but *never* as 'Willy Fisher'; although this latter name can boast probably of equal antiquity. The Herons supplied to the Naworth kitchen were usually such as had been snared or shot by the local fowlers, who could always obtain the sum of sixpence for a 'heronsue.' But the practice of fattening wild birds for the table in captivity was then in vogue; hence batches of young Herons were sent alive to Naworth from considerable distances. Some of these came from Chipchase Castle, and others from the Heronry which, until 1890, existed at Muncaster in the west of Cumberland. Of course the birds were sent as presents, but it was customary to bestow a largess on the servant who brought them to Naworth. Thus in 1612 we find 'Mr. Lampley's man bringing iiij hernshues and a conger eyle, ij^s vj^d'; again, 'Mr. Penington's man bringing 2 fawnes and 6 herns, x^s.' In 1620 there occurs on July 7th, 'to Mr. Heron's man of Chipchase bringing 12 hernsues, iiij^s iiij^d'; again, 'My Lady Savill's man bringing xiiij gulls and v hernsues, v^s.' A similar supply was despatched from Muncaster in 1621, for on the 16th of July was paid, 'To My Lady Savell's man bringing 7 hernsues and 9 gulls, iiij^s vi^d.' A special house or aviary had to be constructed to cage the seventeen young Herons received in 1620, and the outlay was entered among the Extraordinary Paiments: 'July 1°. To Andrew Creaque making the room for the hernsues, xiiij^d.'

Of Lakeland Heronries, the most classical perhaps is that of the birds at Dallam Tower, whose contests with their neighbours the Rooks furnished subject for comment to Bewick, and still earlier to Dr. Heysham. There, and probably there only, in the Lake district, the name of 'Crane' is constantly applied to this Heron; a fact well known to Dr. Gough, who pertinently remarked that 'Croneywood' was the original name of their stronghold. 'The trees,' he wrote, 'occupied by the Herons are situated in the most elevated part of the wood, sloping north-westward towards the upper reach of Morecambe Bay. The

nests are built in the highest trees, a few feet only between the extreme points of the uppermost branches. The trees are of three kinds, beech, ash, and elm—the first being the favourite. . . . We counted twenty-seven nests. About sixty years ago the number was eleven. In course of time the increase reached thirty-two. But of late years there has been a decrease.’¹ I inspected this Heronry in 1888 and 1891, and can therefore testify to the accuracy of the remarks just cited. Almost equally well known, at any rate to a former generation, was the *now extinct* Heronry of Rydal Water. It was not an ancient establishment. *Whence* the first colonies had migrated can hardly be considered quite certain. Canon Tristram informs me that between the years 1850-55 he was told by the late Earl of Ravensworth that his father had at an earlier period cut down one or two trees in the Heronry at Ravensworth, ‘that the herons at once deserted and went the same year to Westmoreland, where they bred on some small islets in one of the west country lakes.’ It is possible that this was the origin of the Rydal Heronry. At all events, the colony was founded between sixty and seventy years ago, because Parsons and White describe this Heronry as ‘recently established’ in the *Directory of Cumberland* which they published in the year 1829.

It was a favoured Heronry, one that afforded pleasure to Christopher North, who noticed that ‘the heronry on the high pine-trees of the only island connects the scene with the ancient park of Rydal.’² Miss Martineau recorded her impression of ‘the grey bird’ as it appeared ‘perched upon a tree near its nest, or fishing in the shallows of its island home.’ That pleasant fisherman-author, Dr. Davy, wrote that, ‘under protection a few herons, here secure from molestation, yearly build their nests in those Scotch firs.’

The subsequent history of this Heronry is best told in the words of Mr. Jones of Hesketh How, who, writing to Dr. Gough on December 26, 1876, furnished the following statement: ‘I find the Herons have not built upon Rydal for three or four years. When they did build there, they built in rather old

¹ *The Heronry of Dallam Tower*, p. 15.

² *Recreations*, vol. iii. p. 370.

Scotch and silver firs of late years; but I am told that some twenty years ago they built in other kinds of trees, oaks especially. And when at one time they were disturbed at building time by some people living at Nab Cottage, they left the island and built in larch trees, in a plantation in the side of Loughrigg, west of the Lake. I well remember three or four nests a year within the last fifteen years, but I understand they were much more abundant about twenty years ago. The birds often come over to feed, and are seen about the rivers and the lake; but they have, I fear, altogether ceased to build there.¹

Until quite recently, an unrecorded colony of ten or twelve pairs of Herons nested in Roudsea Wood, shifting their quarters in 1886, in consequence of some of the trees in which they built being cut down. *Whither* they migrated I have not been able to learn; but, as we saw several young Herons on Roudsea Moss in the summer of 1891, a new nursery must exist in the neighbourhood. Another unrecorded Lancashire Heronry is that of Rusland, regarding which Mr. C. F. Archibald wrote to me in April 1890: 'There is an old established Heronry in the Rusland valley, not on our land but adjoining; to the best of my belief there are about 8-10 nests annually; they used to build in very tall larches. When these were cut down, they migrated to some neighbouring Scotch firs, where they are inaccessible. But on April 5th I had a great treat. I heard a good deal of "talking" going on in some other Scotch firs, at some considerable distance from the Heronry, and led thereby I discovered that a solitary pair were breeding there. I climbed up and inspected the eggs, three, slightly incubated. It was a great treat to see the big blue eggs on the great platform of sticks lying on a cradle of hay, about the size of a dinner plate; the old birds kept to the same place for the next few days, when I left home.' In the following October Mr. Archibald introduced me to the Rusland Heronry. The ground beneath the nests was strewn with fragments of broken shells, showing that most of the young had hatched out safely. At Whittington, not very far from Kirkby-Lonsdale, there exists a Heronry, which Mr.

¹ *The Heronry at Dallam Tower*, p. 13.

Hutchinson found to be tenanted by seven pairs of birds in 1888. The same gentleman tells me that six pairs was the complement of birds occupying the Heronry at Killington Reservoir in 1886. The Ingmire Hall Heronry is situated on the borders of Westmorland and Yorkshire, near Sedburgh. This was occupied by Herons quite recently, but I am given to understand that it has been much harried. In Cumberland, from sixteen to twenty pairs of Herons used to nest until recently at Muncaster, obtaining no doubt a plentiful supply of food in the estuary and neighbouring streams. I have known for some years a nice Heronry in the Wythop Woods, close to Bassenthwaite Lake. Of late a few Herons have nested at Crofton Park, where Mr. W. Storrs Fox ascertained for me that eight nests were occupied in 1888. Other small Heronries exist at Netherby, at Floriston, and near Greystoke; in addition to which, one or two solitary pairs of Herons generally nest on the Eden and the Gelt. By far the finest of local Heronries is that preserved at Edenhall. Most of the trees in which the nests are placed are inaccessible to the majority of climbers, while an unlimited supply of food can be obtained from the Eden and the Eamont with their tributaries, but especially from the fine piece of water, shaped like a horse-shoe, known as Whin's Pond.

This abounds in trout, notwithstanding the fact that it is sadly over-stocked with voracious pike. Here, accordingly, the Heron is to be seen at all times of the year, especially in July, when the young birds flock together on the grassy slopes of the lake. The birds are then performing their annual moult. Consequently, such spots as these birds frequent are often strewn with blue feathers of all shapes and sizes. When a spell of sharp weather freezes the sheets of water inland, and our rivers are also choked with floating ice, the Herons often appear in flocks upon the saltings. But I never could ascertain that the poor birds secured any kind of prey upon the surface of the marsh under such disadvantageous circumstances.

PURPLE HERON.

Ardea purpurea, L.

Our knowledge that this Heron has once occurred in Lakeland rests upon the authority of the late John Gould. The information given by that eminent naturalist is the following: 'Mr. R. C. Musgrave, in a note, dated Eden Hall, Penrith, November 21, 1870, says, "the Purple Heron in my father's collection was shot near Alston in Cumberland about twenty years ago."¹ A full-dressed bird of the species still exists at Edenhall, and I believe this to be the identical bird to which Gould made reference.

SQUACCO HERON.

Ardea ralloides, Scop.

Writing to T. C. Heysham, on September 7, 1845, Yarrell states: 'I heard also in July, by a communication from Sir George Musgrave to Mr. Jesse, that a specimen of the Squacco Heron was shot during the second week near Kirkoswald, a village on Eden. The bird was observed in a meadow close to the river.' Heysham replied, on September 9: 'I owe you many thanks for your kind communication relative to the capture of a specimen of the Squacco Heron near the village of Kirkoswald in July last. . . . Sir George Musgrave . . . has, I understand, a small collection of Cumberland birds, chiefly mounted by Philip Turner, a bird-stuffer residing at Penrith.'

Sir George Musgrave wrote to Heysham on the 26th of November that year: 'I amuse myself in making a little collection of British Birds which have been taken in the neighbourhood; but I have no particularly rare birds, except a Squacco Heron, which a farmer at Lazonby shot for me in the summer.' Mr. Gould furnishes a note regarding the same bird: 'Mr. R. C. Musgrave informs me that a specimen in his father's, Sir George Musgrave's, possession, was shot by one of his gamekeepers in June 1845, while perching on a tree at Lazonby in Cumberland.'²

¹ *Birds of Great Britain*, vol. iv., not paged.

² *Ibid.* vol. iv., not paged.

LITTLE BITTERN.

Ardetta minuta (L.).

The late Mr. John Hancock informed me that a specimen of the Little Bittern preserved in the Newcastle Museum was captured on the river Petteril in the year 1850. A stray note of T. C. Heysham, dated March 27, 1850, corroborates this, while assigning a rather earlier occurrence to the bird. The note says: 'Little Bittern. Mr. Losh this day informed me that a specimen of this bird was caught close to the river Petteril near Carlisle, about 3 years ago, in July, and in female dress. He sent it to Mr. John Hancock of Newcastle, in whose possession it now is.' I cannot vouch for any other specimen having been killed at any time in Lakeland. I have however identified a full-dressed male Little Bittern, which a man named Steel shot on the Kirtle Water, between Kirkpatrick and Kirtle-bridge, in June 1874. This specimen was obtained about six miles north of our faunal limits. It is still in Mr. Steel's possession.

NIGHT HERON.

Nycticorax griseus (L.).

In the north-west of England the Night Heron ranks as one of our rarest birds, the species having been met with only singly and at long intervals. Mr. Brennan, the head keeper on Foulshaw Moss, once shot a fine Night Heron near Milnthorpe. This is no doubt identical with the bird which the late Mr. Anthony Mason reported to Mr. Mitchell as killed near Grange in May 1848. A loose note in the handwriting of T. C. Heysham records of this species that 'a young bird was shot on the Petteril near the village of Carleton by a young man in Oct. or November 1847.' A fine adult is preserved in the collection of the late Mr. Proud; if his son's memory can be relied upon, after a lapse of forty years, this bird was shot at Beckfoot, Brampton, about 1850. At all events, a young Night Heron was killed in the Abbey Holme in 1866, and has remained ever since in the possession of the Mann family, at whose house I have often seen it.

BITTERN.

Botaurus stellaris (L.).

Our first local references to the Bittern occur as early as 1610 in the Denton MS., and were therefore penned in days when extensive morasses covered a large area of Lakeland, and quaking bogs defied the most adventurous spirits to traverse on foot their treacherous surface. Probably the Bittern was always more of a winter visitant than a resident in our mosses, but that odd pairs occasionally spent the breeding season with us can hardly be questioned. Denton writes of 'Drumleyning,' in the north-west of Cumberland: 'All Parton is in the parish of Thursby saving that of Drumleyning, which is in the parish of Aikton, and now doth service to the mannor of Aikton. It is called corruptly Drumleyning, the right name thereof is the *Myre-Dromble-Heyning*; Wee call a bittern a *Myre Dromble* because she haunteth myres, boggs, fens and carrs, and for that she hath a thundering voice which we call rumbling. Heyning is the fryth or freed spring of the place. A wood new cut for springing a fryth and spring we call a *Heyning* of the word *Heyned*, which signifies freed or spared or forborn.'¹ Of Drumbugh [=Drumburgh] the same writer observes: 'It is called Drumbugh of that fenny mire or bog, then full of shrubs and haunted with bitterns, which the people call *myre drombles* or mire drummles, so as that Drumbogh signifies the bittern's fen.'² That the name of Miredrum was colloquially attached to the Bittern in Lakeland appears probable from its occurrence in a curious sermon written by a well-known character, 'William de Worfitt,' in the early part of the last century.³ This homily was professedly written in the vernacular tongue of the peasants residing in the neighbourhood of Morecambe Bay. As the parson was 'stalking hameward' (so runs his 'tale') 'across Blackwater-mosses,' on a winter evening, with 'nought in view but dreary dykes and dusky ling,' the 'awful silence' of the waste 'was sean brokken by a skirling hullet; sure niver did hullet, herrensue or *miredrum* mak sic a noise before.' 'Miredrum' was not, however, the only name applied to our Lakeland Bitterns. On

¹ Denton MS. p. 74.² *Ib. cit.* p. 78.³ This sermon was kindly lent to me by Mr. Harry Arnold of Arnbarrow.

the contrary, the name is entirely absent from the Howard Household Book, in which the Bittern is uniformly styled the 'Bitter' on the few occasions upon which it is mentioned at all. Scanty as the information gleaned from this source must be admitted to be, its value is augmented by the season of the year at which it proves that Bitterns were occasionally obtained. The birds purchased for the Naworth table during the first week of August 1618, included '36 mallards, iijs., 2 *bitters* and a curlue, xxijd.' Among the fowl brought in on the first of August 1634 (and therefore procured in the month of July), we read of 'one duck, vjd., one *bitter*, vjd., and two plovers, iiijd.'

Most unfortunately the eighteenth century is almost a blank as regards information regarding the Bitterns which still lingered on our mires. Richardson was the first to break silence, and even he was content to say that this bird 'sometimes, though rarely, breeds by the side of Eamont, on the low grounds'—*i.e.* on such a moss as Honipot, which is still adapted to its habits. Dr. Heysham three years later added this note: 'The Bittern is not so numerous as the Heron, and is always solitary. It breeds in bogs and makes its nest upon the ground. In the spring it makes a loud bellowing kind of noise, from which it is called in Cumberland Miredrum.' This allusion to the cry of the Bittern is borne out by a remark of the late Mr. W. Dickinson, who says in his glossary: 'Bitter-bump, Miredrum, *c.* the bittern. This bird is now a very rare visitor [1878], and is not known to breed here. The writer has a recollection of being called to listen to the booming of a bittern in a mild spring evening, about the year 1804, in the mosses of Arlecdon.'¹ The Rev. R. Wood informs me that his late father, long the vicar of Westward, remembered the Bittern as frequenting Cardew Mire, where it was supposed to breed. He was born in 1796, and might therefore have heard the Bittern's cry when a boy, as well as his contemporary, Mr. Dickinson. It is therefore quite possible that Dr. Heysham, who came to Carlisle in 1778, had a personal knowledge of the Bittern in the Lake district. But if a stray Bittern lingered among our bogs and flows during the early summers of the present century, the energy of the

¹ *Cumberland Glossary*, pp. 7, 8.

engineers who converted pools of standing water into valuable corn-fields, soon banished the poor 'Miredrum' from the ancient home of its race, and forced it to seek a safer asylum in the great reed beds of Denmark or the Dutch coast. Thenceforward the Bittern was destined to return to Lakeland only when the frosts of the Baltic urged it to seek for food and shelter in our milder climate. Nor did it return to Lakeland in the same abundance which more southern counties experience. T. C. Heysham remarked that the occurrence of eight Bitterns in the neighbourhood of the Solway, between December 1831 and February 1832, was the more remarkable because only a single specimen had been met with in the same district during the previous ten or twelve years. Two of the Bitterns in question were killed near Burgh, two near Brownhouses, two in the Abbey Holme, one at Cumwhitton, and the eighth at Hayton. Most probably these birds had arrived in company. Dr. Gough, in recording the occurrence of four Bitterns in the peat-mosses of Westmorland in December 1834, offers the comment that 'Bitterns are by no means annual visitors, nor is their appearance among us indicative at all of a severe winter; but when we are favoured with the company of this bog-hunter, a flock of eight or ten is generally scattered over the mosses and adjoining country.' We may safely infer that fifty years ago the Bittern, when it visited Lakeland at all, appeared in larger numbers than has been the case recently. My notes embrace records of Bitterns killed nearly all over Lakeland, from Selside and Cark to the Solway Firth; but they only include one note of a Bittern killed in *East* Westmorland, viz., a bird shot at Sandford Mire near Appleby in 1862. The greater number have occurred within a short distance of the coast, though a few must be accredited to the heart of the Lake district, *e.g.*, two birds shot at Esthwaite and Bampton in January 1867. The late Sam Watson of Carlisle told me that he stuffed ten or twelve local examples of the Bittern during his long practice as a taxidermist. One of these was shot in the Eden near Rickerby in February 1865, by a keeper, who killed a second Bittern in the same locality at daybreak on the 1st of December 1868. The first-named bird had swallowed a water-

rat. The last Bitterns reported to me as procured in the centre of Lakeland were shot near Ambleside; one in January and the other in December of 1889. My most recent notes of Lakeland Bitterns refer to two specimens killed near Ambleside in 1889, in the months of January and December; to a third, which appeared in the neighbourhood of Cardew Mire in the autumn of 1891, and attracted the attention of the countryside by its drumming, which was described to me with great correctness by those who were fortunate enough to hear it on several different occasions; lastly, to a fine Bittern which a farmer, named Dixon, killed on Cumwhitton Moss, on January 1, 1892; a fifth specimen shot about ten days later near Penrith, and a sixth shot at the same time on Weddholm Flow.

Order *HERODIONES*.

Fam. *CICONIIDÆ*.

WHITE STORK.

Ciconia alba, Bechst.

By the kindness of Colonel Macdougall, I am able to state positively that a White Stork was killed in Westmorland early in the year 1867. A local paper reported the occurrence of this bird in the following words: 'A large and beautiful specimen of the Stork, in fine plumage, was recently shot on Windermere Lake by Mr. Thomas Fleming of Ecclerigg. It measured 4 ft. 4 in. in height, 5 ft. 5½ inches across the wings, weight 4¼ lbs.'¹

To this information another journal adds: 'The bird was purchased by J. M. Gresley, Esq., Bradford, and is now in the skillful hands of Mr. W. Raws, Rydal, for preservation.'² The late Thomas Fleming has been dead for some years. He was a keen sportsman and a good shot. Colonel Macdougall knew him well, and has interviewed his son and many other local residents. This gentleman finally summarises the result of his inquiries in a single sentence: '*There can be no doubt* about the shooting of the White Stork at Windermere Lake.' The fact

¹ *Carlisle Journal*, Feb. 1, 1867.

² *Westmorland Gazette*, Feb. 2, 1867.

is that a great many people saw the bird, because it was exposed in the flesh in the shop of a man named Green, then a butcher in Windermere.

Order *HERODIONES*.

Fam. *PLATALEIDÆ*.

SPOONBILL.

Platalea leucorodia (L.).

The earliest Spoonbill authenticated in Lakeland is a specimen preserved in the Newcastle Museum. This, Mr. Hancock assured me, was killed on Dalton Sands in 1833. The next supposed occurrence in point of time is that of a bird which frequented the Solway in the winter 1840-41, and was recorded as a Great White Heron by the newspapers. James Irwin (the man who furnished the first intelligence of the bird to the local press) wrote the following letter to T. C. Heysham, dated Bowness, 8th January 1841: 'With reference to the "Heron," I beg to inform you that it was perfectly *white* in every part of its body and wings; on looking at the bird through a spying glass of large dimensions, I ascertained that the throat and the long feathers on the rump were of a dusky white, almost approaching to a light fawn colour. I must however add that my observations with the glass were not as satisfactory as I could have wished, in consequence of the dazzling rays of the sun. The bill and legs were a light ash colour, and its size about that of the common Heron. It would measure about 4 feet 10 from tip to tip of the wings, and weigh from 3 to 3½ lbs. The first time I observed it was about the middle of November, it was fishing in some shallow water near the new wall about 200 yards from the wooden jetty. Its second visit to the same place was about a week subsequent to its first appearance.' In the autumn of 1859 a couple of Spoonbills made their appearance in the north of Cumberland within a few days of one another. George Bowman shot the earliest of the two on Scaleby meadows upon the 7th of November. Sam Watson stuffed this bird. A little later in the same year a Spoonbill was shot on the river Irthing near the village of Irthington.

William Graham of Brampton stuffed this bird. *Where* it exists at present I am unable to say, but Mr. H. P. Senhouse found the Scaleby bird in the little inn at Kirkstyle, Loweswater. Mr. Wallace of Distington possesses an immature Spoonbill, which enjoys the peculiarity of being the only example authenticated hitherto from the west coast of Cumberland. It was killed by John Parker of the Tarn, Bootle, on the 22d of October 1864.

Order *ANSERES*.

Fam. *ANATIDÆ*.

GREY LAG GOOSE.

Anser cinereus, Meyer.

The Grey Lag Goose does not appear to have been a common bird in Lakeland at any time, nor is there *early* evidence that it nested with us. Had it done so at all freely, we should have expected to find frequent notices of wild Geese among the birds used for the table at Naworth. The only entries of this kind refer to Geese shot in autumn, when migratory wildfowl could be obtained as easily as home-bred birds. Thus, in 1620, we have an entry between September 23 and 29: 'A wildgoose, xij^d.' In 1634 there occur similar ones; on Sept. 27 they purchased one wilde gouse, viij^d., and on the 4th of October, '2 willd gesse, xvj^d.' These birds, shot in the neighbourhood of Brampton, are quite as likely to have been Pinkfooted Geese as Grey Lags. Richardson says that the Geese which used to visit Ulleswater seldom stayed longer than a day or two except during severe frost. Dr. Heysham says, 'The grey goose is only seen here in the winter, but breeds in many of the fens in England.' It is evident that neither of these worthies had any knowledge of the Grey Lag nesting in their districts, but it must be remembered that in their time it was difficult to visit the outlying parts of this wild faunal area. Hence their knowledge of local natural history was almost exclusively limited to their own immediate neighbourhood. Dr. Heysham knew the Carlisle district extremely well, but there is no evidence to suggest that he had much acquaintance with the more remote

moors and mosses of Westmorland. It is therefore probable that, in spite of the silence of contemporary witnesses, local *tradition* may be right in asserting, as it undoubtedly does, that a few Geese used to breed in the wild country about the headwaters of the Eden in Westmorland. Yarrell wrote of the Bean Goose in the first edition of his *British Birds*, published in 1843: 'A few pairs, it is said, breed annually in Sunbiggin Tarn, near Orton in Westmorland.'¹ There can be no doubt that this statement should have referred to the Grey Lag Goose and *not* to the Bean Goose.

Dr. Gough included the 'Grey-legged Goose (*Anser palustris*)' as an occasional winter visitant to the Kendal district in 1861. A few years afterwards he informed Mr. A. G. More that the Grey Lag Goose had ceased to breed in Westmorland. Sunbiggin Tarn is a lonely sheet of water, lying in a hollow of the wild moors beneath Orton Scar; there the Grey Lag Goose probably bred on islands which, as the tarn has filled up, are no longer distinct from the sedge and bogbean with which they have become closely incorporated. As lately as July last, two local farmers separately told me that Wild Geese visit the tarn in winter; nor could there be any doubt about it, for one had shot a couple, and the other a single bird. The description given by one of them pointed to the Grey Lag, as he emphasised the *blue* shoulders. The same man, a native of Asby, had 'heard tell of' a Goose's nest being found on Eamont.

But admitting that Yarrell was right in saying that a few Geese really bred beside this lonely tarn prior to 1843, there can be no doubt that T. C. Heysham considered the Grey Lag Goose a *rare* bird in Cumberland. He says, in a draft of a letter to B. Greenwell, dated June 11, 1840: 'I have also at present some doubt as to whether the bird you call the Grey Lag Goose is really this species, not having seen one in this neighbourhood for many years.' The birds obtained by Greenwell turned out to be Bean Geese, as I heard from his own lips many years later. In another draft, T. C. Heysham spoke of a local 'Grey Lag'; but it was by an inadvertence, for he crossed his pen through it, and wrote above, 'Bean Goose.'

¹ *British Birds*, 1st ed. vol. iii. p. 61.

Since Heysham's time, the Grey Lag has continued to be the rarest of the Grey Geese which visit Lakeland. Of course such Geese as were shot in the neighbourhood of the Solway were eaten or sent to distant markets, in most instances, until I came to Cumberland; not that my exertions have always averted the recurrence of this unfortunate event. But the Messrs. Mann preserved two fine Grey Lags shot near Allonby prior to 1883, and Mr. Coulthard of Blackwell purchased another local specimen in the Carlisle market. Mr. Edward Tandy called my attention to a Grey Lag Goose shot in a field near the Eden at Langwathby, on March 29, 1889: this he afterwards presented to me. It was one of a pair, and several others were seen in the neighbourhood by Mr. Tandy and R. Raine during the early part of the summer. Geese of different species so notoriously linger late in their winter haunts, if not breeding birds, that it would be unsafe to infer that the presence of the Grey Lags in question indicated any desire on their part to nest. But the presence of the Grey Lag in the Lake district at *any* season of the year is interesting. Mr. A. Smith of Rockliffe, who has probably a better knowledge of the Geese which frequent the Solway salt marshes than any one except Mr. W. Nicol, has on several occasions observed the Grey Lag Goose on Rockliffe marsh, but has very rarely known of a specimen being killed, either by himself or the numerous gunners of the neighbouring villages. In the winter of 1888-89 he observed a gaggle of six Grey Lag Geese frequenting Rockliffe marsh, but they were wild and unapproachable. In the following December Mr. Smith observed a couple of Grey Lag Geese on Rockliffe marsh. On the 8th of that month he was hiding up among some rushes and rough grass at flight time, when, just as the light of the winter afternoon began to wane, he saw two Grey Geese rise off the marsh, and fly noisily to the sand at the water edge; he thought that they alighted there, and was not a little astonished when, looking up, he saw the two great birds fighting silently overhead. He had number one shot in one barrel, and number six in the other, but, being rather flustered, he fired the barrel containing number six, and jumped up as one of the birds fell in a dub of water with a heavy splash. It began to rise, and he

stopped it effectually with the second barrel. In the dusk the blue portion of the wings appeared to be nearly white. I called to see the bird at his house next day, and found it to be in first-rate condition, a very handsome old gander, having many black feathers on the belly. Its companion escaped uninjured. In 1891 a gaggle of seven Grey Lag Geese made their appearance upon Newton salt marsh on February 26, and on the following day my friend Bob Law had a shot at them and killed one of the number. He carried it to Nicol, who told him that it was the first Grey Lag that he had ever seen in the flesh: a splendid bird (as he described it), with flesh-coloured feet and very light shoulders. Unfortunately, Law thought it was too big for a cabinet specimen, and therefore sent it off with other wildfowl to a game-dealer at Wigton. Nicol, having previously shot the Bean, Pink-footed, and White-fronted Geese, was anxious as a sportsman to add the Grey Lag Goose to his list of 'kills,' but their wariness secured their safety. If disturbed on the marshes they flew to a neighbouring moss. He could always distinguish them from Bean Geese by their light shoulders and comparatively light-coloured breasts. He saw them for the last time on March 6, flying high in an easterly direction. With regard to weight, we found that the bird killed by Smith just turned the scale at 8 lbs. Those shot by the Messrs. Mann weighed 9½ and 10 lbs., while the female shot near Langwathby weighed 6 lbs. The occurrence of this species in the west of Cumberland has been ascertained by Dr. Parker, who tells me that a neighbour of his shot a goose of this species near Gosforth in November 1889. Mr. Heywood Thompson has met with it in the Morecambe Bay; but I fancy that it is rare there.

B E A N G O O S E.

Anser segetum (Gmel.).

Dr. Heysham knew the Bean Goose as very frequent in Cumberland in severe winters. Hitherto it has been the common Grey Goose of our faunal area, or at least of that portion of Lakeland which is much visited by any kind of Grey Geese. During the last eight winters, excepting those of 1885-86,

1886-87, when I was absent from Cumberland, the Bean Goose has constantly come under my notice. Indeed I have rarely visited the Upper Solway without observing the Bean Geese, which usually spend the day upon the most exposed portions of the marsh and sands of the estuary. They are, of course, highly sociable. At the beginning of winter it is not unusual to see an odd bird, but they generally pack and live gregariously in larger or smaller flocks. On a recent occasion Mr. Thorpe and I were waiting for duck at the edge of Burgh marsh, when a Bean Goose flew up and alighted within a hundred or a hundred and twenty yards of us, and there remained on the open marsh until a chance movement roused its suspicions. I have occasionally known single birds to fly overhead within shot, but only when our party happened to be without a gun. As a rule they are very wary. They scarcely ever allow a punt to work up to them, and are chiefly shot when they are feeding in the evening or early morning. Much of their food consists of the marsh grasses, but they feed also in stubble-fields and marshy meadows, as, for example, in the neighbourhood of Allonby. Bean Geese were never more strongly represented with us than during the winter 1890-91, when intense frost prevailed in the south of England and on the Continent. In January we visited the meadows frequented by these Geese near Allonby, and found plenty of evidence of their presence in the shape of feathers and of the droppings which so often reveal their being in the vicinity, even when not seen. The spots which they chiefly frequent are rushy and wet; in fact, they like the swamiest portions of reclaimed lands and the edges of open drains; they feed chiefly in the evening and early morning, resting during the day on quiet mosses where they are not pursued, or on the salt marshes. They show a strong affection for particular spots. In the winter 1890-91, many Bean Geese haunted some rough and wet ground on the Eden a short distance from Carlisle; we examined two that were shot, so that there could be no question as to the species. As a rule, those which frequent our marshes seldom seem to wander more than five or six miles inland. They are more often shot by the farmers than by regular gunners, and from their habit of feeding together, it often happens that more

than one are killed at a shot. Upon Rockcliffe marsh I have seen a hundred birds together, but they chiefly consort in gaggles of from five or six to thirty; sometimes an odd bird, perhaps one that has been pricked with shot, frequents a particular spot in self-chosen isolation for several weeks. They are birds of powerful flight, and any one who compares the sternum of the wild Bean Goose with that of a farm-yard bird, cannot fail to be impressed by the degeneration of the latter. The plumage of Bean Geese is very dense, and even when hard hit they often fly considerable distances before they fall. They often prolong their sojourn upon the Solway marshes into the beginning of summer. It is not known whether the flocks of Geese which visit the centre and west of the Lake district belong exclusively to this species; but I am strongly of opinion that most of the numerous notices of Geese seen in the interior of Lakeland relate to Bean Geese. At all events, this species has been identified at Alston, near Keswick, Cockermouth, and as far south on our coast as Bootle. But the comparative abundance of these Geese in the neighbourhood of the Solway is probably to be accounted for by the fact that this district lies in the line of their migration. Journeying from Eastern Europe to winter in Ireland, which is understood to be a great stronghold of this species, the Geese pass over the Lake district, some visiting Windermere and other lakes in their journey westward, and the larger proportion passing through the west of Cumberland to reach the Irish Channel. The Messrs. Mann have for many years noticed the passage of these birds in late autumn and early spring, the Geese travelling westward in November, to return in spring in an easterly direction. I have often seen them coming from across the Pennine fells at the former season. The *Carlisle Patriot* of March 11, 1842, tells us that on the 8th of that month a very large flock of wild Geese were seen passing over Cockermouth, making a tremendous noise, and that another large party passed over Bootle on the morning of the 6th, 'making in an easterly direction.' The same journal records that a flock of sixty wild Geese passed over Stainton and Stanwix, 'taking an easterly direction,' on March 21, 1843. The *Carlisle Journal* of December 30, 1870, alludes to large flocks of Geese seen on the west coast

of Cumberland the previous week, adding that in the winter of 1864-65, which was unusually severe, many wild Geese were shot in the west of Cumberland. The *Patriot* of January 21, 1842, chronicles that 'during the last few days a great number of wild Geese have been *vegetating* both in Bassenthwaite Water and in Keswick Lake.'

PINK-FOOTED GOOSE.

Anser brachyrhynchus, Baill.

'The earliest reference to this species in Lakeland that I have as yet discovered appears in a note which T. C. Heysham directed to the late Mr. J. H. Gurney, dated February 23, 1842. In this he says, 'I feel myself extremely obliged to you for your kind offer to send me a specimen of the Pink-footed Goose, should you at any time have the chance to meet with it again, and I beg to say that such a thing will be very acceptable, as it is a rare bird in our market, as nearly all the wildfowl now taken in the west of Cumberland are sent to Liverpool by steam.' Mr. J. B. Hodgkinson is under the impression that this bird was not uncommon on the Solway marshes at the time that T. C. Heysham wrote this letter, and certainly the letter contains a hint that Heysham knew that the bird had occurred locally. Mr. A. Smith first met with this species on Rockliffe marsh in 1871. On the 6th of November that year he shot a solitary bird, which he says had been about for some time, and had all the appearance of having been wounded previously. He never secured another specimen until the 16th of February 1888, when he shot a fine bird out of a gaggle of thirty-four individuals, which had frequented Rockliffe marsh for the previous two months. On the 26th of December 1889 another Pink-footed Goose was shot on Rockliffe marsh out of a gaggle estimated to consist of forty birds. The head was duly forwarded to me for identification. On the 8th of March 1892 I received a note from Mr. Smith, in which he says, 'There are at present a large number of geese on the marsh, and at least three varieties, namely, Barnacle, Pink-foot, and Bean Geese. They are likely to remain for a short time while this hard weather continues. If

your friend Mr. Thorpe and yourself can find it convenient to come out during the day, you might get a good look at them with the glass, as they are generally feeding at that time.' It is scarcely necessary to say that we accepted the suggestion gladly, and were rewarded for our trouble by disturbing a large flock of Pink-footed Geese from the open surface of the marsh. Although the weather was severe, and the cloud-capped hills that bounded the horizon were robed in snow-drifts, the Geese were too wide-awake to allow a close inspection. For once they were content to pitch in a long line upon the grass, but when we attempted to approach them by strategy, they lifted and joined the other geese that were sitting out upon the sands. The ground upon which these birds had been feeding for some weeks proved to have been eaten very bare. It was covered with their droppings, and many of their feathers strewed the ground; indeed this last feature was so marked as to make us wonder whether the Pink-footed Goose performs a partial moult in the spring of the year. A few nights after our visit Mr. Smith shot one of the Pink-footed Geese, and sent it to Mr. Thorpe. He had previously had one successful evening with the same birds, and assures me that the heaviest of the four turned the scales at $8\frac{1}{2}$ lbs. The other three Pink-footed Geese killed the same evening weighed 5 lbs., 6 lbs., and $7\frac{1}{2}$ lbs. The heaviest Bean Goose that Smith ever scaled weighed $9\frac{1}{2}$ lbs. On the other hand, a Pink-footed Goose which Nicol shot on the 22d of January 1891, only weighed 4 lbs. 14 oz., at the end of a spell of sharp frost. The finest Grey Lag Gander I ever handled weighed just 8 lbs. Of nine White-fronted Geese shot together, the smallest scaled 4 lbs., and the finest bird weighed just 6 lbs. The heaviest White-fronted Goose that I ever weighed was shot in Ireland in February 1887. It weighed $6\frac{1}{2}$ lbs; other birds of the same species weighed $5\frac{1}{2}$ lbs., 5 lbs., $4\frac{3}{4}$ lbs.

Very few Grey Geese are shot on the marshes of the English Solway at any time, but Story has a bird which he shot near Kirkbride in the winter 1888-89. This is a Pink-footed Goose, as was a local bird which I bought for Mr. Tandy in November 1889. Mr. W. Nicol has met with a few of these Geese near Sillioth, and he tells me that when feeding they generally keep

close together, feeding on the extreme edge of the marsh. He correctly remarks that their call-note is shorter and more frequently uttered than that of the Bean Goose, a remark which will be borne out by any one who has a practical knowledge of the notes of the two species. Grey Geese are rarely shot in the interior of Lakeland, which they chiefly cross in their great migratory journeys. Mr. Johnson is disposed, however, to think that this species occurs not unfrequently in the neighbourhood of Brampton; certainly they appear on our eastern fells occasionally. On the 8th of January 1887, Mr. Goodenough, a visitor at Naworth, was out shooting on Townfoot Farm, Brampton, with Brown, the keeper, when they came across a gaggle of sixty-nine geese sitting in the middle of a stubble-field. They concealed themselves behind some oat stacks, and sent some men round to drive the Geese, which rose to a considerable height before reaching the stacks. The guns brought down one Goose apiece, birds in fine condition, which turned the scales at 8 lbs. Upon investigation the birds proved to be Pink-footed Geese; one of them was sent to Duncan of Newcastle for preservation. My present information, received from several gentlemen intimately acquainted with Morecambe Bay, seems to negative the supposition that the Pink-footed Goose is at all abundant in the neighbourhood of that estuary, although all my informants have shot Pink-footed Geese on the marshes of the Ribble. Mr. Sharpe kindly tells me that he shot a Pink-footed Goose in Morecambe Bay in January 1891, on the only occasion that he has been able to positively identify the bird in that portion of our faunal area.

WHITE-FRONTED GOOSE.

Anser albifrons (Scop.).

Richardson includes the White-fronted Goose in his fauna of Ulleswater. Dr. Heysham also states that 'this species is pretty common in the winter;' so that the species has been recognised for a hundred years as visiting Lakeland. It is, however, a very uncommon bird, even in the neighbourhood of the English Solway, nor has it ever been known to make its appearance in numbers at all comparable to those of either the

Bean or the Pink-footed Geese. The late Sam Watson of Carlisle told me that he stuffed several local specimens during his extended residence in that city. The late Sir W. Jardine obtained specimens on the Scottish side of the Solway which I examined at his sale. On the English side Messrs. Mann shot two beautiful birds out of a gaggle of five which visited the neighbourhood of Allonby in November 1882. They also identified the remains of a single individual, which a farmer in their neighbourhood shot in November 1884. The bird itself was eaten. I never heard of any others until Mr. Nicol shot an adult near Skinburness, January 16, 1889, in quite open weather. It was regarding this bird, the first which he had ever seen, that Mr. Nicol wrote to me : ' The bird I sent you was an old bird ; but it took in with the four Pink-footed Geese that I had seen for some days, and when they were feeding it kept to the outside. Had it not done so, I should most likely not have got it, as it was nearest me when I shot at them, and I missed the other four.' Upon the 6th of January 1890 the same observer was standing at his cottage door at Skinburness when he observed a party of nine Grey Geese fly up from the sea. Circling round, they alighted upon a somewhat elevated part of the marsh, which was rapidly being submerged by the flowing tide. Running to his punt, which lay moored in a neighbouring creek, he put off, and after paddling through some rough water in the teeth of the wind, succeeded in working up to within fifty yards of the birds. He fired, and to his astonishment all the birds stayed. Eight were shot dead, and the ninth was mortally wounded. It was the first shot that he had ever been able to get at Grey Geese of any kind *with a punt gun*, and only the second time in his life that he had met with the White-fronted Goose, to which his whole bag belonged. They exhibited a beautiful series of all sizes and ages, from the youngest bird which had not a white feather, or the bird in which one or two black feathers were just beginning to show, to the richly variegated veterans of the flock.

Piled together on a cottage table, as I saw them next morning, they made a very striking wild-fowler's 'trophy,'—the orange colour of their feet embellishing the general effect produced by

their handsome plumage. But the White-fronted Goose, though an infrequent visitant, is not limited in its appearances to our salt marshes. In January 1891 I handled a couple of adult birds which had been shot near Plumpton the previous day. Another specimen had been shot some years earlier in the same district, viz., at Edenhall, where it is preserved. I have not heard of any examples being obtained in East Westmorland, but the late Mr. Hindson shot a White-fronted Goose at Burton-in-Lonsdale, just outside our southern limits, in 1830. I am indebted to Mr. Edmund Sharpe, one of the enthusiastic amateur punt-gunners of Morecambe Bay, for a notice of the recent occurrence of this Goose upon that part of our coast. Referring to his experiences of the winter 1890-91, when he was shooting upon the Kent near Arnside, Mr. Sharpe makes the following remarks: 'With regard to the geese, I never saw geese myself before at the head of the bay, they only come in very hard winters, there is no proper food for them. In the estuary of the Ribble it is different, they are there every winter, and in considerable numbers, but there are some good marshes there which accounts for it. There were only 10 geese in the flock I saw in January last, I got 3 of them, the other 7 have been seen several times since [February 7th, 1891], but no one has succeeded in shooting one. Two of those I got are unmistakably "white-fronted geese"—a bar of white across the base of the bill, or rather the "foot of the forehead," if I may use such a term, and barred on the breast, with orange feet. The third goose was a very heavy bird indeed, not unlike the others in colouring, but no sign of a white "front" nor bars on breast, and the feet a real chill *beet-root* colour. These were the only geese I have ever seen, or shot at in all the years I have used a duck punt on the Lune, and now at the head of the bay (some 22 years).' The fact of this species being observed (both by Mr. Sharpe and W. Nicol) to *associate with* Pink-footed Geese is interesting. The White-fronted Goose is never as heavy a bird as the other Grey Geese. It seems to lose condition more rapidly than they do in continued frost. But six pounds is a heavy weight for even an old gander of the White-fronted Goose. Whereas it would be a very light weight for any of the other Great Geese that visit us.

SNOW GOOSE.

Chen hyperboreus (Pall.).

Although well authenticated as an occasional visitant to Ireland, thanks to the researches of Mr. Howard Saunders and Mr. J. E. Harting, and reported by Mr. Gaetke as having been identified at Heligoland, this Goose was only ascertained to have strayed to Great Britain in 1884. It was on the 22d of August in that year that a single Snow Goose made its appearance on the shores of the English Solway, near Allonby.

Starting for the coast by an early train, my companion and I reached the beach about 9 A.M., the morning being fine and calm, with a haze at sea. My astonishment may be imagined, when a Snow Goose came flying along the edge of the water, coming out of the west. It flew so leisurely that we felt sure it must soon alight to rest, so, instead of trying a long shot at it with small shot, which was all we had, I contented myself with pointing out to William Railton, who accompanied me, the salient points in the Goose, which I had of course no difficulty in recognising. The bird never alighted; all inquiries on the Scottish and English sides of the firth failed to elicit any detailed information. There can be no doubt that it flew up the whole length of the Solway, and was last seen by a punt gunner making for the Esk. At a later date a Scotch fisherman supplied Mr. R. Service with a description of such a bird, which he said that he had found washed up dead. His employer, to whom he professed to have shown the bird, disowned any such proceeding. I have no doubt that he obtained his description of it from one of the Scotch fowlers, to whom I had written to describe the bird and say that it was 'wanted.'

Curiously enough, the species reappeared in January 1891, almost in the same identical neighbourhood in which it had first occurred to us. A party of four birds were seen in a grass field near Mowbray, by a young farmer, who was positive that they were 'white geese.' His dog rose them, and he had an excellent view of them at comparatively close quarters. Mr. R. Mann cross-examined another man who had seen them, and was positive they were White Geese and not Swans.

Mr. J. N. Robinson received a good description of the same birds from one of the fishermen on the Eden. We ourselves searched for them unsuccessfully until the 22d of January. On that day I walked beside the Eden with Mr. Thorpe, hoping to fall in with some Smews, and to our surprise obtained a fine view of four Snow Geese fighting down the Eden valley at a good height. The atmosphere was fortunately clear, and we thus secured a good opportunity of watching the birds as they swung round a bend of the river. Their anserine flight, and comparatively short necks (as compared with swans) were as convincing to our incredulity as the contrast of the black flights to the snowy body plumage. Mr. Thorpe is quite as experienced in the flight of wild-fowl as myself, and having a cosmopolitan acquaintance with birds, his opinion was perhaps worth more than that of one who has perforce confined his attention hitherto to the birds of Western Europe. We tried to mark down these Geese. They disappeared from view behind a distant clump of trees on the other side of the river. We searched for them diligently on the following day, but never saw them again. Mr. Thorpe, however, secured his revenge, for these birds having outwitted us, in November of the same year, when he stalked another party of Snow Geese on a creek in the North-west Territory, eventually securing a fine old gander.

BRENT GOOSE.

Bernicla brenta (Pall.).

The earliest mention of this species, as frequenting the north-west coast of England, appears to be that of John Denton, who, writing in 1610, derives the name of the township of Rotington, near Whitehaven, from the 'Rotgeese,' *i.e.* 'Root Geese,' referring to the habits of the bird. He says, 'Rotington, *villa ad Pratu Rotinge*, so called because it was usually haunted with Barnacles, Rotgeese, and wild-fowl before it was inhabited.'¹ This local name has latterly become entirely obsolete.

Coming to more recent times, Dr. Heysham included the

¹ Denton's *Account of Cumberland*, p. 25.

Brent Goose in his Catalogue, and as his list was almost entirely restricted to the species represented by specimens preserved in his own collection, the probability that he met with it himself is a strong one, especially as T. C. Heysham undoubtedly did so. But though this Black Goose has probably always paid more or less annual visits to our coast, there can be no doubt that its appearances are irregular, and that, in the absence of any feeding-grounds adapted to its peculiar retirements, it never stays long with us. Both dark and light-breasted birds occur on our estuaries. During the winter 1885-86, some fifteen individuals were shot on the English Solway, and these were dark-bellied. On the 11th of January 1861 the late W. T. Mackenzie had the remarkable good fortune to kill four Brent Geese at one shot, on the Eden near Carlisle, with a gun built by Wallace of Wigton; these were dark-breasted. A bird which I found washed up dead on the beach near Maryport, in March 1888, belonged to the same race as those just mentioned. I am disposed to think that the light-breasted birds really occur rather the most frequently on our coast, where we should naturally look for the Atlantic type to predominate. The species usually occurs with us in small bunches. Mr. W. Nicol, whose life is spent on the Solway, and has therefore exceptional opportunities of observing such a species as the present, shot a single Brent near Silloth on November 11, 1888, saw five others in December, and a flock of these Geese below Silloth in March 1889. While shrimping on the coast west of Silloth, on August 25, 1889, Mr. Nicol obtained a close view of a solitary, white-breasted Brent, which twice flew round him. It came from the Scottish side, and had perhaps passed the summer on the estuary of the Nith. He saw a party of five Brent Geese on the Wampool in October that year, but they only stayed a few days. He shot, and sent to Mr. Tandy, a light-breasted Brent in January 1890. In the severe winter of 1880-81, when the Solway Viaduct was broken by the masses of drift-ice piled against its supports, Mr. Nicol saw a flock of more than a hundred of these Geese flying up the Solway Firth in an easterly direction. Bryson, another gunner of long standing, tells me that he once worked up to a lot of about sixty Brent Geese in the Solway, in the spring of

the year. He expected to 'rake' the birds, but his gun *missed* fire. Brent Geese occasionally visit the salt marshes of the upper Solway—stragglers have been shot at Rockliffe—as well as the estuaries of Ravenglass, where Dr. Parker has obtained examples, and of Morecambe Bay, but their favourite *algæ* are either absent, or too scarce to induce them to stay more than a day or two on passage. Otherwise, they are compelled to graze on the common grass of the marshes, as was the case in 1886, when I dissected a fine old gander which had glutted itself with fine wiry grass, mixed in its stomach with a quantity of fine sand. This bird had been killed on the Solway near Glasson, and weighed 3 lbs. 1 oz., the weather being severe. The Brent Goose rarely occurs in the interior of Lakeland. Mr. Hutchinson recently showed me a fine specimen obtained inland near Kendal, a light-breasted bird. It had probably strayed up the Kent from Morecambe Bay.

BARNACLE GOOSE.

Bernicla leucopsis (Bechst.).

The Barnacle Goose has long been recognised as a winter visitant to the north-west coast of England. John Ray observes of this species 'Maritima Lancastriæ frequentat.'¹ Dr. Leigh describes the bird as very common on the Lancashire coast.

Gerard quotes the myth of the development of this Goose from a shellfish, and states that the bird fetched threepence in the market, and was called a 'tree Goose' by the Lancashire folk in his day.² Dr. Heysham writes that Barnacle Geese 'are very frequent upon our coasts in the winter,' referring, no doubt, to his experiences of Rockliffe salt marsh.

T. C. Heysham remarks, in a draft letter to the late Mr. Gurney, of July 22, 1833: 'The Barnacle is one of the most regular winter visitors to this district, seldom varying more than 10 or 12 days either in its arrival or departure,' another allusion to Rockliffe marsh. Whatever may have been the case before the marsh lands in the neighbourhood of Morecambe Bay

¹ *Syn. Meth. Av.*, p. 137.

² *Herball*, pp. 1391, 1392.

were reclaimed, there can be no doubt that the Barnacle Goose is only an irregular visitant to that portion of our coast-line at the present day. The late Mr. Kirkby of Ulverston assured Mr. Duckworth that a Barnacle shot in their neighbourhood in November 1888 was the first that he had stuffed during a long experience. Mr. Durnford records that several were shot near Barrow in December 1879.¹ The bird no doubt visits the district in most winters, but only irregularly, and when travelling between more favourite haunts. It is well known at Ravenglass, where Dr. Parker obtained an example in November 1878, and heard of others.²

Dr. Stanley, in 1829, included it in his Whitehaven list as 'rare' in his neighbourhood, no doubt with justice; for, though the species is well known on our coast-line, it is only abundant on certain salt marshes between Silloth and Floriston. It has occasionally been observed when crossing the Pennine hills on passage, but has very seldom been shot in the interior of Lakeland. A specimen preserved at Edenhall was shot in that neighbourhood, and stragglers occasionally fly up the Eden. Richardson, who knew the species to be common *on our coast*, says that, in his day, Barnacle Geese sometimes spent a few days on Ulleswater. I have not heard of any being killed on that lake recently; but, in the winter of 1889-90, two Barnacle Geese made their appearance on Windermere Lake. One bird of the couple was shot, and is preserved by a local resident, as I learn from Mr. H. E. Rawson. Among the dales of our eastern limits the Barnacle is little known. It has occurred near Alston. William Dodd wrote to T. C. Heysham, on December 8, 1834: 'Mr. Heysham,—Sir, I have, per this day's carrier, sent you a Barnacle goose for which I paid 5s., not knowing whether it might be useful to you or not, I thought it was best to name the price that I had given for it, so that, if you keep it, you know the price, and if you do not you would oblige me greatly by getting it stuffed for me and returning it again when done. It is considered a rare bird in this part.' The late George Mawson recorded that a flock of Barnacle Geese appeared in the neighbourhood of Cockermonth in the month of January 1865, during

¹ *Zoologist*, 1880, p. 246.

² *Ibid.* 1879, p. 118.

a severe frost. Johannes Caius, to whom we probably owe our earliest account of the Barnacle Goose as a British bird, tells us: 'Gregalis avis est et garrula. Ex pisce vivit, frequens apud nos per littora in Britannia.'¹ Though this early author was incorrectly informed as to the food of this Goose, his description of the bird as noisy and as gregarious is very apt. Single birds are rarely seen, and the chorus of a flock of Barnacles in full cry can be heard at a surprising distance. These Geese frequent the salt marshes of the English Solway during at least seven months of the year, but they are very local in their choice of feeding-grounds. Two conditions are necessary to secure their constantly frequenting any locality, viz., a supply of young grass, such as grows on newly-forming marsh land, and a fair security that they will not be much interfered with during the hours of daylight. Rockliffe marsh was formerly their most favourite haunt, but, since 1888, they have preferred the salt marshes of the Wampool and Waver estuary, where they are rather less disturbed. Probably they would feed during the day, if it were possible to do so with absolute safety—indeed, they do feed a good deal during daylight upon their first arrival in autumn, after which, most of their food is obtained between the evening and early morning. Their arrival varies rather more than might be expected from T. C. Heysham's remark. In 1885 the first Barnacles were seen on our coast near Allonby upon the 1st of October. In 1886 a party of them arrived at Rockliffe on the 11th of October, which station was visited by the same birds on the 24th of September 1887. In 1888 the first Barnacles were shot on the 22d of October. In 1889 they arrived on September 27th, though I did not meet with them myself until a fortnight later. In 1890 Mr. H. Leavers and two friends saw an odd Barnacle on the Esk on the 25th of September, but it was only on the 9th of October that Mr. Nicol shot his first Barnacles of the season out of a flock of several hundred birds newly arrived on the Wampool and Waver estuary. In 1891, between two and five hundred birds arrived on Long Newton Marsh on September 28. Two were shot near Allonby on the 30th. About the 10th of October 1890 Mr. Tom Duckworth saw a flock of these

¹ *De rariorum animalium et avium stirpibus, 1570.*

geese flying from Croglin to the Solway, travelling to the estuary out of the east. My first opportunity of studying these birds in October 1890, occurred on the 24th of that month, a rough, squally day, with a strong N.W. to W. wind, and occasional showers of sleet. On reaching Newton marsh at 10.30 A.M. we found the Barnacles assembled on the opposite side of the Wampool. They rose and pitched again in a great herd under the brow of the marsh, 'clanging' noisily. They appeared to be unsettled. In a few minutes the assemblage split up into two great flocks, the first fighting in a broadly extended file to the N.E., probably to Rockliffe, while the second lot flew in a swarm up and down Wampool, and a few went off in threes and fours. Presently they reunited, and pitched in a long column, many ranks deep, upon the open sand beside the Wampool. The herd was densest in the centre, the birds not being so closely crowded together on the right and left wings. We crept cautiously to the nearest view of the birds that could be obtained, and enjoyed a careful study of their serried ranks, the black jugulum and white belly of every individual showing up to the glass with good effect. Often as I had viewed them before, one could not contemplate a phalanx of a thousand Barnacles without feelings of admiration. After a quarter of an hour's rest, the geese rose again and swept restlessly backwards and forwards as though undecided where to alight, flying now in long extended lines, now many abreast, always crying loudly. At last about half of the number pitched upon the grass of Newton marsh. We approached them cautiously. While still a long way off, one of their sentinels left his companions and flew slowly over the marsh, giving tongue lustily. He circled back to his fellows. They rose again and departed *en masse*, at least with the exception of four, which settled on the sands still further away. On examining the part of the marsh in which they had most recently been feeding, we found numerous fresh droppings, with here and there a grey body feather. On the 7th of the following November we were walking near the Solway Viaduct at Bowness, when we heard the Barnacles calling lustily. In another minute a lot of about fifty passed over us in full cry, flying in a V formation, with a few stragglers

outside the figure. They were taking a short cut across the fields from the Wampool to the Solway, making for Rockcliffe marsh. They flew with their necks moderately outstretched. This was at 11 A.M., tide ebbing rapidly. On the 12th of December that year we revisited Newton marsh, and soon disturbed the Barnacles, which rose in a sort of loose skein. Some of them formed a V formation. Others flew off in a long wavy line to the sands, and others fell into two squads and pitched on the grass again. I made a long détour to drive them, if possible, past Mr. Thorpe, who was hiding up on the nearest bank of Wampool. They awaited our nearing approach with a forest of outstretched necks, and when only three hundred yards lay between us they rose and flew off to join the members of their fraternity already sitting out on the far sands.

Hoping to turn the flank of the tuneful company I fired a cartridge, and of course they lifted, but instead of wheeling up the Wampool, and affording the sportsman of the party the coveted privilege of offering a salute, they crossed the Waver and pitched in the middle of Skinburness marsh. Four only dropped away from the host, and flighted towards Mr. Thorpe; these detected him in time to swing sharp round, and thus to save themselves from a hot reception. Early in the following January, during frost, these Barnacles left Newton marsh for the Scottish Solway, but returned after an absence of several days, and frequented the Wampool and Waver until the middle of April, when they migrated, presumably to the Arctic circle. A good many Barnacle Geese are killed on Rockcliffe and Skinburness marshes in most winters, almost always with shoulder guns, for they have only been known to sit to punt guns in isolated instances. Those who kill them either wait for them at dusk or in moonlight when the geese are on the feed, or drop on to them in the grey light of a winter morning. Wounded Barnacles are generally killed by the great black-backed gulls, but birds which have only been crippled are sometimes captured out on the sands at low water. The speed at which a Barnacle can run recalls an amusing incident witnessed in St. James's Park in September 1887. An old mallard found a large crust of bread, and waddled off with its prize in ostentatious haste. A

cry arose among the water-fowl, 'Heigh! stop that fellow!' and every bird rushed pell-mell after the fugitive. A Barnacle ran like a lurcher, and caught up the duck, which dropped the crust in alarm. The Barnacle stood triumphantly over the coveted morsel. Some herring-gulls tripped up and disputed the crust with the goose. The old duck pecked about the grass, suddenly ran in, picked up the crust from between the disputing parties, and rushed away across the turf. The Barnacle pursued, and just as he was about to overhaul the mallard, the latter dropped the crust and tore a big piece out of it, leaving only a moiety to the bully.

When the tide of the Solway begins to ebb, and isolated sand-banks appear above a wild waste of waters, Barnacles often rise off Rockliffe marsh, and alight again on the first bars exposed, there to linger until another and more extended sand-bank becomes dry. Other variations occur in their daily routine, such as alighting in the shallows of the estuary, and marching in a line to the brow of the marsh opposite, which gained, they range themselves along the edge of the loose turfs of the saltings; or again, they alight in the water and swim a short distance. They are never long silent, neither do they associate with other fowl. They generally leave the Solway in March and April, but sometimes a few linger into May. At that season, pinioned Barnacles exhibit much restlessness and display symptoms of the migratory impulse by their loud calls. Those shot in open weather are considered to be good eating, but they only bring about eighteenpence apiece to the poor fishermen who kill them for the market. The ganders are the largest birds, and can be distinguished externally from females by the shape of their cranium.

MUTE SWAN.

Cygnus olor (Gmel.).

We have no evidence to show at what date the Mute Swan was first placed upon our private waters. Certainly not later than the seventeenth century, because Machel alludes to the fact as already complete: 'There were swanes formerly kept on the

foot of Deepthwaite [in Kendal Ward] wh. sat and bread there.'¹ But I cannot find any subsequent allusion to the presence of this swan prior to Clarke's remark in 1787, that Miles Sandy kept a few swans on Esthwaite, 'which added greatly to the beauty of that lake.' During the first half of our century an advance was witnessed in the domestication of these birds. Our local newspapers of the 'forties' and the 'fifties' contain many protests against the then prevailing custom among sportsmen to shoot the Mute Swans which had strayed from private ponds. Probably the swan which was shot on Bassenthwaite, 'converted into soup, and distributed to the poor of Keswick,'² was a stray Mute Swan.

POLISH SWAN.

Cygnus immutabilis, Yarrell.

Having already explained (vide *Prolegomena*) the grounds upon which I have felt it my duty to risk unfavourable criticism by admitting this Swan to specific rank, it only remains that I should supply the needful particulars of the four Polish Swans which have been taken in Lakeland. Early in January 1892 information reached me that a small herd of wild swans had appeared on the English Solway, in the neighbourhood of Cardunock. Their presence was soon ascertained by the local punt-gunners, who however found them so wild that it was almost impossible to work up to them. On the 14th of January, R. Law secured one of the three swans then frequenting the Waver. He forwarded it to me the same day. It proved to be a typical Polish Swan, with a feathered, suppressed frontal tubercle, and the narrow, lean, snake-like head, characteristic of the true wild-bred *Cygnus immutabilis*. Mr. Nicol shot one of the two survivors on the following day. Story shot the third bird on the Wampool on January 16th, after a severe chase, for at first it was only crippled. A fourth specimen was shot in the Solway off Burgh Marsh on the 18th of January. The birds, taken in the chronological order just mentioned, weighed (a female) 17 lbs. 2 oz.; (a male) 18 lbs.; (a male) 20 lbs.;

¹ Machel ms. vol. ii. p. 173.

² *Carlisle Patriot*, Jan. 24, 1852.

(a female) 16 lbs. Mr. Thorpe and I carefully dissected the bodies of the first and third. The female bird shot by Law measured 4 feet 11½ inches across the wings, measured carefully from tip to tip. The stomach of this bird contained remains of vegetable fibres mixed with much fine sand. The bird shot off Burgh marsh was pure white, and appeared to be an old female. The other three birds retained some cinnamon-tipped feathers on the upper parts, very distinct indeed in appearance from the grey feathers of the cygnets of Mute Swans, and affording a grateful contrast to the blanched white body-colour. The four birds all agreed exactly in the peculiar characters of the head and bill.

W H O O P E R S W A N .

Cygnus musicus, Bechst.

The earliest hints that I can find, that wild Swans frequented our lakes two centuries ago, are supplied by entries in the Rydal and Naworth Accounts. The Naworth Accounts for 1622 include an entry, 'Janu . . . 3. To Mr. John Skelton's man of Armathwate bringing a swan, ij^s. vj^d.' There is another entry in 1624: 'Decembr. 3. To one bringing a Swan, xvij^d.' Similarly Sir Daniel Fleming enters in his expenses for 1661, 'Dec. 1. Given unto Parcivall Corratt's son, who brought hither a swan, £00, 01s. 00d.' A similar item appears on the 27th of the following January: 'Given yesterday by my wife to Hird's daughter, who brought a swan, £00, 01s. 00d.' The fact that these and other swans were invariably supplied in the dead of winter, renders it tolerably certain that they were wild birds. The statement which Robinson made in 1709 probably represents an admixture of truth and fiction. If it relates to wild swans, the first sentence may be accepted, but the portion bracketed here must be rejected: 'There come every year a number of Swans to winter upon this water [and in the spring they breed on the little islands in the water, or in the sedge growing by the sides of it]; and as soon as the young brood gets wing, the old ones carry them into the southern rivers.'¹

Richardson writes in 1793, of *Anas cygnus*, Wild Swan :

¹ *Essay toward the Nat. History of Westmorland and Cumberland*, p. 60.

'This bird visits the lake [Ulleswater] only preceding or during severe frosts : his appearance is looked upon as the prognostic of a hard winter.' Dr. Heysham wrote too early to discriminate between the Whooper and Bewick's Swans, but the species that he was acquainted with was probably the Whooper ; he explains that its trachea distinguishes it from the Mute Swan. We can hardly doubt that such an acute observer would have noticed as new the sternum of Bewick's Swan, had any adult examples of that small swan come under his personal observation.

Dr. Heysham remarks : ' A flock or two of wild Swans generally visit Cumberland every severe winter. Last winter [1794-1795, which proved severe] a flock frequented the Esk near Netherby, three of which were shot [*i.e.* by Sir James Graham and his gamekeeper].' The winter 1795-96 'was remarkably mild,' consequently 'neither wild geese nor Swans were seen' at Netherby. The *Carlisle Journal* of Feb. 19, 1803, records the death of a bird which from the measurements given was no doubt a Whooper : 'On the 9th, William Scott, groom to the Right Hon. Thomas Wallace of Carleton-hall, shot a swan in the river Eamont which measured five feet six inches from the beak to the end of the tail, and seven feet six inches across, from the tips of the wings.' On the 5th of March the same year, the *Carlisle Journal* adds the information : 'On Sunday the 13th ult. upwards of 30 Swans were seen upon Bassenthwaite water : they made a most beautiful appearance. Three Swans have been shot in that neighbourhood.' Writing in 1828, Dr. Stanley of Whitehaven states : 'Anas Cygnus, the Wild Swan.—In hard winters small flocks are seen ; several were shot near Ennerdale Lake two or three years ago.'¹ Under the *nom de plume* of 'Philagros,' an unknown individual records, on January 31, 1830, that a herd of about thirty swans, Whoopers, from the measurements given of one shot, had recently visited Windermere, Esthwaite, and Coniston.²

Mr. T. C. Heysham had already made the personal acquaintance of the Whooper, since he states in the sixth volume of the *Philosophical Magazine* : 'Small flocks of wild Swans are seen almost every winter in Solway Firth, and generally one or two

¹ *Mag. Nat. Hist.* 1829, p. 276.

² *Ib.* 1830, p. 439.



MONKHILL LOUGH. A HAUNT OF WILD SWANS.



procured. On the 20th of February [1829] two were killed out of a flock of five on Burgh Marsh.' In a draft letter of October 14, 1831, Heysham says, 'Two or three good things have lately been met with in this neighbourhood [*i.e.* in the early months of the year], including a specimen of the Whooper Swan, two of the Great Snipe, and a pair of the Bohemian Chatterer.' An undated letter, probably draughted in 1838, runs thus: 'Mr. Heysham presents his compliments to Miss Garforth, and has taken the liberty to ask her if she thinks a wild Swan would be at all acceptable to Mr. and Mrs. Lawson at Brayton. He makes this enquiry at the request of a poor industrious man of the name of Musgrave, who has now one alive in his possession, and which he intends to keep until Saturday. He states that Mr. Lawson has at present a very considerable number of Water Birds in his Park, and provided that he has not already a Wild Swan, it may perhaps be an acquisition, as it very rarely happens that one is captured alive. Wednesday evening.' Whether this was a Whooper I cannot positively say, but I have little doubt that it was. Heysham writes to the late Mr. Gurney on February 14, 1838: 'Many thanks to you for your valuable present of a young specimen of *Cygnus Bewickii*, which reached me in excellent order on Monday last. This is by much the smallest specimen of that species I have yet examined, but the young birds, not only of *C. Bewickii*, but also of *C. ferus*, vary very much in size, etc. Large flocks of Swans during the last ten days have been seen in various parts of this country, but very few hitherto have been obtained. I have only seen one, which however was a most magnificent specimen of *C. ferus*.' It may be remarked, *à propos* of this, that a specimen of the Whooper preserved in the Newcastle Museum is labelled 'mature female, shot near Carlisle, winter of 1838. Presented by Mr. Wm. Green.' Heysham adds to the above letter, 'The frost returned again on Saturday last, and has gradually increased in intensity ever since, and so far there is not the slightest indication of any change.' Mr. Hindson remarks of the Whooper in his MS.: 'In 1838 several were killed in the Lake district. Dr. Cockburn shot two in the Lowther river, near Bampton, Westmorland. Mr. Peter Wilman and

myself were standing on Leckbeck Bridge, in December of the above year, when four of these Swans passed over our heads, not more than twenty feet above us. Unfortunately we neither of us had a gun, although we had been out shooting a short time before.'

A loose note of T. C. Heysham runs thus: 'The Hooper, or Whistling Swan.—Jan. 27, 1848.—Three birds of this species were in the Market this day shot on Burgh and Rockcliffe marshes, an old bird and two young ones. Four were seen flying over the town in Decr. 1847, and during the same winter three were shot in the neighbourhood of Carlisle. Jan. 29, 1848.—I was informed this day that seven Wild Swans were seen on Burgh marsh, six of which were shot a few days ago and forwarded to London for sale.' A specimen of the Whooper preserved at Edenhall is recorded in the *Carlisle Patriot* of January 14, 1865, as having been recently shot 'by R. C. Musgrave, Esq. of Edenhall, on the banks of the Eden near Udford.' Another adult Whooper, which had for some days frequented the middle reach of Ulleswater lake, quite alone, was shot there by one John Simpson, on the 21st of January 1867; as recorded in the *Carlisle Journal* of February 1, 1867. A few other specimens have been seen, if not actually obtained, in subsequent years upon our lakes, in the Eden valley, and the neighbourhood of the Solway Firth. Though wild swans are popularly considered very rare in Lakeland, the more experienced and aged gunners of the Solway have at one time or another met with, and even shot, a few wild swans. Bryson says that once, early in the seventies, he saw a herd of thirty-six wild swans on the Solway. He has since met with a few others while punt-shooting, but only in very small numbers.

It does not appear that any Lakeland naturalist has hitherto attempted to describe the habits of wild Whoopers. I shall therefore endeavour to supply the deficiency, even at the risk of being voted prolix. It was on the 7th of February 1891, that, visiting Monkhill Lough, I found four wild swans swimming on the edge of the sedge. Hearing them '*clanging*,' I at once conjectured that they must be Whoopers. Soon after my arrival I had irrefutable evidence of their specific identity in their well-defined '*hooping*,' the action which accompanied this call

being already familiar to me, as studied in a pinioned bird at the Zoological Gardens. They were feeding in company, and all four necks were sometimes straightened or bent forward at the same instant. For a few moments they would observe silence; then they 'hooped,' and vociferating their peculiar clang, they all fell to feeding again. So closely did they herd together that two birds might often be mistaken for one. They appeared to be well contented with their new quarters, paying no attention to the barking of a dog. Once, indeed, one of the Whoopers seemed to be rather startled by the action of a Coot, which suddenly bobbed up beside it; the Swan flapped its wings uneasily, but did not attempt to fly. These Whoopers swam rapidly through the water, the head and neck slightly thrown back, and the black butt of the tarsus standing out in bold relief against the white body-colour. Their necks were supple and arched sinuously, held erect when the birds were at 'attention,' arched when they fed, but twisted in various forms to rearrange the plumage. Watching the four birds, you could see at the same moment one fellow resting with neck erect, its next neighbour arching its neck, a third shooting its neck forward in the shape of the letter S. On the whole there existed a wonderful spontaneity of action between these birds. On the 9th of February I called out Mr. J. N. Robinson to visit the lough. The two old Mute Swans and their three cygnets were swimming near the mill. The four Whoopers were browsing in the sedge beds in the centre of the lough. A solitary Mute Swan was feeding alone, not as yet daring to associate with the distinguished strangers. It was pleasant to contrast the long-drawn, flat bodies of the Whoopers with the more rounded outline of *Cygnus olor*. The wild fellows swam together; one and another arched their necks backwards in a loop, dipped gracefully forward, and then, raising their necks, allowed the water to trickle over their shoulders. This was their method of bathing, but there was nothing violent about it. On the contrary, the action was easy and majestic, as became such lordly fowl. When they caught sight of us they became metamorphosed at once into a 'stiff-necked generation,' and hurried off in line through the sedge. Reaching open water on the other side they became somnolent;

first one, and then another, gracefully reclined at ease, floating idly on the water, and burying their long and supple necks in the dense feathering of their dorsal plumage, while on either side their two companions kept vigilant watch with necks uplifted, and intent to detect any signs of renewed danger. It was noontide, and the winter sun shone out upon the still waters of the lough; before us, on the further margin of the bank of sedge, floated the strange *voyageurs*; behind the birds was a tiny sea of glittering waters, against which the forms of these beautiful strangers looked dark by force of contrast. Only when we showed ourselves more openly did the Whoopers forego their attitude of disengaged ease; hitherto they had contented themselves with occasionally uttering their trumpet-call, but now a bird 'hooped,' and again they crossed the sedge, this time in a fresh direction. So strongly matted together was the aquatic vegetation, at least in one place, that, instead of swimming through it, the swans lifted their legs over the submerged plants which barred their progress; they swayed their bodies heavily as they crossed the barrier and regained an open track through the sedge. All at once the leader sounded his bugle-call, slightly throwing up the head when expelling the sound. A second bird passed, and the leader fell back in the file, but continued to sound his musical refrain at intervals. On the following day I introduced Mr. F. P. Johnson to these Swans, which on seeing us sounded the bugle-call for retreat, and leaving the bed of sedge in which they were browsing, paddled with stiffly-held necks towards the other side. There at first they maintained an attitude of watchfulness, but their feeling of uneasiness gradually wore off; presently two of them lazily twined their long necks across their backs, their companions alone maintaining a careful outlook. Having secured a good position, we could minutely scrutinise their yellow and black bills, and even their eyes, through a very powerful field-glass; sometimes the sentinels flapped their great snowy pinions, but not with any intention of deserting us. We found it difficult to describe their 'clang' on paper. When we showed ourselves we heard distinctly, 'hoop—hooper—hoop'; then came a 'clang' followed by another 'hoop.' When a bird hoops the neck is stiffened; this exercise is generally followed by a slight

pause. On the 20th of February I spent a whole afternoon with these birds in company with Mr. Thorpe, who was most kindly trying to photograph them for me, though the experiment was defeated by distance. It was in vain that we drove them about the lough, but they never attempted to take wing until a pinioned Mute Swan took fright at our manœuvres, and flapped heavily across the water in a vain attempt to fly. This was more than the nerves of the Whoopers could stand. Though manifestly unwilling to quit their sanctuary, the wild Swans rose heavily, beating the water with their feet and long wings until they got fairly under weigh, when, wheeling round, they crossed the lough in single file, and passing close to us sped across the ploughed fields in a bee-line to the Solway, looking immense as they loomed past with long outstretched necks. On subsequent inquiry it turned out that these Swans were in the habit of taking occasional flights to the estuary as well as to Thruston-field Lough. I continued to study them until the 17th of March, when Messrs. Heywood Thompson and Hugh Hornby accompanied me to inspect them. We found them swimming in the sedge, considerably less timid than when we originally made their acquaintance, for all four Swans simultaneously reclined their necks in a posture of rest, and so continued until, disliking our scrutiny, they retreated further into the sedge. Desiring to drive them towards my friends, I stood out in the open at the head of the runner and heard the Swans hooping. One fellow flapped his great wings as he sat on the sedge, before re-adjusting them under cover of the flank feathers. Another looked very picturesque as it lazily extended the right wing, lifting it up in order to trim the under-coverts, evidently proud of its white array. This was the last occasion upon which we saw these four Whoopers, although the birds lingered in the district until the end of the month before commencing their journey northward.

BEWICK'S SWAN.

Cygnus bewicki, Yarr.

The first specimen of Bewick's Swan known to have been killed in Lakeland was shot in the neighbourhood of Castle-

steads. This I learn from Captain Johnson, who well remembers seeing the birds flying about the river. Of specimens that I have examined, the earliest is an adult killed in December 1879, at Edenhall, where it is preserved. Mr. Raine has a second adult, killed in the same neighbourhood a little later. Mr. W. Duckworth observed a Swan of this species alight upon the frozen surface of Monkhill Lough on November 23, 1884. Three years later, on December 31, 1887, a single bird in very poor condition was shot near Skinburness by a fisherman. This was eaten by his family. A herd of Bewick's Swans visited Ulleswater a short time afterwards, as described in the following 'Extract from the Note-Book of W. H. Parkin, Esq.,' kindly supplied through Mr. Edward Tandy: 'Jany. 2nd, 1888.—Saw three Swans opposite Terrace. W. H. Parkin, Junr., and I went after them, got a long shot—no result; followed them up to Glencoine. Did not get a shot. They lit again opposite Sandwike Beckfoot. W. H. Parkin, Junr., did not see them next day. Jany. 4th.—Saw 15 in Rampsbeck Bay; fired two long shots at them. They rose and lit again just opposite Beauthorn. W. Parkin, Junr., fired rook rifle at them. No result. They flew up the lake. So rough and stormy, he could not see any more of them. They were seen next day at Patterdale on the land, and were shot at. Jany. 7th.—W. F. Winn and I went all round the Lake, but could not see anything of them. When seen at Patterdale there were 20 of them. Here last seen on Thursday evening, flying over the hills in the direction of Wythburn. Jan. 23rd.—I and S. W. L. Sanderson went up to Brotherswater, hearing that 4 Swans were there. We each shot one and wounded another, which my keeper killed next day in Table Bay, Ulleswater. Respective weights are: 12 lbs., 12 lbs., 10 lbs.'

'I may add to the above, that the birds were very shy, but did not take flight till shot at; and it was only with patient stalking and waiting that we got near them on the 23rd inst. The 4th bird was not seen again.' I examined one of these birds, and another killed during the same month on the decoy pond at Lowther, Westmorland.

On the 25th of December 1888 Bryson fell in with three

Bewick's Swans upon the Solway, one being adult. The other two were Cygnets, and were in the act of swimming up to their companion for protection from a Great Black-backed Gull, when the punt gunner killed all three at a shot. The Cygnets were afterwards staked at cards, and changed hands in consequence. I traced the gamesters in time to find one of the Cygnets plucked and headless. The old bird proved to be a male, and in finer condition than any other example of this Swan which I have had the pleasure of examining. Some parts of the body, especially the intestines, were thickly invested with fat, and the bird weighed 16 lbs., in our experience a heavy weight for this Swan. The weather was open, and the birds had probably been in the vicinity for a few weeks. The Cygnet which I dissected was in fair condition, but internal fat was entirely absent. Its stomach contained some fine grit, together with three blades of grass and a small piece of green seaweed. The gizzard of the adult contained a little grass, together with a quantity of estuary sand. The plumage of these fine birds proved to be infested with many white parasites which showed considerable activity, and clung tenaciously to the feathers. In January 1889 I discovered that a pair of these beautiful birds had availed themselves of the protection afforded to wild-fowl on Monkhill Lough by taking up their quarters on that sheet of water.

A pair of Mute Swans, pinioned birds, belonging to the Corporation of Carlisle, had been placed upon the lough some time previously, and we were thus able to compare the two species. Not that the tame Swans relished the presence of the strangers; on the contrary, they desired to drive them off the water, but their efforts in this direction were thwarted by the pertinacity with which the rare birds haunted their safe retreat. When comparing the two species side by side, we came to the conclusion that Bewick's Swan carries its neck more erect than the Mute Swan. The strangers were of course much inferior in size to the domesticated birds. Though pure white, excepting some rusty colour about the head, they were not of such a snowy whiteness as the Mute Swan: they generally carried the neck perpendicular to the water when swimming, the lower neck indeed partly submerged; they arched their necks occasionally,

but with less frequency than the Mute Swans; they swam lower in the water, their sterns being nearly in a plane with the water, not arching upwards, but carried a few inches only above the water. On their first arrival the Bewick's Swans were shy and apprehensive of danger, but finding that they were entirely unmolested, they became less retiring, though through the day they were almost always to be seen in the centre of the lough. One morning Mr. Halton and I started early, and arrived at the lough long before sunrise, hoping to see the wild Swans fighting high in the air when the day broke. Happening to strike a match to light my pipe, as we crouched behind a hedge above the water, I alarmed the ever-vigilant Coots, and they sang out 'danger' so lustily as to disturb all the other birds. The wild Swans proved to have been sleeping at the edge of the lough, but when thus awakened they sheered off from the bank, and paddled out into the centre of the lough. They seemed to obtain all their food in the lough, and fed *during the day* in a bed of sedge. On their first arrival they were cautious, and one bird would act as sentinel while its companion leant forward to browse with neck submerged upon the water-weeds. But when their first suspicions had been lulled to rest they often fed together, submerging their heads simultaneously for from eight to seventeen seconds. In deep water they solved the difficulty of reaching the bottom by feeding stern uppermost, thus immersing the fore part of the body as well as the head and neck. They manifested no intolerance of smaller birds. Once when the Swans were swimming side by side, a Goldeneye swam boldly between the two; a Wigeon brushed rudely past them, but its impertinence remained unnoticed. The wild birds always fed with a keen appetite, occasionally arching their necks and shaking their bills laterally, ceasing at once to feed if any signs of danger appeared, and gazing with stiffened necks in the direction from which they apprehended danger. They appeared to be very active birds, inured to the vicissitudes of a hard, roving life. They never took long flight in our presence, but we were assured by others that they occasionally left the lough at dark in order to repair to the river Eden. The only flights that we saw performed were undertaken in order to proceed

from one end of the lough to the other. Nor did we hear any cry, except that of the male calling to his mate, to whom he was devotedly attached. As spring advanced the wild Swans seemed to become more shy and restless, and on March 26 we found that they had forsaken us. No Swans were *shot* in Lakeland to my knowledge in the winter 1889-90; but in December 1890 a few Bewick's Swans visited the neighbourhood of the Solway. It is probable that some of the number visited Morecambe Bay, where Mr. Sharpe saw some Swans in January 1891, though their specific identity remained undecided. Between the 7th and 14th of December 1890 six wild Swans were seen on a piece of water at Crookhurst, near Allonby. Two wild Swans made their appearance at Ravenglass on December 9. Joseph Farren the fisherman approached a herd of ten while they were resting on the sea-beach the following day. The same man met with a much larger herd of Swans in the spring of 1888. On the 5th of March that year he saw a party of twenty-six Swans circling over the Ravenglass estuary, evidently anxious to alight, a wish frustrated by there being a good many people about, in consequence of which they headed off in a N.W. direction, as though making for the Isle of Man. He described them as 'a good bit less in size than the tame Swans,' so that they were almost certainly a party of Bewick's Swans. A solitary bird was noticed at the same time by Mr. Ross. Mr. Nicol reported that six Swans were seen near Skinburness on Dec. 4, 1890; that he shot one (which he sent to me) on December 13; a second being secured about the same time and sent to Mr. Barker by John Bell. The bird which reached me was an adult female, in very poor condition, only weighing $9\frac{1}{4}$ lbs. Mr. Barker and I weighed his bird in the flesh at his house, and found that it turned the scales at $10\frac{3}{4}$ lbs. It proved on dissection to be a male. When shooting on Burgh marsh on December 15, 1890, I happened to observe a large white bird sitting alone upon the open marsh. All at once it rose, and speedily revealed its identity as its long outstretched neck came within the field of the glasses. Fortunately for my companion, Mr. Thorpe, who, as a sportsman, was anxious to bag a Swan, the bird took a long low flight across the marsh, and alighted in a

wide, open creek, where it began to feed, occasionally raising its long neck in order to watch our movements. After making a careful circuit, we decided that it was a useless risk for the two of us to try to stalk the bird; consequently I ceded to the sportsman the honour of a tedious and painful creep to the creek in which the bird was feeding, lying flat whenever he saw the bird raise its head, and crawling forward whenever it grazed upon the grass. Meanwhile I watched CYGNUS from a distance, saw it leave the water, and begin to move about the marsh, uttering a loud clattering, such as might be compared to the sound of two large pebbles being knocked together. Mr. Thorpe heard this at a very short distance, and thought that it was answered by another Swan far away; but, as the Swan turned away from him while vociferating this '*klack—klack,*' he could not see what action accompanied the production of this sound. Eventually he succeeded in shooting the bird, which proved to be a young Bewick's Swan in change. The delicate cinnamon dress of immaturity had already been in part replaced by the snow-white plumage of the full-dressed bird. Though in fair condition, this example only weighed 8 lbs. A few blades of marsh grass were all the food that it contained.

SHELD DUCK.

Tadorna cornuta (S. G. Gmel.).

The sandy estuaries which indent the coast of the north-west of England have been the haunt of the Sheldrake from time immemorial. Between 1612 and 1634 these birds were often purchased for the table of Lord William Howard, being variously entered in that nobleman's accounts as 'Shell Drake,' 'Skeldrake' and 'Shelfoule,' the supply being no doubt obtained from the Solway Firth. Dr. Heysham knew the species as a resident on the coast, and T. C. Heysham furnished Cumbrian specimens for the collection of Henry Doubleday. Unlike most of our wild-fowl, the Sheldrake or 'Shellduck,' as it is most often called, shows little or no diminution of its numbers in consequence of modern innovations. Many pairs nest among the sandhills of the Ravenglass estuary, and others on the Duddon,

at the south end of Walney, and on the Solway Firth between Mowbray and Longtown. The majority of birds nestle in rabbit-holes, which are variously selected, some being burrows in hedge-bottoms, in preserved warrens, on mosses, and on salt-marshes, but most frequently either in the sand-dunes blown together by winter storms or in sandy banks. Mr. J. Cairns tells me that he has watched house-hunting Sheldrakes on several occasions, and found that, in the very early hours of the morning, these birds examined the holes in a sandy bank beside the Sark near Gretna. The male usually remained outside and on the alert, while his mate rambled in and out of the holes, trying first one burrow and then another. The Sheldrake sometimes nestles at a very slight depth, so that a long arm can easily reach the nest, but more frequently at a depth of several feet. But it would be a mistake to imagine that these birds nested exclusively in burrows. Every year or so one or two nests are found well concealed under a dense growth of gorse or old heather. As lately as June 1891 James Smith showed me a beautiful Sheldrake's nest in situ, *i.e.* under a thick furze covert, on an open and much frequented common, about a mile from the estuary of the Solway. When returning home from the haaf-net fishing in the early morning, Smith had to cross this common, and used to see several pairs of Sheldrakes at that time, which from their actions appeared to be nesting. On June 12th he marked a Sheldrake drop into the middle of a long strip of furze, and, cutting his way with much difficulty through the cover, found that the old bird had made a regular run from the spot where she dropped into the furze to her nest, which consisted of a depression in the soil where the furze was very thick, and contained nine eggs, together with a more copious furnishing of down than in any other nest which has come under my notice. The old bird had to thread her way through the roots of the furze for about fifty yards from the spot into which she first dropped, but the two runs which she had made from the nest to the outside of the cover were very short. It seems probable that Sheldrakes originally nested chiefly among rocks and in such thick cover as that now described, and that their object in taking possession

of rabbit-holes, a traditional use from which they now rarely depart, was in its first initiation a device to secure the sitting female from being snapped by a prowling fox or other 'ground vermin' during the period of incubation. Sheldrakes pair in February and March, and many birds nest in May, a few even earlier, but very few young ones hatch before the middle of June, and there are always late broods, the progeny of birds robbed of their first nests at the beginning of the season. The earliest full clutch of Sheldrake eggs that I can vouch for, consisted of a clutch of nine, taken near Bowness-on-Solway on the 4th of May 1889, but many birds delay laying until the first days of June, especially in cold springs, and one or two of the first eggs are often dropped on the marsh or on the sand-hills. I was formerly under the impression that these dropped eggs always proved infertile, but have since learnt that such is not necessarily the case. The number of eggs constituting a full clutch in my experience varies from seven to eleven. The Sheldrake flies into her burrow so as to leave little or no track, but footprints can sometimes be detected if a shower of rain has fallen shortly before the return of the bird. Occasionally a few flakes of down adhere to the heather or sandbents near the nesting hole, and thus afford a clue to the whereabouts of the nest. When the young are hatched, the parent birds conduct their brood to the estuary sands, which often entails the young birds travelling a mile or half a mile through the fields. Even when the wide sands are reached, the young are exposed to a good many dangers, many of them being run down and captured alive by the fishermen, in spite of the pace at which they hurry over the sands, the distance they traverse, and the pitiful devices adopted by the old birds to divert the attention of their pursuers from their tender young to themselves. Few of the young so captured are reared successfully. Every year a number of nests are robbed, and a large percentage of young birds secured, but only a very small number are ever reared, though if the ducklings are brought up beside the sea-shore they seldom disappoint their owners, maturing rapidly when they obtain a sufficient supply of their natural dietary. James Smith of Drumburgh has had a considerable share of

success in rearing young Sheldrakes on a small pond beside his cottage, and showed us that their sexes can early be distinguished by size, but especially by the fact that the males have the bill of a pure yellowish red, when feathered, while the ridge of the bill is long and dusky in the young female. An adult wild male Sheldrake in good condition weighs about three pounds, but pinioned birds vary much in size, and to some extent in the time which they require to assume full plumage. A young male, reared in 1888, refused to breed in 1889, though confined with an old and amatory female, but it voluntarily mounted guard over some flappers of its own kind, introduced upon the same pond. A four-year-old male paired with a female aged seven years in 1890, and the latter nested under a stack in a farmyard at Whitrigg. Seven young ones hatched out, but four of the number were killed by rats while still very small. The three survivors grew up fine vigorous birds, and had feathered nicely when I saw them swimming on the farmyard pond with their parents on the 19th July. Not being pinioned, however, they took French leave one day and never returned, to the chagrin of the farmer. Smith had a pair of pinioned Sheldrakes on his own pond in the spring of 1890. Two pairs of wild Sheldrakes came to the same pond, and, as their custom is, fought so much, disturbing their tame brethren, that he shot one of them to scare the others away. Even the pinioned birds became very amatory in March. The drake engaged in many encounters, particularly with a gamecock, which he thrashed soundly. On bright spring mornings the male often whistled, and the female uttered the curious laugh to which I have often listened when watching a pair of Sheldrakes fighting restlessly around the point of Rockcliffe marsh in the spring-time. The whistle of the drake is quite distinct from the deep 'kuk' which I have heard uttered by an old male when covering the retreat of his young, which were crossing the Ravenglass estuary under the espionage of the mother bird. Though rarely breeding in captivity, either with its own kind, or by crossing with the domesticated mallard, the Sheldrake in some instances becomes very tame and domesticated. We often saw an old duck Sheldrake at home in Smith's cottage, and

during the winter months this veteran used to tap with her bill at the front door to be let in for her evening meal, which having been consumed, she made her way to a favourite corner in the fowl-house. But the wild Sheldrake is eminently of a cautious disposition, even in the breeding time when most birds forego a large share of their dread of man. During the summer of 1890, Mr. Farren, the Ravenglass fisherman, was able to watch the movements of one of these shy birds with a telescope, since she nested among some sandhills within full view of his cottage door. He assured me that this bird, when sitting on her eggs, usually left her nest for two periods of about half an hour each in the morning and in the evening; that she rejoined her male companion, and that they flew off and fed together. When the female had satisfied her hunger, she invariably returned to her charge. I have sailed close up to a brood of well-feathered Sheldrakes, off Bowness, and though an old bird in the company took wing and settled out of gunshot, the young only swam into a wedge formation, sinking rather deep in the water, their necks appearing in consequence rather long and snake-like. But try to approach Sheldrakes in the open, even when on the feed, and you will find that they will not often allow themselves to be endangered. They prefer to feed with an ebbing tide, and avoiding the higher ridges of sand, which the wind soon dries, obtain their shell-fish chiefly on the lower stretches of sand which are well watered, and being of a more firm and clay-like composition than the rest, retain perhaps half an inch of water on their surface. They feed in little parties, but by preference in flocks of twenty or thirty birds, running eagerly hither and thither, with necks eagerly outstretched, and bodies arching into sinuous curves. If satisfied, and clustering together on the sands or at the marsh edge, they appear at a distance and to the naked eye to be nearly as white as Sea-gulls, and very white in flight. When the tides are running high and the Sheldrakes find their favourite resting-places covered, they may usually be seen fighting briskly, and at a considerable height, above their favourite estuary. In boisterous weather they often shift from exposed situations to more sheltered feeding-grounds, and at

such times appear on sand beds which at other times they rarely visit. Many of the young birds leave our coast in autumn. Stragglers have been shot as far inland as Penrith, generally in immature plumage.

M A L L A R D.

Anas boscas, L.

The Wild Duck breeds freely on our Lakeland mosses, but more numerous in the vicinity of Bassenthwaite, Derwentwater, Esthwaite, and such other sheets of inland waters as provide suitable cover for nesting purposes. Wild Duck pair early, often in January, and those which remain to breed with us nest from March to July. While the females are sitting the males congregate together. If a female loses her eggs she again seeks the companionship of the male, until such time as she begins to incubate a second clutch. I have never observed a Mallard drake taking any charge of the young, which appear to be protected by the female exclusively. It is pretty to see the proud solicitude which a female Wild Duck displays towards her brood even when they have attained nearly full growth and are capable of taking care of themselves; remaining a couple of yards from the young birds, with neck erect, prepared to give a signal for instant flight should an enemy appear. The young birds live in a family party for some weeks at least, nor do they separate until they have acquired vigorous powers of flight. I have examined some young Wild Duck which had been caught in the ditches near Allonby as flappers, and found no difficulty in distinguishing the males by their superior size, longer bodies, and smarter appearance. Half-bred birds are often kept by the farmers, but require to be pinioned if they are to stay at home. The old drakes don eclipse dress in May, and only resume full plumage in September and October, rather later than the young drakes. Mr. J. N. Robinson showed me a brood of eleven young Wild Duck on July 8, 1890; the drakes were already commencing to sport the curled tail-feathers, and showed a few white feathers upon the neck, forming an incipient ring. The bills of these young drakes were already becoming green, while

the mandibles of the females were dark brown, edged with yellow. Two couples of these young birds paired off in the following spring, and went to nest at the beginning of March, one of the ducks dropping a couple of eggs before she made a nest, and laid a complete clutch, which she was incubating when a fox carried her off. In autumn the Wild Duck bred with us resort to our estuaries to feed in the 'dubs' and 'gutters' of the salt marshes, their numbers being largely reinforced by immigrants, which are generally held to be rather smaller and darker than the home-breed.

Mallard, or 'Grey Duck,' as they are chiefly called in North Cumberland, are more sought after by flight shooters than any other species, partly from the frequency with which these birds return to feed in favourite creeks and muddy bottoms, such as that near 'the grey stone' on Burgh marsh. They are also the favourite game of punt gunners. More were shot by both shoulder and shot guns during the winter 1890-91 than the sportsmen of Lakeland had obtained for a good many seasons. Mallard like to haunt fresh-water lakes by day, and to repair to the sea marshes at night. There is a regular flight line, adopted by this species, between Morecambe Bay and Windermere. The birds feed on the coast chiefly and rest inland upon the lake. Hearing that a large number of ducks had assembled on the 'outdubs,' a continuation of Esthwaite Lake, Mr. Archibald visited the spot on January 4, 1891, and saw about a hundred and twenty Mallard there collected, in addition to thirty Teal. Mr. Sharpe shot thirty-one Mallard in Morecambe Bay one day in January, and had nearly as good bags some other days. Mr. H. Threfall tells me that the Mallard is *always* numerous in Morecambe Bay. Mr. Batson writes that 'the commonest fowl on all of these estuaries is the "grey" duck.'

In East Westmorland Mallard are not so numerous as might be expected, but during winter a few birds resort to Sunbiggin Tarn and Great Rundle Tarn near Appleby. Many frequent Hawswater, Ulleswater, and other lakes, as well as our rivers, particularly the Eden. Many frequented the Eden near Langwathby in the winter of 1890-91. It was rather sad to see the half-starved birds sitting in bunches upon the edge of the ice.

One or two were picked up dead, and from their emaciated condition had evidently succumbed to their prolonged hardships; others obtained a supply of food about such few springs as had not frozen. In open weather you can generally see a nice 'sprinkling' of Mallard at Edenhall pond, and enjoy their noisy quacking as they rise wild and circle round above the tops of the trees, while the Coots and Dabchicks dive unconcernedly in these retired waters. The males of this species probably average five to every female Wild Duck. Nicol killed twelve Mallard at one shot, all of them drakes. The females are not only less numerous, but they are more difficult to retrieve if wounded, as they show great craft in hiding up in cover when they have been winged.

Old birds of either sex are always shy during the day, and love to rest in pairs and in bachelor parties in the middle of the thickest covert of sedge available. In open weather it may be difficult to obtain a clear view of them under such circumstances; but when a slight film of ice covers the lough, the Mallard can no longer skulk in the aquatic herbage, but are compelled to become clearly visible. When a sharp frost begins to break up, and the thaw loosens the surface of our salt marshes, 'Grey Duck' often alight openly in such soft spots as are likely to afford them food, just as in autumn they resort to the stubble-fields.

GADWALL.

Anas streperus, L.

The Gadwall is the rarest of all the wild-fowl that can be considered irregular winter visitants to Lakeland, but I have no doubt whatever that at one time such birds of this species as were shot went into the pot, or were sent to market unidentified. Probably the first specimen obtained in Cumberland of recent years is the full-dressed drake preserved at Edenhall, where it was shot during the lifetime of the late Sir R. C. Musgrave, Bart. Mr. Tandy, R. Raine, and myself observed another Gadwall on Whin's pond, Edenhall, in November 1889. It appeared to be a very shy bird. An immature drake was

shot upon the Lyne near Heathersgill on the 3d of January 1885. The foregoing are the only examples known to have visited the interior of Lakeland. A drake in change was killed on the Eden, October 21, 1884. A male and female Gadwall frequented a marsh near Silloth in March 1886, and I am sorry to say that the female bird was shot.

On the 8th of January 1892 W. Nicol was shooting on the Solway Firth, when he fell in with a nice lot of Wigeon, and fired at the bunch. On paddling up to the birds, which the discharge of the cannon left floating on the water, he found a fine Gadwall drake among the slain. It was in full nuptial livery, indeed I never saw a bird in which the chestnut wing coverts were better developed. I have no doubt that this individual, like all the other Gadwall that have been killed in Lakeland, was a passing migrant. The collection of Mr. J. Whitaker includes a Gadwall from the neighbourhood of Morecambe Bay. I do not at present know of any other specimens that can be accredited to the score of those shot in Lakeland.

SHOVELLER.

Spatula clypeata (L.).

The Shoveller is an extremely local bird in the Lake district, especially in the southern portion of this province. Dr. Gough included the Shoveller in 1861 as an occasional visitant in winter to Brigster moss. I have not heard of any Shovellers being killed either there or elsewhere in the neighbourhood of Morecambe Bay at that season. The species is not reported by Mr. Threfall, nor is it in Mr. Sharpe's list of the fowl that he has shot on Morecambe Bay; nor yet in that of Mr. Hindson. But it is quite possible that the Shoveller may occasionally *breed* in the neighbourhood of this great estuary, since the conditions offered by extensive mosses are highly favourable. As a matter of fact, the only Shoveller that I have heard of as obtained there was shot on the 30th of May 1889, at Ayside, near Grange, and mounted by F. R. Kirby of Ulverston, at whose house Mr. W. Duckworth saw it, a male bird. Dr. Heysham did not include either the Shoveller or the Pintail in

his catalogue of the animals of Cumberland—but T. C. Heysham knew the bird. He recorded two female Shovellers shot near Sebergham in September 1831, and a male shot on Burgh marsh the same year, with the comment: 'The Shoveller is a very rare bird in this part of the county.' He afterwards met with additional specimens, but his contemporary, Dr. Stanley, could not include this duck in his list of birds found in the neighbourhood of Whitehaven, though he had met with the Pintail, which he described as rare. The late Captain Kinsey Dover informed me that he had known the Shoveller to occur as a winter visitant in the Derwentwater district. It occurs from time to time near Edenhall, where specimens were obtained in former years by the late baronet, just as R. Raine shot a drake in change in October 1886, and a bird in female plumage in October 1888. A full dressed drake shot near Allonby some years ago is preserved by John Dawson, but the species is rare west of Silloth, occurring regularly only between Silloth and Gretna, and seldom at any distance from the coast-line. To this district the Shoveller is principally a *spring* visitant on passage to its breeding grounds. In March and April the Shoveller appears annually either on one of the loughs or on the salt marshes, when a few pairs linger with us until the end of April, and then take leave, returning in early autumn and frequenting our creeks and salt marshes, in some cases delaying their final departure until the first break of frost. It is very delightful to study the actions of this graceful bird; indeed a constant pleasure attaches to the renewal of our acquaintance-ship on its return from the south in the spring of the year. In 1890 I saw a pair of Shovellers newly arrived on Monkhill Lough on the 13th of April, when the drake was in almost perfect nuptial dress, a very white bird and a real beauty. Merrily they wheeled aloft, easily out-distancing the Wigeon with their short rapid wing-strokes and buoyant flight. Afterwards they dropped quietly into the sedge beds, and there remained undisturbed save for pugnacious and noisy Coots. I have never seen the Shoveller here in pairs before the commencement of March, nor have I ever seen a greater number than half-a-dozen pairs swimming on the water at one time,

snapping at flies, pruning their plumage, and skimming the surface of the water with their spoonbills. Neither have I known them stay *in a party* later than the end of April, though one or two pairs nest in the neighbourhood of the Solway, or at least have done so since 1886 to our certain knowledge. On the 8th of May in that year James Smith succeeded in tracing a female Shoveller to her nest after much careful watching. It was found in a tussock of rushes on one of the salt marshes of the Solway, and the cattle had munched the tops of the rushes, so that the position was a bare one. The nest contained eight eggs, six of which were hatched out, one of the ducklings breaking through the eggshell in the presence of Mr. W. Duckworth, through whose kindness I received two of the number as well as a specimen of the down, which was further identified by Mr. Seebohm. In 1887, Smith found a Shoveller's nest, probably belonging to the same bird in the old locality, placed in a slight depression of the soil and covered by long grass. He took the eggs, and again hatched them under a 'clucker,' but failed, as in 1886, to bring the young birds to maturity. I have not succeeded in finding a nest since; nor is this surprising, when we consider the large extent of the ground, much of it preserved, within which a pair or two pairs of these birds try to nest with us. In July 1889 I saw a pair of Shovellers, which, from their actions, had evidently a brood of young in the sedge at Monkhill Lough. In 1890 I met with a pair of breeding Shovellers on a flow near the Solway in July, and examined a very young bird shot out of a family party at the beginning of August. The male Shoveller never entirely deserts its mate. Single males are of course to be seen at any time during the summer, but they are either bachelors or have a mate in charge of eggs or young somewhere near. Such birds will often take a flight in company with Mallard, but after a few turns they generally drop out and return to some favourite pool. They are shy birds, much more intolerant of interference than the Mallard or Teal; their flight also is more graceful. On the 16th of May 1891 I flushed a drake Shoveller along with six Mallards from the edge of Monkhill Lough. The Shoveller was easily distinguished during their aerial evolutions

by his inferior bulk and faster and short wing-strokes. Round and round the fowl careered, sometimes in a V, their figures often changing, until at last the Shoveller wearied of the exercise and desired to descend. Down it came in a beautiful curve, shooting through the air on expanded wings, now elevating one shoulder and now the other, the better to preserve its balance. But it could not somehow quite make up its mind to alight, so gave a few sharp strokes and rose rapidly; this was repeated many times, the bird gliding gracefully round the western corner of the lough, giving a few quick wing-strokes, and thus rising, to descend again in the same way as before. Round and round it glided, a perfect embodiment of beauty. After watching it thus sailing through the air for many minutes, at last I had the satisfaction of seeing it alight on the water at the edge of the bank of sedge, where I left it swimming into cover. When visiting the same lough on the 23d of November 1889, we disturbed a party of nine Shovellers, which rose out of the sedge and went aloft, where they circled round with many a graceful turn, flying at first in a V formation, which soon altered to a string; the males wore the plumage of change, having many white feathers on their breasts. Shovellers do not fly in very close line; each bird seems to choose its own course, and when the nine just mentioned descended, they did not alight together, but one dropped here and another over yonder, a pair alighted somewhere else, so that they were fairly scattered over the surface of the lough. Soon they settled down to feed, swimming a few strokes and then half submerging the body, stern thrown up, and the balance preserved by the slightly extended wings. When a Shoveller is only resting on the water, the breast is depressed and the stern and back are comparatively high, the neck moderately erect. When the bird feeds, the wings are brought well forward. The Shoveller has only a very small body, and looks larger than is really the case. The broad bill can almost always be seen in flight, besides which they fly higher and more buoyantly than Mallard; they have a knack of rising wild, which serves them in useful stay. Shovellers usually remain with us until the first spin of frost warns them to seek a more temperate climate; it is only in a

few exceptional instances that these birds have been shot in Lakeland, *during* severe frost. The latest date in the year on which I have myself met with Shovellers was the 11th of December 1890, when I found a party of five birds at Monkhill Lough. The leader of the party was a very white bird, already in the first courting dress; of the remainder two were females, and two drakes in change, the white feathers fast breaking through upon the breast. When disturbed, they wheeled gracefully round; and alighted in the middle of the water under cover of the sedge banks. Their rapid yet hovering flight was very beautiful. The food of the Shoveller consists of the insects which it obtains in skimming the surface of the water or in the creeks and wet places of the salt marshes, but especially of minute *shells*, together with a small amount of vegetable matter. T. C. Heysham found a female Shoveller which had been shot at Thrustonfield Lough, to contain an immense number of fresh-water shells recently swallowed, including the glutinous mud-shell (*Limneus glutinosus*) and the crested valve-shell (*Valvata spirorbis*). I dissected two Shovellers, shot in April 1889, and sent to Mr. Mackenzie. They proved to be full of minute shells, together with fibres of a vegetable character. The Rev. Hilderic Friend, F.L.S., kindly examined these shells for me. He decided that they were referable to *Hydrobia ulvae*, mixed with two species of Foraminifera, viz., *Polystomella crispa*, and *P. umbellicata*. A young Shoveller, shot at the beginning of August, had dined in the same way. I extracted from its throat several shells and some fragments of pond-weed.

P I N T A I L .

Dasila acuta (L.).

The Pintail is a decidedly uncommon duck in Lakeland, though a few specimens visit our estuaries every winter. Mr. Threfall writes: 'I never shot a Pintail at Morecambe, although I did so every year on Ribble.' Nor does Mr. Sharpe include this species among the fowl which he has shot, during a long experience, in Morecambe Bay; a pair, however, were shot there in the early spring of 1884. Moreover, Hutton, the old

Flookburgh fowler, has two stuffed Pintail, which, as his better half informed me, are 'rather partikler.' She could not remember having ever seen any others brought in by her husband or sons. A male in female dress is preserved in the Kendal Museum, labelled 'from Arnside, presented by Mr J. Alexander.' Mrs. Arnold tells me that the late Dr. Gough paid considerable attention to the wild-fowl of Arnside, and that he was much pleased in observing occasional Pintail; though, as the lady added, 'they are rare of course, and not often met with.' A few Pintail have been killed on the S.W. coast of Cumberland, whence the late Grayson of Whitehaven received specimens. I picked up the wing of a female Pintail near Ravenglass in June 1889. Stragglers visit the Solway Firth irregularly, and most of the older gunners on the Solway have at one time or another secured a couple or an odd bird of this species in some state of plumage.

Mr. R. Mann reported to me a fine drake seen near Mowbray, Allonby, in January 1887, and others have visited that neighbourhood. Mr. Nicol meets with the Pintail almost every year, on the Wampool and Waver estuary, either as young birds migrating in autumn, or in January and February as hard-weather fowl, or as spring visitors from the middle of March to the middle of April. In 1886 he shot a single young bird out of a flock of Wigeon on October 28. In 1887 he saw a pair at Skinburness as early as September 8, and in 1888 saw three Pintail on the 29th of that month, shooting one of them a few days later. In 1889 he saw a male Pintail in January, and saw five males and two females in April, when one or two others were killed. In 1890 he saw a pair of Pintail on the last day of March, and shot another on October 20. At the end of 1890, and beginning of 1891, he saw two drakes consorting with four Mallard, and in the last week of Feb. 1891 he shot a beautiful drake out of a flock of Wigeon, and two others in October 1891; making a total of 20, observed between the autumn of 1886 and the autumn of 1891, both inclusive. I have extracted these dates from his letters, because they show the experience of a first-rate wild-fowler, who knows his birds really well, and is out daily in all weathers in a most favourable

locality for wild-fowl. I have occasionally observed a Pintail at Monkhill Lough, and there saw two birds in December 1890, flying together, and easily recognised by their long necks and fine shape. Mr. Thorpe observed a single drake Pintail on the same lough in the following February. A few Pintail have been shot from time to time by flight-shooters on Rockliffe marsh, and there one of the handsomest male Pintail that I have seen was shot in January 1891 by Mr. Mason. These birds fly up the Eden also, as far at any rate as Edenhall (in which district birds of this species were observed last winter and previously), as well as on the mosses of the Eden valley, whence two, shot near Armathwaite on October 9, 1890. In Westmorland a fine male was shot some years ago near Shap; again returning to the neighbourhood of Morecambe Bay, I may say that Mr. C. F. Archibald shot a female Pintail in the Rusland valley early in January 1891. It will be seen from the foregoing notes that Pintail do not visit Lakeland numerous, although odd specimens are obtained either in company with a few examples of their own species, or when associating with either Mallard or Wigeon. Those that I have examined in the flesh were generally immature or full-dressed; but a male in eclipse was brought to us from the Solway in December 1888. My friend, Mr. Backhouse, drew attention to a pair of Pintail, kept in a pinioned state at Low Wood, near Ambleside, by Miss Meyer, from whom we learnt that her old birds bred successfully from 1877 to 1881, when she parted with them. A pair of Pintail frequented Bowness Flow during the summer of 1890, and were often seen fighting on the coast by the fishermen of Bowness, and by James Smith, in whose company I searched long but unsuccessfully for any proof of their nesting on the moss they chiefly haunted.

Since the foregoing lines were penned I received from W. Nicol a singularly handsome pair of Pintails, shot by himself on the Solway. They reached me not inappropriately on Christmas Eve, 1891. These are the last he has shot up to date of going to press.

TEAL.

Querquedula crecca (L.).

In former days, before so many of our flows had been reclaimed, the Teal appears to have bred very generally in Lakeland, although always more local in its preferences than the Mallard. It still nests in reduced numbers on Foulshaw moss; near Bassenthwaite, Derwentwater, Edenhall, Thrustonfield, Salta moss, near Alston, in fact pretty generally. Dr. Gough considered it not uncommon near Kendal, and obtained young birds in Dubbs moss, Lambrigg, in 1874. We visited Solway Flow on June 5, 1890, but saw no ducks until we reached some small pools of water, thickly studded with rushes. A Teal in female dress rose from a small 'dub,' at the edge of which we found three flappers skulking. Another female Teal got up and flew around anxiously. Once she settled to watch our movements from a knoll of heather, but soon recommenced her restless flights. The cause of her disquietude was speedily revealed in seven dusky ducklings, piping shrilly among the reeds. Having examined one of these chicks, we released him on the surface of a small pond, when, though only two or three days old, he shot away in hot haste to the nearest cover, travelling with greater speed than a young Mallard of the same age would have done. The male parent was not noticed on this occasion, but I have observed male and female parents taking joint charge of the young. Monkhill Lough is a frequent rendezvous of the birds. On the 12th of August 1889 we there saw some fifty to sixty Teal in a bunch. They prefer the shallow parts of the lough, where there is some cover on the bank, to which fact we have owed some of our pleasantest close studies of Teal. For instance, on the 17th of February 1890, I was lying in cover at the lough edge, when three Teal drakes and a duck came fighting up, pitched immediately in front of me, and commenced to bathe and frolic. First one lifted itself half up in the water and flapped its wings; then a companion dipped its neck under water and allowed the water to run down upon its back and wings, seeming to enjoy the process amazingly.

Then the three drakes swam around the female, reiterating their call-note—*krek, krek*; finally all four flew off together and joined their brethren in the sedge beds. Teal are partial to many inland waters, among others to Whin's Pond, Edenhall. In August perhaps their most favourite haunt is the salt marsh. Many of the young are very fearless. I have flushed a Teal three consecutive times in the course of half-an-hour without inducing the bird to leave the spot, but this was in the gloaming, when the bird was no doubt anxious to feed.

G A R G A N E Y.

Querquedula circia (L.).

Our first record of the appearance of the Garganey, as a rare spring visitant to Lakeland, is furnished by a loose note of T. C. Heysham, dated the 18th of August 1848. This states: 'Story the birdstuffer this day informs me that in the spring two pair of Garganey were seen near Carlisle, viz., one pair on the Eden near the Swifts, which were killed and brought to him. These went to Newcastle. The other pair was seen near Drumburgh; the male was killed and the female escaped.' The elder Hope stuffed two drakes, shot at Tarn Wadling before it was drained (in 1858), by Lord Lonsdale. Thomas Armstrong recorded a drake Garganey shot near Carlisle in 1857. A keeper named Pearson shot a beautiful male near Gilsland in the spring of 1882. William Sharp stuffed a male, shot near Bowness on Solway the same autumn. Richard Moore reported that he shot a Garganey on Millom salt marshes in December 1884. In the autumn of the same year I examined a locally-killed Blue-winged Teal, but too late to preserve the specimen. On the 15th day of August 1890 a man named Sharp shot an adult female Garganey near Glasson. This I examined the following day. Whether it was a recent arrival, or had bred in this region, could not be decided; but the wing quills were much worn, and it showed a hatching spot. The Kendal Museum contains a mounted Garganey drake, which Mr. Hutchinson believes to have been a local specimen, but its antecedents are not vouched for by any label.

WIGEON.

Mareca penelope (L.).

Wigeon constitute a large proportion of the wild-fowl which visit Lakeland. Consequently, we find many entries of these birds being purchased for the table of Lord William Howard, though both Teal and Mallard were more often procured. Sometimes these birds are entered as 'wigeons' and 'widgeons,' sometimes as 'wigen.' At the present day Wigeon are constantly called 'lough ducks' and 'loughs' in North Cumberland. That this is an *old* name appears from such entries as 'one lough,'—'6 lough mallerds,' '4 lough foole, xvj d.' They frequent our *loughs* and lakes inland during the winter time, especially such sheets of fresh water as Thrustonfield and Monkhill Loughs, from which a short flight carries them to their favourite salt marshes, or even to the more retired mosses of the Scottish Solway. But they are best known as winter visitants to our sea-coast, occurring most plentifully in severe weather in Morecambe Bay and on the estuary of the Duddon. Some large flocks of Wigeon always winter upon the estuary of the Irt, Mite, and Esk at Muncaster, where on various occasions I have seen them fighting from the quieter portions of those rivers down to the sea bar, where they are unapproachable. Their stay in Lakeland extends chiefly from October until April. By far the largest number are shot when on passage in October and November, and again in February. They are most numerous in the month of March, after the close-time has arrived. Stragglers have been shot in August, and we usually observe a few early in September. The old drakes arrive first, in eclipse plumage, followed by larger contingents of young birds. In November old males again arrive numerously. It is charming to watch the Wigeon at Monkhill Lough on a fine spring morning, when the larks are singing in the fields, and the male Wigeon paddles around the edge of the sedge beds in close attendance upon the female, whose affections are still sought for by the rejected suitor, which hangs about the skirts of the paired couple. But though some of the old birds pair off in February, the late frosts induce the greater number to delay

their nuptial arrangements, and there are always a number of grey-shouldered bachelors which congregate together. I have spent many pleasant hours in studying the habits of the Wigeon in this locality, which is the favourite rendezvous of those birds which feed upon the grass of Rockliffe salt marsh in the night-time. I visited this lough on the 3d of March 1890, when the snow which had fallen the previous day was lying in wreaths on the fellsides which bounded the western horizon. Long before the highroad was left behind, we heard the shrill whistle of the 'lough ducks,' and on crossing the fields which lay between us and the lough, it was soon apparent that the Wigeon were abundantly represented. The surface of the lough was partly invested with a thin covering of ice, upon which a few couples of Wild Duck were resting, looking rather disconsolate. A few square yards of open water were crowded with Wild-fowl, Goldeneyes, Tufted Ducks, Pochards, but principally Wigeon. Males in full dress made up the greater portion of the company, but a good many were females. As we watched them, they were joined by a flock of Black-headed Gulls, whose spotless dress formed a striking contrast to the Carrion Crow which just then croaked across the lough. Many of the Gulls had already donned their dark hoods, owing to the mildness of the previous fortnight. The Mallard were dotted up and down the ice, the glossy heads and white rings of the males distinguishing them easily from their brown companions. All this time the Wigeon were whistling shrilly in the open water, and when I crossed the little 'runner' which feeds the lough, I disturbed another lot of Wigeon, chiefly grey-shouldered drakes: some of them were resting in a ploughed field, and others on the grass at the lough edge. They rose and again alighted on the ice, but their movement startled the Mallard, and away they went with many a 'quaark' and many a responsive quack. The Wigeon nearest to us lifted, another flock followed their example, and then another; the Diving Ducks followed suit. Soon the only Duck left upon the water was a Tufted Drake: it swam steadily towards the opposite shore; but before the bank was gained a fresh sense of insecurity smote upon him, and he too lifted and wheeled round

the lough uneasily. The Wigeon soon returned and pitched here and there upon the ice, or alighted among the frozen tops of the sedge, the cover in which, at other times, they revel all the day, their mellow whistle adding a relish to the scene before us. When Wigeon are frozen out of their fresh-water resorts, they are compelled to stay upon the estuaries. On the 15th of December 1890 Mr. Thorpe and I walked for hours along the brow of Burgh marsh. The tide had ebbed, the channel was full of ice, and the shore was strewn with the débris of ice that had come down the Eden. Several flocks of Wigeon swam in the tideway, while others spread out in thin lines along the edge of the mud. We saw two or three birds waddling about the open surface of the sands, but the majority sat upon the water edge, the drakes from time to time vociferating their call in musical unison. When the tide flowed the punt-gunners drove the Wigeon up and down the estuary. Before dark we caught a female hiding up among the sods loosened by tidal action from the edge of the marsh. She had belonged to a flock at which we saw Bryson fire about a mile out from land, and being pricked by a shot in the left wing which partially disabled her for flight, had quietly paddled in to the shore for shelter. She was very shy, and did not become reconciled to confinement. Birds similarly injured often recover, if allowed their liberty on some small pond. Mallard and Wigeon usually leave the water when crippled by a gun-shot wound, deserting their companions to seek safety in solitude. I have at different times discovered some beautiful drakes of both species hiding up in the cover of rushes or tall grass near the water edge when thus slightly crippled. Such cripples may of course be unable to leave with their companions when the season arrives at which they would naturally undertake the journey to their breeding grounds. But it often happens that a few full-winged birds voluntarily postpone their departure until the beginning of May or even later. In 1889 we observed on May 6 six drake and two female Wigeon at Monkhill Lough, the former being in the finest feather imaginable. Our attention was first drawn to them by hearing a Wigeon whistle, and, looking up, we saw a male and female fighting round. They joined the main party, which we then

observed swimming in the water just outside the sedge. In 1890 we showed Mr. F. S. Mitchell a single drake Wigeon, full dressed, and showing no sign of eclipse, upon the same lough on the 6th of June. It flew strongly, but appeared unwilling to leave the spot.

POCHARD.

Fuligula ferina (L.).

Dr. Heysham thought the Pochard 'a scarce bird,' and remembering that the only example that he examined in an experience of eighteen years was the drake brought to him on the 1st of January 1788, we can hardly wonder at his opinion. Yet the Pochard is by no means an uncommon bird on the fresh waters of the Lake district. It has occasionally been shot on the lakes, on Bassenthwaite, Loweswater, Esthwaite, Ulleswater, Derwentwater among the rest, and often visits Whin's Pond and Talkin Tarn, as well as the small loughs near the Solway Firth. On the other hand, it must be owned that very few Pochards have at any time been shot by the numerous punt-gunners of Morecambe Bay and the Solway Firth, though we have examined odd specimens shot all along the north-west coast of England, from Carnforth to Gretna. The Pochard is in fact one of our more local wild-fowl, frequenting our estuaries only on passage or when frozen out, and appearing even in its most favourite haunts in rather inferior numbers to the tufted duck; in outlying districts, such as Alston, its occasional presence is due to the desire of migrating birds to rest on passage. Personally, I observe Pochards most towards the close of winter, when from half-a-dozen to a dozen birds can often be seen on Monkhill Lough, inactive and less inclined to feed than to enjoy a quiet siesta, for they are principally night feeders. They seldom appear except in full dress, and the males always largely outnumbered the females. They are rather ungainly fowl, generally fly in a string with very stiff necks, uttering a rasping call-note, a 'kr, kr, kr.' They seldom fly as high as other diving ducks, and are of a less suspicious character than Mallard or Shovellers. On the 21st of December 1889, I

saw about twenty Pochards at Monkhill Lough in one party, chiefly full-dressed drakes; I have seen a similar number on numerous occasions, but have never known this to be exceeded, nor do the birds leave their favourite quarters in winter, except when frozen out. Pochards seldom stay later with us than the beginning of April, and reappear in the following October, their numbers increasing by the middle of winter. I believe, however, that a pair of Pochards nested near Thrustonfield in 1889. On the 12th of August that year, a pair of Pochards were seen on Monkhill Lough, resting lazily in the sedge on the south side. The drake was in the plumage of a breeding bird, the head and neck more dingy and the back darker than in nuptial dress. The duck was more shy than her mate, and when I stood up, they both stiffened their necks, shook themselves and retreated a few yards further into the sedge. Finding that I was still intent on studying their movements, they rose from the water and flew off in the direction of Thrustonfield; where the Rev. F. O. Pickard-Cambridge and I saw a brood of young ducks, which we considered to be Pochards, a few days later. There cannot be the least doubt that if one or two couples of pinioned Pochards were turned down on that lough, and protected from foxes and other vermin, this species would soon become very numerous in the district, from which it is only absent, even now, during the four summer months.

TUFTED DUCK.

Fuligula cristata (Leach.).

Neither Richardson nor the elder Heysham catalogues the Tufted Duck. Dr. Stanley included it in his list of the birds of the neighbourhood of Whitehaven as early as 1829, and Dr. Gough alluded to its presence as a winter visitor on the lakes and tarns of Westmoreland in 1842,¹ so that for the last fifty or sixty years it has ranked as belonging to the fauna of Lakeland. It occurs very sparingly upon the coast line. Mr. Sharpe never shot any Tufted Ducks in Morecambe Bay until

¹ *Zoologist*, 1843, p. 183.

January 1891; they only visit the Ravenglass estuary irregularly, and are scarce on the open parts of the Solway Firth. Mr. R. Mann has met with a few individuals at different times in the neighbourhood of Allonby, but Mr. Nicol, the punt-gunner, never fell in with the species during all his years of hard shooting near Silloth until December 1888, when he shot a drake and duck out of a party of seven on the 14th of the month. Bryson, another professional punt-shooter, sent me a male Tufted Duck in January 1891, saying that he had never met with the species before in the waters of the Solway Firth. The thigh of the poor bird was broken, and we tried in vain to nurse it round, but it looked very handsome as it lay upon the garden lawn, its blue bill tucked into the dorsal plumage, and the golden irides setting off the snowy flanks and glossy upper parts. The fact is that the Tufted Duck prefers inland waters to those of the coast, and absents itself from the coast except when performing a journey, or when frozen out of its favourite retreats. Mr. Baines tells me that the Tufted Duck visits Esthwaite water, and he has known a drake to spend a whole summer there. It is a scarce bird on the larger lakes, but still it occurs irregularly, especially in spring, all over the waters of the western portion of Lakeland, as on Derwentwater and Wastwater. I have observed it myself at all seasons, sometimes very unexpectedly. For instance, when driving from Cockermouth to Wright Green with Mr. H. P. Senhouse, on the 10th of March 1888, we saw three Tufted Ducks—two drakes and a female—on Mockerkin tarn, a small oval strip of water lying among open fields, close to the road, destitute also of suitable cover, though there was then a little sedge at the south end. They visited Whin's Pond, Edenhall, in the time of the late baronet, and continue to do so. During the present summer [1891] hopes were entertained of the Tufted Duck breeding on Whin's Pond, in consequence of the appearance of a male and female in the month of May. No female Tufted Duck could, however, be found when we prosecuted a search on the 19th of June, but we saw a fine drake nearly in full livery, but having the white flanks already clouded with a few brown feathers. He swam very low in the water, and appeared to be reluctant to leave the side of

the lake, but eventually took a short flight into the middle, and pulling vigorously across to the other side, paddled quietly round the edge until he regained the cover of sedge from which he had originally started. Both on this occasion and on July 13th we searched carefully for the female. I fear that our want of success may have been due to a fox having carried her off. On the second investigation we flushed the solitary drake from the side of the pond; he was shedding the wing quills and could only fly very imperfectly. He had now lost his fine tassel, and his white sides were washed with brown, so that he looked shabby and less spruce than three weeks earlier. Mr. F. B. Whitlock reported to me that he met with three Tufted Ducks on the Ravenglass estuary late in May 1890. But in fact I have met with Tufted Ducks in Cumberland at all seasons, and have little doubt that the species has nested with us. I was positively assured that a pair nested near Burgh in 1888, and that the young ducklings were closely identified, and though I cannot vouch for this, I saw a brood of young Tufted Ducks at Monkhill Lough on the 17th September, when of course they could fly well. In 1889 we observed three Tufted Ducks on the same water on the 31st of August; one was an old male, which from its ragged appearance had probably bred, the tuft being nearly worn away and the white sides variegated with brown. The other two appeared to be an old female and a white-fronted bird of the year, only a few weeks old. On seeing us they swam out from the bank, the drake rising in the water to flap his white-bordered wings, while his companions dived from ten to twenty seconds, usually about ten seconds. During the summer of 1890, a single drake constantly frequented the same lough, and was observed by Mr. J. N. Robinson and myself almost daily until the middle of July, but we could never raise a female. This solitary bird was a strong adult and full-winged. I have many notes upon this species as observed at Thrustonfield, but especially on Monkhill Lough, between 1883 and 1891, and shall venture to quote some of the more recent. On the 17th of February 1890, the weather being mild and open, we found eighteen Tufted Ducks at Monkhill Lough. They were

chiefly males, and were not on the feed at 11 A.M. At our approach they drew away, and shortly afterwards rose almost simultaneously, and heading against the wind crossed the lough in our direction, swept overhead, and wheeling round alighted again, their eighteen pairs of feet apparently touching the water at the same instant. But they were no sooner settled than they swam together and formed a wedge. At the other end of the lough we found another party of Tufted Ducks with a few Pochards. It was pretty to see a pair of Pochards sculling along closely attended by four handsome Tufted Drakes, two Tufts swimming on either side of the Pochards, and their dark backs diverging strikingly from the nearly white mantle of the male Pochard. On the 26th of March 1889 I found the Tufted Ducks dotted as usual over the surface of the lough, and the drakes seemed very proud of their companions, stiffening their necks and keeping a sharp look-out. The only solitary bird was a female, which had retired from her companions to pose sedately in an upright position upon a grassy portion of the bank. Presently three full-dressed drakes approached this duck and she roused herself to plume her wings in coy disregard of the presence of her suitors; one of the drakes swam in to the side, the white sides conspicuously displayed as he rode high in the water. An alarm bestirred the fowl at the other end of the lough, and a Tufted Drake hurried past with many a quick beat of his pied pinions. Another and another drake passed, a male and female following in their wake. But their alarm is short-lived. A little later I found a party of the reunited Tufts sheltering at the deep end of the pond, two pairs crowding together; then came a single pair; then two males and a duck—in all four pairs and an odd drake near one another; the remainder were scattered about. A point new to me was that one particular drake frequently *tossed his head*, snapping his blue bill loudly at the same time—an action which is presumably part of his courtship, and arises from desire to ingratiate himself with his chosen partner. Messrs. Thorpe and Robinson were studying a little party of five Tufted Ducks in my company at Monkhill, January 28th, 1891; while watching the birds fighting round, we saw them check their course, and

shoot almost like swallows to the water, but just before touching the water they rose again, and returned in their upward flight nearly to the point from which they had started. This point not having attracted my attention previously, I paid some attention to it, and noticed it again, as for example on March 17, 1891, when we watched a small party of Tufted Ducks flying across the lough, suddenly swoop down towards the water like swallows, to rise—without alighting—in a graceful aerial curve. Tufted Ducks are sociable birds, and often associate with Wigeon. On February 4, 1891, I found three female and two male Tufted Ducks assembled at the narrow end of the lough along with two Pochard drakes. The female Tufted Ducks openly flirted with the Pochards, swimming round them seductively, but the Tufted drakes took no notice of their partners' irregularities, and did not show any jealousy of their handsome rivals. On the 4th of October 1889 I spent an hour and a half in watching a couple of young Tufted Ducks which had joined company to a stray Scaup on their favourite waters. The Scaup swam lower in the water than the Tufted Ducks, and seemed less at home, frequently turning its neck from side to side as if apprehensive of danger. It was very active, swimming at a smart rate, occasionally uttering its harsh call-note. When the Tufted Ducks rose on the wing, the Scaup joined them, but it only took half a turn over the sedge and quietly dropped back on to the water, an example which was at once copied by the Tufted Ducks. We observed this white-fronted Scaup again on the 18th of the same October, but the Tufted Ducks were absent and the Scaup was solacing himself with the company of a score or so of Coots. It was of course a larger and coarser bird than the Tufted Ducks. Tufted Ducks fly from Monkhill to Crofton, Thrustonfield, and to the neighbouring rivers like the Caldew and Eden, as do the Shovellers; so that the first-named lough may often be visited without any Tufted Ducks being seen, or perhaps an odd one only, while the birds are still in the district; but few stop long enough on the rivers to be shot, except during extended frost. In the frosty weather which prevailed at the beginning of January 1891, the Tufted Ducks were frozen out of their

favourite ponds, and naturally took to the salt and brackish waters of the estuaries. Mr. Thorpe and I came across a couple of full-dressed drakes and a young male swimming in the Eden near Rockliffe, on January 3, 1891, and had for some minutes enjoyed their study, swimming gaily in the side of the stream, when the charm of the scene was rudely dispelled by a twelve-bore belching forth its contents from a hedge on the opposite bank. The young bird dropped dead, another drake fluttered along the top of the water pinioned by a shot, the third dived at the flash, came up on the other side and flew up the water. The poor cripple swam low in the water and tried to make in for the bank to land, but, in spite of our protestations, was ruthlessly butchered from a boat. The youngest bird was assuming the black head on this date, but showed very few white feathers on the flanks.

SCAUP.

Fuligula marila (L.).

Richardson includes the Scaup among the Wild-fowl of Ulleswater, and Dr. Heysham was acquainted with the species, but had only seen 'one specimen, which was shot in a very severe winter.' The younger Heysham was more familiar with the species; in January 1840 he offered to secure a specimen for Henry Doubleday, adding that 'good ones only occur now and then.' At the present time the Scaup is widely recognised as a very common winter visitant, both to the estuaries of the Duddon and Morecambe Bay, and to the waters of the English Solway. It is recorded also from the Ravenglass estuary. *Inland*, it cannot be called a common bird. Stragglers undoubtedly occur on our tarns and lakes, at a considerable distance from the sea, almost every winter; but it is generally after boisterous weather. Even Monkhill Lough, which lies within a very short flight of the Solway, is only visited intermittently. We saw four Scaups there on November 28, 1888; but single birds are more often found on fresh-water lakes. Nor is it usual to meet with Scaups during the summer and early autumn. Undoubtedly stragglers occur at that

season. For example, a small party of Scaups visited Silloth in August 1887; in 1888 another small flock, consisting of nine, appeared there on July 26, and a male was shot on the 6th of August. In 1889, a single male was shot near Silloth, September 5th; in 1890 Mr. T. Mann and Mr. A. Wilson saw three Scaups at the Grune Point on July 14th. Very likely these birds had passed the summer on the Solway. In any case the dates of the presence just given are exceptional. We saw a couple of Scaups near Skinburness on the 21st of September 1889; but this species usually makes its appearance about a month later, and then principally in small parties, which gradually collect together. They feed largely on cockles and mussels. In Morecambe Bay the bird is sometimes called the 'Cockleduck,' though the name commonly applied to the Scaup in that locality is the 'Blue Bill.' They especially frequent 'Cartmell Whars,' and can usually be procured by punt-gunners during the winter. I have never seen the Scaup fraternising with any species except the Tufted Duck and Common Scoter. Mr. Durnford records that a Scaup, which a friend of his wounded on the reservoir at Barrow in December 1876, not only remained there on the following April, but also fraternised with some tame ducks, though always careful to roost on an island by itself.¹ The fowlers of the Flookburgh and Cark district obtain a few Scaups in their 'ducker nets' every season. Punt gunners consider them easy birds to work up to. Bryson once killed eighteen Scaups on the Esk with his big gun. They do not, however, often give the fowler a chance of making a very big bag, because if pressed they separate a few yards; a man may work his punt up to them, and have the ducks swimming all around him, and yet fail to make a lucky shot. They have very little natural dread of sailing boats; but after a few days' hard shooting among the Scottish Solway fishermen, who often enter our English waters, the birds rapidly become demoralised and rise wild. Their habits vary with the locality and season; but they feed most during the morning hours, especially the early hours, and then spend the afternoon in floating restfully among the sand-banks.

¹ *Zoologist*, 1877, p. 276.

When a party of Scaup are feeding, it rarely happens that all the birds are submerged at the same time. They generally feed in one and the same direction, and after travelling a certain distance on the feed, will rise and fly back to the point from which they started and begin to work the same area of sand or scar over again. They generally go down to feed with an ebbing tide, and return with the tide. The pace at which an old Scaup drake will swim up an estuary, when the tide is helping it, has surprised me on one or two occasions. Their call-note is extremely harsh, and can be heard at some distance, but during the winter it is not very often uttered. Towards the close of winter, when the old males are in full dress, they pair off and frequently ascend the Eden and other rivers for considerable distances, though it is chiefly birds in immature or female dress which are shot on our fresh waters. In February, the Scaups which have passed the winter in small and large flocks begin to collect in Silloth Bay; at least such has been their custom of recent years—but their movements, and the abundance or scarcity of their numbers generally, have a direct relation to the food supply and to the quiet which they enjoy. In 1889 I went to Silloth on March 22nd, on purpose to see the flocks of Scaups which had assembled in the bay, knowing that they must shortly be taking their departure from our coast. The tide was flowing, and we at once fell in with a flock of about fifty Scaups which were congregating in the open channel. Our trawling boat awakened their apprehension of danger; after swimming in front of us for a short distance, they rose hurriedly on the wing. Four of the number went off to the open sea. Their companions rose to a good height, and, swinging past us heavily, broke into three divisions, which came fighting round, and then flew away to the eastward. That afternoon, when the tide had begun to ebb, we watched a flock of two hundred Scaups, most of them diving for shellfish; while resting on the surface of the water they frequently shook their wings and sat half erect upon the tide. Occasionally a duck left the main flock to enjoy a solitary flight. In 1890 we went down to see the Scaup in Silloth Bay on the 28th of Feb. The weather was magnificent, and, though the tide had nearly

ebbed, we managed to steer our little craft out of harbour. A sharp frost had set in during the early hours, and a breeze from the north blew the surface of the Firth into ripples. Common and Herring Gulls hovered about the quay, but we had nearly reached Skinburness before we fell in with a flock of between five and six hundred Scaups assembled in the tide-way. It was the largest congregation of ducks that I had ever witnessed. The birds extended in a long and broad band along the shore. As we drew up to them they rose heavily, and the main phalanx split up into two divisions. The lesser body flew off steadily to the westward. The larger section circled round us and again alighted on the water, out of shot, but sufficiently near to supply a striking and effective picture—the young birds and old females forming a pleasing contrast to the full-dressed drakes. Before they alighted, and while they were wheeling round, we noticed their heavy flight on first rising from the water, flying against the wind, gradually attaining an elevation of 40 or 50 feet, but never ‘towering’ as Goldeneyes and even Long-tailed Ducks will sometimes ‘tower.’ Presently, away they swept across the water in a long extended line, travelling a half-mile, perhaps, and hesitating to alight, until one or two of the foremost birds dropped and afforded an example which their followers were not slow to adopt. In a few minutes you could see them crowding together in a dense mob; so they would remain until we bore down upon them again, when the birds began to swim away from us. Now and then an odd bird rose at one end of the flock, crossed the party, and alighted on the other side; this was generally followed by five or six Scaups rising together, succeeded by a fresh detachment. The main body would remain for a minute or two longer near us, then rise tumultuously as by common consent, and wheel off in a long-extended line to a quieter part of the Firth, leaving half-a-dozen birds behind them to court our attention. The only stranger that we could detect among all these Scaups was a single Common Scoter, which had somehow strayed into their company.

GOLDENEYE.

Clangula glacicion (L.).

Dr. Heysham knew the Goldeneye as 'pretty frequent in winter.' There can be no doubt that he was right, since the species is more widely distributed over the interior of Lakeland than any other species of Fuliginæ. Murray meets with it commonly at Carnforth, and Bell at Milnthorpe; the late Mr. Kirkby showed me some specimens shot near Ulverston in November 1888, and Mr. Williams tells us that a few are shot every winter on the Barrow reservoir. It is not with us a maritime duck. Those I have seen preserved at Whitehaven, as almost everywhere else, were shot on fresh water. It is a common bird on many of the lakes, Windermere, Bassenthwaite, Rydalwater, among others, being frequented by a few Goldeneyes every winter. I saw a very handsome drake and three birds in female dress on Derwentwater on April 2, 1889, and have seen others shot there. It is not a common bird in the extreme east of our faunal area; immature birds have been obtained on various occasions near Alston, but suitable tarns are few and far between, south of Talkin Tarn. But on the lakes and estuary rivers, and all along the Eden valley, the Goldeneye is one of the most frequent of visitors, chiefly in small flocks. It does not arrive in any abundance before the middle of November, but a few stragglers in female or immature dress generally appear at least a month earlier; thus in 1884 our first example was shot on October 10th; in 1885, five birds appeared on the Eden on October 22d; in 1886, the first seen arrived on October 21st; in 1888, the first came on October 10th; in 1889, October 8th; in 1890, three which I examined in the flesh were shot on Coniston on the 11th of the month. Goldeneyes were rather scarce during the mild spring or late winter of 1890, when they almost disappeared from the Solway, but more than usually abundant in the winter following. Not less than a score were shot at the mouth of the river Eden between October 19th and 26th, 1890. Many birds arrived in November; and on December 1st we saw thirty birds in one

flock at the side of Burgh marsh. On the 10th of that month there arrived a flock of between one hundred and two hundred Goldeneyes. The most experienced wild-fowlers assured us that they had never seen so large a company before, but their punt-guns soon split up the flock, while the shoulder-guns further reduced their numbers. We were on the same ground on the 13th, weather fine with a biting frost, and tide flowing, saw several birds in female dress come flying up from the basin of the estuary, to join a big lot, composed chiefly of females and young birds, with only a sprinkling of old drakes. This broke up into thirties, and Bryson was just working up to a flock of thirty-five when another and another joined the first lot, which was thus augmented to a hundred birds. They swam together in front of the punt, but were manifestly uneasy and drew away; this happened several times, but at length the fowler let fly at a lot of about three dozen; he killed six dead and lost four cripples through not having a shoulder-gun.

The Eden was still ice-bound, notwithstanding a partial thaw, when we visited Burgh marsh on January 3, 1891, to find little else than Goldeneyes, and these sadly reduced in numbers. The persecuted birds for the most part frequented the river above Sandsfield. When they came down stream, eight in one lot and twenty-seven in another, it was flying very fast and rather high; but, as they passed, one sportsman pulled down an old drake which fell with a crash upon the gravel scar, and a villager on the other side stopped an old female, which our dog fetched out for him. Their destruction was only excusable from the point of view that they were hard to shoot, and that the fishermen depend for their living during the winter upon the wild-fowl they kill. Fortunately, the large majority of those shot were males of all ages, their sex always preponderating, and their slightly larger size rendering them rather more conspicuous than females. On the 4th of the following February we found about a score of Goldeneyes on Monkhill Lough, two of the number being full-dressed drakes. I have spent many hours there during the last nine years in studying the actions of the Goldeneye, whether diving actively for food, each bird taking its turn as sentinel, or flying restlessly and low across the

waters, or fighting round us, beating the air with the hardened wing-quills that rattle harshly as they speed pell-mell through space.

Many is the outing that I have shared with this hardy duck, sometimes crossing the open marsh when the chill north wind blew the crisp and finely-powdered snow into veritable puff-balls of ice-crystals; sometimes in the last days of April, when the swallows and the very earliest of swifts were hawking insects above the lough, as though offering a reminder that the summer home of the Goldeneye would soon be loosened from a long winter's frost, that he too must journey across the seas, even like frailer folk, to fulfil the traditions of his race by rearing a progeny in some hollow birch-tree in the depths of the Scandinavian forest. In all my studies a-field, I have found the Goldeneye a day feeder; indeed, as soon as the grey morning of a December day breaks, you may depend on finding a little squad of Goldeneyes diving for the shells that are to form their breakfast in the middle of the Eden opposite Castle-town. They are almost always nicely out of shot, but any one murderously disposed will have a fair chance of gratifying his lust to kill if he searches the higher pools, which often hold a stray Goldeneye, and, marking his quarry, runs in when the bird dives, to shoot the poor thing as it comes up and takes wing. Goldeneyes are curiously local; I have only once seen a flock of these birds on the Wampool and Waver estuary, which I know perhaps more intimately than any other part of the Solway coast, though at the junction of Esk and Eden they occur so commonly. The birds which frequent the Eden follow it up to its head-waters, and occasionally appear at Whin's Pond, the 'decoy pond' at Lowther, and other likely localities. At a distance from their favourite feeding-grounds they are seldom heard of. They leave us generally in March; only a few remain until the last days of April. In 1889 a single bird in female dress haunted Monkhill Lough until at any rate the 6th day of May. It was full-winged and shy, nor did it associate with any other fowl, but Goldeneyes are only sociable in my experience with *their own kind*. On the 16th of March 1889 I saw an old drake Goldeneye chase away a Mallard

and his mate from the vicinity of his own family party with an amusing show of indignation. Yarrell (fourth edition) says of the Goldeneye: 'the voice is said to be very loud: whence, or from the noise of the flight, the name *clangula*.' The second etymology is surely the right one? I have always found Goldeneyes very *silent* birds, and have only twice heard them use a call-note. I was lying upon the bank of Monkhill Lough on the 10th of November 1888, studying the movements of three immature Goldeneyes, when one of them dived up within four or five yards of me, and, catching a glimpse of my head behind the bank, spluttered out a guttural 'kkruk' to express its astonishment. I lay still and it swam out rapidly about fifty yards into the deep water, and there remained until joined by its two companions. But they did not fly off just then. Long I watched their play with fixed glass, and they seemed unconcerned, glancing round with their bright yellow irides, but unaware of danger. Whenever they began to swim fast, it meant that they were preparing to dive. I saw one bird *drink*, dipping its neck forward and then throwing the head back and allowing the water to trickle down the gullet. Perhaps it was only an individual idiosyncrasy, but it was new to me and therefore pleasant to see. The Goldeneye is more thoroughly aquatic than almost any of our wild-fowl. It obtains its food—shells, and in a lesser degree water-plants—in deep water, and never feeds like the surface-feeding ducks on our salt marshes. Under no circumstances have I ever surprised a Goldeneye *ashore*. The birds which the gunners cripple swim and dive away, but they do not go ashore, though after death they are often washed up on the brow of the marsh. I am therefore unable to say of my own knowledge *what attitude* the Goldeneye would adopt *on land*. Mr. Archibald has helped me out of the difficulty by forwarding a sketch of a bird which his dog caught alive at the Rusland Pool. The sketch shows that the Goldeneye on land adopts a more upright position than the Mallard, an attitude in fact nearly identical with that of the Tufted Duck on *terra firma*.

LONG-TAILED DUCK.

Harelda glacialis (L.).

The Long-tailed Duck is quite a rare bird in the sounds and estuaries of Morecambe Bay. Very few of the local sportsmen have met with it in any stage of plumage. One of the number, Mr. H. Arnold, killed a young Long-tailed Duck in the Bay at Arnbarrow on November 14th, 1876; this I saw at his house. More recently, I found a very handsome old male in the possession of Mr. Murray of Carnforth, from whom I learnt that it was shot in the Bay on the 14th of February 1884. This is the only *full-dressed* drake that can be vouched for as having been secured at any time on the N.W. coast of England. In female or immature plumage it has occurred a good many times, although at all times one of the rarest of our wild-fowl, and unknown hitherto upon the larger lakes of the interior. At Ravenglass, Dr. Parker obtained a single bird out of a flock of four, in November 1879. Mr. Harris recollects a similar bird having been killed on the Derwent, and Mr. W. Hodgson, A.L.S., answers for another killed on the Ellen in 1855. Yarrell states in the third edition of his *British Birds* that T. C. Heysham obtained this species on the coast of Cumberland, and so he undoubtedly did, on two occasions. The earlier instance is mentioned in a letter written on Nov. 26th, 1834, to Henry Doubleday; Heysham remarking: 'The only novelty that has occurred to me since my return to Carlisle is a young specimen of the Long-tailed Duck, the first, I believe, that has been detected in the neighbourhood.' He notes on a loose scrap, headed Long-tailed Duck: 'Oct. 23, 1850, Townson this day brought here two young birds of this species, which he had shot on the Eden, near King Garth.' Townson was a Carlisle bird-stuffer. These were the first and last heard of near Carlisle for many a long day. At length, after a lapse of thirty-four years, I fell in with a handsome drake on Monkhill Lough. Readers of the *Birds of Cumberland* will recall how, on one occasion, when sheltering from a storm of sleet, crouched behind a bush at the water edge, I was charmed to see a Long-tailed Duck fly up and alight upon the water within thirty-five or

forty yards from my position. It was on the 24th of January 1884 that I first formed an acquaintance, which extended over a good many weeks, during which the Long-tailed Duck afforded not a little pleasure by its attractive action and picturesque appearance. Though most often alone, it was not entirely unwilling to fraternise with the Goldeneyes. At such times it forewent its usual low flights across the water, to indulge in lofty aerial evolutions with its strong-winged companions. In the autumn of that year, 1884, I recognised a small party of Long-tailed Ducks flying up the Esk. Again, on the 13th of Dec. 1890, when sitting with Mr. Thorpe on the edge of Burgh marsh, we saw a Long-tailed Duck turn the point of the marsh and come up the Eden, flying directly towards us. The facial spots were fast developing—it passed within a few yards of us—but my companion did not recognise it, and, as we had agreed not to fire, in order to give fair play to Bryson, the punt-gunner, whose sport we had once or twice spoilt with a chance shot, and who was just drawing up to some Goldeneyes, neither of us emptied a cartridge. On it flew, following the flowing tide, but, spying the Goldeneyes, wheeled round and alighted in their ranks. Bryson fired, but no Long-tail floated dead upon the water. We rejoiced that the rare stranger had for once escaped destruction, but the satisfaction was short-lived. Three days after, the same gunner was again slaughtering the poor Goldeneyes, and among the slain this time was the Long-tail, shot in the identical reach of river in which it had so narrowly escaped its doom at our first interview. As we had conjectured, it proved to be a young male, but smaller than any other male specimen that I have handled. It weighed just $1\frac{1}{4}$ lb. The heaviest bird of this species that I ever weighed scaled just 1 lb. 10 oz. My personal experience of Long-tailed Ducks in the Solway faunal area can happily be extended by that of Mr. Nicol, who has met with several examples of this bird during his gunning experiences near Silloth. Many immature Long-tailed Ducks appeared on the English coasts during the autumn and early winter of 1887—it was quite a ‘visitation’ of *Harelda glacialis*—as I pointed out in the *Field*, and a few birds visited both the Scottish and English waters of the Solway

Firth. The first English Solway bird was shot on Oct. 10th by Nicol, who had observed two individuals as early as Oct. 3rd, and who in one afternoon observed a total of eleven Long-tailed Ducks, in three parties, consisting of five, and four, and two birds respectively. Altogether, upwards of a score must have been killed during the visitation, on the united waters of the Firth; we examined the birds shot on the Scotch side as well as those of our own waters, and found several young males in the number, although females predominated. During the winter of 1888-89 no Long-tailed Ducks were seen, but Mr. Nicol sent to Mr. Edward Tandy a fine old female which he shot on December 1st, 1889, and had a shot at another single bird (which he missed) on the 28th of November 1890. There can be no doubt that this Duck has hitherto paid but scanty visits to the Solway Firth. The late Captain Kinsey Dover had a large experience of punt-shooting in the waters of the Solway, and he assured me that on no occasion did he come across a Long-tailed Duck. The Long-tailed Duck has occurred with us at a distance from the sea only in a single instance. On the 18th of April 1889 a farmer and his dog caught a lamed bird of this species on a small moorland beck near Renwick. It was an adult male, already far advanced in assuming the plumage of the breeding-time. It was not much injured, and lived in captivity for two or three days. Its death was probably due to want of proper food. It was stuffed by Mr. Dryden, in whose possession I examined it shortly after. The birds which were shot on the Solway in 1887 proved, on dissection, to have dined almost exclusively upon shrimps. The bird shot in December 1890 contained some small mussels freshly swallowed and intact. A young drake which W. Nicol shot on the Waver, Oct. 29th, 1891, proved on examination to have been feeding on small bivalve shells, which we found on dissection to be in a crushed condition. This happened to be the most juvenile male Long-tailed Duck that I have noticed locally, the scapulars being as uniform in colour as in the female. All the other young drakes that I have seen in the district had begun to sport one or two white feathers among the scapulars at the time when they were killed.

EIDER DUCK.

Somateria molissima (L.).

The Eider Duck is entirely unknown in the *upper* portions of the English Solway; indeed, the only birds of this species, that have appeared in the English Solway at all, belonged to a party observed on the coast near Maryport by Mr. R. Mann. This was in the month of March 1886, and seven out of thirteen birds were in male plumage. Dr. Stanley obtained an immature Eider Duck in the vicinity of Whitehaven, but that was prior to the year 1829. Dr. Parker writes, that, in June 1880, 'a pair of Eider Ducks were killed by a fisherman on the Raven-glass estuary. I was told that they had got entangled in the fish-garth, and were killed with a stick, and that they were a pair; but although I was on the spot the next day to secure them, they were already plucked and roasted.'¹ If Lord Muncaster could be induced to introduce a few Eiders, by hatching their eggs or transporting young birds from Colonsay or the 'Long Island,' I fancy that this fine sea duck might easily be naturalised, and would become an additional ornament to the bird colonies which already owe so much to his Lordship's fostering care. The Eider is quite unknown to the Morecambe Bay fishermen, but Mr. Armstrong has an Eider in female dress killed near Barrow about the year 1860. Mr. Batson has never met with the Eider in any of his fowling expeditions to the estuaries of the Duddon and Morecambe Bay; but has often examined a *bird in female feather*, which was killed some years ago on the coast off Fleetwood.

COMMON SCOTER.

Edemia nigra (L.).

Dr. Heysham knew the Common Scoter as a bird of our coastline. T. C. Heysham also met with it, for he says in a letter of 1840: 'So far nothing has turned up here this winter, except a pair of Scoter Ducks, a species however of common occurrence

¹ *Zoologist*, 1881, p. 467.

in most parts of the country.' Dr. Gough recorded this species in 1848 as visiting Windermere in July, and in 1861 he wrote of it as occasionally met with on the Kent. Mr. Hindson, in his MS. Notes, speaks of this duck as 'common on Hawes-water.' I closely observed a Common Scoter at Monkhill Lough in January 1889. R. Raine had observed a similar bird at Whin's Pond in the previous December. Others have been shot at different times in the neighbourhood of the higher waters of the Eden. T. C. Heysham notes a Scoter killed near Rickerby in August 1849. But though often met with at a considerable distance from the sea, this Scoter is most abundant in the neighbourhood of Morecambe Bay, where it frequents the well-known cockle beds, and is often netted by the Flookburgh fishermen. Many Scoters are to be seen at sea between Fleetwood and Walney Island. The Barrow gunners are fond of running out towards Fleetwood to have a few shots at the 'Black Duck.' Williams assures me that within the last thirty years this Scoter was much more numerous in the neighbourhood of Barrow than has been the case of late years. He ascribes this apparent decrease to the birds having been driven away by the steamship traffic.

Flocks of Scoters frequent our open coast-line during all the winter months, but of late years their visits to the English Solway have been irregular. The species has never been numerous in the higher waters on our side of the Firth, though I have seen Scoters flying along the Scottish side near Annan. When they visit our side Silloth Bay is their chief feeding-ground. A certain number of these birds appear to pass the summer on our coast, including adult drakes. Mr. W. Duckworth sent me an old drake in moult, shot near Silloth in the first week of September 1886. The new quills were only half developed, and the black feathers of the breast and wing coverts were variegated with light brown. William Railton killed a similar bird about the 25th of August 1888, on the Eden, near Cargo. Mr. J. N. Robinson had observed it for some days previously, but had abstained from shooting it, because it was incapacitated for flight by the loss of its old flight feathers. Mr. Nicol reported to me that a large flock of Scoters appeared

in Silloth Bay on the 26th of July 1888; these, he thought, had been driven up the channel by a strong wind from the S.W., the sea being rather lumpy outside. But though this Scoter is represented on our coast-line in every month of the year, it will of course be understood that the species is most notably a winter immigrant, leaving our coasts in early spring in order to revisit its breeding-grounds in Northern Europe.

Mr. Hewetson favoured Mr. Eagle Clarke with a description of a large flight of Scoters, which passed over Skipton in West Yorkshire, on the 24th and 25th of April 1879; on the first of which dates the ducks, bewildered by the lights of the town and the darkness of the night, flew against chimney pots and houses, no fewer than one hundred and fifty being secured. A large proportion of them were immolated by the telegraph wires.¹ These birds were flying from the westward against a gentle east wind, and I think that no one, who consults a map, will find fault with the inference that the Scoters were migrating from their winter quarters off Morecambe Bay and Fleetwood across Yorkshire, intending to strike the Humber or the low-lying coast of Holderness. The return passage of these birds is illustrated by an observation of Mr. W. Nicol, who informed me that on the 11th of October 1888, when fishing near Silloth, he saw a flock of from eighty to one hundred Common Scoters flying at a great height from east to west, 'as if they were on their way from their breeding quarters. They did not stay here, but went right away west.' Mr. Nicol has had many opportunities for studying the habits of this Scoter, and has often heard the birds fighting over Silloth on a winter's night, calling loudly. Among other occasions, this was noticed frequently in the early spring of 1889, when the Scoters, which spent the hours of daylight in Silloth Bay, used to fly at night up the channel at a height, rounding the Grune and crossing Skinburness marsh to Silloth. I have on one occasion only recognised the call of this Duck migrating *over Carlisle*.

¹ *Zoologist*, 1880, p. 355.

VELVET SCOTER.

Edemia fusca (L.).

The Velvet Scoter has always been a somewhat rare bird in Lakeland. Taylor of Headswood reported to T. C. Heysham a Velvet Scoter seen and fired at on Talkin Tarn, in May 1847, and Dr. Gough recorded a pair which visited Windermere in May 1848, the drake being killed by Mr. Watson of Ecclerigg. These, strangely enough, are the only Velvet Scoters for whose occurrence in the interior of Lakeland there is satisfactory evidence. Mr. Heywood Thomson, and also Williams of Barrow, informed me that they have seen Velvet Scoters in the Irish Channel between Fleetwood and the south point of Walney, such birds being usually in the company of Common Scoters. Certainly the species is rarely obtained in the 'ducker' nets of the Flookburgh fishermen. Mr. W. E. Beckwith informed Mr. F. S. Mitchell that he obtained a young drake killed on Cartmell Sands in December 1876. The species has not been obtained to my knowledge between Morecambe Bay and Silloth, where the first that came under my notice was shot on May 2, 1883. Mr. J. N. Robinson shot a beautiful old male on the Eden near Cargo, December 22, 1886. An occasional Velvet Scoter has appeared from time to time in Silloth Bay, feeding on shell-fish like the Scaups and Common Scoters. Mr. Nicol shot an immature drake in November 1887, and two in the following month, sent to Mackenzie, and another in female plumage in January 1888. This last was in company with an old drake, which escaped scatheless. In July 1889 the same excellent observer saw a Velvet Scoter in Silloth Bay, and another, also solitary, in October of the same year. Mr. Tullie saw a Velvet Scoter at Monkhill Lough in December 1890, and on the 13th we observed a Scoter, apparently a Velvet, off the point of Burgh marsh, where Mr. Leavers had fired at it several times a few days before. We saw it come up with the tide, flight round and alight again in the main channel, in which it was rapidly carried away. Mr. Nicol considers that this Scoter is more restless than the common species, frequently rising on the wing and taking long flights. He has never heard it utter any call-note.

SURF SCOTER.

Edemia perspicillata (L.).

The only example of this transatlantic duck that has been obtained within the strict limits of Lakeland is the adult drake which was shot by a farm servant on a pond at Crofton, November 2, 1856, a few months before the death of T. C. Heysham. He secured the bird, and probably examined it in the flesh, because he preserved the trachea and sternum, which, in the natural course of things, would have been thrown away. The specimen went to the hammer with the rest of Heysham's birds in May 1859, and was purchased by the late Mr. Gurney. It is now the property of his son, Mr. J. H. Gurney of Keswick Hall, Norwich. The trachea and sternum were included with the mounted bird as 'Lot 176' of the sale catalogue, but by an oversight the trachea was retained at Carlisle. Quite recently a clerk in Messrs. Mounsey's office in Carlisle handed to me for examination a small cardboard box which had been found among some papers. It proved to contain the trachea in question, together with a note in Heysham's hand, stating that it was the trachea of the Surf Scoter shot at Crofton in 1856, and perhaps the only trachea of this rare duck then in England.

It is a little surprising that this bird should have been killed at Crofton, because the locality is about seven miles in a 'bee line' from both the estuaries of Esk and Eden and those of Wampool and Weaver. All the other British examples have been shot, or washed up dead, on the sea-coast.

Mr. Heywood Thompson recently showed me a specimen of the Surf Scoter in the plumage of the young male, which he shot on the N.W. coast of England, although south of our limits, *i.e.* on the Ribble, opposite Lytham, December 9, 1882. It was recorded as a female bird (*Zool.* 1884, p. 29), but it was not sexed. I have therefore no hesitation in pronouncing it to be in *male* dress. This bird is deep brown in colour, with a slight whitish mark before the eye, a more decided whitish mark behind the eye, and a long white patch on the hind-neck, as extensive as in an old male, although not of course nearly so pure in tint.

GOOSANDER.

Mergus merganser, L.

The Goosander has long been known as a winter visitant to the rivers and lakes of estuaries. Nor is it improbable that at one time a single pair of these birds may have elected to nest in the neighbourhood of Windermere, which has always been a favourite resort of this species during the colder months of the year. What gives colour to this suggestion is a statement of Nicolson and Burn regarding Windermere, based apparently on information supplied by the papers of Sir Daniel Fleming: 'Waterfowl in great plenty resort to this lake, especially in winter, such as Wild Swans, Wild Geese, Duck, Mallard, Teal, Widgeons, Didappers, *Gravyes* (which are larger than Ducks, and build in hollow trees), and many others.'¹ An explanation of the difficulty created by this passage is afforded, if we remember that the Goosander is still called the 'Gravel-duck' on the shores of the English Solway. I believe that the name refers to the fact that *this* species often rests on scars of gravel in the bed of the estuary when the tide is out. It may include some further reference to the species obtaining trout in well-shingled pools in preference to a muddy bottom. At all events the Goosander is often called a 'Gravel-duck' at the present time, and I believe that the term was formerly of less restricted usage than is now the case, since old English names naturally tend to become more and more local, until they eventually become obsolete. The accounts of Lord William Howard supply several references bearing directly upon the point at issue. Between November 7th and 13th, 1612, we find entered: 'For Thorne-thwate the same week. Robinson for fish, viij^s, vi^d, iiij seapies viij^d, ij gravens viii^d.' Between October 25th and 31st, 1617, we read, '2 gray hens, a grevell, and a teale, xiii^d.' In 1622, we have an entry between January 6th and 12th, '5 mallerds and gravelins, xx^d.' Lastly, we read in 1623, between January 17th and 25th, 'A gravell and a woodcock, vij^d.' Thus we have four renderings of the spelling, viz., 'gravens' [plural], a 'grevell,' 'gravelins' [plural], and a 'gravell,' all varying

¹ *History and Antiquities of Westmorland and Cumberland*, vol. i. p. 185.

according to the taste of the steward or cook who kept the accounts, but all evidently referring to the same species. The editor of Lord William's household books has ventured the spicy suggestion that the gravelin is 'a small migratory fish, commonly reputed to be the spawn [*sic*] of the salmon.' But he furnishes no explanation for the 'spawn of the salmon' being entered with purchases of wild-fowl; the context might fairly have saved him from expressing so hazardous an opinion. We have here the 'Graven,' of which the singular may well have been the 'Grave,' which is equally easily pluralised as Graves or 'Gravyes'; while at the same time the 'Graven' are identical with 'Grevell,' 'Gravelins,' and 'Gravell,' the latter being the identical term applied even to-day to the Goosander by those who are fortunate enough to retain the Cumbrian dialect. It will be thought perhaps by some that the original term 'Gravens,' found in 1612, may have been suggested by the blue-grey mantle of the female Goosander, just as Badgers were sometimes called 'Greys' from their colour. But be that as it may, the name 'Grevell' was in use in 1617, and spelt as 'Gravell' in 1623. That it applied to the Goosander is rendered the more probable by the fact that the 'Gravens' or 'Gravelins' were supplied during the very season at which the Goosander is most frequently killed on the Solway, viz., from the end of October to the end of January.

Whether or not the Goosander ever bred in the neighbourhood of Windermere, there can be no doubt as to its occurring in small numbers almost every winter on that sheet of water; indeed specimens have occurred at one time or another on almost all the principal sheets of water in Lakeland, such as Derwentwater, Loweswater, Ulleswater, Bassenthwaite, Haweswater, or even on such lesser sheets of water as Whin's Pond, Edenhall. It is not suggested that it occurs in any of these localities except in couples and small parties, nor that it even occurs every winter on any one lake; though as a matter of fact Haweswater and Windermere are visited annually. But inland the Goosander is widely distributed over the central portions of Lakeland; if it be absent or nearly so from the fell lands which form our eastern boundary, it is so because the

waters which it frequents and which must be well supplied with fish, particularly *salmonidæ*, are rare or not to be found where the Goosander is wanting. Upon the coast-line it is a local bird, more often found in Walney Channel than elsewhere in Morecambe Bay. It frequents Ravenglass irregularly, but shuns the bleak open coast from Drigg to Silloth, so that it has rarely been obtained even on the more sheltered estuary of Wampool and Waver. But if it is not partial to the open sea, it is probably because it cannot so easily obtain in salt water a regular supply of the trout and young salmon upon which it prefers to diet. East of Bowness on Solway it occurs pretty commonly, singly and in small parties, between November and March, being then distributed along the tideway from Glasson to the estuary banks of the Esk and Eden, both of which rivers it frequents seasonally, flying up the Eden to the neighbourhood of Penrith and Appleby. Dr. Heysham found that birds in female dress were much more numerous than adult males; such is still the case. Though I have examined a fair number of grey males which possessed the black nuchal collar, the only bird that I have seen, obtained when actually *changing*, in the spring, from the grey dress *into* the black and cream livery of the old male, was shot at Haweswater early in March 1891. The Goosander is not partial to the sandy estuaries of Wampool and Waver, as already remarked, but prefers the rocky and rapid pools of the Eden, and chiefly dives for its prey in deep gravelly holes. It is a clever diver; when winged it is sometimes, though rarely, secured by the punt-gunners, who give chase to such cripples when the tide has ebbed, and left the central portions of the Solway Firth a wilderness of flat sand, the banks stretching away for several miles to the westward. It is sometimes eaten. I have heard its flesh pronounced to be 'quite as good as grey duck' (*i.e.* Mallard). In the *Field* of October 4, 1890, Mr. Wrigley records that two Goosanders were shot that year on the Lancashire coast at Formby on September 27, two days earlier than our earliest date, which relates to a young bird shot on the Eden on the 29th of September 1883, and a week earlier than our second earliest date of arrival, which is that of a bird in female dress shot on the Eden

on the 4th of October 1888. When the tide ebbs, some Goosanders go down with it seaward, but others rest sitting nearly upright on a gravel scar or on the sods at the end of the marsh. I have more than once walked on to the top of these birds; the haste with which they bustled off afforded not a little amusement. It is really a pity that the poor things should be so hard shot, because the fowlers get only a meagre price for them; yet, when one of these large ducks comes swinging up channel at a brisk pace, the temptations to 'let drive' is trying to most sportsmen, even though the chance of retrieving a wounded or dead bird from the race of the tide may be a poor one. Its flight, though heavier than that of the Merganser, is free and vigorous; to see a fine old pair of Goosanders fighting up the Eden from Burgh to their favourite pool at Rickerby, above Carlisle, soon after the break of day, is quite enough to season an early river-side ramble with contentment. During the frosty days of December 1890 a flock of Goosanders frequented the Eden near Langwathby, three of them being in the adult male livery. The old males were sufficiently wary to elude their persecutors, but their companions were less fortunate. R. Raine shot four or five of them to feed his tame Peregrine, and others fell to local marksmen. R. Raine, being an artistic and thoughtful taxidermist, took special pains to study the attitudes adopted by these Goosanders when neither fighting, nor diving, nor swimming. He found that their usual posture of repose was to poise themselves nearly upright upon a sheet of ice or a rock in the river-bed; a conclusion which agreed closely with our studies of Goosanders at the mouth of the same river. In the spring of 1892 a party of eight Goosanders lingered on the waters of the same part of the Eden until the 20th of March. This is rather a late date for these birds to be found in the interior of Lakeland. As a rule they seem to prefer to withdraw to the estuary waters shortly before their final departure to more northern breeding-grounds.

RED-BREASTED MERGANSER.

Mergus serrator, L.

With us the Merganser is more of a seafaring duck than the Goosander. A few individuals always frequent the waters of the English Solway from October to April, and may often be seen fighting down from the estuary of the Wampool to the open sea west of Maryport. In July 1890 Mr. Nicol saw a half-grown brood of Mergansers swimming in the Waver with their parents, but the party had probably crossed over to us from the Scottish Solway. I have seen some very handsome full-dressed males which had been procured off Carnforth, Flookburgh, Arnside, and Ravenglass in the spring of the year: but the majority of those seen on our coast are attired in female dress. This Merganser is comparatively rare in the *interior* of Lakeland; although immature birds have been obtained on Windermere Lake.

S M E W.

Mergus albellus, L.

Dr. Gough in 1861 recorded the Smew as an occasional visitant to Lyth moss, a large and wet 'flow' almost adjoining Foulshaw, and therefore close to the Kent estuary. In January 1891 two adult drakes were seen on the same river near Levens. Mr. Todd, a neighbouring farmer, shot one of them dead. He wounded its companion, but when about to secure it he fell on the ice, and the crippled bird dived away and was never seen again. The bird secured is a very handsome drake, one of the most perfect that I have seen. About the same time that the Smevs visited the Kent, an immature female was shot in the Rusland valley. Mr. C. F. Archibald reports: 'Richard Holme shot it in the pool on January 17, 1891. It was alone. Richard "did not see it dive, but there was no doubt but what it had been, no doubt whatever; it got up hoful quick and flew tremendous sharp, it did for sure."' Mr. W. Duckworth has examined a female and an adult male believed to have been shot near Ulverston. I have not been able to

trace the Smew in the heart of the Lake district. A man named Watson of Little Salkeld showed me a young drake which he shot on the Eden near that place about the year 1870; just when a sharp thaw had succeeded to a severe frost. It was alone and was diving when he shot it. This bird had doubtless flown up the Eden from the Solway Firth, to which Smeews have always been irregular visitants, occurring repeatedly it is true, but only at long intervals. Dr. Heysham says that in his time the Smew was rarely met with, and his son had a similar experience. James Irwin wrote to T. C. Heysham in a letter of January 13, 1841: 'A small Smew was shot in the canal near Glasson a few days ago by a man named Hodgson. He ate it, not knowing what it was.' Heysham purchased another in Carlisle market in January 1848, between which date and 1880 seven adult and immature Smeews are known to have been killed in Cumberland, nearly all upon the Eden. Captain Irwin of Lynehow showed me a fine old Smew drake, shot on the Lyne in December 1883. Nearly six years elapsed before the species reappeared, in October 1889. On the 30th of that month Nicol was shooting on the Waver when he fell in with a bird in female dress. At the first glance he thought it was a Long-tailed Duck, but it swam more rapidly, and looked very small. He soon distinguished the dark reddish crest, grey mantle and white fore-neck. It swam up the estuary in front of his punt, with a flowing tide. The weather was blustering and he thought that the bird had come in for shelter. It seemed hopeless to shoot so apt a diver on the water, and he therefore got a shot at it as it rose on the wing, dropping it into the water. But it was only pinioned and easily dived away. He did not see it again until the 13th of November, when he and Law chased it up into a narrow channel, and despairing of capturing it alive, shot it rather than allow it to be lost altogether. No others were heard of until the severe winter of 1890-91, when many Smeews visited different parts of England. Mr. Thorpe purchased a female killed by some poor gunner near Carlisle, on January 7, and on the 10th of the same month a handsome drake was killed by Mr. Saul's keeper on the Eden. Mr. George Saul, who brought it to me for identifi-

cation, said that a second and similar bird had been seen and fired at by the same man. On the 15th of the month I examined another old Smew drake, shot by the keeper of Mr. MacInnes on the Eden near Rickerby the same morning. Little, who killed it, showed me the exact spot where he flushed it, saying that it flew out from among the 'saffs' or willows at the water edge and was crossing the stream when he stopped it. When he began to handle it a small 'brandling' dropped out of its mouth. On the 17th of the same month a female Smew in adult dress was brought to me for Tullie House by Mr. J. N. Robinson, who had shot it near Cargo the previous evening. No more Smevs were killed during January, but on the 4th of February I found a single bird on Monkhill Lough. The severe weather had now broken; Tufted Ducks, Pochards, Goldeneyes, Teal, and Mallard had all returned to their favourite retreat. The Smew was in female or immature dress. When first observed, it was swimming near the south side of the lough, but on being disturbed it swam out into the middle of the water and along the bank on the opposite side, travelling faster than any of the common diving ducks. The head was carried fairly erect, and the white fore-neck was generally visible. It swam rather deep in the water, and its action in diving resembled that of a Grebe more than that of a duck. It seemed to be shy and wild, and did not consort with any other fowl; neither did it stay long on the lough, for on my next visit it had disappeared. The neck of the Smew is rather short in comparison with that of other ducks, and the body is very compact, the pectoral girdle giving the impression of unusual strength. The legs are placed quite as far back as in the other species of Mergansers, and argue an upright position when the Smew is at rest on land. I have dissected a good many Smevs at different times, and almost always found their food to consist of small fishes, with occasional aquatic larvæ. Mr. MacInnes's bird had nothing but a few fish scales and bones in its stomach, but Raine, to whom I sent Mr. Saul's bird for preservation, in addition to five fishes about three inches in length, took four fresh-water *shells* out of its stomach. This old drake, in fairly good condition, weighed 1 lb. 3 oz. The Smew is not a heavy duck at any time.

Order COLUMBÆ.

Fam. COLUMBIDÆ.

RING DOVE.

Columba palumbus, L.

The Wood Pigeon must always have been a common breeding bird in the forests of Lakeland, as well as an abundant visitant from Scandinavia at the fall of the year. In what way this species may have been captured before powder and shot came into general use is a matter for speculation; but there can be no doubt that the Wood Pigeon has long formed an important article of our food supply. The accounts of Lord William Howard prove that it was regularly supplied to his table. Sometimes the birds were entered as 'Stockdoves,' the title under which, at the present time, they are commonly known in North Lancashire, or, at any rate, in the neighbourhood of Foulshaw. Once the species was described as the Ring Dove, *i.e.* 'iij ring doves vi^d.' Generally it was entered by the common name of Cushat, the taste of the cook varying the spelling from 'Cowshots' and 'Cowshootes' to 'Cowshettes' and 'Cushats.' Occasionally the birds are simply entered as 'Doves.' All sportsmen know the pretty shooting which these birds afford when flocking in to roost in their favourite fir-trees on a winter's afternoon, frequently accompanied by a few of the blue Stock Doves which have joined their ranks while feeding in the open fields. Though shy and wary when persecuted, there can be no doubt that this pigeon admits of a certain degree of domestication if taken from the nest at an early age. In the year 1842 there was living a tame Wood Pigeon which had been kept as a pet for three-and-twenty years. Its owner was Mr. Isaac Stubbs of the Dale, near Kirkoswald. The bird spent most of its time indoors, having contracted a friendship with the sheep-dog and the house cat.¹

Instances of the Wood Pigeon nesting in highly accessible situations are comparatively common, but that this species should voluntarily nest *upon the ground* appears far from probable. A single instance of such a departure from its usual habits is vouched for by a local newspaper, which states that in

¹ *Carlisle Patriot*, August 19, 1842.

June 1843 Thomas Coward, a keeper in the service of Lord Lonsdale, 'discovered amongst the Ling on Shap Fell a Wood Pigeon's nest, in which were two young ones, almost ready to fly.'¹

STOCK DOVE.

Columba oenas, L.

The Stock Dove appears to have been always a winter visitant, if not an actual resident in Lakeland; but there can be no doubt that it is only within a comparatively recent period that it has bred pretty generally in this region. Mr. Tom Duckworth informed Mr. Harvie-Brown: 'In the Rose Holmes, west of Carlisle, about six miles from this city, on the 28th of April 1861, in an old oak-tree (one of the last vestiges of Inglewood Forest), I found the first nest of the Stock Dove, and in the following year I found another in an old rabbit-hole in the bank of the river Roe, a tributary of the Caldew;' since which date he had found these birds breeding on the Lyne, on the Newbiggin Holmes, and also on the Eden.² Mr. W. Dickinson wrote in 1882: 'About 1840 I saw two or three of these birds fly out by the arch holes of the Irton tithe barn, and was told they were in the habit of breeding inside the barn in seasons when the building was not much in use.'³ Mr. Reynolds assured me that when he first came to Ravenglass the Stock Dove was almost unknown in the district, and none bred in the rabbit-holes on Drigg Common. They first began to nest at Kirksanton, and he soon afterwards heard of them as frequenting the Fells, where they were known as 'Rock Doves.' Latterly they have nested numerously among the sand-hills of the coast, in which I have inspected the squab young. The blue pigeons which frequent Whitbarrow are no doubt Stock Doves, for the keeper on the ground volunteered that they were 'Blue Rocks,' and that he found three pairs of them *nesting in rabbit-holes* this year [1891]. He knew the Wood Pigeon as the 'Stockdove,' the name commonly applied to it in his district.

¹ *Carlisle Patriot*, June 9, 1843.

² *Proc. Royal Phys. Soc.* vii. p. 251.

³ *West. Cumberland Rem.* p. 19.

Dr. Gough did not include the Stock Dove in his local list, but Mr. Archibald finds a few pairs breeding in the Rusland Valley; they undoubtedly nest about Appleby. When we cross the county boundary we find the Stock Dove well established in the Edenhall woods and the valley of the Eden. I have seen young birds taken from the Lyne, and believe this species to breed in the limestone scars of Eastern Westmorland, and locally among the central mountains of the Lake district. Mr. W. Hodgson wrote of Ulleswater in 1885: 'The Stock Dove has of late years taken up its quarters at more than one station among the hills, where its low plaintive cooing is first heard at the beginning of March.'¹ I have occasionally observed small parties of Stock Doves flying across our salt marshes; on Nov. 4, 1889, I happened to walk almost on to the top of a single Stock Dove, which was drinking at a small 'dub' on Burgh marsh. At Wright Green, near Cockermouth, the Stock Dove has been known as a breeding bird only since 1884. Mr. Dickinson found one nest *on the ground* under cover of a very thick whin-bush.

ROCK DOVE.

Columba livia, Bonnat.

The Rock Dove may fairly be considered a Lakeland species, inasmuch as the northern portion of this region receives irregular and infrequent visits from veritable 'Blue Rocks,' such as we are accustomed to meet with in the caves of the Hebrides. For example, during the severe weather of January 1891, a small flock of these wild pigeons appeared in the neighbourhood of Allonby. I saw one that had been secured alive, a veritable 'cave pigeon.' Whether the species really breeds in fissures among the precipices of the Lake mountains, as some people report, has never been determined; although I have often *invited* those who support this hypothesis to produce specimens. Most probably some of the birds reported as 'Rock Doves' are the descendants of stray dove-cot pigeons, which have partly reverted to feral conditions. Others are

¹ *Trans. Cumberland and Westmorland Assoc.*, xi. p. 22.

Stock Doves. Mr J. W. Harris formerly assured me that the Rock Dove bred at St. Bees ; but I find on examining the birds on which his opinion was based that they are not pure-bred. The only blue pigeons which I have myself obtained from the locality were Stock Doves. Readers interested in the domestication of pigeons, such as those which once bred in the *churches* of Warwick and Skelton in Cumberland, and Morland in Westmorland, should consult a paper contributed by the Chancellor of Carlisle to the ninth volume of the *Transactions of the Cumberland and Westmorland Archæological Society*.

TURTLE DOVE.

Turtur communis, Selby.

Dr. Heysham knew the Turtle Dove as an occasional straggler to Cumberland, and such it has continued to be, for its visits to Lakeland during the last hundred years have never yet resulted in the permanent establishment of the species in any one locality. T. C. Heysham tells us that a young Turtle Dove, killed at Blackwell in September 1832, was the only local specimen he had seen ; he had heard of others, but considered the bird 'of very rare occurrence in this county.' Dr. Gough styled the Turtle a rare, occasional visitant to Westmorland. The Kendal Museum contains a Turtle Dove labelled : 'Killed near Kendal. Presented by Mr. Josh. Leather.' The only other Westmorland example that I have myself seen was killed near Kirkby-Lonsdale in the summer of 1891. I have not seen any specimens obtained in the heart of the Lake district, but Dr. Parker thought that a pair bred near Gosforth. Certainly I saw a fine Turtle Dove at Drigg, on June 5, 1885, and the collection of the late Mr. Borrodale contains a specimen shot near Eskmeals. It occurs occasionally in North-west Cumberland, at Rose, at Wigton, near Kirkbampton ; it *nested* at Scotby, on the east side of Carlisle, in 1885 ; it has repeatedly occurred in Barron Wood and other parts of the Eden valley. In 1888 a pair appeared near Little Bampton, and would no doubt have nested, had not one of them been winged and caged.

Order *PTEROCLETES*.Fam. *PTEROCLIDÆ*.

PALLAS'S SAND GROUSE.

Syrrhaptes paradoxus (Pall.).

Pallas's Sand Grouse is essentially an Asiatic species, making its home in the arid Kirghis steppes, the great Gobi desert, and extending its range eastward through Mongolia to the plains between Peking and Tientsin in North China (Elliott). Prjevalsky states that *Syrrhaptes paradoxus* 'is one of the most characteristic birds of Mongolia, inhabiting not only the steppes, but also the deserts. In summer they go north, even beyond Lake Baikal, where they breed, but spend the winter in the Gobi desert, in such localities as are free from snow, and in Ali-shan; and from the middle of October we constantly meet with them there, sometimes in flocks of several thousands' (Rowley, *Orn. Misc.* i. p. 382).

The first man to obtain a specimen was a Russian, Nicol Rytschkof, who forwarded it to Pallas, but in a mutilated condition, having lost the long tail-feathers, which form so conspicuous an ornament of the species. Not having a supplementary tail, Pallas figured the specimen without one (Reise, *Russ. Reichs.* ii. App. 712, Tab. F. 1773), and made some shrewd remarks upon the new species, which he referred to the genus Tetrao. He remarks: 'Avis inter Lagopodes et Otides ambigua, multisque momentis anomala et a norma solita aliena.' Attention is called to the curious feet: 'Pedes maxime insoliti fere usque ad unguis plumosi, breviculi, tridactyli, digitis brevissimis, coalitis, solo apice unguibusque distinctis; unde planta triloba, latiuscula, papillis corneis imbricata.' He concludes: 'Habitat in deserto Tartarico australiore, unde adlatum specimen farctum transmisit nobil Nicol Rytschkof.' Our countryman Latham, following Pallas, conferred on the species the title of 'Heteroclite grous.'

Having made these prefatory remarks for the sake of such readers as are not professed naturalists, it becomes possible to consider two irruptions of this Sand Grouse into Lakeland, in the years 1863 and 1888 respectively. Mr. J. H. Gurney has

kindly called my attention to an unrecorded specimen, which he has examined, in the possession of Mrs. Dawson Rowley of Brighton. Mr. Gurney says that this bird, which is a female, was shot by Mr. Jackson of St. Bees in April 1863. If the month be correctly reported, this Sand Grouse was the first to be obtained in England that year, but the earliest public announcement that this species had reached England appeared in the *Times* newspaper of May 26, reprinted in the *Zoologist*. It was Mr. E. J. Schollick who reported that a covey of fourteen birds had been seen on Walney Island, and that two birds had been shot. The birds are described as having been very tame, allowing the man who shot the specimens to approach quite near while they fed in a field of corn. A fine male Sand Grouse was killed near Penrith in May or June, and stuffed by the elder Hope, who says that it was very hard shot. A female bird was shot near Silloth by a man named Lightfoot, who subsequently narrated to me all the facts concerning its capture. Routledge of Silloth remembers the occurrence likewise, and assures me that a second bird was seen at the same time. Lightfoot's bird was skinned by the late James Fell, who was fond of discussing with me the circumstances under which it had strayed to Cumberland. We little thought a few years ago that Professor Newton's prediction of the return of this Sand Grouse to Western Europe would receive so remarkable a fulfilment. When the great irruption took place in the spring of 1888, two distinct flights of Sand Grouse visited Lakeland. The more northern division would appear to have arrived on the east coast of England between Berwick and Holy Island, striking across the Bewcastle fells, and proceeding westward to the southern shores of the Solway Firth. The southern division perhaps arrived at Spurn, and after following the Humber, crossed North-west Lancashire, alighting on Walney Island, whence they spread northward to the sand dunes of Ravenglass estuary. It will perhaps facilitate matters if I state that at no time, during the immigration of these birds, did any of us succeed in tracing their presence in Westmorland; although Mr. W. Duckworth, on June 26, fell in with a flock of seven Sand Grouse at Green Odd, within a short flight of that county. With

this proviso, we may divide Cumberland, temporarily, into four arbitrary and artificial, yet obvious and convenient, divisions.

(A) *East Cumberland*. No birds were reported during the spring from Penrith, Alston, or Renwick, though all possible inquiries were made. Mr. J. J. Baillie informed me that some Sand Grouse were seen in Northumberland, about thirteen miles east of Alston. Had these continued their course westward, no doubt they would have crossed Cumberland. As it is, only the north-eastern corner of the county is known to have been favoured. Near Stapleton 'a lot of five, and on the same day another lot of three,' were seen by Mr. H. J. Lorraine of Westfield House. At Wintershields, near Bewcastle, a flock of 'about twenty' came under the notice of Mr. Richardson, while frequenting a small moss for two or three days. Neither of these gentlemen could furnish an exact date, but both referred the occurrence to *April*. Near Longtown two flights of about a dozen birds were observed by Robert Moscrop, gamekeeper to Major Irwin, flying very rapidly towards the west. 'At first I thought,' he wrote, 'they were Golden Plover, as they much resembled their flight, but they were larger, and darker of plumage, and uttered a peculiar "chuck-cho-chuck" as they flew along well up in the air.' Mr. Moscrop was at first under the impression, like the gentlemen just mentioned, that he had seen the birds in April; but a reference to his diary proved indisputably that the correct date on which he observed the second drove was May 21, and he accounted for his first impression by the coldness of the season. No more birds were seen (or at least reported) from East Cumberland until August 10, when a flock crossed the Esk at Birrell's weir, near Floriston, in view of Major Hogg and Mr. Routledge, who were fishing at the time. Major Hogg kindly furnished the following statement: 'I should say that I saw about thirty-five birds, not more. I saw them twice, but they were the same flock evidently. They appeared to me darker in plumage than the bird we find in such numbers in India, where it is called by the natives "Guttoo," from the continued call it makes when flying.'

(B) *Cumbrian Plain*.—A flock of six or seven appeared in some fields near Orton, on the northern edge of the Cumbrian

Plain, on May 19, as reported by Mr. Davidson, and continued to frequent the locality until May 26, when three were shot and brought in the flesh to George Dawson of Carlisle. About this time a flock of nine took up their abode on the mosses and grass fields near Bow. Mr. J. N. Robinson and Mr. Dawson, being well acquainted with the farmers of the district, succeeded in rousing much interest in the preservation of the birds, and none being shot, the party haunted that district the entire summer.

(C) *The English Solway.* Much interest attached to the immigration of Sand Grouse to this district, from which their presence was first reported by that excellent out-door naturalist, Mr. Richard Mann. First seen here were a pair of birds seen by Mr. Williamson, jun., near Allonby, on May 22. It is probable, from information obtained by Mr. Tom Duckworth and others, that about this date Sand Grouse appeared near Bowness and Abbey. But the earliest date of any number was May 27. On the morning of that day a flock was seen near Silloth by Mr. Osborn. The same afternoon a flock of fifteen were seen at close quarters under cover of a hedgerow, by Mr. R. Mann, near Allonby. I reached the ground on the following forenoon, and, with Mr. R. Mann as guide, observed a number of birds. They had, however, been shot at, and were growing wild. A flock of fifteen which were tame, and had not previously been shot at, was seen in the locality the same day. On June 5 a flock of thirty birds flew past William Nicol, while shrimping near Silloth pier; and the same flock lingered in the neighbourhood until the 8th, when it was last seen, flying west. On June 9, Mr. Tandy discovered that a party of ten birds had frequented Wolstey farm since the beginning of the month, and there they remained until the 13th, when, according to one report, they were seen to cross the Solway Firth to the Scotch side.

After June 13 very few birds were seen near the English Solway. On June 25 a single bird was seen by W. Nicol to cross the Solway from the Scotch side, proceeding inland when it reached our coast. On the 28th June ten or twelve birds visited the Grune Point. On July 20 a flock of eight or nine birds crossed over to us from the Scottish side of the Solway.

(D) *West Cumberland.* (1) Near Cocker mouth the Rev. A. Sutton, whose experience of Sand Grouse in the Soudan is extensive, observed three birds on the Tallantine Hill, July 2-3. When disturbed they flew to Millstone Moss.

At Sandwith, as reported by Mr. H. Nott, four Sand Grouse were seen on the high ground above St. Bees during the second week of July by a young farmer, whose dog turned them out of the turnips.

At Seatcale a male and female were shot out of a flock of nine by Mr. John Porter. Both birds were killed at one shot, and sent to Dr. Parker. The survivors flew off in a westerly direction.

At Ravenglass a flock, numbering at first twenty-three, settled among the sand-hills on July 24, as ascertained by Joseph Farren.

Mr. W. Duckworth most kindly visited Walney Island at my request, both on June 4th and subsequently. He ascertained on that date the presence of a flock of fourteen, and of another of seven, the first birds having arrived on the 19th of May. Between that date and June 18th seven were shot and sent for preservation to Williams of Barrow. On June 11th a flock of forty, and another of seventeen, birds, appeared at the north end of Walney. On June 17th a flock of eight were seen at the south end of the island.

The advent of these interesting strangers roused hopes that they might become naturalised, or, at least, breed amongst our littoral sand-banks for a season, and much labour was expended in ascertaining whether the birds were breeding. I sent to the *Field* office the ovaries of two females, killed on the 26th and 28th of May, requesting that a professional expert might give an official opinion as to whether the birds were nesting. The editor replied: '*Both the hens would have nested, the one in the course of a few days, the other in less than a fortnight.*' This was quite my own impression.

Ignorance of the signification of hedgerows, easily comprehended as characterising a species accustomed to range at will over vast tracts of unenclosed country, proved fatal to some individuals on their first arrival; the survivors were not slow to adopt habits of increased vigilance. Thus when a flock of

ten birds had been marked down into a ploughed field, and their propinquity obtained by a long *détour à ventre*, I had scarcely taken up a vantage point in a thick furze bush overlooking the birds when they began to run together, and, having packed on the ground, rose and abruptly departed, pausing only when they had gained the shelter of the sea-beach. They were marked down afresh, but the like result followed. Rising sharply, at forty yards' distance, they executed a few rapid turns, and pitched in the field which they had quitted previously. On other occasions flocks, which had been shot at previously, showed similar wariness to that just described; but at the same time it should be understood that, when in full flight, parties of Sand Grouse will approach men within a few yards. Noticing a distant flock apparently making for the sea, a position in their probable line of flight was hastily secured, and with success, for the birds shot *overhead* across the heath like arrows, their wings beating the air audibly as they pursued their headlong course. On another occasion I happened to be walking beneath a bank of littoral sand-hills, when a party of Sand Grouse dashed overhead, calling lustily. Away they sped across the beach, over long reaches of sand, away to the edge of a distant tide, and then, following the water edge for about a mile, they swept westwards towards Beckfoot, but checking their course before the village was reached, they rose high in the air and, curving their course with one accord, travelled back to Wolstey, dropping once again in a favourite field. And at this point a word may be said about the flight of the Sand Grouse. Putting aside all preconceived notions, it must be held to bear a not inconsiderable similarity to that of the Golden Plover (*Charadrius pluvialis*); yet the flight, viewed at a distance, served on more than one occasion to suggest some analogy with the flight of the Swift (*Cypselus apus*).

The fact is that Sand Grouse are seen to the best advantage when performing their graceful aerial evolutions. It was only on the breezy moor, or among the long lines of sand-dunes blown up on Walney Island, and at Ravenglass, that we naturalists could enjoy to full perfection the 'beatific vision' of a flock of these birds in full cry.

Not the least pleasurable of many days employed in studying the habits of Sand Grouse was the 3rd of August 1888, spent with Mr. Reynolds at Ravenglass. Together we ferried across the estuary to the edge of Drigg Common, and, after traversing a few hundred yards of sand, took up a position behind a long ridge of well-drifted sand. A glance over the ridge revealed the existence of a strip of sandy ground, evidently saturated by recent rain. Sea plantain and sea milkwort were the only plants noticed. Conical sand-hills rose and fell in the background, ridge flanking ridge until the sea-beach was reached. In the near foreground, scattered over a small area, were resting the members of a flock of three-and-twenty Sand Grouse. A few were feeding; some were scattered in twos and threes around; in the centre ten or eleven birds were squatting close to one another. In spite of all precautions, they seemed to suspect danger, and began to run together with shambling gait. A moment later found fifteen birds at once within the focus of the field-glass. Up to this juncture no cry was heard, but when the birds rose in a pack their cry was distinctly audible, notwithstanding the deafening clamour overhead of a large colony of Common Terns (*Sterna fluviatilis*).

The cry of the Sand Grouse has been rendered as 'truck-turuk, truck-turuk,' by Prjevalsky, and this is certainly an accurate rendering of a not unmelodious call-note; but if a flock of Sand Grouse be startled at close quarters, their alarm note is harder and more guttural than the customary chorus of their united voices.

During the earlier portion of their sojourn, these birds appeared to feed principally on the seed of clover, turnip, and rye. Later in the year they glutted themselves on the seeds of the corn and spurrey (*Spergularia arvensis*), a troublesome weed. I sent to Mr. Tegetmeir a gizzard crammed with this small seed. The birds shifted from one quarter to another in a way that greatly increased the difficulty of studying their movements. Their vagaries proved them to be true Bedouins, inheriting a wandering disposition from their progenitors, whose prolonged adaptation to sterile regions has clearly caused them to transmit to their descendants a roving disposition. Upon the whole, it

may be said that they frequented mosses, grass lands, and, where possible, ranges of sand-hills, feeding chiefly on arable lands, and repairing at regular intervals to their favourite watering-places. The remarkable foot, which induced Illiger to propose the genus of *Syrrhaptes* for *Tetrao paradoxus*, Pall., is eminently specialised to suit the environment of a sandy wilderness. Mr. Reynolds remarked: 'The footprints are curious. They are very small for a bird seemingly larger than a Partridge. The middle claw extends far beyond the other two, and the smallness of foot may account for a kind of roll or shuffle they have in walking or running.' We examined hundreds of impressions in the wet sand of the 'feet of the queen of the golden sands' without detecting any variation from the type. The pad always seemed to produce a depression, shallowest in front, where the three claws pierce the sand and leave three round holes, the first in advance of the other two. Although the feet of the Sand Grouse are encased in pads, and their legs are very short, yet these birds can run with surprising celerity. On the 6th of August we found that the ground which these birds frequented among the sand-hills at Drigg was strewn with the feathers of Sand Grouse. Evidently they were deep in moult.

Information regarding the autumnal movements of these birds was naturally less easily obtained than when the first news of their arrival had kindled a short-lived flame of enthusiasm. The following lines refer to some such occurrences:—(A) *East Cumberland*. Mr. Tandy ascertained that two parties of three and five Sand Grouse visited the Penrith district, apparently for the first time, on September 13th and 15th. Near Rockliffe, a single bird was constantly seen in October. (B) *Cumbrian Plain*. At Orton, Sand Grouse remained throughout September, and two were seen at Newby Cross on the 25th of that month. Mr. George Dawson stated that on October 18th a flock of twenty-five flew over his house, calling loudly. (C) *English Solway*. Near Workington an odd bird was seen by Mr. Hodgson early in September. At Beckfoot, near Silloth, five appeared at the beginning of October, but did not remain. (D) *West Cumberland*. The Ravenglass birds lingered on the

coast between Eskmeals and Drigg until the middle of October. My esteemed correspondent, Mr. Reynolds, wrote shortly after the event of their departure: 'Please note that the Sand Grouse left here on the 17th inst. They were seen to fly high, but in circles, on that day, and the police officer saw them flying in an easterly direction over Muncaster. They have not been seen since. There were about forty of them.'

It is difficult to understand *why* the Sand Grouse left Ravenglass, except by the natural hypothesis that the migratory fever of their race had seized them and they longed to depart to winter quarters. But a few birds lingered in Lakeland. During the week ending November 17th, 1888, upwards of a dozen Sand Grouse were shot near Silloth, in spite of all remonstrances. Having examined eight of this number in the flesh, I feel bound to say that, contrary to some statements current at the time as to the non-suitability of our climate to their peculiar requirements, these Sand Grouse were in the finest feather, while their bodies were loaded with fat. They weighed from $9\frac{1}{4}$ to $10\frac{1}{2}$ ounces, and their crops were full of wheat, in some instances of corn and spurrey. When visiting Walney in November 1888, I ascertained that the Sand Grouse had left the island in July, but a single bird had just reappeared at the south end. This was afterwards shot by a man named Griffiths, and sent to Williams of Barrow, as was a male killed on December 20th by Mr. Richardson of Biggar. Returning to Cumberland, a bird in female dress was shot by a keeper near Ainstable on November 28th. On the 10th of December a single bird was seen at Aiglegill. Two birds, one of them apparently wounded, visited Skinburness about the same time.

A little later in the winter, either in December or in January, a keeper named Smith shot three Sand Grouse a few miles from Whitehaven. The birds were sent in the flesh to his brother, the present Jerry Smith of Bassenthwaite, at whose house I identified one of the number. It was a fine male in winter plumage, but had been hit very hard. Jerry Smith mounted all three specimens, returning two of them to his brother, whose widow still retains them.

On the 19th of January 1889 two males were shot by a

farmer at Skirwith, close to the borders of Westmorland, their mates being therefore rendered barren. On the 28th of January 1889 Mr. Haliday of Abbey reported that a few Sand Grouse were frequenting his land, but a heavy fall of snow supervened, the birds became restless and shifted to the coast and the neighbourhood of Wolstey, where they were seen by Dr. Gabriel and others early in February, after which all news of them ceased until the month of May. Mr. R. Mann then wrote to me from Aiglegill: 'I am sure you will be glad to know that the Sand Grouse have made their appearance in this part of Cumberland again. A single bird was seen on Sunday, May 12th, and a couple (together) yesterday on the fields between this and Brown Rigg.' Tyson Brown, the Ravenglass keeper, told Mr. Johnson that a fine pair of Sand Grouse arrived on the sand-hills at Drigg on the 11th of May. This he repeated to me, with additional information, the accuracy of which I rather doubted. Indeed, so many incorrect rumours of Sand Grouse occurred in 1889 that I have omitted to notice some probably true information rather than run any risk of adulterating the facts stated in this article; not that I query any one's good faith, but that people of sanguine temperament are not always to be trusted to distinguish between Sand Grouse and Golden Plover. However, I fully ascertained that a few Sand Grouse appeared near West Silloth in September 1889, and there remained for a short time. One bird frequented a garden at Blitterlees for several days. In taking leave of this handsome Asiatic, I desire to express an earnest hope that its next immigration to our shores may not be signalised by a thoughtless slaughter of the newly-landed birds; but that they may rather be encouraged on all hands to effect a permanent settlement. The condition of those which were shot in the middle of an English winter has entirely disproved the theory that this Sand Grouse is too delicate to endure the vicissitudes of our uncertain climate.

Order GALLINÆ.

Fam. TETRAONIDÆ.

BLACK GROUSE.

Tetrao tetrix, L.

The Black Grouse does not appear to have been appropriated to heraldic purposes in the same way as Red Grouse, but Singleton observed in 1677 that one of the four coats-of-arms then existing in the ancient manor-house at Melmerby showed 'three blacke cocks and the crossbow between them;' the latter part of the note affording us a pleasant reminder as to the appliances of sport in vogue before the fowling-piece came into general use. Sandford about the same date referred to the existence of black game at Naworth. Evidence of the comparative abundance of this game on the English borders early in the seventeenth century is supplied by the Accounts of Lord William Howard. Black game did not appear at his table in the same abundance as 'Grouse,' but in some seasons there was plenty of it nevertheless. Analysing the game purchased for the Naworth household from August 1618 to the end of that year, I find that one hundred and twenty head of black game were bought in during the last five months of the year. The quantity of Red Grouse consumed during the same period amounted to seventy-two brace and a half. The prices paid were sixpence for a Black Cock, fourpence for a Grey Hen, and threepence for a Grouse.

This species long continued to be numerous on our northern confines. A sale advertisement of 'The Manor of Bewcastle,' published in 1829, tells us that (in spite of recent enclosures), of 17,000 acres, 8300 acres consisted of 'unenclosed wastes abounding with black game and Grouse.'¹ The district in question still contains a fair sprinkling of this game, though of course black game have decreased generally of late years. Dr. Heysham, whose knowledge of Cumberland related especially to the north of the county, tells us that this game was scarce. A few grey hens then nested, as they sometimes do still, on the Solway Flow. There was generally 'an annual brood upon Newtown common within a mile of Carlisle.' Thirty years

¹ *Carlisle Journal*, May 9, 1829.

later the species was still uncommon in the Solway plain. A local paper records in 1827, that 'Last week the Hon. Robert Leeson of Crosby Lodge, near this city, bagged a brace of fine black game, which are very rare in the neighbourhood.'¹ A brood of black game is sometimes reared on one of the mosses near Drumburgh, but, owing to indiscriminate shooting, the species has never become really established there. The only information I possess relative to black game in the west of Cumberland is derived from Mr. H. Patricius Senhouse, who tells me that there is a sprinkling of black game in the neighbourhood of Cockermouth. The *Westmorland Gazette* of September 13, 1845, alludes to Sir George Musgrave killing a few brace of black game at Barron wood. The specimens now preserved at Edenhall came from Barron wood, and Mr. R. Raine tells us that at the present time there are two or three broods of black game on the Barron wood and Lazonby fells.² When we come to the Westmorland border we find a few black game breeding in several localities, on Whinfell for example. The species was 'abundant at Julian Bower' when Mr. Hindson wrote his local notes. The question whether black game are indigenous to a district, or have been introduced by human agency, is often difficult to settle. It is certain that black game have bred in the country round Appleby since the 'forties.' The *Westmorland Gazette* of September 13, 1845, records that the Hon. Colonel Lowther and his son had been out among the black game on the Manor of Sleagill; they bagged six brace, but found the birds very wild. The Rev. A. J. Heelis kindly enumerates the following places as those in which he has shot black game near Appleby: 'In the "Ellen," as they call them, which are rough woodlands of no great extent, immediately behind Dufton Pike; on glebe land at Kirkby Thore and in the neighbouring plantations belonging to Mr. Crackenthorpe of Newbiggin. I have some impression of having heard father say that black game were introduced by Mr. Barham, a former rector of Kirkby Thore. I know my grandfather once shot a

¹ *Carlisle Patriot*, Dec. 7, 1827.

² Some black game exists at Greystoke, Cumberland, and also on Barton Fell, Westmorland.

brood on the Long Marton Glebe, which had spread from Kirkby Thore. There are very few remaining now about the Kirkby Thore estate.' Mr. Heelis adds that black game exist in considerable numbers near Alston.

Mr. R. Raine says that there is 'a breed of black game' at Soulby. He saw a brood this year on Hartley Fell near Kirkby-Stephen, but *there* the bird is becoming rare because the adjoining moors are not preserved. Mr. Hindson included black game as found 'about Shap, Reagill and Lowther wood.' R. Raine writes that black game are to be found about Ulleswater and Haweswater. The head keeper at Lowther says that they shoot from ten to twelve brace per day while Grouse driving.

Mr. H. Arnold, who rents the shooting over Kentmere and Sleddale Forest, informed me that he had a brood of black game in Sleddale Forest last season [1890], and that his keeper saw two head of black game in Kentmere this year [1891]. As regards the southern portion of the Lake district, it may be convenient to correct a slight misapprehension. In his *Birds of Lancashire*, Mr. F. S. Mitchell states that black game appear to have been unknown in that county 'until a few pairs established themselves in Furness nearly forty years ago' (*i.e.* in 1842). He then quotes, in a condensed form, a statement made on this subject in the *Zoologist* by the late W. Pearson, upon which he comments: '*This is a most interesting example of the way in which changes in the character of a district will bring about changes in avifauna.*'

It is hardly necessary to assure the reader that the establishment of black game in this part of Lakeland was due to *artificial* means, *i.e.* to the intentional introduction of breeding birds. Of course their introduction would not have been undertaken if the district had not become suitable to them. Probably their introduction was attempted from more centres than one. At all events, Mr. C. W. Archibald assured me that black game were intentionally introduced into the Rusland valley between 1832 and 1840. His late father introduced them *himself*.

The *Westmorland Gazette* of September 13, 1845, contains a paragraph headed 'The Black Cock in the Lake district.' The writer states that the black game had formerly existed in the

high hills of Westmorland and Cumberland, but had been extinct for a long time : 'though attempts have been repeatedly made to introduce it to these localities, they have hitherto been without success.' The exciting cause of these remarks was the fact that 'last week Mr. B. Hawkrigg of Sawrey shot four of these rare birds on the hills between Windermere and Esthwaite which are supposed to have been bred in the plantations of H. Curwen, Esq.; but how they came to take up their abode in this locality must remain a mystery. We understand that there are four of the brood still left, and that strict orders have been given for their preservation.' The subject is referred to again in 1849 : 'Five or six years ago some of these birds appeared rather mysteriously in this district, and now they have spread for miles on every side. Some have been shot, and fine game they are, equal to any ever brought from Scotland. The Green Hows, belonging to Mr. Sandys, has a brood or two; the Dalepark Fell, belonging to B. Harrison, Esq., two or three broods; Hawkshead Moor contains a few, and the hills in Claife have some also. With a little care they may become numerous.'

Writing to the *Zoologist* in 1850, Mr. Pearson ventures some remarks on the supposed immigration of these birds : 'The nearest locality where I have heard of any is Mell-fell, a round wooded hill at Matteredale in Cumberland, and more than twenty miles from where they were first seen with us. The rugged and lofty barrier of the Lake mountains also intervenes : still it is probable that they came from thence; for we have no Black Grouse within the same distance, either to the east, west, or south of us.' This hypothesis falls to the ground, if we admit the much stronger probability of these birds making their way to Sawrey from the Rusland valley.

Mr. Pearson wrote in 1850 that black game then existed 'at Cock Hag betwixt Crook and Underbarrow, in the extensive larch woods at Lamb How in Crosthwaite; and on the summit of Whitbarrow, a detached limestone mountain, presenting a grand rock escarpment to the lake tourist, as he approaches from Milnthorpe. Perhaps they are most numerous in the larch forest on the heights of Cartmell fell. In the woods of Furness fells, on the western side of the lake, they are also as

far down, I am told, as Holker Hall.' The Black Grouse is not quite extinct on Whitbarrow, but Mr. Drewery informs me that he is not aware (1891) of any Black Grouse being bred on any of the Duke of Devonshire's moors. Mr. R. B. Lee informed Mr. Mitchell in 1882 that black game were more plentiful in the Winster district than anywhere else in the neighbourhood.

The Rev. G. Boag has instituted fresh inquiries for me. This is his reply (August 31, 1891): 'A few years ago I am told that black game was very plentiful in the Winster valley, but for the last seven years it has been scarce, though not quite extinct. I suspect it has become scarce through being so hard shot. There are still a few nests occasionally in this valley on the higher ground.' The Rev. T. P. Hartley tells me that he has always found a few black game in the neighbourhood of Sawrey. Mr. F. S. Ainslie adds: 'About the best place for them is on the east side of Coniston Lake.' Mr. H. Arnold favours me with the following experience: 'About twenty years ago [1871] I used to shoot in the township of Applethwaite about four miles from Lake Windermere on the west side, and there were then generally a brood or two of Black Grouse each year, and at the same time I heard of a few broods near Winster, also on the west side of Windermere. I believe that there are fewer black game in Lakeland now than there were twenty years ago. I have a fine black cock which was shot about twenty-five years ago on Reston Scar, about four miles from Windermere.'

RED GROUSE.

Lagopus scoticus (Lath.).

It was the custom in primitive times to kill Grouse at every season of the year, a usage observed in Lakeland during the seventeenth century. The Naworth accounts include many entries of 'Moorcocks' and 'Moor Fowle' killed in the summer-time; nor did the young escape the slaughter meted out to their parents, because we have such entries as the following: '15 moorcocks and 6 pootes, iiiij^s. xj^d.';—'16 morecocks, ij^s. 8 poutes, x^d.' Once, in April 1620, occurs another name for the Red Grouse: '2 gorcocks, x^d.'; *this* term does not seem to

have been in very general use, but Machell uses it. So vast and so remote were the unreclaimed wastes of Lakeland that persecution failed to affect its numbers seriously; hence Dr. Heysham and Richardson both record that there were plenty of Grouse upon our moors, while the blue Hen Harrier still quartered the wide expanse of Spadeadam Waste. It may be well to point out that the descendants of the primeval race of Grouse, that crowed among the heather, when Beavers built their dams upon our rivers, and Wolves ravened in the forests which then clothed the sides of the Lake Mountains, supplied the first Grouse sent out to the Antipodes. It was Mr. John Boustead of Armathwaite Hall, near Cockermouth, who despatched five brace of Grouse to New Zealand in 1870. Unfortunately only one bird reached its destination alive. Far from being discouraged by this misadventure, Mr. Boustead had eleven and a half brace of birds taken from Binsey, and reared by hand, in 1872; this instalment was shipped for the Colony in November of the same year. There was nothing very unusual in the birds being reared in confinement. Daniel mentions that 'in 1809 Mr. William Routledge, of Oakshaw, in Bewcastle, Cumberland, had in his possession a pair of Red Grouse completely domesticated, and which had so far forgotten their natural food as to prefer corn and crumbs of bread to the tops and seeds of heather.'¹ Grouse are always partial to corn, and their dietary is perhaps rather varied than is sometimes supposed. A hen Grouse, shot near Alston in October 1888, had her stomach distended with food, consisting of fresh heather tops, grass seeds, and ripe blaeberrries. Fine grit is required for the proper digestion of such food, and the birds have sometimes suffered for want of it. Writing from Alston on the 16th of April 1837, John Borrow informed T. C. Heysham that 'in consequence of the Grouse in some parts of this neighbourhood having been unable to procure *sand* (owing to the depth of snow), they have picked up particles of the Sulphate of Barites, which appears to have been the cause of a very great mortality among them. A person whom I can depend on assures me he saw not less than 40 brace dead upon the Moors a few days

¹ *Rural Sports.*

since. I have procured a brace.' When the telegraph wires of the Lancashire and Carlisle Railway were first erected, large quantities of Grouse were killed near the summit of Shap. During the early months of the year Shap is one of the dreariest regions in all Lakeland. Yet Yarrell tells us that, in the year 1835, a farmer who was firing heather on Shap Fell burnt over the nest of a Red Grouse on the 25th of March.¹

P T A R M I G A N.

Lagopus mutus (Montin.).

The former existence of the Ptarmigan in Lakeland has been affirmed and reaffirmed by numerous writers since first Pennant stated in 1776 that a few Ptarmigan still inhabited the lofty hills near Keswick. Having formerly thrown doubt on this statement of Pennant, I now take up my pen to support his proposition. Whether Pennant learnt the fact when travelling through Lakeland does not appear. But I believe that Dr. Heysham himself had independent grounds for his statement in 1797, that the Ptarmigan might still be found on the mountains about Keswick. I find those grounds in *this* fact,—that, when the *author of Observations chiefly Lithological* visited Keswick in 1803 he *found a specimen of the Ptarmigan*, which he calls '*Tetrao Lagopus*,' in *Hutton's Local Museum*. It is extremely likely that Dr. Heysham had himself seen the same bird in Hutton's 'Repository' when he wrote six years earlier. From what we know of Hutton's Museum, I feel confident that the late Rev. H. T. Frere saw the same specimen, 'said to have been killed on Skiddaw,' at Keswick, in 1841. Hutton himself lived until 1831, and his daughter, Miss Hutton, was still exhibiting the collection in 1841. It was finally broken up before the lady's death in 1855, and what became of this Ptarmigan I cannot say. Probably it was one of the last of its race, for the Ptarmigan of Skiddaw must have become extinct by the close of the last century. I have myself conversed with men who knew Skiddaw and the surrounding hills in the 'twenties,' but they had no traditional belief in local Ptarmigan,

¹ *British Birds*, vol. iii. p. 75.

though the late Jerry Smith remembered an abortive attempt to colonise our hills with a batch of Scottish Ptarmigan. Mr. R. Service has shewn that the *Dumfries Courier* of February 21, 1826, contains an unsigned statement as to domesticated Ptarmigan, supposed to have been imported from Skiddaw to Dumfries. This story is not only of *uncertain* authorship, but is too wildly improbable to stand in need of serious refutation. At this time, or within a very few years of the date of the Dumfries story, T. C. Heysham was writing to a correspondent at *Perth*, asking him to procure for him 'a brace or two of the white grouse . . . in February or March, as well as some of their eggs during the next summer.' If Ptarmigan had still existed in Cumberland, Mr. Heysham would surely not have sent for them to Perthshire? He always attached additional value to Cumbrian specimens.

Order GALLINÆ.

Fam. PHASIANIDÆ.

PHEASANT.

Phasianus colchicus, L.

When, in the year 1251, Henry III. decided to keep the Feast of the Nativity at York, the Sheriffs of the northern counties were ordered to contribute a supply of game and poultry for the use of the sovereign. The Sheriff of *Cumberland* was required to deliver a thousand Chickens, three hundred Partridges, twenty 'cranes,' fifteen Swans, twenty Peacocks, and *forty Pheasants*.¹ But, whether this supply of Pheasants was actually forthcoming from Cumberland I am quite unable to say. Indeed, the earliest authority that we possess, favouring the supposition that the Pheasant was early introduced, is that of Machell, who comments on this game having become extinct in Westmorland: 'The species of them being soe tame a fowle are long since destroyed, and, since the great forrests have bin depopulated of their wood and verdure, so that there is little or none on the mountanes for want of copses and covert, to fly too at severall stages, they could never yet be restored agane.' If such an early introduc-

¹ *Documents relating to Scotland*, vol. i. p. 338.

tion of the Pheasant had really taken place, as Machell hints at, it is highly probable that the first birds were sent to Westmorland out of *Yorkshire*. We know from the Earl of Northumberland's Household Book that 'Fesauntes' were ordered 'to be hade for my Lordes owne Mees at Principale Feestes, and to be at xij^d a pece,' early in the sixteenth century; that Pheasants were occasionally sent to Cumberland out of Yorkshire a century later, is exemplified by the entry in Lord William Howard's Accounts for 1629: 'Januarij. . . . To a manne which brought a phesson out of Yorkshire, v^s.' But Machell himself tells us that a member of the Lowther family introduced Pheasants into Westmorland, bringing the birds from Yorkshire: 'But it hath bin lately attempted by Mr. Lowther to restore that game, who 2 or 3 years since [1677-1698] brought young ones over out of Yorkshire hither; but the countrey people distroy'd them, before they increased to any considerable repleunishing number.' The failure of this attempt to introduce Pheasants into Lakeland appears to have damped the ardour of our sportsmen, because for the next hundred years they contented themselves with shooting Grouse and Partridges. The Rev. J. Wilson has kindly pointed out to me that Pheasants were included in an order against poaching made by the magistrates at the Cocker-mouth Sessions in January 1701-2. But I hardly think that this would warrant the supposition that Pheasants existed at that time in Cumberland. As lately as 1784 Clarke wrote that there were *no* Pheasants in Cumberland. This deficiency was remedied by the enterprise of Sir James Graham, Lord Muncaster, and some other gentlemen; so that when the County History appeared, 1794-7, Dr. Heysham and Mr. Nicholson independently announced the fact of its recent introduction; the estates of Netherby and Muncaster being perhaps *the first* upon which the Pheasant was established in the north and west of Cumberland. The first years of our century witnessed the extension of its range to all the coverts of Lakeland, but the original strain was destined to give place to the Ring-necked Pheasant, which is now the dominant species, though on some estates great pains are taken to stamp out the new-comers, and to keep only the old-fashioned red-rumped birds.

RED-LEGGED PARTRIDGE.

Caccabis rufa (L.).

The moist climate of the Lake district can hardly be considered favourable to the naturalisation of a species which thrives best in dry and sandy situations, and has probably exercised an adverse influence upon the various attempts which have been made to introduce this bird into Lakeland. Dr. Parker informs me that Red-legged Partridges have lately (May 1890) been introduced to the Gosforth district, and are at present thriving well in that part of Cumberland. It is to be hoped that the results of this experiment may be more fortunate than accrued to the similar attempt made in 1862 by the late Mr. Jackson Gilbanks, whose stock was shot out by poachers and neighbouring sportsmen the same session; or to the birds turned down at Thornthwaite near Keswick, about the year 1878, by Mr. Short. The earliest known occurrence of this bird in Lakeland is identical with a bird observed feeding with the poultry in a farm-yard at Dykesfield, Burgh, which was shot by Mr. Nixon prior to March 18, 1848, when it was examined by T. C. Heysham. Its appearance points to an introduction of the species either in Cumberland or the south of Scotland. There can be no doubt that other isolated attempts have been made to introduce this bird as a colonist, but country gentlemen rarely take the trouble to record such incidents in print. About the year 1865 Dr. Gough informed Mr. A. G. More that the Red-legged Partridge had 'bred regularly of late years in Westmorland.' I have failed to trace the species as now *breeding* in Westmorland; nevertheless, several of these birds were shot near Kirkby-Stephen in the season of 1887.

PARTRIDGE.

Perdix cinerea, Lath.

Although gifts of Partridges, sometimes of live birds, were occasionally offered to the lord of Naworth, the species does not occur in his poultry bills with the frequency that we should expect to find, had the numbers of this game bird approximated

in the seventeenth century to those of the present day. We may therefore infer, without much fear of contradiction, that the conversion of swamps and mosses into sound arable land has materially favoured the increase of the Partridge in Lakeland. Mowing machines prove fatal to a good many chicks. The operations of poachers during the last nights of August are generally well planned, and often successfully carried out. But in spite of some disadvantages, we have generally a sufficiently good show of Partridges to satisfy the requirements of sportsmen. Nor are sportsmen the only persons interested in the preservation of this favourite bird. Whether the ice morsels whirl in gusts and eddies before the furious blast of the north wind, the warm breath freezing on our beards as we force our way across the high grounds of Westmorland,—or whether the honeysuckle and variously-coloured orchids burden the still air of a summer evening with their heavy perfume,—it is always a joy to recognise the rasping call of the brown bird that runs to squat beside its fellows already huddling together in the snow drift; or that watches ever so anxiously beside its sitting mate. But even this must yield place to the superior pleasure of startling the old hen from the shelter of the ancient tree-stump in the deer-park, disclosing as she retreats the olive treasures that so soon will crack and shiver before the onset of the tiny downy captives which must find a way of exit from their fragile cradles of thin lime. In some seasons a good many early broods are reared. But a local record of the discovery on the 1st of April of a newly-hatched covey of eight chicks, discovered at Wreaksand, near Broughton-in-Furness, in the year 1827, might have been considered a fairy tale had it not been vouched for by the *Carlisle Journal*.

Two expressions used in connection with this species deserve notice. ‘Pubble,’ says Mr. Dickinson, ‘is Cumbrian for plump. Grain well fed is “pubble as a partridge.”’¹ I happened to show to Smith of Drumburgh a sketch of a bird drawn in the act of sunning its plumage; he remarked: ‘It would be *balming* itself. You often see Partridges do the same; and so folk speak of “A *balm* of Partridges.”’ The Rev. T. P. Hartley has

¹ *Glossary*, p. 11.

not heard the phrase in Westmorland, but reminds me that such expressions as 'a balmy day' and 'balmy weather' are in general use.

QUAIL.

Coturnix communis, Bonnat.

I question if the Quail was ever a very abundant visitor to Lakeland. No doubt it was always well known in some favourite localities, or Richardson would not have mentioned its *local* name, 'Wet-my-feet;' yet we know the view of his contemporary, Dr. Heysham, who says: 'The quail is not plentiful in Cumberland. They breed here; but the whole, or most of them, disappear towards the latter end of October.' Curiously enough, the only reference to the Quail in the Accounts of Lord William Howard relates to a bird killed in *winter*. Referring to the payments made between the 12th and 19th of December 1618, we find this entry: 'A partridge, vi^d. A quale, iiiij^d. A skeldrake, iiiij^d.' There can be no question as to the accuracy of this, because odd birds have several times been killed with us in mid-winter. For example, a male Quail was shot at Kirkbride on the 29th of December 1831, and T. C. Heysham pronounced it to be in excellent condition. Mr. Woodham shot a Quail on Foulmire moss on the 26th of December 1871, and Mr. Pearson saw a Quail when shooting at Rampside, November 7, 1885.

The Quail ranks as an irregular summer visitant, thinly scattered over the cultivated parts of our area. Its trisyllabic call-note is usually heard in the neighbourhood of Allonby in the month of May: it is partial also to the valley of the Eden. It was fairly numerous at the time of the Franco-German War. The older sportsmen with whom I have conversed agree that, when they were young, 'beviess' of Quails were far from uncommon. Dr. Gough in 1861 included the Quail as a rare occasional visitant to the neighbourhood of Kendal,—'formerly a regular summer visitant.' Mr. W. A. Durnford says that it is now rare in Furness, though stated to have been not uncommon formerly. The only local clutch of the eggs of the Quail that I have personally seen was taken by Mr. Gabriel about ten years

since in the neighbourhood of Rockliffe. Mr. Dickinson wrote from his home in the west of Cumberland in 1882: 'This bird is now rare around here. In my young days [say 1810] its whit-tu-whit was frequently heard in the breeding season, in rye-grass fields, or in the drier meadows. I only remember seeing one bird so late in the autumn that the ground was covered with a few inches of snow. They appear to leave the country at the end of summer or early in autumn.'¹

Order *FULICARIÆ*.

Fam. *RALLIDÆ*.

CORN CRAKE.

Crex pratensis, Bechst.

The numbers in which this bird visits Lakeland vary seasonally, but from the grass meadows of Holker Park, northwards, it is generally a common summer visitant. Many of our old inhabitants were accustomed, as young men, to shoot Land Rails upon their first arrival in spring, either over dogs or by decoying them within shot by means of a wooden comb. This practice has become obsolete, and some consider that the bird has become more abundant in consequence. It nests in gardens occasionally, but chiefly in our hay-fields. Mr. A. Smith, who has examined many nests, tells me that he considers eleven eggs to be the maximum number laid by any one bird. In June 1891 he found a Land Rail covering twenty-one eggs, placed in a tolerably deep depression, lined with finely-shredded grass. He took and blew the twenty-one eggs, which he found to be but little advanced in incubation. He had no doubt that two pairs frequented the field in question, and that the females had laid their eggs together. He found another nest containing fifteen eggs, but some of these were rotten, and in this instance also two birds had laid their eggs in the same nest. The actions of the Corn Crake are animated and interesting. In September 1890 George Dawson gave me a young bird which had been captured among some 'stooks' the day previous. It was too shy to eat before us, but, with the assistance of a

¹ *West Cumberland Rem.*, p. 16.

looking-glass, I was able to watch its actions unobserved. It had a hungry appetite, and consumed earthworms with avidity, picking out the larger individuals, which were bolted head first. The worms resisted, and strove to return, but *Crex* kept them down with resolution. The smaller worms were generally seized about the middle, and, with the aid of a slight jerk, they disappeared in a twinkling. He drank or sipped water by dipping his bill into the saucer, and then raised his neck; but did *not* throw back the head like a fowl in order to allow the liquid to trickle down the gullet. At other times he stalked round the cage, first putting down one foot and then the other. His plumage was not worn tightly packed together as represented in most stuffed specimens, but the feathers hung loosely from the body; he was fond of ruffling up the feathers of the back, occasionally shaking his tail. The Corn Crake usually limits its stay with us to a period of about five months, from the third week of April until the close of September; but stragglers have been killed up to the end of the year in Lakeland, thus extending its longest sojourn among us to eight months, or two-thirds of the year.

SPOTTED CRAKE.

Porzana maruetta (Leach).

A few Spotted Crakes pass through Lakeland in the spring of the year, but their presence at that season has been less frequently noticed since a close-time was established. The late Sam Watson assured me that an acquaintance of his who possessed a dog clever at flushing Crakes used to shoot one or two Spotted Crakes on the Petteril every spring, and that on one occasion this man shot no fewer than five birds in a morning. Mr. Cowan possesses a specimen killed near Carlisle in March. In 1888 a single bird (evidently on migration, as it was shot as soon as it alighted on the beach) was killed near Silloth on March 31. Many of our mosses appear to resemble pretty closely the haunts of this Crake, which I have visited in Holland; nor can we doubt that the species has occasionally *bred* with us. The only specimen that Dr. Heysham examined

was killed upon the banks of the Eden in the beginning of June. Though catalogued by Dr. Gough as an occasional autumn visitant to the neighbourhood of Kendal, he notes that a Spotted Crake was killed one year on the 5th of June. T. Armstrong shot one near Monkhill Lough in the same month, while at one time the species was observed at Biglands Bog all through the summer, though I failed to find it there. A former keeper, named Hismay, shot several early in the autumn of 1881, and assured me of his belief that the birds he killed had been bred on Weddholm Flow. Odd birds have been killed in August in different years. The late Mr. W. Dickinson recorded that his son shot a Spotted Crake in a rough sievy field near Arlecdon in *September* 1852. There can be no question that most of the Spotted Crakes obtained hitherto in Lakeland were shot beside our water-courses and on the swamplier mosses between September and November—these birds being for the most part immigrants from Northern Europe. *Exceptionally*, the Spotted Crake *winters* with us. Mr. Tremble has one killed in December. The late Mr. A. Mason informed Mr. Mitchell that the Spotted Crake was rare in Furness. Mr. Duckworth examined three of these Crakes killed near Ulverston in October 1889.

LITTLE CRAKE.

Porzana parva (Scop.).

Mr. J. W. Harris informed me in 1885 that he obtained an example of the Little Crake which had been captured in a ditch near Cockermouth Castle in 1850. It appears from three letters, written by Mr. T. C. Heysham to the late Mr. Bell (lent by Mr. H. P. Senhouse), that this specimen came under the notice of the former gentleman. In a letter of March 24, 1852, he wrote: 'A short time ago Mr. Joseph Harris was so obliging as to send me a specimen of the Little Crake, *Crex pusilla*, which had been captured near Cockermouth for inspection, and which I returned on the following day. As this is a rather rare British Bird, it has occurred to me that it would be advisable to have a drawing made of it, which in all probability

may last longer than the skin, unless the Curator of your recently-established Museum understands the business better than these officials generally do.' In a letter of April 15 in the same year, Heysham repeats his request for a loan of the bird. That his wishes were attended to is rendered certain by a letter of April 27, in which he wrote: 'Your letter of the 24th reached me on Sunday morning, and the specimen of *Crex pusilla* was delivered to me at 9 last night; for both of which accept my best thanks. I will return the Crake with as little delay as possible, and, to accomplish this, my Draughtsman's pencil is already at work tracing its likeness.' What became of the sketch we do not know. The bird remained in the Cockermonth Museum until Mr. Harris received it back in exchange for a duplicate specimen. He was therefore able to show it to us in 1891, when it was in good preservation, despite the lapse of forty years. This appears to have existed as our only authenticated Little Crake until the spring of 1886, when a specimen was obtained by Mr. Woodburn of Ulverston. Mr. Woodburn then possessed a black retriever bitch, which had a very soft mouth, and was an adept at capturing Moorhens and other water birds. On the 19th of April 1886 Mr. Woodburn visited the clay-pits at Brick Kiln Lane, near Ulverston. These pits, long disused, cover some few acres, and are full of water, sedges, and rushes, studded with a few hawthorn bushes. The spot commands a pretty view of Conishead Priory, the towers of which appear above the tops of the trees. It is quite near the sea, and would be very likely to catch the eye of a bird migrating at some considerable height. The retriever which accompanied Woodburn ranged the marsh as on many previous occasions, but, to her master's surprise, she caught a Little Crake and brought it to him whole and uninjured. Not knowing what it was, he killed it, and carried it for identification to Kirkby, the birdstuffer, who identified it by reference to books, and spoke of its excessive rarity. A notice of it appeared in the *Ulverston News* of April 24, 1886: 'On Monday last [April 19] a good specimen of the Little Crake, *Crex pusilla*, was caught by a dog in one of the clay-pits at Brick Kiln Lane, near Ulverston.' My attention was drawn to this

example by the vigilance of Mr. W. Duckworth, who kindly introduced me to Mr. Woodburn and his mother. From them we learnt the foregoing particulars of the very beautiful Little Crake of which they are so justly proud, the bird being in bright spring plumage and excellently stuffed. They also showed us a specimen of Baillon's Crake, obtained at the same clay-pits in May 1886, about a month after the Little Crake had been secured.

BAILLON'S CRAKE.

Porzana bailloni (Vieill.).

About the year 1864 William Little shot a very small Crake near Cotehill, which he was not able to preserve, but which certainly represented the present species *or* the last named. Captain Johnson of Castlesteads, a most accomplished field naturalist, assured me in 1889 that some few years earlier he flushed out of thick cover a tiny Crake, which he was unable to secure. The species was fully identified as a visitant to Lakeland in 1886, under circumstances already alluded to. In May of that year Mr. Woodburn, who had frequently hunted the above-mentioned clay-pits since the capture of a Little Crake, had the extraordinary good fortune to come across an example of Baillon's Crake. It was flushed out of the cover by his retriever bitch, and at once rose upon the wing and flew away in the direction of Conishead Priory, but, returning to the clay-pits, dropped into a hawthorn bush, and thence into the water. The retriever followed it up and caught it alive, and retrieved the bird to her master. Woodburn took this bird at once to Mr. Kirkby, who preserved it less successfully than the Little Crake, and, with questionable taste, painted its legs *green*, to match those of the Little Crake, which he had already mounted.

WATER RAIL.

Rallus aquaticus, L.

In the old days, when so large a proportion of Lakeland was under moss, the Water Rail probably bred with us more generally

than is now the case ; but, for the last hundred years at least, it has been chiefly a winter visitant. Dr. Heysham exactly states my own independent opinion when he says : 'The Water Rail visits this county [Cumberland] in the beginning of winter, and leaves it pretty early in the spring.' In the summer-time it must be very local, because its loud cry (which has also attracted my attention in severe weather) would always announce its presence in any of its haunts. Mr. Tom Duckworth has eggs taken on Rockliffe Moss, and they have been obtained in the vicinity of Penrith. It has bred also on the river Eden, and perhaps elsewhere. It should, however, be remembered that Dr. Gough includes it in his Kendal list as a not uncommon 'winter visitant.' From September to March it occurs irregularly all over Lakeland, especially the western portion of that region, as in Wastwater and in the Rusland valley, where Mr. C. F. Archibald has shot several when searching unsuccessfully for Spotted Crakes. A few Water Rails are always killed in the neighbourhood of the Eden in late autumn, and are often exposed for sale in Carlisle. Apparently they have always been regarded as suitable for food, since we find, among other entries in Lord William Howard's accounts for 1620, the following : '3 gulls, a mallerd, one skeldrake, 3 sey mewes, one curlue, a water creake, iijs.' These birds were obtained between the 2nd and 9th of September. Another entry follows : 'Water creakes, xij^d.'

MOORHEN.

Gallinula chloropus (L.).

The homely presence of the Moorhen adds an interest of its own to summer evening rambles beside the becks and backwaters of Lakeland. It breeds on the Kent, on the Caldew, and most of our rivers, as well as on such inland waters as Whin's Pond, where the nest is often built on tree trunks, occasionally 20 feet above the water, just as sometimes it is built in the middle of a wood at a distance from any water. The sight of the Moorhen's simple nest and spotted egg-shells often serves as a pleasant incident in an uneventful afternoon. Wading ankle-deep through the green, velvety moss which borders many of

the small dubs or pools of water on our flows, you are often half startled by an unpremeditated splash. Next moment a frightened Moorhen is sure to paddle across the bit of open water, take wing, and fly away, deserting for the nonce the nest which lies at the water edge, half hidden by tussocks of sedge,—a slight nest withal, or rather a hollow platform of dry reeds, lined with finer stems, containing a few eggs, still warm to the touch. Though generally reckoned a stationary species, the Moorhen is migratory to a considerable extent. Mr. W. Duckworth once found Monkhill Lough fairly alive with Moorhens, apparently newly arrived. I have also found the remains of Moorhens washed up on the Solway Firth after heavy gales, as though the birds had been blown out from land and perished at sea.

COMMON COOT.

Fulica atra, L.

A few pairs of Coots breed on many of our ponds at Crofton, at Edenhall, and on some of the larger sheets of water—Derwentwater, for example. The males are very combative in spring, and the determination with which they strike at and buffet their rivals in the water, sometimes trying to drown their opponents, confers a special charm upon the sedge beds they favour; they are quite as plucky and mettlesome as Gamecocks. When once their passions have been quickened into life by the approach of the season of love, they spar in real earnest, and are always ready to resent the intrusion of a stranger. They are devoted guardians to their mates when the latter are incubating on the flag-piled nest. Though they cannot save their young from the voracious maw of hungry Pike, they watch over their interests with great affection. Young Coots instinctively hide up in cover if danger threatens. On the 12th of August 1889 we disturbed two old Coots on the edge of Monkhill Lough. They flew off disconcerted, leaving behind two tiny chicks, covered with black down. These little fellows swam hurriedly into cover, pausing as soon as they had gained the shelter of the yellow water-lilies, across the leaves of which they squatted in coy alarm. In a minute or two one of them dived,

travelling about six yards before a little head bobbed up, looked round, and, concluding itself safe, was followed by the small round ball of down to which it belonged. But the old Coots care for their young even when the latter are well grown. On July 11th, 1890, I visited Thrustonfield Lough with Mr. J. N. Robinson; we were especially pleased to see two well-grown birds in close attendance on their parents, sometimes swimming in their wake and receiving dainty morsels from their bills, at other times waiting upon them in easy leisure, while the old Coots worked for the youngsters. After an interval they returned to the nest and took up their position on the summit of the pile of closely-matted water-plants, standing high and dry, the better to perform their toilet. The juveniles looked rather handsome in their piebald dress, their white necks gleaming in the sunshine and forming a pleasant set-off to the more sombre feathering of the old Bald Coots.

As illustrating the remarkable tenacity with which this species clings to favourite breeding-grounds, I may cite a passage in Lord William Howard's Accounts for 1621, which refers to a still existing colony of these birds: 'Feb. 2, For bringing xxij lake hens from Corkeby, vi^d.'

Many of the Coots that breed in Lakeland perform a partial migration in winter. Stragglers occasionally appear on our estuaries, but the larger proportion congregate on the larger lakes. The Rev. H. D. Rawsley counted 382 Coots on Derwentwater in March 1888, and Mr. Durnford estimated that in the severe frost of January 1879 all the other wild-fowl were far outnumbered by the Coots on Windermere.

Order *ALECTORIDES*.

Fam. *GRUIDÆ*.

C R A N E.

Grus communis, Bechst.

Although the swamps and dismal morasses which formerly existed in our midst may well have tempted the Crane to summer with us in a remote past, there is no modern evidence to show that this Crane ever visits Lakeland, unless a straggler

detached from one of the main flocks chances to wander westward on the vernal passage of the species to its breeding-grounds in the north of Europe. In the spring of 1869 a solitary Crane made its appearance in the neighbourhood of Allonby. It frequented some rough meadow lands in the neighbourhood of the Solway Firth. Its presence awakened a keen interest among the local sportsmen, each and all of whom were anxious to obtain the distinguished stranger. Mr. Matthew and Mr. Thomas Mann fired two shots at the coveted prize, but only succeeded in knocking some grey feathers out of the bird. This was on the 29th of April.

Order *ALECTORIDES*.

Fam. *OTIDIDÆ*.

GREAT BUSTARD.

Otis tarda, L.

Although we might reasonably have expected that the Great Bustard at one time coursed over the lower fells of eastern Lakeland no less than the Yorkshire wolds, there is absolutely no evidence for any such hypothesis. In the spring of 1854 a female Great Bustard was shot in a turnip-field at Leeshill in the parish of Lanercost. The bird was killed on the 8th of March.¹ The late Mr. John Hancock saw this specimen 'a few days after it was stuffed, and while it was soft and flexible, and the legs were unfaded; the tarsi and toes were greyish, with obscure flesh colour between the scales.'² The bird was in good condition and weighed 11 lbs. At the time it entered the possession of Joseph Mowbray, a Brampton innkeeper. Many years later it found its way into the Newcastle museum.

Order *LIMICOLÆ*.

Fam. *GLAREOLIDÆ*.

COLLARED PRATINCOLE.

Glareola pratincola, L.

One of the first specimens of this Pratincole ever obtained in the British Islands was shot in the year 1807 in the neighbourhood of the Solway at Bowness, as recorded by Graves in

¹ *Zoologist*, 1854, p. 4407.

² *Cat. of B. of N. and D.* p. 95.

the second volume of his *British Ornithology*. T. C. Heysham was then a lad of sixteen, and Dr. Heysham had not long passed the prime of life. They might either of them have taken cognisance of the capture, but whether they did so is unknown.¹ More than eighty years have since elapsed without a recurrence of this species being detected at any point of our faunal area.

Order LIMICOLÆ.

Fam. CHARADRIIDÆ.

CREAM-COLOURED COURSER.

Cursorius gallicus (Gmel.).

The Cream-coloured Courser has only once straggled to the neighbourhood of the Solway Firth. This was in October 1862. Mr. Richard Mann recollects the interest which its appearance awakened among the local gunners, several of whom hastened in pursuit. The bird was shot on the beach at Allonby by a man named Costin. It was identified and purchased by the late Mr. T. H. Allis of York. I understand that Mr. Allis was in the habit of purchasing specimens of stuffed birds and insects from the local collectors, whom he saw from time to time in Cumberland when travelling in the tea-trade.²

D O T T E R E L.

Eudromias morinellus (L.).

Although the mountains of the Lake district undoubtedly afford many suitable nesting-grounds for this Plover, it would be a mistake to suppose that the Dotterel has at any time bred at all numerously even in the wildest regions. From time immemorial the Dotterel has visited Lakeland on its spring passage, sometimes in large flights, and a few individual pairs have frequently spent the summer with us. But this has never been true of the greater number. On the contrary, these have

¹ I have failed to find any reference to this noteworthy event in the *Carlisle Journal* for the year indicated.

² *Zoologist*, 1864, p. 9457.

always preferred to secure a temporary rest upon our fells and salt marshes, before resuming their journey to such dreary tundras of moss as those which Mr. A. C. Chapman found the Dotterel occupying, in the neighbourhood of the Varanger Fiord.¹

No entries of Dotterel appear in the accounts of Lord William Howard, nor does Machell allude to 'the mical Dotterel' more than incidentally, in enumerating the 'Fowle' of Westmorland. Nicolson and Burn state tersely: 'Orton scar is famous for dotterels,' a well-grounded remark, since many birds of this species have been killed there by living witnesses. Clarke and Richardson maintain absolute silence as to the Dotterel visiting their native mountains. Budworth, who was only a visitor, seems to have been one of the very first to describe a personal acquaintance with this Plover. This writer tells us that when visiting Skiddaw 'we saw some dotterels upon the summit, that let us approach within eight yards: and, if I had not thrown a stone at them, I daresaye I might have come near enough to have threwn "salt on their tails." They suck their food from under the small stones, under which they build their nests, and what is more remarkable, have only frequented Skiddaw seven years. These birds are fat and sweet-flavoured, have only thin claws, a long cylindrical bill, and are rather above the size of a thrush, though coloured like one, excepting a black streak in the head. It is with difficulty they can be forced to leave Skiddaw, and when they do, they never rest long on other mountains. Hutton has one in his repository, the recollection of which gives me an opportunity of describing it.' To this a note is appended, 'The dotterel builds and incubates upon the highest mountains in this country, and early in the spring descends to the lower craggy hills, especially in the vicinity of Orton and Asby, where many of them are shot as well for their delicacy of taste as for their feathers which are in high estimation with the anglers

¹ Until the Wild Birds Act was passed, it was a common practice for *parties of gunners* to scour High Street and other mountains for Dotterel on their first arrival in spring. No opportunity was ever neglected of shooting as many as possible, their feathers being in brisk demand for tying 'flies.'

for making artificial flies.’¹ The author of *Observations chiefly Lithological* tells us that in 1803 he found the Dotterel represented in Hutton’s Museum at Keswick. He says further: ‘A bird very much famed among epicures, the dotterel is to be seen occasionally on Skiddaw and the adjacent country; they are only there two months in the year, July and August, when they come into these parts merely to breed. The rest of the year they spend in Lincolnshire and other flat countries. Two of the species of Charadrius, the Morinellus and the Hiaticula, my guide informed me, congregate together, as if they belonged to the same species. The accurate Bewick, whose untimely death [he was alive and well] can never be too sufficiently regretted, gives a very different account of these birds.’² I saw no dotterels at the time I was on Skiddaw, but my guide told me the week before he saw twenty brace there at a time together. The bird itself when stripped of its plumage sells only for fourpence; but its feathers at Keswick are always worth sixpence, for the purpose of making artificial flies for the numerous fishermen who live in the neighbourhood.’ Dr. Heysham only alluded to the Dotterel in a few lines in his catalogue of Cumberland animals, stating that ten or twelve had been shot in June 1784, ‘upon Skiddaw, where they breed; on the 18th of May 1786 I had two females sent from the neighbourhood of Appleby. On dissection, I found the eggs very small, so that it is probable they do not lay until June.’ It is difficult to understand WHY the doctor suppressed the following note, which T. C. Heysham quoted many years later [in 1830] from his father’s ‘MS.’: ‘Some time last summer a nest of the Dotterel was found on Skiddaw; the old one was killed, and the eggs brought away which were three or four in number. I saw *three* of them [*i.e.* a full clutch]; they are somewhat larger than a Magpie’s egg; the ground is a dirty clay-colour marked with large irregular black spots. February 14, 1785.’ Dr. Heysham was without doubt the first scientific naturalist to examine eggs of the Dotterel taken in England, authenticated,

¹ *A Fortnight’s Ramble to the Lakes* (1795), by Joseph Budworth, pp. 222, 223.

² Thomas Bewick ‘gently sighed away his last breath’ on Nov. 8, 1828.

moreover, by one of the old birds being shot at the nest. In 1830 the younger Heysham remarked in the third volume of the *Magazine of Natural History*: 'The eggs of the dotterel, we believe, still remain undescribed, which is somewhat extraordinary, considering that they constantly breed in the mountainous districts of Yorkshire, Westmoreland, Cumberland, and some parts of Scotland. Dr. Latham, it is true, in the last edition of his *General History of Birds*, has given some account of the nest of this species, the time and period of their incubation, and the numbers of their eggs, but does not describe them.' He accordingly set himself to elucidate the subject, by applying to such persons as were likely to find nests of the Dotterel. William Dodd writes to him from Alston on May 9, 1831: 'You will receive at the same time a Dotterel and one of the finest birds that has been shot in this neighbourhood for some years.' John Brown writes on July 15, 1831, from Marble Mills, Stone-House, Dent: 'Sir,—I am sorry to say, in reply to your favour of the 12th inst., that your application for eggs of the Dotterel is at least one month too late. The birds have nearly all left the hills. But have you not made a mistake? I think it possible that in the hurry of writing you have said eggs instead of skins. Great numbers of *these* are preserved and sold to anglers, but I am told that the eggs are seldom taken. If you wish to have a few skins pray inform me and I will send you some. Late in the season as it is for these birds to be on the hills, and it is unusual for them to remain so long, I believe I can yet procure two or three fresh ones.' In a letter of May 10, 1832, Hewitson names to Heysham the species which he hopes to meet with in Norway, including the Dotterel. 'When speaking of Dotterel,' he continues, 'do you know any instance of its breeding in Cumberland? I saw one on Helvellyn at the end of May, and am told that they do breed in Westmoreland, not far from Kirkby-Stephen.' Hewitson no doubt alluded here to a visit paid to the Lakes in May 1830. Writing under the signature 'H,' he appears to have communicated to the fifth volume of the *Magazine of Natural History* a short account of his trip, in which he says, 'I was very anxious to meet with the nest and eggs of the Dotterel [*Charadrius Morinellus*], which

I was informed had been found here, but we only saw the bird as it was wheeling round us in the fog.'

In May 1832 Heysham applied for assistance to John Robinson of Stone House, Dent, who states in his reply: 'I am afraid it will be out of my power to procure you a nest with eggs. There is some dispute whether they breed or not. Some are of opinion they do, others the contrary. I have never yet met with anybody who had found a nest. I called a few days ago on a man who partly makes it his business to look after them. He informed me that lately he shot a bird Dotterel, which, on opening, he found contained an egg, which puts the matter out of dispute. He informs me that for the last four years the bird has become more plentiful, which is to be wondered at, considering that immediately upon its being ascertained that they have arrived, every one that can raise a gun is after them. . . . About the 15th or 16th of last month a flock of nine or ten arrived. . . . One of our men shot two of them.' Heysham wrote to J. D. Drummond on the 13th of July this year: 'During the late cold and backward spring very few Dotterel were seen in the vicinity (on their way to the mountains), and the only specimen I obtained was too much injured to set up. It is a young one.' The specimen in question appears to have been sent to Mr. Drummond with a Ruff and other birds.

In a letter received by Heysham on the 29th of August 1832, Mr. Robinson writes that he forwards two Dotterel shot on Woofel the previous day, with this comment: 'I have been repeatedly on the mountains during the summer, but could never meet with any. I think there is little doubt that they leave us in the spring and return again in September, and remain a little while with us, prior to leaving our island for the winter. I would suppose that they are male and female, or a young and an old bird. I am sorry one of them is hurt in the plumage round the neck. You will see by the map of Yorkshire that Woofel is very high land.' The number of Dotterel visiting Lakeland must always have varied seasonally.

In 1833 the birds appear to have been more scarce than usual, because Heysham informed Doubleday on the 22d of June: 'Not a single Dotterel to my knowledge has been pro-

cured in the vicinity of Carlisle, and the only one I have yet received was sent to me from Yorkshire.' William Camm of Keswick wrote to Heysham on May 27, 1834: 'I forward five remarkable fine Dotterel for you (one of which is alive at starting). They are very scarce this season, and in consequence have been very difficult to obtain. I got them yesterday on a very high mountain (called Great Gavel) situate between Borrowdale and Wastdale, about 11 miles from Keswick. . . . With regard to eggs, unless some of those old birds contain some, I have not been able to procure any.' In the following year (1835) Camm wrote on the 9th of June: 'Sir,—I send you thees lines to let you know that there is Dotrels now if you have the noaton of coming up to Keswick and I will go with you when its suits you.' Heysham in return enjoined on his agent to visit all the 'smittle' [likely] places for the Plovers, in order to ascertain whether any pairs had really taken up their quarters with a view of breeding. Camm replied on the 26th of June: 'The eggs of the Dotterel will be difficult to procure, as there is a great scarcity of birds this season.' He adds: 'There shall be no want of *excursion* on our part to get them.' Two days later, or perhaps on receipt of this note, Heysham despatched James Cooper to Whiteside, upon which mountain he found a clutch of three eggs on the 29th of June. On the 3d of July Heysham accompanied Cooper to Robinson, and obtained a clutch of two eggs, as well as a young bird, on the 5th of that month. Heysham sent on loan specimens of the Dotterel, old and young, as well as an egg, to Yarrell, who acknowledged their safe receipt in a letter dated December 19, 1835: 'The Dottrells old and young are perfect beauties, and when looking at them I could not but feel some regret that you had allowed them the risk of so long a journey. The sight of the egg, too, was very gratifying, confirming as it did that my two from the Grampian Hills are without doubt the eggs of the Dottrell. . . . Having shot part of every season for the last twenty years in the parishes of Royston, Melbourne, and others in the vicinity where the Dottrell always make their appearance twice a year, I have in the autumn both seen and shot more Dottrell than many of those who attend to Natural History here in the south.'

Heysham wrote concerning the same specimens to Doubleday in a letter of January 25, 1836: 'A few weeks ago I sent to your friend Mr. Yarrell (for inspection) a case containing three Dottrels, one of which was only a week or ten days old, for the purpose of convincing the ornithologists in the South of England that the bird does actually breed in the North of England.'

That the Dotterel nested among the mountains of Lakeland was now fully ascertained. It remained to be proved that this Plover on some rare occasions nested upon the higher moors of the Pennine range. The late B. Greenwell wrote to Heysham from Alston on the 29th of November 1841: 'I also got on the 7th of June a nest of 3 Dotterel eggs. They were found by a shepherd near Crossfell.' Greenwell wrote again on the 2d of December: 'Sir,—I hasten with pleasure to forward a specimen of the Dotterel egg for your inspection, but owing to a previous engagement with Mr. Hancock of Newcastle I sent the other two down to him. This being the only one I have left, I do not feel inclined to dispose of it.' Some further information was supplied to Heysham in a subsequent letter from Greenwell, dated January 9, 1842: 'Sir,—In answer to yours of the 4th of Decr. last respecting the other two Dotterel eggs, they were exactly like the one I sent you in colour and size. They were found on dry ground about two miles from the top of Crossfell on a place called by the shepherds Dun dedge, near Mallerby Scar. There were a great many Dotterels seen and shot, I understand, by persons that were in search of them for fishing feathers.'

Mr. J. W. Harris sent a young Dotterel to Heysham in 1842, regarding which he says, in a letter dated the 17th of November of that year: 'The young Dotterel was *caught* by Mr. Benson on Red Pike on the 12th Aug., after he had shot the mother. It could then fly about 30 yards. They are not common here, but are occasionally met with on the Buttermere fells.' The number of eggs which completes a clutch of the Dotterel is believed to be invariably three. Yarrell wrote to Heysham on September 9, 1845: 'In July I heard of one Dotterel nest with four eggs in it having been taken on Saddleback.' Heysham replied two days later: 'During the last few years great attention has been paid by the Dealers at Keswick and the neighbourhood in looking after the

eggs of the *Dotterel*, through the shepherds, and I have been told that a few have been found or said to be found every year. At the same time I have little doubt that the eggs of other birds are now and then sold to the ignorant for those of the *Dotterel*; indeed, I have seen some eggs of the Common Snipe so extremely like the *Dotterels* that it was with difficulty they could be distinguished.' A loose note of Heysham, dated October 22, 1850, contains this entry: 'Mr. Dickinson this day showed me two eggs of this bird (*Dotterel*) which he had found on the 12th of August 1846, not far from Helvellyn. One egg came to grief, so only two were retained.'

Mr. J. W. Harris, who remembers the discovery of the first *Dotterel* eggs, tells me that in his opinion the *Dotterel* has always been a scarce breeding species, and that he had to travel very long distances to fall in with them at all. Captain Johnson, a friend and contemporary of Yarrell, remarked that the *Dotterel* was 'a rare bird' even in his younger days, to be met with on the flat top of Crossfell and similar situations on migration. A man named Watson, of Little Salkeld, who had paid a good deal of attention to Crossfell birds, assured me that prior to 1870 a few *Dotterel* appeared in his neighbourhood nearly every year, and some of them were generally secured for fly feathers. 'Folk said they went up to the fells to breed, but he thought they must go on to breed elsewhere, because he had only heard of one nest of the bird having been found in his lifetime.' The same kind of evidence might be adduced from the lips of many other witnesses, since I have interviewed all the likeliest men to give accurate information. Mr. F. Nicholson, who contributed an account of this species to the *Birds of Cumberland*, at that time wrote: 'During the last thirty years, judging from my own observations, the species seems to have been gradually disappearing from the district, until in this year (1885) I only saw three pairs during several days spent in visiting all the most likely ground.'

In 1887 the same brother Ibis wrote to me: 'I knew of three pairs of *Dotterels* breeding in Cumberland this year, which I hope all reared their young.'¹ The decrease in the

Another member of the B.O.U., Mr. H. E. Rawson, who possesses an

number of this Plover visiting the Lake Mountains corresponds with the scarcity which has marked the visits of the Dotterel to the salt marshes of Lancashire and the Solway Firth in recent years. Percival, an aged native of Rockliffe, recollects the time when considerable numbers visited Rockliffe marsh on passage in May, though they never remained more than a few days. He also informed me that a brother of John Allen was nicknamed 'The Dotterel' by his associates, from his prowess in slaughtering these poor birds for the angling world. They have often been killed on Burgh marsh. Nicol recollects an old gentleman, a great fisherman, who used to kill some of these birds every spring in a field near Silloth, in order to send their skins to some friends fishing the Eden. The Manns used to observe (and sometimes shoot) these birds near Allonby, so that they are, or *were*, found all along the line of the Solway on migration, though always local, if not actually to be termed rare. The month of May has always been the time of their arrival on the Solway, generally between the 10th and 20th. This year (1891), for example, a Burgh fisherman (who in his lifetime has shot thirty or forty of these birds for fly-dressing) fell in with two small flocks of Dotterel, numbering respectively six and four birds, on the 14th of May. Following the evil custom formerly in vogue, and not yet obsolete, he fetched a gun, and, falling in again with the flock of four birds, he killed three at a shot, and dropped the fourth with a broken wing as the poor bird wheeled round. Hoping to obtain a higher price from a naturalist than from the fly-dressers, he sent the birds to me, and seemed not a little surprised to hear that I would gladly have given him a sovereign to let the birds pass unharmed.¹ The other six were fortunately wilder, but on the 18th of the month one of the party flew close past us, looking finer and smaller than a Golden Plover, and flying across the intimate knowledge of that portion of Lakeland which is situated in Westmorland, informs us that he found three pairs of Dotterels nesting on the mountains in 1889, '90, and '91. In the former years he found and respected their nests with eggs. In 1891 he and Mr. John Young, F.Z.S., found three different broods of young birds in company with their parents.

¹ The only consolation is that these birds have been mounted for the County Museum.

marsh with more distinctly separated beats of the wing. On dissecting the dead birds, we found that the duller in colour was a male, and the brightest was a female. The other male and female agreed exactly in appearance, though the ovary of the female was rather more advanced than that of the brighter bird, and the bones seemed to be those of an older bird, judging from their comparative hardness.¹ Their stomachs were crammed with a small species of beetle, which the Rev. F. O. Pickard-Cambridge kindly identified as *Chrysomela hyperici*. The weight of a Dotterel is about four and a half ounces. The local fishermen and other persons accustomed to shoot Dotterel always maintain that it is useless to look for the birds earlier than May. There cannot, however, be any question that stragglers in some rare instances appear in Lakeland during the month of April, and even in March. I have a skin of this Dotterel obtained by Sir W. Jardine in Dumfriesshire in March. In 1890 a newly-killed Dotterel was sent in the flesh to Carlisle on the 22nd of March, and was bought within half-an-hour of its arrival by an amateur fisherman, the applications of the professional fly-dressers arriving too late. In 1885 Mr. Smith of Rockliffe received in the flesh a Dotterel, which was too far gone to preserve, on the 26th of April, and must, therefore, have been killed (on one of the Lake Mountains) about the middle of the month. Elliot killed another Dotterel on Melmerby fell in the month of April. Mr. W. R. Fisher wrote to T. C. Heysham from Yarmouth, on the 25th of March 1843: 'I saw . . . two or three Dotterel this morning at a dealer's in Yarmouth.' Heysham asked him, in reply, whether he meant to refer to Ringed Plovers, commonly called Ringed Dotterel, as the date was very early for the true Dotterel to have arrived in England. Mr. Fisher wrote back: 'It was *Charadrius morinellus*, and not *C. hiaticula*. I mentioned it because, as you observe, I thought it was earlier than usual.' I have never met with the Dotterel on autumnal migration, nor do I know

¹ Mr. Rawson, who has spent many hours in the closest scrutiny of breeding Dotterel, is disposed to think that the *males* are usually the brightest birds, or at any rate that the more dull-coloured individuals are those which exhibit most solicitude for the safety of the young in down.

of any specimens killed either at that season or in winter in recent years. The Newcastle Museum contains two Dotterels in nest feather, shot on Crossfell in the year 1843. One of them is stated to have been killed on the 25th of August, the other on the 1st of September.

Hancock asked T. C. Heysham, some sixty years ago, whether he had ever known the Dotterel to occur in Lakeland *in winter*. So far as I have been able to discover, the only Dotterel that any competent authority has identified, shot in England in winter, is the bird mentioned in the last lines that the late Mr. Gatcombe ever penned for the *Zoologist*, an immature specimen killed on Dartmoor, and purchased in the Plymouth Market on the 12th of December 1886.

GOLDEN PLOVER.

Charadrius pluvialis, L.

Although the wet 'flows' which exist in the neighbourhood of the English Solway are singularly well adapted to the breeding habits of this Plover, only one or two pairs seem to nest on any portion of their area. James Smith found a clutch of the Golden Plover's eggs on a moor near the coast in 1889. The eggs chipped on the 11th of May, and three chicks hatched out on the 13th of that month. When I saw them on the following day they were in perfect health, and really beautiful little birds. Their fresh down looked so bright that they appeared to have been sprinkled with gold dust. Notwithstanding their extreme youth they ran actively about the room, snapping eagerly at midges and other small insects. The loud, clear call-notes of these chicks bore a pretty near resemblance to that of the adult. A few pairs of Golden Plovers nest sporadically upon a good many of our higher moorlands. It is surprising how early the Golden Plovers, bred on our hills, descend to the estuaries. In 1889 Dr. Meikle noticed a large flock on the Solway on July 7, and Mr. Cairns reported many present at Gretna a week later. In 1888, as early as July, I observed a great flock of Golden Plovers, numbering not less than 500 birds, in a bean-field near Floriston, in company with a few

Peewits, but that is always a great district for Golden Plover, perhaps the very best in the whole of Lakeland. In the last months of the year Golden Plover often visit our salt marshes in large and small flocks. Both in the fields near Maryport and on Newton marsh I have crawled within shot of very big companies, as well to closely study their varied and graceful actions, as to listen leisurely to their plaintive whistle. They are partial to feeding on open sands and mussel scars, and if a winged bird be tethered down, one or two nice shots may be secured from behind the big stones at Beckfoot. Yarrell does not appear to mention the singular *order* in which Golden Plover fly, sometimes passing high overhead in a long-extended line, and on other occasions flying in a V formation. With the last days of February many parties of Golden Plover usually make their appearance in the fields in the neighbourhood of the English Solway. These immigrants, most of which are beginning to assume the black breast, only stay with us a few days and depart in an easterly direction.

GREY PLOVER.

Squatarola helvetica (L.).

Dr. Heysham knew the Grey Plover as a Cumbrian bird. T. C. Heysham says, in an undated draught: 'This bird has been killed in the month of September near Skinburness, so that they occasionally at least visit the Firth both in spring and autumn.' Dr. Gough did not include the species in his Kendal list, but it stands in his private notes as 'taken at Cark.' So far as I can judge from numerous inquiries of those gentlemen who shoot regularly on Morecambe Bay, the Grey Plover does not visit that portion of our coast in any considerable numbers; nor is this surprising, for, though often plentiful on the Solway, it is even there capricious in its choice of feeding-grounds. Certainly we found a few Grey Plovers frequenting the channel between Barrow and Walney Island in October 1890, but *only a few*. Arthur Bolton, who shot some of them, assured me that he had always regarded it as rather scarce in that locality. It visits the Duddon, but is not

apparently known on the Ravenglass; nor can I answer for more than two specimens killed on the coast near Whitehaven. But east of Maryport it is an occasional spring and a constant autumnal visitant. Cooper obtained a full-dressed bird on the Solway in spring—that alluded to, no doubt, by the younger Heysham, and others have since occurred. Mr. R. Mann observed a party of six Grey Plovers on the coast at Allonby, May 7, 1886. Mr. W. Nicol never met with the Grey Plover in nuptial dress in the spring of the year until 1889, when he saw a few black-breasted birds in May; he had frequently seen a few black-breasted examples in autumn. Of fifteen birds which he shot on September 14, 1887, eight were young and seven were adults. Two of the adults were in such handsome dress that when Mr. Seebohm saw them in the collection of Mackenzie, he at once remarked that they must be *summer-killed* specimens. Mr. Nicol has never been able to send me a *summer-dressed* bird, but he kindly forwarded two adult males, which had begun to assume black feathers on the chin and breast; shot February 7, 1890. These were male birds by dissection. Some birds pass the summer in most years on the Solway, but these rarely assume the black breast during their sojourn with us, and they are generally wild and unapproachable. The four full-dressed birds which Nicol saw in May 1889 belonged to a flock of more than thirty plain-breasted Grey Plover. On the 20th of Sept. that year he saw two black-breasted birds in a flock of young ones. The greater number of our Grey Plover arrive in September on the more open portions of our estuaries, chiefly that of the Wampool, feed singly and in small parties on the sands, the mussel scars, and the bottoms of the largest creeks, and generally fly in long circuits, not proceeding hurriedly from one favourite spot to another, but fighting round with plaintive cry. The number of those that *winter* with us is seldom considerable. In January 1890 a flock of a hundred birds could generally be found on the Waver, but this is rather exceptional. On the coast these Plovers feed on small bivalve shells, together with a little green algæ. When met with inland these birds are usually on passage, though sometimes one or two Grey Plover voluntarily associate with Golden Plover in the open fields.

RINGED PLOVER.

Ægialitis hiaticula (L.).

The Ringed Plover frequents our coasts all through the year, and breeds numerously at Ravenglass and on Walney Island. Some pairs nest on gravel beds on the rivers Esk, Eden, and Irthing, occasionally on the salt marshes, and constantly, though sparingly, on the whole coast-line from the Kent to the Grune, where I saw four nests near together on the 28th of April. The young begin to hatch between the middle and end of May. In 1891 I caught a yellow-limbed youngster, feathering nicely, on the 2d of July, at the south end of Walney, it having started up at our feet as we crossed the beach. It was pen-feathered, and could run amazingly. When stopped he lay crouching in my hand without an effort to escape, his dark eyes peering inquiringly at his captor. The old birds are generally so demonstrative when they have eggs or young, that I was amused by the quiet demeanour of a pair of these small Plovers, observed at the Grune Point, May 30, 1891. For the first twenty minutes they ran to and fro over the sands, calling plaintively; then one of them began to prune its feathers with a *nonchalant* air, while its companion *squatted down* on the bare sand very much as a Skylark might have done. Large flocks of Ringed Plover frequent our estuaries until the end of May, and many parties of immature birds arrive on our estuaries in the month of September, feeding on the open sands and in small pools left by the ebbing tide, especially between Silloth and Maryport, Cardunock and Port Carlisle. On the 8th of July 1890 I saw a small party of Ringed Plovers at Monkhill Lough, but they are rarely seen in the *interior* of Lakeland, at least apart from the rivers on which, as already pointed out, a few pairs breed annually.

LAPWING.

Vanellus vulgaris, Bechst.

If the Lapwing is less frequently met with in the accounts of Lord William Howard than we should have expected, the

omission is easily explained by the wild character which the north of the Lake district presented in the seventeenth century. Even in our own day this bird is less abundant upon the most desolate moors of Scotland than where there are green straths or cultivated areas. Similarly, there is every reason to suppose that the quantity of land which was drained or brought under the plough of the Lakeland farmer during the earlier half of this century was correlated with a multiplication of the numbers of this Plover. But we find it mentioned under the three titles of 'lapwings,' 'puetts,' and 'greene plovers,' in the Naworth books. In 1612 there is an entry between May 30th and June 6th: 'iij poutes and ij lapwings, vi^d.'; the bird is also mentioned as 'puetts' [Peewit] on the 15th of June that year:— 'Sr George Dawlston's man bringing 20 puetts, ii^s vj^d.' In 1621 we have an entry between October 27th and November 3rd: 'To Mathew Dallton for 22 green plovers, ii^s ix^d.' Probably many of the references to 'plovers' refer to this species. From the lower ranges of our eastern fell lands to the salt marshes of the Solway and the flat meadows round Morecambe Bay, this Plover is a common breeding-bird, though, owing to the quantity of eggs gathered for distant markets, it is on the decrease in many places.

Cooper, Lord Hothfield's head keeper on the Appleby estates, tells me that for a number of years he has always been able to collect five or six dozens of Peewit eggs to send to his employer by the 2d or 3d of April, which proves that even in a district swept by the Helm wind a fair number of eggs are laid before the end of March. Wherever one goes during the spring months, one is certain to meet with this Plover on the ploughed fields which slope slowly to the precipices at Sandwith, no less surely than upon the rushy grazing-lands of Bewcastle, or the flat mosses of the interior of Lakeland; but nowhere else have I seen as many nests as on our salt marshes. Considering the systematic destruction of many eggs by those who sell them to dealers, and the percentage destroyed by high tides, the pertinacity with which these birds adhere to their favourite breeding-grounds is remarkable. The prettiest nest that we have seen on Rockcliffe marsh, examined June 18th, 1889, was built of fresh

green grass, mixed with a few flowers and buds of the sea-pink (*Armeria maritima*), which latter are sometimes appropriated for a similar purpose by the Oystercatcher. Peewits are quite a *feature* of the salt marshes, at least in the month of May, when their presence contributes not a little to the interest of the waterside, as they quietly pose to watch your movements, or shriek anxiously across the rough grass tussocks in which their newly-hatched young are squatting, carefully concealed.

The late John Hancock was one of the first to record that the Lapwing produces a sound not distantly akin to the 'drumming' of the Snipe; yet I have heard it on several occasions, notably on May 27th of the year 1891, when visiting a small moss near Cockermouth with Mr. H. P. Senhouse. Several pairs of Peewits rose at our approach, and one individual wheeled many times round us, giving tongue lustily, and occasionally varying the procedure by beating the air noisily with its pinions, turning right and left, and producing by the action of its wings a loud swishing sound, flying very fast, and giving two or three peculiarly sharp strokes of the wings to produce the effect described. None of the other birds then present acted in the same way. Another point not perhaps very generally known is the Lapwing's fondness for fly-catching. During the last days of April, when the Swallows are busily hawking flies over Monkhill Lough, a Peewit often joins in the sport, pursuing the insects in graceful undulating sweeps across the water. Many Peewits frequent our grass lands in the interior of Lakeland during the autumn, but the larger number repair to the marshes of the coast. Sometimes they afford a shot when clustering on the sands at low water, but the punt-gunners soon teach them caution, and they chiefly feed on the open salt marshes, where they are safe from pursuit, unless the sportsman can wade up a creek and so approach them unawares.

A common trait of the Peewit is the preference which it displays for roosting in and around sheep that are being fed on turnips. Though many Peewits leave us before winter, their numbers in frosty weather are often legionary. Thus, on the 5th of February 1890 I fell in with an immense congregation of Peewits near Longtown. At 8 A.M. I first observed the birds

wheeling at a great height above a ploughed field, sweeping hither and thither in long lines, fresh divisions, large and small, constantly arriving and soaring round. Sometimes two divisions would unite, but they generally kept apart, though once I saw two great flocks *meet* one another. It seemed certain that they must either collide or fuse together, but they did neither. What actually happened was, that the larger division suddenly *expanded*, and the second company passed straight through the extended ranks of the first, which then closed up again; there was not the slightest confusion, not a single bird lost its place, and the two bodies remained perfectly distinct; when at length they had completed the morning's drill, a large flock alighted on the field above which they had been exercising, followed at short intervals by other large flocks, by parties of a dozen, by twos and threes, the birds descending to the earth in gentle curving flight, raising their wings over their backs as they alighted, and so displaying their white flanks for an instant before they became black and almost inanimate objects on the frozen field.

TURNSTONE.

Streptilas interpres (L.).

Dr. Heysham did not include the Turnstone in his catalogue of Cumberland animals in 1796, but T. C. Heysham quoted, in 1830, a note from his father's papers to the effect that 'the first was killed on the borders of Ulleswater on the 11th of May 1801.' The elder naturalist must, therefore, have come across the species within four or five years of the appearance of his catalogue. Turnstones rarely occur in the interior of Lakeland, but immature birds are fairly common on our coast from Arnside to Seatcale, north of which, and on the English side of the Solway, they are met with only sparingly, though I have often observed individual birds, and recognised their mellow whistle on the mussel scars alike in spring, autumn, and winter. They very seldom visit the salt marshes of the upper Solway, though an odd one sometimes frequents the brow edge of Skinburness marsh at high tide, feeding on the mussel scar opposite at low

water. I have seen them in old and young plumage at Ravensglass, where stragglers appear in summer dress, as is occasionally the case on the Solway, but more often at Walney Island. Before Arthur Bolton went abroad he shot several Turnstones in the handsome tortoise-shell dress of the nuptial season on the shores of Walney, whence Williams likewise procured some full-dressed birds.

OYSTERCATCHER.

Hæmatopus ostralegus, L.

There can be no doubt that the Oystercatcher has always frequented the coasts and estuaries of Lakeland in very considerable numbers. It was often supplied to the table of Lord William Howard at the price of two pence a bird. For example, in November 1612 we have an entry, 'iiij seapies, viijd.,' about half the market value of those which are netted now-a-days in Morecambe Bay, or shot by the Solway gunners. The birds so destroyed are chiefly immigrants, but many Oystercatchers nest on Walney and the Ravensglass coast. A few stray pairs nest along the beach from Whitehaven to Silloth, and several pairs nest on Rockliffe and Burgh salt marshes, though their nests are often wilfully plundered, or emptied of their contents by high tides. Mr. R. Mann showed me a nestling caught near Allonby this year, but really very few are reared on our coast north of Whitehaven, numerous as the species must be admitted to be every month in the year. The Oystercatcher has once, at least, nested inland near Gilsland, and a pair frequented the Eden near Langworthy in the summer of 1889; but a gravel bed in the Esk near Longtown is its usual limit of distance from the sea. At Ravensglass and Walney the birds breed freely, nesting on rough saltings, as on the Solway, but especially on shingled beaches and among the sand-hills. The female chooses the nesting site some days before eggs are laid, and often makes several scratchings before she finds one to suit her taste. Laying commences at the beginning of May, and seldom exceeds three eggs. The breeding birds are most vociferous when their young are hiding in the grass or among the sand-bents, and readily

assail a Rook or any other marauder. If their safety be imperilled, it becomes pretty to see how the parents unite in employing every device to draw a stranger away from their young, watching you from the top of a turfed wall, or from the brow edge of the salt marsh. All through the year the mussel scars of the Solway are frequented by numerous Oystercatchers, including in the summer a good many non-breeding birds. The number of the local residents is increased in autumn by an immigration from the eastward. In 1888 we heard some Oystercatchers whistling lustily as they passed over Carlisle from east to west, between 11.30 and 12 P.M., on the 9th of August. In 1890 I heard Oystercatchers crossing the town in the same way on the 13th of August at 1 A.M. Other observers independently confirm my observations. For instance, on the 2nd of November 1888 Mr. Tremble of Carlisle noticed a considerable passage of these birds, commencing shortly before 9.30 P.M., and lasting about twenty minutes. The birds passed over his house, flying from north or north-east to south-west, and were making for the west coast, which they would strike about the Wampool and Waver estuary.

By the end of September legions of Oystercatchers line certain portions of the Solway Firth from Bowness to Allonby, their dark serried ranks easily distinguishing them from the similar masses of Black-headed Gulls which also range along the edge of the tide-way. The former birds prefer the open portion of the Solway, are highly gregarious, and seldom permit a gunner within shot. The best plan for procuring specimens is to take a boat when the tide is ebbing, and to anchor on one of the mussel-beds that lie higher than the rest and is soon exposed. The Oystercatchers and Knots, with a few Godwits and an occasional Whimbrel, fly down to the banks as soon as the water is shallow enough to admit of their wading over the scar, and, being hungry and eager to feed, are less cautious than after they have satisfied their appetites. A second device is to stalk them on a boisterous day, when they are less wary than in fine weather. A third method is to wait for these birds on a day when a very high tide covers the whole beach near Allonby and forces them to fly within shot

of the sand-hills, behind which the 'guns' are stationed. Happily there is no great demand for them as food, so few are shot, though some few years ago large numbers were netted at the south end of Walney by Troughton, the rabbit-catcher.

Mr. Nicol, who has these birds under daily observation throughout the year, assures me that they are constant in feeding on mussel-shells, which he has heard them breaking when night-fishing. My own experience confirms this, both as regards Walney Island and the Solway; but were limpets present, these shellfish would no doubt be equally acceptable. When the young first run, and until they can fly, they are carefully fed by the parents, which bring live food to them from the scars. The Oystercatcher is an expert swimmer, and Mr. Nicol has seen a wounded bird dive like a Duck. The birds which breed on the upper marshes, and they are not numerous, leave their breeding-grounds as soon as the young can fly, but they sometimes re-appear. For example, on December 13th, 1890, in sharp frost, a pair of these birds were wheeling noisily off the point of Rockliffe marsh. Hardy as these birds must be admitted to be, I have often found their remains washed ashore after severe gales, which also frequently drive them inland. After the south-west gale of November 1st, 1887, Mr. W. Duckworth saw a storm-beaten Oystercatcher as far inland as Brampton. Though specially vociferous in the breeding season, the Oystercatcher is *always* a noisy bird. On the 22d of August 1889 an old pair of Oystercatchers rose off the mud banks of the Wampool and flew slowly over us, piping as lustily *as if they had young* in the neighbourhood, which was not the case. Exactly the same trait has often been noticed in the Peewit and Black-headed Gull.

Order *LIMICOLÆ*.

Fam. *SCOLOPACIDÆ*.

RED-NECKED PHALAROPE.

Phalaropus hyperboreus (L.).

Whether the Red-necked Phalarope ever visits the estuaries of the Duddon and Morecambe Bay I am unable to say from personal knowledge. Certainly no specimens obtained in the southern portion of Lakeland are at present forthcoming, nor

has this species been obtained at Ravenglass. Stragglers in immature plumage have occurred on the Solway Firth, but only in rare instances. Mr. A. Smith killed one of these Phalaropes on Rockcliffe marsh in September 1879, and believes that he has identified one or two others at the same period of the year. I observed a solitary example on the estuary of the Waver in September 1884, and acquired an example shot on a small pool near Kirkbride in Oct. 1885, but have not met with any examples during the last six autumns. It would scarcely appear unreasonable to expect that this Phalarope would visit us occasionally in the spring of the year; yet the only specimen at present known to have been shot on *vernal* passage is a bird in summer-dress, shot some years ago on a little pond near Allonby, and preserved at Aigle Gill. It is not a little surprising that this Phalarope confines its rare visits to our *coast* exclusively, considering how many Sea Birds are obtained inland after wild gales in the Atlantic.

GREY PHALAROPE.

Phalaropus fulicarius (L.).

The large flights of this Phalarope, which in some years form such a marked feature of avian migration on the south coast of England, are entirely unknown upon the north-west coast. Yet a certain proportion of these birds probably migrate southwards across the Eastern Atlantic, because one or two individuals usually visit us after any stormy weather that may occur in the month of October. Such was the case during the present autumn [1891], when I examined two individuals killed on Burgh marsh, a third obtained in the Eden valley, and a fourth shot upon Walney Island. Mr. Richard Mann observed another individual resting upon a wayside pool of water on the coast between Mayport and Allonby. This was on the 3d of October. The birds just mentioned were wearing mixed plumage when shot, *i.e.* they were in a state of transition from first dress to winter plumage. A specimen obtained at Windermere on November 10th, 1891, proved to be in full winter dress, as I learnt from Mr. H. E. Rawson, F.Z.S. Mr. Nicol sent me

a younger bird, shot near Silloth a few days later. No specimens have ever been obtained on our coast in the red dress of the nuptial season, nor is any plumage of tolerably frequent occurrence except the intermediate plumage. The sole specimen that I have seen in entire *first* dress was shot some few years ago at Allonby, and belongs to Mr. R. Mann. We were indebted to this gentleman for another of the few local specimens that exist in full winter dress. This bird was shot near Silloth in February 1887.

WOODCOCK.

Scolopax rusticula, L.

Our earliest records refer to the first portion of the seventeenth century, when the Woodcock was chiefly valued as an article of food. Lord William Howard, for example, required a large quantity of Woodcock for the consumption of his household at Naworth, and as the supply of birds was obtained from those who made a practice of snaring them, the entries in the household accounts throw some light upon the immigration of Woodcock from the Continent. Thus, in the year 1618, we find that the first three Woodcock were purchased in, between September 26 and October 3. October, from the 4th day of the month, yielded 57 Woodcock, 6 birds being obtained during the first week, 22 birds in the second week, 13 in the third week, and 16 in the fourth week. In the first week of November 45 birds were bought in; in the second week, 10 birds; in the third week, 25; in the fourth week, 10—making a total bag for November of 90 Woodcock. The number fell greatly in December, most of the migrants having no doubt passed on. The first week of that month yielded 15 Woodcock; none were taken in the second week, and only 4 in the third week; 13 were obtained in the last week, bringing up the bag for the month to 32, 13 of this number being killed in Christmas week. In the first week of January, 1619, 8 birds were killed; 3 in the second week; 8 in the third week; and 6 in the fourth week, so that the bag for January amounted to 25 birds. Seven birds were killed in the first week of

February, after which we hear nothing more of Woodcock until the last week of March, when a single bird was bought in. If we examine the records for another year, 1621, we find a single bird bought in between September 30 and October 6, another single bird is purchased in the second week; a flight of Woodcock arrived in the middle of this month, because 18 Woodcock were bought in the third week, and 21 in the fourth week, making a total bag, to Oct. 28 inclusive, of 45 birds. Twenty-five birds were procured between October 28 and November 3; 12 between that date and November 11; 21 more up to November 17. A rush followed, for between November 17 and November 24 no fewer than 29 Woodcock were purchased. But the rush soon passed on. Twelve birds were indeed taken between Nov. 24 and December 1; 8 Woodcock were captured up to the 8th of the month; single birds only were taken in the weeks ending December 16 and December 22, and only 4 Woodcock were taken during the remainder of the year. To recapitulate the figures, in 1618, 60 Woodcock were taken in between the end of September and the close of October; the total number killed in November was 90 birds; 32 were killed in December, and the total number bought in during the last three months of the year was 182 Woodcocks. In 1621, 66 Woodcocks were killed in October, 94 in November, and 14 in December, completing a score 174 Woodcock, or 8 less than in 1618. The difference between the total number obtained in these two seasons is easily accounted for by the fact that twice as many Woodcock were killed in *December*, 1618, as in 1621, but the results approximate more nearly than might perhaps have been expected. The birds only cost from 3d to 4d apiece; the latter was then reckoned a good price for Woodcock. If we estimate the cost of the lower rate, his Lordship must have paid little more than 45 shillings for all the Woodcock supplied to his table during the season; but if money then possessed ten times its present purchasing value, why then the outlay may be thought considerable. The practice of purchasing Woodcock from every one who could supply them was no doubt generally in vogue. Sir Daniel Fleming of Rydal enters in his expenses for 1682: 'Dec. 12; Given Parson, Brathwait's son, who

brought some Wood-cockes, 6d.' The question naturally arises, by *what* means Woodcock were obtained in such considerable quantities as the Naworth records evidence? Undoubtedly, some of the Woodcock were taken in nets, according to the Italian fashion. It was only in 1645 that John Evelyn remarked of the Villa Borghesi near Rome: 'Here they had hung large netts to catch wood-cocks.'¹ But the method had been adopted in Cumberland some years earlier. In the accounts of Lord William Howard for 1624, we find among the expenses incurred in Oct. 23: 'To Rob Stapleton for hemepe yarn in march for making a drawing nett, v^s., and for iij hankes of yarn for a cockshott nett at Brampton parke, iiiij^s. 27. To Mr. Skelton for ij hankes of yarn for the cock net, ijs.' This device is obviously unsuited to an open country, and was not the kind of fowling most adopted by the natives of Lakeland. They preferred to rely upon the simple and less expensive device of *snaring* Woodcock.

Pennant himself, though a stranger, noticed the practice as adopted in the neighbourhood of Windermere in 1772: 'See on the plain part of these hills numbers of springes for Wood-cocks, laid between tufts of heather, with avenues of small stones on each side to direct these foolish birds into the snares, for they will not hop over the pebbles. Multitudes are taken in this manner in the open weather, and sold on the spot for sixteen pence or twenty pence a couple (about 20 years ago at sixpence or sevenpence), and sent to the all-devouring capital by the Kendal Stage.'² Wholesale destruction, coupled with the loss of much natural wood, could not but affect the numbers of birds in the long-run; such was actually the case, for Hutchinson wrote in (or prior to) 1794: 'We were informed that formerly so great an abundance of woodcocks frequented the woods in this manor [Muncaster], that, by a special custom,

¹ *Diary of John Evelyn*, Ed. Bohn, p. 144.

² *Tour in Scotland*, vol. ii. p. 36. In one of the *Tales of the Lakes*, published in the *Lonsdale Magazine* in 1822, called 'Michael,' and written in 1821, an aged native of Windermere is represented as saying: 'The few shillings I had were obtained by catching Partridges and Woodcocks in *sprents*, for they had not found it out at London then that all the birds belonged to the gentleman.' (p. 13.)

the tenants were obliged to sell them to the lord for one penny each; they were taken by springs and traps: but since the country was stripped of wood, they make but a short stay here in their passage, and are of late years become very scarce.' I have conversed with several persons who were in the habit of snaring Woodcock in their younger days. Quite recently Mr. Ainslie of Grizedale wrote to me: 'When I was a boy, say 1845-50, I recollect our moors were literally covered with sprints, and few of these very silly birds escaped.' Prior to the present century the Woodcock was uniformly regarded as only a periodical or winter visitant to the north-west of England. John Gough of Kendal remarks in some notes written in 1792: 'March . . . 18, Woodcocks, *Scolopax rusticola*, are very abundant at present, after disappearing for a fortnight. These visitors, perhaps, are on their return from Ireland to the Continent,' an interesting observation, as shewing how well the migratory journeys of the Woodcock were even then understood. He recorded the return of the species on the 2d of October in the same year.¹ Dr. Heysham observes: 'The Woodcock is sometimes seen in Cumberland the last week in September; but they are seldom plentiful till the middle or latter end of October. They begin to take their departure in March; but a few are seen, almost every year, in April. Instances, though very rare, occur of their breeding in England.' The same writer adds in another place: 'In short, from the observations I have made on the appearance and disappearance of the birds of passage, I am strongly inclined to believe that *cæteris paribus* as many Woodcocks remain during the summer in England as swallows in winter.'

Those of us who have grown up within the last thirty years, during which the Woodcock has been generally recognised as breeding abundantly both in England generally and in the Lake district in particular, are hardly competent to understand the interest which attached to the nesting of the Woodcock early in our own century. Before the old doctor's death, his son, T. C. Heysham, had recognised the change in the habits of the Woodcock; for, in a letter written to Henry

¹ *Gentleman's Magazine*, 1792, p. 1197.

Doubleday in September 1831, the younger man was able to say: 'I have little or no doubt that this bird breeds annually in small numbers in this county.' We can well imagine the pleasure with which the veteran would have welcomed an opportunity of watching a dark-eyed Woodcock brooding shyly over her eggs or russet-coloured young upon the edge of some pet bit of covert; it was not so ordained. He passed away in 1834—three short years too soon—for, on the 8th of July 1837, his son wrote to John Gould: 'I had the good fortune this spring to see four eggs of the Woodcock, which had been found in a wood about nine miles from Carlisle.' In 1842 the *Carlisle Patriot* of May 5th recorded that George Harrison, a keeper of the Earl of Lonsdale, had that season found two nests of the Woodcock in the covers at Melkinthorpe, and stated further: 'For several previous years Mr. Harrison has found nests of these birds nearly in the same locality, and it is his opinion, as well as that of his brother, Mr. Robert Harrison, that many of these birds if left unmolested after the month of January, instead of migrating, would breed in this climate.' Three young Woodcock were captured in a plantation at the Riddings, on the Netherby estate, in April 1844.¹ The late Mr. Wood of Westward, who spent a long lifetime in that parish, and was an accomplished botanist, wrote in 1880: 'A few years ago the nest of a Woodcock was a great rarity in Cumberland, now it is of frequent occurrence. Last year a pair of these birds had a nest in my parish; this year the number is doubled, and two nests are also said to have been found in the woods at Edenhall.'² Pages of newspaper cuttings, regarding Woodcock nests in the Lake district, could now be reprinted, for though there are many parts of the Lake district in which the Woodcock does not nest, yet wherever adequate cover and freedom from disturbance are found, one or two pairs of Woodcocks nest annually. Many Woodcock nest in the fine sheltered coverts of the Rusland valley, and their nests have often been found in Furness. Mr. W. G. Ainslie, M.P., wrote to me in 1889: 'We have for many years had these birds amongst us all

¹ *Carlisle Journal*, May 4.

² *Science Gossip*, 1880, p. 190.

the summer, and I think the only reason for their not having been known previous to the early part of this century, was that Poachers kept them down most effectively.' Mr. Ainslie stated, in the *Field* of April 27, 1889, that his keeper saw more birds at Grizedale in the summer than in the shooting-season. His own bag of 'Cock' in the season of 1888 was twenty-nine birds. But the supply of Woodcock in winter of course varies with locality and weather, as every one finds. Mr. Archibald's keeper once killed eighteen Woodcock in the Rusland valley in one day, and lost another. This unusual circumstance was fully explained by the fact that the birds had been driven into the springs on the low ground by frost and snow. Woodcock nest near Windermere, Keswick, Appleby, Kendal, Penrith—in fact, in large woods all round our chief centres; they are also scattered up and down the west of our faunal area in the breeding season. Edenhall, Netherby, Appleby Castle, Naworth, are among the chief strongholds of the species; its numbers are of course thin where timber is scarce or where birds are not encouraged, while the wildest parts of the Lake district are unsuitable to the tastes of a bird that loves damp plantations and open drains or mossy ground, in which a plentiful supply of worms can be obtained. I have often watched the flight of the croaking Woodcock crossing the glades of some of our big woods in the gloaming, and occasionally flushed the birds by day in the depths of the coverts that they frequent. The nests and young are chiefly found when keepers are collecting Pheasant eggs. Both the eggs and young require a keen eye to distinguish them from the dead leaves in which they repose. Mr. W. Duckworth examined five nests of the Woodcock at Netherby on April 23, 1886; two were in the shelter of the Crossleaved Heath, one near Heather, one under some rhododendrons, and another beneath some brambles. I have seen others in fir plantations, and others also in woods of deciduous timber. One of the nests which Mr. Duckworth found contained a dwarf egg. The Woodcock is an early breeder, and the eggs are often laid in March. I had some thoughts of seeking to take a census of the Woodcock nesting in the Lake district, but my most experienced friends dissuaded me, on the ground that no

reliable data could be obtained, as keepers *vary* so much in the interest which they take in such matters. Mr. Plenderleath, the head keeper at Netherby, where the Woodcock is known to have nested since 1844, has had a very large experience of Woodcock and Woodcock nests. He told me in 1891 that the Woodcock which breed at Netherby arrive on their breeding-grounds in February, and pair off at the beginning of March. At first he then sees them in pairs, but when the female begins to sit he chiefly sees only single birds; after the young are hatched, in April or May, the old birds unite; when the time comes for a second nest they are again seen singly. Birds have greatly increased since he went to Netherby about 1865, but their numbers are very unequal in different seasons. He discredits the well-known fact that the Woodcock carries her young, because he has never seen it. But there is not the least doubt that the Woodcock often carries her young. It was vouched for by the late Captain Kinsey Dover, a veteran sportsman-naturalist, and can be proved by several witnesses still living in the Lake district; for example, by my friend, Mr. C. F. Archibald, or by Mr. Raine, the highly-respected head game-keeper at Edenhall. As regards weight, Mr. F. P. Johnson shot a 'Cock' of sixteen ounces near Brampton, Oct. 29, 1888, and this is the finest that has been reported to me. It may not be inappropriate to conclude with an extract from the *Carlisle Patriot* of Nov. 5, 1841, instancing the fact that these birds occasionally arrive in large flights on our *western* seaboard: 'On Thursday week [Oct. 28] no less than twenty-six Woodcock were shot in the neighbourhood of Workington. . . . Woodcock have been usually numerous in the vicinity of Bootle during the last week. No fewer than twelve and a half brace of these birds were shot on Thursday week [Oct. 28] by Mr. Walker of that town; and four and a half brace were bagged by the same gentleman on the following day. The birds were remarkably fine, and averaged upwards of thirteen ounces each.'

GREAT SNIPE.

Gallinago major (Gmel.).

Dr. Gough included the Great Snipe as an occasional but rare visitant to the neighbourhood of Kendal. T. C. Heysham only met with a very few specimens in Cumberland. The late Mr. W. Dickinson, during an extended residence in his native county, only heard of five examples killed in the west of Cumberland. There can be no doubt that most of the reports and even records of Great Snipe refer simply to heavy examples of the common bird. At all events, I can only answer for five specimens killed in the decade of 1881-1891. The first of these was shot near Carlisle in 1881; another was killed on Wardhall Common, September 11, 1883; a third near Carlisle, October 30, 1886; a fourth near Carlisle on September 9, 1887; a fifth was obtained in the north-east of Cumberland in November 1891. Our records relate chiefly, if not exclusively, to birds shot in the months of September and October in the northern part of the Lake district. It is believed that all of them were single birds.

COMMON SNIPE.

Gallinago caelestis (Frenzel).

This Snipe has always been a plentiful bird in Lakeland, and still breeds on the wild moors round Ravenstonedale in Westmorland, in the Rusland valley, in the marshy lands around our lakes, or, again, on Solway Flow, Rockcliffe moss, and Bowness Flow in the neighbourhood of the sea-board. Fewer nests are found no doubt than formerly, but this may be partly accounted for by the large portion of 'snipey ground' that has been reclaimed even in the dreariest and most remote portions of our area. This bird is closely associated with the reminiscences of most sportsmen. Often has the 'skape' of the Snipe saluted my ears on the salt marshes when a Snipe has unexpectedly slipped away at our feet from a tussock at the side of a creek, urging us to trace the delicate imprint of its long toes which the soft sand retains. The 'bleating' of the male, as he shoots through the air with amorous velocity, or prepares to descend

with stridulous flight, has frequently conferred a real charm upon some rushy meadowland which had otherwise possessed no interest for any one. Mr. Seebohm's remark that he has never seen or heard of a 'flock' of Snipe is a little perplexing to a student of Lakeland, which is visited in early autumn and winter by many large 'wisps' of Snipe; those that appear on our lowest grounds being chiefly bred on the Scottish hills and the Pennine fells, and resorting to the wet mosses and pools of the low grounds when their own hill-sides are becoming dry and parched up. On the 19th of August 1889 I showed to Mr. Matthew Vaughan the numbers of Snipe which had congregated in the half-submerged sedge and mud of Monkhill Lough; then, as on other occasions, the Snipe rose wild and went away in wisps, varying from three or four to thirty birds, and dispersing in all directions, many towering and others wheeling gracefully over the corn-fields, while some others were content to fly restlessly around the margin of the lough. After a short delay they all turned to their favourite ground, coming in as big wisps or in twos or threes, the flocks all dropping into the sedge, each bird hiding up a few feet apart from his neighbour. This happened in dry weather, which induces Snipe to congregate in their most aquatic retreats. In the following October the waters of the lough rose and flooded the Snipe ground, but many of the birds frequented a 'lea-field' in the immediate vicinity. On the 8th of that month I saw ten Snipe come flying up to the lough, whence they wheeled off to the field just mentioned. Their arrival was due to the fact that a high tide was then submerging Rockcliffe salt marsh, from which they repaired to the lough. The salt marshes afford Snipe-shooting in wet weather, but are too much disturbed to be really first-rate at any time. King Garth Island is always a sure 'find' for Snipe; in the early hours of a November day I have seen it fairly alive with them.

JACK SNIFE.

Gallinago gallinula (L.).

The Jack Snipe has never been a very abundant bird in Lakeland, although occasionally observed in even the summer

months. Under the old name of Judcock, it is mentioned three times in the Naworth Accounts of 1621. Thus we find an entry on the 27th of November: 'Snipes and jude-cocks, 7, v^d.' Two entries follow in December: '6 jugs cocks, iiiij^d,' and 'Jugcocks, 2, and a blackburn, j^d.' Although unknown in flocks, and chiefly met with singly or in pairs, the first stragglers are generally reported to me almost simultaneously, between the last days of September and the first week of October. Most sportsmen have had frequent occasion to remark the astonishing pertinacity with which individuals of this favourite 'gibier' adhere to close cover, preferring to lie up almost at the feet of the gunner rather than to run gauntlet of a 'twelvebore.' The tameness of the 'Jack' becomes accentuated in severe and wintry weather, when even this hardy little northerner finds a difficulty in procuring a subsistence in the neighbourhood of such springs and 'runners' as may fortunately prove the last to freeze up.

RED-BREASTED SNIFE.

Macrorhamphus griseus (Gmel.).

Writing to Yarrell on December 8th, 1835, Mr. T. C. Heysham observes: 'A fine specimen of the *Scolopax griseus* (a young bird of the year) was killed in this vicinity during the autumn, which is perhaps one of the best things in the bird way that has occurred in this district for very many years.' It was recorded in the following words: 'A specimen was shot on Rockcliff salt marsh, on Sept. 25, during a very high tide, which covered the whole of the marsh, with the exception of a few small elevated patches scattered here and there, on one of which the bird was observed busily feeding, and picking up insects, etc., with amazing rapidity. It proved to be a young female of the year, and was in good condition; the stomach was filled with the elytra of several small coleopterous insects: no other individual was seen.'¹ James Cooper was undoubtedly the man who shot the bird. Local tradition maintains, no doubt correctly, that it was killed on the upper part of the

¹ *Mag. Natural Hist.*, vol. ix. p. 186.

marsh, nearer to Floriston than Rockliffe. Mr. C. Murray Adamson says, that, after Heysham's death he examined his birds, and found this Red-breasted Snipe to be in a ruined condition.

PECTORAL SANDPIPER.

Tringa maculata, Vieill.

The autumn of 1888 witnessed the arrival of this nearctic species both upon the eastern coast of England and also in Lakeland. I sent the following letter to the *Ibis* of January 1889: 'Carlisle, Nov. 9, 1888.—Sir,—I beg leave to state that, on the 18th of October last, three examples of the Pectoral Sandpiper (*Tringa maculata*) were observed in a grass-meadow near Penrith. Two of the birds were shot. One of them fell into a Snipe-pool and was eaten by rats [our subsequent search only yielded a few feathers]; the other was safely secured, and within half-an-hour was placed in the hands of my friend Mr. Tandy, a young but zealous ornithologist. The third bird lingered in the neighbourhood until the 22d, but escaped scatheless. Mr. Tandy's bird proved on dissection to be exceedingly fat; its stomach contained the remains of vegetable substances. It is in immature plumage. I may add that Mr. Bidwell and other friends [including Mr. H. Seebohm] have examined the specimen, which is the first authenticated example of the species obtained in the *north-west* of England.'

This notice may be supplemented by the remark that Mr. Tandy, being unaware of the rarity of his specimen, proceeded to skin it before I had examined it in the flesh. I saw it, however, while the legs were still quite soft and flexible. The person who shot this bird was Robert Raine of Edenhall. He at first saw two of the birds running over the grass like Dotterel, and took them for that species in the distance. He then flushed them, when they rose in the air, and, wheeling round, dropped into a neighbouring Snipe-pool. He then flushed them again with a third bird which he had not previously seen, and shot two of the three, but lost one in the water. He had no retriever with him, and, as evening was coming on, he went home with

the bird that he had secured, postponing until the morrow the recovery of the second bird, which he would not have done had he been at all aware of its rarity. Mr. Tandy happened to call at his father's house the same evening, and at once recognised that the Sandpiper was unknown to him, and therefore took it home and skinned it himself. Raine saw the third bird subsequently in the same neighbourhood, but it was too wild to admit of his securing it.

DUNLIN.

Tringa alpina, L.

During the winter months large numbers of these birds frequent Morecambe Bay, and are taken plentifully in the 'bands' of nets set by the Flookburgh fowlers, to whom they are known as 'Purrs' or 'sea-mice.' They are often termed 'stints' on our coast-line, but on the English side of the Solway Firth are best known to the fisher-folk as 'sea-mice.' On the fells near Alston, the name of 'Plover-provider' attaches to the Dunlin, from its well-known habit of associating with the Golden Plover. Although the majority of the Dunlins which frequent our estuaries in autumn and winter are visitants from distant breeding-grounds, yet a good many pairs breed either sporadically on the fells of the Pennine range or in one or two favourite localities near the coast-line. Mr. Seebohm had no doubt been misinformed when he wrote in his *British Birds*, as well as more recently in his *Geographical Distribution of the Charadriidae*, that a few pairs breed on the mountains of the Lake district. At least I know no one who has found the Dunlin nesting on Skiddaw or any other of the Lake mountains proper. But if the expression be restricted to the fell lands which form our eastern boundary, it is perfectly accurate. Upon Crossfell, for example, I found a fair sprinkling of Dunlins and Golden Plover in June 1888. We first heard the two species call almost simultaneously, and noticed a Dunlin closely following a Golden Plover in flight, even to pitching on a tussock beside the larger bird when it alighted. When the Plover rose, so did the Dunlin. When the Plover whistled, the

Dunlin trilled. Once we saw five Dunlin stoop to and settle around a Golden Plover, waiting as sedately as the Plover. But this attendance of the Dunlin upon its larger neighbour is only a feature of our fell lands. The two species sometimes nest thinly on the same mosses near the coast; but *there* the Golden Plover is a scarce breeding-bird, while the Dunlin nests in considerable numbers upon certain portions of Burgh and Rockliffe marshes, as also near Silloth. The home-breeding Dunlins do not seem to winter on these marshes, though I saw a flock of at least a thousand birds wheeling round the point of Rockliffe marsh on December 1, on the occasion of a high tide. Certain it is that some individuals are always present. Once I shot a Dunlin on Rockliffe marsh on the 19th of January, and found it was already moulting into spring plumage, as evidenced by the fresh wing coverts and upper tail coverts.

But the Dunlin does not generally begin to lay before the beginning of May. The earliest broods of young generally hatch out about the 21st of that month. Most eggs are laid from the middle of May to the middle of June, the nest being a tolerably deep depression in a tussock of grass, lined, when the clutch is complete, with short stems of dry grass. The birds are charmingly tame at this season, tripping about and flying round in pairs. It is pretty to watch a male Dunlin carefully preening his breast and coverts, occasionally stretching his neck a little forward to utter a deep running trill as an encouragement to his mate, which probably responds by running up to his side and settling down to trim her feathers. One day I watched a couple of breeding Dunlins posing contentedly on the edge of Rockliffe marsh, until the flowing tide forced them to *swim* back to land, which feat they accomplished without the least show of reluctance. The colour of those which breed on the salt marshes is not so bright as that of the smaller birds which nest on the Pennine range. Although so pleasantly associated with the sea pinks of Rockliffe marsh, it would be a mistake to suppose that all the Dunlins which frequent our estuaries in summer are breeding-birds. Some of those seen in large droves in May are doubtless on passage to more boreal breeding-stations, but, as with most Waders, there are a good

many Dunlins that do not breed. I have seen them in the channel between Barrow and Walney in the breeding-time, though not of course in the numbers which we found in the same locality in the fall of the year. Some individuals retain breeding plumage long after the majority have moulted into the plain grey and white dress of winter. Thus, in 1888, a male Dunlin, which I shot near Bowness on the 23d of October, retained the black breast of the breeding season nearly intact. These little birds seem to feed chiefly on the small shellfish, both bivalves and univalves, which they obtain in the creeks and on the sandy flats of our estuaries.

LITTLE STINT.

Tringa minuta, Leisl.

Of the numerous Waders which throng the estuaries of the north-west of England almost annually, perhaps the rarest, certainly the most local in its choice of feeding-grounds, is the Little Stint. This especially applies to the neighbourhood of Morecambe Bay. Dr. Gough does not appear to have met with it in the vicinity of Arnside, neither does Mr. Durnford include it *with date* in his list of Birds found in the neighbourhood of Walney Island. My own inquiries elicited the fact that Mr. C. A. Hamond shot three Little Stints near Arnside when shooting there on the 7th and 8th of Sept. 1876. Whether it ever occurs at Ravenglass cannot be decided, since all shooting on the estuary is prohibited by the Lord of the Manor. Possibly it will be detected some day on the sands of the fore-shore between Drigg and Seascale. But the only part of our coast-line upon which the Little Stint appears with anything akin to certainty, is that of the English Solway between Silloth and Gretna. Mr. T. C. Heysham, whose information hereon was chiefly derived from his collector, James Cooper, wrote to Yarrell on September 15, 1839: 'Some time ago the Little Sandpiper was credited a rare bird; but this is by no means the case. Here it is seen every autumn and occasionally in the spring, and I have a specimen which was caught alive by a little boy, clerk to Mr. L.—— of Carlisle' [*i.e.* on the cattle

market between the Eden and Carlisle, September 23, 1835]. In the very year that Heysham wrote this letter to Yarrell, Cooper sent ten Little Stints in the flesh to Mr. C. M. Adamson, with the remark that he had *seen* [not obtained] more Little Stints that autumn than in all his previous experience. That same year he shot a Little Stint on the 1st of June, a fact which no doubt induced Heysham to speak of this *Tringa* occurring in the spring-time, at which it is otherwise unknown with us. September is the month which generally sees the arrival of a few Little Stints, especially after a prevalence of strong easterly winds. A few appeared in the seasons of 1887, 1888, 1889, 1890, and 1891, though no considerable immigration of this Sandpiper has occurred since Cooper's day, *i.e.* during the last half-century. Cooper himself twice shot Little Stints on our salt marshes in the beginning of winter, and other late stragglers have occurred quite recently. Mr. Nicol saw a single Little Stint flying in a flock of Dunlins up the Waver on November 1st, 1889, and Mr. Mason shot another on Rockliffe marsh the following day. This last was resting at the edge of a little 'dub' or pool of water on the surface of the marsh. He broke its legs, and was obliged to kill it, though reluctant, as he assured us, to kill such a delicate little Wader. On examination it proved to be still wearing the plumage of youth. Mr. Nicol saw a single Little Stint near Skinburness on the 15th of January 1891, a remarkable date at which to meet with this bird. Of its habits during its brief sojourn on our estuaries on autumnal migration it is difficult to write with the same prolixity as of commoner birds, because of its comparative rarity. But I have never met with it in Lakeland at any distance from our estuaries. By choice it seems to associate chiefly with its own species, and with Curlew Sandpipers. If separated from its fellows, it either remains alone or consorts with the ubiquitous Dunlin. Like that species, the Little Stint is fond of feeding upon open sands, but it never frequents to our knowledge an exposed beach. When high tides have covered our marshes, and filled the half-dried creeks, both species may be found at a distance from the wide sands that they haunt at other times. I have not dissected many Little Stints, but those that I have

skinned rarely contained more than a little grit. In one case the birds had fed on some small white worms. Another had dined on flies. The flight of this Stint is fast and irregular, the bird often rising and falling. Its call-note, 'wick,' bears some resemblance to that of the Sanderling, but is quite unlike the trill of the Dunlin.

TEMMINCK'S STINT.

Tringa temmincki, Leisl.

T. C. Heysham records that 'a pair of this rare species of Sandpiper were killed on Rockliffe salt marsh on the 1st of September [1832], the only specimens that we have hitherto heard of that have been got in this vicinity. Both were young birds, in all probability not more than nine or ten weeks old, and their plumage was in almost every respect very similar to the young of the Common Sandpiper (*Totanus hypoleucos*) of the same age. They proved, upon dissection, to be of different sexes, and were exceedingly fat.' Mr. Charles Murray Adamson showed to us the specimens obtained by James Cooper, regarding which he has observed: 'In answer to my inquiries about this species, Cooper of Carlisle wrote to me in 1839: "I never saw an old Temminck's Sandpiper; the only young I ever saw were three, two of which I killed on September 1st, 1832, and one on the 5th of the same month and year, besides the one I sent you."'¹ The last-named was shot by Cooper on Rockliffe marsh on September 2d, 1839. Considering that this Stint nests on the Norwegian fells, *fide* Collett, it is a little surprising that not a single specimen has strayed to the marshes of the English Solway during the last half-century.

CURLEW SANDPIPER.

Tringa subarquata (Güld.).

Always one of our scarcest periodical visitants, of late years the Curlew Sandpiper has been very scantily represented on the Solway Firth. It is possible that this small Wader may have

¹ *More Scraps about Birds*, p. 130.

been more numerous formerly, for T. C. Heysham wrote to Dr. Drummond in October 1834: 'Within the last eight or ten days a very large flock of Pigmy Curlews (*Tringa subarquata*) have been seen upon the coast in this locality, several of which have been killed. This circumstance most materially strengthens an opinion I have for some time entertained, that this species is by no means rare on many parts of our coast.' Again, a loose note of T. C. Heysham, dated November 2d, 1849, runs thus: 'Watson, the bird-stuffer, this day informed me that he had seen large flocks of this bird on Rockliffe marsh this autumn, and had shot several. I saw two of these birds which he had mounted.' I usually meet with a few individuals in September, generally upon the sands of an open estuary, often in company with Dunlins or Ringed Plover, occasionally among Little Stints. On Burgh marsh we surprised a solitary bird feeding alone on a patch of black mud, September 17th, 1888; but this Wader seldom frequents the higher marshes of the Solway. The Curlew Sandpiper is more deliberative in its actions than the Dunlin, and stalks, rather than runs, over the estuary. It is not partial to salt creeks, at least not in the same degree as the Dunlin. It has not been recorded from Raven-glass, or from any inland station except Alston, near which town the late B. Greenwell once obtained a specimen. But it appears to occur sparingly in the neighbourhood of Morecambe Bay.

T. C. Heysham once wrote to Dr. Gough: 'I have not the least doubt that the Pigmy Curlew and Little Sandpiper will eventually be found on your coast (*i.e.* Morecambe Bay). In the months of August and September the former sometimes visits the shores of the Solway in considerable flocks, and frequently in company with the Dunlin. On the contrary, the Little Sandpiper is somewhat solitary, and seems to be partial to the creeks of the salt marshes. The skins of the birds I sent you I am fully aware are not worth your acceptance, and I merely put them into the box under the impression that they might possibly assist you in making out these birds, should they at any time chance to fall in your way.' It does not appear that Dr. Gough ever obtained the Little Stint on his coast, but

Heysham's presentiment as to the ultimate detection of the Curlew Sandpiper was justified by the fact that Dr. Gough ultimately presented an immature bird to the Kendal Museum, this having been shot on the marsh near Arnside, August 24th, 1868. The species has since been obtained in the same locality. Mr. C. A. Hammond informs me that he met with a considerable flock of Curlew Sandpipers at Arnside in September 1876, and shot seven of the number. The late James Cooper shot a couple of Curlew Sandpipers on Rockliffe marsh in the month of May, one of which Heysham says that he lent to Gould, to be figured in the *Birds of Europe*. The Pigmy Curlew so rarely visits us in the spring of the year that it is practically unknown on our marshes in the *red dress*.

PURPLE SANDPIPER.

Tringa striata, L.

A few Purple Sandpipers occasionally appear on our estuaries in late autumn, frequenting the large stones which lie at the mouths of becks, obtaining much of their food on the sand like other *Tringæ*. The species has never been shot on our salt marshes; indeed, it occurs more frequently near St. Bees than anywhere else on our coast, which is, at the best, indifferently adapted to suit its tastes, there being few, if any, reefs of rock covered with tangles such as this Sandpiper habitually chooses for its haunts. I have seen it on the west side of Walney Island, and there Mr. Durnford also obtained specimens. All the local examples but one that have come under my notice were killed in winter plumage. The exception is a young bird killed a few years ago near St. Bees. This is in nest dress, showing that it was either an early immigrant or belonged to a late brood. I have never observed this Sandpiper to associate with any other species of *Limicolæ*.

K N O T.

Tringa canutus, L.

The Knot visits Morecambe Bay and the lower portion of the Solway Firth in very large numbers, but is not often met with on the more open portions of our coast, being in fact an estuary-loving rather than a maritime species. I have observed considerable numbers in Walney channel, and a good many are netted by the Flookburgh fowlers, but it is on the Solway Firth that I have chiefly studied the Knots which come to Lakeland at the end of their short Arctic summer. A few arrive in August. In 1888 the first muster of young birds occurred on the 7th of September, when a large flock allowed Mr. W. Nicol to approach within shot. On the 18th of that month many hundreds lined the sea-beach at Bowness, just when the sunset flooded the heights of Criffel across the tide-way with a volume of soft light. These, when disturbed, only wheeled *en masse* a few hundred yards across the sands. On the 23d of October 1888 a friend and I visited Bowness just as the tide began to ebb, and observed a few Knots which from their tameness had evidently only just arrived. They ran in twos and threes over the shingle at our feet, and my terrier ran after them precisely as he would have chevied Sparrows under similar circumstances. Some large flocks of Knots seen the same day were as wild as hawks. When shooting on the coast near Cardunock, on January 4, 1889, we came across a fine assemblage of Knots. Crossing a field, we gained the shelter of a hedge within 80 yards of the birds, which were running in the shallows at the edge of the estuary. The tide was flowing fast and soon disturbed a great flock of Oystercatchers, which broke into two divisions that alighted on our right and left. A dense flock of Knots then came flying up, and, after stooping and rising once or twice, pitched in the vacant space between the two bodies of Oystercatchers, and thus united the throng of birds crowding the water-side into one dark multitude. We waited twenty minutes, during which many small flocks of Knots came flying restlessly up the water, the tide being one of 24 feet. As the flowing waters encroached upon the land,

the birds lifted here and there, the Knots being obliged to keep inside the Oystercatchers, as being shorter in the leg! Now they rose in a swarm and pitched a few yards nearer to the shore; anon they rose on the wing and exhibited their aerial evolutions like a well-drilled squadron, hanging in the air like a swarm of bees, forming into a triangle, now lapsing into a dense mass, the twinkling effect produced by the beating of so many pairs of wings impressing the mind with a bewildering sensation. A few manœuvres performed, the Knots returned, but this time to pitch a few yards further away, for the tide had turned; a few minutes more and the receding waters allured them to descend the firth; the right-hand detachment of Oystercatchers followed in their wake. A few Knots linger beside the left wing of *Ostralegus*; the loud piping of the Seapies was agreeably varied by the shrill cries of the Knots. A Curlew waded jauntily outside the black throng of birds, which, no longer content to rest, head drawn within the shoulders, were keenly watching the departure of the tide. Long before the waters had left the sand high and dry, the hungry birds rose and departed to their favourite mussel scars. Wading out into the shallows, we saw many small parties of Knots pass, all fighting down the channel to some well-known rendezvous; a few of the number crossed over to us from the Scottish side of the firth. The experience just described has been repeated many times; on December 21, 1889, when shooting on Skinburness marsh, we watched two large flocks of Knots looking very silvery as they swept up and down the united waters of the Wampool and Waver estuary, now in a compact mass, now spreading into a long thin line, then reuniting into an opaque cloud of birds, anxiously waiting for the retiring waters to lay bare their favourite feeding-grounds, notably those at Beckfoot. Mr. Nicol has killed eighty-four Knots at a shot as early as September 16, but generally gets his best shots at the close of the season; on the 31st of February 1888 he shot one hundred and eight birds at a shot, all of course for the market. At the end of November 1889 Messrs. Law and Nicol conjointly shot over five hundred Knots with their punt guns. But Knots are on the whole most numerous in the month of

March, when many arrive on passage to their breeding-grounds. Knots have not often been taken in the interior of Lakeland, but I have seen Knots arriving at a great height above the Solway from the north-east, and these birds, which we recognised by their twittering cry, must have crossed Northumberland. So too, on the 7th of November 1890, having spent the day among the Knots at Bowness, I confess that I was interested to hear at 10.30 P.M. some Knots uttering their high-pitched whistle, as they flighted over Carlisle, speeding on their way through the dark rain-clouds towards our western estuaries. In November 1887 a man named Elliot, employed as a keeper on Crossfell, saw a small flock of Sandpipers crossing the fell-side, and firing a shot at 70 yards, had the good luck to bring down one of them—a Knot in full winter dress. *That* is the plumage of the greater number of the Knots shot on our estuaries. A few Knots sometimes linger long enough to assume the red dress, as in 1891, when Mr. Nicol counted six or seven 'red Knots' in a flock of fifty birds in the middle of May. They occur also in this dress in early autumn, but are too wild to be often procured. Their food consists almost entirely of small mollusca. Birds that have been accidentally pinioned by a shot sometimes frequent our marshes for many weeks, finding a plentiful supply of animal life in the creeks which drain the saltings.

R U F F.

Machetes pugnax (L.).

The Ruff visits the salt marshes of the Solway Firth every year, but in very small numbers, and only in the months of August and September, when both sexes are exclusively represented (in our experience) by young birds. They often associate with Peewits, and feed in company with those birds on the open portions of the salt grazings, but sometimes in the creeks or even on the open sand. It has been said that the Ruff is a silent bird, and no doubt it is so in comparison with some other Limicolæ, yet its loud shrill whistle may occasionally be heard at a considerable distance. Nowhere has it been met with, or

at any rate reported *inland*, except from the neighbourhood of Alston. Alston lies in the track of many migrating birds, and immature Ruffs have often been shot when resting on passage upon the neighbouring moors. Neither have I seen the Ruff upon the coast *south* of the Solway. Dr. Gough, however, includes the species as an occasional visitant to Lyth moss. Baxter of Ulverston shot some birds of this species in Morecambe Bay in the autumn of 1890. The Ruff has never been obtained in Lakeland *during the breeding season*. Mr. C. M. Adamson assured me that he once received from James Cooper a clutch of the eggs of this species, which had been taken in the neighbourhood of the English Solway. Mr. Adamson subsequently presented these eggs to Mr. Hancock. The late Sam Watson was very proud of a shot which he once fired at some Ruffs. A man went to him to say that there was a flock of strange birds on the 'Sands' near Eden bridge. Watson hastened to the spot and found a party of sixteen Ruffs and Reeves. He shot four running on the ground, and three others as they flew round, bagging six Ruffs and one Reeve.

SANDERLING.

Calidris arenaria (L.).

The sandy portions of our coast, and especially of the Solway Firth between Allonby and Cardunock, are visited by large numbers of Sanderlings, both in spring and autumn, but especially at the former season. Large flocks of these birds make their appearance on the portion of our shores just indicated, about the middle of May, and their sojourn with us is often prolonged into June. Some few arrive in full breeding dress, but some have changed but little, and the great majority have nearly but not quite assumed perfect nuptial plumage. Their numbers vary in different years, but their arrival is an unaltering feature of vernal migration. Upon the 30th of May this year (1891) Mr. Nicol informed me that he had noticed the presence of some Sanderlings for some days; not in the remarkable abundance of 1889, when he estimated their numbers at 3000 birds, but still in very sufficient flocks. About half

past two, when the tide flowed, we walked across the sands together, and at a long distance recognised a flock of Sanderlings running actively at the water edge. Other flocks came swinging past us, and the birds on the water edge rose and flew to and fro, finally alighting on the sands about 100 yards from the beach. The glass proved that many of them were still in the grey and white plumage of winter. Two other flocks came past, crying 'wick, wick,' as they turned, their aerial movements being neither so sharp nor so angular as those of the Dunlin. Alighting on the sands they commenced running up to the large flock, among which their numbers soon absorbed. These birds feed at the water edge and out on the great sandbanks. At high tide they rest on the sea beach, or fly restlessly to and fro. The presence of the Sanderling is the more grateful because the sands are otherwise sadly bereft of bird life at the end of May. Bar-tailed Godwits in winter dress are still in evidence, it is true, while flocks of Dunlins and Ringed Plovers, of Oystercatchers, and even of Curlews, serve to remind us that all *birds* do not necessarily undertake the duties of family life; but except for these and a few Gulls, some Sheldrakes, and a late lingering Red-throated Diver, the estuary is enlivened by the presence of very few birds. The Sanderlings all leave by the 12th of June, unless perhaps a few odd birds stay all the summer; Mr. Nicol once saw two Sanderlings flying in a flock of Dunlins on the 25th of July, but that was of course an exceptional circumstance. Nevertheless, both adults and young birds reappear in their favourite haunts in August and September, though the small numbers which visit us in the latter portion of the year clearly prove that the bulk of the birds which visit us in spring return from the north to their winter quarters by some other route than the Solway Firth. When I wrote of the Sanderling in the *Birds of Cumberland*, our local experience of this bird was limited to the spring and autumn—indeed we only knew of one individual obtained in winter dress, and that at a distance from the sea. Since then I have frequently met with a few Sanderlings near Beckfoot in winter, while in December 1886 Mr. J. N. Robinson shot a bird out of a large flock on Burgh marsh. But our

reference to the Sanderling as 'not remaining to winter' is still true in the main, the bird being of course chiefly a spring visitant. Curiously enough, T. C. Heysham turns out to have studied the birds of Cumberland for very many years before he came across a Sanderling in winter dress, witness the following extract from a letter of his to James Cooper, dated December 13, 1844: 'I have this moment received the enclosed Sanderling, which I understand was shot on Burgh marsh a few days ago, and as it is the only one in winter plumage that has been met with in Cumberland to my knowledge, I am rather anxious to have it preserved.' The only examples that I happen to have seen from Morecambe Bay were shot in summer dress by Mr. Murray of Carnforth.

BUFF-BREASTED SANDPIPER.

Tryngites rufescens (Vieill.).

The comparatively short distance at which Burgh marsh is situated from Carlisle has long rendered it a favourite shooting ground for such of our working men as happen to possess a taste for rough shooting. In September 1876 a man named John Dawson was shooting on this marsh near the monument of Edward I., when he fell in with a small Sandpiper which proved to belong to this species. He pinioned it by his first shot, and was therefore able to secure it almost undamaged. It was skinned and mounted by his brother George Dawson the shoemaker, in whose possession it has remained ever since. Mr. Hill of Carlisle saw it skinned.

COMMON SANDPIPER.

Totanus hypoleucus (L.).

For six months of the year the Common Sandpiper is one of our most widely distributed birds, nesting in the neighbourhood of most of the lakes, tarns, and rivers within our area. It seldom arrives before the middle of April, often in small flocks, which soon pair off and disperse themselves along the banks of our wooded streams. In 1891 Mr. F. W. Bailey observed a single Common Sandpiper on the 11th of April, but that is

four or five days earlier than this bird generally appears with us. In 1889 a clutch of fresh eggs were taken on the Gelt on the 10th of May, and these are as early as any that I have found or heard of. The eggs are often laid at some distance from water, though more usually on the banks of stream or tarn. One picturesque nest was placed in a nursery garden between two rows of strawberry plants. I have observed the old birds *perching on trees* on a good many occasions, and even when they had neither eggs nor young. The birds that breed on our higher lands descend to the sea almost as soon as their young are able to fly strongly, and may often be heard calling on dark nights as they pass over. For example, on July 28, 1888, at 11.30 P.M., wind E. to N.E., and much rain, I clearly distinguished the voices of the Curlew and Common Sandpiper among other species passing over Carlisle. The same was observed on the 21st July 1888, and on a good many other occasions. Almost the only ornithological observation contributed to our knowledge of Lakeland by the late James Cooper, recorded too by the old gentleman *in* his 84th year, related to this species: 'It was early in April while angling in the Petteril, near Carlisle, when for the first time that year I noticed a Common Sandpiper, which was sitting on a bed of gravel near the brink of the river. As I approached, it flew across to the opposite side and sat down on a stump of the weiring made to defend the bank of the pool, which is deep and the stream rapid. It had not been there more than a minute when a Sparrow-hawk swept over a high hedge close by; observing this, the Sandpiper dropped off the stump into the pool, like a piece of lead, and the hawk went on; the bird then came cautiously out on to the gravel bed it had left on perceiving my approach.'¹ In 1890 I found this Sandpiper frequenting the creeks of Rockliffe marsh as early as July 9th, in the family parties which frequent our coast-line until the end of September. Stragglers linger into October, but I have never met with this Wader in Lakeland during the winter.

¹ *Zoologist*, 1876, p. 5126.

GREEN SANDPIPER.

Totanus ochropus (L.).

The beginning of the 'open' season is always a little disappointing to those who 'follow the marsh.' In other words, the species to be met with on our saltings during August consist chiefly of home-bred birds; the bulk of the 'foreigners' arrive a few weeks later. But the Green Sandpiper affords a pleasant exception to this rule. By the end of July one has grown tired of the Redshanks and Dunlins, of the Ringed Plover, Curlews, and Oystercatchers; their notes have lost all freshness for our ears, while their flight is viewed with indifference. One of the first additions to our air fauna at this juncture is usually the Green Sandpiper, freshly arrived, we may suppose, from some nursery in Scandinavia or North Germany. But, wherever the bird comes from, it is a relief to our jaded feelings to flush this favourite acquaintance out of a muddy creek, and to hear its loud shrill whistle as the bird of white coverts speeds rapidly away from danger. From the last days of July to the beginning of October a few Green Sandpipers are generally to be found on our coast marshes. One day, perhaps, you may flush a couple from the margin of one of our loughs; another afternoon, you may possibly walk almost on to the top of a Green Sandpiper that is feeding busily in some soft oozy mud at the edge of a salting. It is not numerous enough to be gregarious in its habits. I have never seen it associate with any other species of Sandpiper. The largest party of Green Sandpipers that I ever saw only numbered six individuals, and *they* only gathered together, I fancy, because a high tide was fast covering Rockliffe marsh. That occurred on the 8th of October 1889. But the species is far too scarce to be gregarious with its own kind, at least in Lakeland. Inland, it is especially uncommon, but it is quite a scarce bird on all parts of our coast. I only know of three examples killed in Lakeland in the *winter*-time. The first to come under my notice was killed near Cardew Lees on January 3, 1885. The second was shot on the Eden, December 18, 1891. I dissected the bodies and

found them to be in prime condition ; adults, I should say, and both females. The other instance relates to a bird killed near Brampton on the 22d of January 1846.

WOOD SANDPIPER.

Totanus glareola (Gmel.).

The only specimens of this Sandpiper that appear to have been procured in any part of Lakeland belonged to a party of five, which visited Edenhall in August 1867. The present head-keeper, Mr. Raine, has often spoken to me of the birds, two of which were shot at a small rushy pond, since drained. Mr. W. Duckworth was formerly under the impression that he once met with the Wood Sandpiper in the breeding season, the actions of the bird closely coinciding with the description furnished by the late Mr. John Hancock of Wood Sandpipers observed at two localities in Northumberland. I mention this only in order that the *possibility* of the Wood Sandpiper being found hereafter nesting on some remote moss in Westmorland may not be entirely lost sight of.

REDSHANK.

Totanus calidris (L.).

The Redshank is mentioned about three times in the Naworth Accounts. Possibly it may have been lumped also with other Waders under the title of 'sea larkes,' which appears frequently ; at any rate, the fact that it is locally alluded to as the 'Redshanke' as early as the seventeenth century, confers a certain amount of respectability on this common Wader. During the winter months a few Redshanks may always be found feeding on the sandy shores of the Solway Firth, but I have never seen larger flocks than of thirty individuals on the *Cumberland* coast, and even that number is above the average ; it is more usual to find them haunting the muddy creeks that bisect the salt marshes in twos and threes, not that the species is scarce, but that these birds feed sporadically. When rambling along the shores of Walney Channel on October 14, 1890, with Mr.

C. F. Archibald, we observed an exceptionally large number of these birds flying together; exceptional, be it understood, on the N.W. coast of England. After waiting about four hours we saw the whole channel covered by the flowing tide. Nearly all the Redshanks in the neighbourhood seemed to have collected in the main flock, composed of about a hundred individuals, though a few small 'strings' were also present. On the 17th of the same month we noticed a flight of forty Redshanks coming down to feed on the wet ooze in Walney Channel as the tide left the estuary. Yet on October 20, 1891, I only saw two Redshanks in the same locality. But though the Redshank is generally plentiful in winter, only a single pair usually nests upon Walney Island. The majority of those seen in autumn are immigrants. A pair or two nest on the marshes of the Ravenglass estuary, but nowhere else on the coast-line until you reach the upper marshes of the English Solway, on which many pairs breed. Dr. Heysham considered the Redshank 'a very scarce bird in Cumberland,' a remark from which we are bound to infer that it did not at all events breed on Rockliffe marsh at that time in the comparative plenty of the last thirty years. I have passed many pleasant hours on these marshes listening to the loud piping cries of these devoted birds, which betoken their parental anxiety with ear-piercing solicitude; but never did I more thoroughly enjoy the wild charm of their company than on the 6th of May 1890. For once the dead level of the estuary was transformed into a scene of weird beauty. A brilliant afternoon had become marred by the unmistakable appearances of an approaching tempest. Columns of dense black thunderclouds hung menacingly in long festoons over the upper part of the marsh, above which the Redshanks wheeled restlessly to and fro, their white breasts glancing like silver against the swart and ominous background. The Redshanks assemble on this breeding-ground in March, and lay their eggs from April onwards, though more liable to delay that operation in the event of an untoward season than is the Dunlin. All the nests that I have ever seen were hollowed out in tussocks of grass. The care which the sitting bird takes to draw together the grass stems when

leaving the nest has often led to the discovery of its eggs. Both sexes take their share of incubation. At least, I can answer for two instances in which the *male* was captured when sitting on the nest. Four eggs usually constitute a clutch, but five and even six eggs have exceptionally been found, all laid apparently by the same bird. Although the Redshank is chiefly a coast bird, a few pairs nest in the interior of Cumberland and Westmorland. Prior to 1885 Mr. Bailey reported to me a colony of Redshanks established in Caldbeck. The Rev. R. Bower found two or three pairs nesting at Newbiggin tarn, Westmorland, in 1890; a fact verified by myself in the season following. Mr. Hutchinson identified an egg of the Redshank taken on Scouts Scar near Kendal in the summer of 1891.

SPOTTED REDSHANK.

Totanus fuscus (L.).

This Redshank is quite unknown to Lakeland *in summer plumage*. In autumn it has sometimes straggled across country to our western estuaries, though even on the Solway Firth it is the rarest of occasional visitants, and appears only in immature dress. The first specimen locally authenticated was shot at Cardunock on October 13th, 1830, and stuffed for T. C. Heysham by James Cooper, who saw others in August 1833 and August 1840. Mr. Garnet of Bassenthwaite possesses a specimen shot some years ago near Kirkby-Stephen, Westmorland, the only example that is known to have been killed in that county. Mr. W. Nicol has observed several examples upon the marshes near Silloth during the last fifteen years, but he never had the good fortune to shoot one of these rare and wary birds until the 18th of August 1888. On that occasion he observed a single Spotted Redshank feeding upon the muddy bottom of a large creek, upon the flanks of a small party of the Common Redshank. He had spent ten minutes watching the stranger boring or tunnelling in the mud, when the birds rose and flew up the creek. He followed and shot the Dusky Redshank. On another occasion he observed a Peregrine in

pursuit of a Spotted Redshank (which he had been vainly trying to out-manceuvre himself), which was driven over towards the Scottish side of the Solway. On the 4th of September 1889 Nicol saw another Spotted Redshank under the brow edge of the marsh, but failed to secure the prize. The following day the bird was shot in a creek near his house by a young lad, who did not know it from the Common Redshank. Luckily, he showed it to Nicol, and the specimen was sent to Mackenzie of Carlisle, at whose house I examined it in the flesh. On the 2d of September 1890 a fowler named Story shot another immature Spotted Redshank on the Wampool estuary. In October 1891 Nicol recognised the call-note of a Spotted Redshank on the Waver, and subsequently saw the bird more than once when punt-shooting. It frequented the edge of the estuary, and did not enter the creeks. When disturbed, this bird generally flew a considerable distance before alighting again.

GREENSHANK.

Totanus canescens (Gmel.).

Of birds that are always scarce upon the estuaries of North-west England, but which return with unbroken regularity to their special haunts, I know none more interesting than the shy and vigilant Greenshank. It is a bird of wide distribution; not a cosmopolitan like the Turnstone, it is true, but covering the length and breadth of many regions in the vast journeys which it annually performs in visiting and returning from its breeding-grounds. Iceland and Greenland know it not, nor does it appear to visit the Faroes; but from the north-west of Scotland its breeding range extends across Russia to Siberia in Asia. In Scotland, the county that it most affects appears to be Sutherland. It is local, almost rare as a nesting bird in the Hebrides, and appears to be absent in summer from the lowlands of Scotland, though I have heard rumours of its nesting in more than one border county. Curiously enough, it appears to be absent in the breeding season from Ireland, though suitable breeding-places must be very numerous. In the north of Europe the exigencies of climate induce the Greenshank to nest later

than in Scotland. Mr. Seebohm states that it arrives on the British coast at the end of April and beginning of May. Mr. Harting says that it arrives on the coast of Sussex about May 9. Mr. Collett says that it arrives in southern Sweden in the last half of May. These dates would suit a bird which breeds among the bogs and upland lochs of northern Europe, where frost often binds the earth until the beginning of June. But in the north of Scotland I have seen the Greenshank on its breeding-ground by April 11, and Messrs. Harvie-Brown and Buckley consider that it usually takes up its summer quarters in the middle of April. The exigencies of climate abundantly explain this apparent discrepancy between the habits of the bird in Scotland and elsewhere. Of its noisy habits when nesting, particularly when the young are skulking in the heather, I hope to speak more particularly on a future occasion. The young do not leave the moss or moor or bog upon which they have been reared until well feathered and strong of pinion; but, when the proper moment comes, they follow the old birds to the river or to the estuary where the latter have been in the habit of feeding. After a few weeks' delay they commence their journey, southward or westward bound. Most of our Waders appear to perform their great journeys by night, but tides and the state of the weather serve also to regulate their movements, so diurnal migrations may occasionally be witnessed. On August 24th, 1889, I was smoking my pipe beside a small lough near the Solway, contemplating the Coots and Mallard which chiefly occupied the water, when I heard the shrill whistle of the Greenshank, and, looking up into the east, I saw four of these birds shooting down from the clouds, with the manifest intention of delaying their journey by a brief rest. They did not descend abruptly, but wheeled briskly five or six times round the lough before they proceeded to alight upon its sedgy margin.

It was not, perhaps, quite suited to supply what they wanted, certainly next day they had gone on. Probably they only desired to rest their wings and enjoy a wash before continuing their travels. At all events, it was a pleasant incident, serving to remind one how these swift fliers come hurrying to us through cloudland, and, after a brief rest, steer their course

southwards to the coasts of Spain and the lagoons of African rivers. August is one of the months in which the Greenshank chiefly travels; odd birds sometimes appear at the end of July, or even earlier, but August is the first month in which we can depend upon finding Greenshanks, September being equally good. For some weeks of early autumn the Greenshank may thus be studied in his haunts; and his haunts are limited, as becomes a scarce bird. You will not find him out on the great sandbanks, nor yet on the mussel-beds, which even the Redshank sometimes visits. It is almost useless to search for him in the narrow creeks that hold the Green Sandpiper, nor does he affect rocks, except where he has little opportunity for avoiding them—at least in my experience; but a broad and shallow creek, below the brow of a salt marsh, or a nice spit of gravel, please the Greenshank.

When he has been already disturbed, of course you may see him anywhere along the margin of the estuary; but he will not willingly stay there long. Give him time and he is sure to hark back to the shelter of the marshes, for he likes shelter and springs of running water. He does not bore for his food in the same way as other Waders do, because his diet is different. Nearly all the shore birds feed principally upon small mollusca, as many dissections have convinced me. But the Greenshank prefers to feed on shrimps and little fishes; and if these can be procured he will not trouble much about the mollusca.

I have written of the Greenshank in the singular. Well, you often meet with odd birds of every species, and the Greenshank is not so sociable as many other Waders. But he likes the company of his brethren. When, patrolling the marsh side, you walk on to the top of a likely creek, broad, and full of running water, and hear the familiar cry, the probability is that the next moment you will not see one, but three or four white rumps flying away in hot alarm.

One afternoon I long watched a flock of nine Greenshanks, newly arrived on the estuary. Though not yet shot at, they were sufficiently wide awake to require a good deal of circumspection on my part to avoid disturbing them. Some men would have thought it best to stalk and slay them forthwith;

but, caring much for their company and little for their carcasses, I laid down my gun and took out my note-book. It was a breezy day, and the birds desired to rest in shelter on a broken portion of the marsh, which is one difficult of access with ordinary tides. So they enjoyed their security, and ran over the turf, or poised gracefully upon protuberant hillocks. Now and then a single bird left his companions to fly noisily up and down the estuary, first shooting up to a surprising height, and then circling round a wide area, sporting merrily in the fitful sunshine, in which his white underparts gleamed with a silvery glance. In a little while this bird descended to rejoin his companions, and they continued their restless manœuvres, filling the air with the babel of their choruses. It is really astonishing what a volume of sound can be produced by a party of nine Greenshanks all calling simultaneously. But, alas! that party of nine was reduced in a few days to two or three birds, which took their departure before the October gales began to blow boisterously.

A few birds linger into October. I have known them shot in December; but the Greenshank rarely seeks to winter with us. Mr. R. Warren has described in the *Zoologist* the wintering of the Greenshank on the north-west coast of Ireland; but there presumably the climate is milder than here, and the Greenshank, as described by that gentleman, is more plentiful than with us. Strange to say, though so well known as a spring visitant to the south of England, the Greenshank is rarely seen with us in May. The late Mr. T. C. Heysham never met with the Greenshank on the Solway in the spring of the year. I have seen a pair on Burgh marsh at the end of April, and in 1890 a single bird was observed near Silloth up to May 25, when it disappeared. But there can be no reasonable doubt that the Greenshanks which visit us in autumn from northern Europe, and escape a legion of gunners—for nearly every fisherman has a gun—return in spring to their breeding-grounds by some route lying to the south of the Solway. Perhaps a dozen Greenshanks may be killed on the English side of the Firth in an autumn, but I hardly think more.

The Greenshank is virtually unknown upon the more exposed portions of our coast, nor does it seem to occur in any numbers upon the Duddon or the Kent. Mr. Murray considers that it

occurs very sparingly on the marshes near Carnforth, although he showed me a fine specimen shot by himself at the period of spring migration. It is, however, a well-known bird in autumn on the estuaries of the Irt, Mite, and Esk at Ravenglass, which are peculiarly well adapted to its habits. Both Mr. Reynolds and Farren know the bird well. From them I learnt that not less than a score of these birds frequented that neighbourhood in the autumn of 1890, though they quite admitted that the species was more plentiful than usual. Oddly enough, although a good many Greenshanks must cross the breadth of Lakeland in their periodical migrations, they rarely appear to alight to rest on the shores of our inland lakes or on the gravel beds of the larger rivers. Consequently the bird has very seldom been shot by any of our local sportsmen at a distance from the sea. I have, however, identified one or two specimens which had been killed in the neighbourhood of the upper waters of the Eden.

BAR-TAILED GODWIT.

Limosa lapponica (L.).

The first reference to which attention can be drawn proves that this Godwit was supplied among other Limicolæ to the table of Lord William Howard. Between November 7th and 13th, 1612, his steward registered an entry: 'A Godwike and a Redshanke, iij^d.'¹ Dr. Heysham did not include the species in his local catalogue, nor did his son meet with the species abundantly; but in this connection it should be remembered that their experience was almost entirely restricted to the upper marshes of the Solway, which are rarely visited by this bird. Godwits come to the Solway from an easterly and north-easterly direction on passage, and, though I have both heard and seen them flying high over Drumburgh marsh on migration, they seldom alight until they reach the Wampool and Waver estuary. You may notice odd birds flying up to Burgh marsh when exceptionally high tides compel them to desert their

¹ An entry in the *Naworth Accounts* for August 1621: '3 curlue knaves, vjd,' probably relates to this Godwit, which is often called a 'curlew knave' on the Solway at the present time.

usual haunts, but the circumstance is unusual, although I have occasionally examined Godwits that Greenwood had shot on the Esk between the point of Rockliffe marsh and Gretna. These birds arrive on the sands of the Solway Firth very numerous in August, but especially in September, the young being occasionally accompanied by a few old birds in summer dress. These last are always very wild. The young birds, on the other hand, are at first tame and confiding, so that an indifferent marksman can often get two shots at the same bird. The misfortunes of those that get 'pricked' soon teach the survivors caution. They feed on the scars of mussels, especially between Silloth and Allonby, but a large proportion of their food is obtained from the sand, in which they bore deeply *or* superficially according to the state of the tide. As the surface of the estuary dries, when the tide ebbs, their prey descends into the sand, consequently the birds find it necessary to bore deep; but when there is water on the surface of the sand, their prey is only just covered, hence the necessity for the birds boring deep is obviated. The late Sir W. Jardine wrote regarding this Godwit: 'The merse at Skinburness and banks of the Wampoole on the Solway are localities where we have never missed parties of them in the end of August and in September.' Mr. C. M. Adamson likewise shot Godwits in these localities—in the 'forties'—concerning which experiences he says: 'I did not observe them there in such flocks as come to the Northumberland coast at this season.' *Perhaps* not, *or* perhaps the number of Godwits varies (as I believe it to do) in different years. Mr. Nicol, when engaged in trawling, has observed flocks of newly-arrived Godwits, very wild, as early as the middle of July, and some of these were in breeding plumage. He has observed others which spent the summer on our coast without assuming a single red feather, and these were birds of the previous year. This Godwit chiefly associates with its own kind, as any one may ascertain by walking over the sands of the Wampool and Waver, or visiting the mussel-beds opposite Beckfoot in the month of September. They feed to some extent in the larger creeks, but prefer on the whole to run hither and thither over the sands, scattered in twos and threes, daintily probing

the surface for the shell-fish and 'sand-hoppers' on which they subsist. When the tide flows, and the Godwits have to take wing, they rise together, or one after another, with the cry 'kewit,' from which the name Godwit is perhaps derived. Mr. Harting has described their cry as 'lou-ey, lou-ey.'¹ This rendering fails to express to my ears any resemblance to the call of this bird. At all events it is a shrill cry, and quite distinct from that of any other marsh bird. Should you want to see a pretty picture, find a party of Godwits—five or six will be enough—standing on one leg, stilt fashion, at the edge of the flowing tide, accompanied perhaps by two or three Dunlins. If the birds are lazily disposed, you may see them sidling in on one leg without taking the trouble to let down the other, occasionally vociferating their shrill whistle.

These Godwits are rather partial to the company of Oystercatchers. An odd bird of each species may often be seen feeding together in the soft sand. The Oystercatchers feed chiefly on the mussel scars, and, when the former birds have flocked to a favourite spot, a stray Godwit frequently chooses to fly up and alight among the noisy Sea-pies, a light-coloured object as viewed against the background of the mussel scar. Allusion has been made incidentally to these Godwits journeying to the Solway from the north-east. It seems likely that they continue their journey westward to the estuaries of the north of Ireland. They are not often noticed in *crossing country*, simply because they fly very high and rarely alight. But stragglers have been known to alight on passage upon their fly-line, just as Ruffs are sometimes shot in August and September on the moors near Alston. For instance, the Earl of Carlisle possesses a specimen of the Bar-tailed Godwit which Captain Johnson shot upon one of his moors near Brampton. Although this Godwit is most notably an autumn visitant to the English Solway, large numbers generally winter with us, but these are chiefly adults which arrive in full winter dress late in the year. In December 1889 Mr. Nicol shot twenty-five old birds up to the 26th of the month. Their movements

¹ I mention this, because it is accepted as accurate in the fourth edition of Yarrell.

in winter are more irregular than in settled weather, frost and thaw, as well as changes in the tides, inducing the birds to shift their quarters in unexpected ways. Speaking broadly, this Godwit is a common, if local, bird on our Solway from August until March. Some non-breeding birds often spend the summer with us. The reader will observe that my remarks on this Godwit have hitherto related almost exclusively to the northern coast of Lakeland. It is so, and for this reason, that the Godwit is not an equally abundant bird on our western and southern estuaries. It visits Morecambe Bay only in very moderate numbers, a fact well known to Dr. Gough, who recorded that Mr. H. Arnold had shot two Bar-tailed Godwits out of a party of three on the shore between Arnside and Milnthorpe, in the *Westmorland Gazette* of October 10, 1874. Williams of Barrow showed me some birds of the year, shot in Walney Channel, where he considered them to be seldom obtained. Mr. Durnford also recorded the species from Walney. It does not appear to visit the Ravenglass estuary with any frequency.

BLACK-TAILED GODWIT.

Limosa belgica (Gmel.).

The Black-tailed Godwit is at all seasons a rare bird on the western coasts of Britain. I have entirely failed to trace its presence in Morecambe Bay or upon any other part of our coast except the Solway Firth, which is occasionally visited by stragglers—usually young birds. T. C. Heysham recorded the occurrence of an immature specimen on Rockliffe marsh in 1832, and received another local example from his fellow-townsmen, the late Mr. T. Reeves, with a note, only dated 'Saturday night.' A few more specimens, but only very few, were killed between 1832 and 1884, when we obtained two single birds, shot at Bowness and on Skinburness marsh on September 6 and October 24. No more were seen in 1885 or 1886, but in 1887 Mr. Nicol killed a single bird near Silloth on Sept. 27. On the 25th of August 1888 the same excellent observer saw two Black-tailed Godwits on a scar near Skinburness. A small

flight of these birds arrived early in September 1889; I long watched them feeding on the mud near Port Carlisle on Sept. 3. Ten days later a man named Storey killed four of these Godwits at a shot on the Wampool. Mr. Nicol killed another on the 16th of the month. Thus it will be seen that in a period of five years, 1884-89, at least ten young birds were seen and eight killed; but none were obtained in the years 1881, 1882, 1883, 1890, so that the total for nine years is identical with that for five years. In winter the Black-tailed Godwit is a rare bird on any part of the British coast. I picked a fine example out of a bunch of Bar-tailed Godwits shot near Bowness, January 1st, 1889. The species has been obtained also in *summer* dress upon our salt marshes. Bailey, a Carlisle bird-stuffer, now deceased, once possessed two red Black-tailed Godwits; another, in Mr. Doeg's collection, was shot near Burgh in May 1876. On the 24th of July 1890 Mr. A. Wilson came across two full-dressed adult Black-tailed Godwits on Skinburness marsh. He shot one, which I have identified. He further assured me that its companion was precisely similar. Probably those birds were resting on autumnal migration. This Godwit is a comparatively early breeding bird on the Continent; Mr. Wilson's birds may, therefore, have reared their young before starting on their journey westward. The bird obtained had not commenced to moult, but wore the rich livery of the season of love.

COMMON CURLEW.

Numenius arquata (L.).

The Curlew nests on the mosses in the neighbourhood of Morecambe Bay, in the Rusland valley, on the high moors around Tebay, on the fells above Appleby, on the mosses of the Solway, and the fells of Caldbeck and the Lake Mountains, so that it is widely distributed inland during the summer-time. The birds arrive upon the moors where they breed towards the end of March, and begin to lay about a month later. The clutches are generally full by the end of the first week of May; in June you find the grey-legged, short-billed, downy Curlews

skulking in the heather, while the parents vociferate their loud distress, flying away from their young. They more often nest at the side of a moss than in the centre, but adhere tenaciously to their breeding-grounds. Some odd pairs nest on rough pasture lands, preserving the traditions of the race of Curlews which were wont to nestle on the same spot when the now enclosed meadow formed part of an extensive moorland. The Curlew sometimes nests upon the salt marshes; at least a pair nested on Rockliffe marsh in 1889 and 1890, though their eggs were, unfortunately, taken in both years. It is fair to add that *this* is the only instance of the kind known to me.

When the young have feathered they still frequent the moors until strong on the wing, and then seek the estuaries. There is probably no part of our coast where you will not see them occasionally in twos and threes, but they assemble in considerable numbers where food is plentiful. Their wariness renders it difficult to shoot them, except when they are fighting from one part of the marsh to another. They generally calculate their distance pretty accurately, but sometimes seem to trust to speed rather than to distance, and suffer accordingly. They are more plentiful than most birds on the *upper* marshes of the Solway, especially upon the Esk. When the tide has nearly ebbcd, numbers of Curlews can be seen any September day feeding on the sandbanks and scars near Floriston, from five or six up to forty in a party. It is generally on a dark, stormy night in 'the fall' that we listen to the piercing whistle of Curlews fighting over the border city on their journey to the western estuaries; but there is no time and no place in Lakeland at which you may not suddenly hear the familiar cry and spy a Curlew passing over, mounted high in the air, to revisit some favourite pool or sandbank. Mr. Nicol, who has had great experience of wild-fowling, tells me that no bird preserves its condition so well in severe weather as the Curlew. This should probably be explained by the depth to which the Curlew is enabled to probe the mud or sand by means of its long mandibles. These birds often remove the shrimps used by our fishermen as baits for codling on the mussel scars. Mr. Nicol one day found a Curlew which had got hooked and was held a firm prisoner.

WHIMBREL.

Numenius phaeopus (L.).

The Whimbrel visits Morecambe Bay and the more open portions of the Solway in considerable numbers from the end of April until May is well advanced, while odd birds prolong their stay with us far into the month of June, frequenting the edge of the estuaries. The greater number of those which visit us in spring obtain a large proportion of their food on rough pasture land. Immature birds occur in August and September, but only in small numbers, even in the usual haunts of this species. Their visits to the upper salt marshes, such as Rockcliffe, are highly irregular. Mr. A. Smith assured me that a Whimbrel which he shot on September 23, 1889, out of a party of three, was the first that he had killed on Rockcliffe marsh for a good many years. I have never met with a Whimbrel in *winter*, except one killed near Silloth in November 1883. Dr. Gough's private notes record that two Whimbrel were shot at Arnside in the month of 'March,' which seems early. In the interior of Lakeland the Whimbrel is known only as a cross-country migrant. On the 11th of May 1890 we heard some Whimbrel passing over Carlisle about 11.27 P.M., calling loudly. The night was dark and rainy. The Whimbrel appeared to be migrating in a north-easterly direction.

Order GAVIÆ.

Fam. LARIDÆ.
Sub-fam. STERNINÆ.

BLACK TERN.

Hydrochelidon nigra (L.).

The earliest note relating to this species that I have come across is a record that, during the autumn of 1835, two or three young Black Terns were observed frequenting the Eden, and that one of the number was killed a little below Eden Bridge, Carlisle, on the 12th of September.¹ An unpublished note of T. C. Heysham, dated August 19, 1848, states: 'Taylor of

¹ Loudon, *Mag. Nat. Hist.*, vol. ix. 1836.

Heads Wood informed me this day that a pair of adult Black Tern was shot on Talkin Tarn the first week in June 1848. The eggs in the female were large, and it is possible they might have bred there.' Thomas Armstrong recorded a few years later that he had taken a clutch of the eggs of this species on Solway Flow in 1855.¹ This is all the evidence for supposing that this marsh Tern has *nested* in the Lake district, though a few adults appear in the neighbourhood of the English Solway. They have been killed repeatedly in May and June upon the Eden, and in one or two instances upon the Esk also. In 1888, for example, seven Black Terns were observed upon the lower reaches of the Eden by Mr. J. N. Robinson, between May 7th and May the 10th, on which latter day he was an unwilling witness of the slaughter of three of the party, shot by a gunner from the opposite side of the river. Mr. H. Miller informed Mr. Mitchell that he had seen this Tern flying about Morecambe Bay up to the end of May. The only bird that I have seen killed on Morecambe Bay was immature. There can be no doubt that the Black Tern visits us pretty frequently in autumn, as in 1890, when Mr. Nicol shot one hawking flies over Skinburness marsh on September 24, a second was shot on West Newton marsh on October 2d by a man named Storey (who shot a young Black Tern in September 1891), while a third was brought to George Dawson by some local gunner. Near Allonby, Mr. R. Mann observed an adult Black Tern in 1885, as early as April 27th, while two old birds were observed on Rockliffe marsh as late as the 20th of October, in 1884. The chief period, however, of the occurrence of the Black Tern in the Lake district extends from the second week of May until the middle of June, at which season the species is more often observed with us than in autumn. It appears to visit the Solway Firth on migration almost every year, and though it has occurred all along our sea-coast from Morecambe to Esk, it may fairly be considered one of the rarer birds of Lakeland. I have at present no notes of its occurrence in Westmorland.

¹ *Naturalist*, vol. vii. p. 251.

SANDWICH TERN.

Sterna cantiaca, Gmel.

Sir W. Jardine knew the Sandwich Tern as a visitant to the Solway Firth (1840), but was not acquainted with any breeding stations, though an impression exists among some of our oldest naturalists that this Tern in their earliest experience sometimes nested both on Rockliffe marsh and Solway Flow. Whether this impression was rightly founded or not, the Sandwich Tern in recent years has been entirely absent from the estuary waters of the Esk and Eden, and though examples have been seen on the coast north of Whitehaven, the species is restricted in the breeding season to Ravenglass and Walney Island. The best-known colony in former days, and even latterly, has been that which existed at the north end of Walney, among the Black-headed Gulls, estimated in 1880 to consist of nearly forty pairs of Sandwich Terns.¹ This colony was broken up by repeated robberies, and the birds nested there for the last time in 1889. But in 1879 Mr. W. A. Durnford noticed that three pairs nested for the first time at the south end of the island, and, though we could not find any Sandwich Terns on the island in 1891, yet I am assured by Mr. Heywood Thompson that he found about half-a-dozen pairs nesting on the south side of the island in 1890. But the Ravenglass contingent, which has nested among the sand-hills on the north side of the estuary of the Esk, Mite, and Irt for some years, established itself within the memory of Farren the fisherman, a keen observer, who remembers the founders of the colony, consisting originally of about ten pairs. This colony, which I have known intimately for some years, is on the increase, and has possibly embodied in its ranks the birds that have been accustomed to breed at the north end of Walney. In 1888 Farren told us, on their ground, that fifteen pairs were then nesting. In 1889 Mr. F. P. Johnson examined four types of eggs, and considered that they belonged to twenty-one pairs. On the 12th of May 1891 Mr. F. B. Whitlock

¹ *Field*, June 19, 1880.

visited this colony, at my suggestion, and counted thirty-four nests of the Sandwich Tern, which were 'apparently just commencing to lay.' Later on Mr. H. E. Rawson visited Ravenglass, and counted no fewer than seventy-one nests. It is conjectured that the birds which formerly bred on Walney, but have now deserted that island, may probably have joined the ranks of those which breed at Ravenglass, whence this unusual augmentation of their numbers. Whether the birds will ever return to Walney in our time is problematical, but as long ago as 1843 the species bred there abundantly, since James Cooper writes to T. C. Heysham on August 12, 1843: 'It was rather strange that you saw so few Sandwich Terns, for Mr. Adamson says they many [*sic*], not upon Foulney but on Walney Island, where they called them Cat Swallows, but he also states that Foulney was the chief place for the other four kinds, and that the Roseate was quite plentiful.' This tern arrives early on its breeding-grounds. In 1890 a single pair made their appearance at Ravenglass on the 29th of March, while in 1884 the birds were not noticed until the 23d of April, so that there is considerable variation in the movements of different years. But they always breed early, scratching a slight depression in the sand, laying during May, and hatching a few of the young ones on the last days of the month. The larger proportion of nestlings hatch in the middle of June; fresh eggs and nearly feathered young can both be taken at the end of June. The eggs vary in type, and the birds do not all nest in the same corner of the sand-hills; in 1890 they bred at Ravenglass in three separate divisions. The young, on the other hand, do not vary at all from their fellows in the colour of their first downy covering, but they are cleverer at concealing themselves among the sand-bents than the other species of Tern. The Sandwich Terns leave us in August, the young birds then wearing the prettily variegated dress of immaturity. During the few months which this Tern spends upon our coast its chief food undoubtedly consists of small fry and sand-eels, as may be verified by any one who carefully studies the birds as they fly over their nests, often carrying small fish. It also diets on small *shell-fish*. A female bird was killed by some mishap in May 1887; its

stomach proved to be full of the comminuted remains of a bivalve shell, though no trace could be discovered either of fish bones or fish scales.

ROSEATE TERN.

Sterna dougalli, Mont.

The Roseate Tern was found breeding on the island of Foulney in 1840. The late Mr. Hancock informed Mr. Mitchell that in July of that year it appeared to be about equally represented with the Common Tern. Then, as now, the island was much disturbed by fishermen, and the Terns' eggs had been repeatedly robbed, so that the birds had had to lay two and three clutches of eggs. Six eggs that he found were just hatching, and one of the number hatched while he was watching the old bird. This statement is independently corroborated by Mr. Adamson's experience, as evidenced by Cooper's letter of 1843, quoted under Sandwich Tern at p. 411.

Yarrell stated, in the first three editions of *British Birds*, that the Roseate Tern probably bred 'on some of the low flat islands in the Solway Firth,' and though no grounds for his statement have ever been produced, a single specimen of this Tern was undoubtedly secured on the upper waters of the Solway in 1834. Writing to Dr. Marshall of Belfast in October of that year T. C. Heysham observes: 'Neither did I see a good specimen of the Roseate Tern in any public or private colln. I had an opportunity of examining. One was accidentally shot in this neighbourhood by a countryman in the month of August, the first instance, to my knowledge, of its occurrence in this county, although I had looked for it for the last few years. The specimen alluded to had evidently been migrating southwards.' Heysham subsequently recorded its capture in the following words: 'A fine male of this beautiful Tern, beyond all doubt the most elegant of the British Sternidæ, was accidentally shot near Burgh marsh point on the 26th of July [1834]. For the last five years we have diligently searched after this bird in this quarter without success, and we have little or no doubt that the above was an accidental straggler on

its passage to the south.' No specimen of the Roseate Tern has been *obtained* on the Cumberland coast since 1834, in which connection it may be well to explain that at that time this Tern nested at various points, as, for example, on the coast of Northumberland, or, again, on the east and west sides of the Irish Channel, near Belfast, and, as already remarked, at Foulney. Dr. Marshall, of Belfast, writes to Heysham from Edinburgh, November 9, 1831: 'I shall endeavour to procure you the old, eggs, and young of the Arctic and Roseate Terns, which breed on an island near Belfast, and where I have frequently visited them. The egg I now send I believe to be that of the Roseate Tern, as both it and the Arctic breed on the island, and the only distinction I could see between their eggs was the greater darkness of the colours in what I believe to be the Roseate.' Dr. Marshall writes again in June 1833: 'I went down one day last month to the Copeland Island for the purpose of procuring a few Terns and their eggs, but I was rather unfortunate, for I went too early for procuring the latter, and only brought home some Arctic Terns. I did not get a Roseate Tern, and my companion and I remarked how rare they appeared to what we had witnessed a few years ago. I was told by several persons on the island that scarcely a week elapses in which a party do not pay them a visit for the purpose of shooting Terns. Should the system be persevered in for a year or two longer, I very much fear that the birds will be totally driven away.' In February of the following year a single specimen of the Roseate Tern was forwarded to Heysham by Dr. Marshall, with an expression of regret that he had no more specimens which he could then forward.

Mr. Hancock was collecting enthusiastically in 1834, and writes to Heysham on the 5th of March that year: 'The Roseate Tern still breeds on Coquet and the Fernes, but is very scarce and difficult to procure. When I visited those islands a few years back I could not get either the bird or the egg. I thought it was probable they might breed more plentifully upon your part of the coast, or should not have troubled you with its name. This spring I shall use my best endeavours to procure specimens, and, should I be fortunate, shall be glad to supply

you.' Hancock writes again on July 23rd, 1835: 'You will think I have forgotten you altogether, but the cause of my delay you will conceive when I tell you I had to depend entirely upon others for the birds you mentioned, as I could not get down to the sea myself to shoot them. I have been very unfortunate, for I have only got one specimen of the Sandwich Tern and two of the Roseate, which you will find in the accompanying box. I have taken their skins off, as I was afraid they would be in a putrid state before they reached you, as they had been killed two days previous to their coming into my possession; they are not so clean as I could wish. You will observe the top of the head of the Sandwich Tern is spotted with white: at this season of the year there are none to be had with black heads, for as soon as they are done breeding the black feathers seem to drop out, and they are replaced by white ones; in all probability, in the winter they have an entirely white head, but I have not had an opportunity of ascertaining this, as they are only summer visitors. I hope in a few days to send fresh specimens, but the Roseate I will not promise, as they are much rarer than any of the others that breed on our coast. These are the first I have had.'

The Roseate Tern has long deserted Foulney; it is very doubtful indeed if any Terns even *attempt* to lay on that island, though I have, of course, seen both the Lesser and the Common Terns flying over. In 1865 Mr. Howard Saunders observed a single pair on Walney, where Mr. Harting had found the species established in May 1864. Williams, the Barrow blacksmith, received two Roseate Terns from Biggar in 1874.

COMMON TERN.

Sterna fluviatilis, Naum.

A few Common Terns may be seen fishing at many points of our coast all through the summer months, but the birds have only three considerable breeding stations. The best known of the number is also the largest, viz., the colony established upon Walney Island. At the north end of the island the birds nestle on rough turf, but at the south end of Walney almost all

the nests are placed among the sand-hills. There are exceptions to this practice. For example, in 1891 we found one nest of this species on the open beach, a hollow in the pebbles, lined with rabbit bones, containing two eggs; a second nest was also placed on the beach above high tide mark, lined with small sticks, and containing a single egg. But we saw most nests in and among the bents of the tall sand-hills, carefully watched by hundreds of parent birds, which hover with shrill cries over the heads of an intruder. Sometimes a bolder bird than the rest returns to its egg within full view, but the majority circle overhead, or dart angrily downwards, until their solicitude has been lulled to rest. As these birds poise themselves gracefully aloft in a flood of sunshine, their breasts often appear to be suffused with delicate pink colour—an optical delusion, however, soon dispelled. A much smaller number nest at the north end, lining some slight hollow in the turf with a few stems of grass, while even the newly-hatched nestlings, with instinctive dread of danger, crouch in the grass almost motionless save for respiration. The little fellows grow so rapidly that in a few hours, and before the chipper has fallen from the tip of the bill, you wonder how they were ever packed away within a small and round egg-case. I have never actually seen the old birds feed the young with small fish. They prefer to wait, even though impatiently, until peace is regained, when the ground will be dotted in a very few moments with the white bodies of the breeding Terns. The habits of the Terns which breed at Ravenglass do not seem to differ from the colony at the south end of Walney, nesting also among extensive sand-hills. Upon Rockliffe marsh the Terns have no choice but to nest upon the rough turf of the saltings. Some idea of the perseverance with which this species adheres to traditional breeding-grounds, even where most persecuted, may be gathered from the fact that the Rockliffe colony bred on the marsh as regularly fifty or sixty years ago as at the present time. In corroboration of this, I quote an unpublished note of Mr. T. C. Heysham, written in 1834, though undated: 'The Common Tern (*Sterna hirundo*) annually breeds near the western extremity of Rockliffe salt marsh, at no great distance from the juncture of the

river Eden and Esk in Solway Firth. This is the only locality they resort to in this district to my knowledge, with the exception of a few pairs which, I believe, breed every year upon Solway Flow. In some seasons they commence to lay their eggs about the latter end of May, and fresh ones may occasionally be obtained until the beginning of July; but the best time to procure them before incubation commences is the first week in June. They usually make little or no nest. Their eggs, which vary from two to four in number, are generally placed either on the sand or the green sward of the marsh: they are exceedingly variable, not only with respect to colour and marking, but also to size and shape.' I have never seen *four* eggs in a nest myself, but entertain no doubt that, in the few instances of the kind which have been reported, two Terns had laid their eggs together. After the first eggs have been taken on Rockliffe marsh, as frequently happens, the Terns generally shift their quarters before they lay again, and should the cattle pastured on the marsh occupy their ground, they attack them vehemently, to the chagrin of the marsh 'herds.' Their intolerance of cattle is exactly analogous to the resentment with which the Common Terns pursue the young of the Black-headed Gull on Walney Island. Their attacks are first directed against the helpless young, but are specially vicious when the young Black-headed Gulls first begin to fly. If a luckless youngster happens to enter the ternery, the Terns swoop at him savagely, and frequently with fatal results. In one instance I saw about a score of young Gulls, unable to fly, cross the beach and make for the bare sands, hoping thus to elude their persecutors. But their flight was vain, for the Terns followed their retreating enemy, one Tern after another in rapid succession darting down to disable, if possible, their inoffensive victims, which never attempted to show fight.

Most persons probably consider Terns to be birds of unwearied flight, but, as already remarked, they like to perch on the salt marsh, while not unfrequently they rest on open sands. On the 30th of May this year (1891) I saw between twenty and thirty of these Terns congregating on the edge of the wide expanse of sand which stretches away from Skinburness far into

the Solway Firth. On our near approach the party broke up and dispersed, but not before they had swooped noisily round us. Earlier in the afternoon we had watched a pair busily employed in fishing off the Grune Point.

These birds are conspicuous also if, in early autumn, you take a trip in a boat trawling in the waters of the Solway. Sailing up and down the main channel on the 14th of August 1890 we enjoyed a quiet study of the sea-birds' life, as the Black-headed Gulls (adults, which had already lost the dark hood) hovered over the waves in search of drifting prey, while many young Lesser Black-backs beat along the sea-shore. The prettiest sight was afforded by the Common Terns, following up the ebbing tide, at one time darting on to the surface of the water, at another hovering airily over the retreating shallows. But this Tern is more numerous in the middle of September, when migration has set in, than earlier in the season. On the 20th of September 1889 Mr. H. Leavers saw many flocks of Terns in the lower waters of the Solway, including one flock of more than half a hundred birds. Four shot for identification were Common Terns. A percentage of birds were young, but adults, as is usual, largely predominated. Apropos of the Solway, it may be repeated that though no Common Terns at present nest in a colony upon any part of our sea-beach, in Sir W. Jardine's day 'a few pairs bred on the shingle above Skinburness.'

ARCTIC TERN.

Sterna macrura, Naum.

The Arctic Tern is chiefly a spring and autumn visitant to our open sea-board, but has always nested on Walney Island, where Mr. Howard Saunders in 1865 estimated its numbers to be equal to those of the Common Tern. Ten years afterwards Mr. H. Durnford considered the Common Tern to predominate, and in the season of 1891 the Arctic Terns were certainly in a great minority, though we detected undoubted Arctic Terns hovering over us. Mr. Archibald had tried to snare some specimens at the north end the previous year, and, though he

was not quite successful, his impression that all the birds at the north end were Common Terns was independently corroborated by my experience in 1891. The only adult Tern that we found dead was a Common Tern, and the colony at the south end likewise consists principally of Common Terns, but the Arctic Terns are present undoubtedly, and seem to nest upon the outside of the main colony of Common Terns. Birds of this genus are notoriously fickle, and the Arctic Tern is especially changeable in its movements, so that it may be numerous in one season and hardly represented in the next. I have never identified the Arctic Tern among the birds that breed at Ravenglass, though in 1885 my search for that species was assisted by Mr. H. Saunders, who has long been recognised as the highest living authority upon the family. The Arctic Tern is absent from the Solway Firth except during the seasons of migration.

LITTLE TERN.

Sterna minuta, L.

The Lesser Tern arrives at its breeding-grounds about the beginning of May, but only begins to lay towards the close of the month. On the 2d of July in 1891 I examined eighteen nests of the Lesser Tern on the beach at Walney Island, upon which the following notes were made. The first nest was a slight hollow in coarse pebbles, lined with fine pebbles, containing an egg and a chick. The nest of another pair was lined with a few dry stems of grass, and contained one egg; another egg was a little distance from the nest to which it apparently belonged. A third nest in the shingle contained two eggs. A fourth nest was a shallow depression in the sand and contained three eggs. The next four nests all contained two eggs apiece, and were only a few yards from one another. The ninth and tenth nests contained two eggs each, but the next two nests held only one apiece. The thirteenth and fourteenth nests were placed in sand near large stones, and held two eggs each. The next held a chipped egg and a newly hatched chick. The sixteenth was a nest of three eggs. The seventeenth nest con-

tained a single young one and an incubated egg. The last was a nest of two eggs. Thus we see that, of eighteen pairs of Lesser Terns, fourteen had incubated clutches of two eggs, while two pairs had only single eggs, and two pairs had clutches of three eggs. Leaving out of consideration clutches of single eggs, only two clutches in sixteen contained three eggs; so that about seven-eighths of the birds lay clutches of two eggs, and one-eighth of the number lay three eggs. It may be objected that it is hardly fair to form a conclusion from the birds of one colony; but my experience of the Ravenglass birds in past seasons is precisely similar. If we suppose that all the eggs would be hatched and all the young attain maturity, it is obvious that these birds should increase rapidly; but owing to various circumstances they only just maintain their footing in these localities. The Ravenglass estuary affords rather more shelter than the shores of Walney; in both cases the lords of the manor employ keepers to secure these and other breeding sea-birds from molestation. A severe epidemic killed many of the young Lesser Terns at Ravenglass one season; their eggs, being laid upon the open beach, are exposed to many enemies. Only a few weeks ago I watched with pleasurable interest the courageous attacks which a pair of these diminutive Terns inflicted upon a Rook, which seemed to be bent on mischief; when the robber at last sailed off, he was chased by a pair of Oystercatchers, which worked in concert, first one and then the other striking at the Rook from above. The mention of this recalls the fact that Dr. Heysham catalogues the Lesser Tern as *breeding* in Cumberland, though without a hint as to any locality. T. C. Heysham informed a friend in 1829 that the Lesser Tern was a scarce visitant to the Solway Firth, but in 1832 birds of this species were sent to him from Dub Mill near Allonby, and here a couple of pairs reared their young in safety in 1891. A similar instance of the instinct, which induces this species to resort occasionally to ancient breeding-grounds, is suggested by the fact that in 1890 a pair nested near Skinburness, where there was a colony in Sir W. Jardine's time; this had been broken up only in 1882 by some strangers, who wantonly killed the breeding-birds. During autumn the

numbers of the Lesser Tern that breed upon our coast are to some extent recruited by birds from other districts, and immature birds occur on the higher salt marshes, from which at other times they are conspicuously absent. I have never, however, observed the Lesser Tern after September. It comes and departs earlier than the Common Tern.

Order *GAVIÆ*.

Sub-fam. *LARINÆ*.

LITTLE GULL.

Larus minutus, Pall.

The Little Gull is a much rarer bird on the coast of the N.W. of England than on our southern and eastern sea-boards. It occurs however as an occasional straggler to the waters of Morecambe Bay and the Solway Firth. Dr. Gough mentions in his private notes that a specimen was found dead in a field at Low Meathop, on the 3d of February 1870. In the neighbourhood of the Solway Firth this bird appears to have been taken in all plumages. Thus the collection of Messrs. Mann includes two specimens, both in the pretty dress worn by the young in their first winter. The most recently obtained of these was killed near Allonby on the 6th of February 1889. The fellow-bird was shot near Silloth some few years before. Mr. Richard Mann has seen one or two other specimens in his neighbourhood, as, for example, a bird observed in company with some Black-headed Gulls, on March 30th, 1889. Mr. W. Duckworth observed two Little Gulls in company with a flock of Black-headed Gulls near Ulverston in the early spring of 1889. Mr. J. B. Hodgkinson purchased from the late Sam Watson an old bird in full winter dress, shot near Bowness on Solway. George Dawson has an adult in summer plumage, killed in the last-named district in the summer of 1886. I have never seen the Little Gull on this coast myself, but Messrs. Law and Nicol believe that they have seen several Little Gulls in different autumns while engaged in fishing.

BLACK-HEADED GULL.

Larus ridibundus, L.

In no part of Britain is the Black-headed Gull more numerous or more firmly established than upon the coasts and inland waters of the Lake District. Its breeding-places, it is true, are generally a good many miles apart, but in the autumn and winter months the species becomes very generally distributed. If you ramble along the banks of the Eden on a winter morning shortly before dawn, you will be sure to see some of these birds working up the swollen river, looking like spectral fowl in the grey light of breaking day; you hear no cry, for they flit silently past, each one following rapidly in the wake of its immediate predecessor, all bent upon reaching their feeding-grounds higher up the river. All the winter through, many of these Gulls may be seen upon our estuaries from Morecambe Bay northwards; nor are such localities entirely forsaken at any time. Not only do the breeding-birds visit the coast at frequent intervals, but the surplus population, consisting of immature individuals principally, spends all the summer on the sands. Consequently, if you visit the beach between Silloth and Maryport at the end of May, you may miss the big troops of these Gulls that one is accustomed to see in winter; but the species will nevertheless be represented by little parties of unpaired birds. Gracefully do they pose in the shallows of the fast-ebbing tide, a single leg generally drawn up close to the white feathers of the breast, apparently absorbed in contemplating the mist-wrapped outline of the hills across the Solway Firth.

This remark applies with equal accuracy to the Lancashire sands, upon which this Gull is known as the 'Cockle Maw.' A few stragglers may at all times be observed upon the larger sheets of water in the interior of Lakeland. The gregarious character of this Gull would facilitate the enumeration of its breeding-stations, were it not that the birds resent human interference, and, consequently, change their breeding-grounds occasionally, shifting to quieter spots than those in which they have been systematically robbed. The most southern of our

breeding colonies has long been known as established among the sandhills, or upon the rough meadows, of Walney Island. I found that a few pairs had brought out their young at the north end of the island in 1891, at which time a larger number held possession of some of the sandy hollows at the south end of Walney, in spite of the havoc caused to their progeny by the attacks of their neighbours in the Ternery. The fostering care bestowed upon the ancient gullery at Ravenglass has resulted in the consolidation of a colony which should cheer the heart of the Lord of the Manor. In Westmorland there is a nice colony at Sunbiggin Tarn (where in 1891 I found young birds crouching in the sedge), and a second on Clibburn Moss. At Greystoke there is a colony, the members of which are often called 'Black-headed Crows' in the neighbourhood. An offshoot of this colony exists at Newton Reigny.

I have never known any of these birds to nest near Alston, but there are colonies on Denton Fell and Bolton Fell. A few birds likewise breed on a small moss near Castlesteads. Solway Flow has long been a great resort of this small Gull, but the numbers that used to nest there have become much reduced in consequence of their nests being so systematically harried that the poor birds could get no peace. Great numbers always breed on Bowness moss, building in the heather. The islands on Salta moss are utilised by a colony of Black-headed Gulls, which are locally known as 'Chir-maws.' Of all our gulleries, no one is inferior in interest to that which occupies a few acres of water, half choked with grass and bog-bean, at Moorthwaite, near Wigton. As recently as 1889, I considered this to be numerically the strongest gullery in north-west England, a fact that is remarkable because it has no pedigree. It was only founded in 1878 by four pairs of birds. In 1879 thirty pairs of Gulls nested there. Ten years later I calculated that a thousand pairs bred there. Certainly it was an extraordinary sight to witness. Many hundreds could at any time be seen hovering in a white cloud over their nests. The surface of the tarn stretched out before us like a white sheet, so closely were the resting birds massed together; several hundreds formed a white patch on the dark surface of a neighbouring field; many more were constantly arriving with food for their young, gathered for miles around.

Besides the well-recognised gulleries, some other stations, which seem equal in scenic attractiveness to the chief nurseries, are utilised irregularly. Thus, these birds in dry seasons build their nests on the sedge at Monkhill Lough; occasionally they nest at Crofton Hall, at Devoke Water, or at Seathwaite Tarn. The open salt marsh seems an unlikely site for a colony; yet in 1889 a detachment of the Solway Flow birds, resenting the loss of their nests, transferred themselves to the point of Rockliffe marsh, where they built and nested. Unfortunately their efforts to rear young in this situation were frustrated by their eggs being swept away by high tides, but some birds returned to the same salt marsh in 1890 and 1891. It has, in fact, been utilised by a few pairs of this Gull at various times within the recollection of Mr. Tom Duckworth, who, in company with the late Mr. T. H. Allis, took eggs on Rockliffe marsh in the period 1859-63, and also in 1870. It will have been observed, from the foregoing remarks, that *Larus ridibundus* nests in many parts of our faunal area, and this under widely varied conditions of life, taking possession of rough ground on the sea-board, as in Walney; assembling in swarms among estuary sandhills, as at Ravenglass; sharing the grouse moors with the more legitimate tenants on the coast or among the hills, or, again, contenting itself with the more limited area of some unimportant tarn in an agricultural region, where grasslands and root crops alternate with large fields of wheat.

The nests vary in size and structure according to individual taste; some of them are scarcely larger than the nest of a Coot, others are decidedly cumbrous piles. They are constructed of bents, dry rushes, pieces of stick, and such other materials as can conveniently be gathered together. I have never seen eggs laid in March, but from the third week of April until the end of July there is always a certain supply of eggs in one or other colony. The earliest broods take wing in May, seldom before the end of the month. A large proportion of eggs are hatched in June. The Ravenglass colony breeds rather earlier than some of the others, but the constant interference to which these birds are liable renders it impossible to define the dates at which the young mature with absolute precision. The old birds

are ever apprehensive of intrusion, and the arrival of a stranger induces them to hover, with noisy outcry, overhead. A practised eye can often distinguish a female which is about to lay from the other sex, even on the wing. The wide variation in colour exhibited by a large series of eggs adds interest to the examination of any large colony, and scarcely less the contrasts of nesting sites, from masses of half-dried sedge and matted clumps of bog-bean to extensive flocs of heather, open marsh, and dry sandhills. I can hardly devote space to describing every local gullery, but a brief allusion to the general appearance of one or two of the number may be acceptable. Moorthwaite Lough, for example, lies in a sheltered hollow, hemmed in on either side by sloping meadows and hawthorn hedges. A nice strip of wood runs along a neighbouring ridge of land, and the Gulls often balance themselves on the branches of the trees. One end of the lough is open and 8 or 10 feet deep, but the greater portion is choked up with equisetum, bog-bean, and some species of grass, whilst a few rushes grow at the water edge. The bog-bean and grassy islets are whitened by the Gulls, some sitting on their nests, if it is early in the season, while their mates stand on guard close beside them. Concerned as they are by interference with their eggs, the charge of their helpless young redoubles the persistency with which they seek to put the enemy to flight. When visiting the colonies on Walney Island in 1891, I felt greatly entertained by the manoeuvres of these birds, and of one pair in particular. As I stooped to handle and caress their offspring, which were crouching in the wiry grass, one bird, apparently the male, made repeated swoops, uttering a deep cry, sounding like 'Baāaaer,' as he dashed down, whilst his mate hovered round with drooping feet and loudly menacing cries. It is curious to see the craftiness displayed by the young, not, indeed, by the very small ones, but by those which are growing strong. Although they can patter down the slopes of the sandhills or run across a shingled beach very fast indeed, they prefer to escape by hiding up. The very little chicks are content to rest quietly in their nest, which at Ravenglass is generally built on the top of a tussock of dry grass. But those feathering hide up and remain so still that it is very difficult to

avoid treading on them. The birds which are bred in the neighbourhood of water, and which swim strongly at an early age (though they do *not* like to cross a lough in the teeth of a strong wind), rarely attempt to escape capture by swimming. If danger threatens they usually run in for shelter to the bank ; there, if you search, you are sure to find the fugitives stowed snugly away in the sedge or rushes. But as the young begin to feather they skulk less, and draw together in level places among the sandhills or under lee of some island that offers a screen from the wind. The social instinct, thus early manifested, becomes even more obvious when the birds feather and can take short flights. Some youngsters are very independent, and prefer to cruise about by themselves, others follow their parents with amusing perseverance, but the greater number congregate together in parties of twenty and thirty birds, until, their pinions growing strong, they leave the nursery on their own account or accompany their parents to fresh waters in search of food.

For the first few weeks of their feathered existence the young birds are conspicuous, owing to the dark colour of the nest plumage, but when the grey mantle has been assumed, in September, the old birds and juveniles are not very dissimilar, though of course the black bar across the tail, and wing coverts mottled with brown, tell their own story. It is very unusual to see any birds of the year at a breeding colony, so unusual that I have only one note of having observed a Black-headed Gull, possessing a black bar upon the tail, associating with nesting birds, *i.e.* at Moorthwaite in 1889.

Individuals show considerable variation in the time at which the dark hood is donned. In the year 1889 I came across an example which showed no sign of assuming a black head on the 20th of May. An interesting topic, and one deserving wider attention than it appears to have received hitherto, is that of the epidemics which occasionally attack whole colonies of birds in the breeding-time. The Black-headed Gull is a typical sufferer. In certain years the percentage of deaths among the unfledged birds is so high at Ravenglass that wherever you go in the midst of the gullery you find the bodies of the birds in all

stages of putrefaction. In 1891 an alarming death-rate prevailed among the old birds at Moorthwaite;—the colony was almost decimated, and was reduced from being the leading colony in our midst to a second-rate position. That the birds died from want of food is impossible, because they were nesting at a time when, owing to the lateness of the spring, the country round was being extensively ploughed. Those that I examined were in fine plumage, but had wasted away, as though exhausted by some kind of fever, the germ of which had found favourable conditions for incubation, owing to the resident population of Gulls being grossly overcrowded. There can be no doubt that the too rapid increase of this bird is amply secured by those natural conditions which, in every season, kill off a certain number of the young which would otherwise be raised. But in dry summers many young birds die from want of worms and grubs, which form the chief food of the nestlings even on the coast-line.

In summer the old birds themselves feed largely on moths and other winged insects, as noted long ago by Nicolson and Burn, who wrote of Betham, near Witherslack: 'Within this manor also is *Helflack Tower*, now in ruins. Helflack mosses are remarkable for the ant or pismire. About the middle of August, when they take wing, a thousand sea-mews may be seen here catching these insects. The neighbours call them the pismire fleet.'¹ At other times they feed on small shells, such as they find readily on the sands. I have found numerous pellets, entirely composed of small mussels, which these birds had bolted entire and afterwards rejected. An intelligent farmer who watches over the Moorthwaite colony pointed out to me that the birds appear there to feed on grass; at any rate, they *crop* the grass on the banks of the lough. He values them highly as destroying enormous quantities of injurious insects, but finds that though they do not care for fresh-sown wheat or barley, they will feed on oats with such avidity that he has often had to sow furrows twice over. 'They shell the oats before bolting the kernel.' But they are so far from being dainty feeders that they regularly frequent localities in which they can obtain the offal discharged from bone-mills, or even

¹ *History of Cumberland and Westmorland*, vol. i. p. 225.

from less inviting sources. In the spring of the year, when their eggs are in brisk demand for the table, their food is of a wholesome character. No doubt they obtain many small Crustacea in our estuaries. I am disposed to conjecture that when severe frost induces these marine animals to leave the shallows and retire into deep water, the Gulls are almost compelled to seek the larger proportion of their food upon the higher reaches of the river; notwithstanding which, many of their number return before nightfall to roost upon the sandy margins of our estuaries, clustering together so closely that one of the punt-gunners killed thirty at a shot. Upon inquiring of his son what purpose such slaughter might fulfil, I received the naïve assurance, '*They's terrible good eating!*' That such was a common estimate of 'sey mewes' during the Caroline period may fairly be inferred from the Naworth Accounts. The birds were generally fattened artificially for the table. Of the young birds that were sent to Naworth for this purpose a proportion seems to have been of Northumbrian origin; others were supplied from the colony of Black-headed Gulls near Muncaster by 'my Lady Savell.' In 1618 we find entered the cost of accommodating these birds: 'June . . . 20. To Andrew Creak for 2 dayes making a place for gulls and hernsues, vj^d.' A 'crook for the gull house' was provided the same year at the cost of twopence. In 1622 we find an entry of August 10: 'A knife to cut the gull's meat, ij.'

COMMON GULL.

Larus canus, L.

The Common Gull frequents our coasts at all seasons, and often feeds inland. It is also a frequent visitor to our salt marshes during autumn and winter. But the birds which are usually seen off Whitehaven and elsewhere in the month of *June* have generally been immature, and the same must be said of those remarked inland. Dr. Heysham recorded this Gull as nesting in Cumberland, but, in the absence of any hint as to where it bred, we may not unjustly assume that he was mistaken; a remark which applies equally to the statement which

Mr. A. G. More received from the late Dr. Gough, that the Common Gull bred in Westmorland. It is only fair, however, to say that the late Mr. R. Gray, as early as 1871, reported that this Gull bred in the 'Scottish Solway' faunal area, a decision fully confirmed by the researches of Mr. Robert Service. The Common Gull remains with us until April, in which month a few examples always visit Monkhill Lough for a short period. In April 1890 I witnessed an entertaining attack made by a Carrion Crow upon a bird of this species. The black robber persistently pursued its quarry backwards and forwards, rising and falling, but the Gull showed great agility, and occasionally turned the tables by swooping swiftly at its adversary, which it finally left far astern. The Crow then departed, but not without making an ineffectual swoop at another immature Gull of the same species which happened to cross its line of flight. The largest number of Gulls of this species that I have observed together belonged to a flock of seventy individuals.

HERRING GULL.

Larus argentatus, Gmel.

The Herring Gull is a common bird at all seasons on our coast, particularly between Sillioth and St. Bees, which it especially affects, fishing in the waters of the Irish channel, and resting on the sands and shingled beach. It is not so common *inland* as the Lesser Black-backed Gull; nevertheless it may frequently be observed feeding in the fields during the winter months, especially after gales at sea. As a breeding bird, its chief stronghold is in the red sandstone cliffs at St. Bees, which afford many of the grassy ledges which this Gull generally chooses for the purpose of nidification. Another haunt is Foulshaw moss, in the neighbourhood of Morecambe Bay. Mr. W. A. Durnford found that the Herring Gull bred on that moss in 1879, in the proportion of one Herring Gull to ten Lesser Black-backed Gulls. In 1885 Mr. F. S. Mitchell reported to me that the Lesser Black-backed Gulls were nearly banished from Foulshaw, and that the Herring Gull had become the dominant species. In 1891 I found that the Herring Gulls of

Foulshaw had again become reduced to a very few pairs. The colony at St. Bees numbered a few hundred pairs, and no doubt supplies our coast with its resident population. It nests in May, and I observed many young squatting upon the rocks in June 1891, frequently accompanied by the old birds. All those that I have examined flying about the breeding ledges have proved to be fully mature, with the single exception of one immature but nearly full-dressed bird, detected among the number of these loudly clamouring birds disturbed from their nests on one of my inspections in 1885. Many immature birds undoubtedly feed in the fields at a short distance from the breeding station, and form an important component part of the Grey Gulls which habitually frequent this portion of our coast-line. Upon the sands of Morecambe Bay this species is less numerous than some other Laridæ, and the same applies to the upper Solway, where the Herring Gull is comparatively scarce in full dress, though you may occasionally see some fine old birds resting on broken turfs at the edge of Burgh marsh. Although the Lesser Black-backed Gull nests so commonly on the mosses near our coast, I have never seen the Herring Gull in the breeding season on any of our moors or flows, with the single exception of Foulshaw moss.

LESSER BLACK-BACKED GULL.

Larus fuscus, L.

The Lesser Black-backed Gull is at all seasons a common bird upon our coast-line, but of its five large breeding colonies no fewer than four are situated in the neighbourhood of important estuaries. When Thompson visited Windermere in July 1835 he observed a pair of adult birds on the lake. Mr. Durnford was told many years later that this species had nested on islands in this lake; but if this species ever nested in such a situation, it has not done so since 1870; a remark which applies also to Ulleswater, where Mr. H. Saunders states that a colony *once* existed upon an island. That single pairs may *occasionally* nest in such localities as those just mentioned (as a single pair does upon a rocky slope beside the Eden) is far

from unlikely ; but all our *accredited* colonies are established upon more or less extensive grouse moors. Dr. Gough remarks in his MS. notes that this Gull breeds abundantly upon Foulshaw moss, a fact already familiar to most Lancashire ornithologists. The persistency with which this colony manages to maintain its footing is the more remarkable because at one time strenuous efforts were made to induce the Gulls to shift their quarters. Many of the old birds were shot and killed, so that when Mr. Mitchell visited Foulshaw in 1885 he found that the Lesser Black-backed Gulls had nearly disappeared from their nursery. But the proprietor relaxed his orders for their destruction, with the result that in 1891 their numbers had resumed their former flourishing proportions. Another fine colony of Lesser Black-backed Gull exists on Roudsea, where I saw many eggs and young birds in the present year [1891]. There are no more colonies of this Gull in our faunal area until we reach the mosses on our northern boundary. Butterburn Flow is the only inland colony. Travelling westward, thence, we come to the gulleries established on Solway Flow and Bowness moss. The neighbouring colony upon Wedholm Flow appears to have been transferred to Bowness Flow. Many pairs nest upon Solway Flow in spite of the destruction of a large proportion of their nests, but more young are reared upon Bowness moss. The nests of this species are usually built early in May, constructed of heather and grasses ; or, as Mr. W. Duckworth has pointed out, in some instances of bog-bean. The eggs are laid from May to July, but the Lesser Black-backed Gull does not commence to breed as early as the black-headed species. Even before laying has commenced the breeding pairs swoop down menacingly in advance of intruders. Although none but full-dressed birds engage in the duties of nidification, it is usual to see one or two immature birds drifting about the skirts of the breeding-colony at Bowness. Even in nesting-time a dozen or so of old birds may be observed clustering on the sands on the opposite side of the neighbouring estuary at low water, occasionally rousing themselves to run a few paces, opening their wings and often clamouring ; at high tide the mosses they affect become white with the birds that are nesting in the

heather. The approach of a stranger is sufficient to disturb the nearest birds, and, should he cross their ground, every gull in the colony wheels noisily overhead, the birds passing backwards and forwards so rapidly that to count their numbers accurately is a difficult undertaking. Roudsea moss is a broad level, intersected by many open drains, covered closely with heather and the cross-leafed heath, tussocks of sedge and coarse grass intervening. Here, as in the other gulleries of our area, the birds nest chiefly in the *centre* of the moss. This year [1891] we found eggs and birds in all stages on the 29th of June. The nests chiefly contained two eggs, advanced in incubation, but three is not an uncommon number, and we found one clutch of two eggs to be quite fresh. Some few of the young birds were squatting in open ground, but the greater proportion, whether small or three-parts grown, hid themselves, burying their heads in heather, though the grey mottled down of the upper surface was seldom entirely concealed. The old birds are never more vehement than when their young are feathered. These last hide up with cunning craftiness in drains and under cover, but are less disposed to take to water than the young of the Great Black-backed Gull. They resist capture strenuously, and when released run away in hot haste to some fresh hiding-place. During the breeding season the old birds are indefatigable in catering for their young. The small pink bivalve (*Tellina tenuis*) is a favourite food, as attested by the numerous pellets containing the remains of this shell which I have observed on all our gulleries. On Roudsea one youngster threw up a crab and a flounder; we replaced the crab in its gullet, much to its apparent satisfaction. There and at Foulshaw they seem to feed chiefly on small crabs and the above-mentioned shell, but on Bowness and Solway Flows there can be no doubt that fish form a considerable portion of their diet. They are also fond of catching moths. At all seasons of the year a few examples of this gull frequent the inland waters of our rivers, and may be observed daily passing and repassing. In autumn the immature birds frequent the estuaries, and often rob smaller gulls. Some probably depart before winter, but at that season this Gull is plentiful all along our coast-line, even in such coarse situations

as the western side of Walney, since it is more indifferent to bad weather than the Herring Gull. A good many examples visit us at migration-time. Mr. R. Mann every year observes a few pairs of these birds passing Allonby in an easterly direction, in the spring of the year, and my own observations corroborate his, since this Gull is more frequently heard crying over Carlisle than any other of our Laridæ. To take a single example of this: on the 23d of February 1890 a great number of birds passed over Carlisle between 8 and 12 P.M. Among the various cries recognised, none were more emphatic than those of the Lesser Black-backed Gulls. There was moonlight, but heavy clouds and some mist made the night a dark one.

GREAT BLACK-BACKED GULL.

Larus marinus, L.

The Great Black-backed Gull is generally to be seen in full dress upon the sands of the Solway Firth, usually alone but sometimes in pairs; a few immature birds haunt the tidal waters of the Eden, the Esk, and Morecambe Bay. Its large size and fine appearance often induce desultory shore-shooters to compass its destruction. Though wary, it often flies away to die of gunshot wounds, or its dead body is carried out to sea by the ebbing tide. It has become much rarer since 1885, when I estimated the number of breeding pairs that frequented the Solway at fifteen; the decrease can be fully accounted for. Several have been trapped in order that their presence might lend attractiveness to garden lawns. Others have been shot or poisoned because they annoyed punt-gunners, like the Black-headed Gulls, which frequently sail up the estuaries a short distance in front of the punts, and give a warning to any flocks of ducks that they may meet with. But though this gull has never been numerous with us, and has lately decreased, it has colonies in both the south and north of our faunal area. That it bred sparingly on the fells near Rusland, a short distance from Morecambe Bay, was first ascertained by Mr. C. F. Archibald, who took eggs laid upon the open moor in 1889.

He discovered in 1890 that a single pair were nesting upon an island in a small tarn in the same neighbourhood. He swam to the nest, which contained two eggs, one of which he took. The female continued to incubate the second egg, from which a fine young bird was eventually brought off. On one occasion when Mr. Archibald was visiting the colony of Lesser Black-backed Gulls at Roudsea, the clamour of these birds induced their larger relatives to descend from the hill and unite their cries to the prevailing babel.

Dr. Stanley stated in 1829 that some Great Black-backed Gulls nested on the margin of Devoke Water.¹ There can be no doubt that the birds of this colony, locally recognised as 'Devoke Water Maws,' bred in that district for a known period of half a century. Some fifteen years subsequent to Dr. Stanley's note, it occurred to T. C. Heysham that he might obtain eggs from this quarter. He applied for them to Mr. Isaac Hodgson of Corney, who wrote to him under date of May 8, 1844: 'I went yesterday to Devoke Lake, and found eight nests, each having three eggs. I brought away six, but unfortunately broke three of them in returning home. I found not the slightest difference in colour except in one egg, which was nearly white, and which I have sent.' Heysham applied again for eggs, and Mr. Hodgson wrote to him under date of June 26, 1845: 'When I sent you the eggs last year I got them on the 14th of May; the young birds are now nearly half grown.' On the 29th of April 1846 Mr. Hodgson reported: 'In obedience to your request I went yesterday to Devoke Lake, and am sorry to say that in some degree I shall disappoint you. I found only eight eggs on the island, all of which I have sent you. The varieties in colour, therefore, was not at my disposal. Indeed they seldom vary, excepting occasionally one more lightly dotted with the dark spots. Mr. Stanley had been up two days previously, and had taken away ten, and the number of pairs will not be more than fourteen.' This colony appears to have become extinct towards the end of the seventies. A farmer, who had known it intimately, volunteered the information that the breeding birds departed 'strangely and suddenly'

¹ *Magazine of Nat. Hist.* 1829, p. 276.

from their time-honoured stronghold. The Great Black-backed Gull has now apparently ceased to nest upon Wedholm Flow. The once flourishing colony upon a neighbouring moss has been reduced to two or three pairs, all of which were robbed during the present year. It is a matter for some regret that this fine species has been so nearly exterminated. These last are the survivors of a colony of a dozen pairs, which had for some seasons repaired in spring to nest upon some large tussocks of rough grass, which they strictly reserved for their own use. Upon Wedholm Flow the eggs were sometimes laid upon the bare ground, but here they are deposited in large nests, consisting of dry stems and heather, piled together in a considerable mass. Upon one of our visits—on July 19, 1890—my party caught three of the young birds, each crouching under shelter of the heather and rough grass quite by itself. Two of the number apparently belonged to the same nest, a difference in size being accounted for by the fact that even in early life the male slightly exceeds the other sex in dimensions. But the third bird was considerably younger, since much down adhered to the sides of the head and to the breast, and the wing pens were only half grown. When discovered, this bird rose and ran away as fast as it could, screaming lustily with its infantine larynx. As the person who accompanied us was fully determined to take these young birds, and could not be dissuaded, we agreed to pay him a consideration and to retain them ourselves. We left them at the man's cottage to be pinioned, together with some young Lesser Black-backed Gulls. While in his charge the birds strayed on the railway line. The finest Great Black-backed Gulls escaped, but all the Lesser Black-backs were immolated by a passing train, and the youngest individual of the larger species received injuries to which it shortly after succumbed. I fetched the survivors home on the 29th of July, and turned them down in a walled garden. In early life these individuals often uttered a plaintive and shrill cry, which bore considerable resemblance to that of a young Curlew. Though attached to one another, the male from the first tyrannised over his companion. They both showed great hostility to a stuffed Lesser Black-back which was placed on

their favourite turf, ruffling up their feathers and pacing solemnly round it before they commenced to attack the dummy with their powerful mandibles.¹ This Gull is far from dainty in its tastes, and few animal substances are rejected as food, but the ground upon which these young birds were bred was covered at the time of their capture with remains of fish, including the skeleton of a small cod; the birds themselves disgorged the bodies of two fine eels, which were nearly fresh, and must have been swallowed only a short time before.

GLAUCOUS GULL.

Larus glaucus, Fabricius.

Opportunities for studying the habits of this fine Arctic Gull are extremely rare on the north-west coast of England. Mr. W. Duckworth observed a Glaucous Gull 'of a deep creamy tinge' flying down to the estuary of the Leven on the 23rd of November 1888. A very similar specimen was shot on the same day of the month at Ravenglass in 1877. Messrs. Mann once obtained an immature bird when following the plough near Allonby. Another was shot (and lost) near Bowness-on-Solway in the winter 1883-84; so that it has occurred singly all round our coast. The only instance in which I have met with the Glaucous Gull *locally* occurred in January 1890, during a heavy westerly gale which inflicted great damage on shipping in the Atlantic. On the 25th of that month I walked along the coast from Mayport to Silloth, and when nearing Allonby fell in with a large Glaucous Gull, in nearly full dress, though still retaining on the back a few feathers of immaturity. Most of the Herring and Common Gulls, and all those of the Black-headed species, had sought shelter on the shores of a small 'dub' screened from the gale, but the Glaucous Gull was resting alone upon a ridge of the pebbled beach. He seemed tired and unwilling to move, but, when disturbed, took a short flight and alighted near a Herring Gull, thus affording an interesting comparison between the two species. Some of his wing feathers

¹ In September 1891 this female *Larus marinus* was killed by an escaped fox.

were damaged, and it was evident that he was wearied of contending with the tempest. We tried to secure a very close inspection, but the fine fellow carefully kept out of gunshot, and seemed quite annoyed at our interfering with his intended repose. Once, indeed, he flew a short distance out to sea, but the tide was flowing fast; great waves came heaving shorewards to break into long lines of seething foam. The Gull thought better of his first purpose. Recrossing the beach, he rose to a considerable height, and, after taking a couple of turns to survey the country, sailed off inland and dropped to rest in one of the neighbouring fields, where we left him. On the following day he had disappeared. Early in February 1892 a single Glaucous Gull made its appearance on the upper waters of the English Solway. It was reported to me by Thomas Peal as an 'Ivory Gull,' but his description of its size satisfied us that it must be an immature example of *Larus glaucus*. Mr. Thorpe and I searched for it ourselves on the banks of the Esk, but to no purpose. Peal was out shooting daily, but he never saw it again until the 25th of the month, when he spied it feeding upon some dead fish on the opposite side of the river. He waited all day to get a shot, and bagged his bird before night fell. He brought it in to me for identification the same evening. The alar expanse exceeded 5 feet by half an inch.

ICELAND GULL.

Larus leucopterus, Faber.

The late Mr. T. C. Heysham was the first naturalist to record the occurrence of this Gull in Lakeland. The specimen which he obtained had been killed on the Solway Firth on the 8th of February 1835.¹ For many years this remained the only specimen obtained on our coast, but in 1880 another example, immature like the first, was shot at the mouth of the river Calder on the 20th of February. On the 28th of January 1882 Mr. Moore of Millom shot a third immature bird on the saltings near that town, and the same man fired at, but missed,

¹ *Mag. Nat. Hist.*, 1836, p. 187.

a similar bird when shooting on the Duddon estuary on the 24th of October 1885. The Iceland Gull has not been obtained on our coasts in adult plumage.

K I T T I W A K E.

Rissa tridactyla (L.).

There are no cliffs on our coast suitable to the requirements of this rock-loving species except at St. Bees, where it does not happen to breed. It is seldom, therefore, seen in the summer months, but in winter and spring it is fairly common along our shores, being more often washed ashore dead after gales at sea than any other member of the Laridæ. Such birds are often in the immature or 'tarrock' dress, which is otherwise little known to our local observers. On Walney Island I have picked up *mature* birds which had succumbed to the winter tempests; the same must be said of the Solway Firth. Though common on our open coasts, it is only after gales that the immature birds are noticed on the *upper* portion of the Solway. Even so excellent an observer as W. Nicol sent to me, as new to him, a couple of young Kittiwakes which he shot at Skinburness in November 1888. In the spring of the year a few Kittiwakes often assemble in the fields a few miles from salt water to feed on the worms and grubs exposed by early ploughing. A straggler occasionally delays its departure after the arrival of summer. Thus, in 1891, when visiting Salta moss with Mr. R. Mann on the 23rd of June, we observed a single immature Kittiwake flying among the Black-headed Gulls which were nesting there. The Gulls did not like its presence; they mobbed it, and eventually drove it away, but not before we had enjoyed a close inspection of the intruder.

I V O R Y G U L L.

Pagophila eburnea (Phipps).

The late Mr. J. Hindson states in his MS. catalogue: 'This Gull has been killed two or three times in Morecambe Bay.' Though unable to directly confirm this statement, I can vouch

for the authenticity of an adult Ivory Gull, in the possession of Mr. Arthur Law of Silverdale, who obtained it from the person who shot it. Neither the shooter nor Mr. Law was aware of its specific identity until I happened to examine the bird. Mr. Law has taken considerable pains to thoroughly overhaul its antecedents, and the information supplied shows satisfactorily that this Ivory Gull was shot on Cunswick Tarn about the year 1850. This tarn lies between the road from Kendal to Newby Bridge and the road from Kendal to Bowness. It is therefore within a short flight of the sea-coast.

Order *GAVIÆ*.

Sub-family *STERCORARIINÆ*.

GREAT SKUA.

Stercorarius catarrhactes (L.).

The Great Skua was added to the Lakeland list by T. C. Heysham, who reported the occurrence in the following words: 'A fine old Skua Gull was brought to us alive on the 27th of April [1833], which had been captured on the preceding day, on the coast, in the following very extraordinary manner:—A fisherman, who had been examining his nets on the above-mentioned day, observed at some distance two large birds struggling together, and upon arriving at the scene of combat, he found this bird upon the point of killing a Herring Gull (*Larus argentatus*), and so determined was the Skua to despatch its prey, that the fisherman secured it without the least difficulty. The stomach was quite empty, and the eggs in the ovary were still very small. We cannot find that the Skua has been captured in this vicinity before.'¹ I learn from Mr. J. B. Hodgkinson that this Skua was killed on Rockcliffe marsh. Heysham appears to have met with this Skua again a few years later. In the draft of a letter addressed to Yarrell, dated October 19, 1837, Heysham adds: 'Since my return to Carlisle I have procured a young specimen of the Common Skua,² the

¹ *Phil. Mag.*, 1834, p. 339.

² Possibly Heysham referred to an Arctic Skua, and not to the Great Skua.

first [*? young specimen*] I have met with or heard of in this quarter.' The late Mr. Grayson of Whitehaven assured me that he mounted a local specimen of the Great Skua killed in 1865. The only recent appearance of this Skua on any part of our N.W. coast was ascertained by William Nicol, who has exceptional opportunities for observing such birds, since his entire time is spent, summer and winter, in fishing and shooting in the waters of the Solway Firth. He wrote to me on November 7, 1889: 'I saw on Friday, Nov. 1st, a Common Skua, a fine-looking bird, but could not get near it.' He told me a few days later that he saw this bird off the Grune Point, and that it was harassing some large gulls. He also remarked that he had a good view of the white alar bar. Mr. Nicol is well acquainted with the other species of Skuas, and has himself shot both the Arctic and Buffon's Skua.

POMATORHINE SKUA.

Stercorarius pomatorhinus (Temm.).

We should naturally suppose that this Skua would pass down the Irish Channel in small numbers every autumn, but in point of fact experience shows that it is a rare bird on the N.W. coast. Dr. Gough has a note of a Pomatorhine Skua killed near Tunstal, on October 17, 1870. Mr. Murray possesses the oldest local bird that I have seen, but it has not quite reached perfect maturity. It was shot on the coast near Carnforth. A few birds of this species visited us after some heavy weather in the autumn of 1879. Mr. A. Smith obtained a specimen on Rockliffe marsh. Dr. Parker secured a second near Whitehaven. A third bird (in the brown plumage of the first year) was shot at the south end of Walney Island. George Holmes forwarded a Pomatorhine Skua which he shot when the bird was flying along the beach near Bowness on the 24th of October 1884. This is the only specimen that I have seen in the flesh in Lakeland, but Mr. R. Mann recollects that on one occasion numbers of this Skua visited the Solway Firth.

ARCTIC SKUA.

Stercorarius crepidatus (Gmel.).

Under a name which indicates a popular fallacy regarding the habits of the bird, but which is hardly fitted for polite ears, this Skua is well known to Whitehaven fishermen, who not unfrequently see one or two individuals in company with the smaller Gulls and Terns, upon whose exertion the Skuas chiefly depend for their subsistence. It has occurred on more occasions than one in the interior of Lakeland, in fact upon the borders of Cumberland and Northumberland, having probably followed one or other of the rivers of the latter county from the sea. As lately as October 1887 a young Richardson's Skua was shot near Alston, in which neighbourhood Greenwell obtained a similar bird on October 1, 1857. Mr. Horrocks possesses a fine old bird, light breasted, which was also shot near Alston. Mr. Graham of Cockermouth forwarded for identification the wings of a young bird of this Skua, which had been shot at Tallentire about Christmas 1890. But allowing for such exceptions as these, it would appear that this Skua is rarely met with except on our coast-line. Mr. Nicol believes that some of these birds migrate eastward in spring *viâ* the Solway Firth. On the 20th of May 1887, after a gale from the N.W., he and two other fishermen saw twelve of these Skuas pass close to them, flying up the Solway in an easterly direction. At the same time it should be understood that odd stragglers, obviously *not* breeding-birds, pass the summer months on the Solway, not perhaps every year, but from year to year. They are generally wild and keep out in the open sea except after heavy gales. A fisherman named Johnston, whose cottage is close to the sea-shore, between Allonby and Silloth, is the only man who has sent me local specimens of Richardson's Skua. In 1889 he shot an old bird of the dark form, after a heavy westerly gale, while the Skua was hotly chevying a Black-headed Gull above the beach. It proved to be moulting on the 9th of October. The plumage was much infested with parasites. A bird which he shot on the 4th of October 1890 was still more advanced in moult, but this

was only a bird of the second year. Another was felled by a stone at Allonby, December 7, 1887, while feeding on a dead pig upon the beach. The Walney Island fishermen sometimes apply the name of 'Sea Hawk' to this Skua, which they consider a somewhat rare bird. Mr. Murray possesses an immature individual, killed on our coast between Carnforth and Fleetwood.

BUFFON'S SKUA.

Stercorarius parasiticus (L.).

The first naturalist to ascertain that this Skua occasionally visited Lakeland was the late Mr. Anthony Mason of Grange, who identified three specimens shot in Morecambe Bay on the 25th of October 1859. Its presence does not seem to have been detected on the English Solway until 1879; that, at least, is my first positive date referring to the bird which Mr. A. Smith shot on Rockcliffe marsh in October that year, and gave to Mr. Anson of Carlisle. Mr. Richard Mann recollects, however, that a large number of Skuas once appeared in the Solway Firth after a severe gale. A good many were killed near Allonby, and he believes some Buffon's Skuas to have been among the slain. This Skua was not, however, obtained in *young* plumage until 1890. On the 5th of November that year the keeper engaged on the Musgrave property at Kirkoswald came across a single Skua, swimming in a small pond near the Eden. It was quite alone and appeared to be much exhausted. He shot it, and gave it to Robert Raine, who kindly asked me to identify it. It proved on dissection to be much emaciated. On the 16th of October 1891 a very similar nestling bird was shot at Skirwith, almost in the same part of the Eden valley as the bird which had occurred the previous year. It was sent to Hope, for whom I decided the species. It was rather darker in ground colour than the bird killed at Kirkoswald, but was of the same age and the same general appearance. Curiously enough, on the very day that the Skirwith bird was shot in the interior of Lakeland, a flight of this Skua appeared in the waters of the English Solway. Mr. Williamson, junior, killed an old bird deep in moult near Allonby on this date. His uncle, Mr.

Thomas Mann, fell in with two full-dressed adults (in change), on October 17th, one of which he secured. He fired at the other but lost it; this was possibly the bird which Mr. W. Hodgson picked up dead at Workington on October 19th. Bob Law shot a bird in the one-year-old plumage on October 19th, and Mr. Glaister winged a similar bird the same day. Mr. Nicol shot another on Skinburness marsh on October 23d. Storey the punt-gunner killed another year-old bird on the Wampool, which he stuffed (after a fashion) and brought to me. Mr. Lomas found another dead inland, a year-old bird. Some unknown person shot a full-dressed bird at Silloth about October 17th, which I examined at the house of James Barnes. Yet another year-old bird wandered up the Eden valley into Westmorland, and was shot near Lowther on October 23d. Several others appear to have been seen but not obtained. About the same time a similar flight visited Walney Island, where about a dozen specimens were reported to me as having been shot. I only examined three of this number, two of them freshly killed, and these were year-old birds. At least one adult in more or less full dress appears to have been killed on Walney, but as the birds fell into private hands no particulars could be ascertained. It is noteworthy that the only specimens shot in possession of the long central rectrices were the birds obtained by Mr. T. Mann at Allonby, by Mr. Hodgson at Workington, and by two unknown persons at Walney and Silloth. Not a single bird is known to have been shot on our coast in really young plumage. Ten of those which I have examined were in the one-year-old plumage, and I understand that an additional specimen telegraphed near Allonby is in the same stage. These birds were all in some stage of change, and much varied with grey. They were very similar to a bird presented to the Zoological Society about the same time by Mr. Hart of Christchurch. The bird which Mr. Glaister winged came into my possession by his kindness. Like the Hants' bird, exhibited in the Fish House of the Zoological Gardens, my captive Skua fed heartily on shrimps. It was a tame bird, and when crouching on the carpet made a very pretty picture, its dark eyes beaming with intelligence. It was however in poor plight.

At some earlier period it had lost a foot, and, when its wing was broken, the poor thing was heavily handicapped. I fancy that the good people who kept it for me a few days supplied it with more shrimps than were good for a half-starved bird. At all events it soon died. All those who were fortunate enough to see these birds flying in life—I had not that advantage, though only a mile away from Mr. Tom Mann when he fired at an adult—assured me that they were much exhausted, which the emaciated condition of their bodies fully bore out. It seems probable that large numbers of these birds were migrating across the Atlantic, when they got into the centre of a hurricane, which forced them up on to our western shores, far out of the usual line of their migration. I think it quite likely that the two young birds killed in the Eden valley in 1890 and 1891 had travelled into Lakeland from the North Sea, and that the coincidence of the Skirwith bird being killed on the day on which the species first appeared in the English Solway was purely accidental. But this is a point on which every one must form his own opinion, since it is entirely a matter for conjecture.

The only specimen of Buffon's Skua that is known to have been killed in Lakeland during the breeding season of the Arctic bird was shot near Kirkandrews on the Eden, on the 3d of June 1885. The bird had frequented the neighbourhood of the river for a few days before it was shot on the lower waters of the Eden by George Batey. It was secured the same day, and sent to me in the flesh by my friend Dr. John Macdougall. It proved on dissection to be a male. As a specimen in nuptial plumage it would be uniform with most others, but for the circumstance of some slight trace of immaturity on the lower surface, a stage which Mr. Howard Saunders told me is rather rare. The body was imperfectly nourished, and contained no traces of food beyond three earthworms. Unusual as the occurrence of Buffon's Skua in Britain undoubtedly is during the summer months, yet several other examples have been obtained in June. The late Mr. Rodd identified an adult shot near the Lizard at the beginning of June.¹ Mr. R. Service has recorded that another adult male was shot in Dumfriesshire on

¹ *Zoologist*, 1877, p. 300.

the 12th of June 1881, as well as a third captured in Nottinghamshire on the 8th of the same month.¹ In 1860 a fourth adult was shot in June on the Kingsbridge estuary, S. Devon.²

Order *PYGOPODES*.

Fam. *ALCIDÆ*.

RAZORBILL.

Alca torda, L.

A nice colony of Razorbills, which has probably existed from time immemorial, holds possession of a number of ledges on the red sand-stone cliffs at St. Bees. As compared with the vast gatherings of birds, which one is accustomed to visit on the great headlands of the north of Scotland, the St. Bees colony is small of course; a considerable number of pairs nest there, nevertheless, and very handsome they look as they sit sedately on their eggs, or come hurrying past the boat, the white eye-streak relieving the sombreness of their otherwise uniformly black upper surface. They are not so numerous as the Guillemots, and appear to succumb to the hardships of winter in a greater proportion to their numbers than the latter species. Nor does the Razorbill occur in the interior of the country with the same frequency as *Uria troile*. A loose scrap in T. C. Heysham's handwriting runs thus: 'Razorbill, Jan. 21, 1849. A specimen was found alive in Mr. Mounsey's plantation at Rockliffe this day. It lived until the 27th.' Similar occurrences have come under my observation in different years, but chiefly at a short distance from the sea-board.

COMMON GUILLEMOT.

Uria troile (L.).

Pennant tells us that, in his day, St. Bees Head was 'noted for the great resort of birds,' referring doubtless to the Guillemots, which, in company with a lesser number of Razorbills, rear their young on the cliffs at Sandwith. If you walk along the top of the cliffs from Fleswick Bay on a summer day, you

¹ *Zoologist*, 1881, p. 469.

² *Zoologist*, 1860, p. 7106.

can distinguish a few Guillemots far below you, as they fly off their ledges to the sea; but the colony is seen to best advantage by the simple expedient of taking a boat from Whitehaven. This is the only colony on the mainland of the N.W. of England. As a natural consequence, the species is somewhat localised in summer, but when shoals of fishes arrive upon our shores they are frequently attended by considerable numbers of Guillemots. There can be no doubt that a good many unpaired birds pass the summer in the Irish Channel and accommodate their movements to the food-supply. Heavy indeed is the mortality among both adult and young birds during the storms of autumn and winter. Many are beached, lying with the white breast uppermost, upon the sands of the Solway Firth; but probably the largest quantity are washed ashore between Seascale and the south end of Walney Island.

BLACK GUILLEMOT.

Uria grylle (L.).

In the month of October 1891 a Black Guillemot was caught alive in a ditch between Silloth and the Abbey Holme. It appeared to be exhausted at the time of capture, but, being transferred to a small pond, it soon recovered from its fatigue and dived actively for food. It lived about a week in semi-confinement. It was wearing the plumage of the first winter. Why it had wandered a few miles into the interior I am unable to say. Such conduct is rarely resorted to by this Guillemot, though its powers of flight are excellent. The late Mr. Grayson informed me that some thirty years ago he stuffed two full-dressed Black Guillemots which had been shot near Whitehaven in the spring of the year. The only other specimen that can be vouched for as having visited us in recent years was observed by Mr. W. Duckworth near Silloth in 1886. It is to be supposed that this Auk must sometimes visit the waters of Morecambe Bay, but I have not succeeded in tracing its presence there.

LITTLE AUK.

Mergulus alle (L.).

The Little Auk not only occurs irregularly all round our coast-line, but penetrates into the very heart of Lakeland. The Keswick Museum has a specimen captured among our mountains. Dr. Gough occasionally met with specimens in Westmorland, regarding one of which the following paragraph was furnished by his pen to a local newspaper: 'One of these birds was picked up on Thursday week in the neighbourhood of Helsington. When first observed the poor wanderer was sitting surrounded by a flock of poultry, and, on being approached, rose and flew to a short distance. From its exhausted state, no difficulty was experienced in effecting its capture alive. Variety of food was offered to it in confinement, but the prisoner, not relishing his change of habits, refused all sustenance, and died on the ensuing day.' Two others were captured about the same time in the neighbourhood of Coniston and Windermere. In a draught of November 8th, 1841, T. C. Heysham states: 'The Little Auk is a rare bird in Cumberland, and I have not seen or heard of more than two or three specimens during the last twelve or fourteen years. It is, however, a somewhat curious coincidence that one should have been taken alive a few days ago at no great distance from Ulleswater Lake, which is upwards of twenty miles from any part of the coast.' The most recent occurrences of the Little Auk in Lakeland include an example captured near Appleby in January 1887; another observed by Mr. Nicol near Skinburness during a very heavy gale on November 16, 1888 (the first he ever saw); a third picked up dead on Walney Island, November 1890; and a fourth, a very beautiful adult in winter dress, picked up dead in a field near Langwathby, January 3rd, 1890. All the local specimens which I have seen preserved as rarities in the hands of private individuals were in winter dress. It is possible that a black-throated bird, existing in the collection at Belle Vue, which formerly belonged to Bailey the birdstuffer, was obtained locally. If such be the case, it is the only one that has been obtained within this region in *summer* dress.

PUFFIN.

Fratercula arctica (L.).

It is chiefly during the storms of winter-time that the Puffin becomes numerous all round our coast-line. The Whitehaven fishermen assure me that even in the breeding season they see a few Puffins off St. Bees Head, and the description furnished of their orange bills leaves no room for doubt as to the species; but though the glassy ledges at St. Bees are suggestive of Puffins' burrows, in point of fact the species does not nest there. In late autumn, on the other hand, a good many Puffins come ashore, dead or moribund; not in at all the same proportions as the Guillemots, nor as numerous as even the Razorbills, but still in pretty considerable numbers, from Silloth all round the coast to Walney Island. Though the species must be vastly more common than the Little Auk in the Irish Sea, it hardly occurs inland as frequently as the Rotche. A Puffin which was picked up dead near Kirkby-Stephen, in August 1885, had travelled more than forty miles from the open sea.

Order PYGPODES.

Fam. COLYMBIDÆ.

GREAT NORTHERN DIVER.

Colymbus glacialis, L.

The Great Northern Diver is generally reckoned a rare bird on the waters of the N.W. of England, but single birds not unfrequently visit our larger lakes, especially Windermere and Ulleswater. Mr. W. Duckworth retains the feet of a Great Northern Diver, shot on Windermere, Nov. 24, 1888. The owner insisted on having the skin converted into a muff. Another in full summer dress was killed on the same lake in 1889, in the month of August, as separately reported by Mr. H. E. Rawson, Mr. G. A. Hutchinson, and Mr. W. Duckworth. The Rev. R. Bower has a summer-dressed Great Northern Diver, killed on the Eden above Appleby. A bird in winter plumage, killed on Ulleswater, is preserved at Edenhall. A few weeks before the bird was killed on Windermere in 1889 I had

pointed out to Mr. Leavers a large *Colymbus* crossing over Carlisle at a great height, flying from N.E. to S.W. *Within a week* there arrived information that a bird of this species had appeared on one of the smaller lakes. This Diver moults late in the year, a fact which perhaps explains the occasional appearance of stragglers in Lakeland during the summer. The Eden has been more often visited by this Diver than any other of our rivers. An example was shot near Bolton Bridge, Westmorland, on the 1st of November 1848. An undated scrap of T. C. Heysham records that 'on Tuesday last' a man belonging to Rickergate killed a young Great Northern Diver on the Eden a little above Eden Bridge at Carlisle. In the extreme west of Lakeland specimens have been recorded from Wastwater by Dr. Parker. The Great Northern Diver appears to occur only irregularly in the immediate neighbourhood of Morecambe Bay. Mr. Durnford reported a bird killed near Barrow in December 1876. Two were killed in the channel between Barrow and Walney in the severe winter 1890-91. This Diver very seldom visits the English side of the Solway Firth. Mr. W. Nicol wrote on December 7, 1889: 'I am glad to tell you that on Wednesday the 5th inst. I saw for the first time a Great Northern Diver. Law and I chased it in our punts for, I think, a mile and a half, but could not get nearer than a hundred and fifty yards or so. There was diving along with it a Red-throated Diver. When both went under, the Great Northern stayed twice as long under water, and went twice the distance. We chased it near to the point, hoping he would not take wing, but when he saw we were driving him into narrower quarters, after a careful survey of the situation, he got under weigh and flew away to the westward.' On the 3d of September 1890 I watched a Great Northern Diver diving and swimming down the channel near Port Carlisle. Wading out into the ebbing tide I watched the bird for ten or twelve minutes. It swam nearly submerged, but occasionally raised itself up in the water, when the white breast became visible. It was in summer plumage, and quite alone. Greenwood told me that he had seen two strange Divers going up with the flood-tide, but I only saw a single bird returning with the ebb. It constantly swam

in the main channel, going out further and further, as the tide ebbed, to avoid the shallows, diving at frequent intervals.

BLACK-THROATED DIVER.

Colymbus arcticus, L.

This species is a much rarer visitant to our waters than either the Red-throated or Great Northern Divers. Indeed, all the Black-throated Divers that have ever been reported to me from our western estuaries turned out, on inspection, to belong to the Red-throated species, which varies widely in dimensions. Some idea of the comparative scarcity of this Diver in the north of England may be gathered from the fact that only two specimens have been obtained in Lakeland during the whole of my local experience, which covers a period of more than nine years. The first of these made its appearance on the river Eden a short distance above Carlisle on the 20th of March 1888. The Rev. J. Phelps was the first to observe the bird diving in the river, a fact which he kindly communicated to me the same day. I was not, however, privileged to see it in life. It was soon shot by one of the waterside keepers, who thought that it was fishing for salmon fry, a conjecture which proved to be only too well founded. On examination, it was found to be an adult, already commencing to assume the summer livery, though the new feathers were almost wholly concealed by the long winter plumes. On the 1st of January 1891 a young female of the Black-throated Diver was killed on Ulleswater. By a curious coincidence a Red-throated Diver was shot on the same lake the same day, thus enabling me to compare the two species in the flesh before the soft parts had lost their natural colours. The Black-throated Diver, although a female, was the heavier bird. It weighed 6 lbs., whereas the Red-throated Diver, a male, turned the scales at $4\frac{3}{4}$ lbs. Both birds were in good condition when procured. The birds just mentioned are not the only specimens that have been obtained in Lakeland. I have identified one or two others, birds which were killed before I took this faunal area in hand. But the foregoing specimens are the only ones known to have been procured during the last

ten or twelve years, a fact which sufficiently evidences the comparative infrequency of their visits.

RED-THROATED DIVER.

Colymbus septentrionalis, L.

The Red-throated Diver is a regular spring visitant to Morecambe Bay and the Solway Firth. It does not frequent our estuaries numerously at any time, but a few individuals are constantly to be met with in the waters of the Solway from Silloth to Gretna between the end of March and the last days of May. These generally assume full plumage before their departure, but an adult which Mr. Mason shot in October 1890, off the point of Rockliffe marsh, was really as handsome as any spring-killed bird. This Diver generally appears in our estuaries in November, when, as the adults are often in moult and unable to fly, they sometimes perish in heavy gales. Such had been the fate, no doubt, of an individual which I found washed ashore near Silloth, and of another adult, retaining a few red feathers, which Mr. Williams showed me in the flesh in November 1888. It had just been washed up on the west side of Walney Island. Some birds occasionally winter with us, but this is the exception, and, as already remarked, the larger proportion are spring visitants. Individuals have occasionally been observed at mid-summer. In July 1886 a small but full-dressed male Red-throated Diver was found dead by a platelayer near Gretna, having struck the wires full upon the lower neck. The presence of this Diver on our inland waters is unusual at any season, but odd birds do in point of fact make their appearance on Bassen-thwaite, Windermere, and the other lakes of this area at tolerably frequent intervals. Mr. H. E. Rawson lately informed me that a Red-throated Diver was killed on Windermere in January 1892, and taken to him for identification. Even such a limited extent of water as Whin's Pond, Edenhall, has been known to serve as a temporary resting-place for this Diver. A bird of this species was shot in the locality just indicated in April 1840, the poor thing having probably alighted with a view to fishing in the lake, whilst migrating across country to the east

coast of Britain. No one, who has watched the strong flight of this *Colymbus*, would imagine that it suffers much harm from severe weather. But the fact is, that the adults shed their wing quills all at once, a proceeding which disqualifies them sadly for contending against a heavy gale. A bird in this condition was captured near Silloth on the 6th of September 1888. It was secured in a shrimping net, and, proving to be uninjured, was subsequently liberated.

Order *PYGOPODES*.

Fam. *PODICIPEDIDÆ*.

GREAT CRESTED GREBE.

Podiceps cristatus (L.).

This Grebe has been recognised for the last hundred years or more as an occasional winter visitant to Lakeland, but it has never become an established resident or even a numerous winter visitant. The plumage chiefly met with is that of young birds in their first winter. The summer dress is not entirely unknown locally. For example, Mr. J. N. Robinson shot a Great Crested Grebe, fast assuming summer dress, on the Eden in March 1884; a similar bird was drowned in a net in the channel off Bowness-on-Solway in March 1886. Mackenzie shot a full-dressed bird on the Eden in July 1869. But the species is quite unaccountably scarce, even as a winter visitant, though perhaps met with rather more frequently on our larger lakes than in the estuary waters of Morecambe Bay or the Solway Firth. Dr. Gough and T. C. Heysham both noticed in their private notes the comparative rarity of the bird in this part of England.

RED-NECKED GREBE.

Podiceps griseigena (Bodd.).

Sometimes, in a hard winter, we get a visit from a Red-necked Grebe, but such an incident is of extremely rare occurrence—surprisingly so if we take into consideration the comparative frequency of the species on the coasts of Northumberland and the Firth of Forth reported by friends who are competent to

speak. Of recent specimens, I may notice two obtained in January 1891. One of these was killed on the Solway Firth near Gretna. The other was caught in miserable condition on the river Eden near Little Salkeld. Another specimen was felled on the Kent some few years ago by a stone from a catapult. This last is the only example which I can vouch for as having been killed within the territorial limits of Westmorland. It was submitted to me for identification through the kind offices of Mr. Hutchinson.

SCLAVONIAN GREBE.

Podiceps auritus (L.).

Dr. Gough included this small Grebe as an occasional but rare winter visitant to Kendal, stating that it had been killed on Whinfell Tarn [prior to 1861]. It is a scarce bird at all times in Lakeland, but occurs occasionally on our estuaries, and less frequently on lakes and loughs inland. Mr. Tremble has an interesting adult which he shot one year on Monkhill Lough as early as September. There are two specimens at Edenhall which were shot on Whin's Pond. Other stragglers have been killed on Derwentwater, on Ulleswater, and in the neighbourhood of Alston. Mr. Nicol never met with the Slavonian Grebe until March 17, 1889, when he shot a bird which had newly commenced its spring moult in the neighbourhood of Silloth. On the 24th of October 1890, the same gunner was paddling up the channel past the Grune, when he saw a young lad running along the side of the big creek in pursuit of two Grebes which were swimming and diving up the water. The lad shot one, and its fellow dived but came up directly and was on the point of flying off when he fired and stopped it. Both birds proved to be Slavonian Grebes.

EARED GREBE.

Podiceps nigricollis (Brehm).

The Eared Grebe is one of the rarest of our occasional visitants—so rare in Lakeland that I have never seen a local specimen.

Probably some of the birds reported to me formerly as 'Eared Grebes' were Slavonian Grebes, but two excellent observers have met with local specimens. Dr. Parker procured the first in the neighbourhood of Ravenglass, and this, I understand, was preserved and can be seen. This is all the more satisfactory because the most recent specimen was past preserving when found. It was Mr. Richard Mann who found this second specimen washed up dead near Allonby in September 1891, after a spell of bad weather. It was an adult, still retaining a good deal of summer dress, and the upturned bill decided the species beyond a doubt. It was found impossible, however, to make a skin of it.

LITTLE GREBE.

Podiceps fluviatilis (Tunstall).

The Little Grebe used to nest almost gregariously at Moor-thwaite before the birds were driven away from their favourite haunts by the encroachments of the Black-headed Gulls. Our northern rivers do not seem to be as well adapted to the requirements of this Grebe as the sluggish streams of the south of England. The Dabchick is accordingly scarce as a breeding bird, though certain favourite stations are occupied every year. In autumn and winter the species is widely distributed, and may often be seen diving through the waterweeds in the vicinity of several species of wildfowl. I have seen examples which had been killed on the Solway Firth, but the bird is not common in the tideway of that estuary.

Order *TUBINARES*.

Fam. *PROCELLARIIDÆ*.

F U L M A R.

Fulmarus glacialis (L.).

It might be supposed that a species so well known in the North Atlantic as the Fulmar would stray at frequent intervals to the N.W. coast of England; but this plausible supposition has been entirely belied by our experience during the last hundred years. Neither Dr. Heysham, T. C. Heysham, nor Dr.

Gough ever met with the bird. Though well aware that my friend Mr. J. W. Harris secured a specimen washed up near Mowbray many years since, I never myself set eyes on a Lakeland specimen of the Fulmar until February of the present year [1892]. On the 11th of that month a man named Thomas Peal brought to me in the flesh a Fulmar which he had secured on Rockliffe marsh two days earlier. It was in the finest possible feather and represented the white-breasted form. The body was however the reverse of well nourished. Mr. Thorpe remarked at once that it was a small specimen, and such on comparison it turned out to be. On dissection it proved to be a female, probably a bird of the year.

MANX SHEARWATER.

Puffinus anglorum (Temm.).

Possessing a more intimate acquaintance with this Shearwater than with any other oceanic species, I have long experienced a sense of regret at its almost entire absence from this region. It is not merely that it does not wander inland like the smaller Petrels. The grievous thing is, that we never enjoy the beautiful gliding flight of this attractive species on the N.W. coast, where it is unknown to our fisher folk. That it occurs in some numbers far out in the Irish Sea there can be no doubt. Dr. Parker has twice obtained derelict specimens near Seascale, where my friend Mr. Whitlock found the remains of a Manx Shearwater in May 1890. The most classical home of this Shearwater was that which once existed on the Calf of the Isle of Man, within view of our own shore. This has long been deserted. Sir William Jardine wrote to T. C. Heysham in the year 1836: 'I had almost forgot the Isle of Man. It is nearly nine years since I was there [in 1827], we went as you observe to seek the Manks' Petrel, but were unsuccessful. The people said that it had certainly left the Calf several years previously, and if any number had been there we should not have missed them.

FORK-TAILED PETREL.

Oceanodroma leucorhoa (Vieill.).

This Petrel gets the credit, generally, of being a rarer species on the N.W. coast than is actually the case. At the same time we must not forget that its appearance in the neighbourhood of our coast is chiefly limited to the last months of the year, and bears a direct relation to the prevalence of tempestuous weather in the open Atlantic. It seems to have occurred on one or other portion of our coast almost every autumn, during the last half century. Dr. Gough and T. C. Heysham both identified a few specimens, obtained in the south and north of Lakeland respectively. My inquiries have naturally covered a much wider field than the researches of either of my predecessors. As a natural consequence, I have seen a good many fresh specimens from Morecambe Bay and the shores of Cumberland, as well as others from the interior of Lakeland. In 1889 I examined five local specimens, all obtained in the month of October. Three of them were obtained near Carlisle, one at Silloth, and a fifth at Ravenglass. This last was picked up dead on the 28th of the month. Such figures represent the return of an ordinary year. There are of course seasons in which this Petrel is more than usually numerous. The last days of September 1891 witnessed the arrival upon the shores of Western Britain, of large flights of this Petrel. The birds had apparently been induced to travel eastward by the prevalence of wild weather on the open Atlantic. At all events they occurred in varying numbers all along the line from Skye to the Cornish coasts. Several were procured in the neighbourhood of Morecambe Bay, and I examined about sixteen specimens which had been obtained on the coast of Cumberland, others being observed battling pluckily against the gale. Two or three specimens turned up *far inland*, e.g. a Fork-tailed Petrel, which was shot while flying along the edge of Ulleswater Lake on the 16th of October. The first that were sent to me from the Solway Firth reached me on the 28th of September. A marked feature of this immigration was that it consisted exclusively of adult

birds, at least so far as concerned the N.W. coast. Usually the specimens that we meet with are young birds, easily distinguished by their fresh plumage and the possession of a pale grey alar bar. All the birds which I saw in 1891 were adults, deep in moult, and very ragged in plumage. Their appearance was fully a fortnight in advance of the usual arrival of this Petrel on our coast in autumn; October and November are the two months in which it principally occurs. Some stragglers have been obtained in December, but I cannot recall having ever met with the species locally during the first four months in the year, and should be disposed to think that the birds noticed in October have been forced upon our shores whilst migrating to winter quarters in some more southern latitude. The species is almost unknown locally, except as a scarce autumnal visitant. I have never met with it at any other season, but T. C. Heysham was more fortunate. In the year 1841 he obtained a local specimen of this Petrel at the end of July, sending it on the 31st of that month to B. Greenwell, that his bird-stuffer 'might have an opportunity of seeing a scarce British bird in the flesh.'

STORM PETREL.

Procellaria pelagica, L.

In bygone years we used to regard this Petrel as the most frequent representative on our coasts, of the family to which it belongs, and there can be no doubt that such it used to be. Moreover it occurred inland on more numerous occasions than the Fork-tailed Petrel. Whatever the reason may be, there can be no doubt that this species has become rarer on our coast than it was at one time, while the larger species has visited us in larger numbers than was formerly the case. I have seen specimens of this Petrel obtained all round our coast, from the sands at Flookburgh to the mussel scars of the Solway Firth, but the species appears to be less gregarious than the Fork-tailed Petrel. It has been obtained locally in all the winter months.

WILSON'S PETREL.

Oceanites oceanicus (Kuhl).

Mr. T. C. Heysham sent word to Yarrell of the occurrence of a specimen of this Petrel, which is supposed to have been obtained in Cumberland.¹ Unfortunately such papers of that deceased naturalist as are forthcoming fail to throw any light upon its history. There can, however, be no doubt that this rare Petrel has occurred within our faunal regions in at least two instances. In the year 1881 one of the servants at Castlesteads found a dead Petrel which he took to his master, Captain Johnson, by whom it was identified as a Wilson's Petrel. Unluckily this specimen was too far gone for preservation, otherwise Captain Johnson would have mounted it himself. The other specimen was washed up dead on the north-west shore of Walney Island in November 1890, and after being kept for a day or two by the working-man who found it, was taken to Williams, the Barrow blacksmith. It was then very far from fresh, but he made a rough skin of it. The skin was subsequently sent to Mr. O. Salvin, F.R.S., who kindly compared it with the series of *Oceanites oceanicus* in the British Museum. Mr. Salvin wrote to me that he found the measurements of this specimen 'to be unaccountably small, the wing only measuring 4·9 in. instead of 5·9.' He adds, 'Besides its small dimensions the Walney Island bird has a square tail, but this varies, some specimens having a slightly forked tail, others nearly or quite even. The yellow mark on the webs of the feet is not nearly so well marked as in the ordinary form. The amount of white on the rectrices and on the under tail coverts is about the same as in the rest. The plumage, generally, is dark, due to recent moult.'

FRIGATE PETREL.

Pelagodroma marina (Lath.).

I furnished the following notice of this bird to the *Ibis* of October 1891:—

'After a severe gale in November 1890, a number of sea-

¹ Yarrell, *British Birds*, vol. iii. p. 516, 1st ed.

birds which had been washed up dead on the outside of Walney Island were collected and taken to Williams, a working blacksmith, of Barrow-in-Furness. It was Williams who received the Spotted Eagle which was washed ashore at Walney in 1875 (cf. Mitchell, *Birds of Lancashire*, p. 109), and I know that he has always been in the habit of stuffing a few of these birds; for example, when visiting him in November 1888, I found his house full of Guillemots and other birds that had just been brought to him from Walney. On the present occasion the birds brought to him were various, but being hardly convalescent from influenza, and out at his work all day, he only skinned two Petrels, a Little Auk, and one other bird.¹ He skinned these birds as well as he could, for they were not fresh, and put them by in a glass-topped box until I should call, which was not until the beginning of the following July. He then showed them to me, and offered to give them to me, as he considered that he could not mount such rough skins to his satisfaction. I had great difficulty in inducing him to accept half a sovereign for the birds, and he was then anxious to make me a present of a white *Turdus iliacus*, as he thought I was paying him too much. I at once recognised the smaller Petrel as *Oceanites oceanicus*; but not knowing the larger bird, I sent the two skins to Mr. Osbert Salvin, F.R.S., just as I received them, the sand of Walney still adhering to their feathers, especially to those of the smaller bird. Mr. Salvin, whose great kindness I specially desire to acknowledge, has not only identified the unknown bird as a typical example of *Pelagodroma marina*, which he thinks may perhaps breed in the Canary group, but has compared both skins with the British Museum series, and has further favoured me with some very valuable notes, of which I now avail myself.

Pelagodroma marina was first noticed during Captain Cook's first voyage, and a specimen obtained on the 23d December 1768 in lat. 37° S., off the east coast of South America, about opposite the mouth of the Rio de la Plata. It was sketched by Parkinson, one of the artists who accompanied Captain Cook

¹ The exact part of the island where the Petrels were found is the north-western beach, nearly opposite the windmill.



FRIGATE PETREL. (See p 957).



and Sir Joseph Banks in the *Endeavour*. This sketch is now in the British Museum, where it appears as "No. 13" under Solander's unpublished name *Procellaria æquorea*, in a MS. volume called *Banks's Drawings*. It then became the Frigate Petrel of Latham's *Synopsis*, and the *Procellaria marina* of the same author's *Index Ornithologicus*.

'The bird is now known to have a wide range in the southern hemisphere. Gould's collector Gilbert discovered it breeding on some of the small islands lying off Cape Leewin, southwestern Australia, in December, where he procured numbers of its eggs as well as many examples of the adult birds. He also met with it on a small island about three miles south of East Wallaby Island in January, when the young birds were almost ready to leave their holes (Gould, *B. Austr.* vol. vii. pl. 61). The most northern locality where *P. marina* has been observed hitherto is the Canary Isles. Here it would appear to be not common, though many observers have either procured specimens or recognised it when flying over the sea. The bird from these islands was named *Procellaria hypoleuca* by Webb and Berthelot. Mr. Salvin concludes his notes by remarking that "the specimen from Walney Island agrees closely with examples from the South Seas and the Canary Islands now in the British Museum." I should be happy to submit the specimen to any brother member of the B.O.U. who may entertain any desire to see it.'

The man who found these birds subsequently left Barrow for Girvan. A fisherman named Gillespie, still resident at Barrow, saw the birds before they were taken to Williams, and says that, though taken together to Williams, they were found washed up on different days. As a matter of fact, the Wilson's Petrel was much staler than the other birds, and had probably been kept a few days at least longer than the Frigate Petrel.

The lines which follow, and which not unfitly close this Book, were composed by my friend the poet after examining the skin of the above-mentioned Frigate Petrel :—

Whence, wanderer of the ocean, have you come?
 Could not the sun's perpetual glory please,
 Where under waves of hyacinth, white trees
 Of coral glance, where round the palm-roots foam

Slow beaming miles of emerald? Driven from home
By thirst of venture or in search of ease,
Did the great wind-blown river of the seas
Neglect your heart and bid you northward roam?
Nay rather, deep within your snowy breast
There moved the wild solicitude of man,
The eager quest for something still beyond,
Till the kind fate to which we all are bound
Closed the keen eyes that would the distance scan,
And gave for storm and tempest calm and rest.

H. D. RAWNSLEY.

Book Third.

REPTILIA.

Order *OPHIDIA*.

Fam. *COLUBRIDÆ*.

COMMON SNAKE.

Tropidonotus natrix (L.).

In the extreme S.W. of Lakeland the Grass Snake is not uncommon. Mr. W. Duckworth assures me that he can find specimens any sunny morning in the neighbourhood of Ulverston, and he has sent me ova of this Snake from the district. Among the mountains this species becomes comparatively rare, but Mr. Tom Duckworth met with single specimens at Stanley Gill, Eskdale, and at Holm Rook near Gosforth. In the Eden valley, as in the north of Cumberland, this Snake is extremely local, if not rare. Mr. Tom Duckworth has met with specimens in the Newby Cross woods, in which he also found eggs of *T. natrix*. On single occasions he has seen specimens at Newlands, near Carleton, and Black Moss Pool near Cotehill.

Order *OPHIDIA*.

Fam. *VIPERIDÆ*.

VIPER.

Vipera berus, L.

The mosses in the neighbourhood of Morecambe Bay share with those which fringe the Solway Firth the unenviable distinction of affording a tolerably safe asylum to large numbers of Vipers. I have rarely visited any of our flows on a hot summer day without coming across one or two individuals of the present

species, basking in the sunshine upon some heather-covered prominence. The late Mr. Kirkby captured great numbers of Vipers in the neighbourhood of Ulverston, and showed me some pretty sections of their teeth under the microscope. His skill in capturing these animals was very great. The occupation appeared to have become his ruling passion.

Order *LACERTILIA*.

Fam. *LACERTIDÆ*.

COMMON LIZARD.

Lacerta vivipara, Jacq.

This Lizard occurs plentifully on many of the hedge banks, especially in dry situations, both upon the coast and in the interior of Lakeland. One of the brightest of the local specimens that have come under my notice was captured on a moor near Tebay. Lizards are often termed 'Asks' and 'Land Asks' by country folk.

Order *LACERTILIA*.

Fam. *SCINCIDÆ*.

SLOW - WORM.

Anguis fragilis, L.

To one accustomed to find the Slow-worm comparatively numerous on the heaths of the south of England, this reptile might appear to be rare in Lakeland. It is, however, local rather than rare. If searched for carefully it would probably be found in a good many localities. Thus it is not uncommon in the neighbourhood of Appleby. Mr. Tom Duckworth has always been accustomed to find the Slow-worm in the Corby woods. I have not as yet seen a specimen from the heart of the Lake Mountains. Mr. Jackson describes it as present in Martindale New Forest, and his description seems to identify the animal beyond a doubt. The name 'Hagworm' is applied in different districts to the Slow-worm, the Viper, and the Common Snake.

AMPHIBIA.

Order *BATRACHIA URODELA*.Fam. *SALAMANDRIDÆ*.

GREAT CRESTED NEWT.

Triton cristatus, Laur.

This Triton is more local in Lakeland than in the south of England, but I do not know that it can be termed uncommon with us. It occurs in the neighbourhood of Carlisle and of Appleby. I have not searched for it elsewhere.

SMOOTH NEWT.

Triton taniatus (Schneid.).

This Newt is common in the clay pits of brickfields and in many of our ponds. It is an object of abhorrence to old-fashioned country folk, who call it the 'Water Ask.' In accordance with the traditions which are transmitted from one generation to another in remote places, they believe this Newt to be poisonous.

Order *BATRACHIA ANURA*.Fam. *BUFONIDÆ*.

COMMON TOAD.

Bufo vulgaris, Laur.

This Toad is often accredited with poisonous qualities by the old wives of the fell villages. 'In my boyish days,' wrote the late Dr. Gough, 'a poor toad . . . was subjected by rude country lads to a barbarous sport called "*spang-hewing*," i.e. a sudden blow upon a piece of wood on which the Toad was placed, sent the reptile to a height of thirty or forty feet into the air, the object being to rejoice over the harmless creature falling stretched out dead upon the ground.'¹

¹ *Personal Reminiscences of the Habits of Animals*, p. 16.

NATTERJACK TOAD.

Bufo calamita, Laur.

Dr. Heysham appears to have received a description of this Toad from the English shores of the Solway Firth, but not to have been able to verify the fact by personal investigation. His cautiously expressed belief that this amphibian, so whimsical in its distribution in Great Britain, was found 'upon the sandy grounds, in the neighbourhood of Allonby,' has been more than justified by subsequent experience. Mr. Tom Duckworth at one time knew a large colony of Natterjacks, established in the neighbourhood of Silloth. He also captured a number of specimens near Bowness on Solway. I have myself captured examples at Silloth. Several Natterjack Toads have been supplied to me during the last ten years from the kitchen garden at Castletown. There, these Toads manifest a partiality for the shelter afforded by the bottom of a thick yew hedge. I am unable to say whether the Natterjack occurs in any numbers on the west coast of Cumberland, but its presence in the neighbourhood of Egremont was ascertained some years ago, when a Natterjack was captured alive and sent for determination to Dr. F'Anson of Whitehaven. It was exhibited by that gentleman before the members of the Whitehaven Scientific Association, and a correct description of the specimen went the round of the local press.¹ The late Dr. Gough appears to have been the first to ascertain the existence of this Toad in Westmorland. He stated in 1861 that the Natterjack was to be found 'in quarries on the lime-kilns on Kendal-fell.' In the year 1865 he presented two specimens of the Natterjack 'from Kendal-fell' to the local museum.² From a MS. note left by the same naturalist he appears to have found the Natterjack abundant at Levens, Westmorland. As to the Lancashire portion of Lakeland, I need only add that Mr. W. Duckworth discovered a fine colony of Natterjacks near Ulverston in the summer of 1888.

¹ *Carlisle Journal*, May 19, 1868.

² *Thirtieth Annual Report of the Kendal Literary and Scientific Institution*, p. 4.

Order *BATRACHIA ANURA*.

Fam. *RANIDÆ*.

COMMON FROG.

Rana temporaria, L.

This Frog shares the soubriquet of Paddock or Paddick with the Common Toad, at any rate in the north of Lakeland. The spawn of Frogs or Toads is 'Paddick rud' or 'Paddick rid.' 'Star sleet' is Frog spawn dropped on the ground.¹

¹ Dickinson, *Cumberland Glossary*, p. 93.

Book Fourth.

PISCES.

Order *CHONDROPTERYGII*.

Fam. *CARCHARIIDÆ*.

COMMON TOPE.

Galeus canis, Bonap.

The commonest Dogfish on the N.W. coast of England is the Tope, better known in Morecambe Bay as the 'Fay Dog.' At Ravenglass it is usually called the 'Blue-back' or 'Bastard Shark.' An example sent to me from Silloth in September 1890 measured about 17 inches; this, Mr. Nicol says, represents the size of most of those that he has seen taken in the draught net. He once saw a specimen measuring about 4 feet stranded at Skinburness, but this is the only large one that he has seen. Sometimes a dozen or even two dozen of this destructive fish are taken by the draught nets in the waters of the English Solway. The Peel fishermen assure me that they sometimes use the rough skin of this fish for scrubbing purposes.

Order *CHONDROPTERYGII*.

Fam. *LAMNIDÆ*.

PORBEAGLE.

Lamna cornubica, (Gm.).

The Morecambe Bay fishermen and those of the English Solway assure me that Sharks of large dimensions are virtually unknown in the waters which they fish; but upon the open coast the capture of such fishes, though rare, is not unheard of. Captain Wignall of Whitehaven caught a Porbeagle in a trawl net off St. Bees, on the 30th of October 1889. My friend the

Rev. R. Burn saw it soon after it had been landed, and with admirable promptitude at once informed me of its arrival. I went to Whitehaven by the next train and identified the animal, which was examined by Dr. Welby P'Anson a little later. It measured about 7 feet 9 inches in total length. Fortunately it early became entangled in the net and did little damage to the gear. While being hauled out of the water by the tail, this Shark disgorged a quantity of Plaice and other flat fishes. Wignall told me that he had caught a similar fish on the same ground about five years earlier.

Order *CHONDROPTERYGII*.

Fam. *SCYLLIIDÆ*.

SMALL-SPOTTED DOGFISH.

Scyllium canicula (L.).

The Whitehaven fishermen complain of the destructiveness of this fish, but it is not usually numerous enough in our open waters to do any great harm to their industry. It appears to be almost unknown in the shallow waters of the estuaries.

Order *CHONDROPTERYGII*.

Fam. *SPINACIDÆ*.

PICKED DOGFISH.

Acanthias vulgaris, Risso.

This Dogfish, sometimes called the 'Bastard Shark,' appears to occur in sparing numbers on our coast; of late years, at all events, it has not been very numerous. An example which Cradock sent to me in July 1891, caught off Whitehaven, measured 2 feet 3 inches. Heysham mentions in one of his letters to Yarrell that a Picked Dogfish had been caught in the river Caldew, November 26, 1828. A local paper tells us that the specimen in question was caught in Dentonholme Caldew dam by a boy, who had observed the fish struggling in a shallow pool. It measured 34 inches, and scaled 5¼ lbs.¹ It is curious that this marine fish should have wandered so far from salt water as to reach Carlisle.

¹ *Carlisle Patriot*, Nov. 28, 1828.

Order *CHONDROPTERYGII*Fam. *RHINIDÆ*.

ANGEL-FISH.

Rhina squatina (L.).

The Angel-fish or Monk has rarely been captured off the N.W. coast of England. In the autumn of 1793, as Dr. Heysham is careful to tell us, two examples of this species, a male and female, were caught near St. Bees. Having been 'dried and preserved,' these specimens 'were carried through the country as a show.' The male was subsequently placed in Crosthwaite's Museum at Keswick, but probably perished prior to the final dispersion of that local collection in 1870. At all events, it was not included in the sale catalogue. Dr. Welby l'Anson has seen only one example of this fish, and that was taken on somewhat the same ground as Dr. Heysham's specimens. It was caught in January 1884, and is preserved in the Whitehaven Museum. The upper surface closely corresponds with the figure given by Day, which is a good likeness.

Order *CHONDROPTERYGII*.Fam. *TORPEDINIDÆ*.

TORPEDO.

Torpedo hebetans, Lowe.

This fish owes its inclusion in the Fauna of Lakeland to my friend Dr. Welby l'Anson. He has met with two examples of this species during his long residence at Whitehaven. These specimens, curiously enough, were caught within two years of one another, although they were taken by different fishermen. The first Torpedo was caught off Whitehaven in October 1880, and was brought ashore by the boat belonging to Mrs. Cowman. A second example of this Ray was secured in the month of November 1882. Dr. l'Anson preserved both the skin and the soft parts of the second specimen for the Whitehaven Museum. The cellular batteries of this fish render the soft parts a very pretty preparation, the nerves having been dissected out with great skill. Dr. l'Anson tells me that the acrid juice of this fish blistered his hands as he skinned the specimen and produced a severe rash, the unpleasant irritation of which lasted for several days.

Order *CHONDROPTERYGII*.Fam. *RAJIDÆ*.

THORNBACK RAY.

Raja clavata, L.

Dr. Heysham wrote in 1796 that both Skate and Thornbacks were plentiful on our coast, 'but only of *late years* have been used in this county as food.' The fallacy of this impression is self-evident. We have also documentary evidence which proves that these fish were often served up at the tables of the county gentry in the seventeenth century. The household accounts of Lord William Howard supply many entries of Thornbacks purchased from the local dealers. Thus, there stands in this book (under date of January 1621) an entry: 'A thornpyke and scate, xv^d.' The price of Thornbacks varied in different years from sixpence upwards, according to the supply and size. Now-a-days many Thornbacks are taken in Morecambe Bay and in the waters of the English Solway. Farren of Ravenglass only sells the 'wings' of the Thornbacks. In the winter time many of these fishes abandon the sandy shallows of the estuaries and retire into deep water.

The fishermen of the English Solway are sometimes content to send only the 'wings' of Skate to market, but their usual plan is to make an incision on the lower surface of the fish and cut out the head, leaving only a ring of cartilage as a sort of handle. The liver of the Thornback varies in colour, being brown, grey, or cream-coloured in the newly caught fish. I have seen an astonishing quantity of shrimps taken out of a large Thornback.

STARRY RAY.

Raja radiata, Donov.

The Starry Ray, or, as they call it, the 'Starr Ray' is occasionally captured by the Whitehaven fishermen. I received an example of this fish on July 9, 1891, from Whitehaven. Cradock, the fisherman who sent it to me, stated that he had caught the fish the same morning. He added in his note that 'The Starr Ray is a noted cure for sprains in the back or chest; it must be boiled to a jelly, and rubbed well into the affected parts when cold.'

COMMON SKATE.

Raja batis, L.

This Skate is well known to all our fishermen. In Morecambe Bay it is called the 'Bluett,' a name that obtains some currency also among the fishermen of the English Solway. A good many Skates are taken with lines off Ravenglass and Whitehaven in the winter-time. The numbers of this species are considered to have shown some falling off of late years, large examples having been taken less frequently than formerly.

LONG-NOSED SKATE.

Raja vomer, Fries.

Joseph Farren tells me that he sometimes takes a large Skate, with pointed bill, off Ravenglass in the winter-time, when fishing with long lines; but since I asked him to send me a specimen he has taken none. The only example that Mr. W. Nicol ever saw taken in the waters of the English Solway was caught in a stake-net set close to the Grune Point. The fish came up the Solway in a strong current, the force of which, together with its weight—30 lbs.—carried the Skate partly through the net, cutting a gap in the net of about a foot. This example agreed exactly with the figure of this species given by Couch.

Order *GANOIDEI*.Fam. *ACIPENSERIDÆ*.

STURGEON.

Acipenser sturio, L.

Sturgeon have long been recognised as summer visitors to the Solway Firth. When William de Brus granted a fishery at Horduf to the monks of Holmcoltram, he reserved to himself and his heirs any Sturgeon or Whale (le graspes) that they might secure.¹ The owners of the fisheries of the English Solway retained their rights to Sturgeon caught within their fisheries until they found it more profitable to forego their privileges—in the present century. The Sturgeon is not, in

¹ *Documents relating to Scotland*, vol. i. p. 107.

fact, as valuable a fish as might be supposed. A Sturgeon which weighed $11\frac{1}{2}$ stone was caught in the Eden, near Cargo, on July 7, 1891. It was sold to a Carlisle tradesman, who sent it to Manchester. It was there knocked down to a purchaser for £2, 5s. The salesman deducted the incidental expenses of his commission and the cost of transit, and sent the fishmonger a cheque for the balance, which I saw, £1, 18s. 10d. Consequently, the 'royal fish' averaged a trifle under 4d. per pound in open competition. I have not found any record of Sturgeon being captured in our waters earlier than the month of April. A Sturgeon which weighed $11\frac{1}{2}$ stone was caught in the salmon nets at Kinggarth on April 27, 1841. The months of May, June, and July, are those in which this fish usually visits our estuaries. The size of the Sturgeon taken by our fishermen varies considerably. A Sturgeon caught off Chapel Island in June 1842 weighed between 60 and 70 pounds. Another, caught off Flimby in July 1850, weighed 17 stone, and measured 8 feet 6 inches. Fish of 8 or 9 stone are not very uncommon in the English Solway. Their condition at the time of capture varies individually. They are often very vigorous, and a blow of a struggling Sturgeon's tail will cut a man's leg to the bone. They are generally taken in the haaf-nets. Although we have no evidence of young Sturgeon having been reared in any of our rivers, it appears probable that it is the instinct of reproduction which impels Sturgeon to seek an entrance to our fresh waters. A Sturgeon which Mr. Backhouse caught near Skinburness in the summer of 1891, proved, on being opened, to contain a large quantity of roe.

Order *ACANTHOPTERYGII*.

Fam. *PERCIDÆ*.

P E R C H.

Perca fluviatilis, L.

The Perch has always been a common fish in Lakeland. Adam Walker, who visited this part of England in 1792, found that at Low Wood, on Windermere, boats, lines, and baits were always ready for fishing Perch (called *Bass* here). 'This

social fish,' he says, 'haunts particular places, particularly where an aquatic vegetable grows called *Meakin*. This plant grows to be 6 or 8 feet long, in water about 10 or 12 feet deep, forming a curious wood. Over this wood the boat is fixed by an anchor, or a great stone fastened to the end of a long rope, and if the fishing party consist of Ladies and gentlemen, the sport is excellent; for every one being equipped with a line and hook, on which the bait is hung, a plummet sinks the bait near to the bottom, and the fishers hold the lines in their hands over the side of the boat. If the Perch are hungry, perhaps three or four will bite at a time, giving the hand a shake almost equal to an electric shock; then are they drawn up, and the struggling victims erect their sharp fins, so that the female fishers dare not touch them; squalling and laughter in consequence ensue—she holds her wet captive at arm's length, who sprinkles her all over with water, and occasions the most laughable distress! I know of no pleasanter diversion than to make one of a good-humoured fishing-party on this lake.'¹ Just a year later, in 1793, Richardson wrote the following note regarding the existence of Perch in Ulleswater: 'Bass is the usual name for them here; in an inquisition, taken in the time of Queen Elizabeth, they are called Basse, Barce, and Barcelles. They never go out of the lake; they deposit their spawn among weeds near the shore, where the water is deep, in the month of May. It is frequently drawn up by the nets along with the weeds, by which means myriads are destroyed. Some of these fishes will weigh 5 lbs.'² Perch-fishing is *still* a popular sport among the visitors to Windermere. In 1878 no fewer than 200 rods were kept at Bowness to be hired by tourists for catching Perch. So abundant was this species that some local anglers desired that Perch should be treated as *vermin*. When Coniston was much polluted by water from the copper mine, the Perch suffered less than the Trout. The finest Perch that John Poole saw taken out of Windermere during an experience of thirty years, weighed $4\frac{3}{4}$ lbs. Perch are sometimes drawn up from the *bottom* of Windermere. Their bladders are then

¹ *Remarks made in a Tour from London to the Lakes*, pp. 67, 68.

² Hutchinson's *History of Cumberland*, vol. i. p. 459.

inflated and they cannot sink.¹ The Perch is seldom taken in our rivers. T. C. Heysham wrote to Yarrell on January 10, 1835, that the Perch was now and then taken in the Solway Firth—washed down, no doubt, by heavy floods. A loose note shows that T. C. Heysham examined a Perch taken in the Eden at Kingarth, March 1849. It was in good condition. Mr. H. Leavers has known several Perch to be captured in the Eden of recent years.

B A S S E.

Labrax lupus (Lacép.).

The Morecambe Bay fishermen take a fair supply of Basse in most summers in the stake-nets at Foulney, and in draught-nets. A fish weighing 7 lbs. was caught near Greenodd in June 1891, in a draught-net. This was a fine specimen, but Mr. Nicol tells me that he has known this species to attain a weight of 13 lbs., and that examples scaling 7 lbs. are not very uncommon in the Solway Firth. The Silloth Fishermen term this fish the 'Perch.' In spring and summer they capture Basse in their draught-nets. In May and June it is sometimes taken in the haaf-net. In winter Basse are sometimes caught on long lines off Beckfoot. Mr. Hutchinson recently showed me a Basse which he had received from the Duddon estuary. Joseph Farren tells me that he catches fewer Basse than formerly in the Ravenglass estuary.

Order *ACANTHOPTERYGII*.

Fam. *MULLIDÆ*.

RED MULLET.

Mullus barbatus, L.

Red Mullet are well known to the Morecambe Bay fishermen, but they are not often captured on our coast. Specimens captured in the waters of the Scottish Solway (on the Wigtownshire coast) have been exhibited before the Royal Physical Society of Edinburgh.² These, I find, belonged to the striped

¹ *Report on the Fisheries of the English Lake District*, p. 9.

² *Proc. Ryl. Phys. Soc.*, vol. iv. p. 43.

variety, *surmuletus*, L. . . . It is highly probable that the Red Mullet which visit the N.W. coast of England represent the same form.

Order *ACANTHOPTERYGII*.

Fam. *SPARIDÆ*.

COMMON SEA-BREAM.

Pagellus centrodonatus (De la Roche).

This is not a common fish in the waters of the English Solway, but a few individuals are captured from time to time among the 'white fish.' The figure given by Couch is excellent, but the colour of this species fades rapidly when exposed to the air. In the autumn of 1879 this small fish was comparatively plentiful in the neighbourhood of Skinburness. Mr. Nicol netted a considerable number in drawing a big hole beside a mussel scar off the Grune Point. I have not as yet succeeded in tracing this fish to Morecambe Bay.

Order *ACANTHOPTERYGII*.

Fam. *SCIÆNIDÆ*.

MAIGRE.

Sciaena aquila (Lacép.).

The Whitehaven Museum possesses a stuffed specimen of the Maigre, measuring between 4 and 5 feet in length. It was captured by a fishing-boat in the neighbourhood of Whitehaven early in the year 1877. Dr. Welby P'Anson saw it in the hands of the taxidermist. It was then flayed open, and the operator was about to cook some Maigre steaks. This specimen can always be seen at Whitehaven. It is the only Maigre that we know to have been obtained on the N.W. coast of England.

Order *ACANTHOPTERYGII*.

Fam. *XIPHIIDÆ*.

SWORDFISH.

Xiphias gladius (L.),

Although the Swordfish is tolerably well known to the Bowness fishermen, almost all the specimens that have been

captured in the Solway Firth, including one very recent specimen, have been taken in Scottish waters, probably owing to the greater depth of channel on the Scottish side. But we may fairly claim as a Lakeland fish the Swordfish that was captured by an Annan fishing-boat off Silloth, August 31, 1876. The fisherman who caught it in his 'whemmle-net' in the channel between Silloth and Annan took it to Annan, where it was exhibited to crowds at threepence a head. The *Carlisle Journal* of September 5, 1876, states that this Swordfish measured 'fully eight feet in length, and the sword being entire, it presents a very formidable appearance.'

Order *ACANTHOPTERYGII*.

Fam. *CYTTIDÆ*.

JOHN DOREE.

Zeus faber, L.

During the summer of 1829 the waters of the English Solway were visited by some Dories, and two small examples were captured. They were identified by T. C. Heysham. The first was caught upon the 19th of May, and weighed 18 oz. Its length was $14\frac{1}{2}$ inches. The second specimen was taken on the 12th of June. 'This exceeded 17 inches in length, and measured upwards of 32 oz.'¹ There is a specimen of the Doree in the Whitehaven Museum. It was taken off that town in 1884. Dr. Welby l'Anson preserved this specimen, and has since seen a second from the same quarter. These are the only specimens that have been authenticated of late years.

Order *ACANTHOPTERYGII*.

Fam. *SCOMBRIDÆ*.

MACKEREL.

Scomber scomber, L.

This bright-bodied, 'lish-looking' fish rarely wanders up the Solway Firth into brackish waters, but Dr. Heysham records that his friend Dr. Blamire, once caught a Mackerel in the Eden

¹ *Mag. Nat. Hist.* vol. v. p. 174.

near Rockliffe. The supply of Mackerel netted upon our open seaboard has always varied from season to season. The *Carlisle Journal* of June 21, 1834, announced that a very abundant supply of Mackerel, of fine quality, had been caught off Whitehaven during the previous week, and had in some cases been sold as cheaply as three-halfpence each. In 1839 the *Carlisle Patriot* of June 8 reported a catch of 228 Mackerel, taken off Whitehaven, as the first of the season. Stragglers are often taken on the line near Silloth.

Order *ACANTHOPTERYGII*.

Fam. *SCOMBRIDÆ*.

GERMON.

Orcynus germo (Lacép.).

The Germon is the only species of fish which I have been able to record as taken in British waters, north of the English channel, for the first time. The specimen in question was found stranded in a creek of Burgh marsh (which creek I visited soon after) early in October 1889, by one of the Glasson fishermen. It was in fine condition, and would have been cooked by its owner, had not tidings of its occurrence reached James Smith. Smith has a commission from me to secure any unusual fishes, and on hearing of this fish he at once secured it. He came to report it to me a few days later, and to say that he had made a rough skin of it. It weighed 11 lbs. and possessed a very beautiful eye. The long sickle-shaped fin convinced me that our prize could only be referred to *Thynnus alalonga*; but, having no material by me for comparison, I took the fish to the Natural History Museum, where Mr. G. A. Boulanger kindly confirmed my decision.

Although the Germon has occupied a place in the British list for a long number of years, *this appears to be only the fifth example hitherto recorded from British waters, and to be considerably more northern than the others, all four of which refer to the coasts of Cornwall and Devon. The occurrence of the Cumbrian specimen was recorded in that useful journal, The Naturalist.*¹

¹ *The Naturalist*, 1890, p. 15.

BONITO.

Thynnus pelamys, C. and V.

A Bonito of twelve pounds weight was captured by a trawl boat between Workington and Whitehaven in September 1856. It was announced in the local papers as 'a valuable addition to the Fauna of Cumberland.' The following are the dimensions published. Length, 27 inches; girth, at the dorsal fin, $8\frac{1}{2}$ inches; from the caudal to the first dorsal, 18 inches; to the second do., 10 inches; from the extremity of the upper jaw to the operculum, $7\frac{1}{2}$ inches; from do. to the pectoral fin, 8 inches; and to the ventral, 12 inches; from the caudal to the ventral, $9\frac{1}{2}$ inches; length of dorsal fin, 7 inches, and height, 4 inches; from the nose to the eye, $2\frac{1}{4}$ inches. This fish was purchased by the late Mr. R. Rook, who, after sketching it, presented the specimen to Mr. Wallace of Distington.

Order ACANTHOPTERYGII.

Fam. TRACHINIDÆ.

LESSER WEEVER.

Trachinus vipera, C and V.

In some seasons this fish is so numerous in the shallow waters of the English Solway, as to be a source of great inconvenience to the fishermen in sorting their shrimps, especially when that operation is conducted by candle-light, for the 'sting' is extremely painful. Hot salt water is locally considered to be the best expedient for reducing the pain of a 'sting.' If stung in the finger, as is usually the case, the fisherman ties a piece of twine tightly round the finger above the puncture. This precaution prevents the pain, which is very severe, affecting the hand and arm. At one time, such numbers of these little Weevers were caught off Cardunock, that they were boiled and used to feed pigs. Curiously enough the flesh of this fish is firm and wholesome. Fowls eat Weevers readily. An old man who was pestered by cats tried to reduce their number by feeding them on Viper Weevers, but he only became an object of increased affection to the creatures of the goddess 'Pasht.' Weevers are dangerous to bathers, because they bury themselves in the sand

to wait for their prey, and work their way into sand that is tolerably hard. In June 1889 Mr. Nicol trawled as many as six quarts of Weevers to eight or nine quarts of shrimps; but, happily, these dangerous fishes are not often present in such numbers. They sometimes attain a length of six inches, but average about three inches.

Order *ACANTHOPTERYGII*.

Fam. *PEDICULATI*.

ANGLER.

‡ *Lophius piscatorius*, L.

The Angler is by no means a rare fish in the waters of the English Solway, but specimens of large size are seldom captured in the nets. They are generally found stranded after heavy weather at sea, and only at considerable intervals of time. Small specimens, on the other hand, are taken almost every year in the stake-nets set on the scars of the Solway to catch Flounders. The colour of those taken on our coast is constantly darker than in Couch's figure. Mr. Nicol captured two small examples in a trawl-net in May 1890. T. C. Heysham wrote to Yarrell on the 13th of May 1835: 'A few days ago I received a specimen of the Common Angler (*Lophius piscatorius*) about eight inches long.' This notice occurs in the draught of a letter written by Heysham to acknowledge the receipt of the second and third parts of Yarrell's *British Fishes*.

Order *ACANTHOPTERYGII*.

Fam. *COTTIDÆ*.

RIVER BULLHEAD.

Cottus gobio, L.

This small fish is not uncommon in the smaller streams of our lower grounds, which alone are suitable to its peculiar requirements. Richardson supplies the information that the name of 'Tom Carle' used to be applied to this fish upon the Eamont.

SHORT-SPINED SEA BULLHEAD.

Cottus scorpius, L.

The 'Father-lasher' is a common species in the waters of the English Solway. The finest example that I have examined locally measured seven inches and a half. It was sent to me by George Holmes of Bowness on Solway, in February 1891.

RED GURNARD.

Trigla cuculus, L.

This Gurnard is not very plentiful on our coast, but its numbers vary from year to year. In exceptional seasons Mr. Nicol has himself taken a dozen specimens at one tide, but its presence is uncertain in the waters of the English Solway.

GREY GURNARD.

Trigla gurnardus, L.

Dr. Heysham remarked of this and the preceding species, 'Both these species are rare,' but a more extended inquiry would have convinced him that the present is one of the commoner fishes of our west coast. The young fry of this Gurnard occur in some numbers in the shallow waters of the Solway, west of the Grune. The adults are frequently caught in deeper waters, as off Whitehaven.

Order ACANTHOPTERYGII.

Fam. CATAPHRACTI.

P O G G E.

Agonus cataphractus (L.).

This is one of our common fishes, frequently caught in the shrimping nets off Silloth, occasionally secured likewise in the sparling nets.

Order *ACANTHOPTERYGII*.Fam. *DISCOBOLI*.

LUMPSUCKER.

Cyclopterus lumpus, L.

The Lumpsucker is sufficiently intermittent in its appearances in the nets of our fishermen to have induced several of their number to send specimens to me for identification. It is, however, a comparatively common fish in our shallow waters, visiting Morecambe Bay as well as the English Solway. Mr. W. Duckworth has occasionally eaten examples of the Lumpsucker, while in earlier times this fish was frequently supplied for the table of Lord William Howard, being entered in his accounts as the 'pad,' 'sea pad,' and 'lump.' Dr. Heysham calls it the 'Lumpfish' or 'Sea Owl,' but the fishermen of the English Solway generally apply the title of 'Sea hen' to this species.

UNCTUOUS SUCKER.

Liparis vulgaris, Flem.

This small fish frequents the shallows of the English Solway, and is often captured in the shrimp-nets. In life the Sucker of this species is strongly adhesive, so that an Unctuous Sucker will readily adhere to a finger. The white streaks of Couch's figure are more pronounced than in our local specimens.

MONTAGU'S SUCKER.

Liparis montagui (Donov.).

This small fish is not unfrequently captured in the shrimping nets of the English Solway during the summer season.

Order *ACANTHOPTERYGII*.Fam. *Gobiidæ*.

SLENDER GOBY.

Gobius gracilis, Jenyns.

This Goby is common in the shallow waters of the English Solway, and is frequently taken by shrimpers. Its local name is the 'Groundling.'

WHITE GOBY.

Latrunculus albus (Parnell).

This small species has often been taken in the shrimp-nets of the Silloth fishermen. Whether it visits the waters of Morecambe Bay, I cannot say.

D R A G O N E T.

Callionymus lyra, L.

A female specimen was brought to me recently, taken in the English Solway in May 1890 by Mr. Nicol, who had met with several others. In 1889, for example, he caught a couple of these fishes in his shrimp-net, fishing in shallow water on a sandy bottom. T. C. Heysham informed Yarrell that a single specimen 'was captured in the Solway Firth not far from Cardonock, on the 6th of April 1834.'

Order ACANTHOPTERYGII.

Fam. BLENNIIDÆ.

S H A N N Y.

Blennius pholis, L.

The Shanny is of occasional occurrence among the various small fishes taken in the shrimp nets near Silloth. I have a specimen of this species taken in that locality by Mr. W. Nicol, and expect to find that it is fairly common, as time goes on.

B U T T E R F I S H.

Centronotus gunellus (L.).

This Blenny is not very abundant in the shallow waters of the English Solway, but it is always present with us. Mr. Nicol tells me that he gets two or three specimens every season. It is locally known as the 'Cat-fish.'

VIVIPAROUS BLENNY.

Zoarces viviparus, L.

This species was first recorded from the English Solway in the year 1837. Writing to Yarrell on the 29th of March 1839, T. C. Heysham remarked: 'On Saturday last I also met with three specimens of the Viviparous Blenny, a fish I have never seen in our market before. I have them preserved in spirits, but I fear this species is much too common to be of any service to you.' Dr. F'Anson has obtained this fish near Whitehaven.

Order ACANTHOPTERYGII.

Fam. MUGILIDÆ.

LESSER GREY MULLET.

Mugil septentrionalis, Günth.

Whether more than one species of Grey Mullet visits the coast of Lakeland remains to be determined. The specimens which have been taken in the waters of the English Solway belong to this form. Dr. Heysham wrote in 1796: 'The mullet is a very good fish, but is not frequently met with upon our coasts. There was one in the market in the beginning of June which weighed two pounds.' Farren tells me that the Grey Mullet which he nets on the Ravenglass estuary run up to three and four pounds. He considers that the local supply of Grey Mullet has decreased of late years. All the Morecambe Bay fishermen with whom I have discussed the habits of this fish dwelt upon the adroit efforts made by shoals of Mullet to leap over the edge of their encircling nets. Mullet are often taken in the sound between Barrow and Walney.

Order ACANTHOPTERYGII.

Fam. GASTROSTEIDÆ.

THREE-SPINED STICKLEBACK.

Gastrosteus aculeatus, L.

The typical form of this Stickleback is common in our brooks and ditches. The marine form, *G. trachurus*, the Rough-tailed Stickleback, is often taken in the shrimp-nets in the waters of

the English Solway. The finest specimen that I have by me at present measures exactly 3 inches. The late Captain Kinsey Dover procured some examples of the Four-spined Stickleback, *G. spinulosus*, in the vicinity of Keswick.

TEN-SPINED STICKLEBACK.

Gasterosteus pungitius, L.

As long ago as 1793 the Rev. W. Richardson recorded this species as found 'in this lake [Ulleswater] and the rivulets.' He adds that the local name was 'Prickly Dick.'

FIFTEEN-SPINED STICKLEBACK.

Gasterosteus spinachia, L.

This Stickleback is a summer visitant to the waters of the English Solway. Its numbers vary from season to season; at times it may be termed plentiful.

Order ANACANTHINI.

Fam. GADIDÆ.

CODFISH.

Gadus morrhua, L.

The fishermen of the English Solway rely to no small extent upon their 'takes' of this fish as a means of procuring a subsistence for their families. Codfish vary so much in condition according to age and other factors of growth, as to suggest the employment of several local synonyms. When such terms have once become fixed, their transmission from one generation to another follows almost as a matter of course. We therefore find without surprise that the *Naworth Household Books* contain some specimens of the peculiar phraseology at present employed by our fishermen. 'Keelings,' for example, were often purchased for the Howards. The editor of the reprinted accounts correctly remarks that '*Keeling* or *Killing* is the name given to Cod of a large size.' Charles Waugh wrote in 1806 that 'there are two species of this fish; that which is of the brownest

colour on the back is most esteemed. There are some so large as to weigh twenty pounds. But they are so well known in the markets that I think I need describe them no further.¹ The term is now chiefly applied to large Codfish which are out of condition. So I am informed, at least, by Mr. W. Nicol, who speaks with authority as a representative fisherman.

Another name applied to Cod in the Naworth accounts is 'Bodling,' upon which the Rev. G. Ornsby volunteers an amusing note: 'Dr. Simpson, Vicar of Kirkby-Stephen, tells me that this is a fish which is found in Wastwater, more especially at the head of that lake, and still known in the neighbourhood by the name of *Bott-ling*. I learn from William Jackson, Esq. of Fleatham House, St. Bees, that it is a mule between the salmon and the fresh-water trout. All are males. It is only found where the water is frequented by salmon, never in the mountain tarns where salmon cannot get. In Scotland it is called the bull-trout. Its scientific name is *Salmo ferox*.'² Charles Waugh states that the Bodling 'is smaller than the Keeling, and thicker towards the tail; they are caught from one pound to nine or ten pounds' weight. It is also of the Cod species.'³ Mr. Nicol tells me that the 'Bodling' represents the best quality of the white fish caught at Silloth, and runs from seven to twelve pounds in weight. The term 'Robbin' is frequently entered in the same accounts, but the editor does not seem to have ventured any suggestion as to its meaning. Charles Waugh writes that the 'Robin' (*sic*) is a small Cod: 'Seldom exceeding one pound and a half or two pounds weight; it is thick and short in the body, but drops suddenly small towards the tail. The back-bone, when taken out, seems as if it had been broken and grown together again.'⁴ Dr. Day says that the members of the Cod family appear to be very susceptible to disease of the vertebral column. Mr. Nicol tells me that the 'Robbin' or 'Robin' is a deformed-looking fish, often taken at the end of the winter fishing. He caught two or

¹ *Fisherman's Defence*, p. 64.

² *The Household Books of Lord William Howard*, p. 78.

³ *Fisherman's Defence*, p. 64.

⁴ *Ib. cit.*, p. 64.

three examples in the trawl-nets in the spring of 1891. The Whitehaven fishermen depend upon their 'takes' of Codfish for a large part of their maintenance; the same may be said with regard to the fishing communities of Morecambe Bay. Dr. Heysham has placed on record the interesting fact, that Codfish were sometimes taken so numerous on the Cumbrian coasts a hundred years ago, as to be sold at Carlisle market at the surprisingly low rate of one halfpenny a pound.

H A D D O C K.

Gadus aeglefinus, L.

The Haddock is not often taken in the higher waters of the English Solway, but in some seasons the species is common on our open coast. Some Haddock were taken west of Silloth in the first months of 1892. Dr. Heysham wrote that 'the Haddock is seldom met with on the Cumberland coast. What we see are generally sent from Newcastle. Such numbers, however, were taken during this present autumn [1796] near St. Bees, that they were sold at Whitehaven for a penny or three halfpence a pound.'

W H I T I N G.

Gadus merlangus, L.

This is not a very abundant fish in our waters, but a few Whiting are netted every year in Morecambe Bay and in the lower waters of the English Solway. Those which I have seen caught were netted west of Silloth. The fishermen called them 'Silver Whiting.'

P O L L A C K.

Gadus pollachius, L.

I have never yet met with Pollack in the waters of the English Solway proper, but the sandy channels are entirely unadapted to the requirements of this fine fish. Some suitable ground for Pollack fishing exists between St. Bees and Whitehaven, and there good sport may be obtained with the 'Sand-eel.' The local name of this fish is the 'Kellat.'

COAL-FISH.

Gadus virens, L.

This is a common fish upon our coast in all stages, from the fry, which are often caught in the shrimp-nets, to the fully mature fish chiefly obtained on the open portions of our coast. Some individuals are taken in the docks with hook and lines. The Coal-fish is known to our fishermen as the 'Green-back' or 'Bluffin.'

H A K E.

Merluccius vulgaris, Flem.

The Hake has not been taken, to my present knowledge, in the shallow waters of the English Solway, nor can I record it as taken within the limits of Morecambe Bay, but it occurs sparingly upon our open sea-board. Dr. Welby F'Anson writes to me that 'the Hake is occasionally found on this coast [*i.e.* off Whitehaven], but is regarded by the fishermen as an "escape" from the Irish coast where they catch it in great numbers.'

GREATER FORKBEARD.

Phycis blennioides (Brünn.).

T. C. Heysham informed Yarrell of specimens taken in the Solway Firth in December 1833 and March 1836. He also wrote to Yarrell on the 29th of March 1837, reporting the occurrence of a third specimen in the following words: 'On the 14th inst. I received a fine specimen of the Great Forkedbeard (*Phycis furcatus*) which had been taken in the Solway Firth the day previous. I have to beg your acceptance of this rarity, which I have already sent in a box to your friend Mr. H. Doubleday, who I make no doubt will deliver it safely to you the first opportunity; and which I trust will prove acceptable. When the fish was first brought to me, the sides above the lateral line were strongly tinged with reddish pink.' Dr. F'Anson secured an example caught off St. Bees, May 24, 1892: it measured 23½ inches, and weighed nearly 5 lbs.

L I N G.

Molva vulgaris, Flem.

Ling are commonly taken on the long lines during the spring months, together with Cod and Skate. The presence of large examples in our *shallower* waters is rather exceptional. Mr. W. Nicol sent me a Ling measuring rather more than four feet on the 22d of April 1892. He had taken it in his trawl-net fishing off Skinburness.

THREE-BEARDED ROCKLING.

Motella tricirrata (Bl.).

Dr. Heysham included this species in his catalogue without remark, but his son reported to Yarrell an example which he found exposed for sale in the Carlisle market on the 14th of March 1833. A pencilled note, written on the margin of a leaf of a copy of Yarrell's *British Fishes* belonging to the Carlisle library, records that 'a specimen caught in the Solway Firth was exhibited in Carlisle market January 22, 1858, measuring 16 inches in length.' The *Carlisle Patriot* says that the example in question was taken near Browhouses. Bell of Glasson caught one in the sparling nets in the very same part of the estuary in October 1888. Mr. Nicol has taken several other specimens in his shrimping-nets near Silloth. I have not examined any examples from the open coast, but Mr. Newton presented to the Kendal museum a Three-bearded Rockling which had been caught at Silverdale in December 1866.

TADPOLE HAKE.

Raniceps trifurcus (Walb.).

The only example of this fish that we know to have been caught in our faunal waters has been preserved by Dr. Welby l'Anson. It was caught near Whitehaven in the year 1887.

Order *ACANTHOPTERYGII*.Fam. *OPHIDIIDÆ*.

GREATER SAND-LAUNCE.

Ammodytes lanceolatus, Lesauv.

This fish must be comparatively rare in the waters of the English Solway, at least Mr. W. Nicol has very rarely met with it, although constantly engaged in fishing. On one occasion Mr. Nicol picked up a Greater Sand-Launce which had been washed up upon the sand. He caught another in a haaf-net, but it contrived to make its escape.

LESSER SAND LAUNCE.

Ammodytes tobianus, L.

This is an abundant species in Morecambe Bay, indeed it is well represented in all our estuaries. The Terns which nest at Ravenglass feed their young upon 'Sand-eels' to a considerable extent. The species is frequently taken in the shrimp-nets of the Silloth fishermen.

Order *ANACANTHI*.Fam. *PLEURONECTIDÆ*.

HOLIBUT.

Hippoglossus vulgaris, Flem.

Dr. P'Anson assures me that the Holibut is very seldom taken by the Whitehaven boats. The *Cumberland Pacquet* furnishes particulars of a large specimen caught in the year 1849: 'A fine Holibut, a fish that rarely appears on this coast, and which is nearly or quite equal in flavour and delicacy to Turbot, was caught on Wednesday last by the fishermen belonging to one of the boats of Messrs. Wilson of Tangier Street, Whitehaven, and the Isle of Man. It weighed no less than 9 stone, 2 lbs., and measured in length 5 feet 9 inches, and breadth 2 feet. This we believe is the second Holibut which has been taken in the vicinity of Whitehaven for some years past. The fish, we understand, was forwarded by Messrs. Wilson to Liverpool.'¹

¹ Reprinted in the *Carlisle Patriot*, May 26, 1849.

TURBOT.

Rhombus maximus (L.).

The Turbot is comparatively scarce in our waters. Those taken in the waters of the English Solway of late years have been uniformly small. Mr. Nicol recollects certain seasons in which a few small Turbot, scaling from half a pound to a pound and a half each, have been taken in the shrimp-nets during a week of night-fishing; perhaps half-a-dozen fish might be taken during the five nights. On the other hand, there are many seasons in which scarcely any Turbot make their appearance. In former days, when our channel was deep, large Turbot were sometimes taken off Silloth; indeed Mr. Nicol himself once assisted in capturing a large Turbot. The fishermen noticed the mark which this big Turbot left in the sand (technically called a 'Fluke-bed') for several days. Having thus learnt its exact habits, they set a 'row-net' (4 feet deep, and furnished with pockets) in such a way that the Turbot entered the engine and was secured.

BRILL.

Rhombus lævis (L.).

Under the title of 'Brett,' which is still applied to this fish by the fishermen of the English Solway, the Brill was often supplied to the household of Lord William Howard, especially in Lent. That this fish was then held in good esteem appears certain from the fact that individual Brills commanded a price of eighteenpence and two shillings each. The Brill taken in the English Solway run up to about half-a-pound weight. In some seasons they are numerous. The fishermen reckon that when Brill are plentiful, Plaice are scarce. Brill have been very scarce of late years, but Mr. Nicol once took three stone weight of Brill with a short draught-net at one tide.

MÜLLER'S TOPKNOT.

Rhombus punctatus, Bl.

Recent research has failed thus far in detecting this small fish upon the coast-line of Lakeland; a misfortune which renders it necessary to fall back upon an undated note in T. C. Heysham's handwriting. This fragment, inscribed in weird and mysterious characters upon a tiny morsel of paper, informs us that T. C. Heysham owed his opportunity 'of examining a specimen of this scarce fish to the kind attention of Mrs. Miller of our [Carlisle] fish market, who received it from Cardunock on Saturday last.' The remainder of the note recapitulates the well-known distinctions between the present species and Bloch's Topknot.

P L A I C E.

Pleuronectes platessa, L.

Dr. Heysham quaintly remarks that 'the plaice (*sic*) is very plentiful;' but the fish taken inshore are chiefly small. There is an old saying, still current among the fishermen of the English Solway, that '*Plaice improve as the grass grows.*' It is certain that they improve in condition as the season of spring advances, probably because they obtain an increased and superior supply of food as the temperature rises. Their colour varies with the ground upon which they live. The upper surfaces of those caught upon mussel scars are much darker than in such Plaice as have been taken off clean sand. Plaice are usually in better condition during the winter months than the Flounder. The ova of the Plaice hatch in April in our waters. The newly-hatched young are of a reddish colour.

C O M M O N D A B.

Pleuronectes limanda, L.

This Dab is very plentiful in the English Solway waters in some seasons, while in others few are seen. It was scarce, for example, in the summers of 1890 and 1891. This Dab arrives in our shallow waters in the spring of the year, and lies upon

sandbanks like the Plaice. It is frequently captured in the draught-net, but does not attain large dimensions. A fish of half a pound weight is considered a fine Dab. Dr. Heysham wrote: 'We now and then see a few of this species in our market among flounders. They are small, but delicate food.'

S M E A R D A B.

Pleuronectes microcephalus, Donovan.

This species arrives in our shallow waters at the beginning of spring. The first example caught by the Silloth fishermen in 1892 was taken on the 20th day of April, a solitary specimen. I received it the same evening. When the present species is numerous, the Sole is generally scarce.

F L O U N D E R.

Pleuronectes flesus, L.

Large numbers of 'fresh-water flounders' of all ages are netted in the waters of Morecambe Bay; many are taken at Ravenglass, and the species abounds in the waters of the English Solway, ascending the Eden in its wanderings a couple of miles above Carlisle. The custom, time-honoured, of spearing Flounders or 'flukes' is still observed as a pleasant and even profitable pursuit upon the Solway, especially in the Waver and Wampool, together with their tributary creeks. The young are often taken in the shrimp-nets, but they are not so tenacious of life as young Plaice. The Flounders which feed on small shellfish, after the habit of Plaice or 'salt-water flounders,' are larger and of better colour than those which subsist upon the inferior and muddy fare of the creeks which drain the salt marshes.

S O L E.

Solea vulgaris, Quensel.

The shallow waters of the English Solway seem to have been designed as a natural nursery for baby Soles, but the fry measuring from three to four inches in length are destroyed

wholesale by the shrimp-nets, although the fishermen show the most praiseworthy desire to reduce to a minimum the destruction of the young of this and other food-fishes. I have seen fine Soles trawled off Beckfoot. Fish of good quality are frequently taken in Morecambe Bay. On the whole, however, the Sole is scarcer with us than it was some years ago. Those sold in Whitehaven are chiefly taken by our own boats off the coast of Wigtownshire.

LEMON SOLE.

Solea aurantiaca, Günth.

The Lemon Sole arrives in the inshore waters of the English Solway towards the end of April and the beginning of May. It is less abundant than the common Sole. Those which I have seen netted were fishes for which we trawled in the Firth to the west of Silloth.

Order *PHYSOSTOMI*.

Fam. *CYPRINIDÆ*.

COMMON CARP.

Cyprinus carpio, L.

The Carp exists only at Whin's Pond and in a few other waters to which it has been intentionally introduced. Dr. Heysham wrote that in his time the largest Carp were to be found in Tarn Wadalayne (or Wadling), drained in the year 1858. Jefferson alludes to the same fact, stating on the authority of the *Carlisle Journal*, that on June 24th, 1815, some men employed at Armathwaite Castle 'took in Tarn Wadling two Carp of extraordinary dimensions, each being about 24 inches in length and 14½ inches in girth.'¹

GUDGEON.

Gobio fluviatilis, Flem.

Careful inquiries have failed to bring to light any evidence of the presence of the Gudgeon in the northern portion of Lakeland. Mr. Hutchinson possesses a specimen caught on a recent occasion in the Kent at Force Falls. This, he is disposed to

¹ *Leath Ward*, p. 218.

think, may have entered the river from the Kendal and Lancaster canal, in which Gudgeon were tolerably plentiful ten or twelve years ago, though now rare, owing to the action of the Pike which infest the same waters.

R O A C H.

Leuciscus rutilus (L.).

The Roach is included in Dr. Heysham's list without any particulars. Mr. W. Patrickson of Crosby wrote to the younger Heysham on September 3, 1841, that he sent him some fishes which his men had captured when 'drafting the Irthing,' including '3 roaches (I suppose I name them properly).' The recipient duly acknowledged the present, and agreed that the Roach were correctly identified. One of T. C. Heysham's scrappy notes, dated March 21, 1849, records the receipt of a Roach of 13 inches, forwarded by Mr. Ralph and taken in the Eden. Mr. Tom Duckworth caught small Roach in the Eden opposite to Stanwix church until 1868, when he gave up fishing. Mr. Hutchinson informs me that at the present time Roach fairly swarm in the canal at Kendal. Mr. Duckworth says the Carlisle canal also swarmed with Roach. Parnell says, 'In the Solway Firth I saw in the month of June five examples taken in the salmon-nets, and I was informed by the fishermen there that in the early part of the season they frequently captured them after a flood.'¹

C H U B.

Leuciscus cephalus (L.).

This coarse fish is only too abundant in some of our fresh waters, particularly in the river Eden, where it is the *bête noire* of all good fishermen and consequently destroyed whenever possible. The drug employed for 'skelly fuddling' is the *Cocculus indicus*. This is prepared by being mixed with flour and water; the composition is half baked into a soft cake, of sufficient consistency to enable it to hold together in the water.

Mem. Wern. Soc., vii. p. 268.

The cake is then broken up and the pieces thrown into the water; many stones of Chub sometimes succumb to this treatment. In the Eden the name of Chub is quite unknown, the fish being invariably distinguished as the 'Skelly.' At Ulleswater, it was known to Richardson as the 'Chevin.' Pennant wrote of the Esk: 'This river is inhabited by trouts, parrs, loches, minnows, eels, and lampries; and, what is singular, the chub, which with us loves only the deep and still waters bounded by clayey banks.'¹

D A C E.

Leuciscus vulgaris, Flem.

Mr. Tom Duckworth tells me that a few Dace exist in the lower waters of the river Eden. They are found about Cargo and near Eden bridges. To the best of his belief, there were no Dace in the Eden when he was a boy; but *when* the species was introduced, or by *whom*, he does not know.

R U D D.

Leuciscus erythrophthalmus (L.).

The only locality from which I have seen Rudd is Whinfall Tarn, near Kendal. I learn from Mr. G. A. Hutchinson that 'this fish simply swarms in Whinfall Tarn, and towards dusk they come to the surface to feed in small shoals, when they are very easily taken with a paste bait. Mr. Severs told me some time ago that he caught one weighing $2\frac{3}{4}$ lbs., which he sent to London.'

M I N N O W.

Leuciscus phoxinus (L.).

Now, as in Dr. Heysham's time, the Minnow 'is plentiful in all our rivers.' This fish is in some request as bait among the anglers of Windermere.

¹ *A Tour in Scotland*, vol. ii. p. 88.

T E N C H.

Tinca vulgaris, Cuv.

This fish appeared in Dr. Heysham's list of 1796, but without remark. A note, possibly penned by the younger Heysham, appeared in the *Carlisle Journal* of November 3, 1827: 'Tench (*Cyprinus tinca*, Linn.). A small fish of this species was caught on Thursday the 25th of October, with a rod and line, in the river Eden, a little below the bridge. It weighed $7\frac{1}{2}$ oz., and had only one cirrus or beard at one of the corners of the mouth. This fish, although common in many parts in ponds and stagnant waters, is very rarely taken in rivers.' Heysham told Yarrell in 1835 that the Tench was 'occasionally taken in Solway Firth and now and then in river Eden.' The only locality in Westmorland reported to hold Tench is Whin-fell Tarn, near Kendal. Mr. Hutchinson informs me that, about four years ago, a farmer netted a couple of large Tench in the tarn just mentioned: 'they were sent down to Kendal, and weighed a trifle over 7 lbs. between them.'

B R E A M.

Abramis brama (L.).

Writing to Yarrell on January 10, 1835, Mr. T. C. Heysham communicated a short note upon this species: 'Common Bream (*Abramis brama*). I received a specimen of this fish on February 21, 1831; another on May 12, 1832, both taken on the coast in the vicinity of Bowness.' I have not been able to obtain any recent specimens, although the Bream is credibly reported to frequent the waters of the river Esk. Yarrell states that 'the lakes of Cumberland produce large quantities of Bream of great size.'¹ Dr. Day copies the statement, volunteering: 'Here it is local in its distribution, being found in the lakes of Cumberland.'² I believe this assertion to be a pure romance.

¹ *British Fishes*, 1836, vol. i. p. 335.

² *The Fishes of Great Britain and Ireland*, vol. ii. p. 196.

L O A C H.

Nemachilus barbatulus (L.).

The Loach is found commonly in our streams. Richardson, who was well acquainted with the species, wrote: 'We saw one in the *Vennet* in Westmorland, measured 5 inches; the largest here not more than 4. . . . Vulgarly, Lob-loache.' Dr. Heysham had evidently no personal knowledge of this species, for he follows Richardson in a carefully guarded sentence: 'This species is found in the Eamont and small streams near Ulleswater.' As a matter of fact, it was quite as common in the Petteril and other streams near Carlisle, but he had probably not troubled to look for it. Mr. Tom Duckworth assures me that the Loach is an excellent bait for catching eels.

Order *PHYSOSTOMI*.Fam. *SCOMBRESOCIDÆ*.

G A R - F I S H.

Belone vulgaris, Flem.

Dr. Heysham includes the Gar-fish as 'now and then taken on our sea-coasts.' It is not uncommon on our open seaboard, but is rare in the higher waters of the English Solway. George Holmes sent me a fine specimen from Bowness in May 1891. Mr. J. N. Robinson obtained a male and female which had entered the mouth of the Eden together, apparently that the female might spawn in fresh or brackish water, some three years earlier. Dr. Welby l'Anson has met with specimens at Whitehaven, but he considers it scarce in his neighbourhood.

S A U R Y.

Scombresox saurus (Walb.).

In January 1891 Dr. Welby l'Anson showed me a specimen which he had obtained a short time previously from a small boy, who caught it with a hook and line when fishing off the quay at Whitehaven. It was the first that Dr. l'Anson had seen, so we must infer that the species is rarely captured at Whitehaven. Mr. Nicol has found three different examples, washed up on the sands of the English Solway during winter.

Order *PHYSOSTOMI*.Fam. *ESOCIDÆ*.

P I K E.

Esox lucius, L.

All food-fishes were held in more or less estimation in the middle ages. The Pike among the rest was highly valued. A warrant of Edward I., dated September 25, 1298, authorised Robert de Clifford to allow the Bishop of Carlisle to have sixty jacks to stock the moats of Carlisle Castle: 'E. par la grace Dieu, etc., a nostre foial a loial Robert de Clifford, justice de nostre forest de cea Troute, saluz. Nous vous mandours qe l'evvesque de Cardoill suffrez prendre seyssante pikerels en nostre lay, qi est apele le lay Kybraid, qi est dedens les bundes de nostre forest d'Englewode, pour estorer eut nos fosses entour le chastell de Cardoill.'¹ Edward II., in 1319, ordered John de Crumbwell, keeper of Ingelwode forest, to give John, Bishop of Carlisle, fifty pikerels from the lake of Ternewathelau [= Tarn Wadelyn] to stock his vivaries at 'la Rose.'² These fishes were most likely placed in the 'Bishop's Lough' in Dalston parish. Pike run to a large size in several of the lakes, notably in Windermere, in Bassenthwaite, in Derwentwater. A Pike of 34 lbs. was caught in Bassenthwaite in July 1861.³ Mr. Hutchinson tells me that the finest fish that he has seen were taken in Killington Reservoir.

Order *PHYSOSTOMI*.Fam. *SALMONIDÆ*.

S A L M O N.

Salmo salar, L.

The Salmon, which essay to leap the falls of our Lakeland rivers, like the Stags which crop the grass and heather of the fells that flank the shores of Ulleswater, belong to a race which played an important part in the early history of this region. Both the Salmon and the Red Deer have afforded noble sport to many successive generations of hardy huntsmen and patient fishermen; both the one and the other have been the cause of

¹ *Papers and Letters from the Northern Registers*, p. 137.

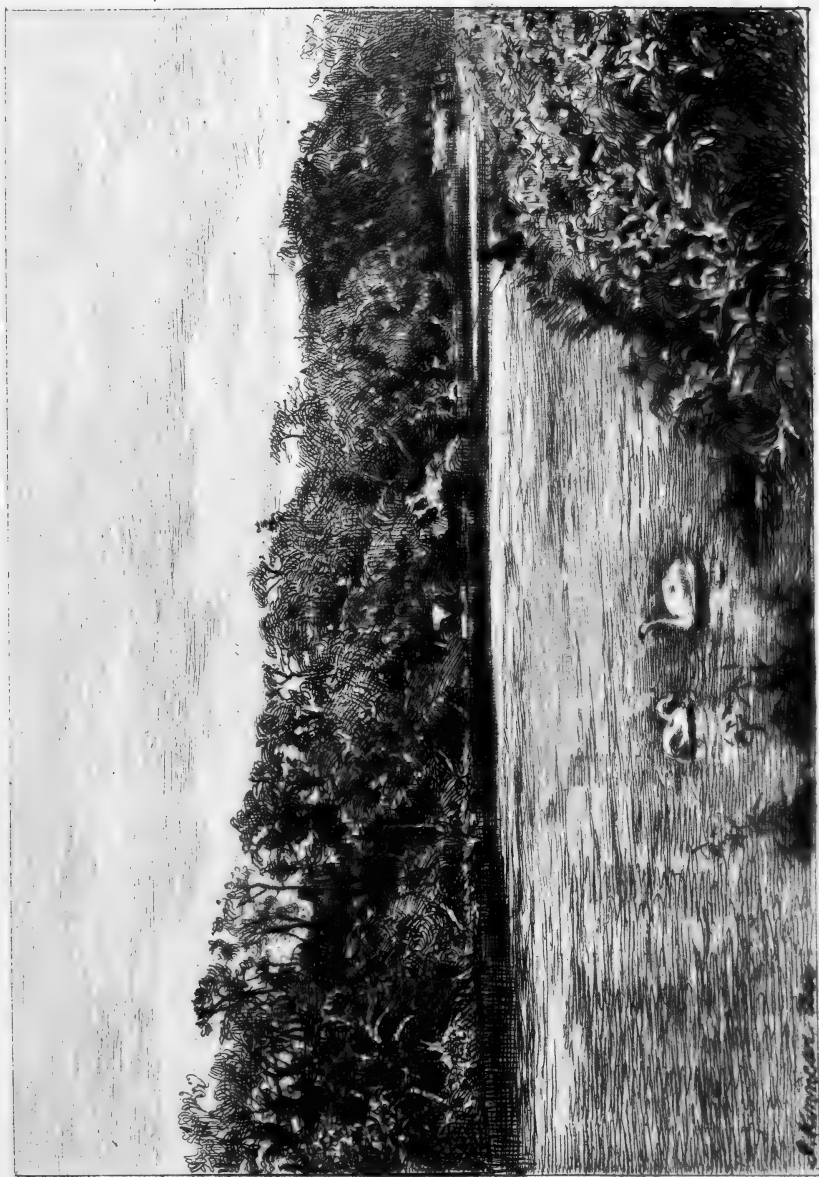
² *Documents relating to Scotland*, vol. iii. p. 123.

³ *Carlisle Journal*, June 19, 1861.

frequent law-suits ; but while the Red Deer have long ceased to supply a subject of dispute, the money which has been expended on fighting local fishing rights, real or imaginary, even within a recent period, would have provided a handsome endowment for any charitable institution.

It is not my purpose to attempt to deal exhaustively with the local history of the Salmon. Such an attempt could not be included within the modest limits of the present volume. It would require also the special skill of a professed archæologist. My task is a simpler one. All that I can aspire to do is to show, however imperfectly, that the gleams of light which we catch to-day, reflected back from the faded characters of ancient charters, go far to prove the importance which once attached to the Salmon as an article of ordinary consumption. I am no ecclesiastical lawyer ; but, so far as I understand the earliest evidence, it seems tolerably plain that the kings of England used to grant rights of fisheries to great nobles, who in their turn bequeathed a large share in their special privileges to the ecclesiastics of their own neighbourhood. The royal grants were sometimes of almost a nominal character. Henry III., for instance, in 1226-27, granted licence to Thomas de Muleton and Ada his wife, a fishery on the bank of the Eden, in Inglewood Forest, for the yearly reddendo of a pair of gilt spurs at Easter.¹ But the majority of such grants implied large possessions, out of which the bold barons could well afford to endow the various religious establishments. The favours which the warriors bestowed upon those who offered prayers for their souls and those of their ancestors were not limited to Salmon fisheries. William of Lancaster, the generous benefactor of the Furness monks, gave them facilities for netting sheets of fresh water : ‘Et insuper concessi eisdem unum batellum, competens ad cariandum, quæ fuerint necessaria in aqua de Thurstainwater et aliud modicum batellum ad piscandum in ea, pro libitu, cum viginti retibus, ad opus dictorum manchorum meorum.’ The monks were allowed another ferry-boat on Windermere, in which lake they likewise kept a fishing-boat : ‘et aliud modicum batellum ad piscandum ibidem cum

¹ *Calendar of Documents relating to Scotland*, vol. i. p. 175.



A SALMON POOL ON THE EDEN.

viginti retibus, sine ulla contradictione mei vel hæredum meorum.’¹ But it was to their rights of fishing for Salmon that the monks clung most tenaciously. Pleased and thankful they were, no doubt, to dip the light paddles of their well-seasoned bark in the rippling waves of Windermere, the brethren chanting their vesper hymn as they drew to land the dripping nets, detaining in their fatal meshes numbers of dark-banded Perch or delicate crimson-bellied Charr. These last might either be preserved alive in tanks or converted at once into a savoury mess, prepared to grace the festal memory of some hermit or legendary saint. Fish stews, let us remember, were the rule in those days. Venison could not be obtained at all seasons. Moreover, the original stock of the wiry little Herdwick sheep, which now people our bare hills with bleating thousands, the ewes dropping their *dark-limbed* lambkins during the first days of May, had not as yet landed on our western seaboard, saved from the wreck of the gallant Spanish galleon that drove inshore before a hurricane, breaking up on one of those sunken reefs of rock that bind our coast, concealed from the careful pilot by the wash of the treacherous tide. The bishop at Rose replenished the episcopal lough with Jack and other coarse fish, fit food for the humbler retainers of his household. At Holmcoltram the Abbot maintained the course of discipline prescribed by his order with sturdy conscience, entertaining Lenten guests with a variety of fishes, selected from those which lay huddling together at the bottom of his well-appointed fish stews. But what mattered *stews* full of Carp and Pike, when a Grilse, fresh run from the sea, could be had for the trouble of drawing a favourite pool? Hugh de Morville gave to God and the Blessed Mary of Holmcoltram and the monks there serving God, ‘unum rete integrum ad Soleburgh et in omnibus aliis locis super Edene communiter, cum vineto de Burgh, et unum bothum *et locum aptum ad rete suum exsiccandum*, cum omnibus aliis aysiamentis ad illud rete pertinentibus.’² Disputes about fisheries are legionary, and even the religious bodies quarrelled with one another about their respective rights. For example, in the year 1234, a dispute arose between the Prior of Carlisle and the

¹ Dugdale, *Monast.*, vol. v. p. 247.

² *Ib.* p. 607.

Abbot of the Abbey of Holmcoltram 'super Piscatione de Eden.' Walter, the Bishop of Carlisle, was appointed to arbitrate upon the case. His Lordship accordingly heard the witnesses, and gave his decision in the following words: 'Videlicit, quod decimæ piscium captorum in aqua de Edin, infra loca prænominata, vel alibi infra limites parochiæ de Routheclif tractorum, ad terram infra parochiam prænominatam, nobis tanquam præfatæ ecclesiæ rectoribus remanebunt; ita tamen quod nos, pro bono pacis, duos solidos argenti præfatis abbati et conventui annuatim ad Pentecostum persolvemus impetuum.' But the interests of peace will not always satisfy litigating parties. The monks had already sent the story of their wrongs to Rome and obtained a Bull from Pope Lucius III. which confirmed the rights of the Abbey and forbade any one to levy toll upon their Salmon: 'Sive de piscationibus vestris, ubicunque fuerint in aquis salsis, vel fluminibus, nullus a vobis decimas extorquere presumat.'¹ Throughout the whole of Lakeland the religious houses exacted and clung tenaciously to certain rights of fishery, which were confirmed, as occasion required, by different sovereigns. For example, Henry III. confirmed to the Abbot and monks of Kaldre their claims to the fishery of Derwent and that of Egge in 1231. They were allowed 'twenty salmon yearly at the feast of Saint John the Baptist, and one net in Derwente between the bridge and the sea.'² That the monks were not too saintly to indulge in personal disputes about their fishing is evidenced by the fact that in the reign of Henry VI. Thomas de Sevenhouse was fined for throwing a monk from the bridge into the Calder during the progress of an argument regarding their respective rights.³ On that occasion the monk seems to have had the best of it on the whole, though we are not told whether he suffered any disagreeable effects from his unexpected bath. But I suspect that the religious communities were sometimes grasping. The Prior of St. Bees was worsted at an assize held at Carlisle, 1278-79, when the jurors present and the whole county complained 'that the Prior of St. Bega has two engines called "cupe" for

¹ Dugdale, *Monast.*, vol. v. p. 598.

² *Documents relating to Scotland*, vol. i. p. 207.

³ *Trans. Cumb. and West. Arch. Soc.*, vol. ix. p. 225.

catching Salmon in his pool of Staynburn, where in times past he had but one, and the other was set up six years ago without warrant, and after the last justice-eyre. Therefore he is *in amercement*. The Sheriff is ordered to remove the second "cupa" at sight of the jury at the Prior's expense.¹ This assize is especially interesting for the glimpse which it affords us into the practical working of the Lakeland fisheries during the thirteenth century. It was on this very occasion that the jurors of Lyth, and Eskedale, and of Cumb', and Allerdale made a presentment regarding the great destruction in the waters of Edene and Esk and others in the county, of Salmon coming up to spawn, and likewise of the young fry going down to the sea. The whole county, knights and freeholders, unanimously decided that they should observe a *close time*; 'that from Michaelmas to St Andrew's day no net shall be drawn or placed at weirs, pools, or mills, or mill-ponds, and that none fish in the above or any other waters in the county, with nets, stergilds, or other engine, within said close time; or without engine. Also that from the feast of the Apostles Philip and James until the Nativity of St. John Baptist, no net or "wile" or "borache" shall be placed at pools or mills or mill pools in said waters.' Only approved nets were to be employed, and the meshes were required to be wide enough to let the salmon fry through,—viz., of four thumbs' length. Persons convicted of illegal practices were to be summarily disposed of by being sent to the King's prison. One of the enactments of this jury survived until our own century—viz., their order that illegal nets were to be burnt in public when seized. The *Carlisle Journal* of April 21, 1827, informs its readers that 'within these few days no less than 20 shackle and other fishing nets *have been publicly burnt* in the market-place, Appleby, which were taken from a most noted gang of night net poachers; most of the nets were new and worth altogether upwards of thirty pounds.' It would weary the reader, were I to detail the dry statistics of the salmon fisheries of Morecambe Bay, as they have been stated in law-suits and other pleas. The year that the above-mentioned nets were burnt at Appleby

¹ *Documents relating to Scotland*, vol. ii. p. 38.

witnessed the settling of a dispute regarding the fishery of the Manor of Beethom, originally bestowed on the Derby family by Richard I. It may suffice to say that the lord of the manor won his claim to the Salmon caught in the river, and to nothing else. But the story of the rights and counter rights that have been held and claimed, and fought and lost, is too tedious for general readers. One finding of an inquisition regarding the Eden shall alone obtain place here: 'Also we present that it hath been used to have a *Water Court* for the reforming of all wrongs in the said water of Eden, or of taking young of fry, called white trouts, or for fishing with nets of so small a mesh.'¹ All forfeitures were to be extracted and answered to the Lord, and the said Court 'was used to be kept at such times as the Stewart thought by complaints it was needful, but not otherwise, certainly every year.' Here I may remark that our shrewd north countrymen employed mechanical means for ascertaining the growth of young Salmon more than two centuries ago. Our information on this point is to be found in a letter which Mr. Johnson of Brignall wrote to John Ray on April 16, 1677: 'In the Mouth of Eden, in Cumberland,' says Johnson, 'the Fishers have four distinctions of yearly growth (after the first Summer, when they call them *Free* or *Frie*, as we Smowts or Smelts) before they come to be *Lackes*; and this they say they have curiously observed by fixing so many Pins in the Fins of Yearlings, or two Years old, and after taking them again.'² It seems not unreasonable to infer from Johnson's expression—'curiously observed,' that this marking of fish was at that time a novel practice, if not actually first developed in Cumberland.

Of the numerous engines employed upon our estuaries from mediæval times for capturing Salmon, I cannot attempt to speak at length. They varied at different seasons, but were principally stake-nets. The 'Haf' net, still employed by the fishermen of Bowness on Solway, was in use in the thirteenth century, and consisted of a net fastened to a pole of eleven or twelve feet in

¹ This is quoted by the late Mr. Nanson, as reported in the *Carlisle Journal* of April 13, 1877. The late Town-Clerk of Carlisle does not seem to have furnished any date for this interesting inquisition.

² *Correspondence of John Ray*, p. 142.

length, supported on a framework, and held by the fishermen 'in an easy stream, in the ebbing and flowing of the tide.' The fishermen draw lots for their respective places in the estuary. Time was when the fishermen of this 'mean village,' as it was called in 1785, obtained a supply of Salmon by striking the fish with 'leesters' in the tideway.¹ Fish must have been very plentiful in the middle of the eighteenth century, if we can credit the statements made by 'Philtopographus' in the *Gentleman's Magazine* of 1755. 'Salmon,' observes this anonymous writer, 'at their markets sells from three halfpence to twopence a pound; but the people have so little notion of dressing it to advantage that they throw away the livers and eat the fish without having so much as a little melted butter for sauce. If any remain unsold after the market is over, they cut it into pieces and salt it, putting it up close in a pot or earthen vessel, to be eaten as winter provision with potatoes or parsnips.'² If the poor Bowness fishermen really sold their fish for such a price as 'Philtopographus' states, they must have been less alive to business than some of their neighbours. The Workington men sent their fish 'up to London upon Horses, which, changing often, go Night and Day without Intermission, and, as they say, out-go the Post, for that the Fish come very sweet and good to London, where the extraordinary price they yield, from 2s. 6d. to 4s. per Pound, pays very well for the carriage. They do the same from Carlisle.'³ Clarke stated, in 1787, that Salmon never entered Derwentwater; or again, 'Salmon come to the foot of Ulleswater to spawn, but never enter it.' Salmon used to enter Ulleswater, and Haweswater too, in Clarke's time, and would do so now if they could gain entrance. Indeed, it has long been well known that Salmon enter several of the lakes. Thus Pennant wrote of the Derwent, that Salmon 'come up the river from the sea about Michaelmas, and force their way through both lakes as far as Borrowdale. They had lately been on their return, but the water near the [Ouze] bridge proving too shallow

¹ The 'leester' employed at this time was a staff of ash about fourteen feet long, armed at the end with three barbed spikes.

² *Gentleman's Magazine*, 1755, pp. 315-317.

³ Defoe, *Tour thro' Great Britain*, 1769, seventh ed. vol. iii. p. 321.

to permit them to proceed, they were taken by dozens, in very bad order, in the nets that were drawing for trout at the end of the lake.¹ The author of *Observations chiefly Lithological* wrote in 1804: 'The lake of Derwentwater has no char in it; only perch, or bass, as it is here called, eels, pike, and trout; and the salmon which pass through the lakes of Derwent and Bassenthwaite from the river Cocker to spawn in the winter season. In the month of May the salmon smelts, or fry as they are called, are on their way to the ocean. They may then be very easily caught. They are esteemed a great delicacy.' It is sad that this noble fish has fallen upon evil days, when the pollution of mines and factories invades its favourite pools, while the direful pestilence of leprosy selects the finest fishes, and destroys them piecemeal before ever a 'fresh' can arrive to sweep away their exhausted bodies into the wholesome currents of the Irish Sea. The intervention of poachers in removing diseased fish, if allowed full scope, would do something to decrease the risks of contamination. Poachers unfortunately cannot be trusted to destroy diseased fish. Usually they try to sell the carcasses, sending them to a purchaser in a basket full of clothes going to the laundress, or disposing of them at a low rate in rural public-houses. Quite recently two little boys, six years of age, were discovered in a public-house in Carlisle, endeavouring to dispose of an Eden Salmon on their own account. But notwithstanding the ravages of disease, the finest and gamest Salmon are taken as often as ever they were. It is believed that the Eden produced the heaviest Salmon authenticated as taken in Lakeland waters. It was not, however, a native of this region, but a Liverpool angler, Mr. Frances, who secured this prince of fishes. It was on the 9th of November 1888 that the fish was hooked in Cat Clint. Half an hour's fine play followed before the fisherman landed his prize in Colley's Nab, the next stream below. It proved to be a finely proportioned male fish, measuring 51 inches in length and 29 inches in girth. The breadth of the tail was 14 inches. The weight was registered at 55½ lbs.²

¹ *A Tour in Scotland*, vol. ii. p. 50.

² *Carlisle Express*, Nov. 10, 1888.

SEA TROUT.

Salmo trutta, Flem.

This is a common fish in our larger rivers, especially in the immature stage known in the Eden, and among the fishermen of the Esk, as the 'Whiting.' Though no fisherman, I heard so much doubt expressed as to the identity of the Esk 'Whiting,' that I asked my friend, the Rev. W. Jackson, an enthusiastic sportsman, to obtain the opinion of the late Dr. Day upon this fish. Carefully selected specimens were sent to Dr. Day, who submitted them to an elaborate examination. This resulted in his convincing himself that the fishes which he dissected were the young of the Sea Trout. These fishes begin to run up the Esk in June, when they average four and five to a pound. They continue to improve in condition until August, some fishes running up to half a pound, or even a pound, each. At this period of their existence 'Whiting' are highly gregarious, and congregate in such shoals, when fresh-run from the sea, that the bottom of the Esk at Floriston is sometimes black with them. They are special favourites because they are such plucky fish, fighting hard even on the top of the water. The artificial fly which they like best is made of a grouse feather, with a gold rim and purple hackle. Mr. H. Leavers tells me that the largest Sea Trout that he has seen from the English Solway was a fish of nine pounds.

COMMON TROUT.

Salmo fario, L.

The becks and lakes of this mountainous region abound in Trout, varying in size and appearance according to locality, but everywhere affording sport in the loveliest and most romantic spots that can be found. Even the little brook by the wayside at Dale Head contains a numerous population of speckled trouties, while their brethren are exceedingly plentiful in certain lakes. T. Lindsay assured me that on one occasion he took 47 lb. weight of Trout in Wastwater Lake in a single day. It must be confessed that on the occasion in question Lindsay was

fishing with the destructive engine known as an 'otter,' now illegal. The Trout of the Eden sometimes attain a weight of five and six pounds, occasionally half a pound more; but heavier fishes have occasionally been taken in some of the lakes. The Rev. T. P. Hartley saw a trout of $7\frac{3}{4}$ lbs. caught in a big 'top net' near Rawlinson's Nab, Windermere. The late Mr. Whalley, a local authority on the Salmonidæ, pronounced the fish to be an undoubted Great Lake Trout (*S. ferox*). The late Dr. Day degraded the so-called Great Lake Trout to the position of a variety of *salmo trutta*. Whether this Windermere Trout represented the variety *S. ferox*, it is of course impossible for me to say. It would have weighed considerably more than it did had it been in good condition. But whatever view of the question may please our local anglers, there can be no doubt as to the fact that Ulleswater was at one time considered to be the home of the Great Lake Trout, and that these fishes are now regarded by most of the local fishermen as extinct. The earliest reference to Trout of large size that I have as yet been able to discover is contained in the recently published Rydal ms.

Sir Daniel Fleming enters in his accounts of October 1683: 'Given to Mr. Mounsey's man for bringing a great trout, £00 00s. 06d.' Captain Hatton alludes to a similar fish in a letter of October 25, 1692, addressed to John Ray:—

'SIR,— . . . Whilst I am now writing, a Westmorland acquaintance of mine coming to see me, in Discourse did accidentally mind me of the *Surprize* I was in, some years since, at *Lowther Hall* in Cumberland, the House of *Sir John Lowther*, seeing at *Sir John's Table* a fresh Water *Trout*, which was 38 inches in Length, and 27 in Girth, taken in *Hull's water*, a large Lake in *Westmorland*, in which I was assured by *Sir John*, and other persons of unquestionable credit, *trouts* of that Size, (nay larger) are frequently taken.'¹

Clarke tells us regarding Ulleswater that 'the fish found in this Lake are *trout*, perch, eels, char, skellies; and a fifth peculiar to this and Buttermere (where there are very few), called the Grey Trout. These grey trouts in form resemble the other trouts, but are much larger, weighing thirty or forty

¹ *Correspondence of John Ray*, p. 268.

pounds: one was killed a few years ago which weighed fifty-six; but the ordinary weight is from seven to twenty pounds each. They are found chiefly in the deep water below House-Holm island; they are, however, sometimes taken in all parts of the Lake, though but seldom, except in October, which is their spawning time. During that month the King of *Paterdale* usually sets a net across the foot of Coldrill-Beck, but not one has ever been known to enter any other of the streams. Some of the trouts, however, escape the net, but are generally taken by the neighbouring farmers, who strike them at night-time with spears by the light of a torch. These unlawful practices the Gentlemen of the neighbourhood have not been able to prevent: it is indeed impossible they should, for the farmers of the fisheries connive at them, because the grey trouts prey upon the small trouts and char, upon which their profits depend; and so voracious are they that I have seen two trouts, near a pound weight each, taken out of the belly of one of the large ones. They are taken with nets, but will sometimes rise at the fly: their strength, however, makes them very difficult to kill.¹

Walker, who wrote about ten years after Clarke, has left a similar statement: 'The Grey Trout of this Lake grows to 30 or 40 pounds weight, and goes up the brooks and rivers to spawn, and takes up its abode in the deepest part of the water at other times, and therefore is very seldom caught.'² Mr. C. C. Hodgson tells me that he once caught a fine, pink-fleshed Trout in the Eamont, shortly after the river leaves the lake, and this he thought must be a small example of *S. ferox*, var. It may be convenient to state here that a hump-backed variety of the Common Trout inhabits the upper waters of the Caldew, near Sebergham.

As regards the introduction of fish into Lakeland waters, Mr. H. Leavers informs me that some eight thousand fry of *Salmo Levensis* have been introduced into the Eden near Carlisle during the last five or six years; these came from Howietoun. Similar experiments are being made, I understand, in other Lakeland waters. The *Yorkshire Post* of February 27, 1889, stated that Captain Machel had just caused 1000 examples of

¹ *Survey of the Lakes*, p. 38.

² *From London to the Lakes*, p. 68.

the American Brook Trout (*S. fontinalis*) to be placed in the Eden at Crackenthorpe, near Appleby.

THE ALPINE CHARR.

Salmo alpinus, L.

Among the numerous writers who have essayed to treat of Charr in the English lakes, a high rank must be assigned to John Ray. He refers to this fish as 'the Red Charre Westmorlandici lacûs Winandermere dicti.'¹ He adds: 'Quatuor aut quinque in Cambria lacus hunc piscem alunt: necnon lacus Winandermere in Westmorlandia.' He speaks of the 'Gilt Charre: 'Hic procul dubio idem est cum *Charra* alba, The *Gilt Charre* lacûs Winandermere.' Defoe writes that Winander Mere is famous 'for producing the Char-fish, seldom found unless it be at Ulles-water, bordering on Westmorland, and in North Wales, as I have mentioned before. It is a curious Fish, and, as a Dainty, is potted and sent far and near by way of Present. It must needs be a great Rarity, since the quantity they take, even here, is but small. Mr. Camden's Continuator calls it very happily the Golden Alpine Trout.'² But Charrs were valued for pies before it became customary to pot them. Some practical information as to the gastronomical qualities of Charr may be gleaned from the book of accounts kept by Sir Daniel Fleming of Rydal, between the years 1656 and 1681. Thus, in 1660: 'Mar. 12, Item, for the carryage of a char pie to my Aunt Dudley to London, £0, 7s. Od. '; 1662, 'Mar. 23, Item, for the carryage of a charr-pie unto my aunt Dudley at London, at 2d per lb., £0, 6s. Od.' When a guest stayed at Rydal, Charr must needs be served up; therefore in 1655, 'June 29, Item, for twelve charrs when Mr. Dugdale was here . . . 3s. Od.' Pies must be sent to grand acquaintances; therefore in 1666, 'Mar. 6, Paid John Banckes which he had paid at Kendall, February 23, 1666, for the carryage of a char-pye unto the Earl of Carlisle at London, being 4 stone and 5 lb., 9s. Od.' Private friends looked for similar attention; therefore in 1665, 'Mar.

¹ *Synops. Method*, p. 61.

² *Tour through Great Britain*, vol. iii. p. 294, 7th edition, 1769.

2. Paid unto John Banks which he had disbursed at Kendall last Saturday, for the carryage of two charr-pies unto London—to the Lord Arlington and Joseph Williamson, Esq.—to Will Banckes, carryer, weight 6 stone, 7 lbs.—the sum of £1.’ It will be noticed that the size of Sir Daniel’s pies varied with the importance of the recipient. The Earl required a very big pie, exceeding four stone; Lord Arlington had a somewhat smaller pie; ‘my aunt Dudley’ had to content herself with pies of lesser dimensions, as the charges for carriage, according to weight, testify. *How many Charr went to a pie? Thirty-eight;* for in 1662 we find that Adam Fleming brought ‘eleven dozen of charres from Connistone for four pies.’ Supposing that the Charr were fine fish, they might possibly average three to the pound; the whole thirty-eight might reach a collective weight of thirteen pounds. But even ‘my aunt Dudley’ received a pie weighing thirty-six pounds, as the cost of carriage shows; therefore, twenty-three pounds of the pie must have been pastry and dish, and only thirteen pounds fish; if the weight of the pastry increased, in ratio to the total bulk, faster than the Charr, as no doubt it would, the consistency of the pastry of the Earl of Carlisle must have required a pretty stiff potation to wash it down. The actual cost of the fish was 3d. apiece, or 3s. a dozen. Curiously enough, the price paid by Sir Daniel is corroborated a century later by Pennant, who remarks of Coniston: ‘The fish of this water are char and pike; a few years ago the first were sold for 3s. 6d. per dozen, but thanks to the luxury of the times are now raised to eight or nine shillings.’¹

Mr. John Fell prints, in ‘Appendix IV.’ to his paper, ‘Home Life in North Lonsdale,’ a curious letter from the Duke of Montagu:—

‘MR. ATKINSON,—I received yours of the 1. of this month, & also the Pott of Charr which you sent me by that days Carrier, which was the best I ever eat, & I would have you send me some of the same sort by every Carryer, take care to Pick the hen fish and those that are of the Red Kind, and let them be potted and seasoned just as that Pot was for it cant be beter—as I recon it is now the best season for Charr, I

¹ *A Tour in Scotland*, vol. ii. p. 34.

would have you send me some fresh ones, directed to my Lord Lovell who is Postmaster General as you did the year before last, which I think was by an express, but these came in a wooden box, which made it to great a weight for the Post to carry conveniently therefore these should be put into some sort of a —— basket and the fish packed in it in moss or some sort of thing that will keep them from bruizing and not give them a taste. You let me know what day they will be in town that I may give Ld Lovell notice of it that they may not lye at the Post office. Let them you send me be well chosen fish and all of the Red sort. When you have Particulars of the Bloom Smithy Rents you'l send them me.—I am yours, MONTAGU.

‘London, Jan. 27, 1738.’¹

Sir Daniel Fleming's correspondence includes a letter from Dr. T. Smith, written April 1, [16]35, and addressed to him at the lodgings of Lord Arlington, Whitehall, explaining the difference between Char and Case. ‘They are very much alike, but the latter is smaller, and spawns at a different time.’² In the lakes of Cumberland, Westmorland, Lancashire, observes Jenyns, cited by Day, this fish in its ordinary state is the *case Charr* of Pennant; when exhibiting the bright crimson belly which it assumes before spawning, it is called the *red Charr*; when out of season, the spawn having been shed, it is distinguished by the name of the gilt Charr. In Sir Daniel's day, a Charr pie cost 33s. for Charr alone. When the fish became dear, housewives devoted their energies to *potting* Charr, instead of making them into enormous pasties. Thus Clarke (1787) observes of Windermere: ‘The Charr in this Lake are of excellent quality for potting, many pots of which are sent to different parts of the kingdom every year.’ He adds: ‘I do not however think them superior in quality to the Ulswater trout, and are distinguishable from them more by their colour than taste; so much alike indeed are they, that many pots of Ulswater trout are sold for Winandermere Char. They are taken in perfection in this lake only from the beginning of

¹ *Cumberland and Westmorland Arch. Soc.*, vol. xi. p. 397.

² *Rydal ms.*, p. 35.

September to the middle of February, during which time they assemble themselves in what is here called *schools* like Herring.' Of Ulleswater, Clarke states: 'The *Char* of this lake are smaller than those of Winandermere, but in my opinion equal in flavour to the best of them. There is indeed one species of *Char* in Winandermere, called Red-bellied *Char*, which is far inferior to the Ullswater *Charr*: these are the kind usually sent to the metropolis, but as they have the name, it is enough.' The Ulleswater *Charr* are extinct. Their race perished owing to the pollution of the stream in which they spawned, by deleterious matter from the mines. Robinson, who wrote in 1709, supplies a quaint account of *Buttermere*: 'The fourth remarkable *Lake* is *Buttermere*, wherein is bred a sort of *Fish* called *Charrs*, much like the Ullswater *Trout*; the *Male* is grey, the *Female* yellow-bellied; the *Flesh* upon them is *Red*, and crisp to the *Taste*. They are more luscious and delicious than the *Trout*. They are in this country baked in pots well seasoned with spices, and sent up to *London* as a great *Rarity*. . . . These *Charrs* are a *Fish* bred in this *Water*, and are peculiar to it and *Windermere-water*.'¹ Clarke wrote that *Buttermere* possessed 'the best fish of any (*Ulleswater* only excepted), viz. *charr* and *trout* for potting, but not very plentiful.' Dr. Heysham wrote that *Charr* 'are found in *Ullswater* and *Ennerdale lake*, but are most plentiful in *Winandermere* in *Westmoreland*, where large quantities are annually taken, and when potted are sent to almost every part of the kingdom.' A full-grown *Charr* is about 10 inches in length, and, if taken in season, weighs about 10 oz.

Sir Daniel Fleming, Bart., was probably the first to describe the habits of these *Windermere Charr*, about the year 1671: 'Up the river *Routha* go yearly great plenty of large *trouts*, and up *Brathy* many *Case* (a fish very like a *charr*, but of a different species, it spawning at another time of the year), and tho' these waters runs a good way in one channel before they fall into *Winander-meer-water*, and are both very clear and bottomed alike, yet the owners of *Rydal-hall* [*i.e.* the writer

¹ *Essay towards a Natural History of Westmorland and Cumberland*, p. 60.

himself] (to whom the fishing of both these rivers doth belong, and have a fish-ark or coop in either river), scarce ever got any trouts in Brathy, or *Case* in Routha-meer, in which are several islands and store of fish as pikes, perch, trouts, and eeles, the fishing whereof, as also Elter-water, Longbrigge Tarn, and other waters in the parish of Gresmere, have time out of mind belonged to the lords of the said mannor.'¹ Mr. Browne's MSS. include the draft of an agreement by which 'Dame Elizabeth Otway, of Ambleside, lets to George Braithwaite, of High Wrey, her privilege of fishing upon Windermere water, with the privilege of carrying a boat with any goods whatsoever from the head to the foot of the said water, for one year, in consideration of the sum of five shillings. The said Dame Elizabeth reserves only to herself the twenty chars which the fishermen are to give her every year. July 2, 1701.'²

Thompson speaks of live Charr kept for sale when he visited the Lakes: 'When at the inn at Waterhead at the northern extremity of Coniston Water, during a tour to the English lakes in June 1835, a number of Char from this lake were kept alive by our host in a capacious wooden box or trough, into which a constant stream of water poured. They were fine examples of the species, about a foot in length. Here I was informed that a supply of this delicate fish was always kept up, that the "curious" visitor might gratify his taste at any season by having fresh Char set before him at the rate of ten shillings for the dozen of fish.'³ Latterly Charr have become almost extinct in Coniston owing to the pollutions caused by the Coniston Copper Mine Company.

But John Poole gave evidence in 1878 that he had heard his father say that he had caught seven dozen Charr in Coniston in one day, using his straw hat for a landing-net. One of the best accounts of Charr that have been published is that of an anonymous writer, whose identity was covered by the letter 'O.' He wrote in 1832 that this fish was found in 'Coniston in Lancashire, Windermere in Westmorland, Buttermere and Cromack-

¹ *Description of Westmoreland*, p. 16.

² *Report Hist. MSS. Comm.* xli. p. 354.

³ *Nat. Hist. of Ireland*, vol. iv. p. 165.

water in Cumberland, and, I believe, in Ulswater.' He describes the Charr as making up the Brathay from Windermere 'in large shoals in the first sharp weather in November, for the purpose of spawning, preferring that river to the Rothay, probably owing to the bottom being rocky and resembling more the bottom of the lake; and it is singular that those fish which ascend the Rothay invariably return and spawn in the Brathay; they remain in the stream and in the shallow parts of the lake until the end of March. . . . Great quantities are caught during the spawning time by the netters for potting, and some are sent up fresh for the London market; but only those who have eaten Charr in summer on the spot, when they are in season, can tell how superior they are to those eaten in London in the winter. About the beginning of April, when the warm weather comes in, they retire into the deep parts of the lake, where their principal food is the minnow (*Cyprinus phoxinus*, L.), of which they are very fond. At this time they are generally angled for by spinning a minnow, but in a general way the sport is indifferent, and the persevering angler is well rewarded if he succeed in killing two brace a day. A more successful method of taking them is by fastening a long and heavily-leaded line and hook baited with a minnow to the stern of a boat, which is slowly and silently rowed along; in this way they are taken during the early summer months, but when the hot weather comes in they are seldom seen. They feed, probably, at night; and although they never leave the lake except during the period of spawning, nothing is more uncommon than taking a Charr in July and August.'¹ Some remarks about the Charr of Ennerdale Lake appeared in the same journal a few years later.²

The Rev. T. P. Hartley, who is intimately acquainted with Windermere, tells me that the natives of the district catch Charr either in nets or with plumb lines. Their season extends from the beginning of March until the end of September. Charr appear to swim near the bottom of the lake in cold weather, and are therefore fished with 'bottom nets.' In hot weather the shoals of Charr swim near the surface, and are captured in

¹ *Mag. Nat. Hist.* vol. v. p. 316.

² *Ib. cit.* vol. viii. p. 231.

'top nets.' They are largely fished also with the plumb line and artificial minnow, very much as Day describes.¹ These fish fetch about eighteenpence a pound in the season, and the surplus supply is despatched to Manchester. The Windermere Charr have improved in quality of late, owing to a larger mesh of net being employed than formerly. Mr. R. B. Lee states that the Windermere fish often average three to the pound. He mentions an instance in which a local fisherman caught eighteen Charr with the hook and line. These fishes were weighed together and scaled 7 lbs. William Bevins, the Leven watcher, stated in 1878 that the largest Charr he ever saw weighed $1\frac{1}{2}$ lbs. Matthew Fleming estimated an average fish to weigh from $\frac{1}{4}$ lb. to $\frac{1}{2}$ lb. The largest he ever saw weighed 2 lbs.²

S M E L T.

Osmerus eperlanus (L.).

The Smelt, or 'Sparling,' as it is usually called in our estuaries, has long been recognised as affording profitable occupation to our fishermen. As early as 1807 Charles Waugh described this species as 'sometimes caught as large as a herring,' and as 'near the same shape. The back is of a dusky colour, but the belly and sides are of a silver colour or resplendent white; it smells like green rushes, but is agreeable food.'³

Mr. Nicol tells me that he once assisted in netting nearly a stone weight of this fish. George Holmes gave me the benefit of a similar experience; but the general opinion appears to be that the Sparling is less plentiful in the tideway of the English Solway than was the case some years ago. 'At Ulverston,' wrote the late Frank Buckland, 'a considerable number of Sparlings are caught. Mr. Jackson Lee, of the Kent Salmon Board of Conservators, informs us that in February the Sparlings are heavy with spawn; they begin spawning about the middle of March, and the spawning is all over by the middle of April.

¹ *British Fishes*, vol. ii. p. 111.

² *Report on the Fisheries of the English Lake District*, p. 9.

³ *Fisherman's Defence*, p. 66.

They come into the Bay in early autumn.¹ Dr. Day was correct in saying that 'in the Solway Firth the best fishing season is in September,' but I doubt if he was accurate in stating that the Sparling 'disappear the next month [October] until March and April, when they ascend to spawn;' because Sparling are fished during the winter months. Dr. Day remarks that Mr. W. Wankly of Grange 'was much struck with the very rapid growth of the Sparling from October to March—in October ten or twelve together weighed no more than 1 lb.; in March the fish were 4 oz. to 6 oz. each, and occasionally one or more in a take weighed close on 8 oz. . . . He opened a Sparling as soon as it was taken out of the net and found six, seven, and eight herring fry . . . The Sparling are very uncertain and apparently fickle in their visits to their supposed haunts—*i.e.* in holes near rocks where fresh-water streams mingle with tidal water.'²

G W Y N I A D.

Coregonus clupeoides, Lacép.

The existence of this fish in Ulleswater was well known in the seventeenth century. Edmund Sandford, for example, described this Lake as containing 'great store of some Chars, Trout, and *Scellies* in abundance, a very good fish oth the bignes of a heering.'³ The Howard Household Books of 1622 include an entry on 'Janu: 5 . . . To Mr. Mounsey's man bringing charrs and skellyes ij^s.'⁴ It is extremely likely that the fish in question had been netted in Haweswater (anciently spelt Hall's water, *i.e.* 'the water of the Hall'). Clarke, a native of the Ulleswater district (though he lived at Penrith latterly), was well acquainted with the 'skelly' of the Lake, beside which his boyhood was spent. 'The *skelly*,' says he, 'is remarkable for this, no bait has ever been found which they will take. . . . Like the herring, they assemble in vast numbers during the

¹ *British Fishes*, p. 332.

² *British Fishes*, vol. ii. p. 123.

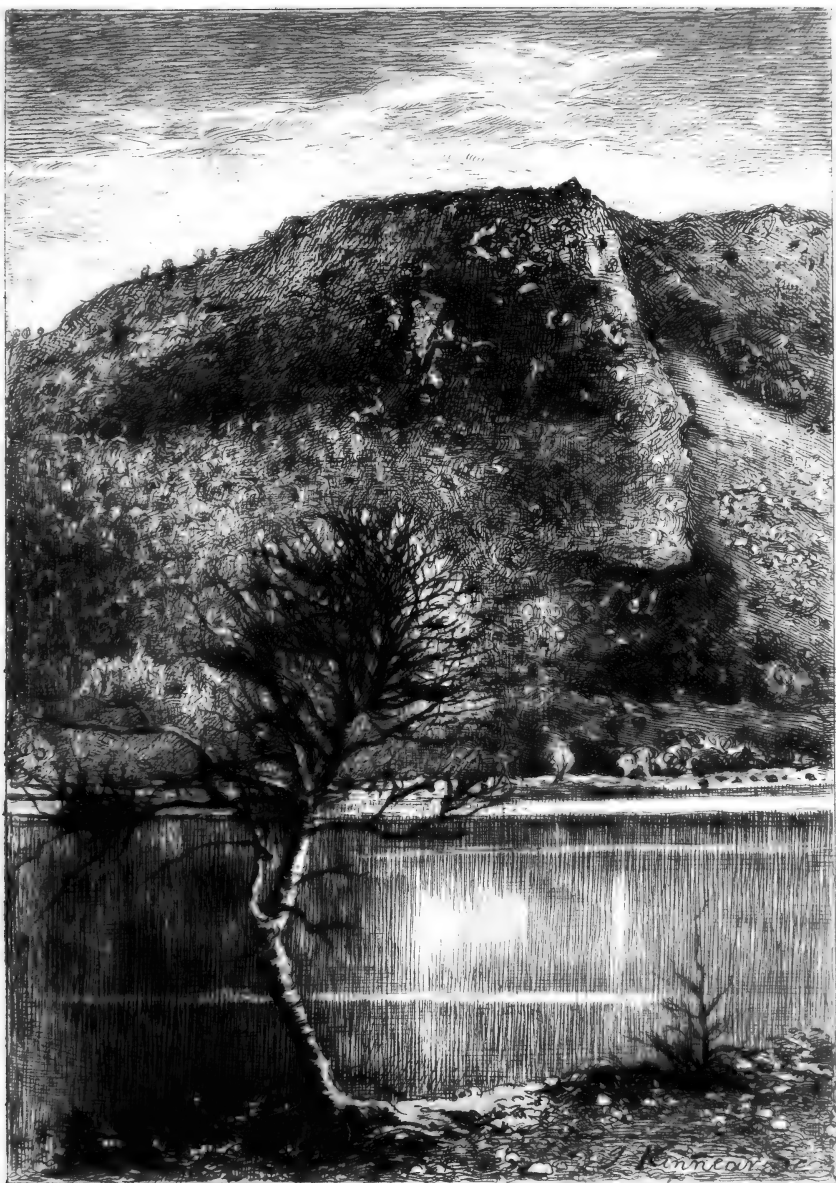
³ *Sandford MS.*, p. 33.

⁴ *Household Books of Lord William Howard*, p. 177.

harvest months, rippling the surface of the water, and are called *Schools* or (in the country dialect) *Skyuls*, of *Skellies*. When they lye in water not too deep, vast numbers are taken at one draught, sometimes ten or twelve thousands. Sometimes the *Schools lye* so close together, and the fishermen take such numbers, that carts are employed to carry them to the adjacent market towns. They weigh about five ounces each, and 800 are commonly reckoned as many as one horse can draw; they are at these times extremely cheap, generally a penny a pound; but I have seen two Winchester pecks of them sold for a shilling. . . . The *Skellies* spawn in the winter among the mud at the bottom of the Lake.¹ The old people with whom I have conversed, whose lives have been spent beside the Lake, independently volunteered statements very similar to that of Clarke. Every one agrees that of late years this fish has become extremely scarce in Ulleswater, although a few are occasionally caught in the trout nets. It is interesting to notice that this fish occasionally quits the Lake and enters the Eamont, as remarked by Dr. Heysham, who added, 'now and then a solitary one is taken [in the Eden] below the bay at Armathwaite.' On the 2d of April this year [1892] Mr. Tullie brought to me an example of this fish, that its identity might be solved. It had been picked up dead on the edge of Burgh marsh, having been washed down thither by the waters of the Eden. It was in poor condition, and much diseased, but about its identity there could be no doubt. Dr. Day remarks that this species is found 'in Red Tarn on Helvellyn,' on the authority of Braithwaite. 'The late Professor Rolleston,' he says, 'gave me some examples which he collected at Haweswater, and informed me that in the early spring some came to the surface with the stomach everted, due to expansion of the air-bladder.'² The Rev. T. Hodson tells me that this fish is still abundant in Haweswater, where its numbers have not suffered the diminution noticed at Ulleswater. Although this fish is procured with nets almost exclusively, Mr. Hodson tells me that he recently caught a fine specimen with a fly. This occurred at Haweswater.

¹ *Survey of the Lakes*, p. 38.

² *British Fishes*, vol. ii. p. 127.



WALLOW CRAG. A FORMER EYRIE OF SEA EAGLE

VENDACE.

Coregonus vandesius, Rich.

The earliest reference to this species inhabiting our faunal area appears to be that furnished in a note which Housman wrote for Hutchinson's *History of Cumberland*. This note was published in 1794, or shortly after.¹ Speaking of Bassenthwaite, Housman observes: 'The Lake . . . has perch, pike, *vendesses*, trout, eel, and salmon, in the spawning season.' He was evidently aware of the interest attaching to this species, because the word '*vendesses*' is the only word italicised in the paragraph. Whether the species had been artificially introduced, I do not know, but the fact that it is confined to Derwentwater and Bassenthwaite rather supports the view, especially since these two lakes have direct communication with one another. The Vendace has rarely been taken in either lake within living memory. As long ago as 1856, Dr. Davy described the capture of a Vendace as being 'the purest accident, not because it is so rare, but because it is contrary to the habits of this fish to take the fly or any of the baits commonly used here in angling. I have heard of one instance only of its having been taken with the artificial fly, and that by an old fisherman of long experience, and likewise of only one of its having been captured with the worm. . . . In this Lake [Derwentwater], within the last eight years [1848-1856] a good many have been taken with the net, and many also in the same way in Bassenthwaite Lake. That it is not a scarce fish here may, I think, be inferred from the circumstance of two lately having been killed by a stroke of an oar; and that the fish is a true Vendace I am satisfied, having compared a specimen from Lochmaben with one from Derwentwater, and also with one from Bassenthwaite Lake, and found them similar. The two first-mentioned I can show you at home; the last you may see at the Museum at Keswick, which is worthy of a visit on other accounts.'² There are now several local specimens of Vendace in the Keswick Museum. Mr. Birkett tells me that these were found floating dead upon

¹ *History of Cumberland*, vol. ii. p. 237.
The Angler in the Lake District, p. 262.

the top of the water, or were stranded on the bank of the lake in a dying condition; such was the case with a Vendace captured in a moribund stage in Derwentwater, June 3, 1856.¹ In corroboration of Dr. Davy's statement that Vendace have been netted by our fishermen, I may cite the following statement from a local print: 'On the 24th ult. [July 24, 1843] a considerable number of that rare and beautiful fish, known locally as the *Vendis*, were taken in Derwentwater by Mr. Mossop of Lodore Inn. Although a fisherman for upwards of twenty years, Mr. Mossop does not recollect more than five specimens being taken, and then, as in the present instance, with the net only.'² Thomas Bell gave evidence before the Inspectors of the English Fisheries in 1878, stating that Vendace existed in Bassenthwaite in very small numbers. He thought that the Pike eat them. A Vendace, which had been taken in Derwentwater, was exhibited before the Zoological Society by the late Dr. Day, May 19, 1885.

GRAYLING.

Thymallus vulgaris, Nilss.

Dr. Heysham was under the impression that the Grayling was occasionally taken in both the Eden and the Esk, but I fancy that he was wrong upon this point; it seems to be quite clear that the Grayling has only been introduced to our waters within a recent period. Mr. W. Patrickson sent to T. C. Heysham two supposed Grayling taken in the river Irthing in September 1841. Heysham replied that the fish must be referred to the Gwyniad, 'the Skelly of Ulleswater;' adding, 'there can be no doubt that both these (females) have made their escape from that lake. The true Grayling (*Thymallus vulgaris*), a specimen of which I am anxious to get hold of, has some resemblance to the Gwyniad, but may easily be known from the latter by its large dorsal fin.' In the year 1883, Mr. C. Donald Thompson introduced some Graylings into the upper waters of the Eden, near Appleby, on May 29. He has since

¹ *Carlisle Journal*, June 6, 1856.

² *Carlisle Patriot*, August 4, 1843.

favoured me with a brief note respecting the success which has attended the experiment. 'The first I saw caught,' he writes, 'was at Easter 1890, and last Easter [1891] I got one myself about 8 inches long, and a friend had one the same day. Since then, I hear about forty have been seen in one stream, evidently spawning (and some large ones), as there were trout close behind them, feeding (from their movements) on what *loose roe* they could catch. This, I think, clearly shows they are establishing themselves.' The Grayling has been introduced within a recent period to the river Mint, as I learn from Mr. G. A. Hutchinson, who writes that a few were caught in that river 'early last season [1891].'

Order *PHYSOSTOMI*.

Fam. *CLUPEIDÆ*.

A N C H O V Y.

Engraulis encrasicolus (L.).

During the summer of 1890 the presence of the Anchovy was noticed at various points of the British coasts, including the waters of the English Solway. On June 27, 1890, eighteen or twenty Anchovies were caught near Silloth by W. Nicol. They averaged about 6 inches in length, or rather less; but one female fish measured nearly 8 inches.

H E R R I N G.

Clupea harengus, L.

Large quantities of Herrings are taken off Allonby, Maryport, and Harrington, in good seasons, but in some years, often for several successive seasons, the industry has proved almost a blank. In the year 1828, the *Carlisle Patriot* of September 12 spoke of the Maryport fishermen as being 'in high expectation of having a successful fishing;' adding that 'one small boat brought in this morning (Wednesday) twelve hundred Herrings, which were sold ten fish for sixpence.' In 1834 the *Carlisle Journal* of November 29 reported that some Maryport fishermen caught nearly 600 herrings in one night, and sold them next morning at 25 for 1s. In 1849 the *Carlisle Patriot* stated that the Whitehaven fishermen had

taken large quantities of Herring, which fetched 4s. 6d. per 100. In the following September the price fell to 1 shilling per 100. As recently as 1891 some huge catches of Herring were made by the Maryport fishermen. The early carts from the country purchased fish at from 1s. 6d. to 1s. 9d. per 124, but later on the price dropped to the unprecedented figure of 3d. to 6d. per 124. Many tons were despatched to Glasgow, Leeds, and other large centres of population; but, after all sacrifices had been made, the fishermen found it impossible to clear out the whole of their stock.¹ Dr. Welby l'Anson informs me that in some years Herrings have visited the immediate neighbourhood of Whitehaven in such numbers, that stake nets were temporarily erected on the shores to effect their capture.

S P R A T.

Clupea sprattus, L.

The Sprat is often very abundant in our waters. In the winter and spring months the Sprat is the favourite food of the Red-throated Diver, which subsists principally on Sprats as long as it haunts our seas.

A L L I S S H A D.

Clupea alosa, L.

Dr. Heysham was acquainted with this species as a visitor to the English Solway. He remarks that *Clupea alosa* 'is by much the largest species of this genus, sometimes weighing 7 or 8 lbs.; but what I have seen have not exceeded 4 lbs. May 28 [1796], I saw one in the market which weighed 4 lbs. It was taken in the Eden near Cargo, and the milt was very large.' The younger Heysham wrote to the late Mr. Gurney on June 4, 1840: 'I have within the last fortnight received two specimens of the Alice Shad, both taken in the river Eden, both males, and full of milt, and about 22 inches in length.' A few specimens of this Shad have been taken in the waters of the English Solway of late years, but the species is relatively scarce and sparsely represented. Its visits have hitherto been limited to the spring and summer months.

¹ See *Carlisle Journal*, July 7, 1891.

TWAITE SHAD.

Clupea finta, Cuv.

Yarrell, referring to the two British species of Shad, states: 'I learn from Mr. [T. C.] Heysham that both species have been taken on the west coast of Cumberland.'¹ When examining the collection of Mr. J. R. Wallace of Distington, I found a specimen labelled 'Twaite Shad, Harrington, 1836.' Mr. Wallace appears to have obtained most of his specimens of British fishes from the coast of the Isle of Man.

Order *PHYSOSTOMI*.Fam. *MURÆNIDÆ*.

SHARP-NOSED EEL.

Anguilla vulgaris, Flem.

An excellent illustration of the value which at one time attached to the fish supply is afforded by a letter attributed to Sir John de Drokenford, dated February 25, 1303-4. The writer was in Scotland in attendance on Edward I., and expected to stay there all Lent. He begged of his correspondent in Cumberland that if any 'porpoys' or 'graspoyes' or 'laumpres de Nautes,' or other 'freshes,' should come in his way, or if any *large eels* could be found, he would instantly salt them, as well as any smaller eels, so that they might last well, and send them to him.² Whether the wishes of the knight were carried out does not appear. It is highly probable that a supply of Eels were forthcoming, because these fishes have always been numerous in our lakes and rivers. Sandford describes their relative abundance in Ulleswater: 'And now I must goe up southward to Glencume Beck, that parts Cumberland and Westmerland on the eastward, and presently falls into the great River Eles water or Eales water, for theirs the greatest gott in england: Thick as ones arme They come forth of a tarne or meer on Top of montaines: how long they stay in this River: but naturall they goe downe every August to the sea: and swim

¹ *British Fishes*, 2d ed., vol. ii. p. 211.

² *Calendar of Documents relating to Scotland*, vol. ii. p. 382.

close by the bothome of the water : so as no ffood carries them over the dam set to stopp them ; and catcht in a nett by Mr. Huddston of Hutton John in great plenty, and them that gets by becomes great Congers ; and a dainty sea-fish.'¹ Clarke not only alludes to the quantities of the 'silver eel' taken in Eamont, but he also refers to the sport of spearing eels in Ulleswater Lake: 'Two or more persons go in a boat in a summer morning, from three to six o'clock ; one gently moves the boat by the margin of the Lake, while the other looks for eels ; he no sooner sees one than he strikes it with an eel spear, and by this method great numbers are sometimes caught.'² A similar practice obtained at Windermere. Walker tells us that 'the large Eels may be seen sprawling on the grassy bottom of the Lake like a country inhabited by innumerable serpents. These are taken early in a morning by bearded spears fixed on the end of long poles. But this is a dangerous diversion ; for, as the bottom of clear water always appears nearer than it is, the un-experienced striker finds the Eel more distant than he expected, and frequently tumbles over the side of the boat.'³ Richardson, writing in 1793, details the method employed for capturing these fishes in the river Eamont on their preparing to descend from Ulleswater to the sea : 'They are taken in August, September, and October, in nets, at Eel-Stank, about half a mile down the river Eamont. In five or six hours eight or ten horse-loads have been caught ; but such large quantities only in the darkest and stormiest nights. The largest commonly go last. . . . They scarcely stir if the moon suddenly peeps out, or when there is lightning. . . . When snow appears on the hills they cease to descend.' This 'Eel-Stank' has only lately ceased to exist. I have visited the spot and questioned local folk, who assured me that considerable numbers of Eels had been taken within a recent period.

Pennant gives a description of Urswick Mere, which may be compared with Richardson's account of Eamont: 'The eels descend in multitudes through the river that flows from this

¹ Sandford ms., p. 32.

² *Survey of the Lakes*, p. 39.

³ *From London to the Lakes*, p. 69.

Mere into Winander, beginning their migrations with the first floods after midsummer, and cease on the first snows. The inhabitants of the country take great numbers at that season; whence it is their opinion that the eels are going into the salt water, and that they return in spring.¹

Dr. Gough's MS. notes record this Eel as found in Killington reservoir. Mr. Hutchinson writes to me that the species 'is common in all the tarns and rivers. Very large ones are caught in Whinell Tarn. I saw a hamperfull about two years ago from Whinell, and I should judge that the fish would average about $4\frac{1}{2}$ lbs. each. I stuffed one of this lot; it weighed about 5 lbs., and measured 3 ft. 9 in.' There are large Eels in the Eden, especially at Armathwaite. One of the big fellows, well known to anglers as frequenting that part of the river, scaled $5\frac{1}{2}$ lbs. It was caught in June 1852. I question whether this weight has often been surpassed. A watcher named Bevins told the late Mr. Frank Buckland that he had known an Eel of 9 lbs. weight to be captured in Windermere.

BROAD-NOSED EEL.

Anguilla latirostris, Risso.

Dr. Gough mentions this species (if it is a species) as taken in Skelsmergh Tarn and at Levens. Mr. Hutchinson informs me that it is 'fairly plentiful in the river Pool and Hood Tarn. These are the only places in the district [Kendal] where they are to be obtained that I am aware of. I have one in my cabinet about 2 feet 6 inches long, caught in the former place.' The largest example of this supposed species that I have examined weighed $2\frac{1}{2}$ lbs. It was caught near the mouth of the Eden in September 1890.

C O N G E R.

Conger vulgaris, Cuv.

Dr. Heysham stated that 'the Conger is not frequently taken up our coasts;' probably because he seldom saw the fish exhibited

¹ *A Tour in Scotland*, vol. ii. p. 35.

in the Carlisle market, where his knowledge of local fishes seems to have been chiefly acquired. Small Congers are often taken near Silloth, and large fishes are occasionally hooked upon the long lines in deep water. Dr. Gough mentions one caught at Arnside in September 1872. Another, caught in Silloth Bay, November 1841, weighed 57 lbs. Dead and sick Congers are occasionally washed up on our shores. The *Carlisle Journal* of November 24, 1876, records that a small Sturgeon, measuring 18 inches in length, was found entire in the stomach of a large Conger. The Eel had been captured off Port Patrick and sent to a Carlisle fishmonger.

Order *LOPHOBRANCHII*.

Fam. *SYNGNATHIDÆ*.

GREAT PIPE-FISH.

Syngnathus acus, L.

This Pipe-fish appears to be of fairly common occurrence in the waters of the English Solway. The largest local specimen that I have seen measures $15\frac{1}{2}$ inches. This was sent to me by Mr. W. Nicol, who caught it near Silloth in September 1890. Parnell observes: 'The Great Pipe-fish I have also found on the shores of the Solway.'¹

WORM PIPE-FISH.

Nerophis lumbriciformis (L.).

This delicate fish is believed to be not uncommon in the neighbourhood of Whitehaven. Dr. Welby I'Anson showed me three specimens, taken by himself with the bladder wrack in the dredge net. We compared them with Day's figure, and found that they closely agreed with it, although the fine black network traced upon the head of the specimen described by Day was only present on one of the three local examples.

¹ *Mem. Wern. Soc.*, vol. vii. p. 396.

Order *PLECTOGNATHI*.Fam. *PETROMYZONTIDÆ*.

SEA LAMPREY.

Petromyzon marinus, L.

This Lamprey is comparatively seldom captured in our waters, although in former times it seems to have been far from uncommon as a summer visitor to some of our larger rivers—the Eden, for example. It appears to be of very infrequent occurrence in Morecambe Bay. Mr. W. Duckworth and I were shown a fine Lamprey, June 30, 1891. It had been caught that day near Ulverston, and appeared to be quite a strange fish to the local fishermen. This example measured 25 inches. Richardson wrote of this fish as found in the Eamont a century ago: ‘It is but rarely taken. Three or four in a summer are killed near Pooley Bridge, in the river. Some weigh 7 lbs.’ Dr. Heysham gives his experience in the following words: ‘Lampreys appear in the Eden and Esk in April and May, are chiefly caught in June when the waters are low. They spawn in both these rivers, and afterwards return to the sea. I eat part of a very fine one this year, the 13th of April, which was taken in the Eden the beginning of that month. April 28, I examined a female full of roe. From the immense number of eggs which this contained, they must be astonishingly fruitful. June 28, I examined three, two of which were males and one a female; they had all spawned; the liver of the males was much larger than the liver of the females.’ Writing of the river Eden in 1803, Warner tells us that it produced ‘quantities of excellent lampreys.’¹ Warner referred especially to the neighbourhood of Armathwaite Hall. I learn from Mr. H. Leavers that a person named Irons, now residing in the district just named, owns the right of fishing for Lampreys under some old deed or covenant, which, however, does not entitle him to fish for trout or salmon. I have made many inquiries among our professional fish-poachers, and I find that very few of them have ever taken the present species in the course of their water-side researches.

¹ *Tour through the Northern Counties of England*, vol. ii. p. 80.

L A M P E R N.

Petromyzon fluviatilis, L.

The river Lamprey is common in the Petteril and some other tributaries of the Eden, the Caldew for example. The Keswick Museum possesses a local specimen, procured by the late Captain Kinsey Dover.

P R I D E.

Petromyzon branchialis, L.

Richardson records this species as 'frequent in the Eamont, and is about five inches long. There called Lamper eel.' Dr. Heysham writes of this species and the last, 'Neither of these species are very plentiful in our rivers. They appear and disappear about the same time as the Lamprey.' It is quite true that these species are seldom caught, but I fancy that it is more because no one searches for them than because they are actually rare. This species, like the last, is to be found in the Petteril near Carlisle.

NOTES ON THE TEXT.

Book First.

M A M M A L I A.

Order *CARNIVORA*.

Fam. *FELIDÆ*.

W I L D C A T.

Felis catus, L.

'*The Wild Cat lingers among the Fells of Cumberland only by tradition*' (p. 11).

The *Yorkshire Post* of May 4, 1892, announced that a Wild Cat had just been killed 'at Belah Bridge near the Stainmore Fells.' The Rev. J. Wharton took an early opportunity of informing me that the animal in question proved to be 'an errant domestic "Tom" which had led an anchorite life.' The late William Pearson wrote the following note in 1839: 'I believe I once saw one many years ago. It was caught in a snare on Cartmell-fell, and was a very fine animal. . . . Although it appears to be now extinct in our district, yet I have talked with a famous hunter, John Elleray (he died not many years since at the advanced age of more than ninety), who had been at the death of more than one Wild Cat.'¹

Order *CARNIVORA*.

Fam. *MUSTELIDÆ*.

B A D G E R.

Meles taxus (Schreb.).

'*Whether the Badger really became extinct in Lakeland within the limits of the eighteenth century is a difficult point to settle* (p. 44).

The late William Pearson wrote in 1839 that the Badger

¹ *Letters, Papers, and Journals*, p. 49.

had become extremely rare: 'I am told, however,' he added, 'that within the memory of persons now living, he has been met with at Smithy Hill, and at Town-head in Cartmell-fell; and a friend informs me there are still a few to be found at Humprey Head near Allithwaite.'¹ Major Parkin kindly showed me the skull of a Badger which was found drowned in Ulleswater a few years since. It was conjectured to have perished in attempting to cross the lake, and its remains were washed up on the shores of Westmorland.

Order *UNGULATA*.

Fam. *CERVIDÆ*.

RED DEER.

Cervus elaphus, L.

“‘*t auld Squire Hasell*’ entertained his friends at Dale Head’ (p. 62).

This refers to the ruined portion of the present farmhouse at Dale Head. Wordsworth has left a description of it: ‘At the last house in the dale we were greeted by the master, who was seated at his door. . . . He invited us to enter and view a room built by Mr. Hasell for the accommodation of his friends at the annual chace [*sic*] of red deer in his forests at the head of these dales. The room is fitted up in the sportsman’s style, with a cupboard for bottles and glasses, with strong chairs and a dining table; and ornamented with the horns of the stags caught at these hunts for a succession of years—the length of the last race each had being recorded under his spreading antlers.’² Similarly, the late Mr. Braithwaite visited ‘Dale Head or Stag Hall, the property of Squire Hasell of Dalemain,’ in September 1853. ‘Here,’ he says, ‘we inspected the large banqueting room, hung round with the heads of stags killed in the chace, on the adjoining hills.’³

‘They die either from old age or from gradual inanition, due to a deficiency of food during the early spring months’ (p. 64).

These words received a faithful illustration in the fate of a young Red Deer Hind, found dying up in Bannerdale, April 5,

¹ *Letters, Papers, and Journals*, p. 55.

² *Description of the Scenery of the Lakes*, p. 123.

³ *Salmonidæ of Westmorland*, p. 165.

1892. Warned by the voice of nature that dissolution was fast advancing, the shy creature had slipped away from the company of her fellows to seek a quiet spot in which she might await the arrival of the end with the calm resignation of her race. Surely a sadder picture has been rarely seen than this forlorn Hind presented, resting on her side, deep-bedded in the marshy ground, helpless, and now advanced beyond the reach of human succour. It was not that the germ of any contagious malady had found lodgment in her frame to mar her shapely outline, or to paralyse the powers of those beautifully-proportioned limbs. She lay stricken by the disease of poverty, a starved child of the mountain mist; but now succumbing to the hardships of the winter season. Not as yet had the film of death dimmed the soft lustre of those dark, eloquent eyes—indeed the chest still heaved uneasily; the plaintive groan which answered a caress of sympathy travelled quickly to my heart. Only too sadly evident was it that her small stores of strength were rapidly ebbing away. Already a pair of Ravens, black as night, exchanged ominous congratulations as they flew down from the impregnable fortress which held their newly hatched young. Poised far aloft, a solitary Buzzard kept lonely watch over the last throes of a prospective prey. Now and again the echoes of the hills awoke from peaceful slumber, starting into life at the bidding of that querulous wail, which only too plainly betokened the greedy appetite that longed to batten upon the waste venison of Martindale.

Order *CETACEA*,

Fam. *DELPHINIDÆ*.

GRAMPUS.

Orca gladiator (Lacép.).

‘*The only recent occurrence that I can positively vouch for was stranded near Skinburness in July 1876*’ (p. 49).

This animal was one of a herd of six, which visited the English Solway in July 1874, exactly two years earlier than stated in the text. It proved to be a female, and was in fine

condition. Its occurrence was recorded at the time in a Whitehaven newspaper, which described the animals as 'deep-sea porpoises.'

Order *UNGULATA*.

Fam. *BOVIDÆ*.

WILD WHITE CATTLE.

Bos taurus, L.

'*A correct translation of the original*' (p. 76).

It may be convenient to add here a copy of the original grant itself:—

'R. a Gardein de ñre forest̃ dicea Trent ou a son lieu tenaunt en ñre forest̃ Denglewode ã. Nous vo' mandos q̃ a ñre ch feal Andreu de Harcla Comite de Cardoill ou a ses genth en son noun suffrez prendre auoir sys Cerfs & sys Deyms en ñre dite forest̃ de Englewo de ñre donne. Don a Noef Chastel s^r Tyne le xix Jour de Sept̃. [1322].

Order *RODENTIA*.

Fam. *LEPORIDÆ*.

H A R E.

Lepus europæus, Pall.

'*But a Cumberland hunt, says a local writer*' (p. 85). The local writer quoted is the worshipful Chancellor Ferguson, F.S.A., whose little work, *The Cumberland Foxhounds*, appeared anonymously. It may here be remarked that, as long ago as the reign of King John, a breed of Harriers was kept in Cumberland. In the fourth year of that sovereign, Allan Wastehouse received a sum of £109, 15s. as the wages for a year and a half of himself and four attendants. This included the maintenance of ten dogs, bred for hunting Hares, as their title of 'leporarii' plainly proves.

Book Second.

Order *PASSERES*.Fam. *CINCLIDÆ*.

DIPPER.

Cinclus aquaticus, Bechst.

'*The Duckworths have overheard the Dipper singing in all the summer months*' (p. 104).

It may be remarked in corroboration of this statement that Mr. Rawson and I heard a Dipper singing cheerily on the 27th of June, 1892. It was perching on a stone beside the stream which flows out of Esthwaite. Mr. Rawson assures me that he too has heard the Dipper's song at every period of the year, a fact which he has enjoyed the best possible opportunities of testing.

Order *ANSERES*.Fam. *ANATIDÆ*.

BARNACLE GOOSE.

Bernicla leucopsis (Bechst.).

'*Two Barnacle Geese made their appearance on Windermere Lake. One bird of the couple was shot*' (p. 247).

This has proved to be a mistake. The species was incorrectly reported to Mr. Rawson. We recently called together to see it, and found that the bird was a Canada Goose, probably one of those bred at Rydal.

S C A U P.

Fuligula marila (L.).

'*Stragglers undoubtedly occur on our tarns and lakes*' (p. 290).

During the winter 1891-2, several parties of Scaups, each numbering ten or a dozen individuals, frequented Windermere Lake. Mr. H. E. Rawson frequently saw them, and shot a

couple of them as specimens. The local boatmen recognised them under the name of 'Blue bill,' by which they are generally distinguished in Morecambe Bay.

Order *PYGOPODES*.

Fam. *PODICIPEDIDÆ*.

RED-NECKED GREBE.

Podiceps griseigena (Bodd.).

'Another specimen was felled on the Kent . . . the only example which I can vouch for as having been killed within the territorial limits of Westmorland' (p. 452).

Two additional specimens were killed on Windermere in the winter 1891-2, and were taken in the flesh to Mr. H. E. Rawson, F.Z.S., by the man who shot them.

Book Fourth.

Order *PHYSOSTOMI*.

Fam. *SALMONIDÆ*.

COMMON TROUT.

Salmo fario, L.

'A hump-backed variety of the Common Trout inhabits the upper waters of the Caldew' (p. 507).

In May 1892 a fresh example of this variety was brought to me by an angler named Rook, who had just taken it in the Caldew. The so-called 'hump' was well developed. Dr. Matthews kindly dissected the specimen with me, when we found that the vertebral column was perfectly regular. The deformity appeared to be due to a thickening of the cervical muscles. The spinous and interspinous processes had been unusually developed, to support the abnormal growth.

THE ALPINE CHARR.

Salmo alpinus, L.*'The largest he ever saw weighed 2 lbs.'* (p. 514).

Mr. Rawson has kindly ascertained for me that a Charr, which weighed 2 lbs. 4 oz. was caught this spring [1892] in Windermere. It was purchased by a local fishmonger named Mudd, who sold it to a customer. This is the heaviest that Mr. Rawson has been able to hear of. Charr were taken in very good numbers in the spring of 1892. The largest take of Charr this season scaled 320 lbs.

G W Y N I A D.

Coregonus clupeoides, Lacép.

'The existence of this fish in Ulleswater was well known in the seventeenth century' (p. 515).

Sandford's record of the existence of this fish in Ulleswater was followed by the independent evidence of Willughby, who probably was the first to record in print the existence of this species in Lakeland waters, which he did in 1686: 'Lavareto eundem omnino esse exestimo Schelley Cumberlandis dictum, qui in lacu Hulswater non procul ab oppido *Pereth* invenitur.'¹

Order PLECTOGNATHI.

Fam. PETROMYZONTIDÆ.

L A M P E R N.

Petromyzon fluviatilis, L.*'The River Lamprey is common'* (p. 536).

A paper entitled '*An Account of a remarkable Decrease of the River Eden, in Cumberland: In a letter to Charles Lord Bishop of Carlisle, F.R.S., from William Milbourne, Esq.,*' was read before the Royal Society on Jan. 13, 1763. This notice contains a record of a sudden fall of the Eden at Armathwaite 'In the night between the twenty-eighth and twenty-ninth of December last.' The decrease of the water was so sudden 'that

¹ *Historia Piscium*, p. 184.

several trouts and young lampreys had not time to save themselves, but were found the next morning frozen to death. Of the former, eye-witnesses can speak to fifteen, of the latter two hundred, all which were found in the extent of no more than forty yards; and several dozens of young lampreys were easily taken up alive by the hand, in the shallows.

N.B.—The trouts in general were small, the lampreys about ten inches or a foot long.¹

¹ *Phil. Trans.* vol. liii. p. 7.

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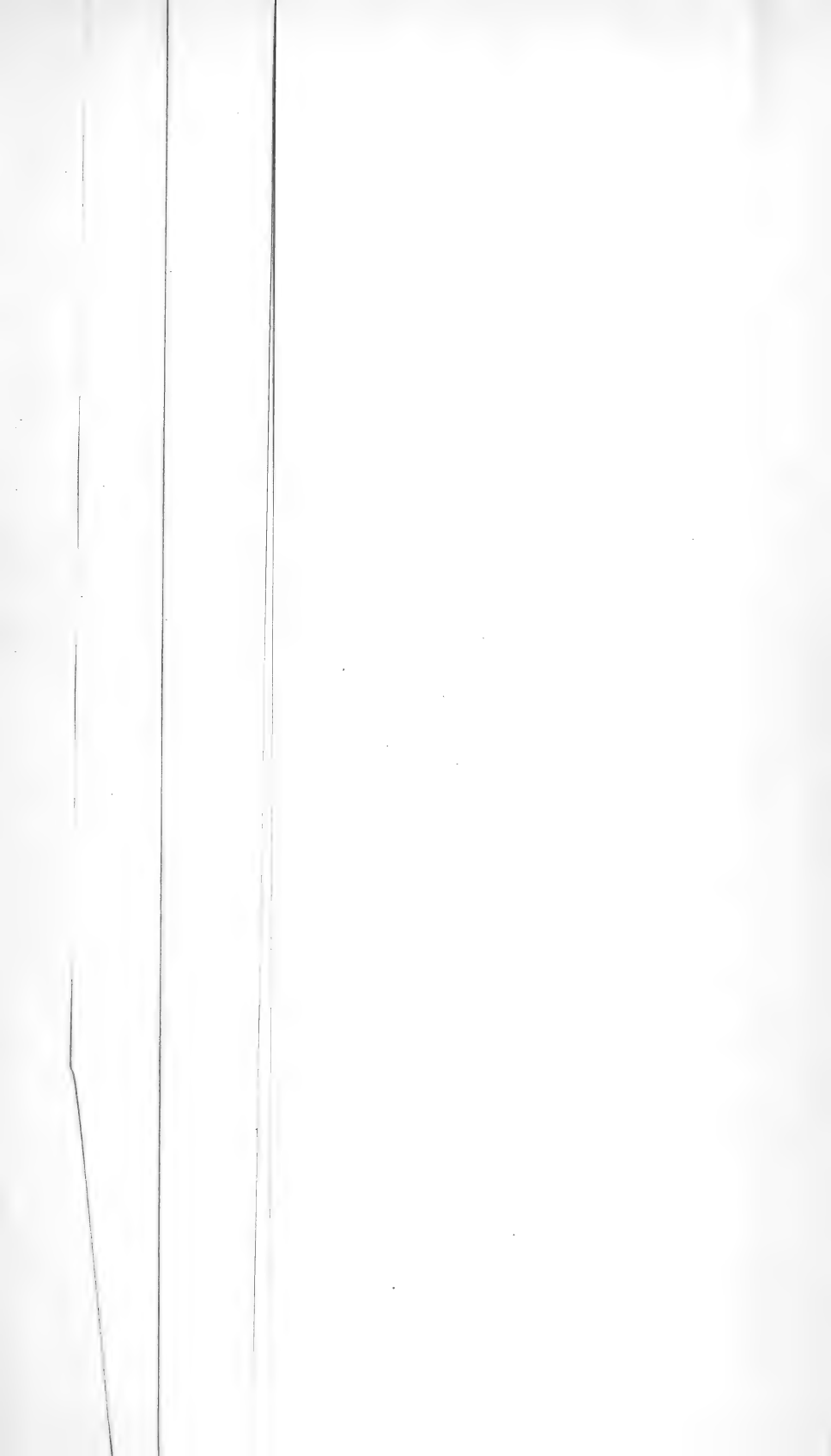
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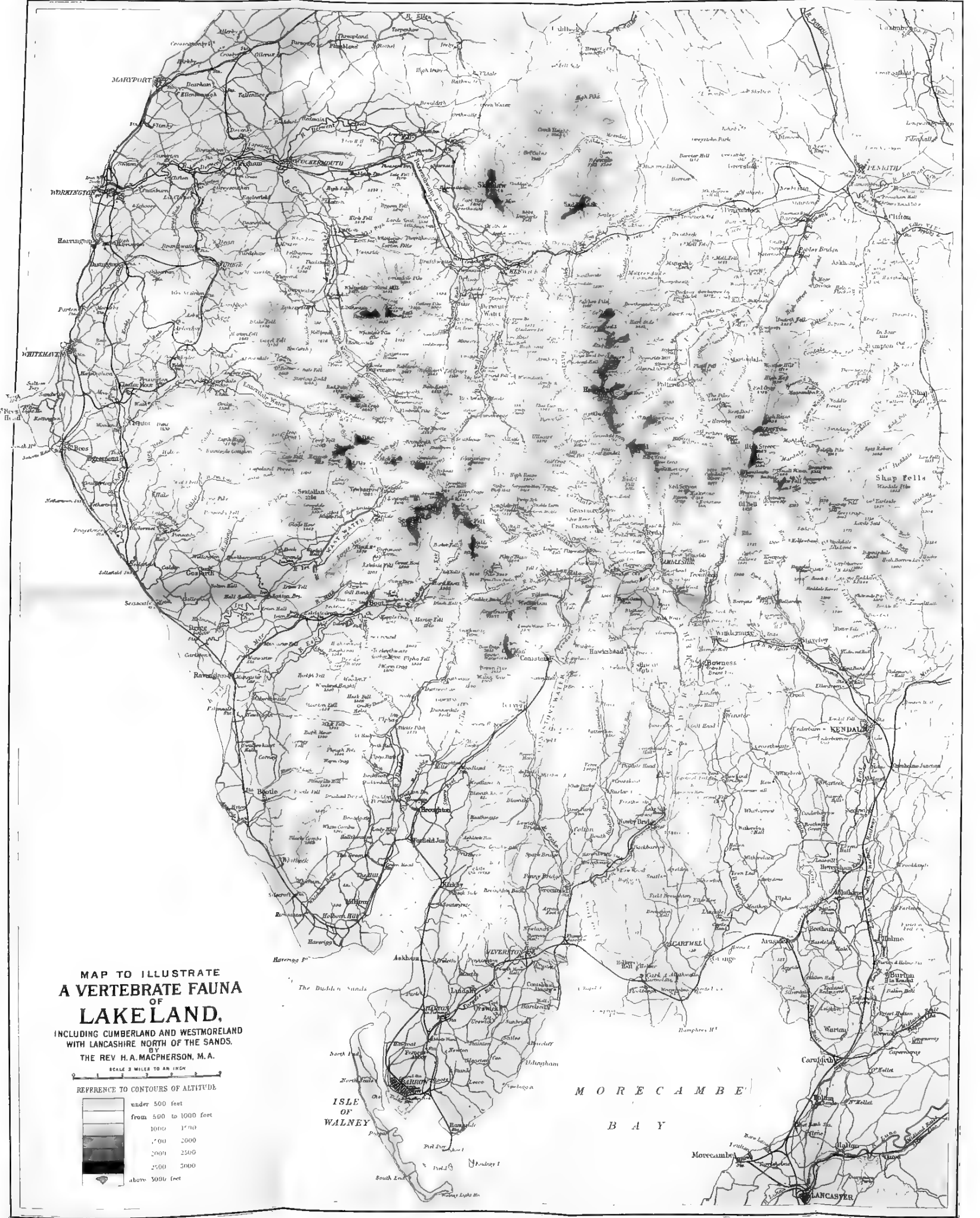
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Note.—The Eagle Eyrie at Buck Crag, referred, as ‘a nebular hypothesis,’ to the Golden Eagle on page 189, proved at the last moment to have been tenanted by the Sea Eagle ; a most surprising contingency, after the statement of the Rev. W. Richardson (page 188). In view of this discovery, the remarks about Buck Crag printed in the article on the Golden Eagle must please be transferred by the reader to the White-tailed or Sea Eagle. We owe the *portrait* of two Dotterel chicks of the Lakeland race to the kindness of the Rev. F. O. Pickard-Cambridge, whose etching is based upon a photograph taken by Mr. D. L. Thorpe.



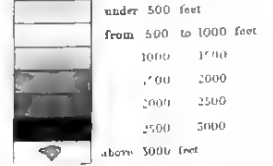




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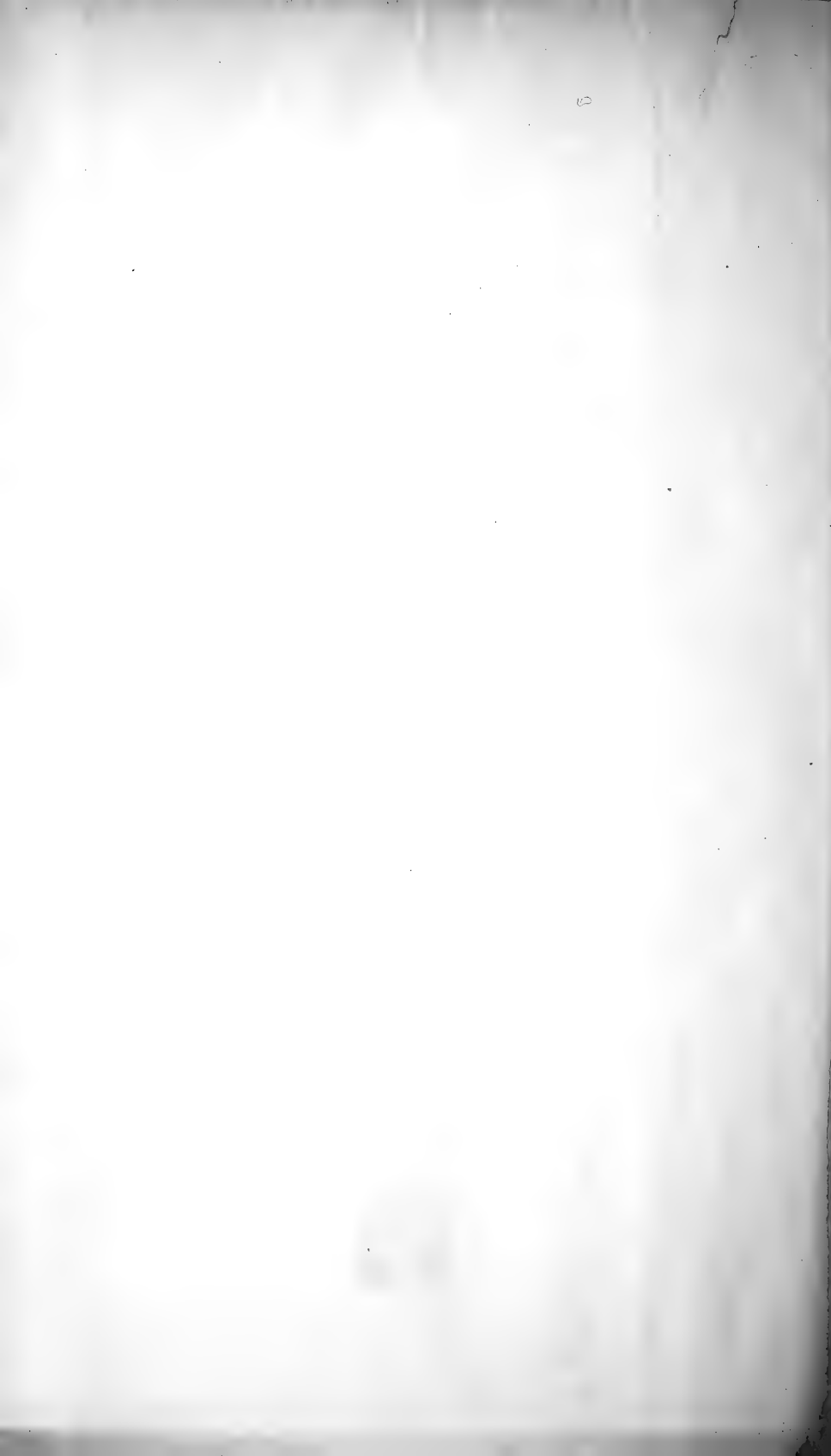
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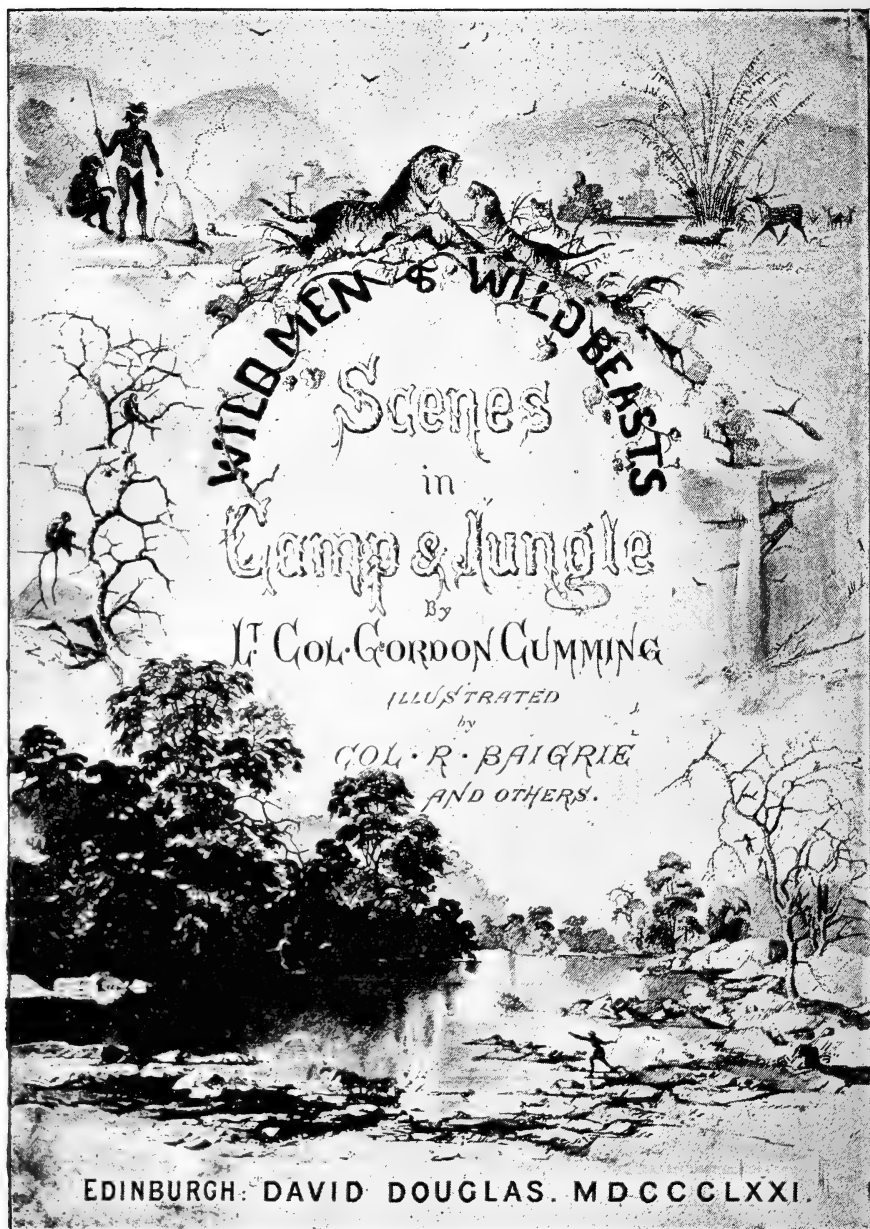


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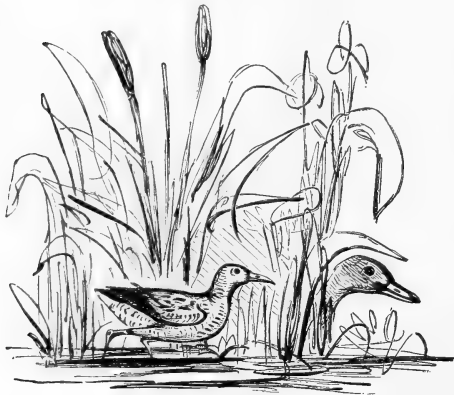
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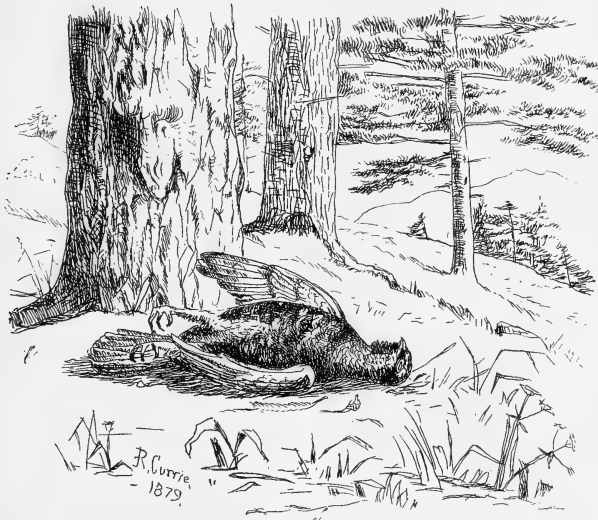
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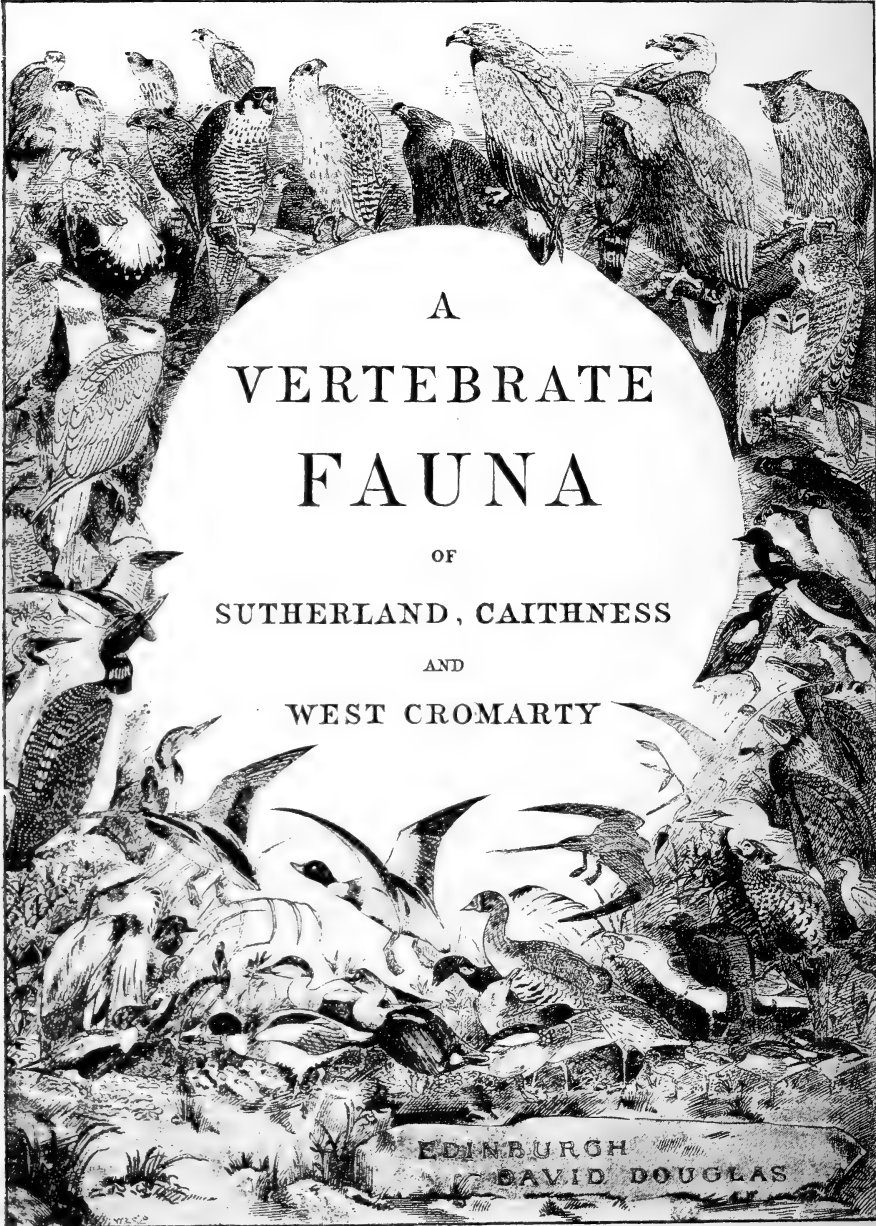
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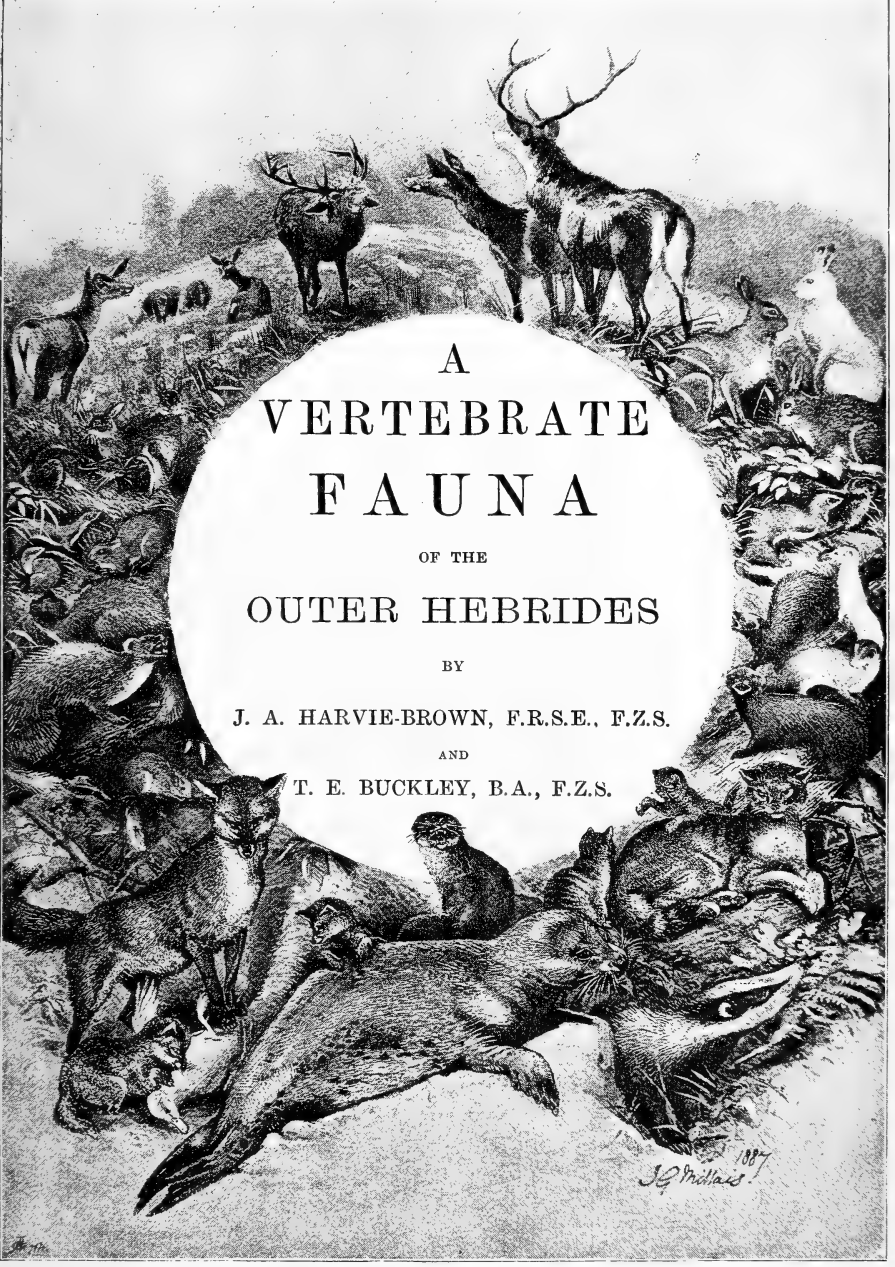


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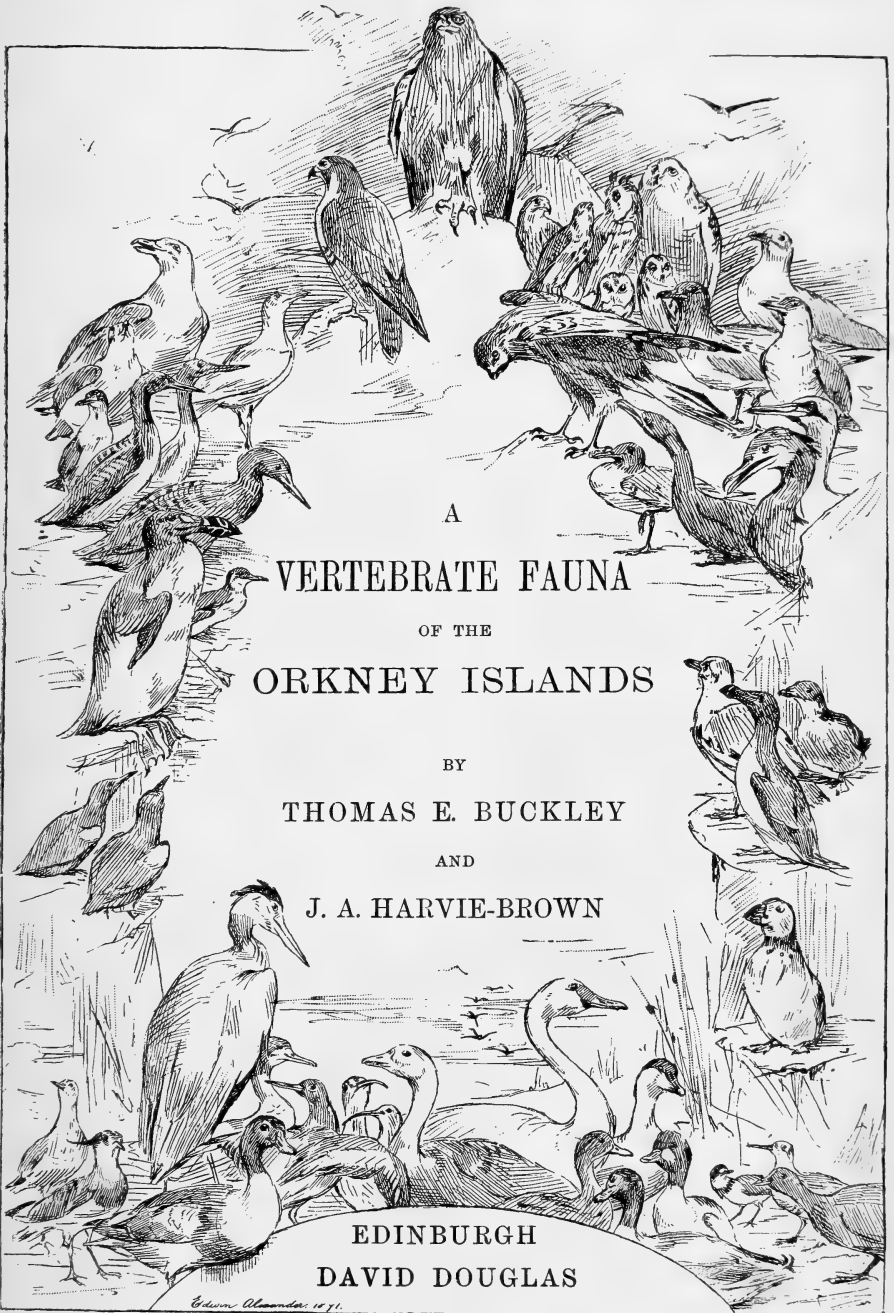
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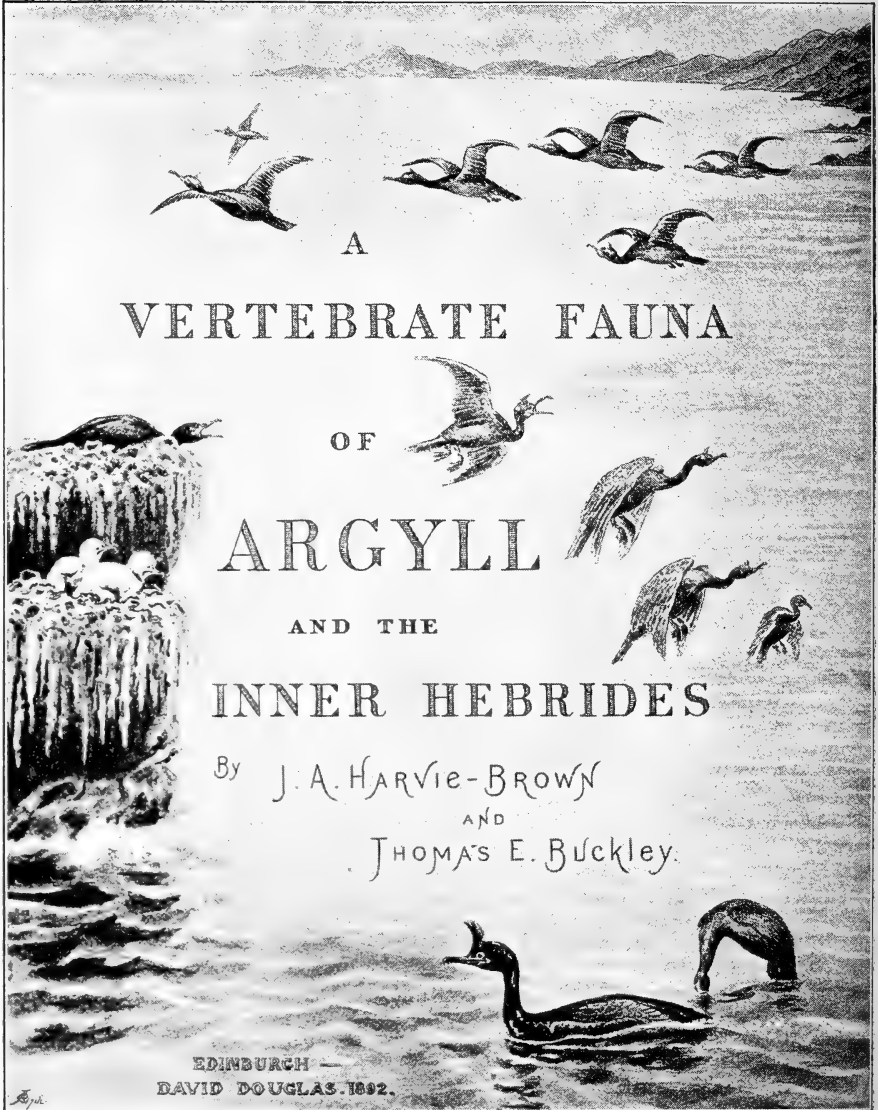
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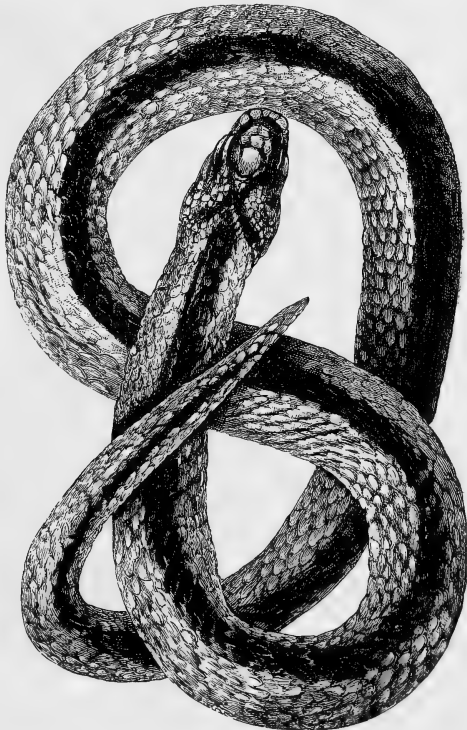
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