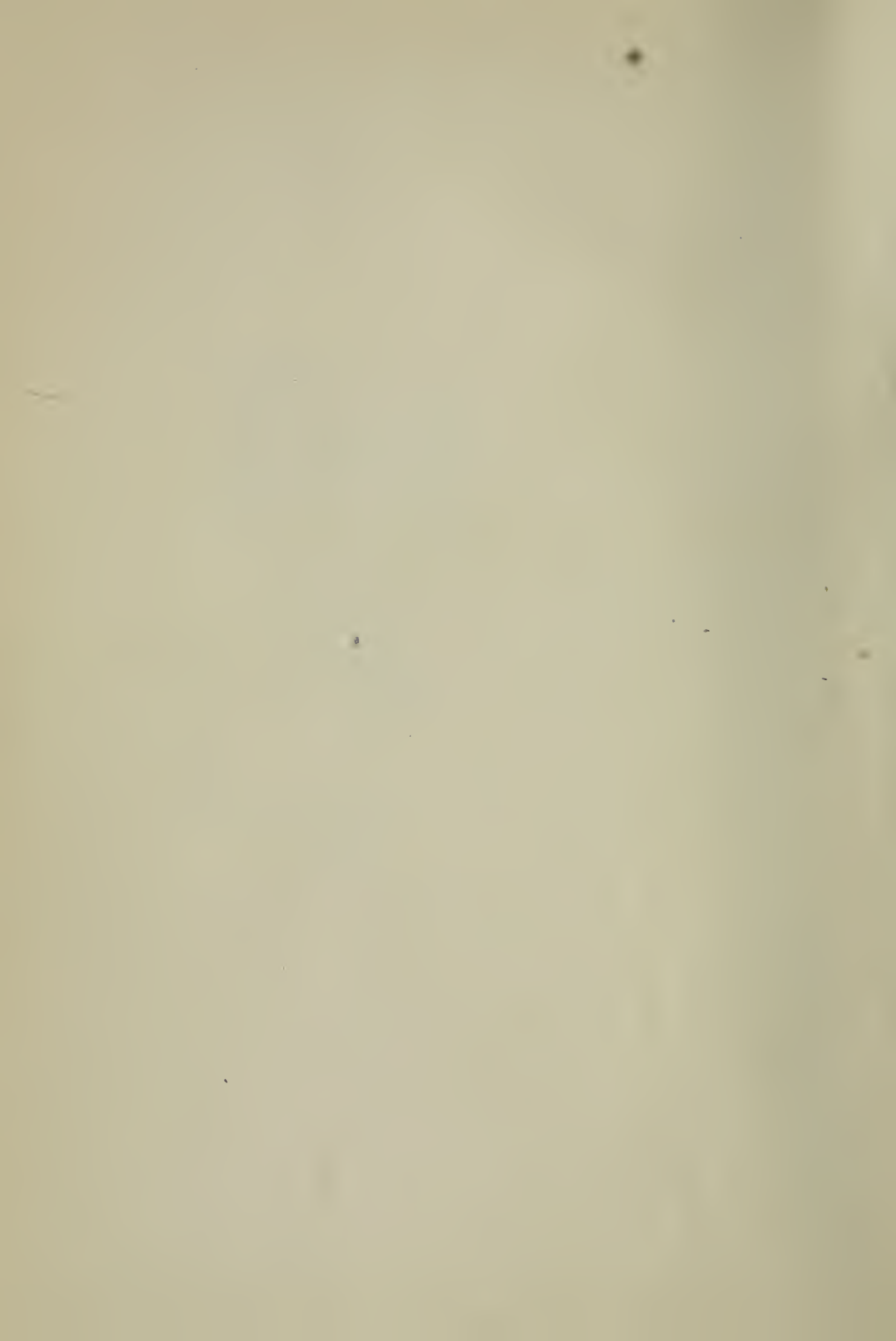


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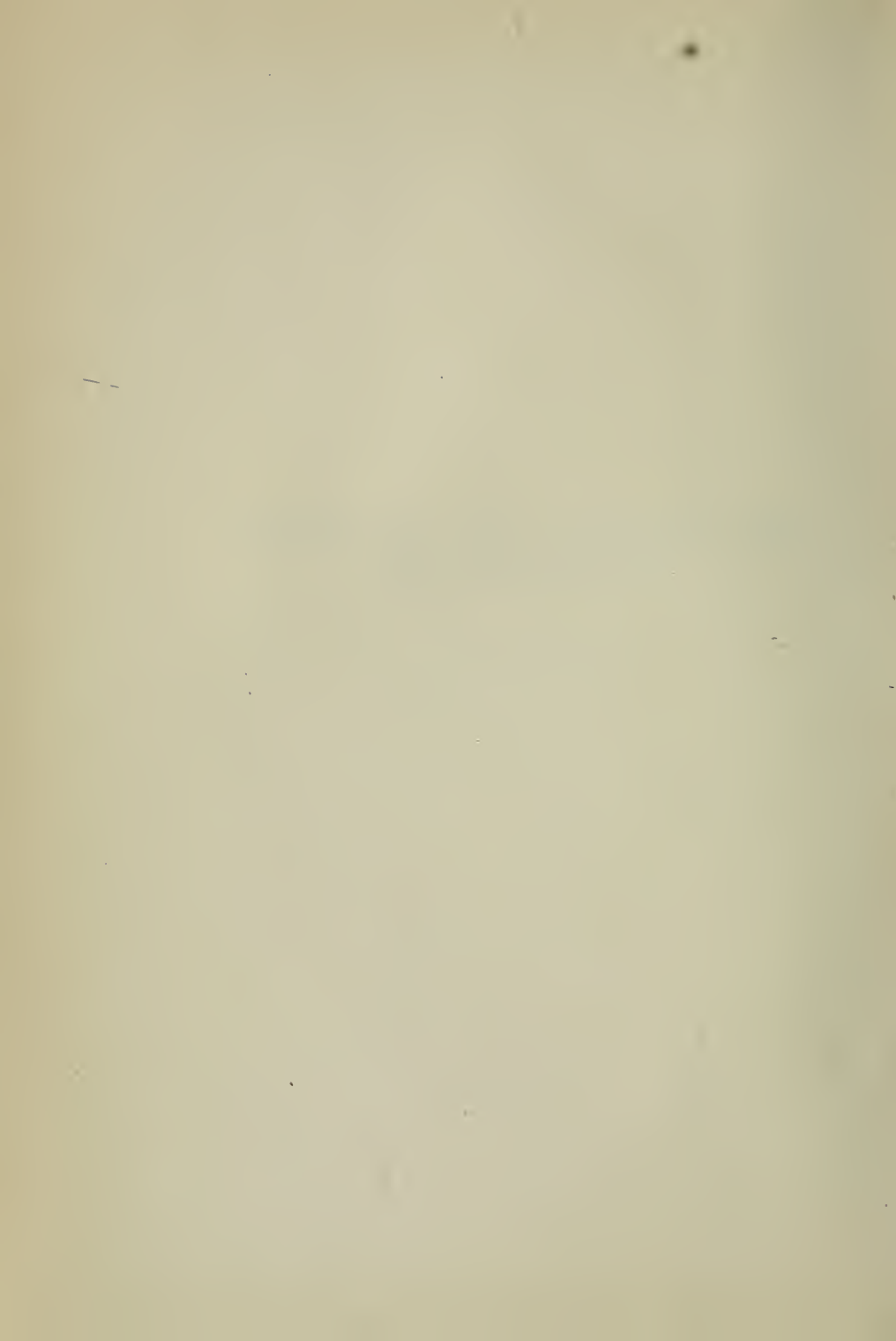
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NATURAL
HISTORY



THE VERTEBRATE FAUNA OF CHESHIRE
AND LIVERPOOL BAY





[Frontispiece].

REDES MERE.

THE
VERTEBRATE FAUNA
OF
CHESHIRE
AND LIVERPOOL BAY

EDITED BY
T. A. COWARD, F.Z.S.
AUTHOR OF "PICTURESQUE CHESHIRE."

IN TWO VOLUMES

VOLUME I.

THE MAMMALS AND BIRDS OF CHESHIRE
BY
T. A. COWARD AND C. OLDHAM, F.Z.S., M.B.O.U.
AUTHORS OF "THE BIRDS OF CHESHIRE"

WITH ILLUSTRATIONS FROM PHOTOGRAPHS BY
THOMAS BADDELEY

WITHERBY & CO.
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PREFACE.

IN the ten years which have elapsed since the *Birds of Cheshire* was written, much has been added to our knowledge of the county avifauna. Birds are only a portion of our vertebrate fauna, and the present work is an attempt to give an historical and distributional account of the vertebrate inhabitants of Cheshire, by which is implied an area geographical rather than political. The natural boundary of the county formed by the River Dee encloses many square miles of marsh-land which politically belong to Flint, and the sea area is extended beyond the actual territorial waters, and includes the shallow-water portion of Liverpool Bay and the whole of the estuaries of the Dee and Mersey.

In describing the Mammals, Birds, Reptiles and Batrachians I have had the assistance of my old friend and collaborator Charles Oldham. Neither he nor I possessed any knowledge of the Fishes, but I am fortunate in having induced James Johnstone to undertake this group, a task for which his intimate practical knowledge of our local fisheries made him eminently fitted. The chapter on the Dee as a Wildfowl Resort, contributed by John A. Dockray, is the outcome of his long and varied experiences of wildfowling in the estuary. The illustrations, with a few exceptions, are from photographs taken by Thomas Baddeley, who has spared neither time nor trouble to obtain them. In the belief that a detailed description of the fauna of a definite area has scientific value, I submit these volumes to the public.

Bowdon,
March, 1910.

T. A. COWARD.



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[The print from which the Plate facing page 66 is taken was lent by Mr. J. E. Harting ; the illustration facing page 304 is from a photograph by Mr. S. O'Hanlon, and the rest are from photographs by Mr. T. Baddeley.]

INTRODUCTION.

CHESHIRE is a maritime county in the north-west of England, having an area of about one thousand and twenty-eight square miles. It is bounded on the west by the shallow waters of Liverpool Bay and the estuaries of the Dee and Mersey. On the north it is separated from Lancashire by the River Mersey and its tributary the Tame; in the north-east, from Yorkshire by the Pennine hills, forming the watershed of the Mersey and Yorkshire Ouse; from Derbyshire and Staffordshire, in the east, by tributaries of the Mersey—the Etherow, Goyt and Dane; and from Flintshire and Denbighshire, on the south-west, by the river Dee. The county is bounded on the south by Shropshire and Flintshire, but the border-line is not a natural one.

The district thus defined varies greatly in character, whether judged by its physical features or by its fauna and flora, and is divided naturally into three areas—the Central Plain, the Hill Country of the east, and the Wirral Peninsula with the marshes and estuaries of the Dee and Mersey.

THE CENTRAL PLAIN.

Four-fifths of the total surface of the county is occupied by a slightly undulating and fertile plain, composed for the most part of glacial deposits resting upon rocks of New Red Sandstone. The plain extends from the Mersey to the Dee, and, except on its eastern confines, is seldom more than two to three hundred, and in some places less than one hundred, feet above sea-level. Southward, however, from a promontory overlooking the Mersey near the mouth of the Weaver runs a tract of high ground which attains an altitude of over five hundred feet at Harrol Edge, Eddis-

bury Hill and Beeston Castle, and over seven hundred feet in the neighbourhood of Peckforton and Bickerton.

Harrol Edge is in that portion of the Overton and Frodsham hills known as the Royalty. To the north of the edge lies Overton Hill, the lower slopes of which are occupied by the village of Overton—a portion of Frodsham; southward from Overton a bracken- and heather-clad ridge runs to Woodhouse Glen, the westward side of which is Helsby Hill, a steep sandstone escarpment rising boldly from the Mersey marshes. To the southward these hills continue—their crests mostly fir-covered, as at Alvanley, Hey, and Rough Hill—as the northern portion of Delamere Forest. At Delamere the altitude is below three hundred feet, but the ground rises rapidly to the grassy slope of Eddisbury, which is backed by a long wooded ridge, running south-east to Harrow Hill. High Billinge, a rounded eminence crowned by a clump of beeches, is visible from most parts of the Cheshire Plain. The Delamere hills are separated from the Peckforton range by the Gowy Valley. The rock upon which Beeston Castle stands is isolated from the Peckforton hills, a long ridge clothed with woods of fir, oak and beech, and terminating in Bickerton Hill, which has never been planted and retains its primitive flora, chiefly ling, heather and bilberry. Apart from the more open parts of the Frodsham hills, Bickerton is the only place in the plain where the Ring Ousel nests. In the east the sandstone rocks of Alderley Edge, planted with firs and beeches, rising abruptly from the surrounding level, reach at the summit the height of six hundred and four feet.

The northern portion of the plain is drained by the Mersey, whose polluted waters are merged in the Manchester Ship Canal near Irlam. Within the memory of persons still living Salmon ascended the Mersey to spawn in its upper reaches, and even now an occasional Salmon is captured at Warrington or taken in the Ship Canal locks. Running as it does for the greater part between artificial banks, and polluted by the refuse from the towns and thickly populated

districts through which it flows, the Mersey no longer "yieldeth great store of Salmons,"* nor even the long list of coarse fish mentioned by Pennant as inhabiting the river at the beginning of the nineteenth century. On the other hand, the construction of the Ship Canal has indirectly been the cause of the old river-bed regaining much of its former fish fauna; the straight cut line of the canal does not follow the windings of the river, and isolated loops of the old river-bed have been stocked with coarse fish by various angling clubs of Warrington and other Lancashire towns. A marked change in the avifauna of the Mersey Valley—the great increase of the Black-headed Gull at all seasons and the Common Gull in winter—is partly explained, no doubt, by the wide waterway of the canal, and partly by the general increase of these birds which has taken place during recent years throughout Britain. Near Heatley the Mersey receives the tributary waters of the Bollin, which rises in the hill-country, and is early contaminated by the refuse from the Macclesfield factories. Within recent years, however, owing to local intervention, the waters have become purer, and the Bollin Angling Association succeeds in maintaining a good stock of Trout and Grayling. From Macclesfield to its confluence with the Mersey the Bollin flows through an agricultural district, where it is augmented by the waters of the Dean, Birkin and other smaller streams. Many of these small streams contain Trout and coarse fish, and the brooks, as a rule, Loaches, Bullheads and Lampreys.

The chief streams in the south-west are the Dee—there a broad and placid river—and the sluggish Gowy, which rises at Bunbury and flows through low-lying meadows to the Mersey Estuary near Stanlow Point, where it is syphoned beneath the Ship Canal. The Dee, a salmon-river of some importance, is resorted to by large numbers of coarse-fish anglers for the sake of the Bream and Roach which abound in its waters. The river is, normally, tidal as high as the weir at Chester, but at spring tides the water

* King's *Vale-Royall*, p. 22.

rises above the barrier and the tide reaches Farndon, where the Flounder is occasionally caught.

The Weaver is, however, the principal river of the plain ; it drains the whole of the central and southern portions. Rising in the Peckforton hills, it has a south-easterly course to Audlem on the Staffordshire border, thence it runs almost due north through Nantwich to Over and Winsford, where it widens into large and constantly growing lakes or " flashes," which are the home of Roach, Bream and other freshwater fish. From Winsford it flows north to Northwich, where it receives the combined waters of its tributaries, the Wheelock and Dane. From Winsford to Frodsham, where it enters the Ship Canal, the Weaver has been canalized and has entirely lost its rural character, being a navigable waterway thronged with barges engaged in the salt and chemical trades. The Dane, running though it does through the town of Congleton, is a rapid and fairly pure stream at Middlewich ; the Dipper, so characteristic of the Cheshire hill-country, nests on its banks at Holmes Chapel.

The small lakes, or meres as they are locally called, are a very characteristic feature of the Cheshire Plain. Many of them owe their existence to the subsidence of the land overlying rock-salt deposits. Water percolating the beds has gradually dissolved the salt and carried it away by means of brine-springs, and a depression has resulted. The " flashes " in the neighbourhood of Northwich and Winsford are being formed at the present time in a similar manner by the pumping of the brine. Others of the meres are artificial—ornamental waters made by damming streams in some of the parks—but so far as the fauna and flora are concerned these differ little from the natural waters. The largest of these meres are Rostherne, Mere, Tatton, Arley, Tabley, Pickmere and Marbury, forming a group in the north ; Radnor and Redes Mere in the east ; Crewe, Doddington, Combermere, Bar Mere and Marbury in the south ; and Oakmere, Petty Pool, Oulton and Hatchmere

in the Delamere Forest district. The seclusion afforded by their positions, fringed as they frequently are with dense reed-beds and situated within extensive demesnes, coupled with the fact that they abound in fish and support a varied and luxuriant aquatic vegetation, makes the meres the resort of many interesting birds. They are pre-eminently the home of the Great Crested and Little Grebes, Coot, Moorhen and Reed Warbler. In winter their waters attract large numbers of ducks—Mallard, Teal, Tufted Duck and Pochard—and during the periods of migration birds of many kinds remain for a few days to rest and feed. The Osprey occasionally lingers to take toll of the fish; the Dunlin, Ringed Plover, Redshank and other waders find food on the sandy margins or the spits of sand at the mouths of the brooks which flow into the meres. The Black Tern stops to feed on the insects which haunt the water, and the Common Tern to dash down upon the surface-swimming fish. At all seasons adult and immature Black-headed Gulls frequent many of the larger waters, although they have not, up to the present time, nested on the meres themselves. Common and Lesser Black-backed Gulls, and occasionally other species, visit the waters, and after stormy weather Cormorants, Divers and the rarer Grebes may occasionally be met with.

The Bream, which sometimes attains a large size, is the characteristic fish of the meres; dead Bream, often picked skeletons, are frequently left on the banks by their captors, the Heron and Otter. At dusk the whistle of the Otter may be heard in the reed-beds, the animal finding in the meres an asylum which the streams do not afford. The Pike grows to a great size in the meres, and in some waters—for example, Marbury near Northwich—the Eel, an exceedingly abundant fish, occasionally reaches abnormal dimensions. The Smelt, an estuarine salmonoid, occurs in Rostherne Mere.

Besides the meres, there are many smaller lakes and pools, and in many places every large field contains one or more

marl-pits. These "pits," as they are always called, were originally excavated for marl to manure the permanent pastures, but the adoption of artificial manures has caused their disuse; they are now filled with water, and often choked with vegetation. The Moorhen builds amongst their flags and rushes, and the Sedge Warbler and Reed Bunting sing in the rank herbage and bushes that clothe their margins.

With the exception of Northwich (population, in 1901, 17,611), Winsford, Over and Wharton (population, 10,382), engaged in the salt and chemical trade, Nantwich (population, 7,722) and Crewe (population, 42,074), there are no towns of any size in the central portion of the plain; the manufacturing towns of Stockport (population, 67,016), Macclesfield (population, 34,624), and Congleton (population, 10,707), being situate on its eastern border, whilst Chester (population, 38,309) and Runcorn (population, 16,491) are in the extreme west. Along the northern border the country is losing much of its charm owing to the extension of the southern suburbs of Manchester; the requirements of a residential district, rather than the proximity of factories, are yearly curtailing the haunts of many mammals and birds, whilst the pollution of the streams is poisoning the fish. It must, however, be borne in mind that the plantations, shrubberies and extensive gardens, as well as the market-gardens in these suburban districts, have undoubtedly contributed directly and indirectly to the increase of many birds, and the demands of the piscatorial working-man has led to a great increase in the artificially stocked waters in the neighbourhood of the towns.

The greater part of the county, and the plain in particular, is still essentially agricultural, in spite of the fact that the population was quadrupled during the last century owing to the growth of manufacturing towns and residential districts. Dairy-farming, for which the soil and humid climate are well suited, is carried on to a greater extent than in any other county. According to the returns of the



DANE'S MOSS.

Board of Agriculture for 1907, there were in that year in Cheshire 114,089 milch cattle, a number higher by forty-five per cent. per thousand acres than in any other county. Dairy-farming implies extensive grazing ground, and in 1907 there were in the county 326,805 acres under permanent pasture, whilst wheat was grown only on 13,713 and oats on 64,953 acres, the land under other cereals being inconsiderable. The small acreage under corn (about fifty per cent. of the average for the whole country) and the large proportion of grass-land undoubtedly influences the status of many species. During the last half-century farming in Cheshire has greatly improved. Land, wet and full of rushes, has been drained—to the detriment of such species as the Common Snipe—and its fertility enhanced by the use of artificial manures. Not only have old and tangled hedgerows, which afford secure nesting places for warblers and other birds, been grubbed up and replaced by mathematically straight thorn hedges or wire fences, but old and apparently useless timber—rotten and full of holes—which supplied abundant nesting sites for Owls, Woodpeckers and other birds which nest in these situations, have been cut down, and waste lands and mosses have been reclaimed and cultivated; changes no doubt advantageous to the common weal, but deplorable when viewed from the standpoint of the naturalist.

Unfortunately there are but few records of the fauna of the county prior to the middle of the last century; we can only speculate with regard to the Wild Cat, Marten and Polecat in the woods and forests, and the Harriers, Bittern, Short-eared Owl and other species, which probably nested on the extensive peat-mosses, of which fragments only remain, in such places as Lindow Common near Wilmslow and Dane's Moss near Macclesfield. The range of the Viper and Common Lizard has undoubtedly been curtailed by the cultivation of these mosses. Whitley Reed, between Great Budworth and Grappenhall, now indistinguishable from the surrounding country, is said to have been one of

the wildest and deepest mosses in Cheshire. It was reclaimed during the years 1850-52, and almost all trace of its ancient fauna is lost. Carrington Moss, now entirely cultivated, was twenty-five years ago a well-stocked grouse-moor, comprising about six hundred acres of moorland. This, the last to be reclaimed, afforded some indication of the primitive condition of the other mosses, for prior to its purchase by the Manchester Corporation, in 1886, it was the haunt during the breeding season of the Red Grouse, Short-eared Owl, Curlew, Common Snipe and Twite, and the Viper and Common Lizard were common. An interesting instance of the change in bird-life wrought by cultivation is the rapid colonization of Carrington Moss, after its reclamation, by the Corn Bunting.

Owing, in a large measure, to the extensive preservation of game, woods and plantations are abundant, the area under this heading being returned in 1907 at 24,665 acres. Pastures in the dairy-farming districts are interspersed with pheasant-coverts, many of which are of recent growth. Where the rivers have carved out narrow valleys in the alluvium, as the Bollin has between Wilmslow and Bowdon, the steep banks are often clothed with hanging woods, which furnish congenial quarters for warblers, finches and other passerine birds. Large parks are numerous, and where, as at Tatton, Doddington, Capesthorpe, and Dunham Massey, these contain much old timber, they are the haunts of Woodpeckers, Owls, Titmice and the Redstart. Red and Fallow Deer are maintained in several parks, and at Somerford an ancient breed of Park Cattle is perhaps in better condition at the present time than it has been for many years. In these parks and the surrounding woods the Fox is preserved, and several landowners have by active or passive protection prevented the extinction of the Badger on their estates.

At Rudheath there are extensive plantations of fir and birch, and the hillsides at Alderley Edge, Overton and Peckforton are clothed with woods of beech and fir. The most

extensive woodlands in Cheshire, are, however, situated within the Royal Forest of Delamere, which lies between Northwich and Chester. In 1812 commissioners were authorized to enclose all that remained of the waste lands in this district, which then amounted to 7,755 acres, one half of which was retained by the Crown and the other half allotted to the adjoining landed proprietors. A large proportion of the Forest was planted with fir, oak and beech, but a considerable area of sparsely wooded heath-land still remains. Game preservation is not so rigorous here as in many parts of the county, but the Pine Marten, which once inhabited the forests, has vanished, like the "Deer, both Red and Fallow," which abounded at the beginning of the seventeenth century. Nowhere in the county are the Jay and Magpie more abundant than in the Forest, and the avifauna of these woodlands and open heaths is rich and varied. Rudheath and Delamere were the last strongholds of the Black Grouse in the plain. Many of the marshy pools in the Forest have been drained; Fishpool and Flaxmere are little more than names, but Hatchmere, whose borders support a most interesting and varied flora, is a typical forest pool, though it varies little in its avifauna from other Cheshire meres. Oakmere, a comparatively shallow water without outlet, is frequently visited by migratory ducks and waders in spring and autumn. The Goldeneye is more often to be met with on Oakmere than on any other mere, and the sandy margin attracts large numbers of Lapwings, Black-headed Gulls and an occasional Curlew. Indeed Delamere would seem to be in the direct route of passing Curlews, since here, more than in other parts of inland Cheshire, they are to be met with at the seasons of migration.

THE EASTERN HILLS.

That part of Cheshire which lies between the Tame and Etherow, and the district east of a line drawn from Marple to Macclesfield and thence to Harecastle on the Staffordshire border, constitute a well-marked area, an outlying

portion of the Peak country, entirely different in physical features from the plain. The Millstone-grit and other primary rocks, of which this district is composed, are weathered into picturesque "edges," and attain a considerable altitude in many places. Shining Tor, on the Derbyshire border, near Buxton, is 1,833 feet, and the conical peak of Shuttlings Low, in the same neighbourhood, is 1,658 feet high. From Bosley Cloud, Congleton Edge runs south-west to Mow Cop, the southern outpost of the hill-country. The moorland ridge stretching from Stalybridge to Woodhead—the northern flank of the Longdendale valley—has its greatest elevation near the source of Heyden Brook at Black Hill (1,908 feet), the highest point in Cheshire.

Apart from the manufacturing towns of Hyde (population, 32,766), Dukinfield (population, 18,929), and Stalybridge (population, 27,673) in the Tame Valley, the East Cheshire highlands are sparsely populated, the hillsides being covered with rough pastures, separated from one another by stone walls, whilst the higher ground is generally uncultivated grouse-moor. The cloughs—the little valleys which the peat-stained mountain streams have cut in the Millstone-grit, are generally treeless, except for a few stunted mountain ashes and birches. In Longdendale or among the hills of Macclesfield Forest one may walk for miles amongst the heather.

In places the hillsides are carpeted with bilberry, whose tender green is varied here and there by patches of darker, thick-leaved cowberry. Right up to the "tops," where the peat is deeply channelled by the winter rains, are great cushions of crowberry, and in a few spots one may come across wide stretches of the cloudberry, whose snow-white flowers set among green crape-like leaves, constitute it one of the most beautiful of our moorland plants. Where the slope is not steep enough to ensure a rapid drainage, wet, spongy "mosses" have been formed, which in spring are flecked with downy flower-heads of cotton-grass, and later

in the season are lighted by the saffron-coloured torches of the asphodel.

During spring and summer these breezy uplands abound in bird-life which contrasts as strongly with that of the plain as do the physical features of the country themselves. The Red Grouse reigns supreme—in its interest the birds of prey are persecuted unmercifully; but the Merlin still nests in certain places, and the Peregrine is a not infrequent visitor. The clear whistle of the Golden Plover, the bubbling cry of the Curlew, the Snipe's weird bleat and the Lapwing's mournful wail are familiar sounds, whilst the wild ringing song of the Ring Ousel may be heard on every hand. The Twite nests in the ling, and the Meadow Pipit, more abundant here during summer than any other bird, pours forth its quavering song, or follows its enemy the Cuckoo with plaintive *peep*. The Wheatear haunts the stone walls of the pastures, and the Mistle Thrush and Tree Pipit are characteristic birds of the plantations on the lower slopes. In winter, except for the Red Grouse, these hill solitudes are practically deserted; one may then tramp from dawn to dusk across the Longdendale moors without seeing any other bird. The introduced Varying Hare thrives on these uplands, and is rapidly extending its range over all the neighbouring hills; in early winter and again in spring, when the hills are free from snow, its white winter pelage shows distinctly against the brown herbage and grey rock.

The chief streams are the Etherow, Goyt and Dane. The Etherow has been dammed, and the upper part of its course forms a chain of reservoirs some five miles in length, whence Manchester obtains a part of its water supply. Woodhead Reservoir is 134 acres, and Torside Reservoir 160 acres in extent. Some of these waters have been stocked with Trout, but the fish cannot ascend the hill-streams which feed them, and consequently Heyden and Crowden brooks, to all appearances typical trout-streams, contain no Trout. The shores of the reservoirs, bare as a mountain tarn, offer few attractions to birds, but the

Common Sandpiper, abundant throughout the hill-country, haunts the stony margins in summer. In spring and autumn wildfowl on passage visit the waters.

From Broadbottom to its confluence with the Goyt at Marple, the banks of the Etherow are pleasantly wooded. The Goyt and Dane, rising in the hills between Macclesfield and Buxton, are for the first few miles of their course typical mountain becks. Descending, they flow through valleys of remarkable beauty, whose sides are clothed with hanging woods, until they debouch upon the plain. The Goyt below Whaley Bridge is polluted, but the Dane retains its purity until within a few miles of Northwich. The Whiskered Bat is unusually abundant in these wooded valleys, and the Dipper, Grey Wagtail and Common Sandpiper are characteristic birds of the streams; in the woods fringing their banks the Garden Warbler is plentiful. The Black Grouse and Woodcock nest in several of the woods amongst the hills. At Bosley there is a large reservoir, where the Coot and Great Crested Grebe nest annually, and other reservoirs are situate at Whaley Bridge and Langley.

WIRRAL AND THE MARSHES.

Between the estuaries of the Mersey and Dee lies the peninsula of Wirral. Inland the country differs little in character from the central plain, and, like it, is largely devoted to dairy-farming. Birkenhead (population, 110,915), on the Mersey, the largest town in Cheshire, is surrounded by an extensive residential district; New Brighton, Hoylake and West Kirby are popular seaside resorts. A heath-clad ridge of high land, now dotted with houses, runs from Caldrey Hill by Thurstaston to Heswall Hill (385 feet). Here the Stonechat, almost unknown upon the Cheshire plain, is a not uncommon resident. Fir woods top the low hills at Storeton and Burton, and Bidston Hill (230 feet) rises abruptly from the low land about Wallasey. The coast-line from New Brighton to Hoylake was at one time fringed by sand-dunes, the home of Stock Dove, Sheld Duck, Natter-

jack and Sand Lizard, but now most of the dunes have been levelled or converted into golf-links. The marshes which extended behind the sandhills have been drained, and the encroachments of the sea prevented by the construction of the Leasowe Embankment. Between West Kirby and Heswall there are low marl-cliffs, but there are no crags where rock-haunting birds, such as Gulls, Guillemots or Razorbills, can breed. Above Eastham the southern shore of the Mersey has been considerably altered by the construction of the Manchester Ship Canal, and several interesting woods have been destroyed, notably one at Hooton which contained a heronry. The construction of a huge spoil-bank, named Mount Manisty, has, however, provided nesting holes for a numerous colony of Sheld Ducks, and indeed the bird, which has increased enormously both in the Mersey and the Dee, now nests in many situations which were untenable before the days of protection. A narrow strip of salting—Frodsham Score—and the rocky Stanlow Point, now entirely cut off from the Ince and Frodsham marshes by the canal, afford secure resting places at high tide for the gulls and waders which frequent the estuary.

About a mile from Hoylake, at the extreme north-west of Wirral, are the rocky islets of Hilbre, whose weathered sandstone faces rise about fifty feet above the surrounding sandbanks. At low tide it is possible to walk dryshod from the Cheshire shore to Hilbre, where the Rock Pipit, only a rare visitor on the mainland, nests, and the Sheld Duck and Wheatear rear their young in the numerous rabbit-burrows.

Between the present narrow artificial channel, or Dee "Cut," and the old coast-line which runs from Blacon to Burton Point, lies a tract of cultivated country, known as Sealand, which has during the last hundred and fifty years been gradually reclaimed from the sandbanks and saltings of the estuary. Sealand, once the haunt of innumerable wildfowl, is now intersected by roads and dotted with

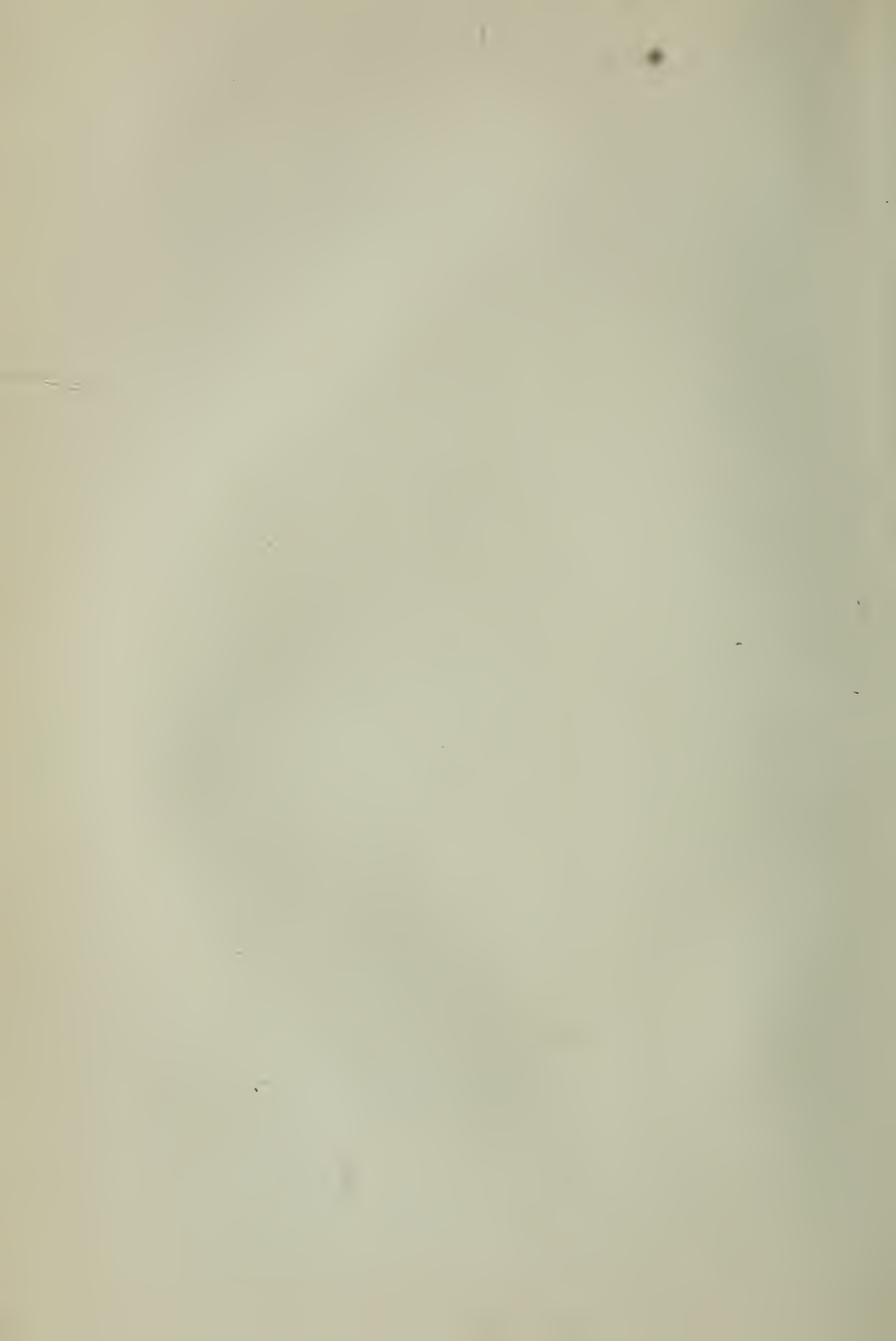
farmsteads, and in several places long mounds running across the fields indicate where the ancient "cops," or banks, held back the tide, which until twenty-five years ago flowed to within a few yards of Shotwick Church. Old residents still talk of the Barnacle Geese which fed within gunshot of the churchyard wall. The rapid silting-up of the estuary, consequent upon the alteration of the channel, which has ruined the once important packet-station and seaside resort of Parkgate, and year by year forces the shrimpers to seek anchorage lower down the river, and the pushing back of the sea by successive embankments have curtailed the haunts of wildfowl. The last embankment, however, the Burton Cop, which runs from Burton Point to the seaward end of the Dee Cop, is broken in three places, and the reclaimed land so far as the Great Central Railway embankment, which runs across the marsh, has relapsed into saltings; these and the outer fringe in the neighbourhood of Burton and Denhall at the present time provide an area of about three thousand acres, suitable at low tides for sheep-grazing, but covered at spring tides right up to the rocks at Burton Point.

These saltings and the miles of sandbank exposed at low water attract numbers of Pink-footed Geese, Mallards, Pintails, Teal and other ducks, whilst the migratory and resident Sheld Ducks are here, as in the Mersey, remarkable for their numbers. Waders of various species frequent the banks in countless thousands in spring and autumn, the Oystercatcher, Curlew, Knot, Bar-tailed Godwit, Dunlin, Sanderling and Ringed Plover occurring in the greatest numbers. The Redshank breeds on the inner marshes below Burton Hall, where at one time the Dunlin also nested.

Porpoises, and occasionally larger cetaceans, find their way up the channels and gutters of the Dee and Mersey estuaries, and not infrequently are stranded on the rapidly shoaling banks; seals, too, have from time to time ascended the rivers, even so far as Chester and Warrington, and it is



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not unusual to hear of Common Seals at Hilbre or on the banks near the mouth of the Dee.

Politically, Sealand and much of the marsh near Burton belong to the county of Flint, but for faunal purposes it is impossible, even if it were advisable, to discriminate between the land north of the Dee Channel and the adjoining parts of Cheshire; this district is therefore included in the present work as part of the county. Marine mammals and fishes, and birds observed in the estuaries, cannot be referred to any particular county, and we have included in our purview the whole tidal waters of the Dee and Mersey.

SEA AREA.

As is explained in the introductory chapter on the Fishes, we have considered it advisable to extend the area to be dealt with beyond the limits of the seas actually contiguous to the Cheshire shore, and have taken into account the marine fish-fauna of the shallower portion of Liverpool Bay; this course, however, has not been adopted in dealing with the mammals and birds.

LITERATURE.

The early literature of the Cheshire fauna is very meagre, and we know almost nothing of the creatures that inhabited the county when the conditions were widely different from those of the present day. Even during the last half-century great changes have taken place; many species have become extinct, whilst others have established themselves or increased in numbers, and there can be no doubt that similar changes, of which there is no chronicle whatever, have taken place in former times.

In *Domesday Book* there are references to hays for Roes, and "aeries of hawks," and in one case a wood at Hantone (Hampton) which "now renders ii shillings and one sparrowhawk" (*sprevarium*).*

* Beamont, *Domesday Book*, pp. 13, 16, 21.

The earliest work which contains more than a casual reference to the fauna of Cheshire is Daniel King's *Vale-Royall*, published at Chester in 1656. The author, in describing the county generally, says:—

“Of Waters, there is also great store, in manner of Lakes, which they call Meres; as *Combermere, Bagmere, Comberbach, Pickmer, Ranstorn Mere, Okehanger-Mere*; and certain also which they call Pools; as *Ridley-Pool, Darnal-Pool, New-Pool, Petti-Pool*; and divers others, wherein aboundeth all kinds of Fresh-Fish; as *Carpes, Tenches, Bremes, Roches, Daces, Trouts, and Eeles*, in great store.”

Speaking of the forests of Delamere and Maxfield, he says:—

“Besides the great store of Deer, both Red and Fallow, in the two Forests before-named; there is also great plenty of Hares: In Hunting whereof, the Gentlemen do pass much of their time, especially in Winter: also, great store of Conies, both black and gray; namely, in those places, where it is Sandy ground: neither doth it lack Foxes, Fulmards, Otters, Basons, and such like.

“Wild Fowl aboundeth there in such store, as in no other Countrey have I seen the like; namely, Wild-Geese and Wild Ducks. Of which first sort, a man shall see sometimes flying, neer 200. in one flock; and likewise of the Ducks, 40. or 50. in a flock. And in other kinds also it hath like store; as Phesant, More-hen, Partridge, Woodcocks, Plovers, Teels, Widgins; and of all kind of small Birds. So hath it on the contrary sorts, Ravens, Crows, Choughs, Kites, Gleads, and such like.”

The “*Dee* aboundeth in all manner of Fish, especially Salmons and Trowts . . .” the “*Marsey*, yieldeth great store of Salmons, Conger, Playce, and Flownders, which they call Flounks; Smelts, which they call Sparlings; and Shrimps, which they call Beards.”*

Dr. Charles Leigh's *Natural History of Lancashire, Cheshire, and the Peak in Derbyshire*, published in 1700,

* pp. 16, 18, 21, 22.

contains little of interest beyond a reference to the Red Deer at Lyme, and a brief notice of the Fallow Deer in Dunham Park ; he does not specially refer to any Cheshire birds. Thomas Pennant, in his *British Zoology*, the first edition of which was published in 1766, and in his other works, refers occasionally to the Cheshire animals, chiefly in regard to accidental visitors amongst the cetaceans and fishes of the Dee. A few references to Cheshire may be found in the works of other early naturalists, but the first really systematic work on the fauna was accomplished by Isaac Byerley's *Fauna of Liverpool*, which was published as an appendix to the *Proceedings of the Liverpool Literary and Philosophical Society* in 1854.

Byerley included in the Liverpool district the whole of the Wirral and other parts of western Cheshire, and the section of the work that treats of the vertebrates is the earliest catalogue for even a portion of the county. Unfortunately, many of the rarer species are dismissed with only a few words, and in some cases the evidence of identification is deficient. Owing to the lack of particulars several of the most interesting specimens cannot now be traced, and in the absence of confirmatory evidence the claim of certain species to a place in the Cheshire List is very slender.

Between the years 1864 and 1868 the late Lord de Tabley—then the Honourable John Byrne Leicester Warren—made sundry memoranda, “Materials for a Fauna of Cheshire,” but they were never published. These MS. notes, which by the kindness of Lady Leighton-Warren we have read, contain many interesting records ; it is to be regretted that Lord de Tabley was unable to complete a fauna on the lines of his *Flora of Cheshire*.

The late H. Ecroyd Smith, in a paper on the “Notabilia of the Archæology and Natural History of the Mersey District,” published in the *Transactions of the Historic Society of Lancashire and Cheshire*, 1865–1866, gives an account of the local fauna, compiled from notes supplied by other naturalists.

In 1874, the late J. F. Brockholes contributed to the *Chester Society of Natural Science* "The Birds of Wirral." Unlike Byerley, who although a specialist in some branches of natural history had only a general knowledge of birds, Brockholes was an enthusiastic practical ornithologist. His intimate acquaintance with Wirral, and the Dee marshes in particular, coupled with his zeal, enabled him to add several species to those recorded in the *Fauna of Liverpool*. Some of his most interesting notes, however, are unfortunately lacking in detail, and it is now almost impossible to substantiate his records of such rare species as Temminck's Stint and the Great Skua.

About the same time a series of interesting articles on the "Birds of Lancashire and Cheshire," by Mr. F. Nicholson, who wrote under the pseudonym of "Redshank," appeared in the *Manchester City News*. These contained some valuable information about the rarer species which have occurred from time to time. A paper on the "Heronries of Lancashire and Cheshire," from the same pen, appeared in the *Manchester Guardian* in 1881.

The late J. D. Sainter, in his *Rambles Round Macclesfield*, 1878, gives lists of the mammals, birds and reptiles of that neighbourhood, but they contain so many obvious inaccuracies as to be of practically no value.

In 1889 the late T. J. Moore contributed an excellent list of the seals and whales which have occurred in the Liverpool district to the *Proceedings of the Liverpool Biological Society*. It was published in the same year by the Liverpool Marine Biological Committee in their *Second Report upon the Fauna of Liverpool Bay and the neighbouring seas*.

The fourth number of the *Proceedings of the Chester Society of Natural Science and Literature*, published in 1894, contained papers of much value to local naturalists. These include an exhaustive paper on the "Hérons and Heronries of Cheshire and North Wales," by Mr. Robert Newstead; "A Preliminary List of the Mammals of Cheshire and North

Wales," by the same writer ; and Dr. W. H. Dobie's " Birds of West Cheshire, Denbighshire, and Flintshire." This last was an important addition to our knowledge ; it dealt with the district west of a line running due south from Warrington, and therefore extended the areas treated of by Byerley and Brockholes.

A series of papers by Coward and Oldham, entitled " The Mammalian Fauna of Cheshire," appeared in the *Zoologist* for 1895, and in 1900 their *Birds of Cheshire* was published. No detailed account had previously been given of either the mammals or birds of the whole county.

The " Fishes and Fisheries of the Irish Sea," by Dr. W. A. Herdman and the late Robert A. Dawson, was published in 1902 as No. II. of the *Lancashire Sea-Fisheries Memoirs*. It contains much useful matter and a list of the marine fishes of our area.

In addition to these lists there are many scattered notes relating to Cheshire vertebrates in the pages of the *Zoologist*, *Field*, *Naturalist*, *Ibis*, *British Birds*, standard works on zoology, local newspapers, proceedings of scientific societies, and other publications.

GAME PRESERVATION.

The influence of game preservation, direct and indirect, upon the fauna is great and far-reaching. This is eminently the case in an agricultural county like Cheshire, where Pheasants and Partridges are preserved universally in the lowlands and Grouse in the moorland districts. Incessant war is waged against predatory mammals and birds, whilst other creatures, inimical to game and often of benefit to the agriculturist, are destroyed by biassed and indiscriminating gamekeepers. Some landowners and individual keepers often acknowledge that certain species, such as the Owls and the Kestrel, are practically harmless to game, but they are still shot and trapped, partly from long-established custom, but chiefly because masters insist upon a large head of game being reared at all costs. Any creature, therefore,

against which there is even traditional suspicion is under their ban.

The protection of the Fox, which in certain parts of Cheshire is considered of greater importance than the preservation of game, has not, perhaps, such wide-reaching results, but certain of the ground-nesting birds may suffer through a superabundance of Foxes in any area. The Badger, considered by many hunting men to be inimical to the Fox, is destroyed in some districts, but several landowners, themselves hunting men, do not molest it.

The Polecat and Marten are already banished, and the Otter, owing to its reputed ravages amongst Trout, is destroyed when opportunity occurs. The Stoat, Weasel and Hedgehog, on the other hand, although killed as "vermin" by every gamekeeper, hold their own, and no doubt derive benefit from the security afforded by the coverts and woods provided for game. This is certainly the case with the worst enemy of game—the Brown Rat—which is an unconquerable pest in almost every game-preserve.

The raptorial birds have suffered. The Merlin is rapidly becoming rarer, and the Kestrel and Sparrow Hawk are not so plentiful as in districts where there is little preservation of game. The Kite has long since vanished and the Peregrine, Buzzard and Harriers, now only known as stragglers, are shot or trapped immediately they appear. Owls on most shootings fare little better, while the Magpie, Carrion Crow and Jay are in some districts almost extinct. From the game-preserve's somewhat limited point of view, the slaughter of some of these birds may be justifiable; but what excuse can be offered for the destruction of the Common and Honey Buzzards, Owls, Cuckoo and Night-jar?

On the trout-streams the Kingfisher and Heron are classed with the Otter as dangerous, but, perhaps owing to the protective orders of the County Council, these two birds are certainly now no rarer than they were twenty years ago.

Since the passing of the Ground Game Act of 1880, Hares

have decreased on many estates, but where local influence gives them protection they are remarkably plentiful; on the moorlands in the east of the county, preservation, implying, as it does, the destruction of predatory birds, has firmly established the introduced Varying Hare. The preservation of game, though prejudicial to many species, is undoubtedly advantageous to others. The destruction of birds of prey contributes materially to the welfare of many passerine birds. The abundance of the Song Thrush and Blackbird, and the inconvenient increase of the House Sparrow, are largely owing to the systematic repression of the Sparrow Hawk. Ring Doves would be less numerous if the larger hawks were not molested; and Merlins, were they left in peace, would diminish the numbers of Meadow Pipits, Twites, Wheatears and other small birds of the moorlands.

An important factor in the economy of many species is the existence of the coverts indispensable to the preservation of the Fox and Pheasant. There is little natural woodland in Cheshire, and were it not for the care lavished on these creatures, the area at present occupied by woods and coverts would be mostly replaced by grazing or arable land. Many birds of various families and species find in the coverts the security and seclusion necessary to them in the breeding season. The Hawfinch and Turtle Dove, species which are increasing, would be hardly known were the coverts absent; whilst the Jay owes its very existence, persecuted though it is, to the privacy of these retreats.

In conclusion, we desire to tender our sincere thanks for the ready assistance we have received from those to whom we have applied for information. Being under obligation to so many friends and correspondents, it is impossible for us to mention all here, but we have acknowledged help individually in every case when treating of the separate species. We must, however, refer by name to Mr. Sidney G. Cummings, who has spared neither time nor trouble in

assisting us; to his accurate powers of observation and wide knowledge we owe much of our information regarding the birds of West Cheshire.

Our special thanks are due to His Grace the Duke of Westminster for permission to visit the Eaton Heronry and take photographs of the nesting trees; to the Right Honourable the Earl of Haddington for the loan of an oil painting of the Delamere Horn and permission to reproduce it; to the Right Honourable Lord Newton of Lyme for permission to measure and photograph the heads and horns of Park Cattle preserved at Lyme Hall; to the Honourable Lady Leighton-Warren for opportunity to visit and photograph the Tabley Heronry, and for the loan of an MS. note-book of the late Lord de Tabley; to Sir Walter G. Shakerley, Bart., for permission to photograph the Park Cattle at Somerford; to Sir Thomas Brocklebank, Bart., for permission to photograph at Storeton; to Professor W. A. Herdman, Honorary Director of Scientific Work to the Lancashire and Western Sea-Fisheries Committee, for permission to use information and statistics compiled by the Committee; to Sir Philip L. Brocklehurst, Bart., of Swythamley, Mrs. J. H. Stock, of The White Hall, Tarporley, and Colonel George Dixon, of Astle, for allowing us access to their private collections; to Mr. R. Newstead, the sometime curator, and his brother, Mr. A. Newstead, the present curator of the Grosvenor Museum, Chester, Mr. C. Madeley, curator of the Warrington Museum, Dr. W. E. Hoyle, formerly director of the Manchester Museum, and Mr. J. A. Clubb, assistant curator of the Derby Museum, Liverpool, for their unvarying courtesy in furnishing us with information relative to the collections under their charge.

We are indebted to Mr. H. F. Witherby for the care he has exercised in publishing the book and for the many valuable suggestions he has offered in connection with the ornithological portion.

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THE MAMMALS OF CHESHIRE



THE MAMMALS OF CHESHIRE.

INTRODUCTION.

FORTY-SIX species of Mammals occur or have occurred within recent years in Cheshire and its territorial waters. Of the nine bats, five are common, two apparently rare, and the evidence of the occurrence of the remaining two—the Barbastelle and Lesser Horseshoe—is not altogether satisfactory. The five insectivores and five of the terrestrial carnivores are more or less abundant, but two carnivores—the Marten and Polecat—are practically extinct; all three of the marine carnivores are occasional or accidental visitors. Ten of the thirteen rodents are common; the Harvest Mouse and Dormouse are rare, and the Varying Hare owes its position to successful introduction and protection. The three ungulates are under the influence of domestication, and cannot be now considered wild; the deer are emparked, and the park cattle are only included because they are of the same stock as the so-called British Wild White Cattle. The six cetaceans are accidental visitors, though the occurrence of one or two—the Bottle-nosed Whale, for instance—is coincident in time with the migratory movements of the species.

Very little documentary evidence exists of the recently extinct mammalian fauna, and owing to the absence from Cheshire of limestone caverns, which have yielded a rich harvest of remains of the Pleistocene Age in the neighbouring counties of York, Derby, Denbigh and Flint, our knowledge of the more ancient fauna is slight. The submerged peat and forest of the Wirral shore at Leasowe and Wallasey contain many remains of Recent Mammals, both wild and domesticated. The majority of these date back no further than historic times, and are associated with Roman or Romano-British remains; but in the alluvium and in the

glacial deposits have been found a few remains which are of considerably earlier age.

The most ancient remains are those of the Mammoth, *Elephas primigenius*, Blumenbach, and of another Elephant, *E. antiquus*, Falconer, which have been found in the "Middle Sand" of the glacial deposits which cover the whole of the level land of mid-Cheshire and are frequently of such thickness that nothing can be seen of the underlying Keuper Marl. It is probable that these remains are, as suggested by Professor Boyd Dawkins, of pre-glacial age, and that they were transported by ice action to the place where they were found—possibly from Derbyshire or North Wales, for remains of both of these Elephants occur in caves in those districts. In 1803, during the excavation of the Ellesmere Canal at Wrenbury, a femur of *E. primigenius* was found. The lower portion of a humerus and a fragment of a tooth of this species, from Sandbach, are preserved in the Bootle Museum; in 1877, another tooth was found in a gravel-pit at Marbury—only three miles from Wrenbury, where the femur was found in 1803. A tooth, found at Northwich, was referred to the Mammoth by Professor Boyd Dawkins, who has recorded *Elephas antiquus* from Coppenthal.*

Some large Mammoth bones, now in the possession of Mr. Lasenby Liberty of The Lee, Buckinghamshire, which we have seen, are said to have been found on the Mere Hall Estate early in the last century.

Skulls, or portions of skulls, of the large Wild Ox, *Bos primigenius*, Bojanus, and of the smaller domesticated *Bos longifrons*, Owen, have been obtained from many places. Specimens from the Wallasey shore, from the bed of the Mersey, and others obtained during the excavation of the Manchester Ship Canal are preserved in the museums at Chester, Warrington, Liverpool and Manchester. In March, 1907, when the canal was being widened at Runcorn, the

* *Quarterly Journal of the Geological Society*, 1869, p. 196. Cf. Leith Adams, *British Fossil Elephants*, pp. 6, 70, 71 (Coppenthal is incorrectly spelt and referred to Staffordshire); and Morton, *Liverpool Biological Society, Trans.*, XII., pp. 155-158.

dredger brought up an exceedingly fine skull of *Bos primigenius* from the old bed of the Mersey. The tips of the horn-cores are broken, but the left core measures over twenty-two inches and is thirteen inches in circumference at the base. The width at the narrowest place, above the orbits, is nine and a half inches, and between the bases of the horn-cores ten and a half inches. We are indebted to Mr. F. W. Hutton for particulars and a photograph of the skull, which is now in the Grosvenor Museum, Chester.*

Red Deer antlers have been obtained at Leasowe, dredged from the bottoms of the meres and River Mersey, and found during excavations. Some exceptionally massive antlers, especially a pair obtained at Norton during the construction of the Ship Canal, have been described as Pleistocene but are really Recent. Particulars are given of these in the article on the Red Deer.

The Roebuck, *Capreolus capreolus* (Linné), inhabited the Cheshire forests, and there is etymological evidence of its existence in Roelau, one of the hundreds into which the county was formerly divided. The words *haia capreolorum* occur twice in the portion of *Domesday Book* which refers to Cheshire; these hays for Roes existed at Wivreham (Weaverham) and Chingleslie (Kingsley), both in the hundred of Roelau; at Kingsley there were four hays for Roes.†

* A considerably larger horn-core, now in the Manchester Museum, was taken from the Ship Canal cutting at Barton in Lancashire. The length on the curve is twenty-eight inches and the circumference at the base thirteen and a half inches.

† The word *haia* is frequently mentioned but *haia capreolorum* only in connection with these two places. The following explanation of the word is given by Beamon (*A Lit. Extension and Translation of the portion of Domesday Book*, etc. Introd., p. xxxi.): "The word *hay*, in its original, is Saxon, and signifies a hedge, whence the quickset, its most frequent material, is a hawthorn, or, in our Lancashire vernacular, a *haythorn*. The transition was easy from that which enclosed to that which it enclosed, and so the latter naturally became a *hay*. The hays were chiefly made in the woods and forests, and except such as were intended for the roe, were forbidden to be made of any great height; and they were so contrived that, at certain seasons, the deer could be driven into them to be taken or inspected, which was called a *stabilitio*, as the stand where the owner or sportsman stood was called a *stabilitura*. We never meet with these hays in places which are said to be waste. The *haia capreolorum* was a hay for roes, and a *dimidia haia* was half a hay, or a hay unfinished."

There is no evidence to show when the Wolf, *Canis lupus*, Linné, ceased to roam in the Cheshire forests; indeed there is little trace of its existence unless it is in the peat-beds of Wirral, where its remains are said to be of frequent occurrence.* Mr. D. M. S. Watson has, however, carefully examined all the *Canis* remains from Wirral in the Manchester Museum, and finds that they are, without exception, the bones of the domestic Dog and not of the Wolf. Furthermore, in the *Chester Plea Rolls* for 1362 (No. 67, 35 E. 3, m. 98)† there is a reference to Wolves, but it is by no means certain that the animal referred to was not the Fox. Translation:—"Cestria. A suit of Quo warranto to shew by what right William de Stanleigh claimed the hereditary forestership of Wirhall . . . also the right of hunting the hare and fox with greyhounds within the forest. . . . The jury found in favour of William de Stanley, excepting as to his claim for hunting wolves and hares."

There is even less evidence of the existence of the Wild Cat, *Felis sylvestris*, Schreber. It is true that in old documents the word occurs, but the name "cat" was frequently applied to the Marten and Polecat, and occasionally perhaps to the Badger. Dr. Brushfield, quoting from *Notes and Queries*,‡ mentions a single place-name as indicative of its former presence in Cheshire: "Wildcatts Hearth (Heath), in the p'ish of Wisterton (Wistaston), in the county of Chester." The late J. F. Robinson, in 1883, described a cat which had been trapped some years previously in Delamere Forest; this he considered to be a genuine Wild Cat, but the evidence adduced is not sufficient to warrant the inclusion of the animal in the Cheshire fauna.§

The Wild Boar, *Sus scrofa*, Linné, which existed until mediæval days, is memorized in the place-name Wildboar-

* Hume, *Ancient Meols*, p. 350.

† Quoted in *Genealogist*, Vol., XIII., pp. 102, 103.

‡ *Devonshire Association, Trans.*, Vol. XXIX., pp. 291-349. Baker, *Notes and Queries*, Series 7, Vol. XI., p. 186.

§ *Manchester City News*, Nov. 3rd, 1883.

clough, and perhaps in Bosley. Tusks of the Boar are abundant near Roman stations and have been obtained from the peat at Wallasey,* and the skeleton of a Boar is said to have been found on the Lower Moss, Mobberley, many years ago.†

There is little difference between the existing mammalian fauna of Cheshire and that of neighbouring counties. The fact that there are no limestone caverns no doubt accounts for the rarity or absence of the cave-haunting Lesser Horseshoe Bat, which occurs in limestone districts in Yorkshire, Derbyshire and North Wales, and the scarcity of the Dormouse and Harvest Mouse is attributable to the geographical position of the county; neither of these is common further north than Cheshire. The large sub-species of the Wood Mouse, *Mus sylvaticus wintoni*, Barrett-Hamilton, has not hitherto been recognised. In the wilder parts of Wales, where game preservation is less rigorous than in Cheshire, the rarer carnivores, such as the Marten and Polecat, are naturally more abundant, but their status in the neighbouring English counties is as in Cheshire. The short mileage of the actual Cheshire coast, the shallowness of Liverpool Bay, and the distance of the estuaries from the main route of migratory cetaceans and seals account for the poverty of the marine mammalian fauna.

Many of our British Mammals are known to differ slightly from their continental representatives, and are distinguished by sub-specific names. We have not thought it necessary, as it is when treating of birds, where two forms may occur in one district, to depart from the accepted binomial nomenclature.

* Hume, *Ancient Meols*, p. 350. Mr. Watson, who has examined all Wirral specimens in the Manchester Museum, tells us that the majority, at any rate, are of domestic animals; the Boar remains are certainly those of domestic Hogs, those of the Horse, which are abundant, mostly represent small animals (ponies) with coarse legs, but there are a few examples with slender metapodia.

† Norbury, *Lanc. and Cheshire Antiquarian Society*, Vol. II., p. 65.

MAMMALIA.

CHIROPTERA

VESPERTILIONIDAE.

Sub-order *MICROCHIROPTERA.*

NOCTULE. *Pterygistes noctula* (Schreber).

Local names—GREAT BAT ; FOX BAT.

Abundant in wooded districts.

The Noctule, a tree-loving bat, is plentiful in the lowlands wherever there is old timber. It was known to occur in Wirral by Byerley, who, on the authority of Mather, a taxidermist, recorded specimens taken from the ruins of Birkenhead Abbey, and "from other localities"; -he adds: "If now in the neighbourhood, it is very scarce." Whether this was or was not the status of the Bat in 1854 we cannot tell, but it now occurs at Storeton and other places in Wirral. In the central plain it is very abundant in the Forest district and in the large parks; it occurs at six hundred feet on Alderley Edge, and in Longdendale up to five hundred feet at Broadbottom.

The Noctule spends the day in hollow trees, and is gregarious; it hibernates in trees, house-roofs or old buildings from the end of October until March. On Knutsford Moor, in 1904, we saw it on the wing on March 8th, but as a rule it does not appear until some ten days later than this date. In 1902, for instance, it was flying over Knutsford Moor on March 18th; in 1903, on March 20th; in 1905, on the 18th; and in 1906, on the 17th. In most years it is not abroad after the first week in October—in 1896 one was flying in Dunham Park at 5.20 p.m. on October 10th—

but, exceptionally, it may be seen later in the year; on November 2nd, 1907, Mr. J. J. Cash saw a single Noctule on the wing at Ollerton. The time of emergence, relatively to sunset, varies according to the season and weather; even in the same month the bats may be out some minutes before or not until half an hour after sunset. In August we have seen them leave their diurnal retreat from six minutes before to fifteen minutes after sunset, and on the same evening the intervals between the time when the first and last bats left the hole varied from fifteen to twenty minutes. On six different evenings, between April 18th and May 6th, Noctules left their retreats in trees on Alderley Edge, twice at twenty-three minutes, once at fourteen and once at eleven minutes after sunset, but on the other two evenings, which were cold and windy, no bats emerged at all. The vesper-tinal flight is short, sometimes lasting less than an hour, but there is also a matutinal flight; it is not known, however, if all the members of a colony regularly take the double flight. Oldham watched a tree in Oulton Park on May 20th, 1905, from which ten bats emerged, the first leaving at eighteen minutes after sunset; seventy-seven minutes after sunset they began to return. At 2.40 a.m. (eighty-four minutes before sunrise) on the following morning some bats emerged and three returned at 3.20 a.m.* On a subsequent visit in July the bats had vacated the tree.

The feeding grounds of the Noctule, and no doubt to some extent its retreats, vary according to the season, and, it would appear, the localities where certain insects are to be found. Thus at times the bats may be seen flying up and down glades in the parks or tree-fringed lanes, at the height of the tree-tops, and at others, especially early in the evening, they are high in the air, among the Swifts, hawking for insects. Large sheets of water—favourite haunts of insects—are frequented, the bats usually restricting their flight to the area of the pool. In the summer and autumn Noctules sometimes frequent grass-lands, flying low above

* *Zoologist*, 1905, p. 307.

the mown hay ; their course may then be only four or five feet above the grass, and when, as they often do, they dive obliquely through the air, they almost touch the ground.

The food of the Noctule, which consists of beetles and moths, is captured and devoured on the wing ; the champing of the bat's jaws, as it crunches the horny cases of beetles, is often audible as it flies overhead.

LEISLER'S BAT. *Pterygistes leisleri* (Kuhl).

Apparently rare ; only observed occasionally.

A female Leisler's Bat, now in the Grosvenor Museum, Chester, was shot by Coward in Dunham Park near Bowdon, on May 8th, 1899. The dimensions—head and body, 58 mm. ; tail, 42 mm.—as well as the dark colour and the absence of strong smell led him to refer it to this species, and his identification was confirmed by Dr. N. H. Alcock of Dublin and Mr. W. de Winton.* A second example, a male, was shot on May 19th, 1909, by Mr. F. Stubbs at Broadbottom, where it was flying, about 7.45 p.m., with two other bats of a similar size at an elevation of about thirty feet. It was submitted in the flesh to Coward, and is now preserved in the Manchester Museum.

In the summer of 1909 we observed this species at one spot on the banks of the Bollin near Bowdon on several occasions. On July 23rd, when at least three were hawking for flies at the same time, Mr. J. W. Percival shot a female, which is now in the Grosvenor Museum, and a male, preserved in the Warrington Museum, on August 2nd.

Leisler's Bat has been obtained several times in the West Riding of Yorkshire, but has not been recorded from any of the other counties adjacent to Cheshire. It is, however, difficult to distinguish on the wing from the closely allied

* T. A. C., *Zoologist*, 1899, p. 266.

and locally abundant Noctule, and it may be more generally distributed and common in the North of England than our present knowledge would lead us to believe.

PIPISTRELLE. *Pipistrellus pipistrellus* (Schreber).

Local names—BIT BAT* ; LEATHER WINGS.

Generally distributed and abundant.

Byerley described the Pipistrelle as the "most common bat" in Wirral, and, although any small bat is usually called a "Common Bat," there is little doubt that in many parts of the county the Pipistrelle is the commonest species. In the valleys of the streams amongst the eastern hills it is outnumbered by the Whiskered Bat.

A tree-loving species, it is, naturally, most abundant in the parks and wooded districts, where it may sometimes be seen in great numbers, at times flying among the boles of the trees and at others circling round the topmost branches. The varying altitude at which it flies is indeed a noticeable trait in the character of the Pipistrelle; we have often caught it in a landing-net, and, on the other hand, have shot it as it fluttered round the tops of the high beeches in Dunham Park. On spring evenings this bat frequently flies high on first emerging from its den, and as the light fades descends to a lower level, the change being no doubt regulated by the insects upon which it feeds. The neighbourhood of farm-buildings is a favourite hunting-ground, and in such situations this little bat is a familiar object in the waning light of an autumn afternoon as it follows the same restricted round again and again in pursuit of the gnats and other small insects which constitute its chief prey.

* The name "Bit-bat" is not restricted to the Pipistrelle, but applied indiscriminately to other species. Byerley cites "Flitter-mouse" as a local name for the Pipistrelle. We have never heard it used in Cheshire, although it is in common vogue in many parts of the country and has an analogue in several European languages, e.g., German *Fledermaus*, Norsk *Flaggermus*.

In its diurnal retreats as in its nocturnal flights it is usually sociable; we have seen several huddled together in a decayed tree stump, and at Siddington have found it consorting with Daubenton's Bat in the roof of a farm-house.

On any evening in spring and summer numbers of Pipistrelles may be seen in the woods on Alderley Edge, hawking for food in the cleared spaces at the mouths of the mine-tunnels, but neither this species nor the Noctule ever hibernates in the tunnels themselves.

In Cheshire the Pipistrelle is normally on the wing from March until the beginning of November, but it goes abroad in winter when the weather is mild; we have seen it flying in the afternoon in November, December and January. The time of appearance relative to sunset varies according to season and weather; for instance, on January 8th we have noticed its first appearance at forty minutes after sunset, and at the end of April at thirty-six minutes after, whereas in May it has appeared on the wing at times varying from twenty minutes to thirty minutes after sunset; in June it has emerged a few minutes before or after sunset, and in July from ten minutes before to thirty minutes after. In the next three months we have seldom seen it abroad until after sunset, but on November 2nd we saw three on the wing at Knutsford a few minutes before sunset, and a week later a single bat flying two hours before sunset.

In the Grosvenor Museum, Chester, there is a melanic example which was captured in the city in April, 1896; the fur is coal-black, with a rusty tinge on the belly and flanks.

NATTERER'S BAT. *Myotis nattereri* (Kuhl).

Only known to have occurred once, but probably overlooked.

On July 18th, 1908, Coward examined an old stuffed specimen of Natterer's Bat, in a case which contained other

bats, in the possession of Mr. John Ball of Henbury. All the bats, Mr. Ball assured him, had been killed some thirty or forty years ago by himself and his father close to their house in Congleton.

Natterer's Bat has probably been overlooked in Cheshire, but it appears to be rare, since this is the only occurrence of which we have knowledge. The species is fairly common in the East Riding of Yorkshire, has been once recorded from South Lancashire,* once from Derbyshire,† once from Shropshire,‡ and we have seen it in the Elwy Valley, Denbighshire.

DAUBENTON'S BAT. *Myotis daubentoni* (Leisler).

Widely distributed, and abundant in suitable localities.

Isaac Byerley was the first naturalist to record this bat for Cheshire. Writing in 1854 he mentions that nine out of two or three dozen were taken by Nicholas Cooke of Warrington, from a hollow tree in Delamere Forest, and that a specimen sent to the British Museum was there identified. It is possible that these bats were not Daubenton's at all, but that some confusion may have arisen owing to Bell's use in his *British Quadrupeds* of the specific name *daubentoni* for the Barbastelle. Byerley in all probability consulted this standard work; indeed, the nomenclature of his *Fauna of Liverpool* is identical with that of Bell's first edition, and it may be that an undated Cheshire Barbastelle in the British Museum is the bat sent by Mr. Cooke for identification, that it was named *Barbastellus daubentoni* by the museum authorities, but recorded by Byerley as *Vespertilio daubentoni*. There is no mention of a Cheshire Daubenton's Bat in Dobson's *Catalogue of Chiroptera*, which was published subsequent

* C. O., *Zoologist*, 1893, p. 457. † R. Garner, *Nat. Hist. Stafford*, p. 244

‡ T. C. Eyton, *Annals of Nat. Hist.*, IV., 1840, p. 396.

to Cooke's discovery, and we have failed to trace any of the nine examples or any reference elsewhere to their occurrence. Opposed to this conjecture, however, is the fact that the name on the old label to the bottle which contains the *Barbastelle* is not *Barbastellus daubentonii* but *Barbastellus communis*.

Until 1892, when we took a Daubenton's Bat in a tunnel on Alderley Edge,* Byerley's record was the only one for the county, but since that date we have observed the bat in many places. It frequents many, at any rate, of the larger sheets of water as well as smaller pools, moats and quiet reaches of rivers. It is partial to the tree-shaded portions of the meres, where it feeds, with characteristic flight, close to the surface of the water. Shade, however, is not essential, for we have seen it on horse-ponds in the open at Lindow End near Mobberley, and at Mouldsworth, the pools on Knutsford Moor, and a mill-lodge at Chadkirk near Romiley. Among other haunts may be mentioned Dunham Park, Gawsworth Fish-ponds, the Ellesmere Canal near Malpas, and smooth reaches of the Bollin at Newbridge Hollow and Castle Mill near Bowdon. On the eastern hills it is found at a considerable altitude; it occurs at one thousand feet in Buxton Gardens, a few miles beyond the Cheshire border.†

On June 28th, 1897, we received six females and two young ones which had been taken from a hollow tree on the margin of Tatton Mere. Both of the young could fly; the larger of the two was only 34 mm. in length (head and body), but the foot was as large as that of the adult females; the smaller was greyer in colour than the older young one, and both were noticeably greyer than the adults. The younger bat was naked on the belly but clothed with greyish fur on the chest. One of the adult females had recently given birth to a young one.

We have not identified Daubenton's Bat on the wing earlier than April 19th, and have seen it abroad in autumn

* C. O., *Zoologist*, 1893, p. 103.

† *Id.*, *Naturalist*, 1896, p. 354.

at Mottram St. Andrew on September 14th, and at Lindow End on the 23rd of that month. Possibly it may be on the wing later in the year, for Oldham has seen it in Hertfordshire on October 13th.

It is usually late in the evening when this species appears on the water, but it is by no means certain that it settles down to its characteristic flight at once on emerging from its retreat. In May and June we have observed its first appearance on the water at from thirty to fifty minutes after sunset, and in July and August have actually seen it emerge from its den at twenty-three and twenty-nine minutes after sunset, though some members of the colony were fully ten minutes later in appearing.

Oldham has watched this bat skimming the surface of Oulton Pool at 2.45 a.m. in the second week in July, and its shadowy form might, no doubt, be recognised in any of its haunts by anyone familiar with it who had occasion to be abroad at dawn, for Mr. C. B. Moffat has shown* that it flies throughout the night.

In winter we have on several occasions found Daubenton's Bat in the mine-tunnels on Alderley Edge. During hibernation it is, like the Long-eared Bat, not always suspended by its feet, but is sometimes wedged horizontally in a crack in the sandstone wall. In common with that species and the Whiskered Bat it is absent from the tunnels during spring and summer.

WHISKERED BAT. *Myotis mystacinus* (Leisler).

Widely distributed and abundant.

The Whiskered Bat was not recognised as a Cheshire mammal before May 30th, 1885, when Oldham found one asleep on the top of a wall in the Goyt Valley, near Fernilee.† As

* *Irish Nat.*, 1905, pp. 106-107.

† Wm. Denison Roebuck, *Naturalist*, 1886, p. 113.

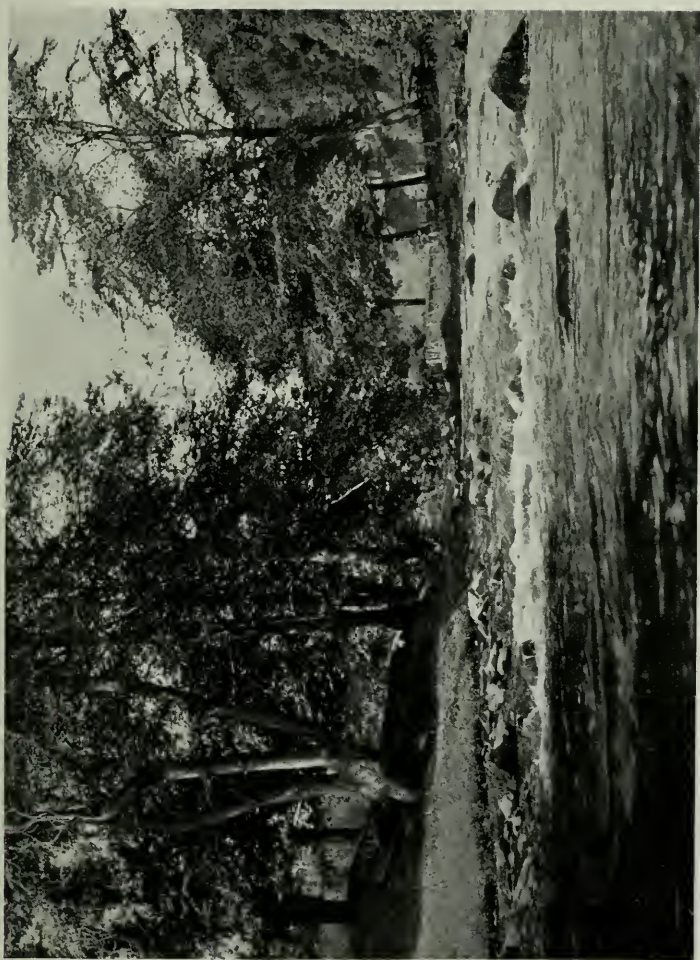
a matter of fact it occurs throughout the county, and is perhaps the most widely distributed local bat, being particularly abundant in the wooded valleys of the Dane and Goyt. We have even met with it in a clough on the bare moors in upper Longdendale at an altitude of over twelve hundred feet.

The period of activity of this species is not definitely known, but we have found it abroad from April to September; an example which was caught on the wing in a bakehouse at Alderley Edge on February 8th, 1901, may have been accidentally disturbed during hibernation.* The winter sleep of this bat, like that of the Long-eared and other bats which retire to caves in the colder months, is probably not profound; in Somersetshire at the end of December and beginning of January Coward found that Whiskered Bats were sleeping on the walls of caverns within reach of daylight and that they changed their position, moving to other parts of the caves.†

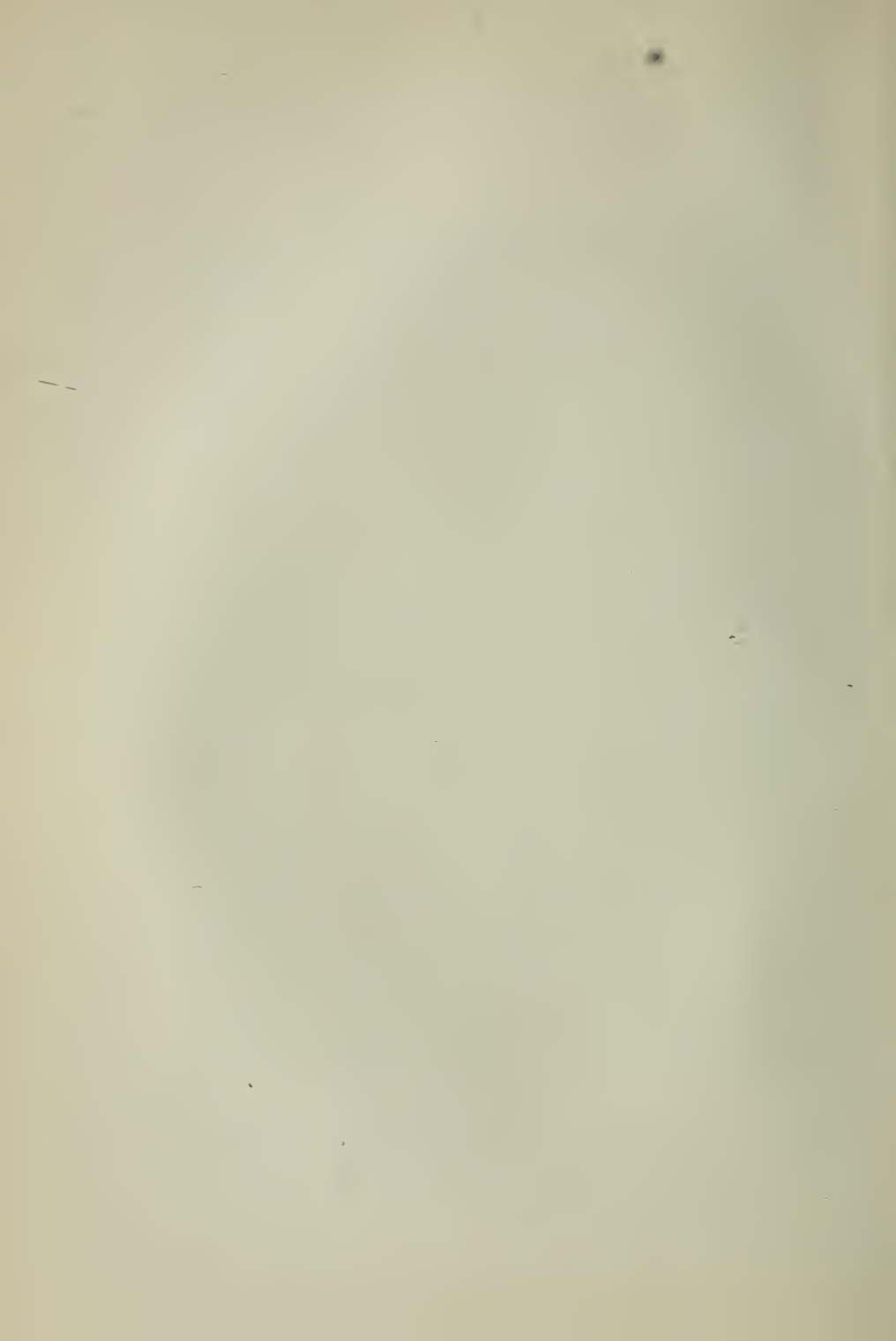
During spring and summer the Whiskered Bat chiefly affects open glades in woods or sheltered lanes, and often feeds about ponds and streams; it not infrequently enters houses. It comes abroad early in the evening, and, indeed, may be seen sometimes feeding at midday, even in bright sunshine. It is to some extent a solitary creature, but at times—possibly attracted by an abundance of insect prey—it assembles in considerable numbers. On several evenings at the end of May, 1897, many were seen feeding in company at Dane Bridge. At about half-past seven, whilst it was yet broad daylight, the first bats appeared, and their numbers increased with the waning light until it was no longer possible to distinguish them against the background of trees as they emerged for a moment from the shadows and flitted again into obscurity. They were so plentiful that one hundred would probably be too low an estimate of the numbers along half a mile of the river above and below

* C. O., *Manchester Memoirs*, 1905, No. 9, p. 4.

† T. A. C., *Proc. Zoological Society*, 1907, pp. 314, 316.



THE RIVER DANE, WINCLE.



the bridge. Individuals did not appear to wander far, but confined their attention to single pools or short stretches of the stream, where they flitted about the alder bushes or threaded their way with marvellous precision through the lower branches of the sycamores. None ever rose to a greater height than twenty feet, and often they flew within a few inches of the ground, or skimmed the surface of a pool for a yard or two, only to rise again and resume their flight around the alders. Even when close to the surface of the river their flight could never be mistaken for the continuous flight at the same level, just above the surface, of the narrow-winged Daubenton's Bat. One which was captured to make sure of the species had in its mouth a small staphylinid beetle.*

In its choice of a diurnal retreat the Whiskered Bat appears to be eminently unsociable, for we have never found it asleep in the company of its fellows. During the period of hibernation, too, when, in common with the Long-eared and Daubenton's Bats, it resorts to the old mine-tunnels in the sandstone on Alderley Edge—we have frequently taken it there from December to March—it is always solitary; for although two or more may inhabit the same tunnel, they are never in close proximity to one another.

At Redes Mere in the spring of 1899 a Whiskered Bat was found, which had been the victim of a curious accident. When first observed, the bat appeared to be suspended by its feet from a brier which overhung the water. A closer examination showed that the wings were half open and not folded to its sides as in sleep, and that the bat was not supported by its feet but by a thorn which had pierced the interfemoral membrane close to the extremity of the tail. In its struggles to free itself, the bat had lapped its tail firmly round the twig from which the thorn projected, and was thus held a fast prisoner. When found it was alive but moribund, and a large portion of the wing-membrane was already dry and shrivelled.†

* C. O., *Naturalist*, 1897, p. 242.

† *Id.*, *Zoologist*, 1899, p. 475.

LONG-EARED BAT. *Plecotus auritus* (Linné).

Local name—HORNED BAT.

Abundant generally.

The Long-eared Bat, a common species in the county, is widely distributed ; it is abundant in Wirral and the plain, and occurs on the hills in the east up to a considerable altitude.

During the winter months this bat may be found in varying numbers in the levels of the disused copper-mines on Alderley Edge, but in summer these haunts are deserted. It is to be found in the tunnels in November, and even so late as the second week in April—we have found it on the 11th—but by the third week in April the bats have vacated their winter quarters and may be seen picking moths from the shallows, where they are easily recognised by their long ears silhouetted against the sky as they hover over the catkins.

In these tunnels the winter sleep of the Long-eared Bat is not profound ; examples which we have marked, either by clipping a little fur from the back, or, without touching the animal, marking the spot where it was hanging, have frequently moved from place to place. On December 10th, 1899, for instance, Oldham found one at 10.30 a.m., and, when marking the wall above it, inadvertently allowed a few grains of sand to fall upon its fur ; twenty minutes later the bat had neither moved nor cleaned the sand from its coat, but at 3 p.m. it was six yards away and the sand had disappeared. A week later it had again moved, and there was a second bat in another tunnel which he had not noticed on his first visit ; six days later both had shifted their positions. The first bat was some ten yards from its last station and only one ear was folded back. In a third tunnel was a bat which was not there on the 10th. On December 7th, 1900, he noticed one in a tunnel, thirty-five yards from

the entrance ; it was in the same spot on the 9th, when he snipped a little fur from its back to mark it ; it resented the action by squeaking and snarling. By December 22nd it had moved, being then in a tunnel which branches from the main working. On January 4th, 1901, it was nineteen paces distant from its position on December 22nd. On this date he also noted the position of another bat ; neither had moved on the 5th and 6th, but a third bat, which was not in the tunnel on the 4th, was present. The unmarked bats were now clipped, a little fur being taken from the back or head in such a manner that they could be distinguished from one another. At 9 p.m. on the 7th the temperature was 44° F. in the tunnel, and 31° F. in the open ; the first bat had not moved, but the other two had disappeared, and there was an unmarked bat in the tunnel in which the first bat had been originally noticed. Throughout January and February these experiments were continued, and the results proved that both marked and unmarked bats moved frequently. In Somersetshire we have seen the Long-eared Bat on the wing in winter ; when Coward entered a cave at Cheddar on December 31st, 1906, he found one flying at the bottom of an up-shaft which was open to the air at the top.

The positions of the bats on the walls of the Alderley tunnels vary ; they are sometimes wedged horizontally in crevices in the sandstone ; but are usually hanging in the normal manner ; occasionally one ear is extended or both are partially unfolded. The bats almost invariably hibernate singly, but on February 15th, 1902, during a severe frost, we found four huddled together in a crevice and a fifth was in a crack a few yards away ; there were no bats of any species on this date in several other tunnels examined.

During the warmer months the Long-eared Bat spends the day in a variety of situations ; we have found it occupying the space between the roof and ceiling of a cottage, timber stacks, holes in beeches, and a crack in the trunk of a birch tree where the animal was not only fully visible but exposed to the weather.

BARBASTELLE. *Barbastella barbastellus* (Schreber).

Has occurred once.

The Barbastelle is only known to have occurred once in Cheshire, and although the bat is in existence, no particulars of its capture are obtainable. In Dobson's *British Museum Catalogue* is an entry "♀ ad. al. Cheshire."* The specimen is, unfortunately, unregistered, and it is now impossible to ascertain either date, donor, or the precise locality in which it was taken. There are two labels on the bottle containing the bat—the older one being "*Barbastellus communis*; Cheshire." Mr. G. Dolman, who has kindly examined the specimen on our behalf, states that it is a male, and that in one of the Museum catalogues the sign ♂ has been substituted for ♀.

RHINOLOPHIDAE.

LESSER HORSESHOE BAT.

Rhinolophus hipposiderus (Bechstein).

Said to have occurred once.

The Lesser Horseshoe Bat has not been obtained in Cheshire during the last seventy years, and its claim to a place in the county fauna, which can only be admitted with hesitation, rests upon the statement of Isaac Byerley in his *Fauna of Liverpool*: "One from Storeton Quarry, stuffed by Mr. Mather, 20 years ago."

We have been unable to trace the Storeton specimen, and it is noteworthy that this bat has never been found in the old copper-mines on Alderley Edge, nor in tunnels or sandstone quarries elsewhere. On the other hand, it occurs

* *Cat. of Chiroptera*, p. 177.

in the adjacent counties of Derby and York, where it appears to be restricted to the limestone districts, and it is widely distributed and not uncommon in caves and mine-tunnels in the limestone and Silurian rocks of Flintshire and Denbighshire. Tremeirchion Cave, Flintshire, a winter resort of this species, is about fifteen miles from Storeton Quarry and eleven from the nearest point in Cheshire.

INSECTIVORA

ERINACEADAE.

HEDGEHOG. *Erinaceus europaeus*, Linné.

Local names—URCHIN ; URCHANT.*

Abundant.

The Hedgehog is common and distributed generally throughout the county, occurring on the higher ground up to at least a thousand feet.

Owing to its crepuscular habits it generally escapes observation, except when it betrays its presence by the rustling of the dead leaves amongst which it is searching for food. During its nocturnal rambles it frequently comes to grief beneath the wheels of vehicles passing along the roads. It will occasionally feed in daylight, and is then, as at other times, indifferent to the presence of man ; Coward came upon one in a dry ditch in Dunham Park which smelt at his boots but showed no signs of fear until it was handled. On another occasion he found a Hedgehog examining some deer dung, in which it was probably searching for coprophagous beetles ; it did not appear to notice him until he touched it.

The Hedgehog varies its diet with the eggs and young of

* Now obsolete, but occurring in churchwardens' accounts in the seventeenth century. Cf. Earwaker, *East Cheshire*, I., 115 and S. C. Scott, *Hist. of S. John's Ch.*, p. 107.

game-birds, and in consequence comes under the ban of the gamekeeper. At Cranage in November, 1896, sixty were hanging together on a keeper's gibbet. When trapped the animal does not appear to struggle and injure itself, as Stoats and Weasels do; we once caught one by the muzzle in a trap baited with bread and aniseed, set for mice and voles, and released it unhurt, and on another occasion found one held by a foreleg in a gin, which, when released, ran off apparently uninjured. Mr. T. F. Egerton, writing from Tatton Dale near Knutsford, cites an instance of the destructive propensities of the Hedgehog.* Hearing a commotion in a coop containing a hen turkey and twelve poults, he went to seek the explanation and found that eight of the young birds were dead, having been bitten at the back of the head; a Hedgehog was in the act of killing another in the same manner.

We have found young Hedgehogs in June—the actual date of birth being the 21st—and at the beginning of August.

In the latter half of the seventeenth century Hedgehogs appear to have been plentiful in Cheshire, for in 1656 no fewer than two hundred and fifty-three were paid for by the churchwardens of Bunbury, and in 1673 and 1674 rewards were paid for three hundred and sixteen at Rostherne.†

TALPIDAE.

MOLE. *Talpa europaea*, Linné.

Local names—MOUDYWARP; MOULDY-WARP ‡; WAUNT.§

Abundant.

The Mole is found on grass-lands throughout the county, even up to the heather-clad moors in the east, and

* *Field*, XCII., 1898, p. 981.

† *Cheshire Sheaf*. I., 172; II., 187.

‡ Wilbraham, *Glossary*, p. 105.

§ Churchwardens' accounts.

occasionally on the moors themselves; mole-hills occur alongside the tracks which cross the moors at over one thousand six hundred feet in the neighbourhood of the "Cat and Fiddle" Inn, but it is doubtful if the animals actually tunnel under the heather. The Mole is very plentiful in all the river valleys and, indeed, is abundant throughout the county. Apparently the abundance of the Mole was a problem in the eighteenth century; at Prestbury "in 1732, in order to ensure the destruction of 'moles or waunts,' 6d. per dozen was to be paid for them by the churchwardens. In the following year this order was rescinded, the wardens having paid 'for moles this year,' £11-8s.-4d., representing the enormous number of 5480 moles killed in that year alone!"*

Mr. R. Newstead has seen several Moles "of a cream-colour with the under parts golden yellow."† There is in the Grosvenor Museum, Chester, one of this variety from Saltney, and a dove-coloured example obtained by Mr. F. Nicholson at Hale in 1896.

SORICIDAE.

COMMON SHREW. *Sorex araneus*, Linné.

Local names—NURSEROW; NOSROU †; NOSTRAL.

Abundant.

The Common Shrew occurs up to a considerable altitude on the hills in Macclesfield Forest and the east; we have found it at over one thousand five hundred feet and have seen in the snow, on the ridge between Cats Tor and

* Earwaker, *East Cheshire*, II., p. 230.

† *Chester Soc. Nat. Science, etc., Proc.*, IV., 1893, p. 245.

‡ Leigh, *Glossary*, p. 143.

Shining Tor, at little under one thousand seven hundred feet, the footmarks of a Shrew, probably of this species. In all parts of the county it is common, frequenting woods, road side banks and, indeed, all sorts of situations. It is frequently attracted by the bait—bread and powdered aniseed—placed in traps set for mice and voles.

This species is very subject to partial albinism ; many of the dead Shrews picked up in autumn exhibit white patches, especially on the ears. In the Grosvenor Museum, Chester, there is an albino from Picton, and another albino, examined by Mr. H. E. Forrest, was obtained on the Cheshire side of the border, near Whitechurch, in March, 1908.

On August 1st, 1907, Coward took two nymphs of the tick *Ixodes tenuirostris*, Neumann (identified by Mr. A. S. Hirst, of the British Museum), from the body of a Common Shrew picked up on the road near Tabley, Knutsford. The usual hosts of this tick are voles, but an instance of its occurrence upon a Shrew has been recorded.*

A widespread superstition—which is referred to by Gilbert White in his *Natural History of Selborne*—lingered until recently at Frodsham. The late J. F. Robinson, writing in the *Manchester City News* (June 30th, 1883), says : “ I remember well a large ash-tree, which was known as the ‘ Rock of Ages.’ It always puzzled me to know why the small ash twigs and young boughs were gathered and hung upon the shippon roof over the cows about calving time to ensure freedom from disease, and it was some time before I found out the reason. It was a shrew-ash, and for several generations it was regarded by the villagers as a tree possessing remarkable virtue, because a wretched shrew mouse had been fastened in alive in an auger hole made in the stem as a living tomb. . . . When (the tree) was sawn up several spots were revealed, marked by a brownish mass of decaying wood, where the harmless little animal had been thrust in by the superstitious farmers.”

* E. G. Wheler, *Journal of Agricult. Science*, Vol. I., Part 4, 1906, p. 415.

LESSER SHREW. *Sorex minutus*, Linné.

Occurs in several localities, but is apparently uncommon.

The Lesser Shrew was added to the Cheshire fauna in 1894. Mr. Newman Neave of Rainow sent us one on January 24th of that year, which had been captured and brought into his house by a cat a day or two before. This specimen is now in the Manchester Museum.*

Probably the Lesser Shrew is not so uncommon in Cheshire as is generally supposed, but it certainly is not so abundant, relatively to the Common Shrew, as in some counties. In a large number of owl-pellets from various localities we have only found a few skulls of this species, although those of the Common Shrew are numerous. Pellets obtained in Dunham Park, Bowdon, in March and November yielded two, and a pellet from Great Budworth, obtained in May, 1894, contained one skull of this species and six of *S. araneus*. In one lot of pellets from Dunham Park there were the remains of thirty-five Common Shrews. Fourteen pellets of the Barn Owl, picked up at Heswall in August, 1904, contained remains of thirty-two Common Shrews and one Lesser Shrew. We have seen three skulls which Mr. F. Stubbs obtained in March, 1907, from pellets of the Tawny Owl in Arnfield Clough, Longdendale, and an example which was killed there on September 8th, 1908. On January 21st, 1908, Coward trapped one in a wood by the side of the river Bollin near Bowdon,† and, in the same place, one on February 12th, 1908. On July 19th, 1908, Mr. F. Stubbs picked up a dead Lesser Shrew in Oulton Park, and on August 15th of the same year Mr. Alfred Newstead found one on Eddisbury Hill. In the Free Public Museum, Liverpool, is a Lesser Shrew obtained at Moreton, Wirral, by Mr. J. A. Clubb on April 22nd, 1907.‡

* N. Neave, *Zoologist*, 1894, p. 110. C. O., *Naturalist*, 1894, p. 130.

† A larval tick, *Ixodes tenuirostris*, Neumann, was feeding upon the Lesser Shrew captured in Bowdon on February 12th, 1908.

‡ *Free Pub. Mus. Liverpool, Ann. Rept.*, 1908, p. 20.

The figures given above do not, of course, represent the relative numbers of Common and Lesser Shrews captured by owls in Cheshire; we have examined large numbers of pellets from many localities which contained numerous remains of the Common Shrew but yielded no trace of the smaller species; on the other hand it is possible that the Lesser Shrew may, by reason of some difference in its habits or haunts, escape capture more frequently than the commoner species. This may also explain why it is seldom taken in traps.

WATER SHREW. *Neomys fodiens* (Pallas).

Local name—OTTER SHREW.

Generally distributed and not uncommon.

The Water Shrew is common in brooks and ditches in all parts of the county. It occurs above the one thousand feet contour-line on the swiftly flowing becks of the Cheshire-Staffordshire border, where the little creature is sometimes rolled by the force of the peat-stained water over the stones and rocks; it is alike at home in these rapid hill-streams, in slow flowing artificial "feeders," like that at Bosley Reservoir, and in the rivers and streams of the lowlands. In May we have watched Water Shrews carrying bedding to their holes in the banks of the Bollin, and in July have found a pregnant female.*

Skulls of this species are often present in the pellets of Barn and Tawny Owls, but never in the same numbers as those of the Common Shrew. A Heron's pellet from Tatton Park, which consisted mainly of the felted fur of the Water Vole, contained three skulls of the Water Shrew.

* Millais states (*Mammals of Great Britain and Ireland*, I., p. 162) that the young are usually born in May, but suggests that there are two litters in the year and perhaps more. Both he and Mr. G. T. Rope (*Zoologist*, 1900, p. 477) have seen pregnant females in September.

A melanic example, described as an Oared Shrew, *Sorex remifer*, Geoffroy, was taken at Birkenhead many years ago,* and another, which was obtained on the Dane at Holmes Chapel in 1897, was presented to the Manchester Museum by Professor G. A. Wright.

The contents of the stomach of a Water Shrew from Barnton, Northwich, which was examined by Mr. R. Newstead, consisted mainly of fragments of two or three small species of water beetles; there was a little fleshy matter, but no traces of either crustaceans or molluscs.

CARNIVORA FISSIPEDIA

MUSTELIDAE.

BADGER. *Meles meles* (Linné).

Local names—BROCK; BAWSON; BAWSIN.†

Occurs in many widely separated localities.

The Badger, although it can scarcely be termed common, is by no means rare in Cheshire; fox-hunters, game-preservers, and the so-called sportsman, "the instinct of whose nature is to kill," do their utmost to slay or capture any Badger they hear of, but, owing to its retiring and nocturnal habits, the animal still holds its own in many districts.

In Wirral, if the Badger now exists at all, it is rare. Byerley mentions one which was killed near Hooton about 1848, and refers to others, many years before 1854, the date of his list, at Oxton, Caldy, and Moston Hall near Chester. The late Captain W. Congreve told us that one was shot near Burton in 1893.

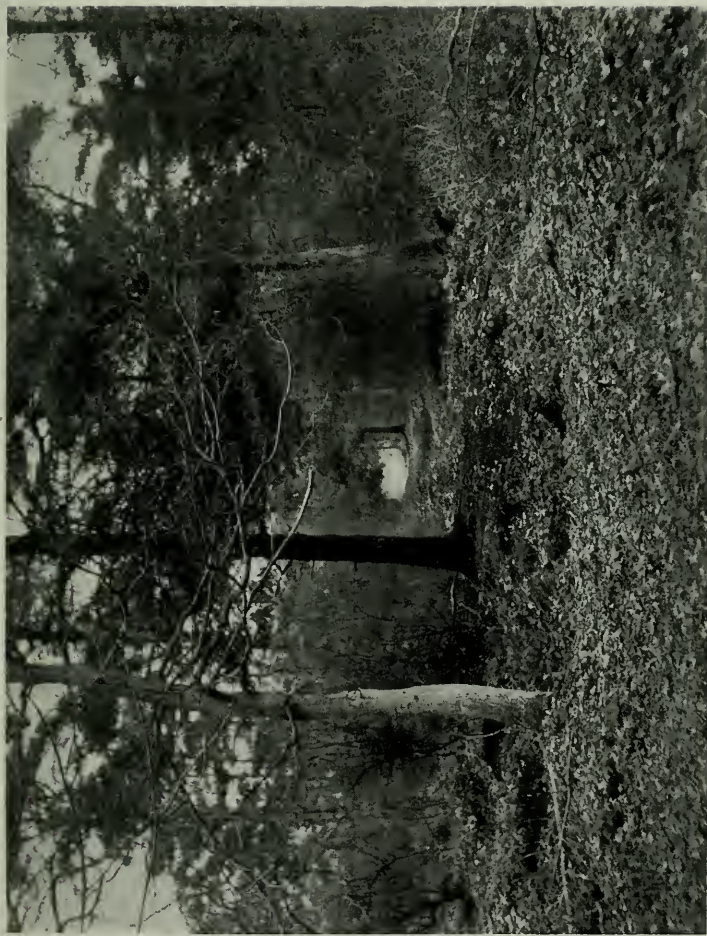
In the west and south of Cheshire the Badger is not uncommon. It is natural to connect the name Broxton

* W. Webster, *Zoologist*, 1848, p. 2009. † Wilbraham, *Glossary*, p. 17.

with the animal, but Dr. H. Colley March of Rochdale said (*in lit.*) that Brock is known to have been a personal name in Cheshire so far back as 1577, and suggested that Broxton was the stead or enclosure of the man Brock rather than of the animal from which his name was derived. There can, however, be little doubt that Badger Clough near Disley, Badger's Rake near Burton in Wirral, Badger Bank at Manley and near Peover, and Badger Hole at Styal were all at one time haunts of this species. At Broxton, on the western slope of the Peckforton hills, whatever the origin of the name may be, this animal is still to be found; we have records of several which were obtained there within recent years. At Cotton near Waverton one was dug out in 1894, and the late Rev. C. Wolley-Dod wrote us in 1893 that Badgers were common in the woods round Edge, Malpas. At Tushingam-cum-Grindley and Bickley, in the same neighbourhood, Badgers are occasionally met with, and at Eaton one was killed in 1887 in the Belgrave Avenue.

In Delamere Forest and the surrounding country the Badger is not uncommon. At Manley "Bodger Bonk" (Badger Bank) was famous for the animal in the middle of the last century, and Abbot's Moss Woods and an enclosure near Oakmere have been frequented by Badgers within recent years. Mr. C. E. Burton tells us that in 1905 and 1906 Badgers were killed at Crabtree Green near Manley. A photograph of "Bodger Bonk," taken by Mr. R. Newstead in May, 1901, shows three distinct earths within a few yards of each other. The late J. H. Stock of The White Hall protected Badgers on Little Budworth Common, and his son, Mr. A. B. Stock, says that they are still fairly common in the district. At Aston on the Weaver it is numerous, for here, too, it is protected by landowners; Mr. F. W. Hutton tells us that on the outskirts of this colony, which is an ancient one, Badgers are frequently met with.

A writer in the *Manchester City News* for October 28th,



RELICK'S MOSS, DELAMERE FOREST.



1893, stated that several Badgers were taken in the neighbourhood of Minshull Vernon, Middlewich, about the year 1893, and an account appeared in the local press of one (possibly an escaped captive) which was captured on March 9th, 1903, when in the act of burrowing under a flower-frame in Hightown, Crewe.

The late Lord de Tabley's MS. note-book contains records of several obtained many years ago at Ashley, Beeston, Holford, Marbury near Northwich, and Winnington Wood, Plumbley, and we learn from Lady Leighton-Warren that Badgers have several times appeared on the Tabley estate within recent years. In September, 1903, we examined an artificial fox-earth in Tabley Park which was then occupied by a Badger; the bark of trees near the entrance of the earth was, as is usually the case, deeply grooved by the animal's claws. In November of the same year a Badger was killed within three miles of Northwich.

Colonel G. Dixon tells us that Badgers are even plentiful in the neighbourhood of Chelford; at Astle, in spite of assertions to the contrary, he is of opinion that they live in amity with the Foxes, often occupying the same earths. He has seen two which had been killed by trains on the London and North-Western Railway at Chelford. We have a number of records of Badgers at Chelford, Astle, Capes-thorne and Lower Peover; at this last place, where the animal is not uncommon, one was dug out in 1891 or 1892 and kept alive for some weeks in Knutsford.

Nearer to the manufacturing centres the Badger is rarer; one was captured at Ashley in 1901 and another was seen by Mr. H. P. Greg and others on November 8th, 1906, at Styal, a locality which has been for many years deserted by the animal. Mr. Greg suggests that it may have escaped from captivity, one which was kept in confinement at Wilmslow having disappeared some months previously. A bend of the river Bollin at Quarry Bank, Styal, is still called Badger Hole.

On the eastern hills the animal is rare. In 1907 a male

and female were trapped by a gamekeeper at Taxal, who, during forty years service on the estate, had not met with the Badger before. Mr. F. Taylor, who supplied the information, has seen the specimens.

The stomach of a Badger which was killed in October, 1903, at Delamere, examined by Mr. R. Newstead, contained almost equal proportions of earthworms and beetles. The earthworms, which were all divided into pieces of about an inch in length, weighed eighty grammes; the beetle remains were almost entirely fragments of *Geotrupes*. There was a little grass and other vegetable matter in the stomach.

OTTER. *Lutra lutra* (Linné).

Widely distributed and not uncommon.

Though much persecuted, the Otter is fairly plentiful in the streams and meres; scarcely a year passes without one or two being the subjects of obituary notices in the local press. In Wirral, where there are no considerable streams, the Otter is rare, and it has vanished from the tidal waters of the busy Mersey. It still holds its own on the Dee, Weaver, Gowy, Bollin, Dane and the lesser streams, while the meres, with their reed-beds and convenient holts among the roots of alders and other waterside trees, provide safe retreats even from the occasional visits of otter-hounds. No otter-hounds are maintained in Cheshire now, but the Border Counties Otter-hounds pay periodical visits, and the sport obtained in Cheshire waters is considered satisfactory. Accounts of the now disbanded Cheshire pack, which was hunted by the late Captain Park-Yates, and of the pack which Lord Hill used to bring into the county from Hawkestone in Shropshire, may be found in the *Field* and *Land and Water* for the decade 1880 to 1890.

Byerley has no actual records for the Mersey itself, or the northern part of Wirral, but in 1863 Mr. W. H. Hatcher recorded a male, captured in Bromborough Pool near Birkenhead on September 15th, where it was first noticed in salt water at the mouth of the pool. Another had been seen in the same locality two or three years before.* Two were killed at Oxtton in 1868,† and one was trapped at Willaston near Hooton, in 1874,‡ where the animal had not been noticed for eight years previously.

The late Captain W. Congreve told us that one was shot at Burton in Wirral, some years prior to 1894, but the Otter is now rare upon the Dee below Chester. Pennant, writing in 1796, says§: "It is certain that they passed to and from Cheshire, over the Channel at low water," but there is little to induce Otters to frequent the Welsh side of the Dee Estuary today, and we have no records for the Cheshire seaboard. Mr. R. Newstead's remark||—"common on the banks of the Dee . . . most common at Eaton and Farndon"—correctly describes the present status of the Otter on the Dee above Chester. Indeed it received a certain amount of protection on this river, for the late John Simpson told us that he considered that it did far more good than harm on a salmon-river by destroying the Eels, and that he discouraged the killing of Otters on the Dee.

Byerley recorded Otters in the Chester and Ellesmere Canal and in Stanney Mill Brook, a tributary of the Gowy. Three were killed on the Gowy at Stapleford in 1892, and five were ruthlessly shot and clubbed to death at Stanney in 1902.

The lower reaches of the busy and polluted Weaver below Winsford cannot have much attraction for the Otter, but in the winter of 1892-3 five were seen together upon the river,

* *Naturalists' Scrap Book*, pp. 105-6. *Zoologist*, 1863, p. 8801.

† F. Price, *Science Gossip*, 1868, p. 39.

‡ H. Westman, *Field*, XLIII., 1874, p. 264.

§ *Hist. Whiteford and Holywell*, p. 144.

|| *Chest. Soc. Nat. Science, Proc.*, IV., p. 246.

though exactly at what point we cannot say. In May, 1909, a large female was killed in a lock-keeper's garden in Northwich. The upper reaches of the Weaver are successfully hunted by visiting packs. An unusually large Otter was killed at Wrenbury in February, 1886; it measured forty-eight and a half inches and is said to have weighed thirty pounds.* Otters are occasionally met with on the Dane, which flows into the Weaver, so high up as Bosley; and on other tributaries—Peover Eye and Waterless Brook—they have been killed at Holford, Capesthorne, Higher Peover, Arley, Marbury near Northwich, and Chelford.

The Bollin, the next stream of importance eastward, supports a fair number; the late John Plant recorded two killed at Oughtrington near Lymm in 1850,† and refers to their former abundance on the Bollin; and in 1866 the skull and skin of an example, shot on Rostherne Mere, were exhibited by Mr. G. H. Harrison at a meeting of the Manchester Literary and Philosophical Society.‡ In 1872 the Bollin Angling Association inaugurated a warfare against the Otter; two were trapped in December of that year close to Ashley Mill, Bowdon, and since then, even within the last few years, many have been killed on the Society's waters. About the year 1895 an Otter, which had left the stream in search of food, was killed in a farm-yard in Dunham village, where it had attempted to enter a fowl-house. Ashley, Arden, Mobberley, Styal and Rostherne are scenes of the death of others within recent years. Footmarks of Otters in the mud of the Bollin banks may often be seen, and after a fall of snow we have traced the riverside peregrinations of the animals for a considerable distance.

Micker Brook or Lady Brook, as it is called in different places, is frequented by Otters; in July, 1903, an old bitch was killed and three young ones captured at Bramhall, and on February 22nd, 1904, another was caught, the seventh taken within a few years. Otters inhabit the Goyt; at

* F. V. Starkey, *Field*, LXVII., 1886, p. 243. † *Zoologist*, 1850, p. 2723.

‡ *Man. Lit. and Phil. Soc. Proc.*, 1886, p. 122.

Disley, in 1905, Mr. John Baddeley saw two adult dog Otters which had fallen into a disused gasometer-pit, situated between the river and the canal; owing to the clumsy attempts to secure them, one was then dead and the other badly wounded. Even on the polluted Tame at Stockport Otters have been captured; there is in the Vernon Park Museum, Stockport, one which was killed at Reddish Vale on September 14th, 1890.

In its nocturnal rambles the Otter, like the Badger, is occasionally run over on the railway. In 1894 one was killed by an express at Balderton near Chester, and in the winter of 1899-1900 another met with a similar fate on the Cheshire Lines Railway at Gatley Cars.

On the meres Otters eat pond-mussels (*Anodonta*); we have seen the gnawed valves in large quantities scattered about the roots of the alders which grow on the border of Redes Mere. Early in April, 1901, Oldham heard Otters gnawing the shells at this spot when it was too dark to distinguish them, and a few days later Mr. F. S. Graves saw two Otters in the water close to the alders. The ligament which holds the valves together is bitten away in every case, as is the posterior margin of the shell; out of scores of the shells which we examined not one had been bitten along the anterior margin.*

We have occasionally heard the bird-like whistle of the Otter at dusk on Tatton Mere, and have often found the "spraint"—containing fish-bones and scales—and half-eaten Bream which the Otters have left. On one occasion, after we had found a Bream, obviously the victim of an Otter, we came across a dead Rabbit with a wound on the nape and shoulders, close to the water's edge. The ground was frozen and no "seals" showed, but the mark where the Rabbit had been dragged across the grass was distinctly visible.

* Cf. J. E. Harting, *Zoologist*, 1894, p. 7, and W. D. Roebuck, *Naturalist*, 1896, p. 90.

WEASEL. *Putorius nivalis* (Linné).

Local name—MOUSE-KILLER (female).

Abundant.

Generally distributed throughout the county, the Weasel is reported to be less common in most parts than the Stoat. The little female—the “ Mouse-killer ” of many gamekeepers—owing to its habit of following voles and mice in their runs, is less frequently captured than the rabbit-hunting Stoat. The almost universal assertion of gamekeepers that the Stoat predominates is supported by the fact that more Stoats than Weasels are seen abroad in the daytime. We have occasionally trapped both Stoats and Weasels in mouse-traps; one of the latter, an old male captured at Parkgate, though only held by one fore-limb, was dead in the trap; it measured ten and a half inches from muzzle to tip of tail.

We have seen tracks of a Weasel in the snow on the hills near the “ Cat and Fiddle ” Inn at an altitude of over one thousand six hundred feet, and Mr. E. W. Hendy has observed the animal on Kinder Scout, in Derbyshire, at between one thousand six hundred and one thousand seven hundred feet.

STOAT. *Putorius ermineus* (Linné).

Local name—FOUMART.*

Abundant, in spite of persecution.

The Stoat is the most abundant carnivorous mammal in Cheshire, outnumbering even the Weasel.

* The name Foumart, *i.e.*, Foul Mart, to distinguish the animal from the Marten or Sweet Mart, is properly applicable to the Polecat. That animal is extinct or, at any rate, extremely rare, but the name has survived and is now commonly applied to the Stoat.

On the bleak hills of the east Stoats are frequently taken in the white winter pelage—the “ermine” dress—and even in the plain examples showing more or less white are by no means rare in the colder months. Most of these, however, retain patches of brown hair on the face and shoulders.

Stoats hunt in the reed-beds by the meres as well as in the woods and hedgerows; in June we have seen a family of well-grown young Stoats emerge from a reed-bed, and when alarmed by our presence, rush back through the water, swimming for a few feet, in order to gain the cover of the reeds. At Aston-by-Budworth Coward once saw a Stoat relinquish a hunt without any obvious reason. A Rabbit, fleeing for its life across a potato-field, doubled and twisted, followed by its apparently determined foe, but when the Rabbit stopped and squatted in the field the Stoat stopped too, and then returned to the weeds on the margin of a pond from which it had driven the Rabbit. It soon appeared again, and, leaving the scared Rabbit still crouching in the field, ran quickly towards Coward, but did not discover his presence until it had reached the roadside bank behind which he was standing.

POLECAT. *Putorius putorius* (Linné).

Local names—FOUMART; FEWMOT or FOOMOT*; FILMOT; FILMART†; FITCHET.

Extinct, or only lingering in a few localities.

The Stoat and Weasel are still abundant in spite of unremitting persecution, but in Cheshire, as elsewhere, modern methods of pheasant-preserving have banished the Polecat as effectually as they have the Marten, Kite, Buzzard, and

* Wilbraham, *Glossary*, p. 39.

† Leigh, *Glossary*, p. 77.

other creatures whose existence is supposed, with more or less reason, to be prejudicial to latter-day sport. The present generation of gamekeepers and farmers scarcely know the animal; a few of the older men only remember it as having occurred in their youth, or recall the stories told about it by their fathers.

It is necessary to remember two facts in connection with the Polecat. In the first place the name "Foumart" is, in Cheshire, frequently applied to the Stoat. Secondly, the domesticated Polecat-Ferret is largely used for rabbiting, and frequently escapes; some of the reported Polecats may really have been escaped Polecat-Ferrets. There is, however, no doubt that in the first half of the last century the Polecat was common enough, and, as in other places, was regularly hunted at night with a scratch pack of dogs. In 1894 the late Thomas Davies of Lymm referred to this custom as existing at Millington in his father's lifetime—"nearly a century ago," and the late Thomas Worthington of Northenden was once shown by an old farmer at Gatley a small bell which used to be hung round the neck of the leading dog; this he treasured in memory of many nights' sport in which he had participated in that neighbourhood.

The late Thomas Davies said (*in lit.*) in 1894 that he caught a Polecat at Millington "some sixty years ago," when trapping for Rats on the border of a wheat-field; he never saw nor heard of one subsequently. The late Captain W. Congreve, writing from Burton Hall, Wirral, in 1894, stated that "some fifty years ago we often used to catch Fitchets in steel-traps, but none exist here now." Byerley, in 1854, described the Polecat as "occasionally found in Wirral . . . formerly common," but Mr. Newstead's list contains no Cheshire records. The last seen on the Wythen-shawe estate was one caught in a rabbit-trap in 1856. In the MS. notes of the late Lord de Tabley (*circa* 1866) two instances are cited—an example which was captured in the Round Wood, Tabley, about 1860, and one which "littered

many years ago in the roof of Wilkinson's old cottage"; the remark is added that many were formerly trapped by the gamekeepers at Tabley. Dr. H. H. Corbett of Doncaster states (*in lit.*) that he saw a Polecat in a "keeper's museum" at Bramhall about the year 1870, and that he found a half-grown example in a trap in that neighbourhood about the same time.

In the *Manchester City News* for June 10th and 17th, 1882, the late J. F. Robinson gave an account of a polecat-hunt, in which he took part some twenty years before, in the part of Delamere Forest near Frodsham*; it is improbable that Polecats survive in the forest now, but in 1883 Robinson stated† that it was then occasionally met with. Mr. H. P. Greg of Handforth writes under date May 24th, 1894: "Our old keeper, Brown (who died ten or twelve years ago), killed a Polecat within half a mile of this house, in the Ringway direction, thirteen or fourteen years ago; and our present keeper, Joshua Pearson, killed one just on the Mobberley side of Burley Hurst four years ago." The Rev. J. E. Kelsall's note in the *Zoologist* for 1893‡ appears to refer to one of these two, but there is a discrepancy in the dates. Mr. J. Middleton of Broadbottom has a Polecat which was killed at Newton about the year 1894, and we have examined another in the possession of Mr. Alfred Salmon which was killed in the Bollin Valley near Bowdon about the year 1889 or 1890. The late Dr. P. H. Mules informed us that one was killed on his shooting in the Goyt Valley near Taxal at the end of April, 1892. In 1900, we are told by Mr. Todd of Hyde, one was killed on the Cheshire side of the river at Hyde; a few years earlier another was captured on the Lancashire side.

* The account of a polecat-hunt in Cheshire, signed "R," in *Science Gossip*, March, 1879, p. 59, was evidently written by Robinson.

† *Manchester City News*, Mar. 3, 1883.

‡ p. 102.

MARTEN. *Mustela martes*, Linné.

Extinct ; formerly occurred in wooded districts.

There is no direct evidence that the Marten was ever abundant in Cheshire, but in such a well-wooded county it probably inhabited suitable haunts until game-preserving as it is practised nowadays, and the growth of population rendered its position untenable. There is reason to think that a few lingered in Delamere Forest and other places until the second half of the last century. Byerley records two ; one killed early in the forties in the township of Whitby by a gamekeeper in the service of the Marquis of Westminster, and the other, trapped at Hooton in Wirral a few years later and sent to Mather, a Liverpool taxidermist, by Sir Thomas Stanley.

The late J. F. Robinson of Frodsham* recollected, as a boy, " seeing a captive specimen caught in the Royalties, a wooded district behind the hills at Frodsham," which was kept " in the house of old John Hulse." Later, when following the hounds on foot in the neighbourhood of Eddisbury Hill, Delamere, he was present when one, disturbed by the hounds from beneath a clump of furze bushes, escaped into the trees. He mentions a third, a stuffed specimen prepared by a local taxidermist, but apparently did not find out whence it had been obtained. In 1876, we learn from Mr. R. Newstead, a Marten was killed in some farm-buildings at Hassal near Sandbach, but the specimen was not preserved. Mr. Newstead was told, on what he considers trustworthy evidence, that one was seen in the spring of 1882 at Thornton-le-Moors.†

The value of these meagre records is greatly enhanced by the more recent capture of a Marten which is now preserved in the Grosvenor Museum, Chester. It was shot in the pheasant-field at Eaton on July 7th, 1891, and presented

* *Manchester City News*, Feb. 9, 1884 ; quoted *Zoologist*, 1891, p. 452.

† T. A. C. and C. O., *Zoologist*, 1895, p. 218.

by the late Duke of Westminster to the Museum. A few days after this animal was shot, another Marten was trapped on a rabbit-warren near Hope, just beyond the Welsh border and at no great distance from Eaton.*

Both these Martens, it should be stated, were killed on the Welsh side of the Dee, although Eaton is within the county of Chester. The Marten still lingers in the wilder parts of North Wales, and may travel, on occasion, for some distance from its usual haunts†; on the other hand an arboreal creature might survive much longer in thick and extensive woodlands than a purely terrestrial species. We can, however, but conclude that it is extinct in Cheshire.

CANIDAE.

FOX. *Vulpes vulpes* (Linné).

Abundant; preserved for sport in the lowlands.

Throughout the greater part of Cheshire the Fox is protected by an unwritten law, and consequently is a nuisance to the game-preserver and farmer. On the Longdendale moors, however, where no packs hunt, large numbers are killed by gamekeepers owing to their depredations amongst brooding Grouse. In spite of the efforts of the keepers and shepherds Foxes are plentiful on these hills; in the winter of 1893-4, for instance, between thirty and forty were slain.

In 1890 a vixen reared her litter on an island on Chapel Mere, Cholmondeley Park, Malpas, and was obliged to cross more than twenty yards of water every time she fed her family. When the cubs were old enough to leave their

* R. Newstead, *Chester Soc. of Nat. Science and Lit. Proc.*, Vol. IV., pp. 246-247.

† Cf. Forrest, *Vert. Fauna of North Wales*, pp. 29-31; *Zoologist*, 1908, pp. 6-8.

dam, she was seen to swim to the shore, carrying them one by one in her mouth.*

It is doubtful if Foxes capture many of the numerous wildfowl which frequent the meres in winter, but now and then one sees evidence of attempts made to stalk the birds. In the winter of 1891-2, when the ice on Tatton Mere was covered by a fall of snow, we followed the tracks of a Fox from the bank to a spot in the centre of the mere where ducks had been resting on the ice. There was no sign of a struggle, and probably the birds had detected the Fox and escaped. Again, we have seen tracks in the snow of a Fox which had stalked wildfowl on a spit of sand at Marbury Mere, Northwich, a favourite resting place for birds; the gamekeeper said that he had often seen Foxes attempt to capture the ducks and Canada Geese at this spot.

The history of fox-hunting in Cheshire dates back to the thirteenth century, for in 1285 the Abbot of Chester was granted by Royal Charter the right to course Foxes and Hares throughout all the forests of Cheshire; in the *Patent Rolls*, Public Record Office, we find confirmation of this charter in 1425.† Systematic fox-hunting, however, did not become general until the latter part of the eighteenth century, and, indeed, at the close of the seventeenth century the Fox was still black-listed by churchwardens. At Rostherne, in 1673, fifteen heads of foxes were paid for by the churchwardens, the highest number in one year discovered by Dr. Brushfield in any church accounts in England.‡

In 1762 the Tarporley Hunt Club was formed, and in 1763 the original Cheshire Hounds—the first regular pack in the county—were established by John Smith Barry of Marbury, the owner of the celebrated "Bluecap," a four-year-old hound which won five hundred guineas for its master in a race at Newmarket. This pack was maintained

* C. Macdona, *Field*, LXXVI., 1890, p. 160.

† De'Trafford, *The Foxhounds of Great Britain and Ireland*, pp. 52-55. Cf. *Sporting Pictorial*, Vol. I., 1908, pp. 551-560.

‡ T. N. Brushfield, *Devonshire Assoc. Trans.*, 1897, pp. 291-349.

by Barry at his own expense for twenty-one years, and hunted chiefly in the country around Ruloe near Northwich. In 1784, after the death of John Smith Barry, Sir Peter Warburton started a pack of hounds at Arley, but James Smith Barry still kept his uncle's hounds. Owing to some misunderstanding between the owners of these neighbouring packs, Sir Peter Warburton, Sir Richard Brooke and others decided to remove the hounds from Arley, and in 1798 they were taken to Sandiway, where new kennels had been built by subscription and where the Cheshire or North Cheshire Hounds have been kennelled ever since.

Under various masters the Cheshire Hounds were hunted, until in 1877 H. Reginald Corbet of Adderley, Shropshire, then master, resigned in favour of Captain Park-Yates of Ince. Corbet, however, did not sever his connection with Cheshire hunting, but, by arrangement, started a bitch-pack at Adderley, which was thenceforth known as the South Cheshire Hunt. Twenty couples of hounds were transferred from the Sandiway kennels, and the southern portion of the county allotted to the new pack, arrangements being made that the North and South packs should hunt on different days. The two packs were managed by one committee and drew upon a common fund; the members of both hunts wore the green collar—badge of the Tarpoley Hunt Club*. This arrangement continued until 1907, when the South Cheshire Hunt was given up and the hounds returned to Sandiway.

For some years, during the first half of the nineteenth century, a pack of fox-hounds was kept by Sir W. Massey Stanley at Hooton Hall, and hunted two days a week during the season in Wirral.† They were dispersed in 1848. In Wirral Foxes are now scarce, but within recent years the Royal Rock Beagles “have viewed a Fox away from Copley Wood, Gayton Gorse, Bromborough Woods, Hall Wood, Badger's Rake, Capenhurst Covers and Stanney Wood.”‡

* De Trafford, *The Foxhounds of Great Britain and Ireland*, pp. 52-55.

† N. Caine, *Royal Rock Beagle Hunt*, p. 1. ‡ *Id.*, *op. cit.*, p. 131.

CARNIVORA PINNIPEDIA

PHOCIDAE.

COMMON SEAL. *Phoca vitulina*, Linné.

An occasional wanderer to the estuaries.

Byerley states that the Common Seal has occasionally been captured in the Dee and Mersey. It was not included by Moore in his list,* as at the date of its publication he had not had an opportunity of examining a local specimen, but there is little doubt that the majority of the seals which have been observed in the district from time to time were referable to this species. Mr. A. O. Walker, late of Chester, could give him no further information than that seals had been taken in both the Dee and Mersey, and Moore concluded that "its extreme shyness, and the vast increase in shipping are, doubtless, the cause of its absence here."

In the Warrington Museum there is a Common Seal labelled "Mersey," which Mr. Charles Madeley tells us was shot by William Mather at the mouth of the Gowy. In December, 1891, Moore obtained definite information regarding a Common Seal which had been captured in that month at Hoylake.† For some time during the winter of 1893-4 one frequented the Great Hoyle Bank near Hilbre Island, where it was finally captured; it was subsequently exhibited, at first alive and afterwards stuffed, in an oyster-shop in Liverpool.‡

On November 19th, 1905, a young Common Seal was caught by some fishermen in the Dee at Chester, between the Castle and the Handbridge. It was secured in a salmon-net and then killed; Mr. R. Newstead obtained it for the Grosvenor Museum. Its pelt was in poor condition, the skin being bare in patches. Mr. J. A. Dockray saw a seal, which he judged

* *Liverpool Biological Society, Proc.*, Vol. III., 1888-89, pp. 261-263.

† *Id.*, *op. cit.*, Vol. VI., 1891-92, xii.

‡ L. Jones (*in lit.*) and Dr. W. A. Herdman (*in lit.*).

by its size to be of this species, on a bank opposite Gayton, Heswall, on November 10th, 1907; it is interesting to note that for several days about this time a seal frequented Llandudno Bay. On August 12th, 1908, a seal, presumably of this species, was killed at Connah's Quay; a portion of its skin was preserved, but the head and feet were buried and lost.

Pennant* describes a "Pied Seal" which he identified as "La Phoque à ventre blanc" of Buffon and *Phoca bicolor* of Shaw. He says: "This I saw at Chester; it was taken near that city in May 1766. On the first capture, its skin was naked like that of a porpesse, and only the head and a small spot beneath each leg was hairy; before it died the hair began to grow on other parts. The fore part of the head was black, the hind part of the head and the throat white; beneath each fore leg a spot of the same color; hind feet of a dirty white; the rest of the animal of an intense black." He further states that it was much under seven feet in length and concludes that it was a young animal. Dr. Cuthbert Collingwood † states that "this appears to have been an individual of the species *Monachus albiventer*, Gray, a rare Mediterranean species, of which this is the only specimen recorded as captured upon British coasts." As Moore remarked, "Much stress, however, must not be laid on" this conclusion. Indeed, though it is impossible to be certain from Pennant's description, we incline to the view that it was merely a young Common or, perhaps, Grey Seal, both of which exhibit considerable colour variation. The strange fact that Pennant did not observe that the fur was merely becoming apparent as the skin dried, and not growing when the animal was dying, as he imagined, shows how little faith can be placed in his description.

In *Land and Water* for June 4th, 1887, another strange seal is reported—a "Mottled Seal," captured in the Dee

* *British Zoology*, I., 1812, p. 177.

† *Liverpool Lit. and Phil. Soc., Proc.*, Vol. XVIII., 1863-64, p. 162.

near Flint Castle. There is, however, no reason to suppose that, as has been suggested, this was a Ringed Seal, *Phoca hispida*, Schreber ; it, too, was probably a Common Seal.

HOODED SEAL. *Cystophora cristata* (Erxleben).

Has occurred once.

A Hooded Seal was captured on the Mersey shore at Frodsham Marsh on February 3rd, 1873. T. J. Moore announced the occurrence at a meeting of the Liverpool Literary and Philosophical Society on February 24th of that year,* after he had seen and made sketches of the animal at Widnes, where it was exhibited alive. It was five feet three inches in length ; the face, breast and fore flippers were blackish, the body paler, with a few dark blotches. From the dilation of the nostrils upon the least provocation, Moore concluded that the animal was a Hooded Seal, but it was not until after the animal's death, when he secured the skull and compared it with a specimen in the British Museum, that he was certain of its identity. A detailed description of this seal, which is now preserved in the Brown Museum, Liverpool, is given in Moore's List.† Its occurrence was the third recorded for Britain, and only three examples have been taken since.

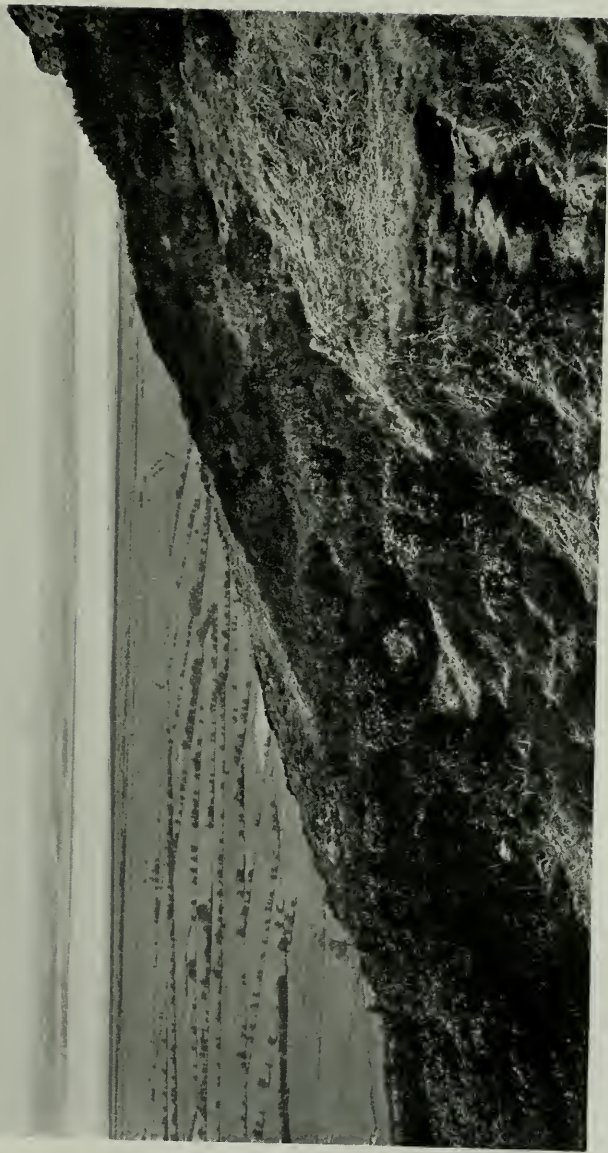
GREY SEAL. *Halichoerus grypus* (Fabricius).

Has occurred occasionally.

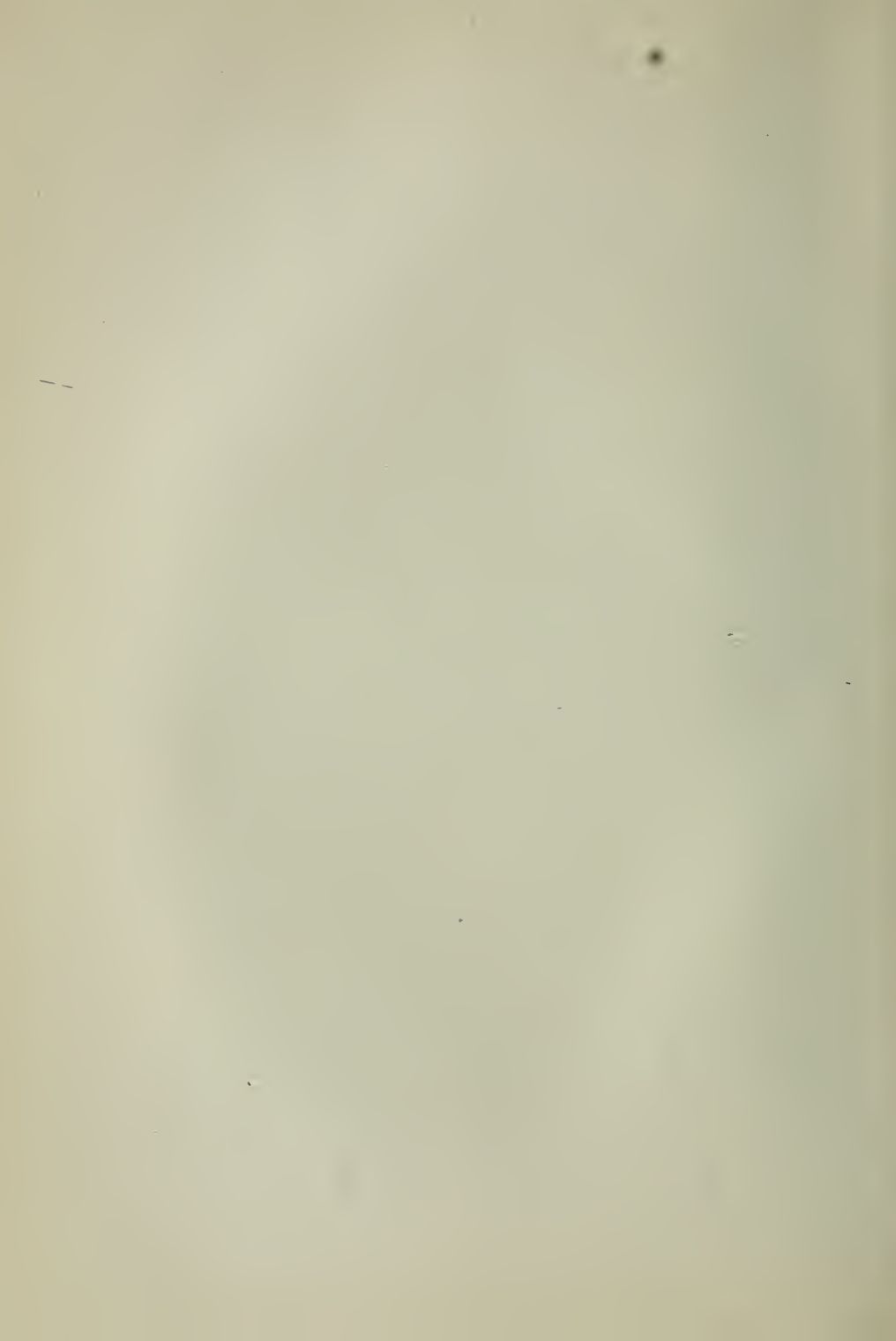
The Grey Seal, which occurs and perhaps breeds on the rocky coasts of Anglesey and Carnarvonshire, has on three occasions

* *Liverpool Lit. and Phil. Soc., Proc.*, Vol. XXVII., 1872-73, pp. lxiii., lxiv.

† *Liverpool Biological Society, Proc.*, Vol. III., 1888-89, pp. 264-265. *Liverpool Marine Biological Cmtee.*, Report II., 1889, p. 137.



FRODSHAM MARSH AND THE MERSEY FROM HELSBY HILL.



at least visited Cheshire waters ; it is possible that some of the seals which from time to time have been noticed off the shore were referable to this species.

In the winter of 1860-1, a Grey Seal, now preserved in the Liverpool Museum, was captured in the Canada Dock on the Liverpool side of the Mersey. It was at first described by Moore, who exhibited it at a meeting of the Liverpool Literary and Philosophical Society on February 18th, 1861, as *Phoca vitulina*, but when he compared the skull later with those of Grey Seals in the British Museum he was able to identify it correctly.*

On June 16th, 1908, a large seal was observed in the Mersey near Warrington Bridge, and on the following day it was driven into Woolston New Cut and shut into Paddington Lock, where it was shot. This lock is more than two miles above Warrington Bridge, and to reach it the seal must have ascended Howley Weir at Latchford. The animal was examined and measured in the flesh, and identified as an adult male Grey Seal, by Mr. G. A. Dunlop of the Warrington Museum, where it is now preserved. Coward examined the skin and skull a few days later. The measurements taken by Mr. Dunlop and Mr. George Mounfield are as follows :—From nose to tip of tail, seven feet six inches ; from nose to hind flipper, eight feet ; length of fore flipper, fourteen inches ; width of fore flipper, eight inches ; girth behind fore limbs, four feet eight inches ; length of head, fourteen inches ; length of hind flipper, fifteen inches ; width of hind flipper, eighteen inches ; tail seven inches. Some of the Mersey flatmen asserted that the animal was accompanied by another. It is possible that it had followed Salmon up the river, for, although these fish seldom attempt to ascend the Mersey, one was taken a few yards below Warrington Bridge a day or two before the Seal was killed.†

* *Liverpool Biological Society, Proc.*, Vol. III., 1888-89, p. 263. *Liverpool Lit. and Phil. Soc., Proc.*, Vol. XV., 1860-61, p. 134.

† Dunlop, *Zoologist*, 1908, p. 268.

On October 28th, 1909, a young Grey Seal was stranded on a bank off Hoylake and captured by some fishermen. It was secured alive for the Liverpool Museum, and on November 8th, Coward, by the courtesy of Mr. J. A. Clubb, was permitted to examine it before it was exhibited to the public. It was then dark grey in colour, and measured two feet ten inches from its nose to the tip of its tail, and three feet three inches to the claws of the extended hind flippers. Its feet and tail were noticeably large in proportion to the whole length of the animal. Although the Seal was so young, its flattened cranium and long, deep muzzle were conspicuous. Mr. Clubb said that it was very noisy, especially in the morning, barking loudly for food, a trait which he did not notice in a young Common Seal which was about the same age when it arrived at the Museum.

RODENTIA

SCIURIDAE.

Sub-order *SIMPLICIDENTATA*.

SQUIRREL. *Sciurus vulgaris*, Linné.

Plentiful in the wooded districts.

In all the wooded portions of the county the Squirrel is abundant, and is especially plentiful in Delamere Forest, the larger parks, and the tree-clad ridges of Alderley and Peckforton. In Wirral, if there was truth in the old saying—

“From Blacon Point to Hilbree
A Squirrel may jump from tree to tree.”

it was commoner in bygone times than it is today, but it still occurs in Burton and Storeton Firs and other woods. In upper Longdendale it is no longer found, but old residents say that before the Manchester Water Works were constructed it frequented the wooded bottoms in some numbers. Near Stalybridge and Swineshaw it was formerly common,

but has now almost disappeared : on May 10th, 1908, Mr. F. Stubbs saw the only one he has seen in the district within recent years leave a drey in a tree at Mottram.

The presence of Squirrels is often revealed by the thick litter of nibbled scales and cores of cones beneath the Scotch firs, and in May young beech leaves, abundantly strewn below the trees, show where the destructive animals have been at work. The short stalks of these fresh young leaves are nibbled off by the Squirrels ; the leaves themselves are dropped. In March we have seen a Squirrel stripping the loose outer bark from a dead ash branch and devouring the fibrous, partially rotten inner bark. Isolated thorns are frequently visited by Squirrels in search of haws in winter ; Mr. S. G. Cummings has seen a Squirrel in January in a thorn on the Dee Cop at some distance from any wood or plantation.

The late Rev. C. Wolley-Dod of Edge Hall, Malpas, called attention* to the fondness of Squirrels for mushrooms ; he had even seen one carry a poisonous toadstool into a tree and there devour it. " They begin," he says, " in the middle of the upper surface, and gnaw off the white, leaving the gills which they then remove, and continue with the stalk. The large horse mushroom is preferred as having a thicker and more substantial top. For some time the ground beneath the oaks has been thick with large ripe acorns, but the Squirrels prefer the mushrooms."

In Dunham Park we once found a Squirrel in a trap set for Jays, which was baited with eggs of the Song Thrush.

It is now so well known that the hibernation of the Squirrel is only partial that it is hardly necessary to mention that the animal may frequently be seen abroad in the colder months, even during a frost. In November, 1904, at the break up of severe frost, when the thermometer on the previous night had registered twenty-five degrees of frost, Oldham saw four Squirrels together, searching for beechmast, with Bramblings and Chaffinches in the snow in Alderley Park.

* *Field*, Vol. LXXXII., 1893, p. 491.

DORMOUSE. *Muscardinus avellanarius* (Linné).

Rare ; has only been observed occasionally in recent years.

Though the Dormouse has been seldom captured in Cheshire, the localities in which it has been observed are widely scattered ; it has occurred in Wirral, on the eastern hills, and near the northern and southern boundaries.

Brockholes, according to Byerley, saw it in Prenton Wood, and Mr. R. Newstead, Senr.,* found one in a hollow in an apple tree at Thornton-le-Moors in 1885. Near Peover it was not uncommon about the middle of the last century, but the late Thomas Worthington, who had frequently met with it in that district, never observed it in the neighbourhood of Northenden, where the later years of his life were spent.† Dr. H. H. Corbett of Doncaster reports it as common in the woods at Alderley in the sixties and seventies, but if it now occurs at either Peover or Alderley it is extremely rare.

The late J. F. Robinson described it as common in the neighbourhood of Frodsham. In an article in the *Manchester City News* for March 3rd, 1883, he says : " It can be met with in the summer season at the foot of Woodhouse Hills in sheltered, sunny nooks ; where I found four nests each containing young all in a radius of three or four yards."

On May 26th, 1890, Professor J. H. Salter and Mr. N. Neave found the nest of a Dormouse amongst undergrowth in the Goyt Valley above Errwood Hall, and whilst they were examining it the animal ran out. The nest was about eighteen inches or two feet above the ground. About the same time a nest was discovered at Castle Mill near Ashley by an Altrincham bird-catcher ; the description given by

* R. N., *Chester Society of Nat. Science and Literature, Proc.*, IV., p. 248.

† *Manchester City News*, Feb. 4, 1882.

this man of both the nest and the mouse was convincing. The late J. Platt of Alderley Edge told us that he had seen Dormice which had been captured in Doddington Park, in the south of Cheshire.

To the south-west and south of Cheshire the Dormouse is found in the wooded portions of Denbigh, Flint,* Shropshire† and Stafford,‡ but in Derby,§ York|| and Lancashire¶ it is thinly distributed and rare.

MURIDAE.

Sub-family MURINAE.

HARVEST MOUSE. *Mus minutus*, Pallas.

Very rare ; has not been noticed within recent years.

The Harvest Mouse has not been obtained of late years in Cheshire, and, indeed, it appears never to have been abundant. Close reaping by modern machines has no doubt helped to reduce its numbers. Byerley's statement that it is "not unfrequent in wheat stacks, barns, and fields" is unsupported by any definite particulars for Wirral, or, indeed, for any part of the Liverpool district, though a nest in the Manchester Museum, formerly in the collection of the late Thomas Glover of Southport, was taken at Halsall Moss, Lancashire.**

The late J. F. Robinson found what he believed to be winter nests of the Harvest Mouse in the neighbourhood of

* Forrest, *Vert. Fauna of North Wales*, p. 46.

† *Id.*, *Fauna of Shropshire*, p. 67.

‡ Storer, *Vict. Hist. of Stafford*, Vol. I., p. 166.

§ Jourdain, *Vict. Hist. of Derby*, Vol. I., p. 150.

|| Clarke and Roebuck, *A Handbook of the Vert. Fauna of Yorkshire*, p. 13.

¶ Forbes, *Vict. Hist. of Lancashire*, Vol. I., p. 208.

** *Manchester Natural History Soc.*, Report, 1864, p. 5.

Frodsham; these nests were "amongst tall reeds and withered grass stems, in our marsh ditches, close to the side of the ditch bank." He alluded to the mouse as "very common in our upland corn-fields," and added that its winter quarters are in "miniature burrows in sandy hedge-banks."* As the animal is undoubtedly very rare in most parts of the county, it is possible that Robinson was mistaken in his identification of the species; he gives no description of the mouse itself, but it is impossible to ignore the evidence he adduces and we give it for what it is worth. Mr. Joseph Turner, who knew Robinson, has no recollection of these "winter nests," and, indeed, never saw the mouse in the winter months. Writing in April, 1908, he states that it is ten years or more since he saw a Harvest Mouse in Cheshire; the last he met with was in a potato-field between Frodsham and Delamere Forest.

In or about 1893 Mr. C. T. Whitely of Stretton saw a Harvest Mouse and found a nest, of which he has kindly sent us a sketch, in a wheat-field near Appleton. On August 29th, 1895, Mr. J. M. St. John Yates, when following the reapers at Bradwall near Sandbach, came across the nest of a Harvest Mouse. Mr. S. Radcliffe of Ashton-under-Lyne had in his possession some years ago several Harvest Mice which had been captured on the premises of a hay and straw dealer, who had noticed them in straw brought from a farm near Wilmslow.

WOOD MOUSE. *Mus sylvaticus*, Linné.

Abundant throughout the county.

In the banks and undergrowth of the wooded valleys among the hills, in the rough park-land and cultivated districts of the plain, and in the ditches which divide the fields bordering the Dee Estuary the Wood Mouse is alike abundant. It

* *Science Gossip*, 1882, p. 140.

is one of the easiest mammals to trap, and like the Bank Vole, may be captured in daylight ; we have taken a Wood Mouse a few minutes after we had removed a dead one from the same trap ; one captured alive in a box trap was liberated in the house and taken again in the same trap a few hours later.

This mouse is often troublesome in gardens, devouring bulbs and doing other damage, but is to some extent insectivorous. In winter it frequents the levels of the old copper-mines in the Alderley Edge sandstone, where its presence is revealed by numerous footprints in the sand, and by gnawed beech-mast stored in cracks and crevices. The mice also feed upon the gnats, flies and moths which hibernate in the tunnels ; the examination of the stomachs of a number showed that in some cases little, if any, vegetable food had been recently eaten. They penetrate the dark tunnels to a considerable distance—one hundred and eighty yards or more from the entrance, but these places are apparently deserted in the summer months.*

Old birds' nests in the hedgerows are frequently used by the Wood Mouse as platforms on which to devour the kernels of seeds of hips, haws and blackberries, and in winter these nests may be found piled high with the rejected portions of the fruit and the empty seeds.† The mice have often to creep to the extremities of slender twigs in order to obtain the fruit, but they are expert climbers. They sometimes ascend ivy or creepers trained against house walls, and occasionally enter windows. We have watched one feeding on a window-sill some feet above the ground, and received two in 1898, which were trapped in a bedroom on the first floor of a house near Dunham Park, Bowdon.

There is a pale buff Wood Mouse from Broxton in the Grosvenor Museum, Chester.‡

* C. O., *Zoologist*, 1900, p. 421, 422.

† *Id.*, *Zoologist*, 1899, p. 27.

‡ R. Newstead, *Chester Soc. Nat. Science and Literature, Proc.*, Vol. IV., p. 249.

HOUSE MOUSE. *Mus musculus*, Linné.**Abundant.**

The House Mouse is by no means confined to houses and buildings, but, like the Brown Rat, may be found at a considerable distance from them, living a similar life to its congener the Wood Mouse. Like the Wood Mouse, too, it will devour insects. We have known it to eat moths which had fallen, singed, beneath a gas-jet, devouring the bodies but leaving the wings.

BLACK RAT. *Mus rattus*, Linné.**Extinct, except about ports, where it is not uncommon.**

The Black Rat has vanished from Cheshire, as it has from other parts of England. Twenty years ago it was reported to be still "not uncommon" at Aldersey near Chester*; there is an undated specimen from this village in the Grosvenor Museum. The late J. F. Robinson, writing in 1883, stated† that "a colony haunted the ruins of Rock-savage Castle and the adjoining farm-houses until within the past three or four years," and considered that the Brown Rats from the neighbouring bone-works were responsible for the extermination of this colony. He adds: "When the workmen were repairing Castle Park, Frodsham, for the late Mr. Stubbs of Warrington, they found many skeletons of the Black Rat in the garret beneath the roof, with the skins reversed and drawn over the skulls. This was a proof that they had been murdered by the Brown Rat." The Barn Owl and some of the carnivorous mammals share with the Brown Rat this habit of reversing the skin

* R. Newstead, *Chester Soc. Nat. Science and Literature, Proc.*, Vol. IV., p. 249.

† *Manchester City News*, Nov. 24, 1883.

of their victims, and one of them may have been responsible for the death of the Black Rats.

Numbers of Black Rats reach the Liverpool and Birkenhead docks in ships, and many are captured there by rat-catchers. There is nothing to prove that this species has succeeded in establishing itself in the docks, but as aliens are constantly introduced the population is maintained. At Runcorn and other ports on the Manchester Ship Canal the Black Rat is occasionally met with; an adult male and two young ones which were killed at Runcorn in February, 1908, were sent to us by Mr. F. W. Hutton. Amongst a number which we examined, that had been taken in the Port of Liverpool, were several examples of the brown subspecies, *Mus rattus alexandrinus*, Geoffroy.

BROWN RAT. *Mus norvegicus*, Erxleben.

Local name—ROTTEN.

Too abundant; frequenting the open country as well as farms and houses.

The Brown Rat is the most destructive and abundant Cheshire mammal, for not only is it a pest in the populated districts, but it abounds in the banks of every ditch and pond, and inhabits the most carefully preserved coverts and parks. In the enclosed rhododendron thickets in Dunham Park, for instance, the Rats burrow in all directions amongst the roots of the bushes. Here they are exceedingly bold; we have seen half a dozen feeding on the corn thrown down for the Pheasants, regardless of our presence within a few feet of them.

The large pond-mussel, *Anodonta cygnea* (Linné), is eaten by the Rats which frequent the ponds and streams; the shells with the margins of the valves bitten away are often left upon the bank or in the water. An idea of the numbers of Brown Rats which inhabit some of the marl-pits in the

fields may be obtained from the following facts. Between two ponds in the neighbourhood of Rostherne there is, at all seasons of the year, a well-beaten track across a portion of a field, an occupation road, and through a hedge. This track is about two inches in width and twenty yards in length, and is not quite direct but curves in places. It was perfectly distinct when the field was under corn, and is well marked alike whether the grass is long or short; when there is snow on the ground the footmarks of the Rats show very clearly, and it is then noticeable that numbers of the animals travel along the hedge to the nearest farm a little more than a quarter of a mile distant. In 1908, when the field was ploughed, the track showed as a smooth pathway across the furrows in less than a week.

Large numbers of Rats live in burrows on the edge of the Dee Marsh and in the Burton Cop; between tides they roam over the marsh in search of food. In 1905 we found the remains of a Black-headed Gull which had been partially devoured by Rats at a considerable distance from either the Cop or the river bank, and we have found traces of these animals fully a mile from any spot where they would have been safe at high tide. Messrs. L. Brooke and J. A. Dockray, who have spent nights in a hut on the embankment, tell us that they were disturbed by the numerous Rats, which during the night attacked anything edible that was taken into the hut.

MICROTINAE.

WATER VOLE. *Microtus terrestris* (Linné).

Local name—WATER RAT.

Abundant; inhabiting the banks of all unpolluted streams, the meres and smaller pools.

The Water Vole occurs alike on the banks of streams on the hills in the east and of the rivers and ditches of the plain;

it is often to be seen on the borders of the meres and the marl-pits in the fields. It has even been met with on the Dee marshes; in the autumn of 1901 Mr. J. A. Dockray saw one on the isolated portion of the Burton Cop, which lies mid-way between Burton Point and the present channel of the river, and which is surrounded at all tides by salt water.

In June, 1887, we found three spherical nests, composed of gnawed reeds and flags, placed upon platforms of the same material, in a reed-bed at Pickmere*; one of these nests contained four blind young Water Voles, of which one was noticeably darker in colour than the other three. On May 25th, 1907, Mr. S. G. Cummings found a similar nest in a pond at Croughton near Stoke. It was domed rather than spherical, about the size of a Moorhen's nest, and placed in a small clump of rushes several yards from the bank. Some of the living rushes had been bent down and woven into the structure, which was composed entirely of rushes and grass and lined with split and shredded rushes.

The Water Vole is much preyed upon by the Heron; pellets of the bird, picked up at the Tabley and Eaton heronries, are mainly composed of its fur and bones.

The black variety of the Water Vole, the *Arvicola ater* of Macgillivray, has been found in Cheshire. Mr. King of Carlisle informed the late H. A. Macpherson that he once came across a colony on the banks of the Dee,† and Mr. Edward Comber of Parkgate shot an example close to that place in the winter of 1881-2. Another was seen in 1890 in a pond about two miles from the spot where this specimen was obtained.‡ On July 16th, 1908, one, now in the collection of Mr. Linnaeus Greening, was captured at Acton Bridge. It is glossy black on the upper surface and grey-buff beneath; the tip of the tail is white.

* C. O., *Naturalist*, 1892, p. 4.

† Macpherson and Aplin, *Zoologist*, 1892, p. 287.

‡ E. Comber, *Zoologist*, 1890, p. 384.

In July, 1901, a white Water Vole—a true albino with pink irides—frequented Micker Brook, Cheadle Hulme; its pure white fur made it conspicuous from a distance.

FIELD VOLE. *Microtus agrestis* (Linné).

Local name—FIELD MOUSE.

Abundant and generally distributed.

Though the Field Vole is an inhabitant of the open country, it often frequents plantations, gardens and hedgerows. On grass-lands it frequently causes serious loss to the farmer; the turf is honeycombed with its burrows and the grass destroyed. In old meadows infested by Voles there are brown withered patches, sometimes covering many square yards.

The Field Vole ascends the valleys amongst the eastern hills to a considerable altitude. Two males, now in the British Museum, trapped in upper Longendale are unusually large. The measurements are* :—

	Head and Body.	Tail.	Hind Foot.
No. 47 ..	.. 123 mm. ..	33 mm. ..	17 mm.
No. 46 ..	.. 118 mm. ..	33 mm. ..	17 mm.

Major G. E. H. Barrett-Hamilton distinguishes two geographical races of the Field Vole, the northern and typical form, *Mus agrestis* of Linné, occurring in Scandinavia; it reaches “when adult a length (head and body) of one hundred and thirty millimetres and upwards”; and the southern race, *Microtus agrestis neglectus*, Jenyns, which is found in Britain and certain parts of south-western Europe. This southern form averages about one hundred and ten millimetres when fully grown, and may also be distinguished by cranial characters and coloration.

* Barrett-Hamilton, *Proc., Zool. Soc.*, 1896, pp. 601-604.

One of the Longdendale specimens (No. 47) and one from Herefordshire in the collection of Mr. W. E. de Winton, "approach the younger Norway specimens in size and characters, and these are the only two that do so out of numerous specimens examined."

The following cranial measurements are given by Major Barrett-Hamilton, showing the difference in size between skulls of two Voles of the northern form and the two largest he could find of the southern form :—

	<i>M. agrestis.</i>		<i>M. agrestis neglectus.</i>	
	No. 74.	No. 75.	No. W. 86.*	No. 47.
Greatest length of skull . .	27.5 mm.	27.5 mm.	25 mm.	24 mm.
Greatest breadth (at zygoma)	17 mm.	17 mm.	16 mm.	15 mm.

The examination of a large number of pellets from scattered localities indicates that this species is more preyed upon than any other by the Barn Owl; in pellets from certain localities the number of skulls exceeded those of all other mammals.

In winter the Field Vole does some damage by stripping the green bark from the twigs of holly bushes.†

There are in the Grosvenor Museum, Chester, two pied Field Voles from Cotton Edmunds and an albino from Nantwich.‡

BANK VOLE. *Evotomys glareolus* (Schreber).

Common and widely distributed.

The Bank Vole does not appear to have been recognised in Cheshire until 1889, when examples were trapped near

* Mr. de Winton's specimen from Graftonbury, Herefordshire.

† Wolley-Dod, *Gardener's Chronicle*, 1888, pp. 212, 213. C. O., *Zoologist*, 1890, p. 98.

‡ R. Newstead, *Chester Soc. Nat. Science and Literature, Proc.*, Vol. IV., p. 249.

Northenden.* As a matter of fact, although perhaps not so numerous as the last species, it occurs commonly throughout the lowlands, and on the eastern hills it has been taken at an altitude of six hundred feet at Rainow, Higher Sutton and Broadbottom.

This species, unlike the Field Vole, does not frequent the open fields; its favourite haunts are ivy-covered banks, hedge-bottoms, dry ditches if they provide abundant cover, copses and the borders of woods, but it also occurs in gardens and osier-beds. It is trapped much more readily than the Field Vole.

RODENTIA

LEPORIDAE.

Sub-order *DUPLICIDENTATA*.

HARE. *Lepus europaeus*, Pallas.

Common; very abundant on many estates.

The Hare, which has been reduced in numbers in many districts since the passing of the Ground Game Act in 1880, is abundant on some of the large estates, where it is strictly preserved for shooting, for there is practically no coursing in Cheshire. It occurs on the hills up to about one thousand six hundred feet, for instance, on Shuttlings Low and Shining Tor, but it is not often met with on the bleak "tops" themselves.

During the reclamation of Carrington Moss, Hares, which were very plentiful there, often made their forms on the small stacks of cut peats, and so secured a drier bed than the ling on the wet moss-land provided.

White or piebald Hares are not common, but one or two

* C. O., *Zoologist*, 1890, pp. 98, 99.

have frequented certain fields in the neighbourhood of Ashley for at least ten years past.

Four packs of beagles and one of harriers now hunt in Cheshire. The oldest pack is the Royal Rock Beagles, which was started in 1845 by Tinley Barton and John Okell, who for some months previously had hunted Hares over a few Wirral farms with three couples of rabbit-beagles. The Royal Rock Beagles began with twelve couples of hounds, which were kennelled at Woodhey near Rock Ferry, where the hunt had its headquarters until it removed in 1883 to Higher Bebington. It hunted over most of Wirral, and from 1846 to 1853 paid an annual visit to Beeston. Thomas Tinley Barton was the first master, but Vincent Ashfield King, well known as "Ould King," piloted it through its most troublous times, and was master for thirty seasons—until his death in 1882. When the club was started ninety names were enrolled, but the membership is now limited to sixty. From 1845 to 1855 Hares were scarce in the neighbourhood of Bidston, Upton, Moreton, Hoylake, Higher Bebington, Spital and Hooton, and numerous round Greasby, Ashfield, Caldý, Thurstaston, Burton, Capenhurst and Sutton; in 1887 eighty-five Hares were imported and turned down in Wirral, with the result that during the decade from 1885 to 1895 they were described as still scarce at Bidston, Moreton, Hoylake, Newhouse and Stanney, but plentiful elsewhere and even too numerous at Ashfield, Burton, Capenhurst, Ledsham, Shotwick and Willaston.*

In 1855 a private pack, which had been started the year before at Chester, became the Scratch Beagle Club, with twelve members, and in 1856 changed its name to the Chester Beagles. In 1890 it became the Cheshire Beagle Hunt, with kennels in Lache Lane, Chester, and hunts the country in the neighbourhood of Chester south of the hundred of Wirral.†

* N. Caine, *History of the Royal Rock Beagle Hunt*, p. 194.

† *Id.*, *op. cit.*, pp. 203-5.

The Malpas Beagles, a private pack, more correctly known as "Tom Johnson's Beagles," belong to Mr. Tom Johnson of Tybroughton Hall, Whitchurch, and were, in 1883, kept at the "Wheatsheaf," Malpas, but afterwards removed to Tybroughton. This pack hunts the district from Broxton to Farndon and southward to Whitchurch, over country previously hunted by Mr. W. T. Drake's pack, which was dispersed in 1880.*

The Forest and District Beagles, the property of Mr. H. L. May, are kennelled at Upton near Macclesfield, and hunt over the Cheshire hills from Disley and Whaley Bridge to the Staffordshire border and Wildboardclough, and from Macclesfield to the Derbyshire border. Mr. May informs us that they regularly find Hares at between one thousand five hundred and one thousand six hundred feet, and occasionally follow them over Shining Tor, above the one thousand seven hundred and fifty feet contour. The pack was started in 1905, some three or four seasons after the Lyme Harriers had ceased to exist. The hill-country Hares, says Mr. May, "keep on foot longer than flat-country ones and do not 'clap' again so soon," and they will frequently run for a mile, or even two, along the little-frequented upland roads.

The Wirral Harriers were inaugurated in 1868, and were kennelled at Hooton Hall; they hunt over the same country as the Royal Rock Beagles, and the dual occupation at first gave rise to some unpleasantness between the members of the two hunts. Satisfactory arrangements were made so that the meets should not clash, and a good understanding now exists between the two clubs; similar arrangements were made with the Flintshire Harriers, which, about the year 1880, hunted over Sealand from Shotwick and Blacon westward to the Dee Cut. The Wirral Harriers are now kennelled at Leighton.†

Other packs, now dispersed, have hunted Hares at various times in different parts of Cheshire.

* N. Caine, *History of the Royal Rock Beagle Hunt*, pp. 209-11.

† *Id.*, *op. cit.*, pp. 206-7.



THREE COUNTIES BRIDGE, DANE VALLEY.

VARYING HARE. *Lepus timidus*, Linné.

Local name—WHITE HARE.

Introduced. Restricted to the hills of the north-east, where it is abundant.

The Varying Hare has firmly established itself on the Cheshire uplands, though it was not originally turned down in the county. Sometime in the sixties the late Colonel J. Crompton Lees released some Perthshire Hares on his shooting at Greenfield, Yorkshire. The first attempt to establish the animal failed; those introduced decreased in numbers and died out. About 1880 fifty more were brought from Perthshire and turned down, this time with success. Their progeny in a few years spread over the watershed on to the Longendale moors, where they are now abundant from Swineshaw near Stalybridge to Woodhead. Within recent years they have crossed to the Derbyshire moorlands on the south side of the Longendale valley, and thence across the Ashop valley on to Kinder Scout, where they are now plentiful, as they are eastwards to the moors in the immediate neighbourhood of Sheffield. By 1908, if not earlier they had travelled further south and crossed the border into Cheshire again to the south-west of Buxton. On October 31st in that year Oldham saw a number on the hillside at Danebower near the source of the Dane.

During the summer they frequent the higher parts of the moors, especially in places where there are rocky outcrops, but in winter many descend to lower levels. After a thaw in early spring, while they are still in the white pelage, they are most conspicuous objects on the hillsides. Colonel Lees' gamekeeper in March, 1893, counted from one spot, with the aid of field-glasses, no fewer than fifty Hares.

These introduced Hares have retained the instinct of remaining stationary when danger threatens, although in the absence of snow their white coat makes them very conspicuous. They will crouch until a man is within a few yards of them, and then only lay their ears back so that the black tips are concealed. When finally bolted they run rapidly up-hill, and usually take shelter in some crack in the rocks or amongst the fallen débris below the escarpments. On snow-covered Scotch hills these stationary crouching animals would be hidden from all but the most keen-sighted enemies, but were it not that on our southern moors constant war is waged against the hill Foxes and larger birds of prey, the Hares would probably have failed to establish themselves.

Towards the end of March the pelage shows signs of change; even then some of the Hares are smoky-white, others bluish-grey, but numbers have attained much of the brown-grey summer coat. The brown appears first on the head and ears, the white hair being moulted and replaced by brown. According to Major G. E. H. Barrett-Hamilton.* the annual moulting time is the first week in May, but at the end of March we have seen the loose hair blown by the wind from the back of a crouching Hare, and have found the forms full of the shed white fur.†

An example in the Grosvenor Museum, Chester, was shot on Featherbed Moss, about two miles from Crowden, on November 17th, 1894. It scaled four pounds ten ounces, and had only partially assumed the winter dress, although on the day on which it was obtained one was seen which was almost entirely white.

* *Zoologist*, 1901, pp. 221, 222.

† T. A. C., *Zoologist*, 1901, pp. 73-75.

RABBIT. *Oryctolagus cuniculus* (Linné).

Local names—RAPPIIT*; RABBIDGE†; GRAZIER‡; CLARGYMAN§
(a black Rabbit).

Common.

On the grass-covered hills in the east, and even on the moors themselves, the Rabbit ascends to one thousand seven hundred feet or more, and elsewhere in the county, except in the immediate neighbourhood of towns, it is everywhere abundant. During a succession of favourable seasons the Rabbit invades the higher ground on the eastern hills, but a hard winter, especially if there be much snow, checks it. The memorable winter of 1894–95 completely exterminated the Rabbits in some parts of upper Longden-dale.

In one of the disused and little-frequented tunnels in the Alderley Edge sandstone there are rabbit-burrows in the soft sand of the floor at a distance of over one hundred yards from the entrance. The burrows are, of necessity, superficial, and in traversing the tunnel one's feet frequently sink through the floor into the runs of the Rabbits.

In Daniel King's *Vale-Royall*, published in 1656, mention is made of "great store of Conies, both black and gray; namely, in those places, where it is Sandy ground,"|| and black Rabbits still occur sporadically, and are especially abundant in the extensive warrens in Lyme Park.

* Wilbraham, *Glossary*, p. 67.

† Leigh, *Glossary*, p. 163.

‡ Wilbraham, p. 43. "A young Rabbit just beginning to feed on grass."

§ Leigh, *Glossary*, p. 43. A black Rabbit; a similar term, "Parson," is applied to black Rabbits in many places. Rabbit-warrens, according to Leigh, were formerly called "coney-grees." Cf. "coney-greys or greeves" as used by Randle Holme (*Acad. of Armory*, Bk. 2, Ch. 9, p. 187).

|| *Vale-Royall*, p. 18.

UNGULATA

CERVIDAE.

Sub-order ARTIODACTYLA.

RED DEER. *Cervus elaphus*, Linné.

Formerly wild, but now only maintained in three parks.

Remains of Red Deer have been discovered in many parts of the county; antlers and bones have been found in the peat of Wallasey shore,* dredged from the bottom of Rostherne† and Combermere meres,‡ and unearthed during the construction of the Manchester Ship Canal. There is also abundant documentary evidence that the Red Deer was formerly common in the Cheshire forests.

The fine pair of antlers which was found between Randles Sluices and Moss-side, on the Norton estate, during the construction of the Manchester Ship Canal, and which is in the possession of Sir Richard M. Brooke, Bart. of Norton Priory, is figured and described by J. G. Millais§; it is forty-seven and a half inches along the outside of the curve, and the beam, between bay and tray, is eight inches in circumference; the right antler has five and the left eight points.

In the twelfth century the master-forestership of the forests of Mara and Mondrem, which then extended from the Mersey to Nantwich, was conferred by Ranulph de Meschines, Earl of Chester, upon Ranulph de Kingsley, "to hold the same by tenure of a horn"||; and in 1270 the liberties of the Forest, which included the right to kill deer, were granted by Royal Charter to the Abbot and monks of

* Hume, *Ancient Meols*, pp. 21 and 348.† *Lanc. and Ches. Antiq. Soc. Proc.*, 1884, pp. 116-117.‡ Millais, *Mammals of Great Britain and Ireland*, Vol. III., p. 95.§ *Id.*, *op. cit.*, Vol. III., pp. 95, 96, and plate.|| Ormerod, *History of Cheshire*, Vol. II., p. 107.



THE DELAMERE HORN.

[65]

From an oil painting in the possession of the Earl of Haddington.

Dernhall (Darnhall) and Over.* In 1303 the Dones of Utkinton, having intermarried with the de Kingsleys, pleaded for and obtained the master-forestship,† but two years later it was ordained that the Abbots of St. Werburgh, Chester, “be permitted by Done to take deer themselves, to the number of a stag and six bucks yearly, and such chance does or wild beasts as might be killed along with them.” William Webb, describing the forest of Delamere in 1656,‡ says: “Which Forest is a very delectable place for a Scituation, and maintaineth not only a convenient being and preservation for his Majesties Deer both Red and Fallow, whereof there is no small store”; and in the general description of the forests of Delamere and Maxfield§ mentions “great store of Deer, both Red and Fallow.” Elsewhere he relates that King James I. “took his pleasure and Repast in the Forrests of *Delamore, Anno 1617,*” and that Sir John Done of Utkinton was knighted.|| James “had such successful pleasure in the hunting of his own Hounds of a Stag to death.”

Before the middle of the sixteenth century the Deer had become very troublesome to the farmers; Leland,¶ one of the chaplains of Henry VIII., says: “in the foreste [of Delamere] I saw but little corne, because of the deere,” and in 1626 it was decided to annihilate them and indemnify the Dones for the loss of office by a grant of land. Sir John Done, in formulating his claim, asserted that sixty or eighty deer were killed annually. These figures no doubt refer to both Red and Fallow Deer.

A horn, asserted to be the one by the tenure of which Ranulph de Kingsley held office, is preserved by the Earl of Haddington, hereditary chief forester, at Arderne Hall. It is described and figured by Dr. J. C. Bridge in a paper

* King, *Vale-Royall*, p. 108.

† Harl. MSS. 2115, 232, *vide* Ormerod, p. 107.

‡ King, *Vale-Royall*, p. 117.

§ *Id.*, *op. cit.*, p. 18.

|| *Id.*, *op. cit.*, p. 106.

¶ Leland, *Itinerary*, Vol. V., fol. 82.

on "Horns,"* which gives particulars also of the horns of the chief foresters of Wirral and Macclesfield. The Delamere horn "is of a beautiful black colour, and strongly curved. It is fourteen inches on outside curve, but it is only five inches across from mouth-piece to mouth. Its greatest width is one and three-quarter inches at the mouth, and three-quarters of an inch at the other end. The mouth-piece seems of silver gilt, and there is *no sign* of the other two "golden" bands with which the picture† and old documents show it was embellished; nor is there any sign of their having been on the horn." With the horn and two white greyhounds the chief forester had to attend whenever the Earl hunted.

At the present time herds of Red Deer are maintained in three Cheshire parks—Lyme, Tatton and Doddington. Probably the herd in Lord Newton's park at Lyme contains descendants of the Deer which were originally emparked in the fourteenth century, and which had previously roamed over Macclesfield Forest. Mr. J. Whitaker‡ states that there were in 1892 about one hundred and seventy head of rather small but stoutly-built Deer; the average weight of stags is two hundred and twenty pounds and of hinds one hundred and twenty pounds. There are at the present about three hundred head. Some of the Deer are confined within the park, but the majority roam over the open moorland of some eight hundred acres, known as the Park Moor, which extends from Bowstonegate to Bakestonedale.

The custom of driving the Deer at Lyme, in order to count them, which obtained during the eighteenth century, is the subject of a picture in the Hall. The scene was painted by T. Smith, and a print, engraved from this picture by F. Vivares in 1745, bears the inscription: "A view in Lyme Park (with that extraordinary custom of driving

* *Journal Archit., Archaeolog. and Hist. Soc. of Cheshire*, 1905, pp. 104-108.

† Sir Jone Done, wearing the horn; an oil painting, dated 1619, in the possession of the Earl of Haddington at Arderne Hall, Tarporley.

‡ *A Descriptive List of Deer Parks, etc.*, pp. 29-32.



57. 1/2 in. 1/2 in.

57. 1/2 in. 1/2 in.

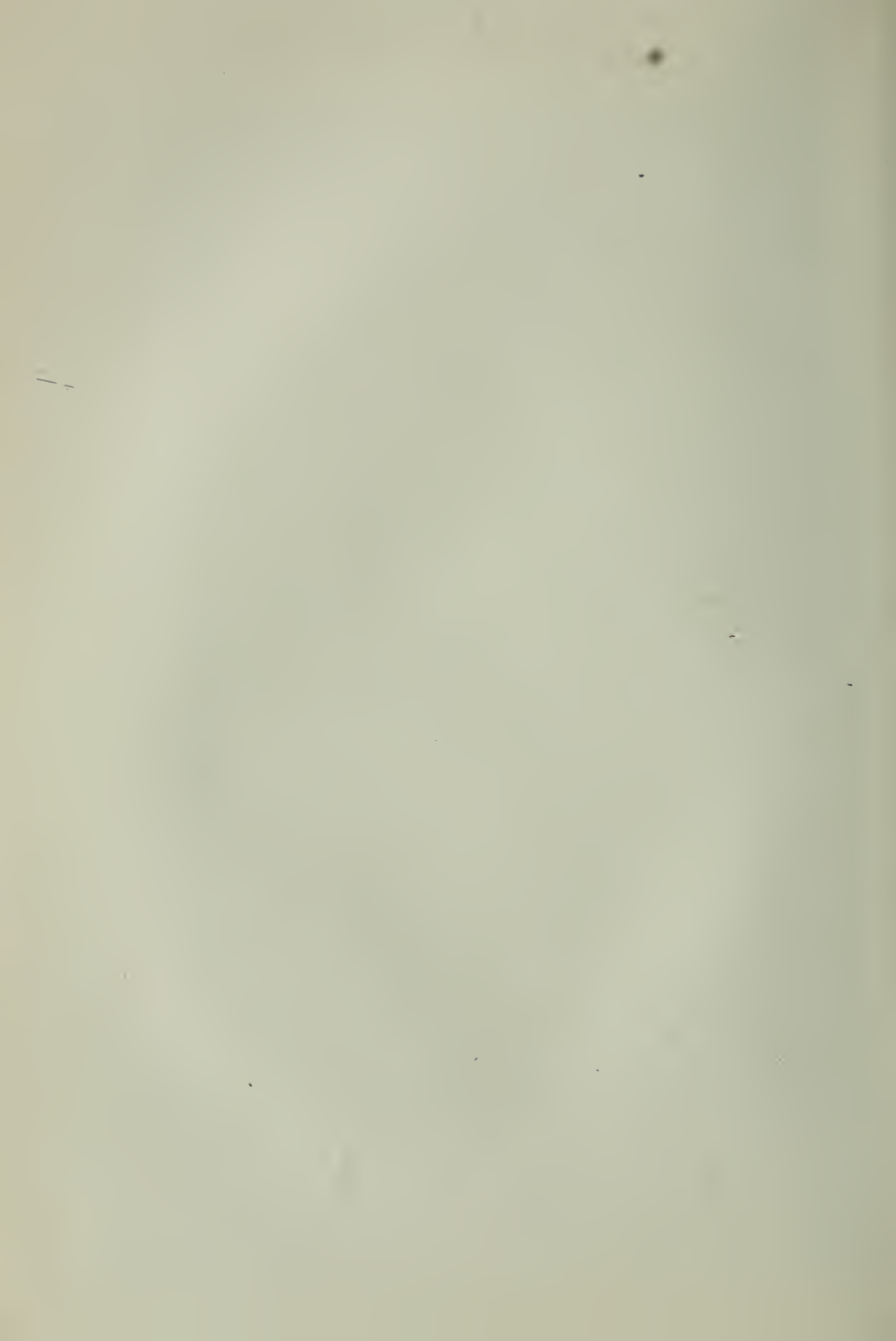
A TYPICAL JUNGLE SCENE

(With the exception of the deer, the animals in this scene are the property of the British Museum, and the scene is a reproduction of the original painting by the artist, J. G. S. P. 1870.)

June 29, 1870

DRIVING THE DEER AT LYME.

From a print of the oil painting in the possession of Lord Newton.



the stags), the property of Peter Legh, Esq., to whom this plate is inscribed by his most humble servant, T. Smith." In the middle distance the Deer are seen swimming across a pool, their heads only above water; in the foreground three have landed, and two, reared on their hind-legs, are striking at one another with their fore-feet. On the far side of the pool are Mr. Legh and his lady on horseback, accompanied by Joseph Watson, the park-keeper, also mounted. Joseph Watson, according to the record on his monument in Disley churchyard, first perfected the art of driving the Deer; he died at the age of one hundred and four in 1753, having been park-keeper at Lyme for sixty-four years. Watson* once undertook to drive twelve brace of stags, for a wager of five hundred guineas, from Lyme to Windsor Forest, and successfully accomplished the feat.

Arthur Wilson, the historian, who was born in 1569, went, when a young man, to Lyme in the train of the Earl of Essex. The following story is from his autobiography, which was edited by Francis Peck in 1732†:—

"Sir *Peter Lee* of *Time in Cheshire* invited my Lord one Summer, to hunt the Stag. And, having a great Stag in Chace, & many Gentlemen in the Pursuite, the Stag took Soyle. And divers (whereof I was one) alighted, & stood with Swords drawne, to have a Cut at him, at his Coming out of the Water. The Staggs there, being wonderfull fierce & dangerous, made us Youths more eager to be at him. But he escaped us all. And, it was my Misfortune to be hindered of my Coming nere him, the Way being sliperie, by a Fall. Which gave Occasion to some, who did not know mee, to speak, as if I had fallen for Feare. Which being told mee, I left the Stag, & followed the Gentleman who (first) spake it. But I found him of that cold Temper, that, it seemes, his Words made an Escape from him; as by his Denyall & Repentance it appeared.

* Shirley, *Account of English Deer Parks*, 1867, p. 207.

† Francis Peck, *Desiderata Curiosa*, Vol. 2, Book 2, pp. 10, 11.

“ But, this made mee more violent in Persuite of the Stag, to recover my Reputation. And I happened to be the only Horseman in, when the Dogs sett him at a Bay ; &, approaching nere him on Horseback, hee broke through the Dogs, & run at mee, & tore my Horse’s Side with his Hornes, close by my Thigh. Then I quitted my Horse, & grew more cunning (for the Dogs had sett him up againe) stealing behind him with my Sword, & cut his Ham-Strings ; & then got upon his Back, & cut his Throate. Which as I was doing, the Company came in, & blamed my Rashness for running such a Hazard.”

In Lord Egerton’s park at Tatton there are about eighty head of Red Deer, but the herd, though it may contain original Cheshire blood, has frequently received additions from Scotland and elsewhere. Many of the stags carry fine heads, and antlers of fourteen points are not uncommon.

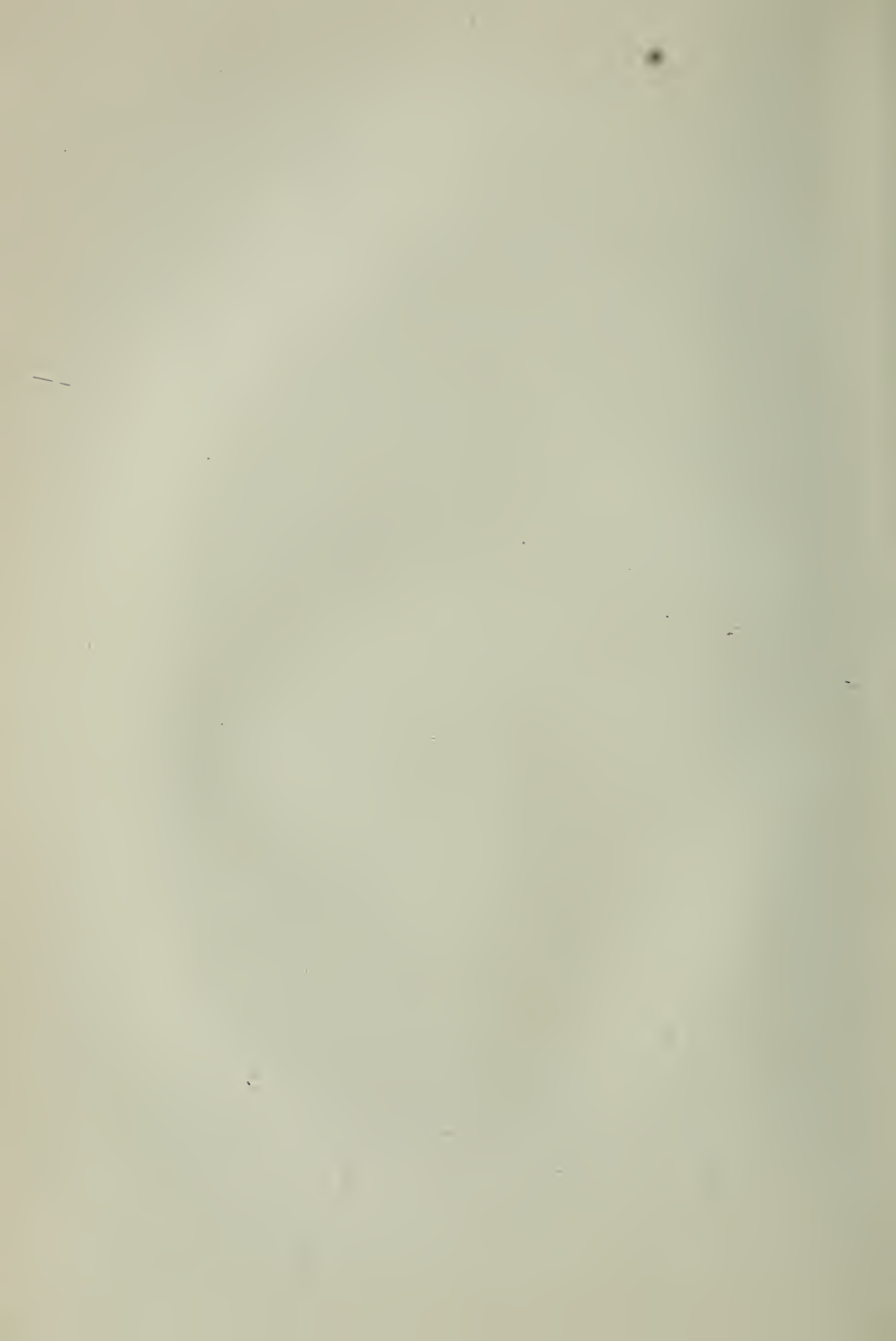
At Doddington, the seat of Sir Henry Delves Broughton, Bart., there is a small herd of Red Deer ; in 1892, according to Whitaker, it numbered about thirty head.

In the Grosvenor Museum, Chester, is an implement described as an “ axe-hammer,” fashioned from an antler of this species ; it was dug up on the Roodeye, Chester, in 1888. Two other horn implements, in the possession of Mrs. C. Griffiths of Helsby, described and figured by Mr. R. Newstead,* are referred by him to the early Neolithic period ; they were found in a submerged forest-bed at Lymm, about twenty-five feet below the surface, during the excavation of the Manchester Ship Canal. They are made from the antlers of the Red Deer ; one is fashioned from the beam of a massive antler and has a chisel shaped cutting edge, the antler having been cut obliquely for a distance of about six inches ; the other is a bay tine cut from the beam of an antler. It measures twelve inches along its outer curve, and the pointed end is slightly flattened.

* *Chester Archaeolog. Soc. Journal.*, Part II., Vol. VI., pp. 152-155.



RED DEER IN LYME PARK.



FALLOW DEER. *Cervus dama*, Linné.

Introduced in very early times ; now extinct in a feral state, but herds maintained in several parks.

In mediæval times the Fallow Deer was abundant in Cheshire ; the forest laws of the thirteenth century, which refer to the killing of deer, mention both stags and bucks, and in the seventeenth century Webb* speaks of " Deer both Red and Fallow," but the Fallow Deer has long been extinct in a wild state.

Whitaker† in 1892 gave particulars of ten parks in which Fallow Deer were then kept : Tatton (Lord Egerton of Tatton), five hundred to six hundred head ; Eaton (Duke of Westminster), three hundred ; Oulton (Sir Philip Egerton), two hundred and fifty ; Cholmondeley (Marquis of Cholmondeley), two hundred ; Carden (Mr. J. H. Leche), one hundred and sixty ; Doddington (Sir H. Delves Broughton), one hundred and fifty ; Adlington (Mrs. Legh), seventy ; Dunham (Countess of Stamford), seventy ; Lyme (Lord Newton), thirty-five ; Beeston (Lord Tollemache), twenty. A large herd were formerly maintained in Alderley Park, the seat of Lord Sheffield, but there were in 1908 only about fifteen head. These figures are only approximate ; the actual numbers fluctuate from time to time. The Dunham herd was at one time much larger than it is now, for, according to Hanshall,‡ it contained upwards of five hundred head at the beginning of the nineteenth century.

In the old church at Warburton are hat-pegs made from the antlers of Fallow Deer ; two or three inches have been cut from the proximal end of the beam and nailed to the oak pillars, the brow tine forming the peg.

* King, *Vale-Royall*, p. 18.

† *Descriptive List of Deer Parks and Paddocks*, pp. 29-32.

‡ *History of the County Palatine of Chester*, p. 371.

BOVIDAE.

PARK CATTLE. *Bos taurus*, Linné.

Herds formerly maintained in three parks; one domesticated herd still exists.

A domesticated herd of polled white Park Cattle is kept at Somerford Park near Congleton, the seat of Sir Walter Shakerley, Bart. The origin of this herd is not known, but it has existed at Somerford for over two hundred years. The Shakerleys of Somerford came originally from Shakerley near Middleton, Lancashire, and it has been suggested that the cattle were brought in the seventeenth century from Middleton Park, where similar polled cattle were kept until the latter part of the eighteenth century.*

The committee appointed by the British Association to report "on the Herds of Wild Cattle in Chartley Park, and other Parks in Great Britain," gave the following particulars of the Somerford herd at the Manchester Meeting on September 6th, 1887†: "In July last the herd consisted of thirty animals, made up as follows:—3 bulls—viz., one born about April 1885, one born about March 1886, one born about June 21 last; 18 cows of all ages, the youngest being about two years old; 5 heifers—viz., one about two years old, one born about February 1886, one born about May 1886, one born about June 1886, one born about September 1886; 4 heifer calves—viz., one born January, two born about end of April or beginning of May, one born July 21; total, 30.

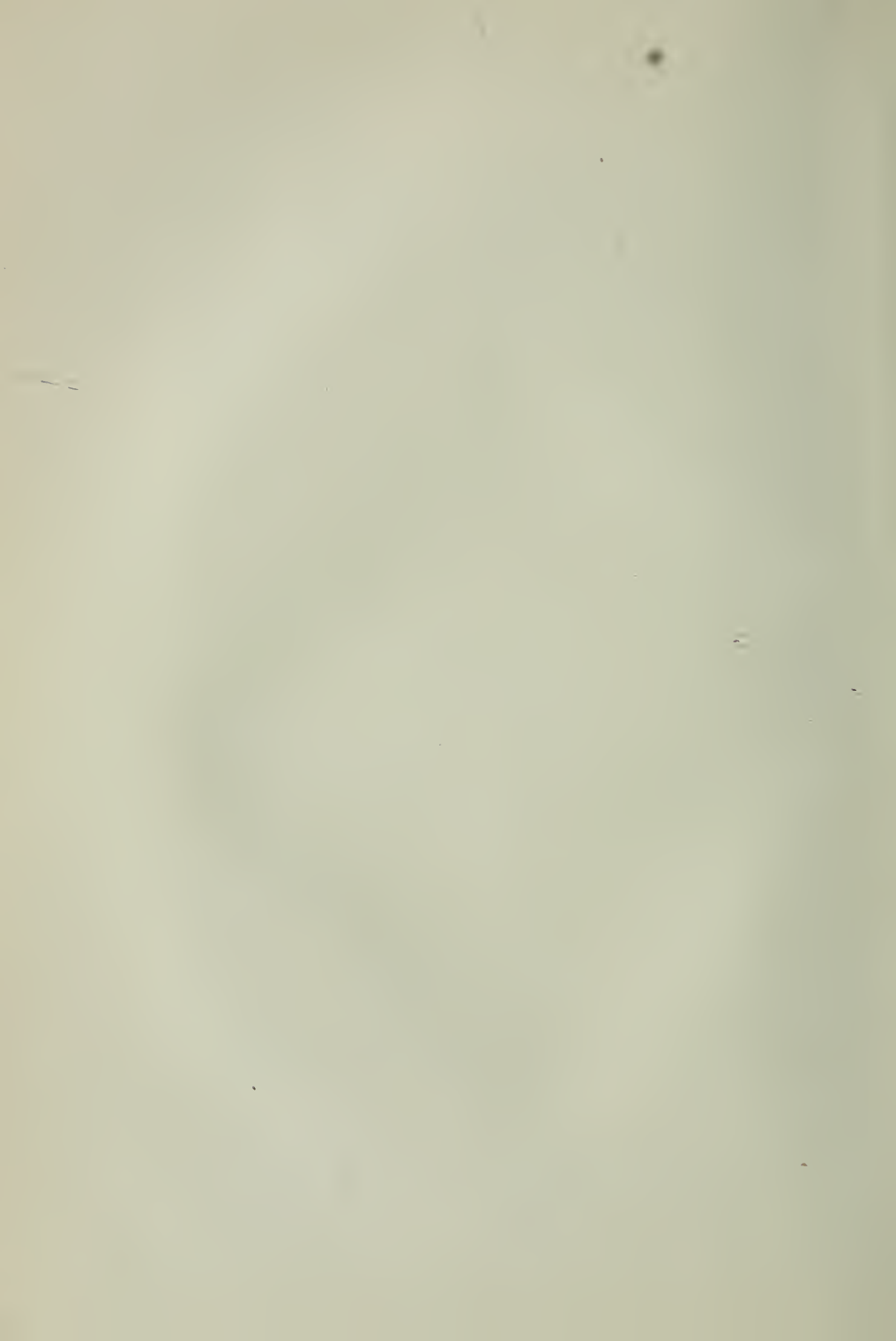
"No steers are reared; all surplus bull calves are fed for veal.

* Accounts of this herd are given in Storer's *Wild White Cattle*, pp. 256-269; Harting's *British Animals Extinct within Historic Times*, pp. 245, 246; and the *Report of the Manchester Meeting of the British Association in 1887*, pp. 139-141.

† *British Assoc. Report, 1887*, pp. 139-141.



SOMERFORD CATTLE.



“Three calves born this year have died—viz., one male from quinsy, two females born prematurely.

“Two heifers were due to calve in September and four cows in October.

“This will make a total of fourteen births during the year, from which we may infer that this herd is in no danger of extinction from shy breeding.

“These cattle weigh up to fifteen scores to the quarter when fed for beef. They are thoroughly domesticated, and allow one to move freely among them, and the second bull permitted two visitors and Mr. Hill (the agent) to handle him simultaneously. The cows are all regularly milked. The butter made from them is pronounced the best in the county, and they are, as a rule, excellent milkers. The highest record (*vide* Mr. J. Hill) is thirty-three quarts per diem, but the drain on this cow's constitution proved fatal in about four months, notwithstanding everything possible being done in the way of feeding.

“These cattle are polled, and no exception is known to have occurred.* They are black pointed, but there is considerable range in the markings—far more than in any of the other herds. When Mr. Hill became agent, some nine years ago, he found the herd somewhat uncared for, and many of the cows so aged as to be past breeding, and he has therefore during that interval of time been keeping every good heifer calf, without weeding out too stringently on account of irregular markings.

“About 1876 or 1877 a young bull was exchanged with the Marchioness of Lothian (Blickling). This cross succeeded fairly well; a peculiarity in this strain being that many are born with the ears square-tipped, as if the animal had been marked by cropping.

“About the year 1879 a young bull was exchanged with A. Cator, Esq. (Woodbastwick). This bull was *brown* pointed, but threw calves with red ears and muzzles, which were the first so marked known to have occurred at Somerford.

* See, however, *Zoologist*, 1895, p. 212.

“ Of the twenty-three cows and heifers, eleven have either very little black fleckings about the body or even none at all ; while about six have a good deal of black in thickly grouped fleckings, spots, and small patches ; two or three have probably fully one-third of the entire hide black. One cow, about ten years old, may be described as a blue-roan, black and white hairs being placed almost alternately over the greater portion of her body, which gives her a *blue-grey* coloration. The fronts of her forelegs below the knees are black, and almost the whole outside of her ears, instead of as usual from one-third to a half at the distal end. . . .

“ One cow is red pointed, and slightly flecked on the neck with the same colour. The black on the nose in the majority extends evenly round the whole muzzle, including the under jaw, but some have merely the naked part of the nose black, and in one or two even this is rusty coloured and not perfectly black. All, with the exception of the red-pointed cow, have a narrow rim of black round the eyes. The animals with the least black about them appear to have the finest bone and smallest heads. This may be following the old strain, while the others, perhaps, more nearly follow the cross-strains.

“ The red-pointed cow and one of the quite white ones have small knobs or excrescences on either side of the frontal bone, like budding horns, but they do not protrude through the skin. . . .

“ The bulls (though both immature) are very strongly made, very broad across the thighs, short on the legs, and with remarkably broad, thick-set heads. Both are plentifully flecked with black, and in the younger of the two the fleckings extend to the lower part of his face, while the black on his muzzle is broader than in probably any other example of park cattle. . . .

“ One of the cows and the younger bull have some black in their tail tassels, in all the rest it is quite white.

“ The bull calf and three of the heifer calves have very



A SOMERFORD COW.



little black about them beyond their ears and muzzles, while the fourth is the blackest individual in this herd, having probably more black than white about it, in spots and patches with ill-defined boundaries.

“The cows produce their first calf when from two to two and a half years old. The bulls run with the herd throughout the year, but, in order to in some degree regulate the birth of calves, individual cows are temporarily shut up.

“The udders of the cows here, are as large as ordinary domestic cows’, which is not the case in the herds which are not milked.

“In winter all the cattle, especially the bulls, develop long hair on the poll and neck, which divides along the central line and covers them like a mane. The hairs decrease in length backwards to the withers, where they cease somewhat abruptly.

“About 180 acres of the park are allotted to the cattle, consisting of excellent upland turf sloping down to the river Dane. It is said that the whole herd will sometimes gallop to a pond in their enclosure and go in so deep that little but their heads remains visible.

“In dry seasons, when the river Dane has become unusually low, instances have occurred of cattle of both sexes crossing the river both ways ; but calves produced by the park cows are kept if correctly marked, etc., even when the sire was probably a common bull.

“The cattle are housed at night during winter, and supplied with hay.”

In December, 1887, when we visited the herd, the two oldest bulls had black polls, and had a good deal of black about the forelegs and shoulders. One cow, as described in the Report, was blue-roan in colour.

In July, 1894, the herd had increased to forty ; it consisted of one three-year-old bull, fourteen cows, fifteen head of young stock, including three bulls, and ten calves. The master bull was a short-legged, massively built animal, with a very broad, thick-set head and heavy forequarters.

The poll was white, and there was no black hair in the tail-tassel nor on the fetlocks. On the shoulders and flanks were a few underlying blue spots, and some scattered black hairs on the sides of the face. The ears were black inside and for about half their length from the distal end outside; the muzzle, hoofs and eye-rims were also black. The roof of the mouth and upper surface of the tongue were black, but the under surface of the latter was flesh-coloured.*

Professor Robert Wallace visited the herd in 1904, and found twenty-six animals, which he describes as "the most direct descendants of the ancient forest cattle of this country," and "the 'missing link' between the wild cattle and the breeds under domestication." He was specially interested in the underlying dark marks on the skin, some of which bear black and some white hair; the latter being "completely obscured during winter, but show through the thin summer coat." "The skin of the head," he says, "is black underneath both the characteristic black ring round the eye and the white or mottled hair covering other parts of it. Some cows have the patches of black skin expanding until they cover the back like a sheet of black cloth thrown over it, which produce white hair similar to that on some of the smaller spots on others. In 1904, one cow, that when in full coat showed only a few black spots on the body, was black-skinned all over, except a speckled udder. The eyes . . . are very black, large, and prominent. The forehead is remarkable for width, and the crown is high and massive. . . . In some good specimens the ears are set very low. . . ."†

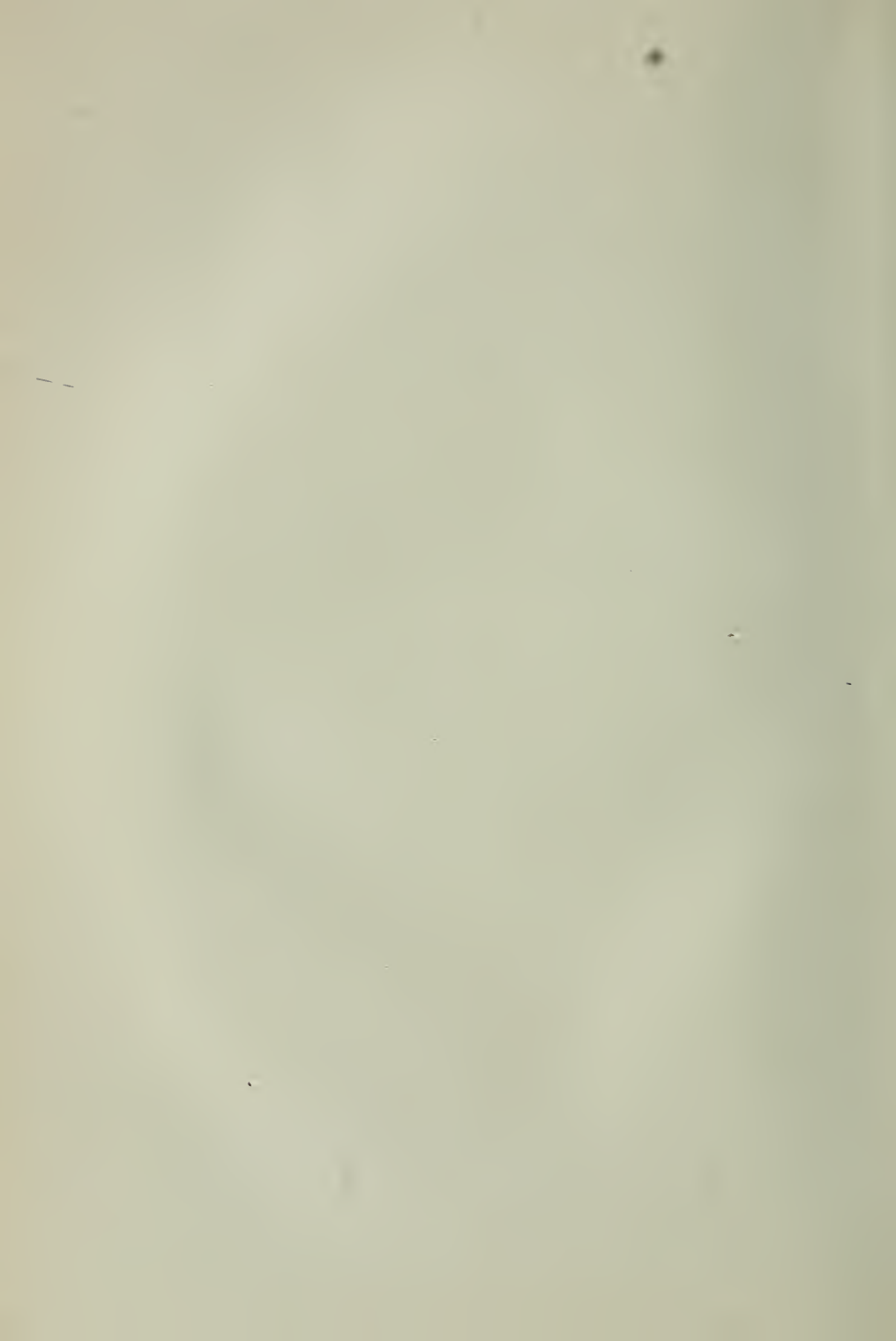
Professor Wallace says that after the herd had been reduced by the rinderpest—in 1867—it was crossed with a shorthorn bull from Derbyshire, and that for some years afterwards shorthorn characters were frequently evident. The sire of the old bull, five years old in 1904, came from Woodbastwick. At two years old this bull developed

* *Zoologist*, 1895, p. 212.

† *Farm Live Stock of Great Britain*, 4th edn., 1907, pp. 150-152.



HEAD OF LYME COW, LYME HALL.



“ loose ” horns, and some of the cows grew them also, as they had done after the introduction of shorthorn blood. When Professor Wallace saw the old bull in 1904 it had developed a small horn.

Storer states that when he visited the herd in 1875 it numbered twenty head,* and when we saw it in May, 1908, we found only twenty-five; the decrease since 1894, however, is in no way due to degeneration, but is explained by the fact that the present agent, Mr. A. E. MacLeod, satisfied that there is no need to keep all calves irrespective of markings, is weeding out the animals which do not conform to the Somerford standard, and is aiming at regularity in points. The herd in May, 1908, was made up of one bull, three years old in the previous January; sixteen cows; six heifers of a year old or younger; and two calves, one of these being a bull.

The bull was an even finer animal than we saw in 1894. He came from Northrepps Hall, Norfolk, the seat of Mr. Quintin E. Gurney, where a herd, an offshoot from Blickling, was established in 1888. He was shedding his winter coat; the skin showed very pink about the shoulders, and in places underlying blue patches were visible. He had irregular black ticks on his fetlocks. Only about one-third of his ears on the outside was black.

The cattle were more uniformly white than in 1894, and all but one had black points. In 1887 one of the calves had chocolate-coloured ears, and one of the cows is mentioned in the British Association Report as having red points; these probable traces of the Woodbastwick cross of 1879 had disappeared. In 1894 one young beast had square-tipped ears, a character due to the Blickling sire, but there were no animals with square-tipped ears in 1908. All the cows had black muzzles and most of them had more or less black round the muzzle; a few had black fleckings on shoulders or necks, but not one had the large black patches which we noticed on several in 1894. The amount

* Storer, *Wild White Cattle*, p. 258.

of black on the outside of the ears varied considerably, and the cow figured—a very white animal—had rather more than two-thirds from the distal extremities black. The muzzle was black, but there were only a few black ticks immediately above it; the black on the fetlocks and teats was remarkably even. Amongst the heifers was one, out of a typically marked cow, which had no black points; the muzzle was pale pink and the ears white inside and out. The bull calf, Mr. MacLeod thought, was as well marked and promising an animal as any he had seen during his five years experience of the herd.

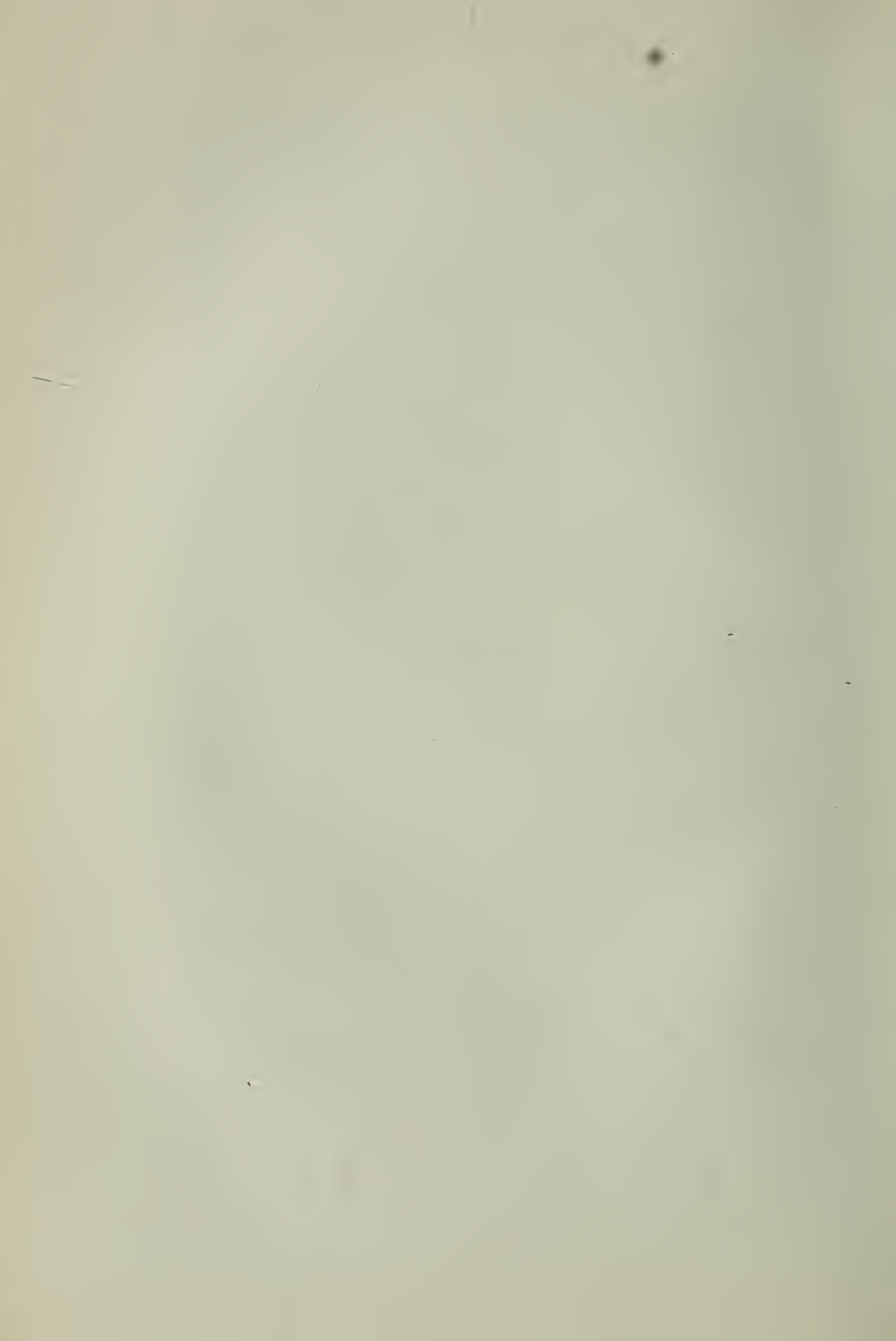
All the cattle are polled, but in 1894 one heifer had well-developed, upstanding, lyrate horns with black tips, similar to those of the Chillingham herd of Park Cattle, and altogether unlike those of the short-horned dairy cattle of the district. This animal was noticeably wilder and more difficult to approach than the other members of the herd. These peculiarities, physical and mental, were not apparently due to the irregular parentage of a shorthorn sire, but possibly indicated a reversion to a horned and less domesticated type. Within the last five years two other cases of horned cows have occurred, but these Mr. MacLeod thinks were the result of a cross with a bull obtained a few years ago from the herd which, until recently, existed at Chartley Park, Staffordshire. These cows were parted with.

A herd of horned Park Cattle existed at Lyme, the seat of Lord Newton, until 1885. Croston* states that, according to popular tradition, Sir Peter Legh, Steward of Blackburnshire in 1505, brought the original cattle from the Lancashire forests. Tradition in this case may have foundation in fact, but it must be borne in mind that Lyme was enclosed about the end of the fourteenth century, and that the cattle may have been emparked with the Red Deer at that time. It is true that we have no positive evidence of "wild" cattle in Macclesfield Forest at that period, but there is

* Croston, *Historic Sites of Lancashire and Cheshire*, p. 338.



SKULL OF COW, LYME HALL. FIG. 1.



reason to believe that feral cattle existed in the forests of the greater part of Britain in the Middle Ages.

Bewick in 1790 mentioned the Lyme cattle incidentally, but Hanshall* was the first to give particulars of the herd. He says :—

“In Lyme Park, which contains about one thousand Cheshire acres, is a herd of upwards of twenty wild cattle, similar to those in Lord Tankerville’s park, at Chillington (*sic*), chiefly white, with red ears. They have been in the park from time immemorial, and tradition says that they are indigenous. In the summer season they assemble on the high lands, and in winter seek shelter in the park woods. They were formerly fed with holly branches, with which trees the park abounded; but these being destroyed, hay now is substituted. Two of the cows are shot annually for beef.”

Between 1856 and 1860 there were from thirty to thirty-five cattle in the park, but the ill effects of inbreeding were apparent and the introduction of new blood was obviously desirable. In 1859 a cow and a bull calf, the sole survivors of the polled herd which had long existed at Gisburne in Craven, were brought to Lyme. The cross was not considered satisfactory, and it became increasingly evident that the herd was declining. About 1871 a bull was obtained in exchange from Chartley, and later a heifer was brought from Mr. Duff Assheton Smith’s herd at Vaynol, but these attempts to save the herd were ineffectual. In August, 1875, Storer found five animals only, one of these being the Chartley bull†; two years later Mr. A. H. Cocks enumerates eight head, including the Chartley bull and the Vaynol heifer, two heifer calves having been born since Storer’s visit.‡

In August, 1884, Coward visited Lyme and found only three animals surviving—a black cow of eleven or twelve

* Hanshall, *History of Cheshire*, 1817, p. 528.

† Storer, *Wild White Cattle*, p. 249.

‡ Cocks, *Zoologist*, 1878, p. 278.

years of age, a cow about nine, and a young bull out of the black cow by the Chartley bull, which, owing to his bad temper, had been shot a year or so before. The two remaining cows were shot by Haig, the shepherd, who had charge of the cattle at the time, in November, 1885, and their carcasses cut up for beef; the bull, we believe, had been killed before that date.

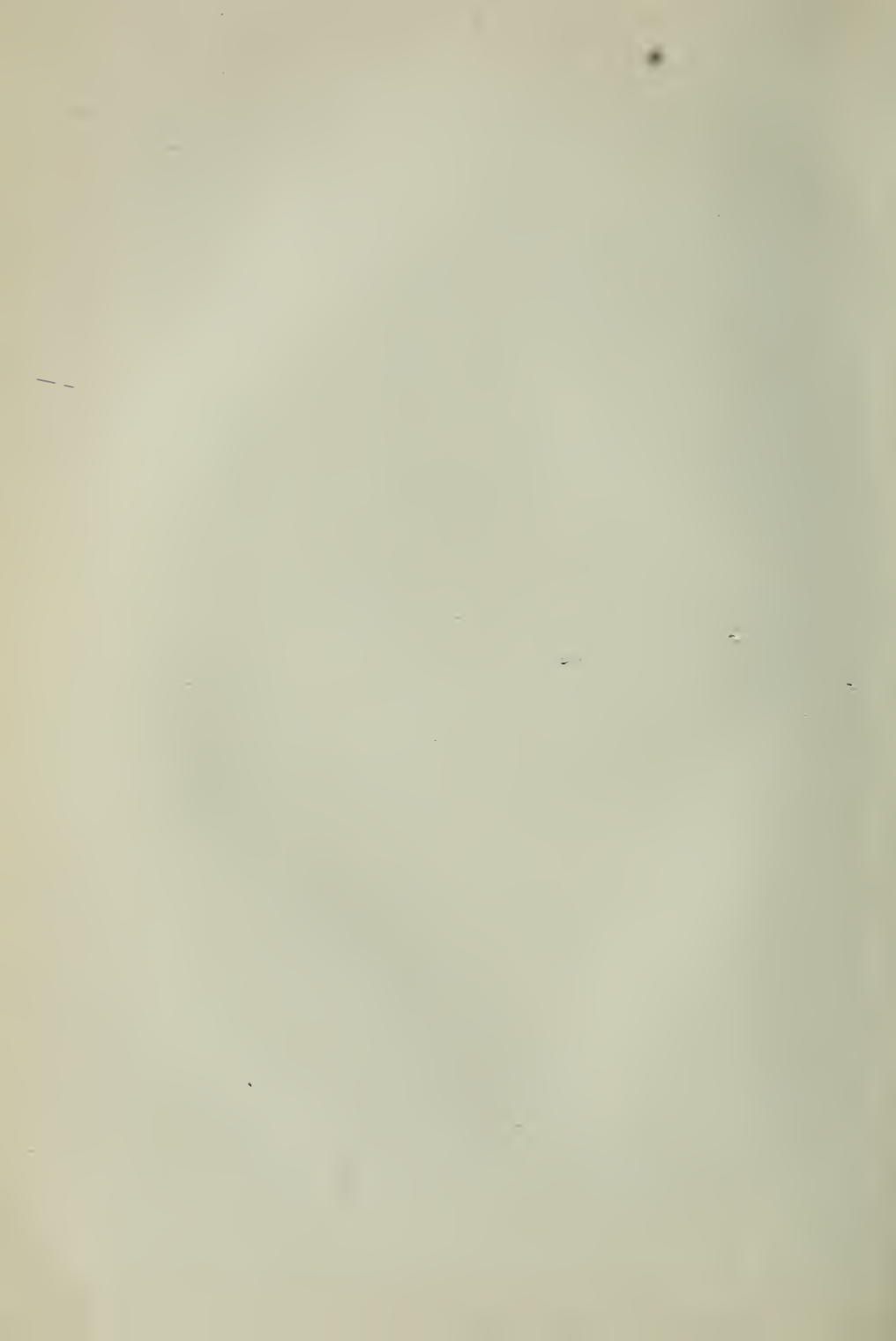
In fine weather during summer the cattle frequented the higher ground on the Park Moor—"up by the Knight's Castle and Bowstonegate," as an old villager put it—but on the approach of rain they descended to the sheltered valleys. People living in the neighbourhood used to consult this natural barometer by watching the movements of the cattle, as the villagers of Chatton do those of the Chillingham herd at the present day. In winter the cattle were confined in a walled yard with ample sheds, which communicated with a large paddock, where they were supplied with hay. So long as the size of the herd permitted one or two animals were shot at Christmas.

The bulls were steered as calves. Had the wiser policy, adopted at Chillingham, of steering the animals when from two to four years old, and thereby ensuring a good bull selection, been practised, the cattle might have survived until now, for one cause of the decline of the herd was the retention at one time of a single bull which proved impotent. When it was necessary to secure one of the animals for any purpose a strong rope with a running noose was thrown over its horns or neck, and the free end of the rope passed through an iron ring made fast in a stone block in the floor of the yard. Owing to the strength and ferocity of the beasts, especially if full grown, it was no easy nor safe matter to haul them up to the ring, where they were comparatively powerless. The cattle retained their hereditary wildness and timidity to the last.

The Lyme cattle were larger than those of any of the existing park breeds; they were long in body, with strong bone, much substance and a quantity of flesh about the



SKULL OF COW, SHOT IN THE WINTER OF 1883-4, LYME HALL. [78]
FIG. 2.



head and dewlap. They had an abundance of long rough hair, which was curly and mane-like on the head and forequarters of the bulls.* The general coloration was white with black muzzles and hoofs, and frequently some black on the forelegs. The ears were black or red, but seem, latterly at any rate, to have varied considerably, and were occasionally entirely white. Storer† says that they had black circles round the eyes, but this was not apparent in the three stuffed heads we have seen.

The admixture of the Gisburne blood had a curious effect on the horns of the Lyme cattle, all the more curious as the Gisburne herd was polled. Prior to the cross the horns were intermediate in character between the Chillingham and Chartley types, not so upright as the former, yet more upright and less like those of the old English long-horn cattle than the latter. Subsequent to the cross, however, the horns developed a drooping incurved character, which approximated closely to the form exhibited by the old long-horn breed of cattle that was supplanted by our modern short-horns.

Two skulls, three pairs of horns and one stuffed head are preserved at Lyme Hall. The skull of an old cow, exhibited at the Manchester Meeting of the British Association in 1887, has a very convex forehead; the other skull, that of an old cow shot in the winter of 1883-4, is narrower, and has comparatively a much longer face with concave depressions on either side of the forehead and a prominence in the centre. The horns in this skull are of the drooping, long-horn character, and exhibit the influence of the Gisburne cross already referred to.

Of the three pairs of horns, one (Fig. 3) shows the form of horn prior to the introduction of Gisburne blood. The second (Fig. 4) is of erratic character, one horn being deflected and the other raised; the third (Fig. 5) is distinctly of the long-horn type, curved downwards and inwards.

* J. D. Sainter, *North Staff. Naturalists' Field Club*, 1878, p. 27.

† Storer, *Wild White Cattle*, p. 250.

MEASUREMENTS (IN INCHES) OF SKULLS AND HORNS.

		Length from supra-occipital ridge to pre-maxillary.	Width between bases of horn-cores.	Width between orbits.	Circumference of horn-cores.	Length of horn round outer curve.	Span of horns.
Skull, fig. 1	..	19.6	8.25	8.0	9.2	16.8	30.3
„ fig. 2	..	19.9	7.2	6.5	6.3	17.8	10.8
Horns, fig. 3	..	..	6.75	..	..	22.5	33.2
„ fig. 4	..	..	7.75	..	8.25	24.5	35.0
„ fig. 5	..	..	6.75	..	8.85	27.75	16.6

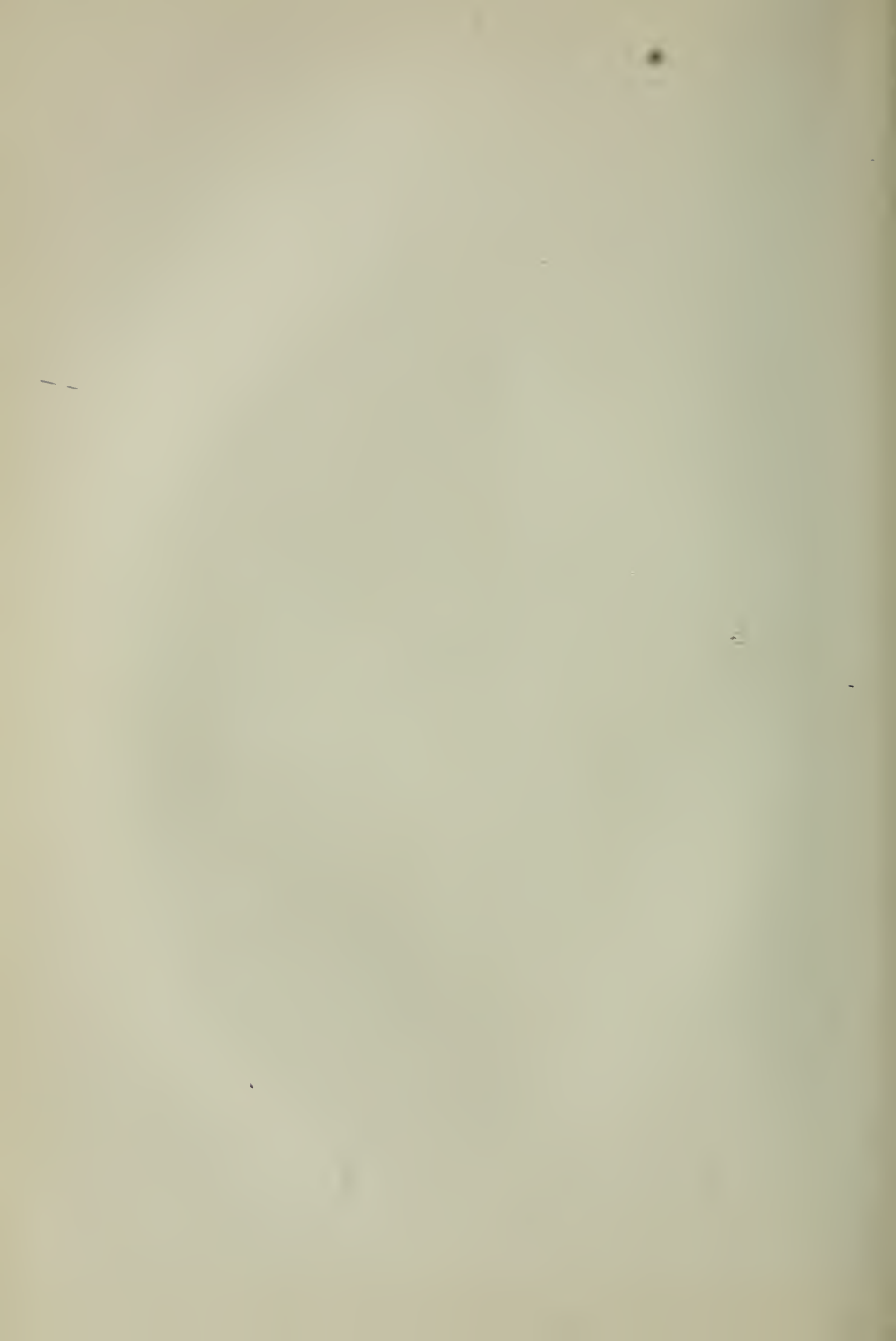
The head is but indifferently preserved. Mr. A. H. Cocks thought when he saw it in 1877 that it had been stuffed several years; the horns are of the long-horn type, and show the influence of Gisburne blood, and as the Gisburne cow and calf came to Lyme in 1859, this animal can hardly have been killed before 1863. The hair is rather curly on the poll, the muzzle black and the ears white inside and out. The measurements below are those given by Mr. Cocks,* who states that it is the head of a bull; Mr. J. E. Pardy, the agent, however, told us that it is a cow's.

The late Mrs. John Leigh of Hale Barns had in her possession a head which we have examined. The animal, which from the length of horn and comparative fineness of face we think was a bullock, was shot, we learnt from Mrs. Leigh, about the year 1848. We have been unable to trace into whose hands this head passed after Mrs. Leigh's death. The hair on the poll of this head was curly, the ears chocolate-red inside and for about a third of their length from the extremities on the outside. One or two of the eyelashes which then remained were red, and there were a few red hairs above the black muzzle. The horns—yellow tipped with black—declined outwards and forwards and then slightly inwards. This head and the older skull show perhaps best the original character of the Lyme cattle.

* Cocks, *Zoologist*, 1878, p. 284.



HORNS OF LYME CATTLE, LYME HALL.



A head of a cow with horns of the altered type was in the possession of Mr. J. Maclachlan of Buxton, but, when we saw it, it was in poor condition and very dirty; it was difficult to judge what the original colour had been. The head of a bull which we saw at Chartley Hall, said to be that of an animal from Chillingham, probably represents the Lyme bull sent in exchange in 1871. There is no record of any Chillingham beast having been sent to Chartley.*

MEASUREMENTS OF STUFFED HEADS (IN INCHES).

	Length of horn round outer curve.	Length of horn in a straight line.	Span of horns.	Across fore- head between horns.	Length of head.	Circumference of horn at base.
Head at Lyme	25	13·0	9·5	10	21·0	..
Head at Hale	27	18·5	29·5	11	22·5	9·5

Until perhaps the middle of the last century a herd of Park Cattle existed at Vale Royal Abbey, the seat of Lord Delamere. Storer† describes it as “an ancient domestic herd of white cattle with red ears, which, though now crossed out and extinct, was kept up, partially pure only, in the time of the late lord. They are supposed to have belonged to the Abbey; and a singular tradition, the truth of which the late Lady Delamere believed she had verified, was prevalent, to the effect that some of Cromwell’s troopers drove off most of them, but that one cow, after being driven with the rest seven or eight miles, escaped from them and returned home.” He states that they “were in all probability derived from North Wales, as from thence the original monks of Vale Royal came”; but the original monks of Vale Royal Abbey came in 1273 from Abbey Dore in Herefordshire,‡ and not from North Wales, and

* For a fuller account of this herd see Oldham, *Zoologist*, 1891, pp. 81-87.

† Storer, *Wild White Cattle*, p. 111.

‡ Ormerod, *History of Cheshire*, Vol. II., p. 147.

probably brought their cattle with them from that place. Hanshall,* after speaking of the Lyme cattle, says: "There is a breed very much like them in a domesticated state, in Vale Royal park, the seat of T. Cholmondeley, Esq." Ormerod,† referring to the legend of the white cow, states that the family, in their privation, supported themselves on the milk of the one cow, and that afterwards in gratitude, the herd was maintained. When they became extinct is not certain, but according to a Cheshire directory for 1850‡ they still existed at that date. This statement in the directory is, however, undoubtedly copied from Ormerod's edition of 1819,§ and the herd may have become extinct shortly after that date.

CETACEA

BALAENOPTERIDAE.

Sub-order *MYSTACOCETI*.

HUMP-BACKED WHALE. *Megaptera boöps* (Fabricius).

Has occurred once.

On July 17th, 1863, a young female Hump-backed Whale was stranded on a sandbank in the Mersey opposite Speke. It was examined in the flesh and described by T. J. Moore.|| The dimensions taken at the time were: "Total length in a straight line from snout to cleft of tail, 31 feet 4 inches; length of gape, about 8 feet; from snout to the eye, 8 feet; length of eye, 3 inches; from the snout to the commencement of the pectoral fin, 10 feet; extreme width of tail at the tips, 11 feet; from the snout to the commencement of

* Hanshall, *History of Cheshire*, p. 528.

† Ormerod, *History of Cheshire*, Vol. II., p. 155.

‡ Bagster, *Cheshire Directory*, 1850, p. 649.

§ The note appears uncorrected in Helsby's 1882 edition.

|| *Naturalist's Scrap Book*, 1863, p. 103; *Zoologist*, 1863, p. 8801.

the dorsal fin or rather hump, 18 feet ; length of the dorsal fin, 3 feet 3 inches ; from snout to cloaca, 21 feet." A quantity of "shrimps" was found in the stomach. "The longest plate of baleen," Moore states,* "measures about two feet long by five and a half inches at base, and the plates were so close together that I counted thirty-eight in the length of a foot. The creature was quite black, except the belly, which was mottled and streaked with white, and the pectoral fins were milk-white except a black blotch here and there."

The skeleton is now in the Brown Museum, Liverpool.

Dr. J. E. Gray's erroneous statement that this whale was captured in the Dee Estuary† has been repeated in the second edition of Bell's *British Quadrupeds*,‡ in Lydekker's *Handbook of the British Mammalia*,§ and elsewhere.

ZIPHIIDAE.

Sub-order ODONTOCETI.

Sub-family ZIPHIINAE.

BOTTLE-NOSED WHALE.

Hyperoödon rostratum (Müller).

Stranded occasionally when passing along the coast on migration.

The main route of the Bottle-nosed Whale on its journeys to and from the breeding places in the far north lies to the west of the British Islands, but a number of the animals travel *via* the English Channel and the North Sea along the east coast of England. Comparatively few pass through St. George's Channel, and of these the greater number have

* *Liverpool Biological Society, Proc.*, Vol. III., 1888-9, p. 267.

† *Zoological Society of London, Proc.*, 1864, p. 211.

‡ p. 394.

§ p. 263.

been observed during the southward migration in autumn. Thus of eight occurrences on the Cheshire coast, for which the precise dates are known, only one pertains to the spring migration as against seven to the southward journey.* In spite, however, of its comparative scarcity the Bottle-nosed Whale has occurred on the Cheshire shore more frequently than any other of the large cetaceans.

Pennant,† under the heading of "Bottle-head Hyperoodon," states: "A fish, which we presume to be of this species, was found on the recess of the tide in the new cut of the river *Dee*, below *Chester*, in *October* 1785; its length was twenty-four feet, but the girth did not exceed twelve feet." At the end of April, 1829, one was taken at the mouth of the *Mersey*; the skeleton was preserved in the museum of the Royal Institution, *Liverpool*.‡ In September, 1839, one twenty-four feet in length was captured on the *East Hoyle Bank*.§ Byerley records four occurrences: one on the *East Hoyle* in 1850; one at *Little Meols* about 1851; a male, twenty-one feet long, on the *East Hoyle Bank* on August 25th, 1853; and another seen in the same locality for about three weeks after the capture of the last example.

In the *Nottingham Museum* there is the skeleton of one which was stranded in the *Mersey* at *Speke* in *October*, 1856||; the skeleton was purchased from the Royal Institution, *Liverpool*, where it had been originally preserved. On *September 2nd*, 1881, another was stranded at *Speke*; it measured twenty-three feet in length and twelve feet in greatest girth.¶ On *September 27th*, 1907, a small female Bottle-nosed Whale was stranded on a bank in the

* *Vide* the remarks of *Thomas Southwell*, quoted by *H. E. Forrest* (*Fauna of North Wales*, pp. 62, 63).

† *British Zoology*, 1812, Vol. III., p. 86.

‡ *Loudon's Mag. Nat. Hist.*, Vol. II., p. 391. 1829.

§ *W. Thompson*, *Annals of Nat. Hist.*, Vol. IV., p. 379, and Vol. V., p. 361. 1840.

|| *Moore*, *Liverpool Marine Biological Committee*, Report II., p. 142.

¶ *Moore*, *Liverpool Lit. and Phil. Soc., Proc.*, XXXVI., p. xlix.

Dee opposite Mostyn, Flintshire; it was dragged, still alive, up the beach by a horse. Mr. J. Bairstow of Queen's Ferry and Mr. Alfred Newstead of the Grosvenor Museum, Chester, saw the whale whilst it was alive and measured and photographed it. From the tip of the snout to the fork of the tail it measured seventeen feet, and the greatest girth was ten feet six inches.

DELPHINIDÆ.

Sub-family *DELPHININÆ.*

GRAMPUS OR KILLER. *Orca orca* (Linné).

Has occurred at least once.

A male Grampus, reported to have been twenty-five feet in length, was stranded at West Kirby on March 22nd, 1876, and was captured by two Parkgate fishermen, who were out in a small boat. When Moore, who reported the occurrence,* saw it, the man who had bought the Grampus from the fishermen had already begun to cut it up and boil it down for oil. He was able, however, to secure a flipper and to examine and measure portions of the carcase. There were eleven teeth "on each side of the lower jaw, and twelve on each side of the upper, the longest projecting an inch and a half beyond the gum." The tail from tip to tip measured six feet six inches; the width of the dorsal fluke at the base was two feet two inches, and its height three feet seven inches; the greatest width of the pectoral fins was two feet five inches and their length three feet six inches. The purchaser of the carcase told Moore that in its death agony the animal threw up a quantity of sea-fowls' feathers, and Moore found some still in the gullet.

* *Liverpool Lit. and Phil. Soc., Proc.*, Vol. XXX., 1875-6, p. lxxxv (Apr. 17, 1876).

It is not possible to identify a cetacean which is mentioned by Randle Holme* : " June 23, 1659, a great fish, the length of 3 yards, was taken upon the Sands in Saltney, after this forme—The fins on it back, taile, and under it belly of the same substance of the fish, the colour on the back is black and shineing like unto iet, and the belly very whit."

PORPOISE. *Phocaena phocaena* (Linné).

Common in Liverpool Bay and often ascends the estuaries.

Byerley describes the Porpoise as " frequent in shoals during stormy and changeable weather," and Moore† repeats his words. Mr. R. Newstead‡ says it often occurs in the Mersey above Eastham. It occasionally ventures far up the river ; in May, 1895, one was shot in the polluted waters of the Mersey at Latchford Weir, more than half a mile above Warrington Bridge.§

The Porpoise is occasionally met with in the gutters amongst the sandbanks of the Dee Estuary, but as a rule keeps to the " Main " and the " Wild Roads." Mr. L. N. Brooke has known one to frequent Denna Gutter opposite Heswall day after day, remaining there even in the shallow water for fully two hours after high tide.

Moore|| describes a young Porpoise which was brought to the Brown Museum, Liverpool, on March 22nd, 1888. It had been caught in a shrimp-net which had been down two hours. It measured eighteen inches in length, and was black on the tail, fins, and upper parts, but rosy pink on

* *Harl. MSS.*, 1929. Randle Holme Collection.

† Moore, *Liverpool Biological Society, Proc.*, Vol. III., p. 269.

‡ R. Newstead, *Chester Soc. Nat. Science and Literature*, Vol. IV. p. 250.

§ C. O., *Naturalist*, 1895, p. 328.

|| Moore, *Liverpool Biological Society, Proc.*, Vol. III., pp. 269, 270.

the sides and lower parts, especially the abdomen. A shrimper reported to Moore that on May 20th, 1889, when at the North-west Lightship "about an hour after daylight," he observed, within ten yards of his boat, a shoal of Porpoises, which he estimated to extend fully three miles.

The form described by Gray under the name *Phocaena tuberculifera*,* on account of a series of short spiny processes on the anterior edge of the dorsal fin, has been met with on at least two occasions in the district. Moore† records one which was speared off the Rock Lighthouse, New Brighton, on February 7th, 1867, and another which was taken near the Herculaneum Dock on October 12th, 1881.

COMMON DOLPHIN. *Delphinus delphis*, Linné.

Occasional ; two occurrences have been recorded.

A Common Dolphin was found on the shore at New Brighton on February 13th, 1879 ; it had met with an accident and lost its tail, possibly having been struck by the screw of a steamer. The skeleton is in the Brown Museum, Liverpool.‡ Another was stranded at West Kirby on February 17th, 1893, and is preserved in the Brown Museum, Liverpool. The Rev. G. H. Staite told us that this Dolphin was stranded alive with another much larger one, but that the latter was so mutilated as to be useless for preservation. The weather had been stormy, and the animals were left by the swiftly receding tide on the shore to the south of West Kirby village. The one which was subsequently preserved was vigorous when stranded and lived until next day.§

* *Zoological Society of London, Proc.*, 1865, pp. 318-321.

† Moore, *Liverpool Biological Society, Proc.*, Vol. III., p. 270.

‡ Moore, *Liverpool Lit. and Phil. Soc., Proc.*, Vol. XXXIII., p. lxxii.

§ T. A. C. and C. O., *Zoologist*, 1895, p. 249.

WHITE-BEAKED DOLPHIN.

Lagenorhynchus albirostris, Gray.

Has occurred once.

On December 29th, 1862, a full-grown male White-beaked Dolphin was stranded on Little Hilbre at quarter-ebb tide. It was secured by the resident Inspector of Buoys and conveyed alive to the Brown Museum, Liverpool; it lived for eight hours after it was taken from the water. At the time of its capture the wind was blowing "fresh" from west-south-west; other "porpoises" had been observed in the neighbourhood for a few days previously. Moore's description* is as follows: "The general colour was rich black. A long and narrow greyish streak extended on either side diagonally across the ribs; and a similar greyish line occurred on each side of the dorsal ridge, extending nearly from the fluke to the tail. The beak white, irregularly blotched with blackish, the white extending slightly above the constriction of the beak. The under jaw and throat milk-white, which colour extended along the belly, but became less clear as it approached the vent. Its dimensions were as follows:—

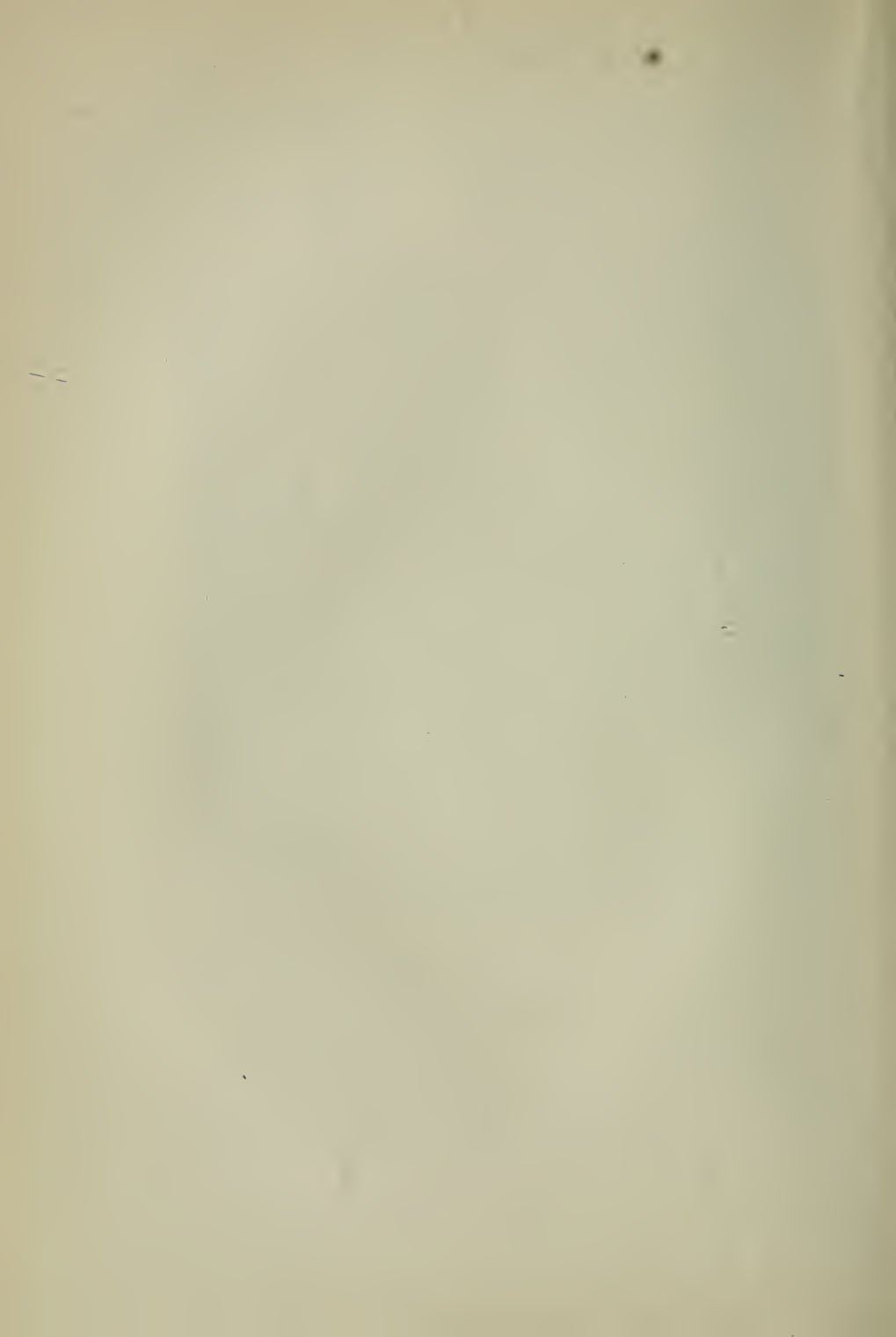
" Total length from snout to cleft of tail	9 feet.
Length of gape	10½ ins.
Length of beak	2¼ ins.
Length of under jaw beyond the upper	½ in.
Length from snout to eye ..	1 foot 1½ ins.
Length from snout to blow-hole ..	1 foot 3 ins.
To commencement of dorsal fluke	3 feet 11 ins.
To end of dorsal fluke	5 feet 6 ins.
To pectoral fin	1 foot 9 ins.

* *Liverpool Biological Society, Proc.*, Vol. III., pp. 272-274. *Cf. Ann. and Mag. Nat. Hist.*, Series 3, Vol. XI., pp. 268-70, 1863.

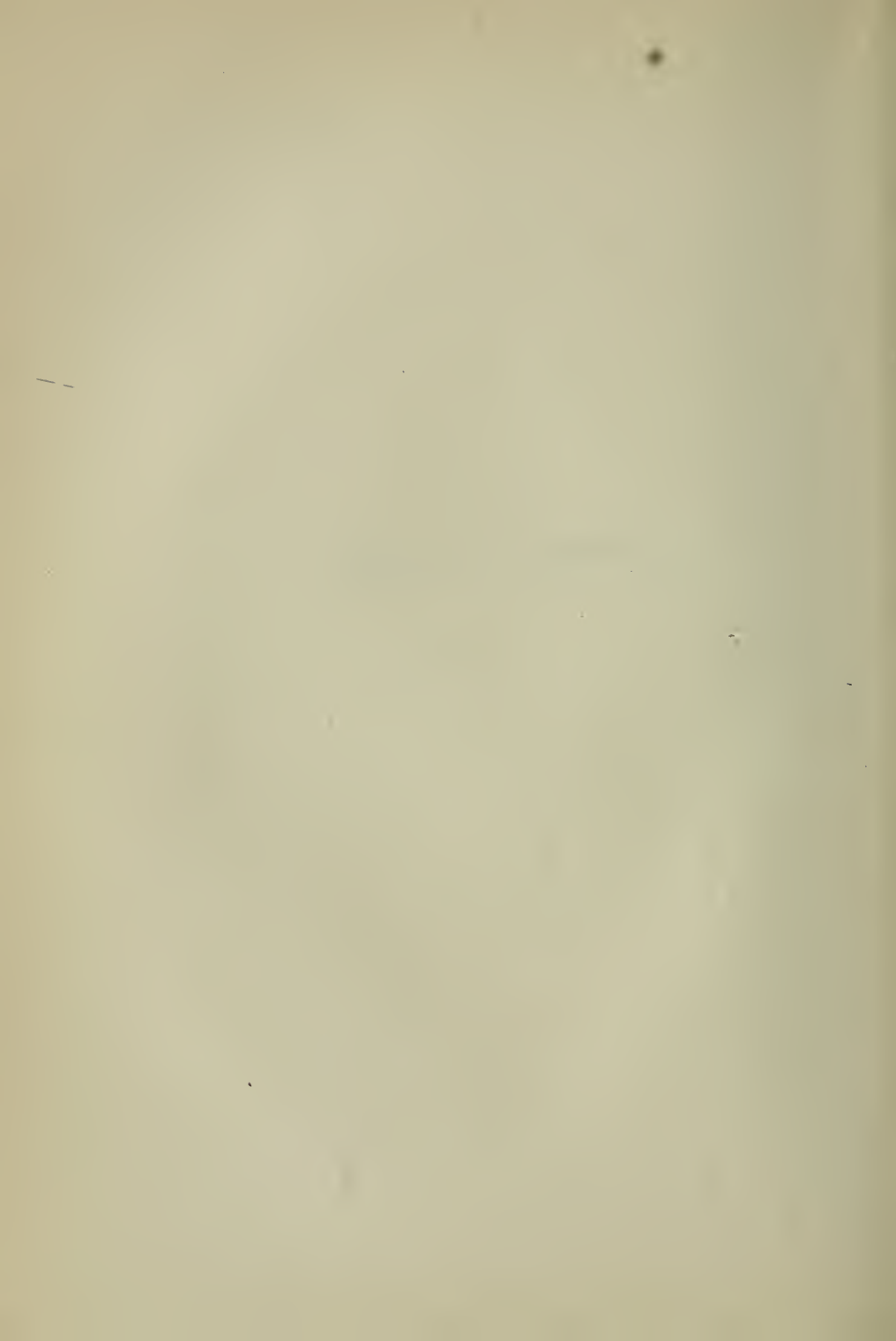
Breadth of tail	2 feet 5 ins.
Deflection of cleft of tail from a line drawn between its tips . .	6½ ins.
Girth in front of pectoral fin . .	3 feet 11 ins.
Girth in front of dorsal fluke . .	5 feet.
Girth behind dorsal fluke . .	4 feet 3 ins

“The body became much attenuated towards the tail. Immediately in front of the dorsal fluke, the vertical and transverse diameters were nearly the same, the former being thirty-one and a half inches, and the latter thirty and a half inches. Half way between the end of the fluke and the commencement of the tail the vertical diameter is thirteen inches, and the transverse six and three-quarters; and immediately before the commencement of it, the vertical diameter was four and a half inches, and the transverse two and a quarter, or exactly one half. The dorsal fluke measured twenty-four inches along its convexity, and was eleven inches high. The pectoral fin at its junction with the trunk was seven inches across, and its greatest length (diagonal) nineteen inches; measured round the curve it was twenty-one inches. The eye was seven-eighths of an inch long by half an inch. The orifice of the ear was two and a half inches behind the eye in a slightly diagonal direction, and was less in diameter than a puncture by an ordinary pin. The transverse diameter of the blow-hole was one and three-quarters inches, and the longitudinal one inch, the points being directed *forwards*. Teeth $\frac{2}{2}$ $\frac{5}{3}$, $\frac{2}{2}$ $\frac{4}{3}$, curved, and acute where not slightly worn.”

Dr. J. E. Gray identified the skull.



THE BIRDS OF CHESHIRE



THE BIRDS OF CHESHIRE.

INTRODUCTION.

THERE is satisfactory evidence of the occurrence in a wild state of two hundred and thirty-one species of birds in Cheshire during the present and last centuries. It is not possible to dogmatise on the claims of some of these to a place in the list, and we have excluded the Canada Goose and Mute Swan, birds originally introduced, although they now exist in a more or less wild state. We have included the Little Owl provisionally, although there is presumptive evidence of its introduction.

In the *Birds of Cheshire* we gave at length our reasons for considering that none of the following fourteen species was entitled to a place in the county avifauna: Rock-Thrush, *Monticola saxatilis* (Linné); Cirl Bunting, *Emberiza cirrus*, Linné; Crested Lark, *Alauda cristata*, Linné; Alpine Swift, *Cypselus melba* (Linné); Roller, *Coracias garrulus*, Linné; Montagu's Harrier, *Circus cineraceus* (Montagu); Golden Eagle, *Aquila chrysaëtus* (Linné); American Swallow-tailed Kite, *Elanoides furcatus* (Linné); Ruddy Sheld Duck, *Tadorna casarca* (Linné)*; White-eyed Duck, *Fuligula nyroca* (Güldenstädt); Harlequin Duck, *Cosmonetta histrionica* (Linné); Temminck's Stint, *Tringa temmincki*, Leisler; Spotted Sandpiper, *Totanus macularius* (Linné); and Noddy Tern, *Anous stolidus* (Linné). The Cirl Bunting has, however, undoubtedly occurred in the county within recent years, and Dr. Dobie has substantiated Brockholes' record of the Spotted Redshank, *Totanus fuscus* (Linné), which was referred to in the article on the Common Redshank, but not included in the list given above.

* On the occasion of an incursion of that species in 1892, a Ruddy Sheld Duck was shot at Ditton, on the Lancashire side of the Mersey Estuary. Cf. Oldham, *Zoologist*, 1905, pp. 107, 108.

Since the publication of the *Birds of Cheshire* in 1900, the following species have been added to the county list: Cirl Bunting, Mealy Redpoll, Woodchat, Shore Lark, Shag, American Blue-winged Teal, Kentish Plover, Schlegel's Petrel and Baillon's Crake. One hundred and twelve species breed, or bred until recently, within the county boundaries. The Nightingale is included in this number, for although a nest has never been found, there is no doubt that the bird has bred on some, at any rate, of the occasions when it has been observed. The Bittern used to nest regularly in the early part of the last century; the Marsh and Hen Harriers have probably only been exterminated as breeding species within the last fifty or sixty years, whilst the Oyster-catcher, Lesser Tern and Common Tern may have nested regularly on the coast until comparatively recent years. No definite account of their nests has been preserved, however, and we have not felt justified in including any of these species amongst the breeders.

The Oyster-catcher, Cormorant, Guillemot, Razorbill, Herring Gull, Greater and Lesser Black-backed Gulls and Kittiwake rear their broods annually on the neighbouring Welsh coast, and are to be seen on Cheshire waters throughout the year, thus occupying the anomalous position of summer residents which do not nest in the county.

Compared with many other English counties, Cheshire has a poor avifauna. The number of residents would no doubt be larger were there a rocky coastline, but it is among the casual visitors rather than the residents that the deficiency is apparent. The eastern counties of England are those chiefly affected by the great waves of migratory birds which reach this country from northern Europe and Asia, and no county in the west is so rich in regular and casual migrants as those on our eastern seaboard. Cheshire, even for a western county, is poor in migrants, for, as explained in the chapter on migration, it lies east of the regular route of west-coast migrants.

In counties north of Cheshire in the west of England the Reed Warbler, Nightingale, Nuthatch, Wryneck and Great Crested Grebe are rare or unknown as breeding species ; whilst the Ring Ousel, Dipper, Grey Wagtail, Twite, Red Grouse, Curlew and Common Sandpiper, birds characteristic of the Derbyshire Peak and the Cheshire moorlands, are only met with locally further south.

BIRD PROTECTION.

IN Cheshire, as elsewhere, the Wild Birds Protection Act of 1880 was practically a dead letter, little attempt being made by the local authorities to enforce the law. The Cheshire County Council, however, taking advantage of the powers conferred by the Act of 1894, applied for an Order for extended protection, which was granted on July 10th, 1895. This Order enacted that the close time, which, by the Act of 1880 existed from March 1st to July 31st, should be extended to August 12th, and that throughout the county the Kestrel and Heron should be afforded the protection enjoyed by the specially scheduled birds. Further, that within a specified area, lying between Birkenhead and Meols, which included shore line and sandhills, the following birds should be classed with those in the schedule of the Act of 1880 : Red-backed Shrike, Whinchat, Spotted Flycatcher, Sedge Warbler, Blackcap, Grasshopper Warbler, Wood Warbler, Garden Warbler, Mistle Thrush, Corn Bunting, Reed Bunting, Goldfinch, Wheatear, Chiffchaff, Golden-crested Wren, Yellow Wagtail, Pied Wagtail, Skylark and Meadow Pipit. The taking or destroying of the eggs of all wild birds was prohibited in this prescribed area, and the eggs of Owls, the Bittern, Kingfisher, Kestrel, Heron, Sheld Duck, Dunlin, Black-headed Gull, Common Tern and Oyster-catcher received protection throughout the county.

The Act of 1896 conferred additional powers, and on March 1st, 1897, the Council issued a further Order which

prohibited the taking or killing of the Kingfisher, Great Crested Grebe, Heron, Goldfinch and Owls anywhere in the county throughout the year. It also protected all wild birds, whether scheduled or not, within the Wirral prescribed area at all seasons of the year.

By a third Order, dated February 15th, 1898, which nominally repealed the two former Orders but really embraced all their clauses, gulls and terns were protected throughout the year in the parishes bordering the Dee and Mersey Estuaries.

An Order dated March 29th, 1901, was similar to that of 1898, but added to the list of birds protected throughout the year, the Siskin, Twite, Brown Linnet, Green, Great Spotted and Lesser Spotted Woodpeckers, Bittern, Shoveler, Little Grebe and Nightjar, and protected the eggs of the following additional species: Shrike, Hawfinch, Twite, the Woodpeckers, Little Grebe, Great Crested Grebe, Redshank, Sandpiper and Nightjar. It modified the Order of 1898 by the exclusion of market-gardens from the protected area in Wirral.

An Order dated March 14th, 1904, differed from the Order of 1901 in that it afforded protection to all birds in such portions of the rivers Dee and Mersey as are within the jurisdiction of the county.

The latest and existing Order is quoted below in its entirety; it does not differ from the Order of 1904, but merely extends the period during which eggs are protected in the Wirral prescribed area for another five years.

“ TITLE.

“ I. This Order may be cited as ‘The Wild Birds Protection (County of Chester) Order, 1909.’

“ BIRDS.

“ *Close Time Extended.*

“ II. The time during which the killing or taking of Wild Birds, or any of them, is prohibited by the Act of 1880,



BURTON POINT.

shall be extended throughout the County of Chester, so as to be between the 1st day of March and the 13th day of August in any year.

“ Additions to the Schedule of the Act of 1880.

“ III. The Wild Birds Protection Act, 1880, as extended by Clause II. of this Order, shall apply within the whole of the County of Chester, to the Heron and Kestrel, as if these species were included in the Schedule of the Act.

“ Other Additions to the Schedule of the Act of 1880.

“ IV. The Wild Birds Protection Act, 1880, as extended by Clause II. of this Order, shall apply within the area named in Clause V. of this Order to the following species of Wild Birds, as if these species were included in the Schedule of the Act : Common Bunting, Reed-Bunting, Chiffchaff, Spotted Flycatcher, Goldfinch, Red-backed Shrike, Skylark, Titlark, Mistle Thrush, Pied Wagtail, Water-Wagtail, Yellow Wagtail, Blackcap-Warbler, Garden-Warbler, Grasshopper-Warbler, Sedge-Warbler, Wood-Warbler, Wheatear, Whinchat, Golden-crested Wren.

“ All Birds Protected during the Whole of the Year within a Certain Area (Market-Garden Lands not included).

“ V. During that period of the year to which the protection afforded by the Wild Birds Protection Act, 1880 (as extended by Clause II. of this Order), does not apply, the killing or taking of Wild Birds is prohibited within the undermentioned area :—

“ The portion of the Hundred of Wirral embracing the low-lying lands and sandhills situate between the estuaries of the River Dee and Mersey, of which the boundaries shall commence to the south at a point of the main highway of the County of Chester 200 yards to the west of the Dock Cottages near ‘Docks’ Railway Station of the Wirral Railway, run along the main highway to Bidston Village, and then turn in a northerly direction and run to Bidston Railway Station of the same railway, then turn in a westerly

direction and run along the Wirral Railway until it reaches the Meols Station of such railway, then run along the highway near to the Meols Railway Station in a northerly direction to the Irish Sea, then on the north along the margin of high-water mark of the Irish Sea to a point at New Brighton where the Yellow Noses joins the said Irish Sea, and then run in a southerly direction to 'Warren Drive' or road, and along 'Warren Drive' to the most northerly house and grounds on the west side of such drive, then along the western boundary of the houses and premises situate along the western side of such drive or road to a point 100 yards or so from Grove Road, then turning in a westerly direction along the northern boundaries of the houses and premises in Grove Road, Wallasey, until it reaches the Wirral Railway, then turning in a southerly direction along the Wirral Railway until it reaches the Wallasey Marsh, then along the edge of the Marsh in a southerly direction until it reaches the Poulton Halfpenny Bridge, then turning in a westerly direction on the edge of the said Marsh until it reaches along the edge of the Marsh the main highway leading from Poulton to Meols.

" Provided that such parts of the area aforesaid as are market-garden lands are excepted from the operation of this Clause and of Clause IV. and XI. of this Order.

"The area aforesaid (except market-garden lands which are left uncoloured) is coloured pink and outlined in red on a map sealed with the seal of the Secretary of State, dated the 13th of March, 1909, and deposited in the office of the County Council.

" Further Protection for all Birds.

" VI. During that period of the year to which the protection afforded by the Wild Birds Protection Act, 1880 (as extended by Clause II. of this Order), does not apply, the killing or taking of Wild Birds is prohibited in such portions of the River Dee and Mersey as are within the district of the Administrative County of Chester.

“ Additional Protection for the Gull and Tern.

“ VII. During that period of the year to which the protection afforded by the Wild Birds Protection Act, 1880 (as extended by Clause II. of this Order), does not apply, the killing or taking of the Gull and Tern is prohibited throughout the County of Chester.

“ Certain Districts Exempted from the Operation of Clause VII.

“ VIII. I hereby exempt from the operation of Clause VII. of this Order so much of the County of Chester as does not lie within the parishes of Puddington, Burton, Ness, Neston-cum-Parkgate, Gayton, Heswall-cum-Oldfield, Thurstaston, Caldy, Hoylake-cum-West Kirby, Wallasey, Lower Bebington, Bromborough, Eastham, Hooton, Netherpool, Whitby, Stanlow, Ince, Great Stanney, Frodsham Lordship, Weston, Runcorn, Halton, Norton, Moore, Acton Grange, Walton Inferior, including therein so much of the estuaries of the River Dee and Mersey as lie within the Administrative County of Chester.

“ Certain Birds Protected during the Whole of the Year.

“ IX. During that period of the year to which the protection afforded by the Wild Birds Protection Act, 1880 (as extended by Clause II. of this Order), does not apply, the killing or taking of the following species of Wild Birds is prohibited throughout the County of Chester :—

“ Bittern, Shoveler-Duck, Goldfinch, Great Crested Grebe, Little Grebe or Dabchick, Heron, Kingfisher, Brown Linnet, Nightjar (Goatsucker), Owl, Lesser Redpoll, Siskin, Twite, Green Woodpecker, Great Spotted Woodpecker, Lesser Spotted Woodpecker.

“ EGGS.

“ Certain Eggs Protected throughout the County.

“ X. The taking or destroying of the Eggs of the following species of Wild Birds is prohibited throughout the County of Chester :—

“ Bittern, Dunlin, Great Crested Grebe, Little Grebe or

Dabchick, Blackheaded Gull, Hawfinch, Heron, Kestrel, Kingfisher, Nightjar (Goatsucker), Owl, Oyster-Catcher, Redshank, Sandpiper, Sheldrake, Shrike, Common Tern, Twite, Green Woodpecker, Great Spotted Woodpecker, Lesser Spotted Woodpecker.

“ *All Eggs Protected within a Certain Area (Market-Garden Lands not included).* ”

“ XI. The taking or destroying of the eggs of any species of Wild Birds is prohibited within the area named in Clause V. for a period of five years from the date of this Order.

“ *Repeal of former Order.* ”

“ XII. The Order of the 14th March, 1904, is hereby repealed.

“ Given under my hand at Whitehall, this thirteenth of March, 1909.

“ H. J. GLADSTONE,

“ *One of His Majesty's Principal Secretaries of State.* ”

The regulations formulated by the County Council are complicated and obscure, and rules applying to one parish may be inoperative in an adjoining one. The protected area is one of the least suitable that could have been selected in the county—it is marshy low-lying land, devoid of woods, trees, or suitable cover for the nesting of birds. Very few birds, and not one which really needs protection, nest within this area, and the exclusion of market-gardens, the only places within the area likely to attract many species, reduces Clause V. of the Order to an absurdity. Clauses VII. and VIII. present a curious anomaly with regard to the Lesser and Great Black-backed Gulls; Clause VII. protects gulls and terns during the whole year throughout Cheshire, but Clause VIII. exempts from its operation those portions of the county which do not lie in coastwise parishes. The Black-backed Gulls were not included with other gulls in the schedule of the Act of 1880, but by Clause VII. they are

protected "during that period of the year to which the protection afforded by the Wild Birds Protection Act, 1880, does not apply," and in consequence are protected during the greater part of the year in the coast parishes, but may be shot there by owners and occupiers of land during the breeding season.

Police officers are seldom practical ornithologists, and frequently err in identifying species. On one occasion at any rate, the magistrates showed even slighter knowledge of birds than did the police. A bird-catcher, found with Redpolls in his possession, contended that they were "Jitties" and not scheduled, and though the police-officer who had charge of the case assured the bench that the "Jitty" was the Redpoll his evidence on this point was disregarded and the case dismissed.

The existing regulations are violated by game-preservers and their keepers; Kestrels and Owls are on many shootings ruthlessly destroyed, even on the estates of Justices of the Peace. Nevertheless the Acts and Orders have undoubtedly contributed to the increase in the numbers of certain species, and in none is this more noticeable than in the Black-headed Gull, Redshank and Sheld Duck. In all three cases, no doubt, other factors must be taken into account, but protection is a material one. Protection generally—that is, not only in Cheshire—explains to some extent the marked extension of the breeding range of the Tufted Duck, and in perhaps a greater degree the re-establishment of the Great Crested Grebe, which six years before the Act of 1880 came into force was described in Cheshire as "now very scarce, and will soon be extinct . . . owing to the price paid by ornithologists for them."

MIGRATION.

The British Islands, owing to their geographical position, are in the direct route of the vast hosts of birds which pass in spring and autumn between south-western Europe and

north-western Africa on the one hand, and the Scandinavian Peninsula, the Faroes, Iceland and Greenland on the other. The complex phenomena of migration, as exhibited in our islands, are involved in much obscurity, but during recent years considerable advance has been made in our knowledge of the subject. This is mainly due to the researches of a committee appointed by the British Association for the Advancement of Science. During the years 1879 to 1887, by the co-operation of the keepers of lighthouses and light-vessels, a large number—in the aggregate more than one hundred thousand—of observations of the movements of migratory birds were obtained. If considered in the mass, these only appeared to make the whole subject more chaotic and complicated than it was before, but when sifted, tabulated and considered by the committee, not only was chaos reduced to order, but entirely new light was thrown upon it. The able and efficient way in which the evidence afforded by the light-keepers' records—the most important part of the committee's work—was sifted and interpreted was due almost entirely to the labours of Mr. W. Eagle Clarke, who acted as secretary. It would be out of place to refer here in detail to the conclusions arrived at,* but it is necessary to emphasize two points which materially affect any consideration of bird migration in Cheshire.

In autumn vast numbers of birds from northern Europe reach the eastern shores of Britain, crossing the North Sea in a south-westerly direction, and striking the coast from the Shetlands to Norfolk. Another great stream of migrants, travelling by what is known as "the east and west route," strikes the south-eastern coast between Kent and Yorkshire, crossing the southern waters of the German Ocean in a direction from south-east to north-west or from east to west. The bulk of these immigrants pass southwards along the English shores, and thence south-west along the

* Published in the *Reports of the British Association*, for the years 1896, 1898, 1900, 1901, 1902, 1903.

Channel, to their winter quarters to the south of our islands, but many birds of certain species travel inland to winter quarters in Britain, and some even cross the country and proceed southward along the west coast to winter quarters beyond our islands. The western coasts of Britain do not, it is stated, receive any immigrants directly from north-western Europe.

A few, at any rate, of the migratory birds that breed in the Faroes, Iceland and Greenland pass along the east coast of Britain on their journey south in autumn, but many of them travel down the west coast, and the migrating hosts are recruited *en route* by birds which have spent the summer in this country. The main route, however, lies to the westward of the coasts of Lancashire and Cheshire. The birds travel from the Wigton shores by way of the Isle of Man and Anglesey, and thence along the Welsh coast to the southward. In spring they follow the same routes on both eastern and western seaboard, travelling in the opposite direction to that taken in autumn.

It is clear then that Cheshire lies remote from the great highways of migration, and consequently its avifauna is poor in regard to many of the species which occur frequently on the shores of such counties as Yorkshire, Norfolk, Kent and Sussex; but it must not be inferred from this that none of the phenomena of migration may be observed in the county, nor that they are limited to the coming and going of such species as the warblers, Cuckoo and Common Sandpiper, which spend the summer here, or the Fieldfare, Redwing and other regular winter visitors.*

It is true that we see very little of the "rushes" of migratory birds, which are under certain conditions

* The investigations of a committee appointed by the British Ornithologists' Club have been on different lines from those of the British Association Committee in that they mainly refer to the arrival and dispersal in the country of the summer residents. They were commenced in 1905, but the results hitherto published—the spring migration of 1905, 1906, 1907 and 1908—are, perhaps, hardly sufficient to form the basis of any broad generalization (*Bulletins of the British Ornithologists' Club*, XVII., XX., XXII., XXIV.).

observed on the main routes, even at the one lightvessel off the Cheshire coast ; but during the seasons of migration—in spring and autumn—many species may be encountered on passage to and from their breeding quarters, not on the coast alone, but throughout inland Cheshire. At these seasons the sandbanks and mud-flats of the Dee and Mersey Estuaries, and of that portion of Liverpool Bay contiguous to the Wirral seaboard, are largely resorted to by various species of waders, ducks and geese, as are similar situations in the Solway and on the coasts of Cumberland and Lancashire. Birds of these classes do not appear to affect the route *via* the Isle of Man and Anglesey, which is taken by other migrants, for, according to Mr. Eagle Clarke, they, “as a rule, religiously follow coastlines.”* That some, at any rate, migrate overland is apparent from birds observed occasionally, and in some cases with great regularity as regards seasons but not numbers, on the Cheshire meres and reservoirs. Certain species, belonging to various classes, perform partial migrations, passing between the hills and the lowlands, or between inland localities and the coast ; these movements are largely due to varying weather conditions and the exigencies of food supply.

Lastly, the movements at irregular intervals of certain nomadic species, such as the Waxwing, and the erratic occurrence of others which have apparently wandered from their regular routes, have to be taken into account.

The migratory birds which are included in the Cheshire avifauna may be classed as follows :—

- I. Summer Residents.—Birds which arrive in spring, remain to nest, and leave again for the south in autumn ; *e.g.*, Whinchat, Nightjar, Turtle Dove.
- II. Winter Residents.—Birds which arrive in autumn from more northern breeding haunts, remain through the winter, and depart in spring ; *e.g.*, Fieldfare, Pink-footed Goose, Jack Snipe.

* *Migration of Birds*, Report VII., p. 130, footnote.

- III. Birds of Passage.—Birds which pass through the county or along the coast in spring and autumn on their way to and from their breeding grounds ; *e.g.*, Pied Flycatcher, Whimbrel, Black Tern.
- IV. Partial Migrants.—Birds which perform short seasonal or irregular movements within the limits of the county or its immediate neighbourhood ; *e.g.*, Skylark, Lapwing, Great Crested Grebe.
- V. Irregular Migrants.—Birds which visit Cheshire at irregular intervals, influenced by winters of exceptional severity in continental Europe, or actuated by an extraordinary emigratory impulse ; *e.g.*, Crossbill, Waxwing, Pallas's Sand Grouse.
- VI. Casual Wanderers.—Birds whose rare occurrence is erratic and due, apparently, to their having wandered from their accustomed course ; *e.g.*, Nutcracker, Purple Heron, Schlegel's Petrel.

Many species cannot be definitely relegated to only one of the above classes, and, indeed, most of the so-called "permanent residents" pertain to one or more of these. The Song Thrush is to some extent a permanent resident, but it is mainly a summer resident, and to a lesser degree a bird of passage. The Wheatear is a summer resident in the east and west, but in the plain is only known as a bird of passage. The Lapwing is a permanent resident, a summer resident, a winter resident, a bird of passage and a partial migrant.

So far as the first Class—the summer residents—is concerned, the reports of the British Association Committee do not throw much light upon the immigration of Cheshire birds. The stations in the Cheshire district from which the committee received reports were in 1880 and 1881 the Point of Air Lighthouse, on the Flintshire side of the Dee Estuary, and from 1884 to 1887 the Dee Lightvessel, which is stationed one mile N.W. of the Point of Air and about

four miles S.W. by W. of Hilbre Island, roughly in a direct line between the Flintshire and Cheshire coasts. From the position of the vessel, and the direction of flight recorded of many passing birds—S.W. to N.E., and *vice versa*—it is evident that migrants might pass between Wales and Lancashire without touching the Cheshire shore; therefore the vessel cannot be reckoned as lying in the direct line of birds entering the county, but rather of those passing its shores. Only a few of the movements of birds reported from these stations refer to the summer residents. These reports then furnish only negative evidence of the route of summer residents.

The reports of the committee of the British Ornithologists' Club on the spring migration of 1905, 1906, 1907 and 1908 suggest, however, that all our summer residents reach Cheshire by an overland route from the southern shores of England.* Certainly many species are observed as early in central and eastern Cheshire as in the west, but it frequently happens that others—for example, the Wheatear, Yellow Wagtail, Lesser Whitethroat and Turtle Dove—are noticed near Chester a day or two before they are seen further to the east. The Blackcap on the other hand usually reaches the valleys of the eastern hill-country a day or two before it is seen either near Chester or elsewhere in the lowlands. It is noticeable that all species usually appear on the coasts of North Wales before they are observed in Cheshire, and possibly the Welsh stations are fed by the west coast stream which passes to the west of Cheshire. It is, too, possible that birds are spreading eastward along the Welsh coast towards Cheshire at the same time that others of the same species are travelling northward through the Midlands.

In Cheshire the earliest summer residents to arrive are as a rule the Pied Wagtail, Reed Bunting, and Meadow

* "After landing on our shores, the most favoured route seems to be that which leads due north, *via* Gloucester, Hereford, Shropshire and Chester; the eastward spread of the species taking place gradually." *Report*, 1908, p. 10.

Pipit, all of which are also permanent residents in some degree. The Song Thrush returns early, but it is not easy to distinguish between the immigrant and the resident Thrush. These are followed by the Wheatear, Chiffchaff and Sand Martin, and later by other regular summer visitors. Emigration begins as a rule in August, the departure of the Swift being the first noticeable movement. There is no definite date for the departure of most species; their emigration is coincident with the passage of birds of the same species from further north, and it is practically impossible to say which are Cheshire residents departing and which birds of passage.

Simultaneous with the departure of the summer residents is the arrival of the earlier of the winter residents—Class II. The earliest of these are the Lapwing and Golden Plover, birds which by no means only belong to Class II. In September, and often earlier, numerous ducks, such as the Tufted Duck, Pochard, and the immigrant Mallard and Teal, may be observed on the meres and in the estuaries, and towards the close of the month or in October the Pink-footed Goose appears in the Dee. Many of the ducks, however, the Wigeon and Shoveler for example, are birds of passage. Some, at any rate, of the winter residents remain until late in the spring, provided always that they are not driven further afield by exceptionally severe weather.

Class III.—birds of passage—includes a large number of species which also belong to other classes. Some, however, for example the Pied Flycatcher and Whimbrel, are undoubtedly merely spring and autumn migrants passing through the county on their way to and from breeding haunts elsewhere in Britain or beyond. Amongst the birds of passage are many typical summer residents. At the end of March or early in April there are generally more Chiffchaffs, and a little later more Willow Wrens, than remain to nest; but they seldom linger with us more than a day or two. This passage of summer residents is even more noticeable

in the case of the Wheatear, which does not nest in the plain, and the Stonechat, which rarely does so ; both frequently appear in spring, linger for a day or more on their northward journey, and are seen again on their return in autumn. Certain waders—the Ruff and Knot for instance—pass through the county ; in the east of Cheshire there are, perhaps, regular routes of wading birds, which are only indicated by the occurrence from time to time of a straggler from a passing flock. More remarkable than the passage inland of waders is the occasional occurrence of pelagic species with such uniformity of date as to suggest a regular seasonal passage ; of these, perhaps, the Manx Shearwater is the best example, for though many years pass without the species being observed, by far the greater numbers of occurrences, both in Cheshire and neighbouring counties, are at the end of August or during the first fortnight in September.

The observations made at the Dee Lightvessel, which, though few in number, were carefully recorded, indicate that under certain weather conditions—usually southeasterly winds accompanied by fog—birds which usually travel by the west coast route come close to the Cheshire shores. Under other weather conditions they may pass unnoticed at a greater altitude. They prove that the Song Thrush, Blackbird, Starling, Meadow Pipit and other birds are birds of passage occasionally along our shores, and—probably because these weather conditions are more prevalent in autumn than in spring—that they are more frequently observed during the southward than the northward journey. Another possible explanation is that the occasional passage of very considerable numbers of these and other species may have no immediate connection with the main stream of migration, the birds which are seen belonging possibly to tributary streams which have either drained large areas inland, or have crossed the country from the east coast. It is reasonable to suppose that this is to a certain extent normally the case ; since the Redwing

and Fieldfare are amongst the number and are seen in the company of other species, whilst it is practically certain that they do not reach the west coast direct from continental Europe.

Amongst the birds of passage which visit the estuaries are vast flocks of waders—Oyster-catcher, Knot, Sanderling, Bar-tailed Godwit, Curlew, Whimbrel, with Ringed Plover and Dunlin of the small migratory races, Grey Plover and others. Attracted by the richness of the feeding-grounds on the large area of mud-flat, sandbank and marsh, these waders frequently remain for considerable periods in our neighbourhood, but—although some must be classed as winter residents—the majority move to the south before the end of the year, and return in April or May. The White Wagtail—a typical west coast migrant—passes along our shores and through the county in spring and occasionally, at any rate, in autumn, but it is by no means certain that it arrives or leaves the estuaries by a coastwise route. In any case the numbers of White Wagtails which touch the Cheshire shore are very small indeed compared with those observed further to the west—for instance, on the western coast of Anglesey.

Many of the birds which are included in Class IV. as partial migrants are also birds of passage or may be referred to other classes, but the Great Crested Grebe and Kingfisher constantly move under stress of weather from inland waters to the coast, and the Skylark, Lapwing and other ground-feeding birds resort to the marshes when the fields are frost-bound. To a certain extent the Dipper, Grey Wagtail and other birds of the uplands descend to the plain in winter, and even the Red Grouse, under exceptional conditions, leaves the high moors for the valleys.

The movements of irregular migrants—Class V.—calls for no special comment; they are coincident with the great irregular migratory waves or irruptions which are felt all over the country.

The movements of the casual wanderers—Class VI.—are, apparently, influenced by no fixed laws, and it is not necessary to refer here to any of the species in detail.

The classification and nomenclature adopted is, with a few exceptions, that of the second edition of Howard Saunders's *Manual of British Birds*, as revised by him in 1907.* Owing mainly to the researches of Dr. E. Hartert, it has within recent years been proved that birds of several species which breed in Britain belong to races distinct from those birds of the same species that breed in the neighbouring parts of the continent of Europe. In these cases we have thought it advisable to adopt the trinomial system of nomenclature, which in addition to other advantages shows plainly the real affinities of the local races or sub-species. We know with certainty that at the periods of migration the continental representatives of some of our insular forms—*e.g.*, the Greenland Wheatear and the White Wagtail—occur in Cheshire, and it is highly probable that the corresponding forms of other species also occur, either as regular migrants or as stragglers, but on this subject we as yet know almost nothing. The attention of local ornithologists may with advantage be directed to the subject, for it is certain that a close investigation of the plumages of many of the birds that pass along the coast or through the county on migration would contribute to a better understanding of the factors concerned in the migration and distribution of many species.

* *A List of British Birds*, 1907.

AVES.

PASSERES.

TURDIDAE.

Sub-family TURDINAE.

MISTLE THRUSH. *Turdus viscivorus*, Linné.

Local names—SHERCOCK ; STORMCOCK ; SEDCOCK ; SEDGE-
COCK ; SETTCKOCK (Longdendale) ; SADCOCK ; SHRILLCOCK ;
SHELLCOCK ; THRICECOCK ; STONE THRUSH.

Permanent resident ; some birds leave in autumn and at this season there is also a considerable immigration.

The Mistle Thrush, as a resident, is generally distributed throughout the county, but is much less common than the Song Thrush and Blackbird. In the east, where it is more plentiful than in other parts of the county, its conspicuous and often untidy nest is placed in the fork of a mountain ash in some sparsely wooded clough, or in one of the small clumps of trees that break the monotony of the barren hillsides. Orchard trees or oaks in the hedgerows are often selected on the lower ground, and not infrequently the bird builds in suburban gardens, where it boldly defends its nestlings against the attacks of cats and other marauders.

The Mistle Thrush will defend its nest against the thieving *Corvidae*, driving Jackdaws and even such powerful birds as Crows from the vicinity of the tree in which the nest is situated. At Abbot's Moss in June, 1907, Mr. T. Hadfield and Oldham heard a commotion in the upper branches of a Scotch fir, in which the chatter of a Magpie was mingled with the angry alarm notes of Mistle Thrushes. Presently a confused mass of screaming birds fell to the ground ; this resolved itself into a Magpie clutching a full-fledged nestling by the wing, two other nestlings, and the adult Thrushes. The old birds buffeted the Magpie to such purpose that it dropped its quarry, and fled with the old birds in

pursuit.* It is not, however, only during the nesting season that it is bold and overbearing—Crockett has called it “the butcher boy of the woods.” In February, 1901, Oldham saw a Mistle Thrush knock a wounded Redwing out of a holly bush to the ground; the Redwing, which was in wretched condition, had a broken thigh, a fracture of some days’ standing.

When the young are on the wing in June, the family parties combine, and small, straggling flocks of Mistle Thrushes feed in the fields, especially on the hill-pastures in the east. In the plain these flocks are never so large as on the hills, but in August and September there are many flocks in the lowlands. In late September or October the numbers of the residents are supplemented by the arrival of migratory birds, but there is little evidence of a regular passage of the bird along the Cheshire coast. Only once, on October 31st, 1886, when many hundreds of birds of various species were on the move, has the Mistle Thrush been recorded as striking the lantern at the Dee Lightvessel,† though the species may have frequently been unrecognised amongst the “Thrushes” which have been noticed at the vessel. The immigrants often arrive about the same time as the Redwings and Fieldfares; on October 19th, 1905, Mr. S. G. Cummings noticed large numbers of all three species in the Sealand fields, feeding greedily on the berries of the thorns.

It is not easy to say when the birds return from further south, and when emigration of winter residents takes place, but so early as the second week in February Dr. J. W. W. Stephens has observed unusual numbers in the gardens at Hoylake.

The song of the Mistle Thrush is begun early, and occasionally the bird sings in autumn; from the end of December, throughout January and February it sings whenever the weather is mild. As a rule the song is uttered from the topmost twig of some tall forest tree, but in March, when the

* An instance of the victory, through combined action, of a number of Magpies over a Mistle Thrush is mentioned in White’s *Selborne*, p. 188, Letter XXII. to Hon. Daines Barrington.

† *Migration of Birds*, Report 8, p. 100.

pairing season is at its height, the bird, exceptionally, sings upon the wing. On March 8th, 1903, Oldham saw a bird flying across Oakmere, and heard it repeat its song in characteristic fashion several times before it reached the opposite bank, and on March 28th, 1907, he saw another singing on the wing at Knutsford.

BRITISH SONG THRUSH.

Turdus musicus clarkei, Hartert.

CONTINENTAL SONG THRUSH.

Turdus musicus musicus, Linné.

Local names—THROSTLE ; THROG ; THROGGY* ; THROLLY.

A resident, abundant in summer ; most of the birds leave in winter ; a bird of passage across Liverpool Bay.

The Song Thrush is abundant everywhere in Cheshire from spring to autumn, from the sea-coast to the hills in the east, where it nests at an altitude of over one thousand feet in the wooded cloughs and even in the stone walls which separate the upland pastures. The large area of land under cultivation, plentifully supplied with woods and coverts, affords the bird ideal conditions of existence, and though no species suffers more at the hands of bird-nesting children, there is no diminution in its numbers, even in the immediate vicinity of towns.

In the autumn large numbers of Song Thrushes leave Cheshire, and in most winters the bird is absent from the open country, though in residential districts in the neighbourhood of towns, such for instance as Chester, Knutsford, Altrincham and the suburbs of Manchester, numbers of birds remain, even through the hardest winter.†

* Darlington, *Glossary*, p. 393.

† A similar state of things obtains in other parts of England ; Mr. W. Eagle Clarke, in his summary of the movements of the Song Thrush (*Report of the Brit. Assoc.*, 1900, p. 404) describes the bird as “ a permanent resident in certain districts, more especially in the gardens and immediate neighbourhood of cities and towns.”

On the coast of Cheshire there are annual southward movements of Song Thrushes, which during the years from 1884 to 1887 inclusive, when detailed observations were made at the Dee Lightvessel, occurred between October 16th and December 1st. In 1884 Thrushes were noticed from the 21st to 23rd of October and again on November 10th and December 1st; in 1885 on October 16th and 17th and November 10th and 11th; in 1886 on October 31st and November 22nd; and in 1887 on October 22nd and November 19th. In most cases the birds were accompanied by other species, but occasionally were alone; on several occasions both males and females struck the light on the same night, proving that the sexes migrate in company.* Mr. W. Eagle Clarke has pointed out† that the October movements of the Song Thrush in Britain are difficult to interpret, seeing that emigration, immigration and passage are often in progress simultaneously. We have no evidence that any immigration takes place in Cheshire at this season, but as movements similar to those observed at the Dee Lightvessel were noticed at other stations on the west coast on or about the same dates, we may conclude that some, at any rate, of the Thrushes were birds of passage, though these may have been joined by emigrating summer residents. The movements observed in November and December were probably instigated by severe weather in regions whence the birds came.

Returning birds have been noticed at most west coast stations in March, and occasionally so early as the middle of February, but the reports include but few observations of spring movements at the Dee Lightvessel. Occasionally, however, there are in Cheshire about the middle of March unusual gatherings of Thrushes in the fields, and these are presumably returning birds. On January 19th, 1908, Dr. J. W. W. Stephens noticed many Thrushes with a few

* *Migration of Birds*, Report 6, pp. 106-109, 112; Report 7, pp. 111, 112, 116; Report 8, pp. 100, 101; Report 9, pp. 100, 109.

† *Report of the Brit. Assoc.*, 1900, p. 405.

Fieldfares on the Hoylake golf-links ; probably they were birds which had returned after the break-up of the frost on the 6th.

The number of birds which remain in the open country depends largely upon the severity of the weather ; thus in the mild winter of 1905-1906 there was an unusual number of Song Thrushes in the fields, but in severe winters the bird is entirely absent.

Although we have been unable to obtain actual examples of the Continental Song Thrush in Cheshire, it is almost certain that some at any rate of the passage birds are referable to the sub-species *T. musicus musicus*, Linné. It is possible also that birds of this form may winter with us occasionally, and that the Song Thrushes which were so abundant in the winter of 1905-1906, for instance, were continental birds.

In its choice of a nesting site this species is very catholic ; whitethorn hedges and evergreens, as holly or rhododendron, are most frequently selected, but nests are often placed in forest trees, either in a fork, on a horizontal branch, or amongst the roots of some fallen monarch. The hedge banks, so common in Cheshire lanes, are often chosen, and occasionally a ledge in a deserted outbuilding, or even the bare ground is used. In March and April, before the foliage is thick, the large nest is often absurdly conspicuous, and the blue eggs would court detection were it not for the protective tints of the brooding bird as she crouches low in the nest with her bill held almost vertically and her speckled breast concealed.

The eggs are often laid by the third week in March, and early in April young birds are about. The materials of which the nest is constructed are varied according to circumstances, and often without any regard to concealment. A nest found by Mr. A. W. Boyd in Dunham Park in March, 1905, was built almost entirely of dead bracken ; and for two years a bird which built in a holly in Coward's garden at Bowdon decorated the outside of the nest with the long

strips of paper thrown down on the road as a "trail" by harriers.

In mild weather in spring the voice of the Song Thrush is heard on every side throughout the day, and often until long after dark. In the height of the breeding season the bird will sing on the ground, and occasionally will continue its song in the air as it flies from tree to tree. It is difficult to say when the spring song begins; the majority of the birds are silent in July and August, but from September onwards Thrushes sing a little in the neighbourhood of houses whenever the weather is mild. Unless it be exceptionally severe the males are in good song from the end of December, and towards the end of January or beginning of February they will sing in even a hard frost.

REDWING. *Turdus iliacus*, Linné.

A winter resident and bird of passage.

The Redwing, a winter visitor to Cheshire in varying numbers, first arrives, as a rule, during the second week of October, and for some time afterwards the soft *seep* of passing birds may be heard at night. Probably many of these birds are travelling through the county to winter quarters further south, for there is a simultaneous southward movement down the west coast of England, and occasionally these west coast birds of passage travel close inshore across Liverpool Bay, and have been noted at the Dee Lightvessel. In 1885 they were observed there in the company of other birds on several nights between October 15th and 30th. The nights of the 16th, 17th and 19th were foggy, with light south-easterly winds; Redwings and other birds were about the light during the night and some struck, but, although the "rush" of migrating birds was continuous by day and night, no Redwings were observed passing in the daylight.*

* *Migration of Birds*, Report 7, pp. 111, 113, 117.

The return migration begins towards the end of March, and again the movements are evident by the night-calls of the birds; as a rule the majority have emigrated by the end of the first week in April, but in 1889 Mr. R. Newstead observed large numbers in the Eaton woods so late as the 15th of that month.*

So long as the weather remains open in winter, the Redwings consort with the Fieldfares in the pastures, and are shy and difficult to approach; but snow or a severe frost drives them to the berry-bearing trees, and they then become very tame, frequently visiting hollies in suburban gardens. A protracted frost or heavy fall of snow drives most of the Fieldfares and Redwings to seek more genial quarters elsewhere, but usually some Redwings, which suffer more from severe weather than the other thrushes, remain, and if the frost be of long duration many succumb. The song of the Redwing is occasionally heard in March and April, just before the birds leave the country, and soon after their arrival in autumn. In 1908 Mr. S. G. Cummings heard a number of birds singing in the trees at Upton near Chester on November 1st, and Mr. J. J. Cash heard others at Chelford on the 15th of the month. Mr. J. A. Holland, who has heard the song several times in spring in the neighbourhood of Knutsford, says: "The song differs widely in more than one particular from that of any of its British congeners. It is decidedly quieter and more continuous, and may be described as a musical babble very gently warbled. This gentle melody is interrupted at frequent intervals by a sound which I may syllable as *churr*, very like the loud, harsh screech of the Mistle Thrush, but so toned down and subdued as not to offend the ear. One of the most remarkable features of the music is its decidedly guttural timbre, suggesting in a pronounced manner the slow, deep guttural notes of the Reed Warbler."

* Dobie, p. 286.

FIELDFARE. *Turdus pilaris*, Linné.

Local names—BLUEBACK ; KIT ; PIGEON FELT* ; FRENCH BIRD (Wirral).

A common winter resident.

The Fieldfare, one of our best-known autumn visitors, does not arrive in Cheshire until some weeks after its appearance on the east coast, for the birds reach us by crossing England, and not by the route down the west coast of Britain. Fieldfares, it is true, travel south by the west coast route, but they have only once been recorded from the Dee Estuary ; on November 7th, 1880, numbers passed the Point of Air Lighthouse (Flintshire) at sunrise,† but these may have been birds which, having travelled across Lancashire or Cheshire, were making their way into North Wales. As a rule the Fieldfare reaches Cheshire about the third week of October, but frequently its numbers are augmented in November. Throughout the winter months it frequents the open fields in flocks of varying size, often consorting with Redwings, Mistle Thrushes and Starlings. The birds will perch on the topmost branches of high trees, every individual facing in one direction, that from which the wind is blowing, and when disturbed leave the trees in straggling flocks, uttering their harsh *tsak*, *tsak* as they fly. Severe frost or heavy snow drives most of the birds to seek more genial haunts, but they return so soon as a thaw sets in.

The low-lying country of the Mersey valley between Stockport and Warrington is a favourite haunt of the Fieldfare, and the bird is equally at home on the bleak hill-pastures of the Derbyshire border. Prior to their departure for the northern breeding grounds, the small parties pack together in large flocks, the majority of which leave by the end of April, but it is not unusual to see late birds during the first fortnight in May. In 1907, for instance, Mr. S. G. Cummings

* Leigh, *Glossary*, p. 24.

† *Migration of Birds*, Report 2, p. 98.

saw from two to three hundred birds in a flock at Upton on May 1st, in 1903 a few on May 12th, and in 1909 a single bird on May 19th, long after the majority had departed.

The bird occasionally begins to sing before it leaves ; on April 11th, 1906, Mr. Cummings heard Fieldfares singing in the Sealand fields, and on April 7th, 1908, Coward heard one utter a few warbling notes, similar to but not so full and melodious as the spring song to be heard in its Scandinavian breeding haunts. In April Mr. Cummings has heard the bird utter a call—*tchwee, tchwee*—quite different from the ordinary harsh *tsak*.

BLACKBIRD. *Turdus merula*, Linné.

Local name—OUSEL.

A resident, migrant, and bird of passage.

The Blackbird is present in Cheshire at all seasons, and throughout the greater part of the year it is exceedingly abundant, the fertile plain supplying the conditions it loves. In the wooded valleys of the east it is plentiful, nesting up to the edge of the moorlands, where its breeding ground overlaps that of the Ring Ousel.

In the autumn many of the birds leave us, and at the same season there is considerable immigration from further north, but some individuals remain all the year round. A bird, easily recognised by its white head, frequented a covert near Ashley Hall in summer and winter alike from 1905 to 1907.

Large numbers of Blackbirds, generally in the company of other birds, pass down the Cheshire coast in October and November, and a return migration has been noticed at stations on the west coast of England in February. The earliest autumn movement of any importance, of which there is a record, was noticed at the Dee Lightvessel on October

16th ; from that date until the 19th, in 1885, Blackbirds in large numbers were seen, both by day and night, with Larks, Thrushes, Redwings, Meadow Pipits, Linnets and Chaffinches, and on the 19th with Lapwings. The report on the 18th was : " Large flocks of Titlarks and Blackbirds in company flying south all day." Other movements were noticed on October 30th and November 9th in the same year.* In 1884 the chief movement noticed was on October 23rd, when nine Blackbirds struck the light during a fog ; the chief interest of this note, as Mr. W. Eagle Clarke points out, is that males and females were migrating in company. On November 10th a second southward migration of Blackbirds with other birds was noted.† In 1886 Blackbirds were not seen at the Dee Lightvessel until October 31st ; they were observed again on November 22nd ; and in 1887 only on November 19th.‡ In each of these years, except in 1885, Blackbirds were noticed at other west coast stations on several earlier dates than those on which they were observed in the Dee. It is therefore evident that only a small proportion of the Blackbirds and other species, which pass down our western coasts in autumn, approach the Cheshire shore ; probably the birds only come inshore under certain weather conditions, apparently when travelling with a south-easterly wind in foggy weather.

The hedgerows, evergreens, and the dense undergrowth of many of the game-preserves afford an abundance of suitable nesting sites for the Blackbird in Cheshire, but, exceptionally, the bird nests on the ground. In 1905 Mr. A. W. Boyd found a nest on the bank of a stream at Agden ; it was partially concealed by an overhanging tuft of grass. In March, when the birds are pairing, there is frequently noisy competition between the males for the females ; we once saw so many as six cocks chasing a

* *Migration of Birds*, Report 7, pp. 111-115.

† *Op. cit.*, Report 6, pp. 108, 109.

‡ *Op. cit.*, Report 8, pp. 100, 101 ; Report 9, p. 109.

single hen, but when they overtook her all ceased screaming, and the female flew off accompanied by only one male.

In mild winters the song of the Blackbird is begun at the end of January—in 1904 we heard it first on January 28th, and on the 27th in 1906—but as a rule the bird does not sing before the first or second week of February. Mr. S. G. Cummings has heard it on January 15th. The song is continued through the spring, but the Blackbird seldom sings after the moult. On September 18th, 1903, and December 18th, 1904, Coward saw and heard birds singing for a few minutes in Bowdon, and on December 20th, 1903, Mr. A. W. Boyd heard one in good song near Rostherne. When singing the bird usually perches near the top of a tree, but occasionally the song is uttered from the ridge-tiles, gable-end, or chimney of a house.

The usual food of the Blackbird consists of worms, molluscs and insects, but in autumn toll is levied on the fruit in gardens and orchards, and the berries of the mountain ash, wild rose, holly and hawthorn are freely devoured. In 1903 Coward saw ten Blackbirds in one pear tree in a Bowdon garden. Mr. R. Newstead found haws in the stomachs of birds killed in January, February and December, together with fragments of weevils, land shells, and in one case remains of the large violet ground beetle, *Carabus violaceus*, Linné. The stomachs of three birds killed at Ince in January and February were almost filled with the fruit of the apple.* Mr. Cummings has seen a Blackbird kill and eat one of the large dragon-flies.

Examples with more or less white in their plumage are not uncommon, and such varieties are often reported as Ring Ousels. In the Grosvenor Museum, Chester, there is a Blackbird from Ince which has the whole plumage French grey, rather darker on the ear-coverts and lighter on the throat.

* *Food of Birds*, pp. 18, 19.

RING OUSEL. *Turdus torquatus*, Linné.

Local name—MOOR BLACKBIRD.

A summer resident, confined to the moorlands in the east and to the Peckforton and Frodsham hills. An occasional bird of passage elsewhere.

Nowhere in England is the Ring Ousel more plentiful than on the wild moors of the Longdendale valley and in the hill-country from Disley southward to Bosley and eastward to the Derbyshire border. In May the wild clear song of half a dozen or more birds may be heard at one time in some parts of these districts.

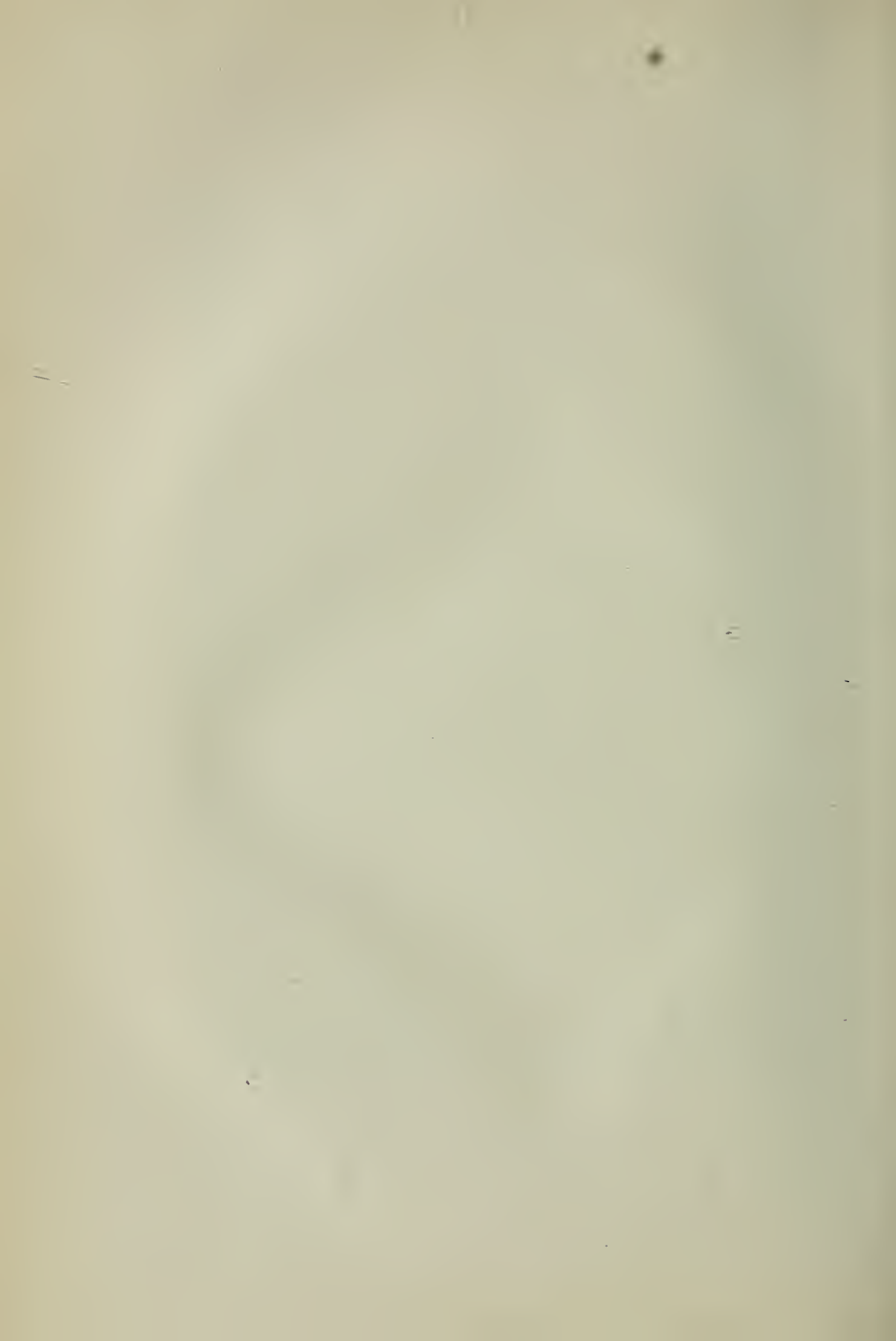
It nests on the moorlands, generally in a bunch of ling or on a ledge of rock, and not infrequently against the bare, steep bank of a stream, from above the pastures, at six hundred to one thousand feet, to the summit of the highest moors. Suitable conditions rather than altitude, however, regulate its breeding area, and a few pairs nest on the hills in the west of Cheshire. Dr. Dobie has taken eggs on Bickerton Hill, at the southern end of the Peckforton range, which is little more than six hundred feet above sea-level, and Mr. R. Newstead records it as breeding on Overton and Helsby hills near Frodsham, which are under five hundred feet. On April 15th, 1905, Oldham saw several birds on the steep western slope of Bickerton Hill.

Elsewhere in Cheshire, where the cultivated plain is utterly unsuited to its habits, the Ring Ousel only occurs as an occasional visitor on migration. It does not appear to have nested on the low-lying mosses at Carrington and Lindow before their reclamation, though it has been observed during the spring migration on the now reclaimed Hale Moss near Altrincham.* In 1893 one was shot at Oakmere by Mr. A. Cookson; on April 17th, 1905, Mr. A. W. Boyd saw one in Arley Park, and on April 4th, 1909, Mr. E. W. Henty saw one near Alderley. Occasionally a passing

* J. E. Smith, *Manchester City News*, May 16, 1874.



CROWDEN GREAT BROOK, LONGDENDALE.



bird is noticed in autumn ; on August 10th, 1903, a young one was shot by Mr. T. Baldwin at Sale, where it was feeding with some Mistle Thrushes on strawberries and raspberries.

In Wirral the Ring Ousel has been noted on migration at Hoylake* and elsewhere, and Mr. L. Jones has a bird which he shot on Hilbre Island, where at the end of April, 1894, another bird frequented the island for several days. There is no recorded instance of the bird having been noticed at the Dee Lightvessel. Some fifty years ago nests were said to have been found at Puddington,† Noctorum,‡ and Upton,§ but the evidence, which gave rise to some controversy at the time, is not satisfactory ; there is no authentic instance of the bird having bred in Wirral in recent years.

The Ring Ousel reaches its haunts in the east of the county at the end of March or beginning of April, and departs in September or October. On November 2nd, 1908, Dr. J. H. Salter and Mr. N. Neave saw a bird in Goyt's Clough near Whaley Bridge. In September, prior to emigration, the birds flock with Mistle Thrushes, Starlings and other birds, and attack the rowans. Bilberries are eagerly devoured in the late summer ; Mr. J. M. St. John Yates has frequently noticed large gatherings of Ring Ousels on Bosley Cloud in September, where they feed on bilberries, for some days before their departure.

The Ring Ousel may very occasionally winter in Cheshire, for on January 3rd, 1859, the late Rev. G. E. Freeman saw a male and snared a female in his garden at Wildboardclough.||

Like other members of the family, this bird is a mimic ; we have heard the *tlui* of the Golden Plover admirably reproduced in its song, which, by the way, is often continued until after dark.

* Byerley, p. 11.

† Brockholes, p. 5.

‡ H. E. Smith, p. 243.

§ E. Gleave, *Naturalists' Scrap Book*, p. 229.

|| "Peregrine," *Field*, XIII., 1859, pp. 86, 128.

COMMON WHEATEAR.

Saxicola oenanthe oenanthe (Linné).

GREENLAND WHEATEAR.

Saxicola oenanthe leucorrhoa (J. F. Gmelin).

Local names—STONECHAT ; WHITERUMP.

A common summer resident on the hills and coast ; a bird of passage in the lowlands and along the coast.

The Wheatear is a well-known summer resident in Wirral, nesting in some numbers on Hilbre Island. It also breeds in suitable places along the coast from Parkgate to the Frodsham marshes, as well as on the higher ground at Heswall Hill. On the hills in Longdendale, where it is known as the "Stonechat," the Wheatear is plentiful, nesting in the stone walls. We have seen it in summer on Werneth Low near Hyde, and once came across a pair which were nesting on an old pit-bank at Woodley. In Lyme Park it nests in rabbit-burrows, and thence to Bosley in the south and the Derbyshire border in the east it is plentiful up to the hilltops.

Although a common summer resident in the extreme east and west, the Wheatear is only known in the greater part of the county as a bird of passage in spring and autumn. At these seasons it occurs in many widely scattered localities in the plain, and it may be looked for almost with certainty on the meadows and ploughed lands of the Mersey valley near Sale, the Bollin valley, and the forest land at Delamere.

The Wheatear is one of the first summer visitors to reach Cheshire. At Rainow near Macclesfield Mr. N. Neave has generally remarked its arrival during the last week of March, and Mr. J. M. St. John Yates has noticed it so early as the 16th of that month at Buglawton. On the coast it arrives from the middle of March onwards, but occasionally is not observed until April.

The spring movement of birds of passage through the

county begins in the latter half of March and continues until May; we have seen birds so early as March 29th at Delamere and so late as May 13th at Tatton. Occasionally these passing birds linger in favourite feeding grounds, remaining in the same field for some days; in 1906 a single bird, a male, consorting with some Pied and Yellow Wagtails, frequented a ploughed field near Tatton from April 19th until the 27th. In 1906 birds were passing from April 11th until May 13th.

It is certain that some, at any rate, of the Wheatears which pass through Cheshire in spring, after the resident birds have settled down, are referable to the sub-species *S. oenanthe leucorrhoea* (J. F. Gmelin), which nests in Greenland. A bird in the Grosvenor Museum, Chester, killed in Cheshire on April 30th, 1893, has a wing measurement of one hundred and one millimetres, and a male in the Warrington Museum, picked up by Mr. G. A. Dunlop on Morley Common on May 12th, 1907, has a wing of one hundred and three millimetres.

The autumn passage and emigration is also prolonged. On July 16th, 1899, Coward saw a Wheatear at High Legh, but as a rule the birds do not appear in the lowlands until August. Throughout that month and September odd birds or couples may be seen from time to time, feeding in a field one day and gone the next. The end of August is the time at which most birds pass, and in September it is unusual to see more than one or two. In 1906, however, Mr. W. H. M. Peterkin showed us one which had been shot at Astbury on October 13th, and in the same year Mr. F. Stubbs saw one near Mossley, on the Lancashire border in the east of Cheshire, so late as November 12th.

On the coast the birds remain or are passing even later than in the lowlands, but most have departed before the end of September. On September 4th, 1886, many remained all night round the lantern at the Dee Lightvessel and several were killed.* On October 13th, 1903, Mr. S. G.

* *Migration of Birds*, Report 8, p. 89.

Cummings saw one at Burton, and in 1905 two on the Cop opposite Connah's Quay on October 19th. Dr. J. W. W. Stephens noticed his last bird at West Kirby in 1905 on September 23rd, but in 1907 one remained until October 17th, and in 1906 one or two until the 21st of that month. In 1908 he saw one or two even later—on October 24th and November 1st.

WHINCHAT. *Pratincola rubetra* (Linné).

Local names—UTICK ; GORSEHOPPER.

A summer resident, widely distributed.

The Whinchat arrives in Cheshire between the middle of April and the end of the first week of May. In 1905 Mr. S. G. Cummings saw one on the Cop near Chester on April 14th, but in 1906, when there was rough weather and snow in late April, we did not see any before the 9th of May. The bird is distributed in the summer months throughout Wirral and the lowlands generally ; it chiefly affects the low-lying, open country, and is especially plentiful in the meadows bordering the Mersey between Stockport and Warrington, and in the marshy fields of the Goway valley.

The cock sings from the top of a bush or hedge, or from roadside telegraph-wires, but if the vicinity of a nest be approached after the young are hatched, both birds flit anxiously from perch to perch, constantly uttering the alarm note, *u-tick*, from which they derive one of their local names.

In the high land in the east of the county the Whinchat is not so plentiful as in the plain, but a few pairs nest on the lower ground in Longdendale, and on the upland pastures of the hills near Stalybridge and those to the east of Macclesfield, even up to twelve hundred and sixty feet on the summit of Bosley Minn.

Towards the end of September most of the Whinchats leave Cheshire on their southward migration, but,

exceptionally, birds are met with in October ; on the 10th of that month, in 1903, Mr. Cummings saw one near Burton in Wirral.

STONECHAT. *Pratincola rubicola* (Linné).

Local names—WINTER UTICK ; STONEPRICK* ; STONEPRICKER ; BLACKCAP.

A summer resident and partial migrant in the west and east ; a bird of passage in the plain.

It is doubtful whether the Stonechat is resident throughout the year in any part of Cheshire. In Wirral, where it is not uncommon, though not so abundant as the Whinchat, it nests on the heathy hills and warrens near the coast. Brockholes describes it as " abundant in summer in suitable localities. This is a partial migrant here, the majority leave in autumn whilst a few remain all winter." It has been twice noted at the Dee Lightvessel, once in spring and once in autumn ; on April 23rd, 1886, one was killed at midnight, and on October 19th, 1885, one was alive on deck in the morning, after a " rush " of several species during the previous night.† Mr. S. G. Cummings generally sees a few birds on migration in spring and autumn in the neighbourhood of Chester.

The Stonechat nests in the hill-country in the east but is not abundant. Mr. S. Radcliffe found a nest in 1895 at Dan Bank, Marple, and he tells us that it breeds occasionally on the hills near Stalybridge. It also nests at Crowden and Woodhead in Longdendale.‡ It occurs in a few places, such as Shuttlings Low, on the hills east of Macclesfield, but Mr. N. Neave has never met with it at Rainow.

* The names " Stoneprick " and " Stonepricker " are apparently confined to Wirral and " Blackcap " to the eastern hills.

† *Migration of Birds*, Report 7, p. 113 ; Report 8, p. 84.

‡ F. Stubbs, p. 26.

A few pairs nest annually on the Peckforton Hills, and on June 19th, 1904, Oldham saw fledged young on the rough heathy ground which borders Oakmere, but as a rule it is only known as a passing migrant in the greater part of central Cheshire. These migratory birds are usually to be seen in February and March ; we have noted them between the 3rd and 16th of the latter month at Knutsford, Marbury and Pickmere near Northwich, and Little Budworth Common. In 1906 there were one or two birds about on Knutsford Moor for several days in the first half of March. On February 18th, 1906, Oldham saw a female on Newchurch Common, and we have seen a young bird which was killed on February 24th, 1896, on Hale Moss, Altrincham.

Returning birds pass through the county in September and October. Mr. J. J. Cash saw a male at Knutsford on September 25th, 1905, and we saw single males in Tatton Park on October 2nd, 1904, and November 2nd, 1907. Stonechats which Mr. A. Gwynn Newling saw at Heswall on November 17th, 1905, and Oldham at Newchurch Common on November 20th, 1904, may have been either late migrants or birds that were wintering in Cheshire. On December 17th, 1887, we saw a male at Knutsford.

REDSTART. *Ruticilla phoenicurus* (Linné).

Local names—FIRETAIL ; WOH SNATCH, *i.e.*, Wall Snatch (Longdendale).

A summer resident, widely distributed and common.

Brockholes considered the Redstart scarce in Wirral, and it is not very plentiful in the west of the county. Mr. A. O. Walker formerly found it common near Chester and even in the city itself, but Dr. Dobie and Mr. S. G. Cummings say that it is now rare, although a few pairs nest in Eaton Park.

Throughout the central and eastern parts of Cheshire

the Redstart is increasing in numbers, and in Delamere Forest and some of the parks where there is much old timber it is abundant. At least a dozen pairs nest annually in Dunham Park.

The bird arrives in Cheshire, as a rule, in the third or fourth week of April and at once selects a nesting site ; it is not unusual to find eggs before the middle of May. During the period of incubation the male keeps in the vicinity of the female, and his song, or plaintive *whee-tic*, is a certain indication of the proximity of a nest. Emigration takes place in September, and it is unusual to see the bird in Cheshire after the beginning of the month.

In a well-timbered district the nest is usually placed in a crevice or hole in a tree trunk, but even when such sites are available it is sometimes built in a hole in a wall, or upon a beam beneath the eaves of a building. Mr. W. H. Peterkin has found a nest on the ground among trees on Alderley Edge. In the eastern hill-country, where the bird is decidedly common, the nest is built in quarries or in the stone walls on the bare hillsides.

If the birds are not molested the same site is resorted to year after year. For two or three years a pair occupied a deep cleft in a thorn a few yards from a frequented gate of Dunham Park and succeeded in bringing off their young, although Whit-week came during the period of incubation, and hundreds of noisy trippers daily passed close to the sitting bird, whilst steam merry-go-rounds and hurdy-gurdies filled the air with discordant sounds within a few yards of the nest.

BLACK REDSTART. *Ruticilla titys* (Scopoli).

A very occasional winter visitor or passing migrant ; only observed in the west of the county.

Brockholes records the occurrence of a Common Redstart during severe weather in winter on the Leasowe Embank-

ment, but taking into consideration the place and season of the year, there can be little doubt, as Dr. Dobie suggests, that this bird was a female Black Redstart.

Byerley, on the authority of Mather, a Liverpool taxidermist, cites the occurrence of a male at Storeton Quarry about the year 1853.

Mr. R. Newstead, on May 7th, 1888, saw a pair of birds in some old trees in Eaton Park, which he believes were Black Redstarts.* The date, although very late for this species in Britain, is not unprecedented.†

BRITISH REDBREAST.

Erithacus rubecula melophilus, Hartert.

Local name—ROBIN.

An abundant resident.

Except upon the bare hilltops in the east of the county, the Redbreast is at all seasons one of our best-known birds; it is common in the woods and game-coverts in the open country, as well as in the gardens of houses in the towns. The numbers of the bird do not appear to vary much, and there is no marked evidence of emigration and immigration in Cheshire; the bird has, however, on at least one occasion, been killed on migration at the Dee Lightvessel—on September 14th, 1884.‡ This bird may or may not have been a Continental Redbreast, *E. rubecula rubecula* (Linné), but we have failed to identify this sub-species amongst the few Redbreasts shot in winter which we have been able to examine.

The nest is built in a hole in a hedge bank, even beside

* Dobie, p. 288.

† Cf. Saunders, *Manual of British Birds*, p. 33.

‡ *Migration of Birds*, Report 6, p. 105.

a much frequented road or lane, in gardens, or in the loosely built walls so often met with beneath the hedges in Cheshire lanes; in the woods it is not infrequently placed beneath a tussock of grass on the ground, and it is sometimes built on ledges or shelves in sheds or outbuildings. We have seen it supported upon the handle of a garden fork which was leaning against the wall in a potting-shed. As a rule the eggs are laid in April, but the bird has two or more broods in the year, and nests are occasionally met with at extraordinary times. On January 5th, 1901, a nest containing six eggs was found in a stable wall at Hale Barns near Altrincham,* and in the mild December of 1908 a bird was sitting on four eggs in a nest in a bucket at Mayfield Nurseries, Sale, at Christmas.

The Redbreast is generally, and with justice, considered to be a useful insect-eating bird, and Mr. R. Newstead states that "the only accusation" he can bring against it is that it will occasionally eat ripe grapes, persistently entering vineries when it has once acquired the taste for the fruit. In the stomachs of seven Cheshire birds Mr. Newstead found remains of beetles, dipterous flies, moths and their larvae, one earwig—an insect seldom eaten by birds—and in one instance (a bird killed in February) the seeds of *Convolvulus arvensis*.†

The Redbreast not infrequently takes insects on the wing, hovering in the air after the manner of a Flycatcher. We have seen birds in the late summer feeding freely upon the larvae of the small moth *Cemiostoma laburnella*, Heyden. These larvae shortly before they pupate suspend themselves from the branches of laburnums by long silken threads; the Redbreasts hovered in the air and repeatedly secured

* F. H. Taylor, *Naturalist*, 1901, p. 75.

† *Food of Birds*, pp. 21, 22. The Redbreast, however, does occasionally eat berries and fruit. In Cambridgeshire, in August, Oldham saw one throw up a pellet, which he subsequently examined; it contained twenty raspberry seeds, skins and seeds of both red and white currants, legs and wings of flies, and an earwig. Cf. Borrer, *Birds of Sussex*, p. 52.

the greenish-yellow grubs which swung to and fro in the wind.

For a short interval in summer, during the moult, the Redbreast is silent, but as the birds do not appear to moult simultaneously it is seldom that the song is not to be heard. The majority of the birds moult in July; from the end of that month to the end of the following June the Redbreast sings continuously; the autumn song, however, is not exactly similar to the song of the courting bird. In the song the notes of other birds, even those of waders such as the Common Sandpiper and Lapwing, are sometimes introduced.

NIGHTINGALE. *Daulias luscinia* (Linné).

An occasional summer visitor.

On the eastern side of the Pennine Range the Nightingale is not uncommon in some parts of Yorkshire, and has even occurred on one occasion in the north of Northumberland. In the west of England the northern limits of its range are probably marked by the wooded lowlands of Cheshire, where it occurs as an occasional summer visitor.

Almost every year the local newspapers report the occurrence of Nightingales in various parts of the county, but the majority of these instances are unsupported by trustworthy evidence, and investigation generally proves the songster to be a Sedge Warbler, Blackcap, Song Thrush or other bird.

In May, 1862, a Nightingale sang for about a fortnight at Strines on the Derbyshire border. The identity of the bird was vouched for by the late Professor Williamson,* Joseph Sidebotham and John Watson, well-known Manchester naturalists. Mr. Joel Wainwright, who has

* *Manchester Guardian*, May 15, 1862.

detailed the circumstances of its visit,* tells us that the bird was first heard in his garden, which, though politically in Derbyshire, is on the Cheshire side of the Goyt. In the same year a bird was said to have taken up its quarters in a hanging wood on the banks of the Dean at Wilmslow, where it was heard nightly by many who affirmed that there was no mistake about the species.† In the following year it was widely reported that a bird was to be heard in Birkenhead Park. The evidence was not accepted by some of the Liverpool naturalists, and it was even alleged that the songster was not a feathered one and that a hoax had been perpetrated‡; Mr. Isaac Cooke, however, tells us that he went with his father to hear the bird, and in the late Nicholas Cooke's note-book the date of the visit is given as May 21st, 1863; Mr. Cooke, a very careful observer, was satisfied that the bird was a Nightingale.

The late Lord de Tabley mentions that "one came to Lymm" in 1865, and that "so unusual was its appearance that a Nightingale train was started from Manchester to hear it. Eventually a bird-stuffer is said to have come and shot the bird."§

The late Thomas Worthington, an accurate observer, remarked the occurrence of a Nightingale in Peel Wood, Northenden, in 1882, where it sang from the 1st to the 24th of May.|| Mr. C. Hope reported that he heard one in a wood at Bromborough on June 9th, 1883,¶ but no confirmatory evidence was put forward at the time, and the occurrence cannot be regarded as established.

The late Rev. C. Wolley-Dod recorded that a bird sang every night in May, 1889, in Lowercross Gorse, Tilston;**

* *Memories of Marple*, pp. 60-66.

† J. Plant, *Manchester Guardian*, May 13, 1862; cited in *Field*, XIX., 1862, p. 444; cf. J. Page, *Field*, XIX., 1862, p. 469.

‡ T. Fry, *Naturalists' Scrap Book*, p. 53; *Field*, XXI., 1863, p. 524. C. S. Gregson, *Naturalists' Scrap Book*, pp. 53, 54. N. Cooke, *op. cit.*, p. 67.

§ *MS. note-book*.

|| *Manchester City News*, May 20 and June 3, 1882.

¶ *Field*, LXI., 1883, p. 805.

** *Field*, LXXIII., 1889, p. 754.

he informed us that one frequented the same neighbourhood in 1891. Mr. W. E. Sharp, who was familiar with the notes of the bird in Worcestershire, heard a Nightingale at Ledsham in Wirral, throughout May and early in June, 1893.*

At the end of April, 1896, a Nightingale made its appearance in a hanging wood at Oakwood Hall, on the bank of the Mersey at Romiley. It was at once recognised by the gardener, who subsequently showed in conversation that during a prolonged residence in Worcestershire he had made himself acquainted with the song, appearance and nesting habits of the species. We heard the bird on several evenings in May. Towards the end of the month its presence had attracted large crowds, and the late Ephraim Hallam, then residing at Oakwood, apprehensive of damage to his property, gave instructions that the Nightingale should be scared away. The firing of blank cartridges in the wood proved ineffectual, until on the evening of the 21st one was discharged beneath the tree in which the bird was singing. The male was neither seen nor heard again, but it is not certain that the firing was responsible for the silence, as two days later the gardener saw the hen with food in her beak, and it appears probable that the eggs were then hatched.

In May, 1897, a Nightingale was reported as having been heard near Eaton Hall,† and in May, 1901, one appeared at Christleton, where it was heard on the 4th by Mr. R. Newstead, and on the 13th, at 10 p.m., by Mr. S. G. Cummings.

On June 8th, 1907, Mr. S. F. Rowland heard a Nightingale in a wood at Allostock; he again visited the spot on June 22nd, but only heard the bird utter a few bars, from which he concluded that the young were hatched. On May 2nd, 1908, Mr. J. A. Holland, who knows the song of the Nightingale well, heard one singing on the Allostock side

* Dobie, p. 288.

† Rev. L. E. Owen, *Field*, LXXXIX., 1897, p. 800.

of Rudheath, but the bird, apparently, did not remain in the immediate neighbourhood. Mr. T. Hadfield, Mr. Holland and Coward visited the spot several times in May but did not hear it again.

An unsuccessful attempt was made some years ago by Mr. Egerton Leigh to establish the Nightingale in Cheshire ; he turned out a number of birds at Jodrell but apparently none of them remained.

Although neither eggs nor nestlings have been actually found in the county, there is, of course, presumptive evidence that the birds nested in most of the cases where their occurrence is beyond doubt.

Sub-family *SYLVIINAE*.

WHITETHROAT. *Sylvia sylvia* (Linné).

Local names—NETTLE CREEPER ; STRAW MOUSE ; SPLIT-STRAW ; CUTSTRAW ; SMALSTER.

An abundant summer resident.

During the latter half of April the Whitethroat makes its appearance in the woods and hedgerows ; in early years we have seen it on the 15th and 18th, but as a rule it is not until the fourth week of April and sometimes early in May that the bird is generally distributed. In the inclement spring of 1906 birds were observed at Buglawton near Congleton on April 21st, and at Bowdon three days later, but they did not arrive in any numbers until the 8th or 9th of May. Emigration takes place in September as a rule. Probably the birds travel south by an overland route ; there are few records of the species in the reports of the British Association Migration Committee, and the Whitethroat has only once

been observed at the Dee Lightvessel—on September 3rd, 1886.*

Throughout Wirral and the lowlands generally, the White-throat abounds, being by far the commonest member of the genus. A few pairs nest amongst the scanty vegetation on Hilbre Island, where on May 15th, 1894, we watched several birds catching insects on the bare sandstone cliffs. Even on the bare hills of the east of the county it may be seen in the stunted bushes high up amongst the heather.

The Whitethroat is less retiring in its habits than many of the warblers, and nests in hedgerows and rank vegetation bordering the country lanes, as well as in woods and thickets. It is partial to osier-beds where there is a growth of young withies. At Gatley Cars the nests are often placed on the tops of willow stumps, a few inches above the damp ground.

Dipterous flies, especially of the family *Bibionidae*, are largely eaten by the Whitethroat; in four out of five birds killed at Eaton and Aldford in April and May most of the remains of insects in the stomachs were of these flies.†

The bird sings late, but only rarely after the moult; very occasionally one may be heard towards the end of August, shortly before the species leaves for the south.

LESSER WHITETHROAT. *Sylvia curruca* (Linné).

A common summer resident.

The rattling notes of the Lesser Whitethroat may usually be heard in Cheshire in the last week of April; the bird arrives as a rule a few days later than the Common Whitethroat. It is distributed throughout the lowlands, being most abundant in the west of the county, where, in the neighbourhood of Chester, it is in some years nearly as plentiful as the Common

* *Migration of Birds*, Report 8, p. 106.

† R. Newstead, *Food of Birds*, pp. 22, 23.

Whitethroat. In central and eastern Cheshire, though it is by no means rare, it is outnumbered by the larger species. It occurs at the foot of the hills in the east, in the neighbourhood of Congleton for instance, but is not, apparently, common on the hills themselves; it is possible, however, that the bird has been overlooked in many districts.

Although the Lesser Whitethroat chiefly affects the open country, especially lanes where the hedges are untrimmed and brambles and rank vegetation are allowed to grow, it frequently nests in gardens, and, indeed, is far from uncommon in the residential suburbs of the towns. The bird sings throughout May and June and even in the early days of July, and is one of the most persistent songsters in hot and sultry weather. Occasionally, after a period of silence, it sings at the end of July and even in August and September.

It has been repeatedly stated that the Lesser, like the Common Whitethroat, lines its nest with horse-hair, but Mr. S. G. Cummings, who has examined many nests in the neighbourhood of Chester, has only occasionally found horse-hair in the lining, which almost invariably consists of fine fibres and roots. Some nests, he says, are attached to the twigs and herbage at the sides only and are without support from below. The bird frequently begins to build immediately it arrives in April, and Mr. Cummings has found eggs so early as May 5th.

BLACKCAP. *Sylvia atricapilla* (Linné).

A summer resident in woodlands.

The Blackcap, a regular summer resident, arrives in early years about the middle of April, but as a rule not until the third or last week of that month, and remains until the end of August or beginning of September. In the summer months it is fairly abundant throughout Wirral and the wooded

plain, and occurs in a few sheltered spots in the valleys amongst the eastern hills. Mr. N. Neave has found it on the hills to the east of Macclesfield, and it nests at Swineshaw and in upper Longdendale,* where we have heard it singing in a wood at an altitude of a thousand feet.

The exquisite song—often uttered from the topmost branches of high trees—reveals the whereabouts of the Blackcap when the secluded nature of its haunts would otherwise enable it to escape detection. Unlike the White-throat, it does not frequent hedgerows and open places, but woods and coverts where there is abundant undergrowth. It is most plentiful in hanging woods on the banks of streams. The nest, always well hidden, is usually placed in briars or brambles, but we have found it concealed among the outer leaves of a rhododendron. In common with many of the warblers, this species is partial to soft fruit, and to obtain it often resorts to gardens in late summer.

The insects recognised by Mr. R. Newstead in the stomachs of three Cheshire Blackcaps, all obtained in April, were beetles, dipterous flies, ichneumons, and a rather large solitary wasp.†

GARDEN WARBLER. *Sylvia hortensis* (Bechstein).

Local name—SMASTRAY‡ (*i.e.*, Small Straw).

A common summer resident.

The Garden Warbler is amongst the later summer migrants to reach Cheshire; its song is seldom heard before the end of April and sometimes not until the end of the first week in May. It occurs throughout Wirral and the plain in

* F. Stubbs, p. 26.

† *Food of Birds*, p. 23.

‡ Leigh, *Glossary*, p. 193.

similar situations to those affected by the Blackcap, but it is not in most parts so common as that bird. In the neighbourhood of Ince Mr. R. Newstead, Senr., found the Garden Warbler and Blackcap in about equal numbers,* and at Alderley Edge the Garden Warbler is certainly the more plentiful. Mr. S. G. Cummings finds that this is also the case in Eaton Park and other places near Chester.

In the hill-country it is abundant in the wooded valleys of the Dane near Wincle and the Goyt above Taxal, localities in which the Blackcap is rare.

BRITISH GOLDCREST.

Regulus regulus anglorum, Hartert.

A common resident and partial migrant.

The Goldcrest, a resident in Cheshire, breeds throughout the plain wherever there are fir plantations; it is plentiful in Delamere Forest, at Alderley Edge and Chelford, and on the fir-crowned sandstone ridges at Storeton, Burton and elsewhere in Wirral. In the hill-country it finds abundant nesting places in the conifers in the wooded valleys of the Goyt and Dane, and the bird occurs in the breeding season in Arnfield Clough, Longdendale.

In most years large numbers of migrants arrive in autumn and although in some seasons but few visit us, the Goldcrest is usually plentiful in Cheshire from October until March. During winter the bird is by no means confined to fir woods; combined flocks of Goldcrests, Creepers and titmice may often be seen moving slowly in loose formation in the woods, along the hedgerows, and in gardens.

At Ince Mr. R. Newstead has observed the bird feeding extensively on the American blight (*Schizoneura lanigera*,

* Dobie, p. 289.

Hausman), and the stomach of a bird killed there in January was filled with the remains of this insect; and that of another, killed in the same month at Oakmere, was almost full of the remains of leaf-fleas (*Psyllidae*).*

The song of the Goldcrest is most frequently heard in April and May, but the bird sings occasionally in autumn and winter; we have heard it in every month except August.

The Goldcrest is never a common bird on the west coast migration route; occasionally "scores" and "dozens" have been noticed at lighthouses and lightships, but as a rule only odd birds are observed. All the records are of birds on the southward passage, from August to November, and generally at stations on the main fly-line from Wigtonshire, via the Isle of Man, to the west coast of Wales. In 1884, however, the birds seem to have travelled more to the east than usual; they were noted in large numbers in September at St. Bees, and on November 16th one was found dead on the deck of the Dee Lightvessel.†

Probably the Goldcrests on passage along the coast, and many of those which occur in flocks in winter are referable to the Northern European form, *R. regulus regulus* (Linné), but we have been unable to obtain proof; examples killed in winter which we have examined have all been of the British form.

CHIFFCHAFF. *Phylloscopus rufus* (Bechstein).

A summer resident; widely distributed.

The Chiffchaff, though widely distributed and not uncommon, cannot be considered abundant in Cheshire as compared with some other parts of Britain, for instance the coast of

* *Food of Birds*, pp. 23, 24.

† *Migration of Birds*, Report 6, p. 115.

North Wales and southern Anglesey. It is, as a general rule, more local and far less abundant than the Willow Wren. In certain parts of Delamere Forest, however, the Chiffchaff predominates, but in the surrounding cultivated districts the Willow Wren is the commoner species. The Chiffchaff is found in suitable localities throughout the plain, but in the eastern hills it only occurs sparingly, though a few may be heard in spring and summer in Longdendale and the valleys of the Goyt and Dane.

The Chiffchaff is the earliest warbler and one of the first spring visitors to reach Cheshire. As a rule its characteristic throbbing notes may be heard in sheltered cloughs or in the woods of Delamere at the end of March, and year after year the first arrivals may with confidence be looked for in the same spots. In early years the bird arrives in the third week of March, and in 1905 Oldham heard one in full song in Oulton Park on March 19th,* only three days after the first bird was reported in the south of England and actually the day before the first immigration of importance on the southern coasts.†

The song in Cheshire is continued throughout April and May, and a few birds may be heard occasionally in June and even so late as the beginning of July. After the end of May, however, the majority of the birds are silent. Probably all do not moult at the same time; we have heard birds in July on the 3rd, 5th, 19th and 30th. By the end of the month the autumn song, always in a lower key than that of spring, is commenced and the bird frequently sings throughout the month of August. Emigration takes place in September, but in most years a few birds may be met with in the latter half of that month. These are either laggard summer residents or possibly birds of passage. In 1903 Oldham heard birds singing in a Knutsford garden on September 19th and October 1st.

* C. O., *Zoologist*, 1905, p. 140.

† Cf. *Bulletin of the British Ornithologists' Club*, Vol. XVII., February, 1906, p. 50.

WILLOW WREN. *Phylloscopus trochilus* (Linné).

Local names—PEGGY ; PEGGY WHITETHROAT ; WHITE WREN ; GROUND WREN ; FEATHER POKE (Longdendale).

An exceedingly abundant summer resident.

The Willow Wren is the most plentiful of the warblers which visit Cheshire, and is abundant throughout the county. It usually arrives during the second or third week of April, and remains until the latter part of September or even later. In 1909, when, curiously enough, the Chiffchaff was late in appearing, the Willow Wren arrived during the first week ; Mr. J. J. Cash heard one at Chelford on April 5th, and a few days later the bird was generally distributed. An unusually large number passed through the northern part of the county on and about the 20th and 21st of the month. In early summer its sweet song is the most familiar sound in woods, thickets, hedgerows and gardens throughout Wirral and the lowlands, and though the bird is not so plentiful amongst the hills, it occurs in the treeless cloughs in Longdendale and the country to the east of Macclesfield. Mr. N. Neave has found the nest amongst the heather on the hill-sides above Errwood Hall.

The food of the Willow Wren consists largely of dipterous flies, which it captures—like a Flycatcher—on the wing or picks from the plants upon which they have settled. Mr. R. Newstead has frequently seen the bird fly-catching round the flowers of the sycamore and lime. Plant-lice or aphides are freely eaten, and the stomach of a bird killed at Chester was entirely filled with these troublesome pests ; weevils and other small beetles, and moth larvæ are also taken.*

The song of the Willow Wren is begun, unless the weather be unpropitious, so soon as the bird arrives, but by the end of June most of the birds are silent ; a few, however, continue

* *Food of Birds*, p. 24.



to sing occasionally throughout June and early July. The autumn song, differing in volume and quality from the spring song, begins about the end of July or early in August, and is continued at intervals by some birds until the middle of September.

WOOD WREN. *Phylloscopus sibilatrix* (Bechstein).

A summer resident, abundant and widely distributed.

The Wood Wren arrives later than most of our summer visitors, its shivering song being seldom heard before the last few days in April. It occurs locally throughout the county, being most abundant in woods where oaks and beeches predominate.

Brockholes describes it as a common summer visitor to Wirral. In the unreclaimed parts of Delamere Forest the bird is very plentiful, outnumbering the Chiffchaff and Willow Wren, but is rare in the surrounding cultivated districts. Elsewhere in the lowlands it is often absent from plantations and game-coverts of recent growth, but is abundant in parks, such as Dunham and Tatton, where there is much old timber. The Wood Wren is plentiful in the beech woods on Alderley Edge, but on the wooded ridge of the Peckforton Hills, where the conditions are very similar, it is curiously rare.

It is common in the hill-country in the east, occurring in plantations in Longdendale and amongst the hills between the Dane and Goyt; in the valley of the former stream above Bosley it is more abundant than any other warbler.

The Wood Wren obtains most of its food by searching the twigs and smaller branches of the oaks and beeches which it frequents. Occasionally, however, it will drop to the ground, seize an insect, and mount aloft again in an instant,

or dash out like a Flycatcher to take an insect on the wing. It will often hover in order to pick off a small caterpillar from the under-side of a leaf.

REED WARBLER. *Acrocephalus streperus* (Vieillot).

Local name—REED SPARROW.

An abundant summer resident in the reed-beds fringing the meres; not common elsewhere.

The dense reed-beds that fringe many of the Cheshire meres are suitable nesting places for the Reed Warbler, and in these situations it is abundant during the summer months. It occurs in the reeds on all the larger meres in mid-Cheshire, such as Rostherne, Tatton, Marbury near Northwich, Pickmere, Tabley and Redes Mere; in the Delamere district at Hatchmere, Oulton Pool and in the mill-pond at Little Budworth; and on Combermere, Marbury, Bar Mere and others in the south and west. It is seldom met with at any distance from large sheets of water, but about 1870 Dr. H. H. Corbett found it nesting at Handforth, and we have seen it in a willow-bed by the brook-side at Lower Peover.

In Wirral, where there are no large sheets of water, it is not common, but in June, 1865, a nest was taken in one of the reed-filled ditches at Leasowe,* and Brockholes, writing in 1874, said: "a few years ago, this species might generally be detected as an annual summer visitor to the Bidston Marshes."

There are no reeds in the reservoirs in the hill-country, and the bird has only once been noticed in the extreme east of the county; Mr. F. Stubbs watched one, which may

* H. E. Smith, p. 244.

have been on passage, on the edge of the Arnfield Reservoirs on May 1st, 1904.*

The Reed Warbler reaches Cheshire rather later than the Sedge Warbler—at the end of April or beginning of May. From then until the beginning of August its song—more monotonous but sweeter in tone than that of the Sedge Warbler—is the dominant note of the reed-beds. Towards the end of July there is a great diminution of song in the reeds, but throughout August a few birds may be heard singing in a half-hearted manner; a sod or stone thrown into the reeds at once rouses them to greater activity and causes other silent birds to sing. Emigration takes place early in September, and as a rule by the middle of the month the reeds are deserted.

SEDGE WARBLER.

Acrocephalus phragmitis (Bechstein).

Local names—PIT SPARROW; NIGHT SPARROW.

An abundant summer resident.

Amongst the hills of eastern Cheshire the Sedge Warbler occurs but sparingly, and then only in sheltered situations in the valleys. A few pairs nest in the valley of the Dane near Wincle and the bird is fairly plentiful on the marshy ground near Bosley Reservoir, but Mr. N. Neave tells us that it is not common near Rainow. It does not, apparently, occur in the neighbourhood of Crowden and Woodhead, the lack of suitable cover in upper Longdendale being sufficient reason for its absence.

To the lowlands and the rest of the county the Sedge Warbler is one of the commonest visitors, generally arriving about the middle of April and remaining until September

* F. Stubbs, p. 26.

It is most abundant in the marsh-lands bordering the meres, by the sides of marl-pits in the fields, and along brooks and ditches, but is not uncommon in plantations and thickets at some distance from any water. Wherever the bird occurs its chattering song, which is continued until the beginning of July, reveals its presence at night as well as in the daytime. Towards the end of August a small proportion of the birds begin to sing again and continue until shortly before they leave.

The fields along the coast at Heswall and Parkgate are divided by deep ditches whose beds are clothed with luxuriant vegetation. Old thorn trees, whose upward growth is prevented by the winds from the sea, fill the upper part of these ditches to the level of the surrounding fields with a matted mass of twigs and branches. This dense cover affords shelter for innumerable Sedge Warblers, and nowhere in the county is the bird more plentiful.

GRASSHOPPER WARBLER.

Locustella naevia (Boddaert).

A rather scarce summer resident.

The Grasshopper Warbler is the rarest of the warblers that nest regularly in the county; it is more plentiful in some seasons than in others. It usually arrives during the third or fourth week of April, and from then until the beginning of July may be heard in suitable places; its favourite haunts are osier-beds, and the swampy rush-grown ground near the meres, but it sometimes nests in the tangled bottoms of old hedgerows at a distance from any water.

Brockholes refers to the bird as "a rather scarce summer visitor" to Wirral, and gives Bidston, Bebington and Puddington as localities where it has occurred, adding that a nest has been found near Upton. H. E. Smith adds

Liscard, and Mr. Isaac Cooke (*in lit.*) Wallasey. Probably since the spread of the residential suburbs of Birkenhead the bird has deserted some of its old haunts, but it still occurs near Heswall and Little Saughall, where Mr. S. G. Cummings found a nest on May 27th, 1904. The Grasshopper Warbler is a regular visitor to the district round Chester, where, in some seasons, Dr. Dobie finds it common, and Mr. R. Newstead states that it nests annually at Ince, Thornton-le-Moors and Dunham-on-the-Hill.* In the plain generally it is local, but is probably overlooked; it occurs regularly in the Delamere district at Hatchmere, Little Budworth, Oulton and Newchurch Common; it nests on Knutsford Moor and other localities in the neighbourhood of Knutsford and Chelford; and occurs occasionally at Rostherne, Dunham Massey, Ashley and other places near Bowdon. We have heard it at Pickmere, Alderley Edge, Dean Row near Wilmslow, and Northenden, and several nests have been found in the osier-beds at Gatley Cars.

In the hill-country this bird is apparently rare, but has been reported from Compstall at the confluence of the Goyt and Etherow; we have seen an example which was shot in that locality. In the spring of 1903 Mr. H. Harrap constantly heard a Grasshopper Warbler at Copley near Stalybridge, but this was the first he had heard in the district.

The curious reeling song is heard to the best advantage in the early hours of the day and from dusk to dark, but in dull weather the bird occasionally sings at mid-day. During the snatches of song, which last from a few seconds to two minutes, the bird never closes its mandibles. The spring song ceases at the end of June or early in July, but the bird occasionally sings again towards the end of the month.

* Dobie, p. 290.

Sub-family *ACCENTORINAE*.HEDGE SPARROW. *Accentor modularis* (Linné).

Local names—DUNNOCK ; BLUE DUNNOCK.

An abundant resident.

Except on the wind-swept moorlands of Longdendale and the hills east of Macclesfield, the Hedge Sparrow is one of our commonest residents. It nests everywhere in hedgerows and gardens in the lowlands, and its blue eggs may even be found in gorse bushes at a considerable altitude on the hills.

The Dunnock, as it is almost invariably called in Cheshire, sings in the autumn and winter when the majority of songsters are silent, and in spring, when the pairing season is at its height, it not infrequently sings at night. When disturbed at its roost the bird will utter a few snatches of song ; in 1907 Coward frequently heard a bird, which roosted in a holly in his garden, sing for a few moments at various times between midnight and 3 a.m. during March and once or twice in May and June ; on all these occasions the bird had been disturbed by sudden gusts of wind or heavy rain showers.

Mr. R. Newstead found in each of the stomachs of three Hedge Sparrows from Aldford, killed in April, many *Rhynchophora* and other destructive beetles.*

* *Food of Birds*, p. 21.

CINCLIDAE.

BRITISH DIPPER. *Cinclus cinclus britannicus*, Tschusi.

Local names—WATER OUSEL ; ROCK OUSEL.*

An abundant resident on the hill-streams in the east of the county ; nests in one or two places in the lowlands, and is occasionally met with in the plain in winter.

Throughout the eastern hill-country the Dipper is an abundant resident. It breeds freely on all the streams in Longdendale, and on the tributaries of the Tame above Stalybridge. The bird abounds in the country lying between the upper Goyt and Dane, where it occurs on little upland becks as well as on larger streams. Dr. M. S. Wood has found it nesting on a polluted brook at Middlewood.

The greater part of lowland Cheshire is unsuitable for the Dipper, but it breeds on the Dane at Havannah and Cranage Mill, and on the higher reaches of Astle Brook near Chelford.

Many of the birds leave the high ground in the late summer or autumn, and in winter the Dipper is occasionally met with on the lower reaches of the larger streams and on brooks in the plain. A bird in the Warrington Museum was killed at Tarporley in the spring of 1893, and about the same date one was shot on the Bollin at Quarry Bank, Styal. Mr. E. A. Shaw has seen the bird on several occasions recently on the Bollin actually in Macclesfield. On October 8th, 1904, Mr. John Baddeley saw one on Lady Brook, Bramhall Park ; on January 10th, 1908, a bird was seen by Mr. John Hindley on Kid Brook, Marbury Park near Northwich, and on February 8th, in the same year, Mr. C. M. Gadd noticed one on the Bollin near Bowdon.

* Mr. F. Stubbs points out that the name "Rock Ousel" is applied to the Ring Ousel on the borders of Lancashire and Yorkshire but in Longdendale always to the Dipper.

In Wirral and the west the Dipper is unknown, although it breeds on the hills on the Welsh side of the Dee, and one has been shot at the mouth of the Wepre Brook at Connah's Quay.*

Nests of the Dipper which we have examined on the Goyt consisted of a rather deep cup, made of grass stems and blades of a *Carex*, enveloped by a spherical covering of moss or woven grass stems, and with a small entrance below the median line. The inner nests were lined with a thick layer of dead beech leaves, with a few of oak, ivy and bramble. The outer nest usually harmonises with its environment, being constructed of green moss when placed on wet moss-grown rocks or beneath dripping water, and of dead grass when built against a face of neutral-tinted rock. The strongly contrasted black and white plumage renders the bird far less conspicuous than might be imagined amongst the lights and shades of the broken rocks and tumbling water of its haunts.

The Dipper will, even if persecuted, resort persistently to the same nesting site year after year, and more than one brood is often reared in a season. Even before they can fly, the young birds are at home in the water. We have seen barely fledged nestlings, when alarmed, scramble out of the nest and drop into the swiftly flowing Goyt. Making their way beneath the surface to the opposite bank, they emerged some yards down stream, and sought shelter among the stones.

Mr. R. Newstead has not examined the stomach-contents of any Cheshire birds, but in four Welsh examples he found the remains of many water beetles, the larvae of caddis-flies, and small freshwater crustaceans.†

The song of the Dipper, a loud Wren-like warble, is begun in autumn, and heard to the best advantage in winter, when other denizens of the upland streams are silent. Perched on a rock in mid-stream, the bird pours forth its notes, which mingle harmoniously with the noise of the rushing water.

* Dobie, p. 291.

† *Food of Birds*, p. 25.



THE GOYT VALLEY, TAXAL.



PANURIDÆ.

[BEARDED TITMOUSE. *Panurus biarmicus* (Linné).

Possibly once a resident.

In the Grosvenor Museum, Chester, are two pairs of Bearded Titmice, which are said to have been taken in Cheshire, but the authenticity of the localities where the birds were obtained is not beyond question. One pair is said to have been taken in September, 1893, in a ditch full of reeds between Hoylake and West Kirby,* and the other was formerly in the possession of the late R. Nunnerley of Congleton, who assured us that the birds were shot by his father on Whitley Reed between Warrington and Northwich about the middle of the last century.

The Bearded Titmouse is a species that rarely wanders from its usual haunts, and if there has been no error about the places where the birds were obtained their occurrence is of the greatest interest. The existence of Mr. Nunnerley's specimens almost suggests that the bird formerly bred at Whitley Reed, which fifty or sixty years ago was a wild unreclaimed bog. In any case, however, additional evidence of the occurrence of the species in Cheshire is necessary before it can be included unconditionally in the county avifauna.]

PARIDÆ.

BRITISH LONG-TAILED TITMOUSE.

Acredula caudata rosea (Blyth).

Local names—DOG-TAIL ; BOTTLE-TIT ; CHURN.

A resident ; not very abundant.

The Long-tailed Titmouse is a resident, sparingly distributed throughout the wooded portions of the county. After the breeding season the birds are met with in family parties,

* Dobie, p. 291.

which during winter combine in flocks with other titmice, Goldcrests and Creepers.

The nest of this bird, often built in a whitethorn hedge, is frequently completed before the foliage is thick enough to conceal it. The white lichens, however, which are interwoven with the moss, producing the effect of light and shade amongst a mass of twigs, afford protection to what would otherwise be a conspicuous object in a leafless hedge. Like other titmice, the bird is a close sitter. Mr. F. Brownsword once received a nest containing ten slightly incubated eggs from Mottram St. Andrew; the man who had cut it out from a thorn hedge told him that, after carrying it for some distance, he was astonished to see the brooding bird emerge from the entrance hole and fly away.

Mr. R. Newstead made post-mortem examinations of three Long-tailed Titmice which had been killed in February, 1894, and found that the birds had eaten a coccid—*Asterolecanium quercicola*, Signoret, which is injurious to the young shoots of the oak.*

At Little Saughall in May, 1903, Mr. S. G. Cummings took a nest after the young had flown, and when he examined it found at the bottom of the nest a dead adult bird and two eggs, which had been buried beneath the fresh lining of feathers added by the pair of birds which had last used the nest.

BRITISH GREAT TITMOUSE.

Parus major newtoni, Prazák.

Local names—SAWFINCH; SAWFITCH †; SAW-FILER; SAW-SHARPENER; KING CHARLES; BIG TOMTIT; TITTIMAW.‡

An abundant resident.

The Great Titmouse is a common resident throughout the county; in some of the parks and woodlands it is the most

* *British Coccidae*, Vol. I., p. 36.

† Holland, *Glossary*, p. 30.

‡ *Id.*, *op. cit.*, p. 363, applied to any titmouse.

abundant tit, but in most districts it is outnumbered by the Blue Titmouse. Mr. N. Neave finds that in the country east of Macclesfield it is rarer than either the Blue or Coal Tit.

The bird is by no means entirely dependent upon animal food, being partial to maize, beechmast, nuts and the seeds of the sunflower. In our schooldays we often caught it in a trap baited with bread. Mr. R. Newstead adds the Spanish chestnut, and he once saw a bird feeding on a horse chestnut. In autumn it "attacks pears in the same way as the Blue Tit, and when it has once acquired a taste for this fruit becomes equally, if not more, destructive."

The marble-gall insect, *Cynips kollari* (Hartig), is hacked out of its woody gall by the Great Titmouse, and in autumn the bird will sometimes break up fungi in order to obtain the larvae of flies and beetles which infest these plants.*

The number of eggs laid by the Great Titmouse is sometimes very large, ten or twelve in a clutch being not unusual. In a nest in a wall at High Legh we found fifteen, but possibly they were the produce of two females. The bird is a close sitter, only leaving its eggs when compelled to do so, and even then, if the nest be in a wall, it will retire to some crevice in the interior, and hiss angrily at the intruder. A bird sitting on ten eggs in a cleft thorn in Dunham Park neither moved nor made a sound until, using a twig as a lever, we raised it from the nest.

The saw-sharpening note of the male, from which the bird derives many of its local names, is to be heard early in the year, or even, in mild weather, at the end of December. The bird occasionally calls, after the moult, in August.

* R. Newstead, *Food of Birds*, p. 33.

BRITISH COAL TITMOUSE.

Parus ater britannicus, Sharpe and Dresser.

A common resident.

The spring song of the Coal Titmouse, a common resident, is usually heard in Cheshire towards the end of February, and the bird frequently sings again in the autumn, beginning at the end of August or early in September. In the neighbourhood of Chester, Dr. Dobie finds the Marsh Titmouse more numerous than this species, but in most parts of the county the Coal Titmouse is the commoner of the two; it is everywhere less plentiful than the Great and Blue Tits.

During the winter months the bird is more in evidence than in the breeding season, and it seems probable that the numbers of the residents are then augmented by immigrants from other parts of the country. The Coal Titmouse, more than any of its congeners, affects the society of the Goldcrest; the large flocks which haunt the conifers during winter almost invariably include many Goldcrests.

The bird occasionally nests in a hole in the ground; on May 27th, 1894, Mr. S. G. Cummings found twelve young birds in a hole on level ground in a copse at Chester.

In autumn the Coal Titmouse, like other tits, feeds on the fallen mast beneath the beeches, but, so far as we have observed, is alone in the habit of plucking the ripe nuts from the branches. The birds do not eat the mast in the tree-tops, but fly with it to the ground, often thirty yards or more from the tree, and there extract the kernel. Mr. Cummings finds that it is the only tit which habitually carries away and hides its food when the supply exceeds its immediate needs; in the winter of 1907-08, when the four commoner species of titmice were constantly feeding on cocoanut and suet in his garden, the Coal Titmice repeatedly took fragments of food and concealed them in a yew and a holly close by. Like others of the *Paridae* it feeds upon destructive insects, such as the American blight, coccids and weevils.*

* R. Newstead, *Food of Birds*, p. 26.

BRITISH MARSH TITMOUSE.

Parus palustris dresseri, Stejneger.

A airy common resident.

The Marsh Titmouse, although it occurs in all parts of lowland Cheshire, is not, except perhaps in the neighbourhood of Chester, so abundant as the Coal Titmouse. It is most noticeable during the winter months, when flocks consisting solely of Marsh Tits are often seen; the bird does at times associate with other species, but it is on the whole less sociable than its congeners.

The song of the Marsh Tit is begun early in the year, sometimes in the first half of January, and the bird frequently sings again at the end of August and in September.

The nest is usually built in a hole in a tree or rotten stump, but is sometimes placed on the earth beneath tree-roots in a hedgerow, a site often affected by the Coal Tit. When the birds hack out a nesting hole in dead wood, they usually carry the chips away and drop them from the branches of neighbouring trees or bushes. This act of concealment, however, is not always thorough; we have seen a considerable litter lying below a nesting hole from which the birds were busily engaged in removing the chips. Mr. R. Newstead has seen the Marsh Titmouse near Chester and at Ince, feeding upon two destructive coccids—*Mytilaspis pomorum* (Bouché), the mussel-scale of the apple, and *Chionaspis salicis* (Linné), a pest on the willow and ash.*

* *British Coccidae*, Vol. I., p. 38.

BRITISH BLUE TITMOUSE.

Parus caeruleus obscurus, Prazák.

Local names—TOMTIT ; TITMAUPS * ; TOM NOWP ; JACK NOUP † ; BILLYBITER.

An abundant resident.

The Blue Titmouse is the best known member of its family, and is abundant throughout the county in summer and winter alike. In cold weather a bone or lump of suet suspended in a tree is an unfailing attraction to these active little birds. Other tits avail themselves of this food, the Coal and Marsh taking their turn indiscriminately with the Blue, but all give way if a Great Tit makes its appearance, and concede the first place to the more powerful bird.

The nest of the Blue Titmouse is placed in any convenient hole in a tree or masonry, and is frequently built in incongruous situations ; at Twemlow, in 1906, a pair nested in an iron gate-post, entering through the latchet-hole, and at Weaverham in 1904 a disused pump was occupied.

The number of insects destroyed by the Blue Titmouse in the breeding season is enormous. A pair at Alderley Edge, which were feeding young in a hole in an apple tree, visited the nest with food forty-three times in half an hour.

In Delamere Forest, on July 1st, 1905, when the green oak moths, *Tortrix viridana*, Linné, were on the wing in unusual numbers, we watched a pair of Blue Titmice carrying moths every few minutes to their young in a hole in an oak. On Little Budworth Common in December, 1907, we saw large numbers of Blue Tits, with a few Great Tits, feeding on the spangles on fallen oak leaves ; the birds pecked a hole in the centre of the gall, and picked out the *Neuroterus* larvae.

* Leigh, *Glossary* ; applied to any titmouse.

† Holland, *Glossary*, p. 178.

Mr. R. Newstead refers to this habit, and adds:—"In Cheshire the tenants of the marble-gall of the oak (*Cynips kollari*) are also eagerly sought for during the autumn and winter in some localities, the insects being extracted after considerable labour has been expended in excavating the hard woody structure." *

The stomachs of thirty-four Blue Titmice, all taken in Cheshire at various seasons, have been examined by Mr. R. Newstead, and a summary of the contents of the stomachs of ten of the birds is cited by him, to show that this species feeds largely upon scale-insects, which, on account of their offensive smell or unpleasant taste, are as a rule immune from the attacks of birds.†

In the stomach of one bird, which had been killed at Eaton in February, Mr. Newstead found between two and three hundred examples of the pit-making oak-scale, *Asterolecanium quercicola*, Signoret, many of the round oak-scale, *Aspidiotus zonatus*, Frauenfeld, and fragments of a few small weevils.‡

The Blue Titmouse is accused of several acts of destruction, but in some cases the evidence is not entirely conclusive. Like the Great Titmouse it occasionally eats hive-bees, but Mr. Arthur Newstead, who concealed himself near his apiary in order to watch the actions of the birds, found that both the Blue and Great Tits only fed upon the dead bees which were lying on the ground near the alighting board. The Blue Tits seized and shook the dead bees, then pulled them to pieces and ate them on the spot, but the Great Tits carried them to an adjacent hedge. During the whole hour in which Mr. Newstead watched, bees were crawling near the birds, but in no single instance did he detect a titmouse in the act of killing a bee.§

The habit of the Blue Titmouse of destroying ripe pears

* *Food of Birds*, p. 30.

† *British Coccidae*, Vol. I., pp. 34, 35.

‡ *Food of Birds*, p. 27.

§ *Op. cit.*, p. 31.

by pecking holes in them, usually in the neighbourhood of the fruit stalk, is indefensible, but in the stomachs of five birds, shot at Halton when in the act of attacking pears, Mr. R. Newstead found many plant-lice, including the injurious American blight, *Schizoneura lanigera*, Hausman, coccids and other insects mixed with the fruit.

Fruit buds, especially on apple and pear trees, are undoubtedly destroyed, and in one large garden in Cheshire over fifty per cent. of the buds were destroyed on some trees. Mr. Newstead carefully examined the trees, but failed to find any trace of insects in the buds which were left, or those which had been partly destroyed by the birds. Bud-scales are occasionally present in the stomachs of birds, but to such a small extent that Mr. Newstead thinks they cannot be considered as an important source of food supply. On July 12th, 1898, two birds were shot "red-handed" in the act of destroying peas, and were sent to Mr. Newstead, but in their stomachs there was not a single pea, and one was completely filled with American blight, while the other contained large numbers of this pest and a few less harmful insects.

The Blue Tit, in common with others of the genus, is a constant attendant in places where maize is scattered for Pheasants. The birds carry the maize, grain by grain, into the bushes, where, holding it on a branch with one foot, they peck out the soft part and drop the remainder to the ground. Beechmast, chestnuts, wheat and barley are also eaten in winter, and Mr. Newstead adds that the bird is "passionately fond of the seeds of the sunflower." In the stomachs of several birds, killed at Aldford in January and February, Mr. Newstead found quantities of fragments of a hard black fungus.

When the larvae of *Cemiosoma laburnella*, Heyden, which are so destructive to the foliage of the laburnum, are full-fed and suspending themselves by silken threads from the trees, the Blue Titmouse feeds freely upon them. We have seen a pair of birds remain in the vicinity of a tree for a space of

three hours, constantly flying from point to point, and catching the suspended larvae as they passed.

The song begins early in the year; on any mild day in January it may be heard, and by the end of February the bird sings daily, even during a frost.

SITTIDAE.

BRITISH NUTHATCH.

Sitta europaea britannica, Hartert.

A very local resident in Cheshire; chiefly confined to the south-west.

The Nuthatch, a very local resident, nests regularly in the neighbourhood of Chester; it is not uncommon at Eccleston, in Eaton Park and in the Chester Cemetery. Mr. S. G. Cummings states that it has occurred at Mollington. Dr. Dobie quotes the late Rev. C. Wolley-Dod to the effect that the bird is "abundant all the year round at Edge Hall" near Malpas; he adds that Mr. A. P. White shot one at Little Budworth. The Nuthatch is not uncommon on the part of Little Budworth Common which adjoins Oulton Park, and several pairs nest annually in the park itself, where the birds are to be seen at all seasons.

Elsewhere in the county the bird is very rare. Brockholes does not include it in his Wirral list, and it is unknown on the eastern hills. In the plain, despite the fact that some of the parks contain much old timber, it is unaccountably rare, and, except from localities already mentioned, we have only seen two examples—one obtained in winter at Norley near Delamere, and one shot some years ago at Astle by Colonel Dixon, and now in his collection. In January, 1908, Mr. J. A. Holland heard one in Mobberley.

The Nuthatch is included by the late Lord de Tabley as

having occurred in Tabley Park near Knutsford. In his notebook he states that one was shot there on February 22nd, 1865, and another on May 12th, 1866. The late C. S. Gregson is cited by A. G. More as his authority for the statement that the Nuthatch is numerous in Dunhorn (Dunham) Park ; * Mr. W. I. Beaumont tells us that he used to see one or two pairs in Dunham Park in the early eighties, and that when living at Knutsford in the early nineties he saw birds occasionally in Tatton Park. Possibly the Nuthatch has disappeared from these localities, as it has from many places in England ; at any rate we have not met with it in either park in recent years.

At Oulton one pair has for several years past nested in a hole in a beech, some twelve feet above the ground. Jammed tightly into cracks and crevices in the bark of many of the trees in the vicinity of the nest are seeds—mostly of the yew, obtained from a neighbouring hedge—from which the birds have extracted the kernels. On one occasion we found an orange pip which had been similarly treated.

On April 17th, 1904, one of the birds, apparently the female, was carrying nesting material—mostly dead leaves—to the hole in the beech. During an interval in her labour, the male took up a position immediately in front of her on a thick branch, and standing with his back towards her, expanded his deflected tail and moved his raised head from side to side. The performance was repeated four times between as many acts of coition, which followed one another in rapid succession. †

The Nuthatch, as is well known, feeds during the greater part of the year upon insects ; the remains of two dipterous flies and three weevils were found, mixed with numerous fragments of acorn, by Mr. R. Newstead in the stomach of a bird which had been killed at Eaton on March 22nd, 1894. ‡

* *Ibis*, 1865, p. 138.

† *Cf. Saunders, Manual of British Birds*, p. 114.

‡ *Food of Birds*, p. 34.

TROGLODYTIDÆ.

WREN. *Troglodytes troglodytes* (Linné).

Local names—JENNY WREN; DICKY PUG*; STUMPY TODDY or STUMPY DICK (Longdendale).

An abundant resident in all parts, also a partial migrant or bird of passage on the coast.

The Wren is an abundant resident in all parts of the county, being met with as frequently in the bare cloughs amongst the hills in the east as on the wooded plain. The bird is equally plentiful at all seasons, but there is evidence of either emigration and immigration or the movement of passing birds in spring and autumn. On April 23rd, 1886, two struck the lantern on the Dee Lightvessel at midnight,† and on August 23rd, 1885, one was caught on the vessel in the early morning,‡ and another was on the deck on the morning of October 20th, 1886.§

The domed nest is built in a variety of situations, often in a thorn hedge, amongst the twigs growing from the trunk of an oak, or beneath the bank of a stream, where it is generally hidden from view by the overhanging turf. The exposed roots of fallen trees and the thatched roofs of sheds and haystacks are favourite sites. In 1890 Mr. F. Brownsword found a Wren's nest containing six eggs inside the old nest of a House Martin at Prestbury, and Mr. R. Newstead tells us that in 1899 one was built within the nest of a Swallow at Chester. In the Grosvenor Museum, Chester, there is a nest supported between the drooping wing and body of a dead Sparrow Hawk, which was taken from a keeper's gibbet at Carden Park in July, 1898. Mr. F. S. Graves saw a nest at

* Holland, *Glossary*, p. 413.

† *Migration of Birds*, Report 8, p. 84.

‡ *Op. cit.*, Report 7, p. 120.

§ *Op. cit.*, Report 8, p. 95.

Capesthorpe in 1899, which was built in the head of a Brussels sprout.* In 1898, Coward found an abnormal nest, containing eggs, in a crevice in the bark of an old poplar in Dunham Park. It was cup-shaped, with an arch of nesting material round the entrance hole, but had no dome, the roof being formed by the bark of the tree. In 1899 a similar nest was built in another part of the same tree, which had been blown down during the winter.

In winter a number of Wrens will occasionally roost together in a hole in a stack or wall, or it is said, in old nests; no doubt it was one of these gatherings which was captured in a riddle at night by a gardener at Congleton on February 8th, 1900, and was thought by him to be an early nesting pair of birds with their fully fledged young.†

The Wren sings in autumn and occasionally in the winter months; and in the early spring, before the warblers and migratory songsters have arrived, its loud and vehement song is one of the most noticeable bird-notes.

CERTHIIDAE.

TREE CREEPER. *Certhia familiaris britannica*, Ridgway.

A not uncommon resident.

As a breeding species the Tree Creeper, though not very common, is generally distributed in the lowlands, and it occurs in the wooded valleys of the upper Goyt and Dane. In winter it associates with Tits and Goldcrests, most of the larger flocks of these birds being accompanied by one or more Creepers.

* Cf. Seebohm, *British Birds*, Vol. I., p. 508.

† A. J. S., *Field*, XCV., p. 253, 1900. This sociable habit of the Wren is emphatically denied by Seebohm (*British Birds*, p. 509), but is confirmed by Saunders (*Manual of British Birds*, p. 116), Newton (Yarrell's *British Birds*, Vol. I., p. 461) and others.

The following incident shows to what an extent birds are creatures of habit, and suggests that many of their actions are not the outcome of a reasoned adaptation of means to an end, but rather an unthinking repetition of actions frequently performed under similar circumstances in the past. On May 11th, 1901, Oldham saw a Creeper fly to the trunk of an oak in Tatton Park and disappear in a small crevice in the bark. In prising back the loose bark in order to examine the nest, he inadvertently detached a strip about two feet long, which revealed the nest at some eighteen inches below the crevice. He replaced the strip as neatly as possible and stood a short distance away to see what would happen. The bird, which had been frightened from the nest when he first touched the tree, returned, and crossed and recrossed the replaced strip of bark many times, as though it realised that some change had taken place in the environment of the nest; in so doing it loosened the strip, which fell to the ground. The bird flew to another part of the trunk, but quickly returned to the now bare patch, at the lower end of which was the nest. It ran about the adjacent parts of the trunk and the bare patch, actually touching the nest, but did not settle upon it for some time; at last it worked up the bare place to the top, appeared to recognise the edge of the crevice, and from thence descended along the edge of the bark to the nest, on which it settled. When put off the nest again, it descended on its return in the same manner from the place where the crevice had been, and which had been, presumably, its usual and perhaps only possible means of entrance.

It has often been stated, even by well-informed writers, that the song of the Creeper is seldom heard in this country. It is difficult to understand how such a fallacy has arisen, for during the breeding season the male often sings persistently, pausing at intervals of a few seconds as it traverses a tree trunk in search of food to utter the notes *zee, zee, zee, pee, zee, zee, zissy-pee*. The song may occasionally be heard at other times of the year; we have notes of

Creepers in full song in Cheshire in mid-July, at the end of November, in mid-January, and late in February.

As a rule the Creeper hunts for its food on the trunks and branches of trees, searching in cracks and crevices for insects, but Mr. S. G. Cummings has seen a bird in Eaton Park catching flies on the wing after the manner of a Flycatcher. At Newton, Chester, Mr. Cummings and Oldham watched a bird in May, 1907, systematically working a red sandstone wall in its search for insects. The bird worked up from the bottom to the top, examining nooks and crannies, and then flew down to the foot of the wall again a few feet further on. This performance it repeated perhaps half a dozen times before it flew to a neighbouring tree-trunk.

The Creeper is one of the few birds which are known to feed upon coccids; Mr. R. Newstead has watched it picking the puparia of *Mytilaspis pomorum* (Bouché), the destructive mussel-scale, from apple trees in Chester gardens.* It also destroys many other destructive insects, among them the turnip flea beetle, which shelters under bark and similar situations in winter. Mr. R. Newstead found these beetles (*Phyllotreta undulata*, Kutschera, and *P. nemorum* (Linné)) in the stomachs of five Creepers which had been killed at Oakmere and Aldford in January and February, and in one from Ince which was obtained in June. In six out of eight specimens examined there were fragments of weevils, in some instances in considerable quantity; in one there were five small lepidopterous larvae, which, as the bird was killed in January, had probably been found by it when they were hibernating. Spiders and balls of spider's web were present in three examples, and in one the cocoon of a small ichneumon. Insects of the beneficial group were seldom present, but in one bird were a geodephagous and a coccinellid beetle. One bird, killed in January, had in its stomach an apple pip, and one in February three seeds of the knapweed.†

* *British Coccidae*, I., p. 38.

† *Food of Birds*, p. 36.

MOTACILLIDAE.

PIED WAGTAIL. *Motacilla alba lugubris*, Temminck.

Local names—WATER WAGTAIL ; WATITTY.

Resident and partial migrant ; only a few birds remain through the winter.

In Cheshire the Pied Wagtail is a partial migrant, only a few birds remaining through the winter. Early in March small flocks of immigrants, recognisable by their clean plumage, may be seen in the ploughed fields and pastures. From then until autumn the bird is plentiful and widely distributed, frequenting farmsteads and brooks in the hill-country as well as the watercourses of the plain. Emigration begins in September and continues through October and November.

On the 22nd and 23rd of April, 1886, flocks of Pied Wagtails and Meadow Pipits—on the second day with small flocks of Swallows—were observed at the Dee Lightvessel “passing to the east during the whole of the day.”* The birds may have been entering Lancashire or Cheshire, for there are no reports on the same or subsequent days of the first two species from stations further north. On October 30th, 1885, a movement of considerable magnitude was observed from the same vessel. Wagtails and Pipits in flocks were passing south-west all day ; at 9 a.m. on the 25th, a single Pied Wagtail had been seen on deck.† In this case, however, the birds were probably passing, since a similar southward movement was recorded on the same day at the Selker Lightvessel off the Cumberland coast.

At the time of the spring migration in March and April, and again prior to their departure in autumn, Pied Wagtails roost in large numbers in reed-beds. The birds arrive in

* *Migration of Birds*, Report 8, p. 84.

† *Op. cit.*, Report 7, pp. 114, 120.

little parties of from eight or nine to a score or more. They alight on the upper part of the reeds, often on the flower-heads, but later drop into thicker cover. On November 13th, 1904, several hundreds came into the reeds on Knutsford Moor between 4.15 and 4.40 p.m. On the 19th the birds were still roosting in undiminished numbers, but during the following week heavy snow laid the reeds, and when after the thaw the reeds recovered their upright position, no Wagtails came in to roost. On November 13th, 1897, there were many birds about the brooks and pit-sides in the neighbourhood of Alderley Edge, presumably passing southward, for a few days later all had disappeared.

The few odd birds which remain through the winter often show a partiality for a particular spot, and remain week after week beside the same watercourse or mere; in the evening they congregate and roost in small flocks in reed- and withy-beds. On February 4th, 1905, at least forty birds came in to roost on Knutsford Moor at dusk. Occasionally the birds keep in small flocks during the daytime in winter; on several occasions in December, January and February Mr. A. W. Boyd has observed flocks of from five to a dozen birds on his lawn at Bowdon.

In winter, especially during a frost, Pied Wagtails are numerous on the Dee marshes; the birds feed along high-water mark, and resort to the gutters when the tide is out.

The song of the Pied Wagtail is to be heard in Cheshire early in March, so soon as the immigrants have arrived; we have seen two males rise at the same time from a small flock of migrants, fly to a tree and sing from the branches.

In 1896 a pair of Pied Wagtails built a nest beneath the metals on the Cheshire Lines Railway near Moberley Station, over which many trains passed daily. In spite of the fact that the nest was removed several times during alterations to the permanent way, the birds did not forsake the spot, but succeeded in bringing off their brood.*

The examination by Mr. R. Newstead of the stomachs of

* Geo. Leighton, *Field*, LXXXVII., 1896, p. 845.

four Pied Wagtails, killed near Chester in February and March, shows that at this season the birds feed largely on beetles; weevils and others were identified, amongst them *Notiophilus biguttatus* (Fabricius), *Helophorus aquaticus* (Linné), *Cercyon* spp., and *Anchomenus* sp. In one were fragments of two ichneumons, and in two a little vegetable fibre. The contents of the stomachs of two killed at Ince in April were almost entirely fragments of *Diptera* (*Bibionidae*, etc.); of one in May, geodephagous beetles and two water-boatmen, *Notonecta glauca*, Linné; and of a bird in June, seven larvae of a tortrix moth and fragments of weevils.*

WHITE WAGTAIL. *Motacilla alba alba*, Linné.

A bird of passage in spring and autumn.

Probably the majority of the White Wagtails which pass up the west coast of England in spring cross the Irish Sea from Anglesey to the Isle of Man without approaching Cheshire, but some, moving eastward along the Denbigh and Flint seaboard, may spend a few days on the Cheshire shore before they pass on to the Lancashire coast; the birds have been several times observed on the coasts of North Wales, Cheshire and Lancashire. As, however, the species occurs inland in Cheshire as well as upon the shore it is probable that there is also an overland route. So close is the resemblance between this species and the Pied Wagtail that it is often overlooked, and the few observations recorded of its occurrence hardly suggest the actual regularity of its movements.

The spring passage takes place in April and May, and the birds often appear at the same time as migratory parties of Pied and Yellow Wagtails; when, however, two or three

* *Food of Birds*, pp. 36, 37.

White Wagtails are together they do not associate themselves closely with the other birds.

Brockholes observed a pair near Burton in Wirral in April, 1869, and the late C. S. Gregson shot one on Bidston Hill, but gives no date.* Mr. R. H. R. Brocklebank saw a party of about ten White Wagtails on the shore at Heswall on May 4th, 1904; there were a few Pied and Yellow Wagtails on the beach, but the White Wagtails, when flushed, flew in a flock apart from the other birds. On the 5th Mr. Brocklebank obtained five of the birds. Dr. J. W. W. Stephens saw a couple on the beach at Hoylake on May 5th, 1907.

Inland the bird has been more frequently observed. Some time prior to 1893 the late John Cordeaux saw a pair on the Peckforton Hills,† and within the last few years we have recognised it in several different localities in spring. In 1909 a single male was seen by Mr. J. M. St. John Yates at Buglawton on April 10th, but as a rule the birds do not appear until later in April and are passing during May. In 1906 Dr. M. S. Wood had a male constantly under observation on the Sewage Farm at Gatley throughout May; in 1909 a bird visited this spot on the 19th of April, and later in the month Dr. Wood secured a male and female out of a flock of five. In 1908 and 1909 Coward saw birds on the margin of the mere at Marbury near Northwich on various dates between the 20th and the end of April. As a rule single birds or couples were seen, but on April 24th, 1909, Mr. A. W. Boyd and Coward watched two pairs at close quarters; the females had no black on the crown.

The White Wagtail has been observed in Cheshire on the return migration. On September 3rd, 1905, Mr. S. G. Cummings and Oldham saw four birds—two adults in winter plumage, and two presumably birds of the year—on the Dee Marsh at Burton. A few days later Mr. Cummings saw a single adult bird consorting with Pied Wagtails in the same

* H. E. Smith, p. 237.

† Dobie, p. 293.

locality.* The plumage of the young birds was noticeably paler than that of young Pied Wagtails which were feeding near them. In 1909 Dr. Wood saw several with Pied and Yellow Wagtails at Gatley in the second week of August, and on September 5th Coward saw a male and female with three Grey Wagtails at Ashley Mill near Bowdon.

GREY WAGTAIL. *Motacilla melanope*, Pallas.

Resident on the hills in the east, but subject to local migration; possibly some birds emigrate in autumn.

The Grey Wagtail is resident in Cheshire, breeding in considerable numbers on the streams of the hill-district in the east, and sparingly in the lowlands. In no part of the county, in the breeding season, is it more abundant than on the Dane from its source to Bosley, where it is at once the commonest wagtail and the most attractive bird that frequents the stream. Below Bosley it is not so numerous, but nests in suitable places on the lower reaches, such as Buglawton and Cranage. On the Goyt and other streams in the hill-country it is also plentiful.

A few pairs of Grey Wagtails breed in the lowlands, chiefly in the eastern portion of the plain. The birds frequently return year after year to the same spot. In May, 1898, Dr. M. S. Wood found a nest with young at Cheadle, and Mr. W. H. Peterkin observed a pair which were nesting in a secluded dell on Alderley Edge. In 1899 the latter pair nested again in the same spot.

In 1903 and 1905 Grey Wagtails nested in the masonry of a bridge at Siddington, and on July 6th, 1905, Mr. S. G. Cummings watched a pair feeding young near Mouldsworth Station. Mr. A. W. Boyd has, on two occasions, seen Grey Wagtails in June on the Dee above Chester. In 1907, Mr.

* *Zoologist*, 1905, p. 430.

Joel Southworth tells us, birds nested near the flashes at Winsford.

The majority of the Grey Wagtails leave the hills in autumn, and are distributed in winter over the lowlands, where they haunt the margins of the meres, rivers and streams. We have seen the bird at Marbury Mere near Northwich so early as August 18th, but as a rule it does not appear in the plain until October. Occasionally small flocks, perhaps of birds of passage, may be observed in the autumn. On August 28th, 1907, Mr. J. J. Cash saw between twenty and thirty together at Chelford.

In winter the Grey Wagtail is, as a rule, unsociable and is most frequently met with singly. Individuals are greatly attached to localities where they have taken up their quarters, and will haunt the same spot day after day for several weeks.

The birds return to the hills in February or March. Mr. N. Neave considers that they reach the neighbourhood of Rainow at the end of February, but Mr. J. M. St. John Yates says that at Buglawton it is generally the second week in March before any number arrive. Throughout March and April, however, birds are to be seen in the plain; indeed there are even more birds about in these months than in December, January and February. At the end of April, at which season this species usually has eggs, we have seen Grey Wagtails at Tabley, Ashley and Bowdon, and on May 13th, 1903, Mr. S. G. Cummings and Coward watched a pair at Marbury near Northwich. Although careful search failed to reveal a nest, it is possible that there was one in the neighbourhood. Some of these April birds may not be going up to the local hills but be passing through the county.

In Wirral and west Cheshire the Grey Wagtail is common. Brockholes observed it only occasionally, and Mr. R. Newstead states that it is rare at Ince.* Mr. S. G. Cummings tells us that a pair nested some years ago on

* Dobie, p. 293.

a stream which runs through the Bache Grounds, Chester, where he heard a bird singing in March, 1904, but as a rule the Grey Wagtail is only a winter visitor to the neighbourhood of Chester.

Mr. R. Newstead found in the stomach of a bird killed at Ince in January small fragments of beetles, including carnivorous *Geodephaga* and injurious *Rhynchophora*.*

BLUE-HEADED WAGTAIL. *Motacilla flava flava*, Linné.

Has been obtained once.

A female Blue-headed Wagtail which was shot on the lawn at The White Hall, Tarporley, in March, 1898, † is preserved in the collection of the late J. H. Stock. The bird, which we have examined, was at first described as a male, but it has not the blue-grey crown of the male; Mr. A. B. Stock tells us also that it was sexed as a female at the time it was stuffed. It is referable to the sub-species *M. flava flava*, Linné. The Blue-headed Wagtail, reputed rare in the west and north-west of England, may have been overlooked; Mr. F. Stubbs, in June, 1899, saw a bird at Crowden in Longden-dale, which had a blue-grey head and white eye-stripe, that he believes was referable to this species. ‡

YELLOW WAGTAIL. *Motacilla raii* (Bonaparte).

An abundant summer resident.

The Yellow Wagtail, a regular summer visitor to Cheshire, arrives early in April, in the west of the county sometimes

* *Food of Birds*, p. 37.

† *Birds of Cheshire*, p. 256.

‡ F. Stubbs, p. 27.

so early as the fourth of the month. The birds usually appear in small migratory flocks, often in the company of Pied Wagtails and Meadow Pipits, in damp meadows and open park-lands. When they first arrive they are in bright yellow plumage, and the males are especially conspicuous, particularly when feeding on ploughed land. The newly arrived birds roost nightly with Pied Wagtails in the reed-beds, and in August, after the nesting season is over and the birds have begun to pack preparatory to departure, they again repair nightly to the reeds. On Knutsford Moor we have seen them in the reeds so early as August 14th.

During spring and summer the Yellow Wagtail chiefly frequents water-meadows and other low-lying situations in the plain; on the hills in the east it is rarer, but may be seen occasionally on the upland pastures, and a few pairs breed in the upper part of Longdendale.

Emigration begins in August, and towards the end of the month flocks are on the move. Mr. S. G. Cummings has seen numbers on the Dee marshes on August 31st. A few remain until September, but after the middle of that month the bird is seldom seen in Cheshire except in the west, where Mr. Cummings has noticed it on several occasions between the 18th and 27th. Mr. J. A. Holland heard large numbers leaving the reeds on Knutsford Moor in the early morning on September 10th, 1907.

When the Yellow Wagtails are pairing the male will hover like a Kestrel, about eighteen inches above the female in the grass below. The bird takes insects on the wing in the manner of the Spotted Flycatcher. Mr. J. J. Cash has seen six or more birds at one time sallying from the piles in the bed of the Mersey near Sale to take their prey in the air.

An immature bird, entirely white except for a tinge of yellow on the primaries, and with normally coloured irides, was shot at Dunham Massey in 1895.

TREE PIPIT. *Anthus trivialis* (Linné).

Local names—BLOODLARK ; TITLARK ; WOODLARK.

An abundant summer resident.

The Tree Pipit usually arrives in Cheshire towards the end of the second week in April ; at that time an odd bird may be heard singing here and there, and a day or two later the majority come with a rush. The bird is generally distributed throughout Wirral and the plain during the summer months, and although absent from the bare moorlands it occurs freely on the hillsides wherever there are plantations. In many of the parks, and in those portions of Delamere Forest where oaks predominate, it is particularly plentiful. In such situations the Cuckoo usually deposits her egg in the nest of this species. The eggs are usually laid in May, but in 1909 Mr. S. G. Cummings found a nest at Upton, which contained young on the 17th of that month.

The song is not invariably uttered on the wing. At times, especially in dull or windy weather, the bird remains perched on the tree top, the concluding notes, *see-ar, see-ar, see-ar*, uttered normally as the bird sails downwards to regain its perch, being then curtailed or omitted altogether ; this curtailment of the song is usual with the birds which arrive in advance of the main body in spring. In the height of the mating season the full song is occasionally uttered by a bird as it runs upon the ground.

The Tree Pipit will simulate disablement in order to lure an intruder from its nest. One which Oldham flushed from a nest containing six eggs in a hedge bank at Beeston Castle, dropped into the roadway, fluttered for a few feet, and then flew up into the trees, where it continued its fluttering flight from tree to tree, calling *zit, zit*. The bird soon returned to the nest, from which it was disturbed three times at intervals of five minutes, and on each occasion its alluring tactics were repeated.

The stomach of a Tree Pipit from Aldford, examined by Mr. R. Newstead in June, contained many dipterous flies (*Tipulidae*, etc.) and beetles, including *Hypera nigrirostris* (Fabricius) and other weevils.*

MEADOW PIPIT. *Anthus pratensis* (Linné).

Local names—TITLARK ; MOOR PEEP ; PEETLARK.

An abundant resident and partial migrant ; frequently noted as a bird of passage in Liverpool Bay.

The Meadow Pipit, a resident in Cheshire, is found throughout the county, but is local as a breeding species. On the bleak moorlands, where, in company with the Red Grouse and Curlew, it nests up to the summits of the highest hills, it is exceedingly plentiful in summer. In the lowlands it is found sparingly in meadows and pastures, and is abundant on unreclaimed mosslands, such as Lindow Common, but is not so common nor so generally distributed as the Tree Pipit. It is fairly common in Wirral, where it nests amongst the sandhills.

Early in March migratory parties of Meadow Pipits, very clean birds, arrive in Cheshire, and may be seen with Pied Wagtails in the fields and parks, and on the Dee marshes. At Hoylake Dr. J. W. W. Stephens has noticed these flocks so early as March 8th, and we have seen them inland on the 11th of the month. On March 29th, 1908, and on exactly the same date in 1909, he noticed a considerable immigration of Meadow Pipits. In the latter year he saw birds coming in across the Hilbre flats until April 10th. Throughout March the birds are constantly arriving, and like their companions the Pied Wagtails, roost at first in the reed-beds by the meres. Probably many

* *Food of Birds*, p. 38.

of these birds are passing through the county on their way to more northern breeding haunts, and even so late as the third week in April the two species have been noted in company at the Dee Lightvessel, passing east in considerable numbers. On April 22nd and 23rd, 1886, important easterly movements were recorded simultaneously at the Dee Lightvessel and at the Selker off the Cumberland coast.*

Emigration takes place from September to November, and no species has been recorded as passing the Dee Lightvessel in autumn more frequently than the "Titlark." In 1884 the general movement along the west coast lasted from October 18th to November 14th, but a Meadow Pipit was found dead on the deck of the Dee Lightvessel on September 15th; at this station important movements were noted on October 18th and 21st, and from the 10th to the 14th of November.† In 1885 the first birds were seen at the Dee Lightvessel on August 15th, and others passed on September 6th, while from October 15th to 30th, flocks passed "almost daily, . . . often in considerable numbers, and notably on the 18th, 21st, and 25th, when continuous streams passed, flying S. or S.W. . . . From the 1st to 9th of November they passed the Dee vessel almost daily. On December 29th, six were observed at the Dee L.V. On comparatively few instances noted as migrating at night."‡ Similar though not such extensive movements were noted in 1886 and 1887. Some of the birds mentioned as "Titlarks" or "Pipits" may not have been referable to this species, but in many cases wings were obtained. At the end of September we have seen large numbers of Meadow Pipits in scattered flocks on the Dee marshes. On October 17th, 1907, Dr. J. W. W. Stephens noticed many crossing the sands in a westerly direction at West Kirby. Inland, flocks may be seen so late as the beginning of November.

* *Migration of Birds*, Report 8, pp. 84, 107.

† *Op. cit.*, Report 6, pp. 105-110, 115.

‡ *Op. cit.*, Report 7, p. 120.

The bird does not reach the moorlands immediately it arrives in spring; on March 25th, 1905, for instance, Meadow Pipits were plentiful in the valley bottoms but there were none on the Longdendale moors. The moorlands are usually deserted in winter, but in mild seasons a few birds remain. Mr. F. Nicholson has seen the bird on the moors at Woodhead so late as December 10th, and in the mild winter of 1898-99 Mr. N. Neave saw Meadow Pipits near the "Cat and Fiddle" in January.

The Meadow Pipit is absent in winter from many parts of the plain, but on the Dee marshes and in the water-meadows bordering the larger rivers it occurs all the year round. Hard weather drives the birds to the marshes, where, in severe frost, they are very abundant. On December 26th, 1901, they were unusually abundant all along high-water mark when the marshes were covered at high tide.

ROCK PIPIT. *Anthus obscurus* (Latham).

A local resident ; breeding, apparently, in one locality only.

The sandy coast of Wirral is unsuited to the requirements of the Rock Pipit during the breeding season, and its nest has only been found on the rocky islets of Hilbre. Brockholes had seen eggs from that locality, and Mr. A. O. Walker found three nests there on May 24th, 1858.* When on Hilbre in May, 1894, we saw several pairs of nesting birds on the edge of the low sandstone cliffs.

The Rock Pipit is occasionally met with on the shores of the Dee Estuary in the winter months. Mr. R. H. R. Brocklebank has in his collection a female which he shot on Burton Marsh on January 8th, 1900, and on December 9th, 1903, Mr. S. G. Cummings and Coward watched a bird on the stones of the Dee Cop between Queen's Ferry and

* Dobie, p. 294.

Connah's Quay ; about a week earlier Mr. Cummings had seen a Rock Pipit at the same spot. During the winter of 1906-07 one haunted the sea-wall at Parkgate for several weeks. Oldham saw it on November 17th and 18th and again at the same spot on February 10th.

ORIOLIDAE.

GOLDEN ORIOLE. *Oriolus galbula*, Linné.

A rare straggler to Cheshire.

There are only two recorded instances of the occurrence of the Golden Oriole in Cheshire. A male was obtained at Taxal in May, 1830, and was preserved in the collection of the Manchester Natural History Society.* In the late fifties a female was shot at Styal, where it was said to have been consorting with a number of Thrushes and about half a dozen birds of its own species.† It is now in the collection of Mr. Bulkeley Allen of Bowdon. Although the Golden Oriole is at times gregarious, and has been met with in flocks of considerable size in Cornwall at the period of the spring migration, it is usually noticed in England singly or in pairs ; but the half dozen birds which were not obtained at Styal may have been incorrectly identified.

On May 6th, 1907, a bird was seen by Mr. Alan Lister-Kaye and Mr. Roger Parr when motoring between Ashton-Hayes and Kelsall, which they believe was a Golden Oriole. Mr. Lister-Kaye says (*in lit.*) : " It flew along in front and close to the motor, and when Mr. Parr slowed down, it sat on the hedge about ten yards off. It was magnificently

* *Aves Britannicae*, p. 7, 1836.

† *Minute-Book of the Manchester Nat. Hist. Club*, Sept. 28th, 1863, p. 165. "Redshank," *Manchester City News*, July 24th, 1875.

marked, yellow and bronze-black wings, about nine or ten inches long as it sat. When flying the flight was a little like a Jay's."

Several instances of the occurrence of the Golden Oriole in Lancashire are recorded by Mitchell,* and there is a bird in the collection at Tabley House which may have been killed in either Lancashire or Cheshire. The only information given about it in Lord de Tabley's MS. note-book (circa 1864-68) is: "One stuffed at Tabley reported to have been shot near Manchester."

LANIIDAE.

GREAT GREY SHRIKE. *Lanius excubitor*, Linné.

An occasional winter visitor.

The Great Grey Shrike has occasionally visited Cheshire during the autumn and winter months. One, formerly in the collection of the Manchester Natural History Society, was shot by J. Moore at Sale.† Byerley gives Whitby Locks (now Ellesmere Port) as a locality where the bird has been observed, and Leo. Grindon states that one was seen at Cheadle about the year 1850.‡ Lord de Tabley refers to one in the "Chester Nursery Gardens, Mar. 1864."§ Mr. J. Ball tells us that one was shot at Astbury about thirty years ago.

A Grey Shrike with a single white wing-bar, which was captured in a hawk-trap at Oakmere in Delamere Forest in December, 1886, is preserved in the Grosvenor Museum, Chester. Dr. Dobie mentions birds at Eaton Kennels and

* *The Birds of Lancashire*, pp. 49, 50.

† T. Blackwall, *Loudon's Mag.*, Vol. II., 1829, p. 274.

‡ *Country Rambles*, p. 286.

§ *MS. note-book*.

Stanlow, without dates, and one obtained at Dodleston on November 9th, 1893. There is an undated specimen from Middlewich in the Warrington Museum.

On November 3rd, 1901, Mr. G. F. Gee had a view at close quarters of a Great Grey Shrike, which was perched on a dead branch that protruded above a thorn hedge, on the Chester road between Mere and Tabley. Mr. Gee did not notice the number of bars on the wing of the bird, but Mr. F. S. Graves saw a Grey Shrike with double wing-bars near Capesthorpe on December 25th, 1903. From the dulness of its plumage he was of opinion that it was an immature bird.*

RED-BACKED SHRIKE. *Lanius collurio*, Linné.

A rare and irregular summer visitor.

The Red-backed Shrike is an irregular summer visitor to Cheshire. H. E. Smith records a nest near Claughton in 1863,† and in 1874 Brockholes said that a few years before that date a pair brought off their young near Bidston. Mr. R. Newstead found the bird nesting at Ince in 1886,‡ and Mr. S. G. Cummings once saw a male in a field near the Dee Cop. Mr. W. Bell tells us that a pair nested at Leasowe in 1892.

In all these instances the Red-backed Shrike has occurred near the coast and we know of only one occasion on which it has been observed inland. Dr. H. H. Corbett tells us that a pair nested, about the year 1869, in a roadside hedge at Alderley.

* *Zoologist*, 1904, p. 31.

† H. E. Smith, p. 243.

‡ Dobie, p. 294.

WOODCHAT. *Lanius pomeranus*, Sparrman.

Has occurred once.

The Woodchat was added to the Cheshire avifauna in 1908, and although the birds were not obtained the record is trustworthy. On May 2nd of that year, Mr. J. M. St. John Yates saw two birds of this species—he thinks a male and female—on some furze bushes by the side of the river Dane, about two miles above Congleton. The birds were remarkably tame and allowed him to approach to within a few yards of them. Mr. Yates, who is well acquainted with the Red-backed Shrike, at once noticed the reddish-brown head and conspicuous black and white plumage of the male Woodchat, and subsequently described the birds in detail to Coward.*

The Woodchat has been recorded twice from Lancashire.

AMPELIDAE.

WAXWING. *Ampelis garrulus*, Linné.

An irregular winter visitor.

The Waxwing, which visits Great Britain in considerable numbers at irregular intervals, is usually more abundant in the east than in the west of the country. In the invasions of the winters of 1849–1850, 1863–1864 and 1901–1902, the bird reached Cheshire; in 1892–1893, when many birds were recorded from different parts of England, one was shot a few miles from the county border—at Connah's Quay, Flintshire.†

In January, 1850, the late Henry Johnson recorded the

* *British Birds* (Mag.), II., 1908, p. 60.

† Dobie, 294.

occurrence of a Waxwing in Wirral,* and Mr. F. Nicholson tells us that several examples were obtained near Bowdon in the same winter. Towards the close of the year 1863 two birds were observed at Moreton, Wirral, one of which was shot, and preserved by J. Leyland of Liverpool; and on the 23rd of February, 1864, another was caught under a riddle baited with berries of the dog-rose in a garden at Liscard Vale. Before its capture the bird was feeding on the fallen berries and allowed a man to approach within a few yards before it took wing.†

In 1898 we saw an adult Waxwing which had been shot at Hulmewalfield near Congleton a few years before. There is a specimen in the Grosvenor Museum, Chester, from Tattenhall, but the date of its occurrence is not known.

Three birds, at least, were obtained in the invasion of 1901-02; one, now in the possession of Mr. J. Porter at Warburton, was shot in that district; on December 23rd, 1901, a female was killed at Willington, on the Flintshire border; and on the 26th of the same month a male was shot at Aston near Nantwich. The two last named birds are in the Grosvenor Museum, Chester.‡ The stomachs of both were full of the hips of the wild rose.§

MUSCICAPIDAE.

PIED FLYCATCHER. *Muscicapa atricapilla*, Linné.

A bird of double passage.

The Pied Flycatcher has been occasionally observed in Cheshire, but only as a passing migrant, and with one excep-

* *Zoologist*, 1850, p. 2769.

† N. Cooke, *Zoologist*, 1864, p. 9023.

‡ *Chester Soc. Nat. Science, Literature and Art*, Report, 1901-2, p. 19.

§ R. Newstead, *Food of Birds*, p. 39.

tion all the instances, when the time of year is known, have been during the vernal migration. In nearly every case the birds observed have been males, but this is possibly due to the markedly conspicuous plumage of that sex.

The earliest mention of the bird refers to one which is still preserved at Tabley House. "A specimen now preserved shot by F. (the second Lord de Tabley), Garden Wood, 1826."* Brockholes saw a Pied Flycatcher in a wood at Burton in Wirral on April 30th, 1867, and another was noted at Thornleigh near Chester on May 5th, 1884.† On the same day, in the following year, Coward watched a male in a covert at Birkin Heath, Ashley.

Mr. C. D. Milne saw a male at Cheadle in 1887, and two, both males, one of which he shot, in 1889. Dr. M. S. Wood killed a male at the same place on April 29th, 1900. Dr. Dobie mentions one that was obtained at Hoole near Chester,‡ and we have seen one which was shot in the garden of Northenden Rectory. Gillett, a Stockport taxidermist, had two examples through his hands some years ago—one from Vernon Park, Stockport, and the other from Adswood near Cheadle. The late J. H. Stock killed a male, now in the collection at The White Hall, on Little Budworth Common on May 5th, 1900. A male in the Grosvenor Museum, Chester, was obtained at Eaton on April 16th, 1894. On May 21st, 1898, Mr. F. Stubbs watched a pair at Tintwistle.§

On the evening of April 22nd, 1902, a male Pied Flycatcher was seen by Oldham at Booths Mere, Knutsford. For forty minutes the bird was constantly on the move, catching insects in the air, and once it alighted for an instant in the grass. It never returned to the same perch and seldom to the same tree, but did not wander far from one spot, a space of about twenty yards. It did not sing nor utter any note, but the snapping of its mandibles when it caught an insect was

* De Tabley, *MS. note-book*.

† *Field*, LXIII., 1884, p. 651.

‡ Dobie, p. 295.

§ F. Stubbs, p. 28.

distinctly audible. It frequently, when perched on a twig, moved its tail vertically in the deliberate fashion so characteristic of the species. On the evening of the 23rd the bird was again in the same spot, but it was raining hard during the time we watched it, and it made no sallies into the air to feed but repeatedly dropped into the grass for an instant to pick up an insect. On May 13th, 1903, Mr. S. G. Cummings and Coward saw a male Pied Flycatcher and a Spotted Flycatcher—the first noticed that year—perched within a few feet of each other on the railings enclosing a small wood in Marbury Park near Northwich. The Spotted Flycatcher made a dash at the rarer bird and chased it among the trees in the wood, finally driving it away.

The only instance of a Pied Flycatcher being observed on the return migration, is of a young bird which was watched for about an hour in the Rectory Garden at Warburton, by the Rev. G. Egerton Warburton, on August 25th, 1908.

SPOTTED FLYCATCHER. *Muscicapa grisola*, Linné.

Local names—OLD MAN ; WALL ROBIN.

A common and widely distributed summer resident.

The Spotted Flycatcher is a summer resident, usually arriving in Cheshire about the middle of May, but exceptionally in April. In 1909, when the Swift and Turtle Dove were abnormally early, Coward saw a single bird at close quarters at Ashley Mill near Bowdon on April 27th. It is generally distributed in the lowlands, and occurs in the valleys of the Goyt and Dane and in many of the wooded cloughs on the hills.

The bird sometimes rears its young in the nests of other species. On May 31st, 1857, the late R. Holland saw a

Spotted Flycatcher leave the half-finished nest of a House Martin under the eaves of his house at Mobberley. He found that the Flycatchers had built a nest on the foundations begun by the Martins and had laid one egg. Three weeks later the Martins had recommenced building operations and had nearly finished the outside of the nest; the Flycatchers' nest, now empty, was still within. Holland did not notice whether the Flycatchers had brought off a brood or had been driven away by the Martins.* In an instance noticed by the late Rev. C. Wolley-Dod at Malpas, no nest was constructed by the Flycatchers, a Swallow's nest of the previous year being used without any addition.†

In 1899 Mr. F. S. Graves found a Spotted Flycatcher's nest at Alderley Edge which had been built inside the nest of a Song Thrush, there being two eggs of the latter bird beneath the nesting material added by the Flycatchers.

Emigration takes place in August, but young birds are sometimes about at the beginning of September, and Mr. S. G. Cummings saw one on the 24th of that month in 1904. There is no definite information in the Migration Reports regarding the migration of the Spotted Flycatcher at the mouth of the Dee; one entry of "Flycatcher," killed on October 4th, 1886, after a number of unidentified small birds had been about the light all night, is too vague to be considered.‡

The Spotted Flycatcher, like the Robin, Wren and Swallow, is considered sacred in some of the country districts, and its nest and eggs are not molested by the schoolboy.§

* *Science Gossip*, 1868, p. 89.

† *Field*, XC., 1897, p. 307.

‡ *Migration of Birds*, Report 8, p. 92.

§ Holland, *Glossary*, p. 249.

[RED-BREASTED FLYCATCHER.

Muscicapa parva, Bechstein.**One reputed occurrence.**

Mr. Edward Tristram of Poynton states that during the last fortnight in June, 1903, a bird frequented his garden, which he is "convinced must have been a Red-breasted Flycatcher." * June is an altogether improbable month for this species to be seen in Britain; all the properly authenticated occurrences have been between the middle of September and the end of January. Apart from this, Mr. Tristram's description of the Poynton bird is vague, and "the crown of its head almost black" does not suggest the Red-breasted Flycatcher. The fact that it hawked for flies in the air does not prove that it was a Flycatcher, but whatever the bird may have been, it is inadvisable on such data to give the species a definite place in the Cheshire avifauna.]

HIRUNDINIDAE.

SWALLOW. *Hirundo rustica*, Linné.**An abundant summer resident and bird of passage.**

The Swallow seldom reaches Cheshire in any numbers until the second or third week of April, but odd birds often arrive in the first week, before the main body; in 1904 Mr. S. G. Cummings saw a single bird at Blacon on April 4th, and in 1902 there was one on the 5th flying over Booths Mere, Knutsford, and another at Oakmere on the following day, in spite of a cold north-east wind accompanied by showers of sleet.

During the summer the Swallow is universally distributed,

* *Field*, CII., 1903, p. 138.

and may be seen hawking for insects on the bleak hill tops as commonly as in the cultivated plain.

Like the Sand Martin, but in much smaller numbers, the Swallow roosts in reed-beds. This habit is, however, only general in the autumn, when, early in September, the birds have begun to flock. The Swallow does not depart so early as the Sand Martin, but emigration begins in September and is usually continued until the middle of October. Frequently, however, a few birds remain until the end of October, and occasionally, as in the mild autumn of 1896, well into November; in that year both Swallows and House Martins were observed so late as the 15th, and in 1903 there were a few about on November 6th. Late Swallows are usually birds of the year. In late springs Swallows are often driven to take refuge from severe weather in buildings and outhouses, where many die from cold and hunger. In May, 1886, hundreds perished in Cheshire.

As a bird of passage the Swallow has been occasionally noted at the Dee Lightvessel; the single spring observation, of birds in ones and twos passing north-east the whole day on May 15th, 1887, suggests a movement later than is generally noticeable inland.* In 1884 and 1885 Swallows were observed in the autumn; in 1885 the first were noticed going south on July 31st, but in 1884 not until August 31st, and then only a score of birds.† The paucity of observations suggests that the main movements along the coast are to the west of Cheshire. From the fluctuations in the numbers of birds to be seen in any particular locality in autumn it is evident that Swallows from further north pass through the county at this season, and, though not so noticeable in spring, birds may then travel northward.

The nest of the Swallow, a saucer-shaped structure, is usually supported on a ledge or beam, and even when the mud of which it is built is plastered against a vertical wall, some projection is as a rule utilised as a support. Mr.

* *Migration of Birds*, Report 9, p. 87.

† *Op. cit.*, Report 7, p. 121; Report 6, p. 116.

S. G. Cummings, however, refers to nests which were built in a loft at Backford Vicarage, Chester, in 1904, which had no support of any kind beneath them, and owing to their shape had of course less area of attachment than nests of the House Martin.* On June 19th, 1907, Coward examined two similar nests, built only a few feet apart, and both containing eggs, on the vertical wall of the entrance to a stable at Great Budworth. The nests, except that they had no attachment to the roof above, were exactly similar to the half-cup-shaped nests of the House Martin, and had no support of any kind beneath them. In both cases the young were safely brought off without the structure giving way. Another similar nest was observed near Rock Ferry in 1891.†

Mr. Cummings has seen nests built in a low and narrow culvert in Eaton Park; they were not more than two feet above the water in the archway.

In 1872 a white Swallow was seen on the wing at Delamere,‡ and in 1867 an albino was shot at Gayton, where it had been observed in the nest with three normally plumaged birds.§

HOUSE MARTIN. *Chelidon urbica* (Linné).

An abundant summer resident.

The House Martin is an abundant summer resident in all parts of the county; in the east it nests about the hill farms, and frequently feeds at an elevation of at least twelve hundred feet at Shuttlings Low, in the cloughs of Longden-dale and elsewhere.

The bird, in early years, arrives in the third week of April, but often very few House Martins are seen until the beginning of May. Indeed, in most years the first comers seem to be on passage and it is not until May that the birds frequent the

* *Zoologist*, 1905, pp. 121-123.

† C. H. S., *Field*, 1891, p. 284.

‡ *Field*, XL., 1872, p. 184.

§ D. M'Isaac, *Field*, XXX., 1867, p. 286.

spots where they nest. Thus in 1902 a bird was seen by Mr. F. S. Graves at Audlem on April 14th, and another was noticed at Knutsford on the 29th, but it was not until the middle of May that the birds which annually nest in Bowdon appeared in the neighbourhood of the houses. In 1906 nests at Bowdon were not completed until June 20th.

During the summer months the House Martin is in most parts of the county even more abundant than the Swallow, but in a backward spring the bird suffers. In the cold inclement spring of 1886 many birds were killed, and the numbers which visited Cheshire were considerably below the average for several years afterwards.

Towards the end of August the House Martins begin to gather in considerable flocks and in September numbers depart. As a rule, however, there are many about until the middle of October, and in some years even so late as the beginning of November. In 1897 and 1903 birds were seen in different parts of the county so late as November 6th. Many of these belated House Martins are birds of the year, for it is not unusual to see young in the nest so late as the middle of September, and in 1901 and 1903 Mr. S. G. Cummings found birds still in nests on October 3rd and 10th respectively.

In common with many insectivorous birds, the Martin has, in places, suffered from the inordinate increase of the House Sparrow; the stronger bird will oust the weaker and appropriate its nest. In this connection it is a significant fact that at Tarporley, where Sparrows were rigorously destroyed, Mr. R. J. Howard has counted thirty-two occupied nests of the House Martin under eighteen yards of eaves.*

The House Martin, like many other birds which take insects on the wing, feeds freely on flying beetles, especially the dung beetle *Aphodius fimetarius* (Linné); in the stomach of one bird, killed at Chester in August, Mr. R. Newstead found many wing-cases of a coccinellid beetle.†

* Mitchell, *Birds of Lancashire*, p. 57.

† *Food of Birds*, p. 40.

SAND MARTIN. *Cotile riparia* (Linné).

An abundant summer resident ; a bird of passage in spring and autumn.

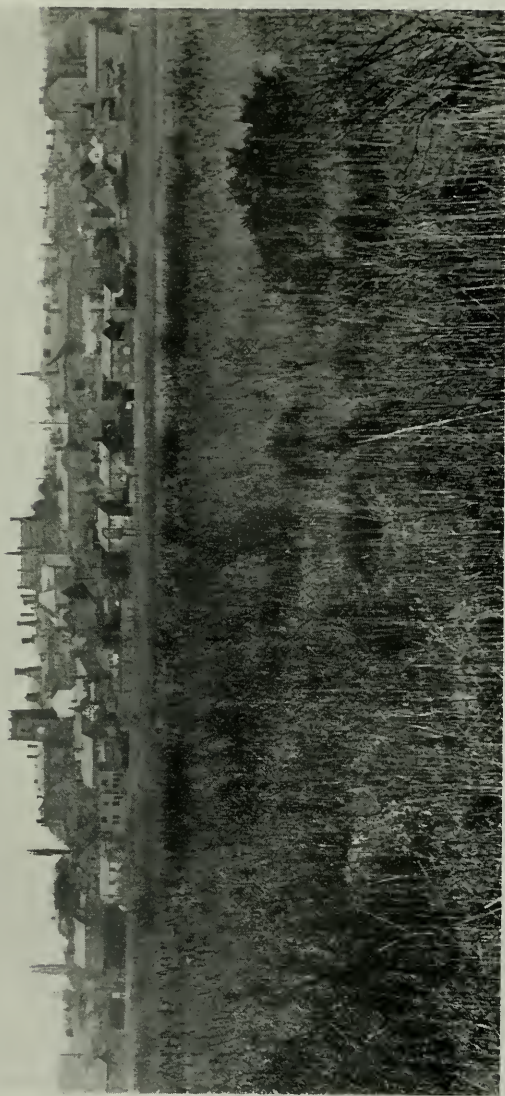
In most springs a few Sand Martins reach the Cheshire meres about the end of March or in the first week of April ; the majority of the birds arrive by the middle or end of the latter month. From then until the autumn the Sand Martin is met with in all parts of the county, frequenting the meres and rivers in large numbers. The bird is abundant about the Woodhead Reservoir at an altitude of eight hundred feet. In July Sand Martins begin to flock, and numbers emigrate at the end of the month or early in August ; during September, however, and exceptionally so late as the middle of October, they may be observed in some numbers, generally in the vicinity of the larger waters.

In August Sand Martins congregate in large flocks prior to their departure, and these gatherings are often exceptionally large in different parts of the Mersey valley between Stockport and Warrington, where the birds may be seen lining the telegraph wires in thousands or hawking for insects in dense crowds over the low-lying water-meadows. Mr. J. J. Cash thus describes one of these flocks which he observed near Wythenshawe in 1893 :—“ On August 12th the neighbourhood was inundated with Sand Martins. I never saw so many before. The air was full of beating wings and clamorous twitterings. The birds covered a wire railing, a hundred yards or more in length, until it resembled a thick cable without a flaw ; their heads were all in one direction, pointing to the west. The surrounding trees were filled, and the birds flew in and out amongst the foliage of one large chestnut like bees around a hive. They must have numbered incalculable thousands, and the district in question evidently was, in 1893, the rendezvous for Martins over a very wide area. The flock haunted the district for ten days. A foretaste of autumn at the end of July no doubt precipitated the assembling, but the return of intense heat in August

evidently checked the departure. However, on the bank of the Mersey near Sale, on the evening of the 22nd of the month, I saw what I took to be the same concourse again—for surely two such multitudes could not exist in close proximity! The whole expanse of sky was speckled and dotted with birds flying at a great altitude, and bearing slowly but surely westward, the direction Swallows and Martins invariably take when leaving the district. As darkness fell I still watched this vast army of migrants in steady flight high above the river.”

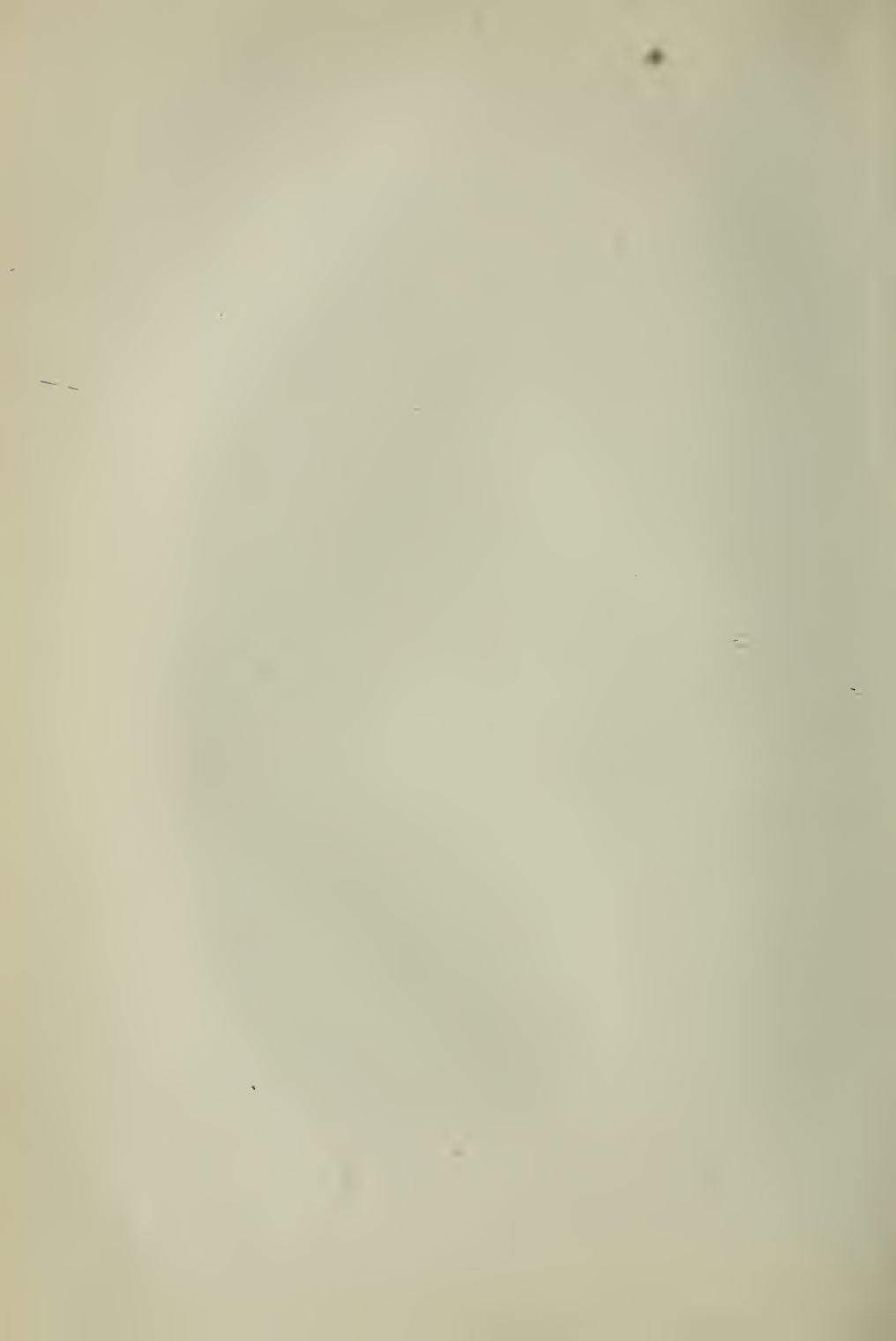
For some weeks after they arrive in spring—often until the middle of May—and from the end of June, when the young birds are on the wing, until their departure, flocks of Sand Martins, constantly varying in size, roost nightly in the reed-beds by the meres. As large numbers frequently appear for a few nights after the locally breeding birds have repaired to their nesting haunts, and as the numbers vary considerably at these roosts in August and September, it is evident that the flocks are not all of Cheshire residents, but in the spring and autumn frequently consist of birds passing to and from more northern haunts. In the reed-beds on Knutsford Moor there were in 1903 upwards of two hundred birds on April 16th—over a fortnight after the first birds were noticed in Cheshire—and on the 23rd about half that number; on May 4th, the flock comprised three hundred birds or more, and up to the 12th the numbers showed no diminution. On May 16th only a few remained, and on the 18th none was to be seen. On July 2nd there were many hundreds of birds above the Moor a little before dusk; early in August the numbers had increased—by the 13th to several thousands. On the 27th there were far fewer birds, perhaps a sixth of the number seen on the 13th, and they continued to dwindle until September 3rd, when only about two dozen remained.

The increase and decrease were fairly regular in 1903, but in 1904 and 1905 the fluctuations were more noticeable. On April 5th, 1904, a little party of eleven Sand Martins was



KNUTSFORD MOOR.

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flying over the Moor in the evening ; by the 11th there were about two hundred, and by the 16th fully a thousand birds ; on the 18th there were perhaps one hundred and fifty, and on the 25th not above a dozen. On May 3rd and 9th, however, there were about three hundred. On June 18th three or four hundred birds came in, and on the 29th at least a thousand ; a month later several thousand birds roosted nightly, but by August 3rd considerably under fifty. On the 9th the numbers were more than doubled, but by the 24th they had again dwindled to a score. In the autumn of 1905 there were between four and five hundred Sand Martins on the Moor at the beginning of August, far fewer than in mid-July, but on the 5th some thousands dropped into the reeds shortly before 8 p.m., and on the 8th the numbers were doubled—more than Oldham had ever seen on the Moor. By the 11th the bulk of these had departed—perhaps one thousand remained, and on the 24th there were not more than a hundred.

Both in spring and late summer the Sand Martins go through combined aerial evolutions for a short period before dropping into the reeds ; the flocks will turn and wheel as one bird, and, twittering constantly, fly to and fro high over the reed-beds and at times for a considerable distance beyond. Sometimes the flocks appear to lose all combined action and the birds cross and recross each other's paths in a perfect maze, only, however, to form into ordered battalions again a few minutes later. Then the whole body will mount high in the air, wheel round several times, and drop suddenly into the reeds—a falling shower of birds. As a rule, however, they do not settle immediately, but skim to and fro in the waning light with rapid flight just above the reeds, into which they suddenly and imperceptibly vanish, the exact roosting place being indicated by the melodious twittering which is kept up for some time after the birds have pitched.

Sand Martins nest in colonies, usually excavating their holes in the banks of streams or in sand and gravel pits, but sometimes they utilise the softer strata of the red sand-

stone rocks in quarries or railway cuttings. Mr. R. Newstead states that about sixty pairs took possession of such a situation in 1892 in the Ship Canal cutting at Ince,* and a considerable number of pairs nest in the rock wall of the Canal at Latchford. At Lymm several pairs nest in crevices between the sandstone blocks of the dam wall. The depth of the hole varies without apparent relation to the geological formation; in the alluvium of the Mersey banks near Sale nests are occasionally only four inches from the mouth of the hole, but in other instances are beyond arm's reach.

Whilst Sand Martins are excavating they will roost in the unfinished tunnels, and in severe weather will take refuge in the completed nesting holes. In the cold spring of 1886, which was as fatal to this species as to the Swallow and House Martin, Oldham took the remains of fifteen birds and some broken egg-shells from a single hole in the bank of the Mersey at Sale.†

Though the majority of Sand Martins leave in August, there are occasionally young birds in the nest in September; this was the case at Lower Peover on the 4th of that month in 1904 and the 9th in 1906.

FRINGILLIDAE.

Sub-family FRINGILLINAE.

GREENFINCH. *Ligurinus chloris* (Linné).

Local name—GREEN LINNET.

An abundant resident and partial migrant; the majority of the birds arrive in spring and leave again in autumn.

From spring to autumn the Greenfinch abounds in the lowlands and is found at a considerable elevation on the

* Dobie, p. 296.

† C. O., *Naturalist*, 1886, p. 214.

eastern hills, provided that there are thorn hedges or bushes in which its nest may be placed. In winter, though a few birds may be met with, it is scarce in most parts of Cheshire. Brockholes says of Wirral: "I see a flock occasionally only in winter, and think the majority must go elsewhere for this season." This is true of the county generally.

Very early in March the flocks begin to appear, but migratory parties arrive all through that month and April. In mid-April, 1907, we saw many Greenfinches consorting with Goldfinches, Redpolls and Chaffinches in larches near Oakmere and Little Budworth Common, and in 1906 a flock of birds in clean, bright plumage so late as May 11th. In 1908, on the other hand, a flock was seen by Mr. A. W. Boyd so early as February 29th.

The birds leave again in September and October, and towards the end of the former month are frequently very plentiful. Mr. J. J. Cash has in many years noticed their unusual abundance in the neighbourhood of Ollerton and Chelford during the last week of September.

During the first or second week in March the "buzzing" note of the male Greenfinch may be heard in Cheshire, usually a few days later than it is begun on the sheltered parts of the North Wales coast; the bird sings late, and is often in song and "buzzing" at the end of July or beginning of August.

In districts in the north of the county, where large quantities of garden produce are grown for the Manchester market, the Greenfinch is regarded with disfavour. It holds its own, however, in spite of persecution, and few nests are commoner than those of this bird in evergreens and hedgerows. In some places where it is little molested the bird is sociable in the breeding season, many nests being built in a restricted area.

Mr. R. Newstead finds that the Greenfinch feeds largely upon the seeds of both wild and cultivated *Brassicæ*, in the one case destroying troublesome weeds like the char-

lock, and in the other doing considerable damage to crops of young turnips, radishes and sprouts, especially by pulling up the young plants which are just breaking through the soil. In Chester gardens it will eat the seeds of the sunflower, and in winter those of the wild rose, splitting the seeds either longitudinally or transversely to obtain the kernels. The stomachs of three birds killed at Chester in February contained maize, wheat and cinders, all in fragments; of three killed in March, fragments of maize and many seeds of cultivated mustard; one in April, wheat in fragments; one in October, fragments of sunflower seeds; and one in December, seeds of the wild rose. Those of two birds from Prestatyn, Flint, killed in October, were full of seeds of the charlock.*

HAWFINCH. *Coccothraustes coccothraustes* (Linné).

A resident, increasing in numbers; nowhere very common, but widely distributed.

Neither Byerley nor Brockholes includes the Hawfinch in his list, and thirty years ago the bird was rare in Cheshire. As is the case in other parts of England, it has within recent years increased in numbers and extended its range, and now is a fairly common resident in the lowlands of Cheshire. In Wirral it nests annually in many localities, and though it is, naturally, absent from the treeless portions of the eastern hill-country, it occurs in some of the wooded valleys. At Wincle in the valley of the Dane it is well known in the gardens, where it is troublesome, and in July, 1905, Mr. Charles Marshall watched a pair of birds feeding on peas in his garden at Compstall on the Goyt.

Since 1860, when the Hawfinch was first recorded as a Cheshire bird, † it has been so frequently reported and is now

* *Food of Birds*, pp. 40, 41.

† J. J. Jones, *Field*, Vol. XV., 1860, p. 199.

so generally distributed that a detailed account of its range is unnecessary. Owing to its shyness the bird is seldom seen, except in summer, when its overpowering love for green peas attracts it to gardens, where it does considerable damage. Mr. R. Newstead states that a young bird taken at Ledsham subsisted almost entirely for eighteen months upon dry peas.* Peas are usually attacked before they are quite ready for gathering; the pods are crushed in the bird's stout bill, and the soft peas squeezed out, the damaged and split pods, left hanging but empty on the vines, being deeply scored with beak marks.

The late Rev. C. Wolley-Dod furnished Dr. Dobie with the following account of the Hawfinch as observed at Edge Hall, Malpas: "They have bred here for more than twenty years, ever since I came to live here. . . . They destroy many peas in the pod, but the most remarkable evidence of their presence is beneath the yew trees. When the berries get nearly ripe, about September, the ground beneath them becomes covered with small twigs with one or two unripe berries on each. I used to think it was done by Squirrels, but I have now become certain it is by Hawfinches. If I get under the trees stealthily I can generally hear their shrill wee chirp. There are two large yew trees under which the twigs are strewn so thick that I have had more than a wheelbarrowful swept up at once, and in a fortnight they will be as thick again."

Not only does the Hawfinch in search of food venture into gardens even in populous districts, but it occasionally nests in such situations. On July 8th, 1905, a young bird, still unable to flutter for more than a few feet at a time, was captured in a garden in Ashley Road, Bowdon, within a few yards of the Altrincham boundary. The bird, when examined by Coward, bit fiercely at his hand and held on so tenaciously that he was able to lift it, hanging by its bill to his finger, from the basket in which it was confined. It readily ate cherry kernels and raspberries when offered

* Dobie, p. 296.

to it, and evinced a marked partiality for mealworms. The head and neck of this bird were greenish-yellow, without any trace of black on the throat, forehead or lores ; its throat and belly were speckled, but the bill, which is described by Saunders* as "olive," and by Newton† as "of a pinkish flesh-colour, inclining to pale brown on the ridge," was distinctly lead-blue, though not so markedly so as in an adult male in summer.

In the winter months the Hawfinch feeds to some extent upon holly seeds, and the discarded pulp of the berries and the split seeds may be seen lying beneath the bushes. In late summer it attacks cherries for the sake of the kernels ; the litter beneath the trees bears evidence to the damage done. The cherry stones are not all split in the direction of the long axis, but some are broken into two pieces in the opposite direction. The seeds of the hawthorn, the favourite food of the bird, are almost invariably split neatly in two, the fracture being longitudinal. These split seeds are abundant in winter beneath whitethorn bushes, especially isolated thorns in the fields and parks, and we have found them under trees within a short distance of houses in Bowdon, Knutsford, Alderley and elsewhere.

In May we have seen Hawfinches feeding with Chaffinches beneath Scotch firs on Little Budworth Common, apparently upon the seeds which were falling and which were strewn beneath the trees.

Mr. R. Newstead has examined the stomachs of twenty Hawfinches killed in western Cheshire, and of these nine—four in January, two in November, and one each in March, April and December—contained nothing but kernels of hawthorn, in most cases mixed with a few fragments of the outer shell. Three birds, two killed in July and one in November, had been feeding upon the kernels of the wild cherry or plum ; seven birds, one in August, one in September and five in December, had been attacking the yew, and in the

* *Manual of British Birds*, 2nd ed., p. 172.

† Yarrell, *A Hist. of British Birds*, 4th ed., Vol. II., p. 104.

stomach of the August bird were also kernels of the Portugal laurel. A bird killed in December had nothing in its stomach but the seeds of the sycamore.*

BRITISH GOLDFINCH.

Carduelis carduelis britannicus (Hartert).

Local names—RED LINNET; JACK NICKER; JACK-A-NICKAS; NICKER NOCKER.

Rare as a resident; more abundant as a winter visitor.

The Goldfinch, as a resident, has for many years been rare in Cheshire, and in many districts it has been exterminated. The reclamation of waste lands has curtailed its haunts, and persecution by bird-catchers has been instrumental in further reducing its numbers. In a few localities it appears to have derived benefit from protection and to be now nesting regularly.

Even so long ago as 1854 the Goldfinch was rare in Wirral, for Byerley described it as "not very frequent" in the Liverpool district, and ten years later the late C. S. Gregson considered the occurrence of a nest at Bidston as worthy of note.† Brockholes, in 1874, called it "a scarce resident," and added that bird-catchers told him that a good many visited Wirral in autumn. There is no recent record of the Goldfinch nesting in Wirral, but it occurs regularly in winter and early spring.‡ Mr. S. G. Cummings has met with it in these seasons on the Dee Cop, and at Shotwick and Burton.§ On May 5th, 1900, he saw one at Puddington, and on May 21st, 1906, two at Mollington near Chester, where he thinks that the bird may occasionally nest.

* *Food of Birds*, pp. 41-43.

† H. E. Smith, p. 245.

‡ Dobie, p. 297.

§ *Zoologist*, 1903, p. 104.

In western and southern Cheshire a few pairs of Goldfinches nest annually, and within the last few years the numbers of breeding birds have apparently increased. At Aldford near Chester two pairs nested in 1893, and one nest was obtained for the Grosvenor Museum after the young had flown.* Early in July, 1905, Mr. Cummings heard a Goldfinch in full song at Pulford, and in 1908 a pair reared a brood within a mile of Handbridge, Chester; a nest and eggs now in the Grosvenor Museum were taken at Christleton in June, 1909.

The late John Platt, who had eggs from Shavington-cum-Gresty, told us that in that locality the bird, formerly common, had become rare in recent years owing to the depredations of Nantwich bird-catchers; a few pairs, however, now nest in Nantwich and the immediate neighbourhood. In 1908 and again in 1909, when on June 16th we saw the birds and nest, a pair brought off their young from a nest in a damson tree on the farm of Mr. R. B. Bowers at Nantwich, and in the gardens of Dorfold Hall in the same neighbourhood three broods were reared in 1909.† Mr. H. Tollemache tells us that though three separate nests were built, he saw only one pair of birds; he witnessed the departure from the nests of the first two broods of five and four young birds respectively, and there were eggs in the third nest early in August. The late Rev. C. Wolley-Dod told Dr. Dobie that the Goldfinch nested regularly in the gardens at Edge Hall, Malpas, and was abundant there in flocks in winter.

A pair of Goldfinches nested in a crimson Rambler in the gardens at The White Hall, Little Budworth Common, in 1907, and brought off their brood; Mr. A. B. Stock constantly sees birds about the Hall in spring and summer. The Goldfinch is, however, chiefly known in the Delamere country, as in other places, as a winter visitor, and occasionally the flocks of migratory birds are of considerable

* Dobie, p. 297.

† Henry Tollemache, *Chester Courant*, August 11th, 1909.



LITTLE BUDWORTH COMMON.



size. In 1905 we saw a "charm" of eleven birds on March 5th near Oakmere, and for some days in mid-April, 1907, there were at least fifty, consorting with Bramblings, Mealy Redpolls and other finches, in larches between Oakmere and Little Budworth Common, and others on the Common and elsewhere in the forest. On April 14th, when we first noticed these birds, our attention was attracted by the twittering of the Redpolls, the loud spring call of the Bramblings and the songs of the Goldfinches. Towards the end of the month the numbers were reduced, but on April 30th there were still a few Goldfinches about; on the 27th we had heard several in song between Oakmere and The White Hall. On May 3rd all had apparently departed. Considering that the Goldfinches were consorting with migratory finches—Bramblings and Mealy Redpolls—it is probable that they were passing birds on their way to northern Europe. We have, however, no evidence to support a suggestion that they were referable to any particular race of continental Goldfinch.

In other parts of the lowlands of Cheshire the Goldfinch has seldom nested within recent years. Mr. S. Radcliffe saw a nest in 1892 in an apple tree at Holmes Chapel, and he tells us that Mr. John Moss of Ashton-under-Lyne has a nest which was taken at Mobberley in 1890. In 1900 an Altrincham bird-catcher assured us that a pair had nested for several successive seasons, "some years ago," in an orchard close to Mobberley station, and that on one occasion the young birds were captured and sold. In 1902 Mr. J. H. Hil Kirk of Altrincham found a nest containing eggs close to this orchard. In 1907, as we are informed by Mr. J. Ball, at least one pair nested in a clump of sycamores at Henbury, and on May 6th, 1908, Mr. A. W. Boyd saw a Goldfinch in Marbury Park near Northwich, in which locality the bird has been seen in summer by Mr. G. F. Gee.

In the valley of the Bollin between Bowdon and Wilmslow, where we have seen the bird feeding on thistle-heads protruding above the snow, the Goldfinch

was until recently taken regularly by bird-catchers in winter, and even within the last few years, although efforts have been made to prevent illegal capture, some have been snared on the "rough ground" which borders Witton Flash near Northwich. Dr. M. S. Wood tells us that a "charm" of over twenty birds frequented the Gatley Sewage Farm from early in January until March 17th, 1906.

We have never met with the Goldfinch on the eastern hills, nor have we any definite information of its occurrence there.

SISKIN. *Carduelis spinus* (Linné).

Local names—**ABERDEVINE** ; **GOLDEN WREN**.*

A winter visitor in varying numbers.

The Siskin is only known in Cheshire as a winter visitor, sometimes occurring in considerable numbers, but in some seasons being scarce or absent. There is a general opinion that the bird does not now occur so frequently nor in such numbers as it did formerly. Siskins are almost invariably met with in compact flocks in alders and birches, feeding upon the seeds, where their tit-like actions and pleasing twitter cannot fail to attract attention.

Byerley had apparently no knowledge of the bird in Wirral, it is not mentioned by Brockholes in his list, and Dr. Dobie had never observed it in the neighbourhood of Chester. Mr. W. E. Sharp, however, told Dr. Dobie that in the winter of 1872-73 it was abundant in the birches at Ledsham, and on March 25th, 1903, Mr. S. G. Cummings and Coward watched a flock in larches in the fir woods at Burton apparently feeding on either the buds or the larch aphids.

Dr. Dobie mentions a female, now in the Grosvenor

* Golden Wren is given by Lord de Tabley, in his MS. note-book, as a local name for the Siskin. He adds: "real goldcrest not named though shown to several persons."

Museum, Chester, which was shot at Ince Hall in November, 1891, and two birds obtained by Mr. R. Newstead, Senr., at Tarporley; he also quotes the late Rev. C. Wolley-Dod, who had often seen flocks in the alders near Malpas.

On December 24th, 1887, Oldham watched a couple of Siskins feeding in an alder swamp near Somerford, and we have seen others which had been obtained at Oulton, Compstall, Marton and Antrobus; this last, now in the Warrington Museum, was shot in November, 1894. In the winter of 1896-97 the late John Platt saw a flock in a birch tree on Alderley Edge.

The Siskin was abundant in north Cheshire in the winter of 1897-98. We saw birds on several occasions at Handforth, Monks' Heath, Siddington and Ashley, and Mr. J. J. Cash observed a flock in Toft Park, Knutsford. On February 9th, 1901, Mr. Cummings saw a flock with Redpolls at Blacon. In February and March, 1903, it was again plentiful. On February 1st we saw about twenty in the alders at Tabley, and they remained about this spot for some time. On February 8th Mr. F. S. Graves saw a flock at Monks' Heath and another at Capesthorpe, and on March 15th a few in an alder at Old Alderley. Others were noticed at Styal, Heron Bridge near Chester, and Burton in Wirral, and on March 29th there was a female still remaining at Tabley.

In the winter of 1905-06 the Siskin was again abundant in Cheshire; we first noticed birds at Little Budworth on November 12th, and a few days later at Bowdon. Others were seen in December by Mr. F. S. Graves at Alderley Edge and Redes Mere, and by Mr. J. J. Cash at Snelson. In January and February we saw flocks at Oulton and Ashley.

The song of the Siskin, familiar to cage-bird fanciers, may occasionally be heard before the bird emigrates; Mr. Cummings has heard males in a flock in song so early as March 7th. On March 29th, 1908, Mr. R. Newstead heard the song in his garden at Chester, and saw a male Siskin in one of the trees. It sang for about a quarter of an hour,

and allowed him to approach within about thirty paces of the tree. As, however, Siskins were not reported elsewhere in Cheshire during the winter of 1907-08, and considering the locality in which it was observed, it is possible that it was a bird that had escaped from captivity.

HOUSE SPARROW. *Passer domesticus* (Linné).

Local name—SPADGER.

An abundant resident.

Except in the bleaker portions of the hill-country, the House Sparrow is an all too common resident ; in the eastern hills it is to a large extent replaced by the Chaffinch, although a few birds frequent the isolated farmsteads.

So long ago as the middle of the eighteenth century the Sparrow was regarded with disfavour by the agriculturist ; the chapel wardens of Holmes Chapel paid for killing Sparrows four shillings and fivepence in 1743, and in 1772 ten shillings and sixpence was expended upon a new sparrow-net.* With the advance of cultivation and the destruction of its natural enemies by the game-preserved the Sparrow has increased to an alarming extent ; although comparatively little corn is grown in Cheshire, the bird is a force that has to be taken into serious consideration by the farmer. It is true that the nestlings are largely fed with insects, but through the greater part of the year the bird feeds upon grain, and even in the breeding season the Sparrow encroaches upon the food-supply of purely insectivorous species. With obtrusive familiarity, the bird monopolises the scraps spread in suburban gardens in winter, frequently to the exclusion of more deserving species, and repays its benefactors by pulling to pieces the crocuses and early spring flowers.

* T. W. Barlow, *A Sketch of the History of the Church at Holmes Chapel*. MS. additions by the author.

Occasionally, however, the Sparrow renders man some service. In the summer of 1905 the oaks in Delamere Forest suffered even more than usual from the attacks of the larvae of *Tortrix viridana* (Linné), and in July, when the moths were on the wing, we noticed that House Sparrows in some numbers joined the tits and Willow Wrens which were feeding upon them. Mr. R. Newstead is of opinion that the Sparrow may destroy some coccids. He found, in May, that numbers of females of *Lecanium genevense* (Targioni-Tazzetti) had been removed from a hawthorn hedge, which was infested by a colony of these insects. "On carefully watching the colony," he says, "I found it was the work of a flock of sparrows. Whether they actually ate the coccids, or whether they merely dislodged them, it is impossible to say, as I was unable to procure the birds for post-mortem examination."*

The untidy nest of the House Sparrow is usually placed on houses or buildings, but often in the branches of orchard trees or hollies, corn-stacks, holes in trees, the disused nests of Magpies and other diverse situations. Not only does the Sparrow rear its young in the nests of the House Martin, but it frequently uses these nests as roosting places in the winter.

White, partially white, and pale buff House Sparrows have been noticed on many occasions.

TREE SPARROW. *Passer montanus* (Linné).

Local names—COPPER HEAD ; MOUNTAIN SPARROW ; ROCK SPARROW.

A not uncommon resident ; distributed throughout the county.

The Tree Sparrow is undoubtedly often overlooked ; it is by no means rare in Cheshire, and occurs in all parts of the

* *British Coccidae*, Vol. I., p. 39.

county. As Brockholes had not, apparently, observed the bird in Wirral, merely remarking: "I am assured this bird nests near Bache House, Chester," it is possible that it has increased within recent years in the west of the county, for it is now not uncommon. Dr. Dobie mentions Hooton, Upton, Backford and Ince as localities where it has nested, and states that it is not uncommon on the north side of Chester; and Mr. S. G. Cummings tells us that there is a colony close to the Chester Gasworks. There was in 1894 a large colony in the old sandstone quarry at Burton Point, where the nests, constructed of grass stems and wool and lined with a profusion of fowls' feathers, were placed in fissures of the rock or built amongst the matted roots of gorse bushes above the rock face. This colony was subsequently deserted, but the birds continued to nest in the rocks in the immediate neighbourhood; there were birds there in 1908. In 1906 Mr. Cummings found a colony at Puddington; there is another in a clump of trees near Storeton Hall, and the bird also frequents the old quarries at Storeton.

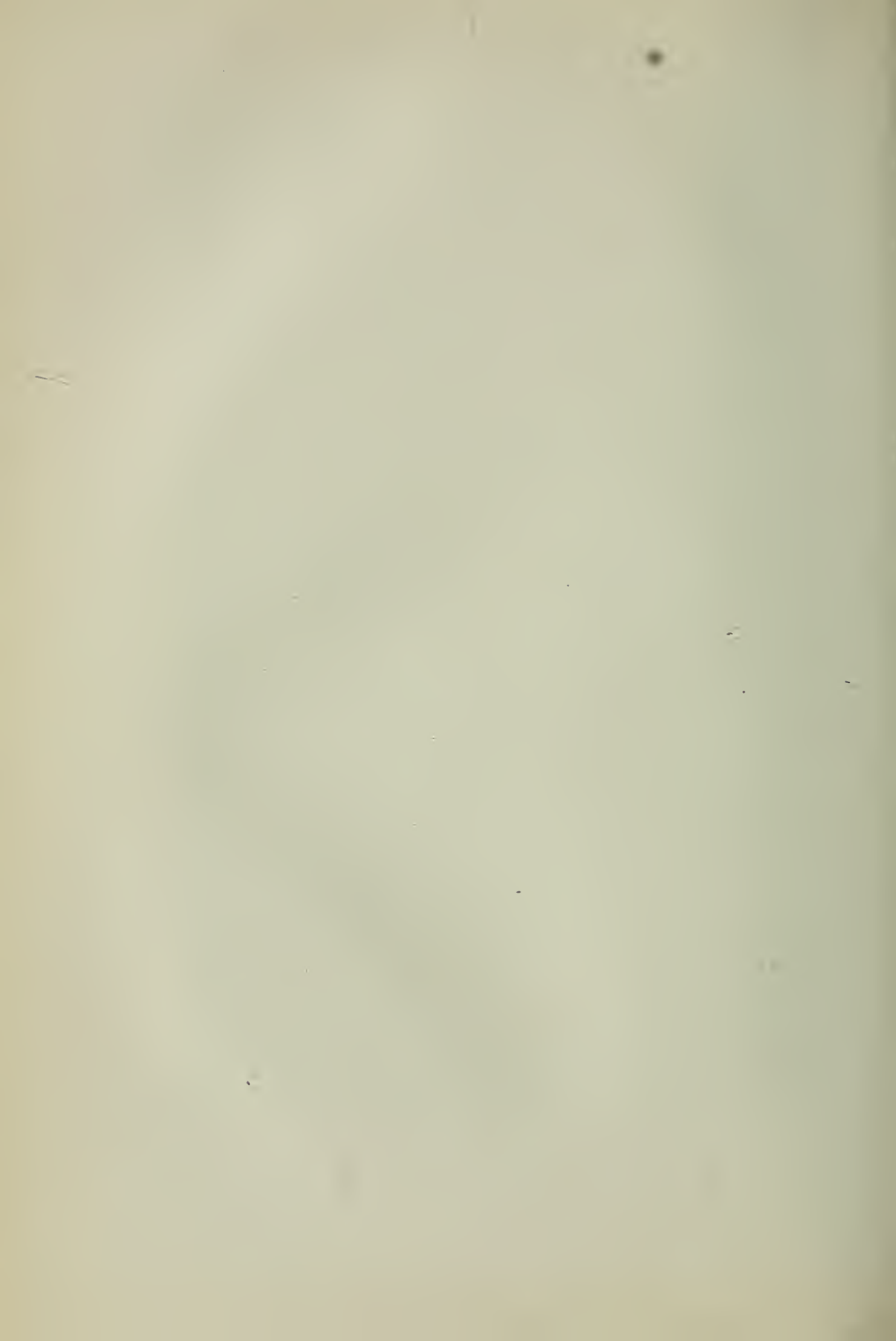
Throughout the Cheshire lowlands the Tree Sparrow occurs in all parts, frequently nesting in roadside trees; it is fairly abundant in the Delamere country, and was noted as common in the hilly districts near Frodsham by the late J. F. Robinson more than thirty years ago,* when the occurrence of the bird in Cheshire was hardly recognised. It occurs in the castle grounds at Beeston, on the Peckforton Hills, and in most of the parks on the plain. In the neighbourhood of Knutsford and Bowdon it nests in woods just beyond the populated districts. It occurs in Longdendale, nesting at Tintwistle, but is not common on the high ground in the east of the county.

In winter Tree Sparrows consort with House Sparrows, Chaffinches, Yellow-hammers and other grain-eating birds, and feed with them in farmyards or by the roadside, but occasionally flocks consisting of Tree Sparrows alone may be met with.

* *Manchester City News*, Oct. 14th, 1882.



STORETON QUARRIES.



The call note of the adult bird is sharper and shorter than that of the House Sparrow, and the combined twitter of a number of Tree Sparrows, when going to roost in clumps of evergreens, as the birds do nightly in winter in Tatton Park and elsewhere, is more musical than, and perfectly distinct from, the chatter of a flock of House Sparrows.

CHAFFINCH. *Fringilla coelebs*, Linné.

Local names—FLACKIE ; PIED FINCH ; PITEFINCH ; PYDIE ; TWINK ; SPINK ; DRUMSTICK.*

An abundant resident and partial migrant ; many emigrate in autumn, but are replaced by immigrants.

The Chaffinch is one of the commonest residents and is found abundantly throughout the county, nesting even in fir plantations and small clumps of trees high up on the hills in the east. In winter the bird is sociable and large flocks may be seen in the open fields or feeding with Sparrows and other birds in the farmyards. About the farmsteads in the hill-country it is the commonest passerine bird, far outnumbering the House Sparrow.

In winter the numbers of the resident birds, which have been reduced by emigration in the autumn, are augmented by flocks of migrants. Emigrating birds or those which are *en route* for winter quarters further south were noted at the Dee Lightvessel on September 15th and October 24th, 1884.† In 1885 single birds alighted on the deck on August 25th and 28th‡ ; on October 17th, a foggy day, many with Meadow Pipits, Blackbirds and Linnets, flew round the vessel§ ; and on November 9th Chaffinches accompanied by

* Holland, *Glossary*, p. 414, given for the district round Frodsham.

† *Migration of Birds*, Report 6, 1885, pp. 105, 117.

‡ *Op. cit.*, Report 7, p. 121.

§ *Op. cit.*, Report 7, p. 112.

Blackbirds were simultaneously noted at the Dee Light-vessel and the Skerries Lighthouse.* On October 22nd, 1887,† Chaffinches with Larks and Thrushes were about the light all night, leaving at daybreak. Writing on the same date—October 22nd—in 1906, Mr. Lewis Jones of Hilbre Island says: “First flock of Chaffinches passed south this morning. The males always come a week or two before the females.” Flocks of arriving or passing birds appear again in March, and we have seen them with other migratory finches—Bramblings, Goldfinches and Redpolls—so late as the end of April.

The winter flocks usually break up during February and March, and in mild weather we have heard the song of the Chaffinch so early as January 20th; as a rule, however, the bird does not sing until the first or second week in February. The Chaffinch occasionally sings in late summer and autumn; we have heard it in August, September and October. The song varies considerably in individual birds, and very occasionally there is a secondary song between the ordinary snatches or repeated phrases, a guttural rattle or broken *kur-r-r*.‡

The exquisitely neat nest is generally placed in a white-thorn hedge or in the fork of a birch or a fruit tree, the mosses and lichens of which it is constructed harmonizing with its surroundings. Incongruous materials are sometimes used; we have seen a nest at Plumbley which was principally composed of old newspaper. Mr. A. W. Boyd has found a nest in his garden at Bowdon largely composed of paper, and on April 12th, 1904, Mr. S. G. Cummings found one near Chester, round the edges of which the bird had wound a conspicuous piece of white string. Exceptionally, the Chaffinch builds at a considerable height in a forest tree; a nest which we saw near Goyt's Bridge was placed on a

* *Migration of Birds*, Report 7, p. 121.

† *Op. cit.*, Report 9, p. 100,

‡ Cf. Seebohm, *History of British Birds*, Vol. II., p. 102. “In the Engadine in the autumn I noticed that the Chaffinches at rest in the pine trees occasionally uttered a sound like the word *kurrt*.”

lateral branch of an oak at least forty feet from the ground. A nest at Castle Mill, Ashley, in 1904, was built in the miscellaneous collection of straw and twigs which had lodged during a flood in a branch of a willow that overhung the River Bollin. The nest was not more than two feet above the surface of the water, and was suspended from the branch but supported by the accumulated sticks.

On April 3rd, 1884, Oldham saw two Chaffinches fighting on a garden lawn at Sale. The combatants were surrounded by half-a-dozen other birds, passively watching the fray. Presently the bird which was obviously getting the better of its opponent retired, and its place was taken by another. After a short scuffle the aggressor and the onlookers flew away, leaving the victim, a hen bird, motionless upon the ground. It was in a pitiable condition, its plumage being saturated with the morning dew, and its head and neck stripped of feathers; but after being placed for a couple of hours before a fire it recovered sufficiently to fly away when taken into the open air.

Although it does not display the dexterity of the fly-catchers and warblers, the Chaffinch, in common with the House Sparrow and other finches, often captures insects on the wing. We have seen birds by the side of a wooded stream pass repeatedly from bank to bank in order to snap up the insects which were flying above the water. In July, when the oaks are often almost leafless owing to the depredations of the green tortrix, *Tortrix viridana* (Linné), family parties of Chaffinches frequent the trees to feed upon the moths, which they catch upon the wing. Mr. J. J. Cash has seen the bird hawking for bees round shallows.

The Chaffinch is a useful bird, destroying the seeds of several troublesome weeds. The stomachs of eleven, killed at Ince in January, which were examined by Mr. R. Newstead, were all filled with the seeds of the knotgrass (*Polygonum* sp.), mixed with a few particles of brick; those of nine, killed in October in Flintshire, were full of charlock seeds. The stomachs of a male and three females, killed

near Chester in June, were entirely filled with fragments of beetles, mostly weevils of the family *Curculionidae*.*

White or pied Chaffinches occur occasionally; one in the collection of Mr. E. Stanley of Greenheys, Manchester, is entirely white with the exception of the flight feathers; it was obtained at Toft, Knutsford.

BRAMBLING. *Fringilla montifringilla*, Linné.

Local names—FLAT FINCH; BRAMBLE COCK.

Bird of double passage; winter visitor in varying numbers.

The Brambling is a winter visitor whose numbers vary in relation to the severity of the season. In hard winters the bird is fairly plentiful, frequenting beech woods, and in company with other finches resorting to farmyards for food. It is often shot on account of its attractive plumage; in the cases of stuffed birds so common in cottages and farm-houses there are usually one or two Bramblings.

The immigration of the Brambling usually begins in October or November, but many of the flocks, for the bird is essentially gregarious in winter, appear to pass through the county, and probably go further south. Subsequent immigrations may take place if the weather becomes severe, and indeed in some seasons no birds appear in Cheshire until the beginning of the year. Occasionally the Brambling does not reach Cheshire at all. The return migration takes place in March and April, the flocks which are seen in the latter month being presumably birds which are passing through the county from winter quarters further south. The irregularity of the visits of the Brambling can be best realised by a consideration of the times of arrival and departure and the relative numbers which have been observed during a period of years.

During the decade—1898 to 1908—Bramblings were

* *Food of Birds*, pp. 43, 44.

observed in Cheshire in seven winters, but in 1899-1900, 1901-02 and 1903-04, flocks may have passed unnoticed. In 1898 numbers arrived in November, but we saw none after December 4th. In 1900 we first heard of them early in December, and did not see many after that month until the return migration in spring, when a few were noticed at the end of March and on the 6th and 7th of April, 1901. In 1902 they were observed in November, but not later, nor were any reported in the spring of 1903. In the autumn of 1905 Bramblings arrived at the end of October and in November; they were plentiful all the winter, their numbers being considerably augmented in January, 1905; Oldham saw the last—a single cock in nuptial dress—at Peckforton on April 16th. The crop of beechmast was considerably above the average in the winter of 1905-06, and the birds arrived about the middle of October—they were abundant until January, when their numbers diminished. Mr. S. G. Cummings observed them at Burton so late as April 18th. On October 13th, 1906, there were a few Bramblings in Tatton Park, on the following day some at Upton near Chester, and later in the month others were noticed, but the majority passed on and we saw but few until April, 1907, when the returning birds were passing through the county; Mr. Cummings noticed them at Blacon so late as April 23rd, and we saw large numbers at Oakmere about this date, and a few even on April 27th. In November and December, 1907, Bramblings frequented their usual Cheshire haunts, but they were not noticed in the early months of 1908; in the spring of 1909, however, flocks of considerable size were observed in different parts of the county.

When the birds are returning at the end of March and in April, the cocks, in showy nuptial dress, repeatedly utter the harsh spring call, a loud *cree*, not unlike the buzzing call of the Greenfinch, but louder. This note, associated with the breeding season, and one of the most characteristic sounds in Norwegian woods, is seldom heard in autumn and perhaps never in the winter.

In autumn and winter the chief food of the Brambling is beechmast, and the duration of the visit of a flock to any particular locality depends largely upon the quantity of mast upon the trees. So long as there is a plentiful supply of food the birds remain in the immediate neighbourhood of particular clumps or avenues of beeches, and may be seen day after day in the same spot. They feed largely on the fallen mast, and rise in a flock when disturbed; they may then be easily distinguished from their constant companions the Chaffinches by their pale grey rumps and their note, a sharp *scape*. In October we have occasionally seen Bramblings in birches, feeding upon the catkins. In the spring the late flocks frequent larches. In 1906, when a flock remained for some time at Burton, Mr. S. G. Cummings found that the birds were feeding upon the larch aphid or blight, *Chermes laricis* (Hartig),* and in 1907, for about ten days—from April 17th to 27th—large flocks, gradually dwindling in numbers, consorted with Goldfinches, Chaffinches, Greenfinches and Redpolls in the larches on and near Little Budworth Common. The birds remained longest in one particular clump of Scotch firs and larches, but fed almost entirely in the branches of the latter trees. On April 20th of that year Coward saw a flock of upwards of a hundred Bramblings in the larches on the Knight's Low in Lyme Park.

LINNET. *Linota cannabina* (Linné).

Local name—BROWN LINNET.

A local resident; more abundant on the high ground in the east and on the coast than in the plain; migratory birds arrive in spring and leave in autumn.

The same influences which have caused the decrease of the Goldfinch—reclamation of waste land and the depredations

*S.G.C., *Zoologist*, 1906, p. 188. The aphid was identified by Mr. R. Newstead.

of bird-catchers—have affected the status of the Linnet in Cheshire. It is now exceedingly local as a breeding species in the plain but nests annually in certain localities. The Linnet is common as a breeding species near Chester, and in the flat country between Nantwich and Audlem we have seen several pairs in May, but the late John Platt told us that though the bird still breeds at Shavington-cum-Gresty it is not so plentiful as it was some years ago. It nests in some numbers on the gorse-covered portions of the Peckforton Hills, and in open parts of the Delamere Forest country, especially near Oakmere. In open country where the gorse has not been destroyed, as on Knutsford Heath and in certain places near Cheadle, the Linnet still breeds in small numbers, but it is absent from large tracts of cultivated land in the plain, though occasionally pairs may be met with in other localities than those mentioned. Within the last few years we have seen a few pairs in May near Bowdon.

Brockholes describes the Linnet as “an abundant resident” in Wirral, and though it has probably decreased since 1874, it still nests in many places along the coast.

Among the gorse bushes on the hillsides in the east of the county the Linnet maintains a footing; we have met with it in the breeding season at Winkle, Bosley and Higher Sutton, and Mr. N. Neave tells us that a few pairs nest near Rainow. Near Stalybridge Mr. S. Radcliffe finds the bird less numerous than it was thirty years ago, but in the district between Mottram and Godley it breeds regularly, nesting as often in thorn bushes as in gorse.

In winter the Linnet is generally distributed, consorting with Chaffinches in the hedgerows and pastures; its trilling notes often call attention to straggling flocks flying high overhead. Migratory flocks arrive in Cheshire at the end of March and in April, but it is probable that some, at any rate, are passing birds; we have seen flocks so late as April 22nd at Knutsford, and Mr. S. G. Cummings has seen them at Upton near Chester on April 19th and May 1st, and on Sealand on May 15th. The return migration of birds of

passage down the west coast takes place in October, but it is doubtful if the flocks usually come so far east as the Cheshire coast. On October 16th and 17th, 1885, however, mixed flocks of Linnets, Blackbirds, Thrushes, Redwings, Meadow Pipits and Chaffinches were about the Dee Light-vessel in foggy weather; on the same dates the birds were noticed moving south at other west coast stations.*

Mr. R. Newstead finds that the Linnet feeds largely on the seeds of weeds, such as charlock, selfheal and dock, but he has only examined the stomach of one bird which was killed in Cheshire, a female obtained at Aldford on July 6th, 1894; in it he found seeds of dock and dandelion, with fragments of quartz and brick.†

MEALY REDPOLL. *Linota linaria linaria* (Linné).

An occasional migrant.

In the collection of the late J. H. Stock at The White Hall, Tarpoley, are two Mealy Redpolls which were shot there in the spring of 1905. They are in a case and it is impossible to measure and examine them closely, but they are, apparently, typical Mealy Redpolls.

On April 14th, 1907, we noticed an unusual abundance of migratory finches in Delamere Forest; the flocks consisted of Bramblings, Goldfinches, Redpolls and Chaffinches, and Greenfinches in smaller numbers. The largest mixed flock of finches frequented a small clump of Scotch firs and larches near Oakmere, but from the 14th to the 17th there were smaller flocks in many parts of the forest. On the 27th and 28th the numbers of the Redpolls had increased, and on the 30th, by which date most of the Goldfinches and nearly all the Bramblings had left, there were considerably more

* *Migration of Birds*, Report 7, pp. 111, 112.

† *Food of Birds*, p. 44.

Redpolls than on previous occasions. The Redpolls were large pale birds, with light—white or nearly white—wing-bars and very pale rumps. The males had bright crimson breasts, and the females were boldly streaked on the sides of their breasts. We were able on one or two occasions to compare them with some undoubted *L. rufescens* which were feeding in the trees; they were distinctly larger, and had paler wing-bars, rumps, and plumage generally than the Lesser Redpolls. The birds were feeding principally among the young green needles of the larches, but occasionally a few would drop to the ground in search of food. Mr. R. Newstead examined on our behalf some of the twigs from these larches; they were infested with insects of two species, upon which the birds were presumably feeding. He found at the base of the “rosettes” numbers of “foundress” females of *Chermes laricis* (Hartig), surrounded by eggs, and on the leaves themselves considerable numbers of the larvae of the larch-miner moth, *Coleophora laricella*, Huber.

The birds were obviously not Lesser Redpolls, but as no specimen was obtained it is impossible to say with certainty to what species or sub-species of migratory Redpoll they should be referred. We have little doubt that they were *L. linaria linaria*.

LESSER REDPOLL. *Linota rufescens* (Vieillot).

Local names—JITTY; CHITTY (Longdendale); CHADY;
GREY BOB.*

A not uncommon resident.

Byerley refers to the Lesser Redpoll as occurring “about New Brighton” in the summer months, and Brockholes

* Leigh, *Glossary*, p. 93.

describes it as "a rather scarce resident" in Wirral. As a matter of fact it is not uncommon, breeding at any rate in many parts of Wirral, throughout the Cheshire lowlands, and in the valleys and on the lower hills in the east of the county. At Whaley Bridge, Wincle, Bosley, and in other parts of the hill-country the bird is very plentiful.

In early autumn the broods combine, and at that time the birds may often be seen feeding on the seeds of hawk-weeds dandelion and other composite plants which abound on railway embankments and waste ground. The Lesser Redpoll is partial to the seeds of the sorrel, and may frequently be seen in grass fields. In August we have watched young Redpolls greedily devouring the aphides on the leaves of plum trees in an orchard at Knutsford, and Mr. S. G. Cummings has observed the same habit at Upton near Chester.

During the winter months flocks of Redpolls, sometimes numbering from fifty to a hundred birds or more, may be met with throughout the Cheshire lowlands, usually in birches and alders. The birds are constantly on the move, swinging below the slender twigs to reach the seeds, and keeping up a continuous twitter. Every now and then the whole flock rises with loud twitterings, as if suddenly alarmed, takes a short flight away from the trees, and returns again in a few moments to recommence feeding. So late as May 9th, 1908, we saw Redpolls in flocks amongst the larches on the Knight's Low, Lyme Park. The birds settled repeatedly on the twigs and cones, and were probably feeding to some extent upon the larch blight, *Chermes laricis* (Hartig), which is plentiful at the beginning of May. The stomach of a Lesser Redpoll, shot on April 7th, 1908, at Oakmere, where it was feeding amongst larches, contained fragments of vegetable matter, and a few insect remains which appeared to be of the larch blight. Mr. Newstead found seven larvae of a *Tortrix* and fragments of a weevil in the stomach of a young bird which was taken at Aldford on June 15th, 1894. In that of a bird killed at

Oakmere in December there was nothing but seeds, some of which were of the milfoil (*Achillea millefolium*, Linné).*

The nest of the Lesser Redpoll is usually placed in a thorn hedge, an alder or birch tree, but sometimes in a bush at the side of a pond. We have found it artfully concealed in a tuft of leaves at the extremity of a long brier. A nest examined by Mr. Cummings was lined with the down from the pappus of the groundsel in place of the usual lining of cottony willow down.

TWITE. *Linota flavirostris* (Linné).

Local names—MOOR LINNET; MOOR PEEP.†

A common resident on the hills in the east; occasionally observed elsewhere on migration.

As a breeding species in Cheshire the Twite is now confined to the hill-country in the east. It is plentiful on the moorlands of Longdendale and on the high ground in the neighbourhood of Swineshaw Reservoir, Buckton Vale, and Hollingworth Hall near Stalybridge. It is common on all the grouse-moors of the Derbyshire border, and we have seen it in the breeding season on the pastures near Wincle and in Macclesfield Forest. John Rowbottom, an old gamekeeper, has shown us Twites which had been captured by him on Werneth Low near Hyde, where he assured us the bird used to breed every year on a patch of rough heathy ground.

The Twite was fairly abundant at Carrington before the moss was reclaimed, and it probably nested in former times on many of the low-lying mosses in Cheshire. We used to find nests at Carrington in the thick growth of ling which fringed the moss-ditches.

* *Food of Birds*, p. 44.

† Mr. F. Stubbs informs us that in Longdendale this name is applied to both the Meadow Pipit and the Twite.

After the breeding season the birds become gregarious on the moors and hill-pastures; towards the end of August we have seen several flocks on the same day on the hills near the "Cat and Fiddle," and on October 22nd, 1904, we watched between thirty and forty birds in a field by the Buxton-Macclesfield road, feeding on the seeds of *Centaurea nigra*, Linné. Many of the heads of the knapweed had been entirely cleared of seeds.

In winter the Twite forsakes the higher ground, and though we have not met with it in the plain at this season, it is occasionally to be seen in the estuary of the Dee. On January 9th, 1904, Mr. S. G. Cummings saw fully two dozen pass over the Burton Cop, and on October 19th, 1905, a single bird near the same place. The Twite is not mentioned by Byerley or Brockholes, and Dr. Dobie did not know of its occurrence in Wirral.

In spring, when the birds are pairing, the male shows off before the female; perched on a stone wall or heap of turf, he repeatedly opens and depresses his wings so as to display the rose-red feathers of the rump.

BRITISH BULLFINCH.

Pyrrhula pyrrhula pileata, Macgillivray.

A not uncommon resident.

The Bullfinch, a fairly common resident in the lowlands of Cheshire, often escapes observation owing to its shy and retiring habits, for it frequently courts the seclusion of dense woods and thickets. At times, however, it may be met with in the lanes, when its call—a soft *whib*—attracts attention. It will travel with characteristic bounding flight before a pedestrian or cyclist, alighting on the hedge in front of him, and, loth to leave the shelter of the hedgerow, take short flights whenever he approaches. Not infrequently it builds

its nest in roadside hedgerows. On the hills in the east it is rarer, but has nested at Mottram in Longdendale,* and has been observed occasionally during autumn and winter at Wildboardclough, Rainow, Disley and in the Goyt Valley.

The Bullfinch does not appear to pass through Cheshire or along the coast on migration in spring and autumn; indeed the bird has been seldom noticed as a migrant on the west coast of Britain, though small parties have been observed passing southward in autumn in Morecambe Bay and off the coast of Lley. On November 20th, 1904, Mr. S. G. Cummings and Oldham saw six birds together at Delamere; these may have been a migratory party, but the bird is occasionally gregarious in winter; on January 19th, 1908, Mr. Cummings saw over a dozen in a flock at Wervin.

In spring the Bullfinch becomes bolder, and then does considerable damage in orchards and gardens. When attacking an apple or pear tree, the birds commence operations at the junction of a branch and the trunk, and working systematically outwards destroy every fruit bud on the thicker part of the branch, usually leaving those at the extremities of the slender twigs untouched. Occasionally, however, they attack the outermost buds, and will swing, head downwards like a Redpoll to reach the twigs beneath them. In the winter the Bullfinch eats the dry seeds of sorrel, dock and other roadside plants; Mr. Cummings has seen it feeding on the seeds of the milk thistle, hovering in front of the plants as it plucked the seeds.

Although Mr. R. Newstead had examined the stomach of a Bullfinch, shot in April, which was full of fruit buds, divested of scales, he failed to find traces of buds in eleven other birds which were killed in late winter and spring. On January 11th, 1905, eight birds, which had been "shot while in the act of destroying fruit buds" were sent to him from Capenhurst; in the gullets and stomachs of these he found nothing but the seeds of the sycamore, and a few small

* F. Stubbs, p. 29.

fragments of cinder and brick. He points out, however, that they may have been killed before they had time to eat the buds, and that if they were actually destroying them without eating them, it suggests "wanton mischief." The stomachs of three other birds shot in January and February, were full of hawthorn kernels. In the stomachs of eleven birds killed in November and December, were seeds of dock, bramble, charlock and nettle.*

In Cheshire the Bullfinch was formerly called the "Maupe," "Maulp," or "Malpe." The name occurs in the churchwardens' accounts of Goostrey, Wilmslow, and Rostherne, between the years 1654 and 1674, the reward which was paid for the birds being in each case one penny per head. "Maulpe" and its variants was thought by Earwaker to refer to Moles, but it is merely a variant of "Whoop," "Hoope," "Oope," or as it occurs in the Dorsetshire dialect, "Moupe."†

CROSSBILL. *Loxia curvirostra*, Linné.

An irregular visitor to Cheshire.

At irregular intervals flocks of Crossbills have occurred, chiefly in the winter, in woodlands in various parts of the county. A flock visited the woods at Twemlow about the year 1834 or 1835. Several of the birds, with characteristic tameness, allowed themselves to be snared while feeding on the seeds of conifers, by means of a horsehair noose fastened to the end of a fishing-rod.‡

The late Peter Rylands of Warrington recorded a flock of Crossbills in 1838. He apparently did not notice any brightly coloured males, and in consequence referred the birds to a new species. His note is as follows:—

"Pippin Crossbill (*Crucirostra cinerea*, Ryl.) in Cheshire.—

* *Food of Birds*, pp. 45, 46.

† Cf. Murray and others, *New English Dictionary*, "Maulp."

‡ T. W. Barlow, MS.

A flock of Crossbills were observed last February in the neighbourhood of Tarvin, Cheshire.”*

A flock was observed in the autumn of 1838 at Barthomley. The Rev. E. Hinchcliffe says that they settled in two larches in his pleasure grounds, and attacked the cones. His gardener described them as being “like little parrots, and of various colours, and so tame that he could easily catch some with his hand,” which he did, securing two, one of which “was cherry coloured, the other of a dusky green.”†

The Crossbill is not included in Brockholes’ list, but there was an example in the collection of the late Captain Congreve which was shot in Burton fir woods in January, 1839.‡

The numerous larches in and about the forest at Delamere offer attractions to these unusual visitors, and they have been more frequently observed in this district than elsewhere in the county. On January 22nd, 1889, Mr. W. I. Beaumont saw a flock of about twenty Crossbills in a larch plantation at Vale Royal,§ and there are several birds in the Grosvenor Museum, Chester, that were shot at Oakmere in the winters of 1889 and 1891. Seeds of the Scotch fir and kernels of the hawthorn were found in the stomachs of three of the birds shot in 1889.|| In the winters of 1902–03, and 1903–04, flocks of Crossbills, containing from ten to twenty birds, constantly frequented the firs in the neighbourhood of The White Hall, Little Budworth Common; the late J. H. Stock secured five males and one female for his collection.

In the east of the county the bird has been once recorded; Mr. J. Middleton states that one was shot, by a bird-stuffer named Walker, at Mottram in Longendale about the year 1897.¶

* *Naturalist*, 1838, p. 439.

† *Barthomley*, p. 151.

‡ Dobie p. 300.

§ *Naturalist*, 1889, p. 102.

|| R. Newstead, *Food of Birds*, p. 47.

¶ Stubbs, p. 29.

During the irruption of the end of June and July, 1909,* when birds were noticed in many localities in Scotland and England, a single female or young bird was seen at close quarters on Alderley Edge by Mr. M. V. Wenner on the 11th of the latter month. Four birds were seen by Mr. F. S. Graves in a clump of larches on the Edge on October 3rd, and during that month and November Coward saw Crossbills on several occasions in these and other larches in the same locality. On October 9th, when many small parties were moving from tree to tree, Mr. T. Baddeley counted twenty-three in one larch, and on the 15th Mr. S. G. Cummings and Coward estimated that there were at least between fifty and sixty birds on the Edge. Mr. J. J. Cash saw a small flock on Snelson Common near Chelford on October 24th. About half the birds at Alderley and Snelson were in red dress, the others being green, brown or yellowish.

The birds when feeding wrenched the cones off with their beaks, often hanging beneath the bough during the operation. They then carried the cones in their beaks to a more secure foothold than the tips of the slender branches afforded, and holding them with one or both feet, grasping the branch at the same time with their claws, wrenched forward the scales with their crossed mandibles so as to reach the seeds. All or sufficient seeds having been extracted the cone was dropped, and the bird almost invariably cleaned its beak before searching for another cone. We never saw the birds hold the cone in one foot and raise it to the bill as Hincheliffe states they did at Barthomley, but they always held the cone firmly on the branch whilst they pulled at the scales to reach the seeds.

* *British Birds* (Mag.), III., pp. 82, 83.

Sub-family *EMBERIZINAE*.CORN BUNTING. *Emberiza miliaria*, Linné.

A local resident and partial migrant.

The Corn Bunting, a very local resident in Cheshire, is restricted during the breeding season to the coast, Sealand, the low-lying meadow-land of the Mersey valley between Stockport and Warrington, and one district in the eastern part of the plain. In Wirral, Brockholes described it as common during spring and summer in such places as Wallasey and the enclosed portions of the Dee marshes. It occurs along the Wirral shore at Heswall, Parkgate and Burton, in the fields adjoining the Dee Cop, and at Shotwick and Saltney.

In the water-meadows of the Mersey valley between Stockport and Warrington the bird is abundant, but even here it is local, for the Rev. G. Egerton-Warburton tells us that he has not met with it at Warburton; in recent years it has invaded the tract of cultivated land which has replaced Carrington Moss. The absence of the bird from the hill-pastures in eastern Cheshire is difficult to explain, for it is fairly plentiful in similar situations in the neighbourhood of Buxton, Castleton and Chapel-en-le-Frith, a few miles beyond the Derbyshire border, and Mr. John Ball reports that a few pairs nest in the neighbourhood of Astbury and Moreton, near the Staffordshire border.

The Corn Bunting is seldom met with in winter, and Brockholes considered it absent from Wirral at that season, but Mr. S. G. Cummings has seen flocks on the Dee Cop and at Shotwick in January and February; he says that it is not so common there as it was some years ago, and that it is now absent from several of its former summer haunts in the neighbourhood of Chester. Examples have been obtained at Aldford and Ince in winter, and at the latter place Mr. Cummings and Oldham heard a bird singing in

May, 1907. We have seen one that was shot out of a flock at High Legh in the winter of 1892-93.

The monotonous song begins in January or February and continues until late in summer; we have heard the unmistakable notes so late as August 12th, and occasionally the bird sings in the autumn.

YELLOW BUNTING. *Emberiza citrinella*, Linné.

Local names—YELLOW-HAMMER; GOLDFINCH; GOLDIE; GOWDIE; GOLDEN AMBER; SCRIBBLING LARK; WRITING LINNET (Longdendale).

A common resident.

The Yellow Bunting or Yellow-hammer, the commonest of the buntings, is one of the most familiar of our Cheshire birds, being plentiful everywhere in the lowlands and on the hills up to the edge of the moors. Mr. J. M. St. John Yates tells us that the bird is absent from the hills in the neighbourhood of Buglawton in winter; he usually notes its return about the middle of March. In winter, in the plain, it frequents stubbles and farmyards in company with Chaffinches and Sparrows, but though much in evidence at that season is not so plentiful as in summer.

There is little evidence to suggest that the Yellow Bunting is a regular bird of passage along the west coast of England, and only a single entry in the *Migration Reports* refers to it at the Dee Lightvessel. At 8 a.m. on October 19th, 1885, after a foggy night, when many small birds were about the light and several were killed, a Yellow Bunting and a Stonechat were "alive on deck."*

The song of the Yellow Bunting is often heard in Cheshire before the beginning of March; in most years about the

* *Migration of Birds*, Report 7, pp. 113, 122.



THE DEE COP.

second or third week in February. Mr. J. J. Cash has heard it so early as February 3rd. It is continued long after most birds are silent and is one of the most noticeable songs in July and August. Mr. S. G. Cummings has heard it on October 29th, and Mr. Cash noticed several in good song on November 5th, 1908. The nesting period is also often prolonged. Mr. Cummings has seen young in the nest on April 22nd, and eggs are occasionally found during the first half of August. On September 5th, 1906, the Rev. G. A. Payne showed Oldham a female bird brooding on an addled egg and a newly hatched young bird in a nest at Knutsford.

In autumn the Yellow Bunting is a grain-eater, but Mr. R. Newstead finds that in spring it devours large numbers of destructive weevils, and in Wales he has seen a pair feeding their young with crane-flies.*

In Cheshire this species is commonly called the "Goldfinch," whereas the Goldfinch, *Carduelis carduelis*, Linné, is as generally known as the "Red Linnet." Unsubstantiated reports of the occurrence of the rarer bird should, therefore, be received with caution.

CIRL BUNTING. *Emberiza cirrus*, Linné.

A very rare visitor in winter.

The Cirle Bunting nests in the adjacent counties of Denbigh and Flint, and Mr. S. G. Cummings has seen and heard it in August at Cefn-y-Bedd at the foot of Hope Mountain, within three and a half miles of the Cheshire border, but the bird has never been observed in Cheshire in the breeding season. Indeed, until 1906 there was no satisfactory evidence of the occurrence of this species in the county. On January 23rd of that year, Mr. S. G. Cummings saw a party of eight or ten Cirle Buntings on the Cop near Chester. They were

* *Food of Birds*, p. 47.

feeding on the right bank of the Dee when he first noticed them, but when disturbed by a dog they flew across the Cut towards Saltney. There was at least one Reed Bunting with them.*

REED BUNTING. *Emberiza schoeniclus*, Linné.

Local names—BLACKCAP ; PIT-SPARROW ; SPIT-SPARROW.†

A common resident and partial migrant ; only a few birds remain through the winter.

The reedy margins of the meres and the coarse herbage and undergrowth which fringe many of the marl-pits are favourite nesting places of the Reed Bunting, the bird being abundant during summer in such situations throughout the lowlands. In the hill-country, where the conditions are less favourable, it may be met with occasionally in marshy places.

Although a few odd birds, sometimes a male and female, evidently a pair, frequently remain throughout the winter, the majority of the Reed Buntings leave in the autumn. Migratory parties have been observed by Mr. S. G. Cummings and Dr. W. H. Dobie on the Shotwick marshes early in October, and on the Dee Cop Mr. Cummings often sees two or three birds in winter feeding along the water's edge, especially if the weather be severe.

The Reed Bunting is one of the earliest spring migrants to reach Cheshire. As a rule the first birds come about the middle of March, and parties arrive, often associated with

* *Zoologist*, 1906, pp. 71, 72.

† Holland, *Glossary*, p. 332. Holland gives both "Pit-sparrow," and "Spit-sparrow" as local names for the Reed Bunting; the first is the more general, and is derived from the habitat of the bird, small ponds in Cheshire being usually called "pits." "Spit-sparrow" may be merely a variant, or may be derived from the jerky, uncertain song.

Meadow Pipits and Pied Wagtails, through the latter half of that month and early April. Occasionally there are migratory flocks in Cheshire so early as the beginning of March, and on February 11th, 1906, we noticed small parties and pairs of birds in several places in the neighbourhood of Marbury and Pickmere, where earlier in the winter we had only seen one or two birds about. On February 21st, 1908, Mr. Cummings saw a flock of about a dozen at Shotwick.

Few birds are so handsome as a male Reed Bunting in his nuptial dress, and his beautiful plumage is never seen to better advantage than when, clinging to a tall reed or withy, he utters his stammering song. The song is usually begun immediately the birds arrive—about the middle of March.

Like many birds that build upon the ground, the female when disturbed will frequently endeavour to lure an intruder from the vicinity of the nest by tumbling along the ground for several yards with trailing wings. Not only does the male sometimes assist in incubation, but he will in case of need adopt similar tactics. On July 15th, 1903, Oldham flushed a male from a nest which contained four eggs on Knutsford Moor; the bird, when it left the nest, squattered along haltingly over the herbage with outspread wings and tail.*

The food of the Reed Bunting is usually described as consisting of insects in the summer and seeds in the winter. The stomachs of four birds, examined by Mr. R. Newstead, contained the following: One killed in February, a few grains of wheat, and a small quantity of black sand; one in March, a large number of seeds of a *Carex* and numerous fine pebbles; another in March, many small reddish larvae of a *Noctua*, fragments of water boatman (*Notonecta glauca*, Linné), and small weevils; one in May, many fragments of weevils, three larvae of geometrid moths, and sand.†

* A similar occurrence is recorded by Sir Herbert Maxwell (*Ann. Scot. Nat. Hist.*, 1908, p. 49).

† *Food of Birds*, p. 47.

SNOW BUNTING. *Plectrophenax nivalis* (Linné).

Local names—MOUNTAIN BUNTING ; SEA LINNET ; SNOW LARK ; WHITE LARK ; WHITE BUNTING.

A fairly regular winter visitor to the coast, and occasional visitor inland in severe weather.

Brockholes described the Snow Bunting as "a rather scarce winter visitor" to Wirral, but few years pass without a flock, or at any rate a few odd birds, being noticed on the coast. The late Nicholas Cooke stated that a bird was caught at Leasowe in December, 1866, and Dr. Dobie that one was taken on the sandhills at New Brighton "a few years ago."

In January, 1896, Mr. R. H. R. Brocklebank shot one on Burton Marsh, and Mr. J. A. Dockray frequently sees Snow Buntings on the edge of the marsh when he is out in his punt.

On December 26th, 1901, we followed a bird, which was feeding at high-water mark in company with a Pied Wagtail, for half a mile or more along the seaward side of the railway embankment which crosses the Dee Marsh. The birds flitted before us and refused to part company. On December 9th, 1903, Mr. S. G. Cummings and Coward came across a flock of twenty birds on the marsh at the junction of the Chester and Burton Cops ; the birds were feeding on the seeds of seablite, *Suaeda maritima*, Dumortier, which grows there abundantly. When the tide drove the birds from the marsh they alighted on the stonework of the embankment. A few Snow Buntings remained at this spot for some weeks ; on January 9th, 1904, Mr. Cummings saw three, and on the 13th we found one bird still there. On December 31st, 1905, Oldham came across two birds sheltering from a south-easterly gale behind the sea wall at the Hoylake end of the Leasowe Embankment. On March 31st, 1906, Mr. Cummings' attention was attracted by their calls to a few Snow Buntings which were crossing the Dee Marsh near Burton.

Dr. J. W. W. Stephens saw a single bird on the beach at Hoylake on March 3rd, 1907, and three on November 2nd of that year; in 1908 he saw three repeatedly on the beach and the Red Rocks, between February 2nd and March 14th. On March 3rd Coward saw one on the railway embankment at Burton.

Occasionally the Snow Bunting occurs in some numbers on the hills in the east of Cheshire. Mr. F. Stubbs describes it as "almost a regular visitor in winter"* to the hills of the Yorkshire-Cheshire border, and mentions a bird which was shot at Swineshaw. He watched one near Crowden on November 12th, 1906. On the Longdendale moors the bird is frequently recognised when it is feeding with other finches in the farmyards. Flocks of Snow Buntings have been met with on Werneth Low near Hyde in hard weather; in the severe winter of 1880-81 an old gamekeeper, John Rowbottom, noticed several flocks frequenting the Low, one of which numbered over one hundred birds. He secured no less than thirty-five, several of which he ate, finding them very palatable. In the cold February of 1895 Mr. B. R. S. Pemberton saw a flock on the moors near Taxal.

On November 28th, 1908, Mr. E. W. Hendy saw a couple of birds in autumn dress on the moors near the "Cat and Fiddle" Inn, and Mr. R. E. Knowles saw one in the same locality on October 23rd, 1909. Mr. Knowles tells us that in most years he sees a few on these hills in the autumn.

The Snow Bunting is seen less frequently on the Cheshire plain than on the coast and hills. At the end of January, 1845, the late Nicholas Cooke obtained three birds on the bank of the Mersey at Fiddler's Ferry near Warrington, and in his MS. note-book he mentions others which were snared in the neighbourhood about that date. In the winter of 1880-81 the late J. F. Robinson had a small flock under observation for some days in the neighbourhood of Frodsham; he snared two birds with horsehair nooses. The Buntings were consorting with Chaffinches, Bramblings

* F. Stubbs, p. 30.

and Yellow-hammers, and Robinson noticed that when disturbed they did not, like the finches, fly into trees or bushes, but alighted again on the ground after a short flight.*

Dr. H. H. Corbett has seen, in a bird-stuffer's shop at Cheadle Hulme, several Snow Buntings which had been shot in that neighbourhood, and there is one in the Warrington Museum which was killed at Antrobus. One was shot in the winter of 1892-93 at High Legh, and on March 22nd, 1906, Mr. L. B. Wells saw one at Bollington near Bowdon.

STURNIDAE.

STARLING. *Sturnus vulgaris*, Linné.

Local names—SHEPSTER ; STARE.

An abundant resident and partial migrant, large numbers arriving in autumn and leaving again in spring. Bird of passage on the coast.

Brockholes refers to the Starling as : " An abundant resident, and partial migrant. Countless thousands congregate in the autumn evenings to roost at Caldy and Thurstaston. The majority of these migrate before winter begins."

Few birds exhibit greater powers of adaptation to a varied environment than the Starling ; it is equally at home in the thickly populated districts, in secluded woodlands, and in the cliffs of the coast. In Cheshire it is everywhere abundant, and both as a resident and migratory visitor has undoubtedly increased within recent years.

Starlings are eminently sociable ; many pairs often nest in close proximity, and flocks are met with at all seasons. In autumn and winter these flocks resort each night to a

* *Manchester City News*, Aug. 19th, 1882.

common rendezvous in a reed-bed or plantation, where they roost in countless thousands. A pheasant-covert at Ashton-on-Mersey, principally composed of Austrian firs, whose dense foliage afforded warm shelter for the birds, was for some years a favourite haunt. Although a few birds might be found roosting in ivy and evergreens in different parts of the district, practically all the Starlings within a radius of five or six miles of Ashton congregated there nightly. The numbers, roughly estimated, exceeded one hundred thousand. From the time when the light began to fade until dusk, compact flocks of from fifty to two hundred birds might be seen flying in a bee-line for the covert from every direction. These flocks amalgamated as they approached the roosting place, and before settling for the night wheeled in dense masses high above the trees, going through a series of aerial evolutions with military precision. Long after settling, especially if the night were light, the birds kept up an incessant chatter, the combined voices of thousands sounding like surf breaking on a shingle beach. We have crept into the covert on a dark night when all was quiet except for an occasional scuffle when a bird in altering its position jostled its closely packed neighbours from their perches. But when we struck a match or made a sudden noise the air was filled with hundreds of bewildered birds, which in the first moments of confusion blundered in the darkness against us and the surrounding bushes. When they rose above the tree-tops, the whirr of innumerable wings sounded like the roar of an express train. Shortly after daybreak the birds would leave the covert in large well-ordered flocks, which split up into smaller parties as they radiated from the centre to their feeding grounds in the surrounding district. It was supposed that the presence of the Starlings was detrimental to the welfare of the game, although we have seen Pheasants roosting on the lower boughs of trees whose upper branches were roped with Starlings. Ineffectual attempts were made for some time to drive them away by discharging guns as the birds came

in to roost, but they were only scared away in the winter of 1894-95, when the device of flying a kite above the trees was adopted. Compelled to seek a fresh asylum, the evicted Starlings took up their quarters in a fir covert at Wythen-shawe, four miles away.

The situations selected for these autumn roosts vary in different years, but certain localities are repaired to annually. The extensive reed-beds at Rostherne Mere are frequently occupied by Starlings in winter, but in January we have known them to vacate the reeds and roost in a neighbouring covert. At Marbury Mere near Northwich, where at the end of August vast flocks assemble nightly, the reeds are generally occupied throughout September and October, but here also the birds sometimes roost in a plantation of firs. When reed-beds are the chosen roosts, the birds collect first in some tall trees in the vicinity, whence they fill the air with their evening songs before going through their characteristic aerial evolutions and descending into the reeds.

Brockholes, as already mentioned, was of opinion that the majority of the birds migrated before the beginning of winter, and certainly large numbers have been observed passing the Dee Lightvessel in autumn, but in the north and centre of Cheshire the approach of cold weather brings an increase rather than a diminution in their numbers. It is not unlikely that weather conditions regulate the migratory movements, but it is difficult to determine when the birds have actually left any neighbourhood, for they are capricious in the choice of a roosting place and the period during which they occupy it. In 1907, for instance, considerable numbers—certainly many thousand birds—roosted in October and early in November in a small plantation near Bowdon, but by the middle of the latter month the plantation was almost deserted, whereas there was a distinct increase in numbers in a roost near Rostherne, about two miles away.

The observations at the Dee Lightvessel show that a stream of Starlings—birds of passage or emigratory birds—

occasionally, at any rate, passes along the Wirral seaboard. The movements of flocks flying west or south-west are most frequent in October and November ; any later movement is dependent upon weather, severe frosts or snow driving the birds westward. On October 21st, 1884, large numbers of Starlings were seen passing in the company of Meadow Pipits and a few Thrushes at the same time that similar movements were observed at the Selker Lightvessel (Cumberland), the South Stack, Carnarvon Bay and Bardsey Island lights.* In the same year Starlings, Thrushes, Blackbirds and Meadow Pipits passed the Dee Lightvessel from 8 a.m. to midnight on November 10th ; the movement was observed at the Bahama Bank (Isle of Man), Selker, Morecambe Bay, and Carnarvon Bay Lightvessels.† A third movement of considerable magnitude was observed simultaneously at the Dee Lightvessel and at Langness Lighthouse, Isle of Man ; the Starlings were accompanied by Blackbirds and Thrushes.‡ Dr. J. W. W. Stephens saw many small flocks passing westward between Hoyle and Hilbre on November 28th, 1908 ; presumably the birds were leaving.

The northward movement is not so frequently observed, but occasionally large gatherings are noticed in the spring. On April 14th, 1909, for instance, immense numbers of Starlings were seen by Mr. J. E. Bowers in some small woods at Hatherton near Nantwich, a few days before a similar abnormal flock of birds was noticed at Wigan in Lancashire ; in both localities the birds were not observed later and were presumably about to emigrate.

The Starling is not fastidious in its choice of a nesting site, any convenient hole in a building, tree or cliff suiting its purpose ; we have seen birds feeding their young in a crevice in a garden rockery, and have found nests under the thatched eaves of corn-stacks. In Dunham Park, Delamere

* *Migration of Birds*, Report 6, pp. 106, 107.

† *Op. cit.*, Report 6, p. 109.

‡ *Op. cit.*, Report 6, p. 101.

Forest, at Alderley Edge and elsewhere the Starlings are prone to occupy Woodpeckers' nesting holes, thereby in all probability influencing the decrease of these already scarce birds. Not only are the old holes utilised, but the Starlings often take possession of those just excavated.

By destroying worms, small molluscs and insects, which last are often captured on the wing, the birds hawking for them after the manner of a Swallow at a considerable elevation, the Starling during the greater part of the year renders invaluable service to the agriculturist. In autumn, however, it levies heavy toll upon fruit of various kinds. It is recognized that the growth of the frugivorous habit has been coincident with the increase of the birds throughout the country. Mr. J. D. Siddall* alludes to the fondness of Starlings for the berries of the mountain ash and yew, and states that "when cherries are ripe, they seem to be converted for the while into eating machines, and go on, if undisturbed, eating all day long." When the mountain ash and beam tree are in fruit, Starlings far outnumber the Blackbirds and Thrushes which flock to feed upon the ripe berries. Haws and elder-berries are also eaten. Considerable damage is done by Starlings to pears; the birds attack the fruit in the ripest part, near the stalk, eating downwards, and often leave only a stalk and core hanging to the branch, whilst the ground beneath is strewn with the lower half of the fruit.

At the end of June we have seen many flocks of several hundred Starlings amongst the bilberries on the moors in Longdendale, at an elevation of between seventeen and nineteen hundred feet; the fruit was not ripe and we were unable to ascertain upon what the birds were feeding.

Even in autumn the Starling devours large numbers of insects. Mr. R. Newstead's report on his post-mortem examination of the stomach-contents of a number of birds proves practically nothing against and very much in favour of the Starling; he comments on the absence of remains of

* *Chester Soc. Nat. Science, Proc.*, Part IV., pp. 206, 207.

fruit in the stomachs of birds killed in autumn. He examined altogether fifteen birds which had been killed at various seasons in Cheshire. The stomachs of those killed in March, April and June contained the remains of many beetles. One bird, shot at Aldford on April 3rd when hawking insects on the wing, had in its stomach seventy-eight almost perfect wing-cases of *Aphodius fimetarius* (Linné), fragments of an *Amara*, and the shell of the mollusc *Cochlicopa lubrica* (Müller).

Weevils of the families *Otiorrhynchidae* and *Curculionidae* were abundant in the stomachs of birds killed in August; in one there was also the larva of a cabbage moth, *Mamestra brassicae* (Linné), in another the skins of moth larvae, and in a third portions of the beetle *Pterostichus versicolor*, Sturm, a few grains of wheat and pebbles. Three birds, two of them immature, killed in September, had been feeding largely on dung beetles, mostly *Aphodius fimetarius* and *A. contaminatus*, Herbst. The two young birds had also taken a considerable number of crane flies (*Tipulae*) and some beetle larvae.

In a bird taken in November was a single moth larva, and one hundred and four larvae of dipterous flies (four of *Stratomyidae* and one hundred of *Muscidae*); there was also one *Pisidium* shell and two grains of wheat. Mr. Newstead classifies his insects in "injurious," "beneficial," and "indifferent" groups; ten of the birds examined had taken injurious insects (weevils, etc.), six, beneficial (carnivorous beetles), and seven, indifferent insects (dung-feeders).

In addition to these post-mortem examinations, Mr. Newstead made careful observations between May 22nd and June 8th, 1908, on the visits of a pair of Starlings to their three young in a nest which was built close to his study window. He was able to identify the nature of the food brought by the birds in a large number of cases; "During a total period of seventeen hours, representing approximately the hours of one day during which food was

collected for the young, (about) 169 journeys were made to the nest. It may be interesting to note that three birds (two males and one female) were seen on four occasions to bring food to the young. Of this I am absolutely certain as all three birds arrived at the nest almost simultaneously. As a rule, however, the birds paid alternate visits and there was an irregular interval between them. . . . During fifty-five consecutive minutes, twenty visits were made to the young." The food chiefly consisted of the larvae of moths.*

When foraging in the fields, a flock of Starlings after alighting usually works outwards in an ever-widening circle; but if alarmed, even when consorting with Lapwings or Rooks, they immediately resume a compact formation on taking wing, and keep separate from the other birds.

In Cheshire the Starling resumes its song at the end of July or beginning of August, and if the weather be warm sings throughout the winter, but the regular spring song is not usually begun until the end of January or beginning of February. The bird possesses remarkable imitative powers. We have often heard it reproduce the notes of the Skylark, Song Thrush, Blackbird and Hedge Sparrow in its song, and repeat with wonderful accuracy the calls of the Green Woodpecker, Curlew, Ringed Plover and Lapwing. Near a farmyard it will pick up the crow of a cock, the cackle of a hen, or even such a mechanical noise as the creaking of an uncoiled pump.

White Starlings have been obtained from time to time in various localities, and in December, 1893, a peculiar variety was shot at Ashton-on-Mersey. The general plumage of this bird was rich brown, the primaries were white, and the tail-feathers white splashed with brown; each feather on the breast and belly was broadly margined with pure white, giving the bird a curiously spotted appearance; the head and neck showed traces of the metallic sheen of normally plumaged birds.†

* *Food of Birds*, pp. 58-61.

† C. O., *Naturalist*, 1894, p. 157.

The reputed occurrence of the Mediterranean *Sturnus unicolor*, Temminck, at Wallasey on November 22nd, 1905 (recorded in *The Country Side* for January 17th, 1906, and repeated by Mr. R. Lydekker)* was almost certainly an error. The bird was not seen by any competent authority, the evidence of identification was slender, and as not a single feather was preserved, the report, if it had not been accepted as veracious by Mr. Lydekker, would not have been worthy of mention.

CORVIDAE.

CHOUGH. *Pyrrhocorax graculus* (Linné).

A casual wanderer to Cheshire.

The Chough has long since deserted most of its breeding stations on the north coast of Wales, and though a few pairs linger in Lley, Cardigan Bay and the Isle of Man, it is, owing to its sedentary habits, only a casual visitor to Cheshire.

About the year 1846 one was taken near Holmes Chapel, † and Brockholes, in 1874, said: "Some years ago I met with a flock of these birds in a field at Leasowe." At that time the bird nested in Anglesey and near Llandudno. On October 4th, 1887, a Chough was knocked down with a whip by a man at Compstall, and was taken to Gillett, a Stockport taxidermist, who kept it alive for several days. The bird, which showed no signs of having been in confinement, is now in the Vernon Museum, Stockport.

* *The Sportsman's British Bird Book*, p. 585.

† T. W. Barlow, *Zoologist*, 1846, p. 1501.

NORTHERN EUROPEAN NUTCRACKER.

Nucifraga caryocatactes caryocatactes (Linné).

Has occurred once in the county.

The Nutcracker has been obtained once in Cheshire. In 1860 a male was shot at Vale Royal near Northwich, and preserved by the late William Thompson of Chester, from whom it was purchased by Mr. A. O. Walker and presented to the Grosvenor Museum, Chester.* This bird has a short bill, forty millimetres in length and fifteen in depth at the nostrils. There are two geographical races, distinguished by the length and stoutness of the bill, which visit England; it is referable to the thick-billed Northern European form, which by some authorities is said to be less frequent in Great Britain than the slender-billed Siberian form.

The first Nutcracker recorded for Britain was shot in Pennant's garden at Downing near Mostyn, Flintshire, on the Welsh side of the Dee Estuary, in 1753,† but this is the only known occurrence of the bird in Wales. It has not been noticed in other counties contiguous to Cheshire with the exception of Yorkshire, where four out of the five recorded examples have occurred in the West Riding.

BRITISH JAY. *Garrulus glandarius rufitergum*, Hartert.

A common resident in most parts of Cheshire.

Byerley in 1854, on the authority of Brockholes, described the Jay as "formerly common in Wirral, but now scarce," but Brockholes, in his 1874 list, merely says: "a much persecuted resident." It has not, however, been exterminated in the wooded portions of Wirral, and in many parts

* Dobie, p. 303.

† *British Zoology*, Edition 1812, Vol. I., p. 298.

of lowland Cheshire the bird is an abundant resident in the parks and coverts, where its presence is frequently revealed by its harsh cry. Nowhere is the bird so plentiful as in Delamere Forest, where a score may be seen hanging on any gamekeeper's gibbet, for in this district all efforts of the game-preserved fail to reduce its numbers. A theory that Jays and Magpies cannot thrive in the same district, supported by the evidence of certain localities, such as Dunham Park, where Jays are abundant and Magpies rarely seen, is disproved in Delamere Forest, for there both birds abound, the Jay being perhaps the more plentiful.

The Jay is absent from the treeless hills in the east, but it occurs in some numbers in the upper Dane valley. In the Goyt valley it is uncommon, and is seldom met with even in the well-wooded parts of the valley at Romiley, Middlewood and Disley.

In the autumn and winter the Jay feeds largely on acorns. Dr. Dobie records that in October, 1893, over fifty Jays were shot as they passed between the forest and Ashton Hayes. "Every bird which came from the forest had its gullet empty, while every one which returned had five or six acorns, and always one in its bill."

The stomachs of seven birds killed in Cheshire in February, September, November and December, which Mr. R. Newstead examined, contained acorns, in most cases divested of their shells; in six of these there was nothing except a few pebbles, but in one killed in September there were several earwigs. One bird killed on April 25th had in its stomach an equal proportion of acorns and oat glumes, mixed with many pebbles. Those of three others which had been killed in the same month were filled respectively with equal proportions of wheat without husks and oat glumes, mixed with the remains of a large geodephagous beetle; with grass mixed with the remains of one dung beetle, *Geotrupes stercorarius* (Linné); and with the remains of click beetles or "skip-jacks," *Agriotes obscurus* (Linné), the thoraces of one hundred and twenty-seven

specimens being intact, and one geodephagous beetle, *Pterostichus versicolor*, Sturm.

As a set-off to the damage done by the Jay in game-preserves the bird destroys many noxious insects. The stomach of a female, shot on the nest at Eaton on May 23rd, contained, in addition to many fragments of incubated eggs of the Pheasant, over one hundred and twenty larvae of *Cheimatobia brumata* (Linné) and two of *Melolontha vulgaris*, Fabricius.

Nestling Jays are largely fed upon insects by their parents. Mr. Newstead examined the stomachs of two well-feathered birds which were taken from a nest at Abbot's Moss on July 12th, 1902. The contents consisted of the remains of many click beetles, several large moths, weevils and one dragon fly (*Aeschna juncea* (Linné)) with the wings almost intact, the incisor tooth of a small rodent and a few small pieces of potato.*

In some of the Cheshire parks and woods Jays are captured in concealed gins which are arranged round the egg of a Pheasant or Partridge; not infrequently a gin and the nest of a Thrush or Blackbird containing eggs are placed upon a platform which is supported against the trunk of a tree.

MAGPIE. *Pica pica* (Linné).

Local names—PIE; PYANET; PIEANNOT †; PIANNOT; PINUT (Longdendale).

Resident; scarce in some parts, but abundant in others.

The distribution of the Magpie in Cheshire is uneven; in some districts it is an abundant nesting species, in others it

* *Food of Birds*, pp. 48-49.

† Wilbraham, *Glossary*, p. 108.

is hardly known. The numbers in any district do not appear to be entirely regulated by the strictness of game-preservation, for in certain localities many are destroyed annually and yet the numbers are maintained, whilst in other places, where game-preservation is certainly not carried to greater extremes, the bird is seldom met with.

Brockholes described the Magpie in Wirral as "a much persecuted resident," but the bird is still fairly abundant in that part of the county. In the neighbourhood of Chester it is not very common,* but in the whole of the Delamere Forest country it is plentiful. Round Knutsford and Bowdon, even in the parks at Tatton, Tabley and Dunham, the Magpie is seldom seen, but at Mobberley, Rudheath, Antrobus, Great Budworth and Lymm a few pairs nest annually. Scattered pairs are to be found throughout south-west and south Cheshire, and in the district round Audlem and Doddington the bird is common.

In the whole of the Mersey valley above Warrington, and throughout the east and north-east of the county, the Magpie, in spite of persecution, is exceedingly plentiful; the large domed nest, often built in a poplar, is a prominent feature of the landscape when the trees are bare. The nest, however, is not always built in a tall tree, even where these are abundant; at Cheadle Hulme we have seen one in a thorn, only about four feet above the ground. At Romiley, where after the breeding season it is not unusual to see a score of birds in a flock, more than one hundred were killed on one small shooting in 1896. Mr. N. Neave tells us that in 1891 he took seventy eggs and found many nests containing young in the neighbourhood of Rainow. At Hattersley in 1904, Mr. F. Stubbs counted over fifty nailed to a shed, and a gamekeeper at Whaley Bridge told us that he had killed forty-two on his beat in 1897.

In autumn and winter the Magpie is frequently gregarious, large numbers roosting together, and often feeding in company in the daytime. On November 15th, 1903, Oldham

* Dobie, p. 304.

saw over forty feeding together in a field near Abbot's Moss, Delamere. Gatherings of Magpies are perhaps more noticeable in the early months of the year; on February 2nd, 1908, for instance, Mr. F. Stubbs reports that a party of twenty-six was seen at Broadbottom at a spot where he had seen a similar gathering twelve months before. Flocks were noticed in the first half of February, 1908, by Mr. William Whiston at Wildboardclough and by other observers in different parts of east Cheshire; it is possible that some of these birds may have been leaving the districts in which they were seen, for the Magpie, though not a regular migrant, occasionally wanders from one locality to another. In February, 1895, Mr. F. Stubbs saw nearly two hundred birds together at Taunton near Ashton-under-Lyne, about a mile north of the Cheshire border. By the beginning of February some of our resident Magpies have actually begun nest building.

When cock-fighting was a popular sport, an idea prevailed that Game-fowls' eggs hatched by a Magpie produced birds with enhanced fighting qualities. Mr. P. Cunliffe tells us that he recollects as a boy, some sixty years ago, climbing to a Magpie's nest at Handforth to bring down for a farmer some chickens whose birth was proclaimed by their chirping.*

The Magpie, placed on the black list by all game-preservers, is nevertheless of some service to the farmer. Mr. Newstead found in the stomachs of four birds from Chester, Eaton and Delamere fragments of a large number of weevils and other destructive beetles and the larvae of several large moths (*Noctuae*). A bird from the Dee marshes had been feeding on a Field Vole, whilst the stomach of a nestling taken at Mouldsworth was almost filled with the remains of five or six cockchafer.†

* *Naturalist*, 1899, p. 51. Cf. account of Game-fowls hatched in nests of Sparrow Hawk in Northumberland, in nests of Magpies in France, and of Magpies and Hooded Crows in Scandinavia, *Naturalist*, 1899, p. 76.

† *Food of Birds*, p. 50.

JACKDAW. *Corvus monedula*, Linné.

An abundant resident in all parts of the county.

The Jackdaw is found throughout Cheshire, and is particularly numerous in many of the parks, where it nests in hollow trees and in the dense growth on the trunks of old limes. Amongst the hills in the east, where there is little old timber, the bird nests in chimneys, steeples, quarries and rock faces, and similar situations are, more rarely, occupied in the plain. In Bowdon, although there are abundant nesting sites in the old trees in Dunham Park, several of the church steeples have within recent years been occupied by one or two pairs of Daws.

Jackdaws, like Rooks, pay frequent visits to their nesting sites in winter; early in January birds may be seen gathered round some favourite steeple, perched on the vane and pinnacles, or clinging to the conducting-rod, but building operations do not begin until the middle of March. Huge quantities of sticks are sometimes placed on the winding stairs of church towers to give foundation for the nest; in an old tower at Tabley, in 1902, a pyramid of sticks between three and four feet in height had been piled upon the floor of an empty room in order to raise the nest to the level of an open window.

Not only is the Jackdaw gregarious in autumn and winter, when large numbers of the birds—possibly some of them migrants—almost invariably associated with Rooks, congregate in the fields, but it is often sociable in the breeding season, many pairs nesting in close proximity. The Jackdaw is very plentiful in the Delamere country. There is not much old timber in the forest and the birds have perforce to choose other nesting sites. Eggs are sometimes laid in old Magpies' nests, and in many places there are numbers of open nests—bulky, untidy structures, quite unlike the compact nests of the Rook and Carrion Crow—built on the broad flat branches of Scotch firs.

Jackdaws, like Starlings, often perch upon the backs of cattle in order to search for parasites, and sometimes to collect materials for their nests. Mr. R. B. Bowers, in May, 1906, noticed near Nantwich a pair of Daws flying repeatedly from an elm in which they were building to the back of a young bull, from which they plucked some loose hair and returned with it to the nest.

Mr. C. E. Stott has described* the actions of a Jackdaw that rose from the banks of the river Weaver with a full-grown Water Vole in its claws, which it dropped from a height of about forty feet. This action was repeated seven or eight times, until the animal was dead, when the bird carried it away to a neighbouring steeple. Probably Mr. Stott's inference that the bird dropped the Vole in order to kill it is correct, for Jackdaws, Crows, Rooks and Gulls treat molluscs and crabs in a similar manner in order to break the shells and obtain the contents.

So few birds attack the destructive scale insects that it is worthy of note that one species at least has been found in the stomach of a Jackdaw. Mr. R. Newstead gives the following description of the contents of the stomach of a male Jackdaw, killed at Eaton on April 15th, 1895. "*Lecanium genevense*, two specimens of adult females. Also many *Chrysomela staphylaea*, *Otiorrhynchus sulcatus*, *Sitones* sp., and many other fragments of Coleoptera. Oats from horse-dung; a few feathers from its own breast; many small pebbles, and a No. 7 gun-shot. The latter had been taken in lieu of a pebble."† In the stomachs of two other Jackdaws killed at the same place and time were fragments of several weevils (*Otiorrhynchus sulcatus*, Fabricius and *Sitones sulcifrons*, Thunberg), glumes of oats, wheat, small balls of sheep's wool, and in one three fragments of brick and mortar. The stomachs of two birds killed at Aldford in April, 1894, were filled with wheat, which had probably been used as a bait, and a few fragments of beetles.

* *Zoologist*, 1890, p. 437.

† *British Coccidae*, Vol. I., p. 36.

A female from Delamere, May 28th, 1901, contained fragments of many weevils, a beetle of the genus *Athous*, one shell of *Vitrina pellucida* (Müller), a young potato about the size of a pea and fragments of many others. Nothing but vegetable matter—wheat and other cereals, which had probably been used to attract the bird—was in the stomach of a bird killed at Eaton in June, 1901; but in that of one from Mouldsworth, obtained in the same month in 1903, there was no vegetable matter, the contents consisting entirely of moth larvae and the remains of cockchafers (*Melolontha vulgaris*, Fabricius). Mr. Newstead also examined the contents of the stomachs of two nestlings, obtained from Delamere in May, 1901, and the analysis is particularly interesting, suggesting that the young are largely fed upon destructive insects. In the stomachs were ten almost perfect click beetles, *Athous haemorrhoidalis*, Fabricius, and the larvae of the following moths, *Cheimatobia brumata* (Linné), *Hybernia defoliaria* (Linné), and *Charaeas graminis* (Linné), as well as the remains of less harmful insects, such as *Geotrupes stercorarius* (Linné), *Carabus violaceus*, Linné, and *C. catenulatus*, Scopoli.*

RAVEN. *Corvus corax*, Linné.

Extinct; once, apparently, plentiful.

The Raven is now extinct in Cheshire, but there can be little doubt that it was once a common resident. So plentiful indeed were Ravens at the beginning of the eighteenth century that only one penny per head was paid for their destruction by the churchwardens of Stockport.† It is true that we have few actual records of its occurrence; probably the bird was exterminated in Cheshire as it was

* R. Newstead, *Food of Birds*, p. 51.

† Heginbotham, *Stockport Ancient and Modern*, Vol. I., p. 269.

in other parts of the country almost before it was realized that it had become even rare.

Byerley, in 1854, mentions the Raven as occurring "occasionally in Wirral," and Brockholes, writing twenty years later, refers to its former abundance in winter on the Dee marshes, but remarks: "I have not seen one since about the year 1866." Poison was, he believed, employed by the farmers in order to exterminate the birds on account of their depredations amongst the sheep. He reported* that a pair of Ravens nested on the west side of Hilbre Island in the spring of 1857, "but were driven away before the young were hatched, by boys who threw stones at them."

There was a Raven in the collection of the late Captain Congreve, labelled "Burton, 1840,"† and we have seen one in the possession of Mr. John Ball of Henbury, which was killed at Winle about thirty years ago.

The Raven still lingers in Denbighshire and other counties in North Wales, where it nests in some of the remoter valleys and on the rocky coast.

CARRION CROW. *Corvus corone*, Linné.

A rather scarce resident, thinly distributed throughout the county.

Game-preservation has without doubt reduced the numbers of the Carrion Crow in Cheshire, but a few pairs succeed in rearing their broods in different localities.

Brockholes says that prior to the year 1865 the Carrion Crow was a common resident in the neighbourhood of the Dee marshes, nesting regularly at Shotwick, Burton, Saughall and Puddington. He considers that about that date it shared the fate of the Raven, but Dr. Dobie states that it

* *Liverpool Lit. and Phil. Soc. Proc.*, Vol. XV., 1860-61, p. 18.

† Dobie, p. 304.

has nested within recent years at Mollington and elsewhere in Wirral. The bird is not uncommon on the marshes, where it shares with the rats and gulls the garbage left by the tide.

Throughout the plain the Crow nests sparingly but regularly. In Delamere Forest, in the country round Peckforton and Beeston, and in game-coverts in other parts, a few pairs annually escape the vigilance of the keepers. In June, 1891, we found a nest in a tall tree in a pheasant-covert in Higher Peover Park which contained five young birds, one of which was conspicuously smaller and weaker than the others. A partly eaten Ring Dove and the wing of a young Jay lay at the foot of the tree, and in an old nest in an adjacent tree were the remains of another Ring Dove.

The Carrion nests sparingly in the valleys of the Goyt and Dane, and visits the adjacent grouse-moors in search of eggs, but in many of the hill districts, such as the moors above Longdendale, the high land near Lyme Park, and, according to Mr. Newman Neave, in the neighbourhood of Rainow, the bird is rare.

In autumn and winter numbers of Carrion Crows congregate to roost in the Duckwood at Eaton* ; on February 18th, 1905, at about five o'clock in the afternoon, Oldham saw many Crows, singly and in pairs, come in to roost in the trees.

The Crow may perhaps be a passing migrant along the Cheshire coast. In the *Report* for 1885, † flocks of "Crows," in company with "Blackbirds, Titlarks, and Larks," were observed passing south by day on October 30th, at Selker Lightvessel, off the Cumberland coast, and at the Dee Lightvessel. The identity of "Crow" with *Corvus corone* must not be taken as certain—the birds may have been Rooks or Hooded Crows, but that they were migrants and not residents passing from one spot to another is supported by

* Dobie, p. 305.

† *Migration of Birds*, Report 7, p. 114.

the simultaneous observation of flocks, in company with the same species, at these widely separated localities off the north-west coast of England.

HOODED CROW. *Corvus cornix*, Linné.

An occasional visitor in autumn and winter to the coast and plain; a regular winter visitor in small numbers to the eastern hills.

The Hooded Crow, a resident in the Isle of Man and an abundant visitor to the eastern counties of England, is only known in most parts of Cheshire as a straggler during the colder months. Brockholes did not include the bird in his Wirral list, but the late Mrs. Longueville of Chester, who resided at Hoylake between the years 1810 and 1854, informed Dr. Dobie that she often saw "Royston Crows" in winter, their arrival being watched for by those interested in birds. At Hilbre Point they fed upon mussels and crabs, which they broke by dropping them from a height upon the "Red Rocks."* In recent years the bird has only been noticed occasionally in Wirral and western Cheshire. Two were shot out of a flock of seven or eight near Ledsham in November, 1888, one of which is now in the Grosvenor Museum, Chester, and a bird in the same collection was obtained on the Mersey shore at Ince in 1882. Birds are recorded from Aldersey and Eaton Park,† and one was shot in the last named locality on October 30th, 1901.‡ On October 18th, 1904, one was killed at Mollington.§ On February 10th, 1907, we saw two rise from the carcass of a sheep on the Dee Marsh opposite Denhall Hall.

To the Cheshire Plain the Hooded Crow is a casual wanderer. One was shot some years ago at Warburton,||

* Dobie, p. 305.

† *Id.*, p. 306.

‡ *Chester Soc. of Nat. Science, Literature and Art, Report*, 1901-02, p. 19.

§ A. Newstead, *Zoologist*, 1904, p. 429.

|| J. E. Smith, *Manchester City News*, May 16th, 1874.

and another was killed in the same locality in the autumn of 1903 or 1904. One in the collection of Mr. J. E. Newton of Denfield Hall, Rostherne, was obtained at Rostherne some time prior to 1860. About the year 1884 a couple were seen in the woods at Plumbley and one was shot; it was in the possession of the late J. W. Nuttall of Bowdon. Mr. John Baddeley saw a Hooded Crow at close quarters when he was shooting near Cheadle in December, 1895.* On February 17th, 1897, a bird was killed near Northwich, and Hilton of Sale, in whose shop we saw it, assured us that he had preserved others which had been obtained on Carrington Moss.

In November, 1901, one was shot at Knutsford, and at the end of February, 1906, another was killed at Whitegate. From February 10th to March 4th, 1906, a Hooded Crow frequented the immediate vicinity of Tatton Mere, Knutsford; it was usually to be seen perched in the very tops of the trees on the east side of the mere.

On the eastern hills the Hooded Crow is of more frequent occurrence; in fact it is, in certain districts at any rate, an annual winter visitor. "Norway Crows," we were told by a gamekeeper, are seen in the winter on the moors near "the Cat and Fiddle," and at Lyme, where the Carrion Crow is almost unknown, the head-keeper said that perhaps half-a-dozen or more "Grey Crows" came annually. In March, 1908, he told us he shot one on the Knight's Low, a wooded hill behind Lyme Hall. Mr. S. E. Thomason tells us that the Hooded Crow annually visits the high land above Whaley Bridge. Mr. John Ball of Henbury has two Hooded Crows which were shot on the hills near Macclesfield, where Mr. R. E. Knowles of Bollington Cross has frequently seen the bird during the last twenty years. On one occasion he saw three, and on another five or six hunting in company over the moors.

* *Manchester City News*, April 18th, 1896.

ROOK. *Corvus frugilegus*, Linné.

Local name—CROW.

An abundant resident.

The Rook is an abundant resident throughout Cheshire; its nesting colonies are met with everywhere. Rooks may be seen feeding on the pastures and arable land of the plain, the shores and sandbanks of the estuaries, and the grouse-moors of the east. In the cultivated districts the damage done to the crops is perhaps more than compensated for by the number of injurious insects and other pests destroyed by the birds, but on the moors their egg-eating propensities cause Rooks to be regarded with disfavour.

In the winter months the birds from various rookeries join forces and repair nightly to some common roost, which may or may not be the trees in the neighbourhood of some large rookery. Every night and morning the birds may be seen passing between the feeding grounds and the roost in long straggling flocks. The number of birds which nightly gather at some of these roosts is so large that it seems probable that the number of the residents is increased in winter by immigrants. There are, however, no records of Rooks passing the Dee Lightvessel, although westerly migratory movements have been noted in March at Isle of Man stations.

The rookeries are frequently visited during the winter months, but as a rule nest repairing and building does not begin in Cheshire until the end of February or the first week in March. Pairing takes place early in February, but during warm weather, even in November, birds may be seen sitting round and actually in the old nests, with actions that suggest the season of courtship.

During autumn and winter Rooks and Lapwings feed together in amity, but in the breeding season Rooks quarter the fields in search of eggs, and a pair of clamorous Lapwings may frequently be seen chasing a marauder from the vicinity of their nest.

Some of the Cheshire rookeries are very large ; one of the biggest is at Ashton Hayes near Mouldsworth, and immense gatherings of Rooks and Jackdaws frequent the western portion of the Delamere Forest country. In August, when the birds have left the nesting colonies, we have seen very large flocks of Rooks feeding with Jackdaws and Black-headed Gulls in the Wirral fields near Eastham. The birds often exhibit a preference for a particular tree in a rookery. At Wythenshawe near Northenden Mr. J. J. Cash has counted forty nests in a single sycamore which comes into leaf earlier than the surrounding elms and beeches.

During a severe plague of "leather-jackets," the larvae of *Tipula oleracea*, Linné, on the Sealand marshes and fields in 1900 Rooks destroyed great numbers of the pests. Several hundred acres of grazing land and golf-links were affected by the plague, the short grass being completely destroyed over large patches. "So effectually had the 'leather-jackets' severed the crowns of the plants," writes Mr. Robert Newstead, who investigated the matter,* "that one could with little difficulty roll back the turf into large masses, leaving the ground smooth and bare, exposing the surface-tracks of the larvae." The larvae, which did not feed during the day, lay in J-shaped hollows, and were with difficulty extracted ; they clung so firmly to their beds that if seized and pulled they broke, but did not relinquish their hold. In June, when the larvae were devastating the grass, Rooks flocked in immense numbers to the infected area, and devoured the grubs. The method adopted by the Rooks for extracting the larvae was simple. Apart from the dead grass there was no external evidence of the existence of the larvae, but by probing with their beaks and pulling away tufts of grass the Rooks located the burrows. They then excavated the overlying soil, exposing the curved end of the burrow and its tenant, removing from above each a little "gob" of earth. Mr. Newstead

* *Gardeners' Chronicle*, Jan. 21st, 1905, p. 34.

estimated that fully 25 per cent. of the grubs in the affected area were destroyed by Rooks.

Mr. Newstead has on many occasions seen numbers of Rooks and Jackdaws congregated in oaks in Delamere Forest, which were infested with the larvae of the green oak tortrix, *Tortrix viridana* (Linné), busily searching for insects; he is of opinion that the "birds feed extensively upon the larvae and pupae of this destructive insect." The stomachs of two female Rooks killed at Eaton in May, 1894, which he examined, contained several earth-worms, one *Noctua* moth larva, one weevil (*Ceuthorrhynchus* sp.), the cocoon of an ichneumon, and fragments of brick and mortar. Ten fledged young birds, killed in the Manley rookery on May 19th, 1905, were examined. The stomachs of two contained respectively seventy-five and forty-seven larvae of *Noctuae* and nothing else; a third had in it one small mollusc and a single grain of wheat in addition to twenty-three larvae. Another, with sixty-five larvae, had one wire-worm, remains of a dung beetle (*Geotrupes*) and a grain of wheat. Dung beetle remains were present in four of the others; in three there were pieces of potato tuber, and in three wheat, in one case so many as thirty-two grains.* It is evident that the young are fed by the parents with both animal and vegetable food.

ALAUDIDAE.

SKY LARK. *Alauda arvensis*, Linné.

A common resident and partial migrant; probably a bird of passage and winter resident.

The Sky Lark abounds throughout Cheshire, nesting at all altitudes, from the sandhills of the coast to the tops of the

* *Food of Birds*, pp. 52, 53.

highest moors, nearly two thousand feet above sea-level. In winter it is absent from the bleak moorlands, but frequents the open country of the lowlands in flocks.

Brockholes believed that the Sky Lark was a partial migrant, as he used to see flocks in the autumn crossing the Dee marshes in a southerly direction, and his opinion has been amply confirmed by more recent observations. Mr. Lewis Jones tells us that migratory Larks, flying south-west, usually pass Hilbre Island early in October, especially when the wind is from the south-east. Several movements of considerable importance are recorded in the *Migration Reports* of the British Association, in which Larks, usually accompanied by other birds, passed the Dee Lightvessel in October and November.* The earliest date noted is October 19th, and the latest November 19th.

The birds which participate in this autumn movement in the north-west of Cheshire or across Liverpool Bay are probably "summer visitants, with their offspring, *i.e.*, home-breeding and home-bred birds," as they are described by Mr. W. Eagle Clarke in his account of Sky Lark migration.† As, however, a considerable number of birds of passage from central Europe are known to make their way across England from the east to the west coast at this season, and winter visitants are arriving at the same time from Scandinavia, it is not unlikely that many Sky Larks which have spent the summer beyond our islands reach or pass through Cheshire in October and November.

Later movements, which are undoubtedly referable to Mr. Clarke's Class 6—"Winter emigration from, and partial migration within, the British Isles"—are occasionally noticed. These movements—the exodus of winter visitants from Britain or migration to a warmer part of the country—are entirely influenced by falling temperature or heavy snow. For example, on December 26th, 1906, after the memorable snowstorm of the previous night, Mr. J. A.

* *Migration of Birds*, Report 7, 1886, pp. 113, 114; Report 8, 1887, p. 100; Report 9, 1889, pp. 100, 109.

† *Report of the Brit. Assoc.*, 1901, p. 366.

Dockray noticed immense numbers of Larks and Lapwings crossing the Dee, all flying north-west by north. "All day long," he writes, "they kept streaming past in ones and twos, and up to a score at once. Most of the birds were Larks; I must have seen many thousands in the course of the day." A general westward movement of Sky Larks, Lapwings and other birds was observed at this time, chiefly in the south of England. Large numbers arrived from the Continent and, together with the exiled birds which were wintering in Britain, travelled across England to the milder region of Ireland.* Mr. Clarke points out that: "The Sky Lark obtaining the whole of its food on the ground is at once driven to change its quarters when that is covered with snow, and only somewhat less quickly when it is merely frost-bound without snow."†

During winter, especially in hard weather when the inland districts are almost forsaken, great numbers of Larks frequent the Dee marshes. They feed along high-water mark when the tide is up, but so soon as the water subsides the majority spread over the marsh.

The song of the Sky Lark may be heard in Cheshire in most months, but the bird is usually silent during the latter half of July and in August. From September onwards it sings whenever the weather is mild, and towards the end of January the song becomes frequent. Early in February, immediately after a thaw, we have heard a dozen birds or more singing at once over the low-lying meadows at Moreton and Meols in Wirral. The flocks, however, do not usually break up until March. Often in May the bird sings more than an hour before sunrise, and the song is not infrequently continued until after dark. It is not invariably uttered as the bird is soaring; the Sky Lark often sings on the ground, or whilst perching on a rail, hedge or some tall weed in a field of young corn.

The Sky Lark does not readily forsake its nest. In July,

* Cf. R. J. Ussher and others, *Zoologist*, 1907, pp. 33, 74, 112, 113.

† *Report of the Brit. Assoc.*, 1901, p. 369.

1887, Oldham flushed a bird from a nest in a field at Ringway from which the hay had just been carried. The three eggs, in an advanced stage of incubation, must have been laid before the grass was cut, and had only escaped destruction from the knife of the mowing-machine because the nest was placed in a furrow.

Grass and the seeds of grass appear to be eaten freely by the Sky Lark, both in winter and spring. In the stomach of one bird, killed on the Dee marshes in January, Mr. R. Newstead found nothing but a quantity of grass and a few pebbles; in another, killed at the same time and place, turnip leaves were mixed with the grass, and there were also two beetles, *Helophorus aquaticus* (Linné). A single staphylinid beetle was with the grass in the stomach of a bird killed in February. A bird killed at Aldford in March had in its stomach seeds of a *Polygonum*, numerous fragments of weevils, and one spider; another, killed at the same place at the end of June, had eaten weevils and many beetles of the family *Halticidae*, as well as grass seeds.*

WOOD LARK. *Alauda arborea*, Linné.

Possibly at one time a scarce resident or migrant; now extinct.

No known specimen of a Cheshire Wood Lark exists, and much of the evidence of its occurrence in the county is unsatisfactory. Byerley wrote in 1854, on the authority of Mather, a Liverpool bird-stuffer, "Plentiful twenty years ago; now never seen," and Blackwall refers to it singing regularly in the neighbourhood of Manchester from 1818 to 1828.† This and other evidence of its former occurrence in southern Lancashire,‡ and possibly in those portions of Cheshire included by Byerley and Blackwall in their districts,

* *Food of Birds*, pp. 56, 57.

† *Researches in Zoology*, p. 53.

‡ Mitchell, *Birds of Lancashire*, p. 99.

adds weight to such meagre accounts as we have of the status of the Wood Lark in Cheshire in the last century.

The late Captain Congreve had in his possession a water-colour drawing of a Wood Lark, marked "Burton, 1839,"* and Brockholes says: "In April, 1859, I saw a rather wild unsettled bird at Cloughton near Birkenhead. In May, 1861, I saw a pair of birds but failed to find the nest. Burton." The late Lord de Tabley, in a note-book which was mainly written between the years 1864 and 1868, mentions two localities for the bird—Tabley and Lower Peover, and adds: "Now very rare. P. Booth says they are all but extinct."

During the hearing, in 1903, of a case concerning a right of way through Petty Pool Park, Thomas Barrett, then aged seventy-two, stated in evidence that he used to go, when a boy, with his father to the New Park to catch Wood Larks.

The late Dr. Sainter, writing in 1873, said that Wood Larks had recently been seen at Gawsworth, where they used to breed twenty-five years previously.† Dr. H. H. Corbett knew of a nest at Alderley, and in 1882 the late J. F. Robinson stated that he had heard the bird singing on several evenings in a wooded hollow at the foot of Simmons Hill, Manley.‡ Mr. W. Beaumont, who has kept Wood Larks as cage-birds and is well acquainted with their song, tells us that he has heard birds singing at Woodley and Poynton.

SHORE LARK. *Otocorys alpestris* (Linné).

Only once recorded.

A Shore Lark was seen by Mr. Lewis Jones of Hilbre, on the island on December 19th, 1905.§ A sketch, which Mr.

* W. H. Dobie, *in lit.*

† *Nature*, Vol. IX., 1873, p. 132.

‡ *Manchester City News*, July 8, 1882.

§ T. A. C., *Zoologist*, 1906, p. 72.

Jones made at close quarters, shows the black gorget, cheek and crown, and the yellow on the ear-coverts; the breast and belly "dirty white"; the back "same colour as lark"; the throat, abdomen and a streak above the eye "dirty yellow." The bird was, apparently, a female or immature male, as he did not notice any erectile tufts above the eyes. Mr. Jones remarked that the body seemed very near the ground, as if the legs were short, that the bird ran swiftly, occasionally uttered a call like that of a Meadow Pipit, and that it was about the size of a Wheatear.

There is no reliable record of the Shore Lark from the North Wales coast, but we have seen birds which had been obtained on the Lancashire shore at Formby and Southport.

PICARIAE

CYPSELIDAE.

SWIFT. *Cypselus apus* (Linné).

Local names—SQUEALER; LONGWING; DEVIL SCREAMER; SQUEEK.*

An abundant summer resident, which has increased in numbers within recent years; bird of passage.

The Swift arrives in Cheshire with great regularity during the first week in May, but it is usually a day or two later in appearing in the east than in the west of the county. In the spring of 1909, when other migrants arrived considerably before their usual date, Mr. A. W. Boyd and Coward saw two Swifts flying over Marbury Mere near Northwich on April 24th, and a single bird was seen in Bowdon on the same date by Mr. J. W. Higginbotham. On the 25th and 26th birds were noticed at Chester and Heswall. The bird is common throughout the county, but is somewhat particular in its

* Holland, *Glossary*, p. 335.

choice of haunts ; it is decidedly gregarious, large numbers occurring in one locality, only a few in another, while from others again the bird is absent. A few pairs breed in most parts of the hill-country in the east, and in summer birds may often be seen hawking for insects on the highest moors.

In July the Swift begins to depart, and as a rule by the middle of August the majority have left. It is, however, a bird of passage through the county, and long after the local Swifts have departed small flocks or odd birds appear in the haunts of the residents. In 1908, for instance, all the local birds left Bowdon, Knutsford, and certain localities on the North Wales coast on or before the night of August 16th, but on August 30th, September 1st, 3rd, 4th, 5th, 6th, 7th, 11th, 12th and 14th birds, generally singly, were noticed in the neighbourhood of Bowdon and Knutsford and in other parts of Cheshire. On the 11th Coward saw perhaps half a dozen flying steadily south-west before a light NNE. wind, in the company of many hundreds of Swallows and House Martins. As a rule, these passing birds are noticed in late August or early September, but in 1907 two were seen at Lymm by Mr. G. A. Dunlop on September 24th, and, rarely, birds have been observed in October. In 1896 several were passing in October, the latest being recorded by Mr. H. C. Harrison on the 27th.* In 1903, another late year, Coward saw a single young bird flying briskly in Bowdon on November 6th, after a cold night when ten degrees of frost had been registered.

In many parts of Cheshire the Swift has increased in numbers within recent years.

The food of the Swift consists of small dipterous flies and flying beetles, largely of the families *Staphylinidae* and *Scarabaeidae*, but in the stomachs of four nestlings and one adult, taken at Chester at the end of June, were several beetles of the family *Coccinellidae*.†

* *Manchester City News*, November 21st, 1896.

† R. Newstead, *Food of Birds*, p. 62.

CAPRIMULGIDÆ.

NIGHTJAR. *Caprimulgus europæus*, Linné.

Local names—GOATSUCKER ; FERN OWL ; BRACKEN OWL (Longdendale) ; MOTH OWL ; EVENING JAR ; JENNY SPINNER ; NIGHT HAWK ; LICH-FOWL.*

A local but widely distributed summer resident.

The Nightjar usually arrives in Cheshire during the second or third week in May, and its churring note may be heard in woodlands and on the heaths throughout the summer months.

In Wirral the bird breeds regularly in the fir woods of Bidston, Storeton, Ness and Burton, and on low heather-clad hills, such as those at Bidston, Caldý and Thurstaston.†

The Nightjar occurs on the Peckforton and Bickerton hills and is very common in Delamere Forest, frequenting thickets as well as open glades ; half a dozen or more birds may be heard on a June evening in traversing a couple of miles of forest road. On Little Budworth Common and Abbot's Moss it is even more abundant, and on still evenings several birds may be heard simultaneously. The bird occurs in some numbers on the Frodsham and Helsby hills.

Before the reclamation of the Moss it was abundant at Carrington, and many pairs still nest in the plantations and the narrow belts of heath planted with birches which border the roadways. The Nightjar frequents patches of rough ground and open fir woods in many other parts of the plain ; it occurs, amongst other places, at Lindow Common, Alderley Edge, Soss Moss near Chelford, Marton, Mere Moss, the Moss Covert at Plumbley, Butts Clough near Ashley, Rudheath, Knutsford, Somerford, and in the parks at Tabley, Petty Pool and Dunham Massey.

The bird is generally distributed and fairly abundant on

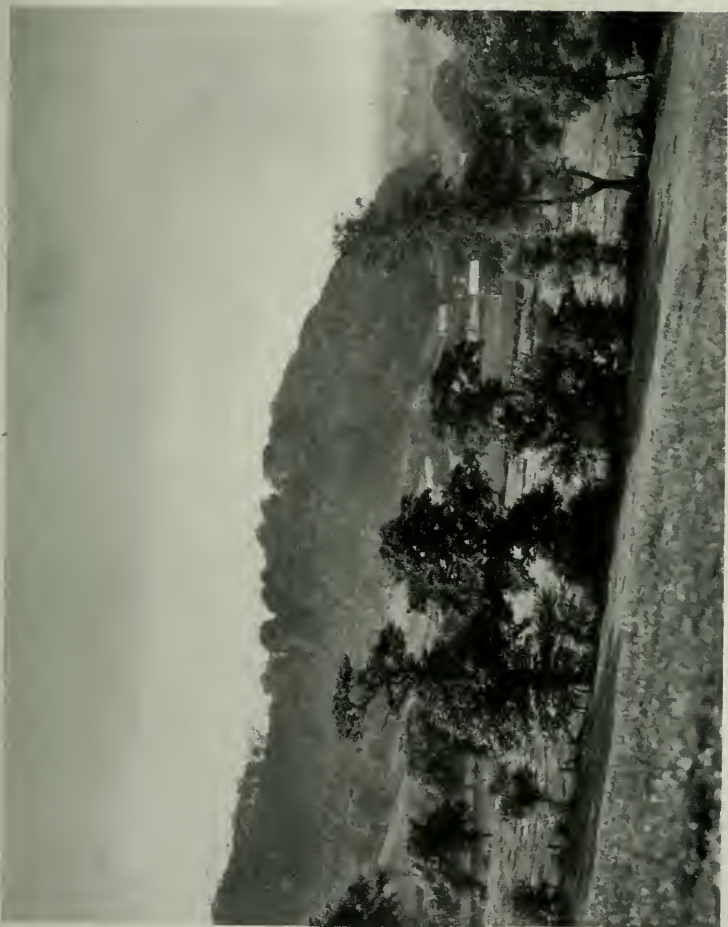
* In Cheshire the "i" is long, the word being pronounced *leitch*.

† Brockholes, p. 10 ; Dobie, p. 307.

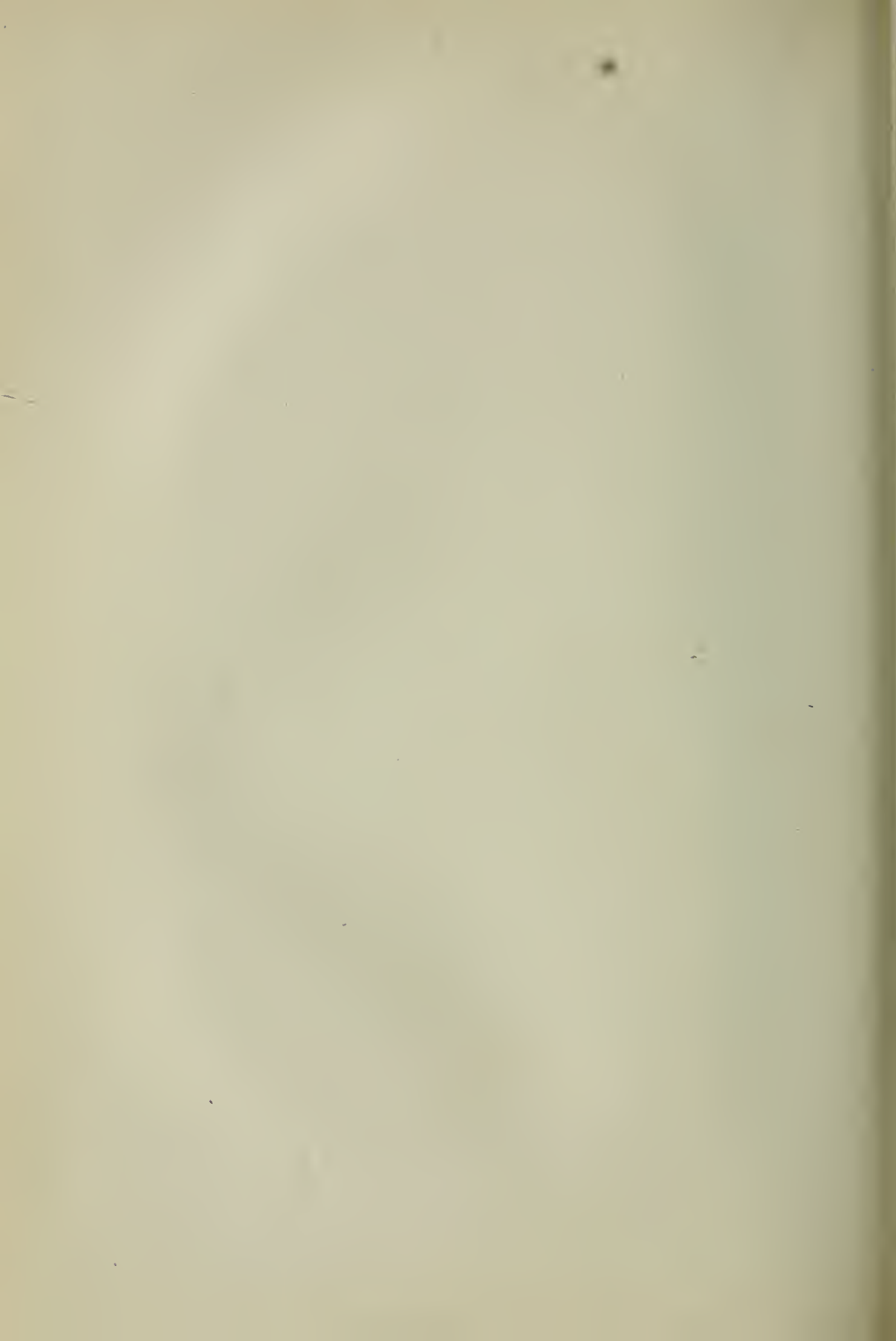
the moorlands of Longdendale and near Stalybridge, as well as throughout the hill-country between the Goyt and Dane.

In the summer of 1899 Oldham had several opportunities of observing the behaviour of a couple of young Nightjars on Alderley Edge. The nestlings were discovered by Mr. F. S. Graves on June 25th, when they were about two days old and were a few inches from the broken egg-shells. On July 2nd they were eight or ten feet from the egg-shells, and they altered their position each time they were inspected. The feathers were just beginning to show through the brown down. On being disturbed, the female rose and fluttered along close above the bracken with outspread tail and drooping wings, dropped on an oak bough, and uttered a *chuck* of alarm. The young were silent, even when handled, though when first found by Mr. Graves they repeatedly uttered a low note. When crouching beneath the brooding female the young always had their heads facing in an opposite direction to that of their parent. On July 2nd the rictal bristles, which are not visible when the birds are hatched, still retained plumose tips, but five days later these tips had been shed and the bristles were longer. Though well feathered and able to scramble about on the ground with surprising agility, the young bird exhibited no signs of pectination of the claws on July 7th.

On July 29th, 1900, Mr. Graves found a bird brooding on two eggs, one of which was chipped for hatching, and on the 30th the young bird emerged. When Mr. Graves and Oldham visited the spot in the evening, the female flew without any demonstration into a fir tree a few yards away. The young bird was clothed with brownish down, but the back and scapular region were naked. It constantly uttered a feeble note, and though so young, scrambled about on the ground. When on the ground its eyes were closed, but when taken in the hand it half opened the lids. On the 31st when the old bird was flushed she flew to the branch of a fir, where, depressing and expanding her tail below the bough and drooping and shivering her wings, she uttered a low croaking



ALDERLEY EDGE.



note at intervals. After a few seconds she became motionless and silent. The second egg was hatched on the following day and the female was brooding on the young in a fresh nest—a depression in the dead bracken about two feet from the original one. Oldham sat down at 8.30 p.m. near the brooding bird; about 8.45 she left the young and flew into a fir, and was immediately joined by the male bird, which pitched in an adjacent fir, where he expanded and depressed his tail and shivered his wings exactly as the female had done on the previous evening. When he did this the white spots on his wings and tail were very conspicuous. He kept up a constant *quik, quik, quik*, quite distinct from the usual *co-ick*, for fully a quarter of an hour, and uttered the note both when on the bough and when taking short flights. During these flights he repeatedly hovered.

The churring of the Nightjar, which is to be heard immediately the birds arrive, is usually discontinued early in August, but is recommenced occasionally at the end of the month, shortly before emigration.

The food of the bird consists of moths and flying beetles; the large dor beetle, *Geotrupes stercorarius* (Linné), being amongst the latter. Five almost perfect examples of this species and the remains of a noctuid moth were found in the stomach of a Nightjar which had been killed at Oakmere in June.*

PICIDÆ.

Sub-family IYNGINÆ.

WRYNECK. *Iynx torquilla*, Linné.

A scarce summer visitor; has nested occasionally.

The Wryneck, a scarce summer visitor to the north-west of England, has only been occasionally noticed in Cheshire.

* R. Newstead, *Food of Birds*, p. 63.

Byerley states that it has nested at Saughall Massey. Mr. J. E. Smith, writing in 1874, said that "no specimens of the Wryneck have been seen in Cheshire since 1818 (? 1868), when one nested in Ashley Lane, Bowdon."* A bird and seven eggs were taken by Mr. A. Cookson from a nest in the trunk of an old poplar at Oakmere about the year 1884.† Mr. W. Beaumont tells us that in 1880 a Wryneck with a broken wing, which had been found beneath telegraph-wires at Marple, was brought to him in the flesh.

About the year 1890 Mr. F. S. Graves saw a Wryneck at Bramhall, and in July, 1901, the late Edward Milner saw one in his garden at Hartford Manor near Northwich. On September 9th, 1906, a Wryneck was captured alive by a boy on the outskirts of Winsford; he noticed the bird in the early morning struggling inside a street lamp, into which it had gone, no doubt, in the pursuit of insects. After the bird had been examined by Mr. Joel Southworth and a friend it was released.‡

Sub-family *PICINAE*.

GREEN WOODPECKER. *Gecinus viridis* (Linné).

Local names—YAFFLE; WITWALL; ETWALL.

A local resident, plentiful in a few localities.

The Green Woodpecker is irregularly distributed throughout the Cheshire lowlands, being only present in those districts where there is plenty of old timber, and, except in a few localities, is not abundant.

Byerley records the bird from New Brighton, and

* *Manchester City News*, May 16th, 1874.

† Dobie, p. 307.

‡ Cf. J. Southworth, *Zoologist*, 1906, p. 392.

Brockholes described it as "an occasional visitor at all seasons," and believed that it "occasionally nests in Wirral." Though there is no record of a nest having been found, the Green Woodpecker is not uncommon at Burton, but elsewhere in Wirral it is rare. Mr. R. H. R. Brocklebank saw a bird at Heswall on February 7th, 1904, and Mr. S. G. Cummings has seen the species at Mollington, and on August 24th, 1908, one at Upton near Chester.

In the immediate neighbourhood of Chester it is rare, but has nested in Eaton Park; it has, on one occasion at least, nested at Stanlow near Ince.* It is not, however, uncommon in some parts of western Cheshire, for instance the Peckforton Hills and Bolesworth; the late Rev. C. Wolley-Dod described it as very abundant at Edge near Malpas, and Lord Combermere as common at Combermere.†

The Green Woodpecker is abundant in Delamere Forest and the surrounding wooded districts; it is especially plentiful on Little Budworth Common and in the neighbourhood of Oakmere and Abbot's Moss. Throughout the rest of the lowlands it is thinly distributed. A few pairs nest annually at Alderley, and occasionally at Tatton, Tabley, Arley, Dunham, Rudheath and Holmes Chapel, and an odd bird may be seen in winter in localities remote from any known breeding haunt.

Examples have been obtained in Lyme Park, and the bird nests in Matley Woods, but it is naturally absent from the treeless parts of the hill-country in the east.

The Green Woodpecker has undoubtedly suffered from the increase of the Starling; the latter bird frequently appropriates the nesting hole which the Woodpeckers have prepared. On May 19th, 1901, Mr. F. S. Graves visited a nesting hole at Mouldsworth which the birds had been excavating for some time; on this date the Woodpeckers were still in possession, but a few days later Mr. Graves found the hole occupied by Starlings.

In Delamere Forest the larvae and imagines of the longicorn

* Dobie, p. 308.

† *Id.* p. 308.

beetle, *Rhagium bifasciatum*, Fabricius, are keenly sought for by this bird and other woodpeckers; Mr. R. Newstead says: "Nearly all the decayed fir trees harbouring this insect are found drilled and excavated by this bird," and "the dead limbs of the oak and rough posts and railings are also often stripped for the larvæ of beetles (*Astinomus aedilis* (Linné), etc.), which they sometimes harbour." He has found the Green Woodpecker feeding on the larvæ of a clearwing moth, *Sesia culiciformis* (Linné), which affect the cut ends of the birch stumps in the forest. The bird is partial to ants, which it searches for on the ground; ants and their larvæ have been found in the stomachs of birds examined by Mr. Newstead.*

BRITISH GREAT SPOTTED WOODPECKER.

Dendrocopus major anglicus, Hartert.

A widely distributed but not common resident.

The Great Spotted Woodpecker, a widely distributed but rather scarce resident in Cheshire, occurs sparingly during autumn and winter in all parts of the county, but in the breeding season it is confined to woods in which it can find suitable nesting places.

The bird has seldom been known to nest in Wirral. Brockholes states that a pair nested in May, 1860, in Patrick Wood near Bromborough, and in July, 1865, four young birds were obtained at Hooton.† In 1887 a pair were shot in a garden at New Brighton.‡ Mr. S. G. Cummings has seen the bird at Burton in May, 1902, on the Cop near Chester on August 22nd, 1903, and at Blacon Rough in March, 1904.

In Eaton Park and Delamere Forest the bird may be met

* *Food of Birds*, pp. 64, 65.

† W. L. Hayman, *Field*, XXVII., 1866, p. 77.

‡ Dobie, pp. 308, 309.

with all the year round, and there is presumptive evidence that it has bred at Edge, for in the spring of 1893 the late Rev. C. Wolley-Dod used to hear the birds daily, and his keeper saw three birds in April fighting for a hole in a hollow beech.* The Great Spotted Woodpecker breeds in the fir woods on Alderley Edge, and in the parks and woods at Alderley, Dunham and other places in the plain, but owing to its retiring habits it has been much overlooked.

Mr. J. K. Taylor tells us that some years ago he saw a pair at their nesting hole in an ash near Goyt's Bridge, and the bird breeds in Taxal Wood in the same valley.

In Dunham Park the nesting hole is generally in a beech ; at Alderley Edge and Taxal firs and birches are the favourite trees.

The old nesting holes are almost invariably appropriated by Starlings ; unfortunately these birds are not always content with unoccupied holes. On May 14th, 1900, Mr. F. S. Graves disturbed a Great Spotted Woodpecker from a hole in a dead birch at Alderley Edge, which in 1899 had been occupied by the Woodpeckers but early in 1900 had been used by a pair of Starlings. The Starlings' nest, littered round the foot of the tree, had apparently been cast out by the Woodpeckers. On May 16th Oldham visited the spot and found six Starlings on a tree overhanging the dead birch stump. Presently two flew to the stump, where one perched and sang whilst the other entered the hole and remained in it for a minute or two. A second bird attempted to enter but was driven away by the male, which was still singing on the stump. The Woodpeckers did not appear and probably had been driven away by the Starlings, of which more than one pair seem to have been concerned in the eviction. On May 27th Oldham found a pair of Woodpeckers in possession of a hole in a dead beech on the Edge ; on the 29th there were Starlings in the tree, and one of them frequently went into the hole, whence it had presumably driven the Woodpeckers.

* Dobie, pp. 308, 309.

During the winter months the Great Spotted Woodpecker will sometimes roost night after night in an old nesting hole.

This species, like the Green Woodpecker, feeds largely upon the larvae and imagines of the wood-boring beetle *Rhagium bifasciatum*, Fabricius; the stomach of an example from Delamere, killed in February, was filled with the larvae of this and other beetles, and in the stomach of one from Broxton, killed on January 28th, 1891, there were, in addition to partially digested remains of this beetle and its larvae, four examples of the unpalatable ladybird, *Hippodamia variegata*, Goeze, quite fresh and undigested. From this it may be inferred that the distasteful ladybirds had been eaten last and not owing to stress of hunger.*

BRITISH LESSER SPOTTED WOODPECKER.

Dendrocopus minor comminutus, Hartert.

A scarce resident.

Owing to its smaller size and its habits of frequenting the tree-tops, the Lesser Spotted Woodpecker has been even more overlooked than the preceding species. It has, however, been observed in many widely separated localities in Wirral and the lowlands.

It is not referred to by Brockholes, although Byerley mentions a wood near Bromborough Pool as a locality for it and Mr. S. G. Cummings tells us that it occurs at Burton, and Chorlton near Backford. The bird breeds in Eaton Park, and in June, 1886, one was obtained at Tiverton. In the Grosvenor Museum, Chester, there are specimens from Saighton and Ince, both killed in winter, and others have been obtained in these localities.† Another in the

* R. Newstead, *Food of Birds*, p. 63. Cf. R. N., *Entomologist*, XXIV., 100, 1891.

† Dobie, p. 309.

same collection was killed at Tarvin on May 9th, 1898. The late Rev. C. Wolley-Dod described it as plentiful at Edge near Malpas, and stated that it begins to rattle at the end of January or early in February.*

The Lesser Spotted Woodpecker occurs in the Delamere Forest district, nesting on Little Budworth Common and in other places; we have seen the bird on several occasions, both in summer and winter. In winter, Mr. C. E. Milner has seen it at Hartford near Northwich, and in April, 1904, Oldham watched one rattling at Tabley, where a female was obtained in July, 1902. A few pairs nest every year at Somerford, Alderley Edge and other places; there is a specimen from Rostherne in a case of stuffed birds at Denfield Hall, and birds have been killed occasionally in Dunham Park. Mr. W. H. Peterkin has eggs in his collection which he took some years ago from a hole in a birch on Alderley Edge.

On February 18th, 1900, Oldham saw a Lesser Spotted Woodpecker in a row of hedgerow oaks on Alderley Edge feeding on the larvae of the marble-gall insect, *Cynips kollari* (Hartig), which it obtained by hacking open the oak apples as it clung to the slender twigs in the tree-tops.

The Lesser Spotted Woodpecker occurs in the wooded valley of the Goyt in the hill-country in the east; we have seen its nesting hole in a dead fir at Whaley Bridge. The late R. Nunnerley had two examples in his collection, which he had shot on different occasions at Sutton near Macclesfield.

The wood-boring *Rhagium bifasciatum*, Fabricius, destructive to old firs, is eaten by this species as well as by the larger woodpeckers, but the bark-boring *Scolytidae* are perhaps more eagerly sought for. The bulk of the remains found by Mr. R. Newstead in the stomachs of two birds examined—one from Ince and one from Tarvin—consisted of the larvae of these beetles.†

* *Field*, LXXXVII., 1896, p. 737.

† *Food of Birds*, p. 63.

ALCEDINIDAE.

KINGFISHER. *Alcedo ispida*, Linné.

A resident, widely distributed but nowhere abundant ; a partial migrant.

In spite of the fatal brilliancy of plumage which makes it the coveted prize of every "moucher" who owns a gun, and the fact that many are sacrificed in the interest of Trout, the Kingfisher still holds its own on most of the Cheshire streams and meres. It nests sparingly throughout Wirral and the plain and on the streams of the eastern hills. Mr. N. Neave has found the nest in a sandpit near Rainow, a quarter of a mile from the nearest water. In autumn and winter Kingfishers often frequent the small marl-pits in the fields and the ditches in such places as the water-meadows of the Mersey valley.

The first frosts drive many of the birds to the marshes and coast ; Mr. J. M. St. John Yates says that they usually leave the neighbourhood of Buglawton some time in November, and towards the end of that month we have seen so many as five within a short distance of each other in the ditches of Burton Marsh. In the winter the bird occurs all along the gutters and coast of the Dee Estuary, and has been shot on Hilbre Island. It is possible that some of these winter residents are migrants from other parts of the country, but there is no evidence of a regular passage along the coasts of Cheshire.

When feeding, the Kingfisher does not always remain on its perch until its prey appears below it, but will occasionally fly to and fro over shallow water, often ten feet or more above the surface, and hover, sometimes for so long as ten seconds at a time. The pose of the bird is then different from that of a hovering Kestrel ; the long axis of the body is almost at right angles to the plane of the water, the head and bill are lowered, and the feet held in front, quite clear

of the body. We have seen it hovering when in pursuit of small fish at Tabley, and when repeatedly catching fresh-water shrimps, *Gammarus pulex* (Linné), in the shallows of the river Bollin.

The Kingfisher often resorts to a favourite perch on which to devour its captures ; the hand-rail of a bridge at Marbury Mere near Northwich is frequently almost covered with the glistening scales of fish which have been beaten upon it by the birds.

In addition to its well known whistle, the Kingfisher has a distinct song, a sweet trilling whistle, almost a warble, which we have heard in March, and which Mr. S. G. Cummings has heard near Chester at the end of February.

UPUPIDAE.

HOOPOE. *Upupa epops*, Linné.

An occasional straggler on migration.

On at least four occasions the Hoopoe has reached Cheshire, the three occurrences for which the date is known having been on the autumn migration.

Adam's Weekly Courant for September 11th, 1792, contains the following paragraph : "A very curious bird was shot on Sunday morning in the garden of Mrs. Bolds, of the Bars, in this city (Chester). It is accurately described by Pennant in his *Zoology* as the Hoopoe ; has a beautiful crest, which it raises or falls at pleasure when alive. It is found in some parts of Europe, in Egypt, and even as remote as Ceylon in the East Indies.—Adam."

Byerley records the occurrence of one, without date, at Hoylake, on the authority of the Rev. T. Staniforth.

On September 21st, 1904, a young Hoopoe was shot in a potato field at Sale by Mr. Thomas Baldwin, who first

saw the bird on September 17th. It allowed him to get within ten yards of it, but if flushed it would rise "like a Snipe or Sandpiper at nesting time and settle on some tree near by."*

On August 29th, 1906, a male Hoopoe was shot at Saltney near Chester, and is now in the Grosvenor Museum.† The stomach of this bird, which Mr. R. Newstead examined, was filled with the skins of moth larvae, comprising those of seventeen small and fifteen large *Noctuae*.‡

CUCULIDAE.

CUCKOO. *Cuculus canorus*, Linné.

A common summer resident in all parts.

The reports of the arrival of the Cuckoo in March or early April that appear almost every year in the local press are unworthy of credence. Although in some seasons the bird makes its appearance so early as April 12th, it is not as a rule until from the 20th to the end of the month that its familiar notes are heard in Cheshire. At the Point of Air Lighthouse, Flintshire, a male and female were seen on April 10th in 1881,§ but there is nothing to show whether these birds were early visitors to North Wales or Cheshire, or were passing further north.

The call of the Cuckoo is less frequently uttered towards the end of June than earlier in the season, but may still be heard in the first week of July; in late July the majority, at any rate, of the adult birds leave Cheshire and by the end of August most of the young birds have followed them.

Throughout the summer the Cuckoo is everywhere

* Cf. C. O., *Zoologist*, 1904, p. 429.

† A. Newstead, *Zoologist*, 1906, p. 392.

‡ *Food of Birds*, p. 66.

§ *Migration of Birds*, Report 3, p. 68.

common; its numbers, however, vary considerably in different years. It frequents the coast sandhills and even the island of Hilbre, the meadows and woodlands of the plain, and the uplands in the east. On the breezy grouse-moors of Longdendale and the hills between Macclesfield and the Derbyshire border the bird is particularly abundant, depositing its eggs in the nests of the Meadow Pipits that build in the heather. When crossing the moors in May and June, one's attention is constantly attracted by the sight of a Cuckoo pursued by a pair of its victims, which follow it with shrill notes of alarm for a considerable distance. Later, in July and August, a young Cuckoo may often be seen attended by its foster parents, whose actions owing to the lack of cover can be readily observed. The Cuckoo, seated on a wall or tussock, utters an incessant querulous cry, a long-drawn *chiz-chiz-chiz*, which is continued on the approach of danger in spite of the alarm notes of the Pipits. When the Pipits have gained confidence they resume the feeding of the Cuckoo, which awaits their advent with depressed body, quivering wings and excited cries. The young bird after receiving the food invariably makes a vicious snap at the Pipit, which warily retreats a few inches and rests a moment before flying off for further supplies. Although the Cuckoo will take flight on the near approach of a human being, its fears appear to be instinctive and have no relation to the alarm notes of the Pipits, which would certainly influence the behaviour of their own young.

In Cheshire the Cuckoo usually foists its eggs upon the Tree or Meadow Pipit. Less commonly the Robin, Hedge Sparrow, Pied Wagtail, Yellow Wagtail, Yellow Bunting, Sedge Warbler or Whitethroat is imposed upon; and in 1861 a young Cuckoo was reared by a pair of House Sparrows at Northwich.* The same pair of birds is often victimised year after year. In a lane at Prestbury in June, 1886, Mr. F. Brownsword found a nest containing four eggs of a Robin and one of a Cuckoo; in the following year there was

* J. Tomlinson, *Field*, XVIII., 1861, p. 67.

a young Cuckoo in a Robin's nest not ten yards away from this spot, and on visiting the place in 1889 Mr. Brownsword found four Robin's and a Cuckoo's egg in a nest about a hundred yards higher up the lane.*

The late Rev. C. Wolley-Dod described an interesting case of Swallows rearing a young Cuckoo and one of their own young in the same nest at Edge Hall, Malpas.† On June 22nd, 1892, he found in a Swallow's nest on a beam in his potting-shed a Cuckoo apparently a week old and two Swallows three or four days younger. About a week before, his gardener had noticed two broken Swallow's eggs on the ground beneath the nest. The Cuckoo did not pay any attention to the young Swallows, one of which had disappeared on the 23rd, having probably died and been removed by the old birds. The remaining young one seemed weakly and starved, so Wolley-Dod placed an empty Blackbird's nest on the beam and put the Cuckoo in it; but as the old birds confined their attention to the usurper he moved the young Swallow too. On July 2nd the Cuckoo left the nest and sat on the beam behind it, and on the following day the Swallows began to neglect the foster child for their own offspring. Three days later the Cuckoo upset a prop that supported the Blackbird's nest, causing the old birds to be violently agitated. They never fed it again, and from this time seemed to regard it as an enemy, flying at it with angry cries, and approaching their own young by a circuitous route. On the 6th the Cuckoo escaped into the garden, when the old birds, in company with several others, chased it from tree to tree, mobbing it as though it had been an adult Cuckoo. After this date the Cuckoo was not seen, and its ultimate fate is unknown. The young Swallow left the nest on the 8th or 9th of July.

On Hilbre Island in 1901 a Cuckoo laid its egg in a Wheat-ear's nest in a rabbit-burrow. The nest was fully two feet from the entrance, and there was a turn in the burrow

* *Naturalist*, 1894, p. 176.

† *Ibis*, 1892, p. 524.

a few inches from the mouth ; the old Cuckoo must have travelled into the burrow in order to deposit its egg in the nest.

On June 30th, 1901, Oldham found the nest of a Meadow Pipit on Lindow Common which contained a single egg of that species and two of the Cuckoo. As the latter were of distinct types it is probable that they were the produce of two birds. The two eggs were in different stages of incubation and the Meadow Pipit's egg was also incubated. The natural conclusion is that one or both of the Cuckoos had removed the other eggs of the Pipit, and possibly devoured them. In the stomach of a female Cuckoo, killed on May 24th, 1895, at Whitchurch, Shropshire, Mr. R. Newstead found many fragments of egg of the Meadow Pipit mixed with the larvae of insects.*

It is well known that the Cuckoo will devour distasteful larvae, especially those of two pests of the gooseberry—the magpie moth, *Abraaxas grossulariata* (Linné), and the gooseberry sawfly, *Nematus ribesii* (Scopoli). Mr. Newstead found many larvae of both these species in the stomachs of four birds killed in Cheshire in May and June ; in one were ninety of the sawfly larvae. Hairy caterpillars are also devoured ; in the stomach of a female killed at Chester on April 15th, 1895, soon after its arrival, were twelve full-fed larvae of the drinker moth, *Cosmotriche potatoaria* (Linné), fragments of others, and three nearly full-fed larvae of the oak eggar, *Lasiocampa quercus* (Linné), together with many fragments, more or less perfect, of beetles. In a bird from Wallasey were the wing-cases of several coccinellid beetles, *Hippodamia variegata*, Goeze, distasteful to most birds, and beetle remains were present in several birds examined. The stomach of a young bird from Delamere, killed on September 3rd, 1904, contained fourteen larvae of the moth, *Hadena pisi* (Linné), and one of the buff ermine, *Spilosoma lubricipeda* (Linné), but there were no hairs on the stomach-wall, as is usually the case in adults which have been feeding

* *Food of Birds*, p. 67.

on hairy caterpillars. Another fledged young bird had in its stomach a small pellet, about the size of a filbert, composed of tightly packed grass blades mixed with the hair from some larvae; Mr. Newstead suggests that possibly the grass had been swallowed to assist in forming a pellet to clear the stomach-walls of hair. In one bird, taken on April 27th, Mr. Newstead found remains which he could not identify—"a black pulverised mass of spinose hairs, mandibles, thoracic sclerites, etc., of a lepidopterous larva; evidently all of the same species. The remains are unlike those of any British species, and it is highly probable that they are of tropical origin. There was also a piece of knotted string about two inches in length."*

Mr. J. J. Cash tells us that in the summer of 1906 eight Cuckoos were seen at one time amongst the gooseberry bushes in a garden at Sale.

The Cuckoo not infrequently calls upon the wing, and this not only when one bird is chasing another. We have often observed birds flying alone and calling repeatedly.

STRIGES

STRIGIDAE.

BRITISH BARN OWL.

Strix flammea kirchhoffi, C. L. Brehm.

Local names—WHITE OWL; ULLET; HULLOT or HULLART†; WHITE ULLERT.

A common but rather local resident.

Generally speaking, the Barn Owl is a not uncommon resident in Cheshire, but it is curiously local, being rare in

* *Food of Birds*, pp. 66-68.

† *Ullert*, given by Leigh (p. 217), and *Hullot* or *Hullart* by Wilbraham (p. 48), were formerly used, and perhaps are still in some rural districts, when referring to young birds or owlets. *Ullert* is applied near Wilmslow to the adult bird.

the hill-country and in certain districts in the lowlands. For example, it is fairly abundant in the populous districts to the south of Manchester, such as Bowdon and Sale, but about Knutsford it is scarce. As a rule it is most abundant in the vicinity of houses, breeding in Chester, where a pair used to nest annually in the old tower of the Cathedral, in Birkenhead Park, Bebington,* and similar populous districts. It is, however, by no means restricted in its nesting habits to church towers, barns and the roofs of houses, but frequently nests, and roosts during the day, in hollow trees in the parks and elsewhere.

The food of the Barn Owl varies in accordance with the character of the district in which it occurs, and an examination of its pellets shows that one animal is often preyed upon more than any other. Pellets, for example, from the church tower at Great Budworth are mainly composed of remains of the House Sparrow; in Dunham Park the staple food is the Field Vole, but pellets from an outlying covert yield Wood Mice and Common Shrews in excess of any other creatures. The following analyses show the varied nature of the food. The remains of birds so large as Thrushes and

No. of Pellets.	Locality.	Lesser Shrew.	Water Shrew.	Common Shrew.	Rat.	Mouse.	Wood Mouse.	Water Vole.	Field Vole.	Bank Vole.	Sparrows and Finches.	Insectivorous Birds.
11	Handforth . . .	...	4	8	1	...	5	...	6	3	4	...
14	Great Budworth	...	...	1	...	1	...	...	1	1	21	1
8	" "	...	...	3	...	4	2	...	...	...	10	1
7	" "	...	...	2	...	4	2	...	3	...	7	...
7	Dunham Park .	...	...	6	1	...	2	...	19	...	...	...
10	" "	...	...	5	...	...	6	...	17	...	2	...
30	" "	1	3	35	..	6	12	...	41	...	6	1
24	Red Moor Covert } Dunham Park }	..	...	11	1	8	14	1	1	3	2	...
14	Heswall . . .	1	...	32	3	9	5	...	20	...	...	...
1	Great Budworth	1	...	6	...	...	...	...	...	...	...	...
17	Latchford . . .	...	...	1	3	...	7	...	6	...	17	...

* Dobie, p. 311.

Starlings are occasionally to be found in the pellets, but as a rule House Sparrows are more frequently represented than all other species put together. In addition to the remains of vertebrates, most batches of pellets contain the elytra of a few large beetles, such as the dung beetle (*Geotrupes*) and cockchafer (*Melolontha*).

In the stomach of a Barn Owl killed on September 12th Mr. R. Newstead found remains of two Long-eared Bats, one Wood Mouse, three beetles—a *Geotrupes*, a *Pterostichus*, and a small weevil—and a large moth.* A Barn Owl that Coward kept in captivity for some years would eat Frogs readily but invariably refused to swallow the Toads which were offered to it.

The cast-up pellets, consisting of the undigested portions—mostly bone, fur and feather—of the creatures devoured, are locally known in Cheshire as “owl-skuds”† or “boggart-muck,”‡ the small bones, no doubt, being supposed to be remains of creatures devoured by boggarts, *i.e.*, evil spirits.

LONG-EARED OWL. *Asio otus* (Linné).

Local name—HORNED OWL.

Resident; widely distributed but not very abundant.

The Long-eared Owl, though nowhere abundant, occurs in all parts of the county, frequenting fir woods and even isolated clumps of Scotch firs. In Wirral Brockholes described it as resident at Bidston, Prenton Mount, Storeton, Ness, Burton and Ledsham, and in the Grosvenor Museum, Chester, there are young birds in down from Saughall and Burton. In the woods at Burton and Irby it is common. It breeds in Stanney Wood near Thornton-le-Moors, and

* *Food of Birds*, p. 68.

† Leigh, *Glossary*, p. 188.

‡ Holland, *Glossary*, p. 407.

on the Eaton Estate,* as well as at Delamere, where in some woods it is fairly plentiful. Butts Clough in the Bollin valley, the Moss Covert at Plumbley, Rudheath, Gawsworth, Alderley Edge, Dunham Park, and the fir woods bordering Carrington Moss may also be cited as localities in the lowlands where it nests.

In the Goyt Valley and the wooded portions of the hill-country it is the commonest Owl, and used frequently to be captured in pole-traps when these were set on the moors.

The food of the Long-eared Owl is on the whole similar to that of the Tawny and Barn Owls—small mammals, birds and insects—but it feeds upon a greater variety of species of small birds than does, at any rate, the Barn Owl. Pellets taken from beneath a nesting tree of this species at Lower Peover contained skulls of buntings, finches, and portions of the skull of some soft-billed bird, apparently either a Redbreast or Hedge Sparrow, in addition to those of Field Voles and Wood Mice. The partially plucked body of a Swallow lay at the foot of the tree. Bones of the Sky Lark, Yellow Bunting and House Sparrow have been found in pellets of this species from Burton and elsewhere in Cheshire,† and Mr. S. G. Cummings found the remains of a Starling and a Blackbird beneath a nesting tree at Burton. In a nest in a fir at Plumbley, from which two young birds had been blown during a storm in May, 1887, was a Yellow Bunting, a nestling of some small passerine bird and the tail of a Pied Wagtail. In order to prepare them for the consumption of the young Owls, the birds had been decapitated and partially denuded of feathers, and their bones had been crushed.

On the evening of May 19th, 1903, as Oldham was passing a covert at Lower Peover, he heard the hunger cry of a young Long-eared Owl, a discordant creaking note strikingly like a gate swinging on unoiled hinges. The noise appeared to come from a tree and also from or near the ground, but in

* Dobie, p. 311.

† R. Newstead, *Food of Birds*, p. 69.

the dusk it was not possible to locate it exactly. On the following evening at eight o'clock he again visited the wood, and found a young Long-eared Owl in down, with incipient ear-tufts. The primaries were showing, but the bird was as yet unable to fly. It was sitting bolt upright on a branch of a small dead fir, about four feet from the ground, with its wings and downy feathers pressed close to its body; it looked, in that posture, very attenuated. The toes were two and two on either side of the branch. On being touched the bird hissed like an enraged cat, snapped its mandibles loudly and attempted to bite. It then lowered its head, arched its wings so that the secondaries met above its back, and spread the primaries on either side, presenting the whole upper surface of its wings to the enemy, and thus increased its apparent bulk very considerably. At the same time it puffed out its body-feathers, snapped and hissed. It did not swing its head as an angry Barn Owl does, but remained rigid for some seconds. This attitude—no doubt a terrifying one—was assumed again whenever the bird was touched or alarmed. A second young Owl was standing on a nest—apparently an old nest of a Sparrow Hawk—in the branches, some thirty feet from the ground, of a Scotch fir about thirty yards from the tree on which the first bird was perched. A clamorous party of Blackbirds and Song Thrushes, with at least one Mistle Thrush among them, was in the meantime mobbing one of the old Owls, chasing it from fir to fir in the wood. About 8.30 the birds ceased to mob the Owl, which then came into a tree near the nest, and called loudly *woof, woof, oo-ack, oo-ack*. The Thrushes did not molest it after it began to call, but sang in the trees, some of them close to the nest, for a time. The old Owl, for nearly an hour, was constantly calling *oo-ack, oo-ack*, both when perched and on the wing, but it only uttered the barking *woof* once or twice after the initial cry. About the time that the old one began to call, the young birds started their monotonous creaking cry, and the one near the ground became much more lively, climbing

clumsily among the branches ; it did not appear to make use of its beak to assist it in climbing. The old bird frequently came into the tree beneath which Oldham was standing near the young one, called loudly, and obviously resented his presence. Whether the young bird had left the nest voluntarily or had fallen out, the old bird was evidently looking after it, and was no doubt feeding it as well as the one in the nest. The facial disc of the young bird was black ; the primaries blackish brown, and the irides deep yellow.*

SHORT-EARED OWL. *Asio accipitrinus* (Pallas).

No longer a permanent resident ; a bird of double passage ; an odd pair occasionally remains to nest.

The Short-eared Owl is met with not infrequently in open situations from the coast sandhills to the moorlands in the east, and is often flushed by sportsmen from its resting place amongst the turnips or in the heather. It has occurred on migration on Hilbre Island, where Mr. L. Jones obtained a specimen. Mrs. A. Bulley tells us that early in March, 1906, an owl, which from the description was apparently of this species, frequented the neighbourhood of her garden at Neston for about a fortnight. From about 6.30 to 8 a.m., and again in the evening before dark, it hunted for mice, and occasionally chased a young Rabbit, but during the day crouched in the long grass, where it was mobbed occasionally by gulls and Rooks. Brockholes describes the species as migratory in Wirral, where it is occasionally met with in the autumn. On November 20th, 1908, Mr. R. H. R. Brocklebank saw two on Thurstaston Common.

On the grouse-moors in the east of Cheshire the bird is well known to the gamekeepers as a winter visitor, and possibly an occasional pair remains to nest, since it breeds

* C. O., *Zoologist*, 1905, pp. 311, 313.

on the contiguous Derbyshire moorlands.* A Short-eared Owl, seen by Mr. T. Baddeley and Coward on the Knight's Low, Lyme Park, on May 9th, 1908, probably had a nest on the adjacent moor. This bird had been hunting in the daytime, and when first seen was flying round the firs on the Low with an adult Starling in its talons, followed by an angry crowd of Mistle Thrushes and Blackbirds; one of the former appeared to strike it once or twice with its wing. Finally it settled in a tree—a very unusual action in this species—where, owing to the persistent mobbing of the Thrushes, it dropped its prey, which had already been decapitated.

It is doubtful whether the bird breeds at the present time anywhere in the lowlands of Cheshire, although it has been seen in summer on the Eaton Estate by Mr. H. Garland,† but it used to nest regularly on Carrington Moss until the year 1893. By that time all the moss-land had been reclaimed, but a pair of birds succeeded in rearing a brood. The young were seen on the wing during the summer, but were killed on the 1st of September by partridge-shooters.

The Short-eared Owl, besides hunting in the daytime, frequently travels some distance by day. On November 15th, 1907, Coward's attention was attracted at Marbury near Northwich by the angry alarm notes of a Rook and a Jackdaw, to a Short-eared Owl which they were attacking. When first seen the birds were high in the air and a great distance away, but they steadily approached, the Owl flapping slowly and occasionally gliding on motionless wings. The Jackdaw flew a little in front, constantly uttering its cry of alarm, but the Rook dashed repeatedly at the Owl, which swerved aside to escape the impact. When the birds were above Marbury Park, the Owl, half closing its wings, came down rapidly and obliquely towards the ground, and alighted somewhere in the neighbourhood of the Hall; the Rook and Daw abandoned the chase when it descended.

* Whitlock, *Birds of Derbyshire*, p. 121.

† Dobie, p. 311.

TAWNY OWL. *Syrnium aluco* (Linné).

Local names—BROWN OWL ; WOOD OWL ; GIL-HOOTER ; HILL-HOOTER ; HOOTER* ; BROWN ULLERT.

A common and widely distributed resident.

In the parks and woods of the lowlands the Tawny Owl is a common resident. In parks, as at Eaton, Tatton, Tabley, Alderley and Dunham, where the hollow trees provide plenty of nesting holes, it is abundant.

Byerley states that it breeds at Eastham, but Brockholes does not include it in his Wirral list. Even if it was rare in Brockholes' time, it is not today, for Mr. S. G. Cummings finds it common at Burton, Upton, Chorlton, Stanney and Stoke, and it occurs close to the city of Chester. In the hill-country in the east of Cheshire it is perhaps not so plentiful as the Long-eared Owl, but it is apparently increasing in numbers in Longendale, has been observed near Stalybridge,† and breeds in the neighbourhood of Disley and in the wooded valley of the Dane near Wincle.

The melodious hoot of the Tawny Owl is seldom heard in the late summer, but occasionally the bird calls in August, and Oldham has heard it once on July 18th. Early in September the note becomes frequent, and from then throughout the winter and spring the bird may be heard in suitable places almost any evening. Young birds begin to hoot in their first autumn. On September 16th, 1903, Coward watched a young Tawny Owl, which was still being fed by one of its parents, in a clump of trees at Bowdon. The young one constantly repeated a clear *tu-whit*, very sharp and shrill, and made many tentative attempts to hoot. The

* The name "hooter," with or without a prefix, is, according to Wilbraham and Leigh, applied in Cheshire to an owl of any species. We have heard "hooter," but "gil-hooter" and "hill-hooter" are probably obsolete.

† Stubbs, p. 32.

old bird, when it visited it, uttered a loud hoot, and the young one at once answered with a decided *hoo-hoo-hooo*; the old bird then flew round calling *ke-wik, ke-wak*, and ultimately both moved away, but for some time afterwards the difference in tone and quality between the hoots of the old and young were readily distinguishable, that of the latter being almost invariably preluded by *tu-whit*, often repeated half a dozen times.

Mr. Charles Marshall tells us that a pair of Tawny Owls wintered for three years in succession in his garden at Compstall; they appeared towards the end of October, roosted daily in a fir, and retired again to the woods in March.

The Tawny Owl, perhaps more than any other species, is subject to the persecution of small birds in the daytime. One's notice is often attracted in the woods, by their discordant alarm notes, to an excited mob of birds—Thrushes, Blackbirds, Chaffinches, Titmice and other small Passeres, and less frequently Jackdaws and Jays—which is chasing an Owl from tree to tree; the mobbed and hustled bird always seems too drowsy and bewildered to retaliate and passively submits to the persecution. Nevertheless, the bird is occasionally abroad and may be heard to hoot even at mid-day.

The Tawny Owl feeds more upon the House Sparrow than upon other birds, but small mammals, especially Shrews, form its chief food; beetles and other insects, and earthworms are occasionally eaten. The remains of beetles found in the stomachs of Tawny Owls by Mr. R. Newstead were mostly of the large dung beetle (*Geotrupes*). In forty-eight pellets from Eaton Park were portions of the skulls of the following species: Field Vole, 10; Water Vole, 4; House Mouse, 1; Wood Mouse, 6; Common Shrew, 38; House Sparrow, 25; Thrush, 1; Bunting (Yellow Bunting?), 1.*

* *Food of Birds*, pp. 69, 70.

LITTLE OWL. *Athene noctua* (Scopoli).

An occasional wanderer to Cheshire.

As most authorities are agreed that the majority, at any rate, of the Little Owls that have been obtained in England have either escaped from confinement or been purposely liberated, the bird can only be provisionally included in the county avifauna.*

The bird has been observed three or four times in the county. In the note-book of the late Lord de Tabley there is mention of one at Tabley, on the authority of his father, the second lord, who died in 1887, but no date or other particulars are given.

In the Warrington Museum there is a bird which was shot at Arley in December, 1887. Mr. R. J. Smith told Dr. Dobie that a small species of owl, which he believed to be the Little Owl, bred in an oak in Eaton Park some time late in the eighties.

About the end of April, 1902, a female Little Owl was shot at and wounded by a gamekeeper in a wood at Agden near Lymm. For about six weeks it was kept alive by the keeper, and then it passed into the hands of Mr. Bulkeley Allen of Bowdon, in whose collection it is now preserved.

SCOPS OWL. *Scops scops* (Linné).

Only known to have occurred once.

The Scops Owl, a rare wanderer, has reached Cheshire on one occasion. An example in the possession of Mr. J. H. Leche was shot by his gamekeeper at Carden Park in June, 1868. The bird was heard on several evenings before it was obtained uttering its peculiar cry of *kew, kew*.†

* Cf. Seebohm, I., p. 174; Saunders, p. 301; Witherby and Ticehurst, *British Birds* (Mag.), I., pp. 335-342.

† Gould, *Birds of Great Britain*, I., 1873; cf. Yarrell, *British Birds*, I., p. 174, and Dobie, p. 312.

ACCIPITRES

FALCONIDAE.

MARSH HARRIER. *Circus aeruginosus* (Linné).

Probably at one time a resident on the mosses, now extinct except as an occasional wanderer.

There can be little doubt that until the early part of the last century the Marsh Harrier nested regularly on the mosses which then covered thousands of acres in the broad valley of the Mersey. Like most of the larger birds of prey, it has vanished from the county, owing to the increase of cultivation and game-preservation, and for the last forty years, at any rate, it has only been known as a casual visitor. Within recent years it has nested in North Wales,* and it formerly bred in Yorkshire† and Lancashire.‡

The late Lord de Tabley§ gives Oulton, on the authority of the late Sir Philip Egerton, as a locality where the bird has occurred, but no details are supplied.

About 1887 or 1888 a Marsh Harrier in immature plumage was shot by a gamekeeper on Carrington Moss; it was stuffed by Samuel Penney of Ashton-on-Mersey, in whose cottage we saw the bird. An immature male in the possession of Mr. H. Garland was killed on the Eaton Estate, Chester, several years ago.||

HEN HARRIER. *Circus cyaneus* (Linné).

Possibly at one time a resident, now only a rare wanderer to the county.

Although no evidence of the fact exists, it is probable that the Hen Harrier at one time bred regularly on the heather-

* Forrest, *Fauna of North Wales*, pp. 215, 216.

† Nelson, *Birds of Yorkshire*, Vol. I., pp. 315, 316.

‡ Mitchell, *Birds of Lancashire*, p. 121.

§ *MS. note-book*.

|| Dobie, p. 312.

clad hills of east Cheshire, as it did in the early part of the nineteenth century on the moorlands of the West Riding of Yorkshire* and the Derbyshire Peak.† Now it is only a rare wanderer to the county.

Brockholes stated that he had occasionally seen a Harrier on Bidston Marsh which he believed to be of this species. Early in November, 1886, a Hen Harrier was shot on the moors at Wildboardclough near Macclesfield. Howard Saunders, to whom the bird was submitted, pronounced it to be a young female.‡ On November 5th, 1897, a female was killed at Saughall near Chester, after it had frequented the neighbourhood for several days. The stomach of this bird contained the remains of one Skylark and two Meadow Pipits, a single vermiculated feather of a Teal, and a feather which appeared to be that of a Partridge. The smaller birds had evidently been denuded of most of their feathers before they were devoured.§

COMMON BUZZARD. *Buteo buteo* (Linné).

A wanderer to Cheshire, more frequently met with in the west than elsewhere.

A few pairs of Common Buzzards still nest in the more secluded districts of the mountains of North Wales, and occasionally birds are met with on the Cheshire side of the border and in Wirral. Brockholes says that one was shot at Puddington in the sixties, and that the same autumn two others frequented the Dee marshes. A pair, probably the birds alluded to, were observed near Neston in September, 1865, and the late C. S. Gregson shot one about this time on

* Nelson, *Birds of Yorkshire*, Vol. I., p. 318.

† Whitlock, *Birds of Derbyshire*, p. 125.

‡ A. N. Curzon, *Field*, LXVIII., 1886, p. 884.

§ R. Newstead, *Food of Birds*, p. 71.

Moel Fammau, North Wales, which he believed to be one of the pair.* His conclusion hardly appears to be warranted, for even at the present time the bird is not uncommon in the counties of Denbigh and Flint. A bird in the possession of Mr. L. N. Brooke was shot at Thurstaston some years ago.

Four examples are in existence which were obtained on the Eaton Estate near Chester: two are in the possession of Mr. H. Garland†; one, killed in 1891, is in the Grosvenor Museum, Chester; while the fourth was obtained in 1902. A Buzzard, in the Grosvenor Museum, was shot at Thornton-le-Moors on October 27th, 1890, and in the autumn of 1903 another was shot near Chester.

A few birds have from time to time visited east and mid-Cheshire. One in the Vernon Museum, Stockport, is labelled: "Shot on Lindow Common by J. Thorniley," and Mr. B. R. S. Pemberton tells us that another was shot at Taxal near Whaley Bridge in 1895.

In 1903 an unusual number of Buzzards were noticed in north and mid-Cheshire. In January, one, now preserved at the Railway Inn, Mobberley, was trapped in Tatton Park; in April a large raptorial bird, apparently a Buzzard, was seen by Mr. John Hindley on two or three occasions in Marbury Park near Northwich; on October 12th Mr. James Kenyon saw a bird in Tatton Park that he believes was a Buzzard, and at the end of November one was trapped at Norton. This last bird was described in the local press as an "Eagle," and accused of depredations amongst the Pheasants and Moorhens. The bird was seen in captivity on March 16th, 1904, by the Rev. G. Egerton-Warburton, who identified it and refuted the false statements.‡ Mr. Egerton-Warburton has in his collection a Buzzard which was shot at High Legh a few years ago.

* H. E. Smith, p. 236.

† Dobie, p. 313.

‡ *Warrington Guardian*, Dec. 5th and 23rd, 1903.

ROUGH-LEGGED BUZZARD.

Buteo lagopus (J. F. Gmelin).

Observed occasionally upon the autumn migration.

The Rough-legged Buzzard has been occasionally noticed on its autumn migration. One was captured in a farm-yard at Appleton on November 24th, 1865.* A gamekeeper shot another at Lymm on November 4th, 1880,† and in the following year Mr. A. Cookson killed one at Oakmere. Mr. H. Garland has an example that he trapped in winter near Aldford, Chester, using a goose for a bait.‡ We have seen a bird which was shot on Carrington Moss some time in the eighties.

In the autumn of 1895 a Rough-legged Buzzard frequented the moors at Goyt's Clough for several days, until it was taken in a trap baited with a dead Rabbit; it is now preserved at the "Cat and Fiddle" Inn. A young bird was shot when in the act of devouring a snared Rabbit in Tatton Park in the first week of November, 1906. This bird was stuffed by Johnson of Knutsford, in whose possession we saw it.

WHITE-TAILED EAGLE. *Haliaëtus albicilla* (Linné).

Three recorded occurrences.

The White-tailed Eagle is not met with so frequently on the west as on the east coast of England, and there are only three recorded instances of its occurrence in Cheshire. Brockholes shot at one at Leasowe and the bird was subsequently found dead in the neighbourhood. There is

* H. E. Smith, p. 236.

† T. Davies, *Field*, LVI., 1880, p. 715.

‡ Dobie, p. 313.

a bird in immature plumage in the Grosvenor Museum, Chester, which was obtained some years ago on the Eaton Estate.* This, as Dr. Dobie suggests, is probably the female recorded by Mr. E. Ward as having been shot near Chester on January 5th, 1863.† One, obtained at Davenham near Northwich some time prior to 1875, was presented by Major Harper of Davenham Hall to the Manchester Natural History Society, and is now in the Manchester Museum.‡

SPARROW HAWK. *Accipiter nisus* (Linné).

A rather uncommon resident in the lowlands.

In spite of rigorous game-preservation, the Sparrow Hawk, though nowhere common, still nests in the woodlands in all parts of the Cheshire lowlands, and is even to be found in the hill-country in the east. Mr. F. Stubbs considers it at the present time the commonest bird of prey in lower Longendendale, where he has often seen the nest.§

In winter the Sparrow Hawk frequents the more open country, and often a heap of feathers by a hedgeside shows where a Thrush, Ring Dove or other bird has fallen a victim to its prowess. It hunts over a regular beat as a rule, passing a given spot about the same time day after day. The audacity of the bird when in pursuit of its prey is well known; Mr. S. Radcliffe tells us that at Mottram, a few years ago, one chased a Robin through a house into the kitchen, where both were captured.

The Sparrow Hawk will kill and eat any bird which is not too large for it to attack. Mr. R. Newstead has found the remains of the following species, and of others which he

* Dobie, p. 314.

† *Field*, XXI., 1863, p. 98.

‡ F. Nicholson, *Manchester City News*, Aug, 21, 1875.

§ F. Stubbs, pp. 33, 34.

could not identify, in the stomachs of a number of Cheshire birds : Song Thrush, Blackbird, Willow Wren, Skylark, Bullfinch and Blue Titmouse.* In the stomach of one of the birds were four half-grown frogs, and the remains of several grasshoppers and beetles. Mr. Stubbs has found remains of Lapwings and Ring Doves at the nesting trees.†

The nesting habits of the Sparrow Hawk have occasioned much controversy ; some observers affirm that the bird always builds its own nest, whilst others assert that it only uses the deserted nest of some other species. Probably neither rule is invariably followed, the bird building a nest or appropriating another according to circumstances. In Wirral, Brockholes says, it always makes its own nest, and “if this be robbed, a second is occasionally built ; but generally the second laying of eggs is placed on any old nest which is sufficiently large. If robbed a second time, a third set of eggs is sometimes laid.” He once found a third clutch of eggs placed on some leaves which had accumulated in the fork of a tree. The nest of a previous year is sometimes used ; in May, 1887, a gamekeeper at Plumbley showed us a Scotch fir, where in 1886 he had captured three adult Sparrow Hawks in succession by placing a gin in the nest. On climbing to the nest we found the rusted and unsprung trap covered by a thick layer of larch twigs, upon which were six eggs in various stages of incubation.

KITE. *Milvus milvus* (Linné).

Local names—GLED ; GLEAD HAWK.

Formerly a resident ; within recent years only an occasional wanderer to the county.

The Kite was at one time a common resident in the Cheshire woodlands, where it was known as the “Gled,” but in

* *Food of Birds*, pp. 71, 72.

† F. Stubbs, p. 34.

recent years it has only been noticed very occasionally. It is possible that the few which have been seen or obtained had wandered from those districts in mid-Wales where a few protected pairs occasionally rear a brood in spite of the persecution of unscrupulous collectors, for the Kite is not a regular migrant through Britain.

That the Kite, at the end of the eighteenth century, was still plentiful in Cheshire is suggested by the following extract from a letter written by the first Lord Stanley of Alderley in 1791,* referring to Radnor Mere in Alderley Park :—

“ On the other side of this mere the eye rests on a thick venerable wood of beech trees above 140 years old, planted by one of our great grandfathers on his marriage. There are no trees so large in the county. . . . The finest gloom is caused by the blended branches of the wood, and the silence that reigns there is only broken by the shrieks of the large kites, which constantly build their nests in the neighbourhood, and the calls of the teal and wild ducks to each other on the mere.”

The late Thomas Davies of Lymm had in his possession a Kite that he killed one August, probably in the thirties or forties, at Booths Bank near Rostherne.† The bird, judging by its grey head, was nearly mature. The late Lord de Tabley‡ was told by his father that the Kite used formerly to visit Tabley, and two of the keepers on the estate confirmed this statement ; one, W. Maddocks, said that he saw a “ Glead Hawk ” in one of the rides in 1865.

Mr. H. E. Forrest has afforded us an opportunity of perusing a letter from Mr. J. M. Howells to the late W. E. Beckwith. The writer, while otter-hunting at Shavington Park about the year 1884, had his attention drawn by the late Harry Shaw of Shrewsbury to two Kites that were circling high overhead. Shavington is on the county border, part of the park being in Shropshire.

* *The Early Married Life of Maria Josepha Lady Stanley*, p. 100.

† T. A. C., *Zoologist*, 1904, 314.

‡ *MS. note-book.*

In the winter of 1886-87 Mr. G. F. Gee saw a Kite near Great Budworth ; he particularly noticed its brown plumage and conspicuously forked tail.

An immature bird was shot at Eaton near Chester in September, 1888, and a second was seen at the same time by Mr. H. Garland. In the winter of the same year one was seen by Mr. A. Cookson at Oakmere. On May 30th, 1892, a Kite was shot by Mr. J. Burgess at Bruen Stapleford near Tarvin.* This bird was in the possession of Dr. Dobie for some weeks. At the end of February, 1894, a Kite was seen in the neighbourhood of Oakmere by Mr. A. Cookson.

HONEY BUZZARD. *Pernis apivorus* (Linné).

A straggler on migration.

No evidence exists of the former nesting of the Honey Buzzard in Cheshire ; it is only known as a rare straggler on migration in spring and autumn. In the Grosvenor Museum, Chester, is a Honey Buzzard that was obtained at Burton in Wirral on September 22nd, 1841 ; it was formerly in the collection of the late Captain Congreve. Mr. H. Garland has in his possession one which was shot at Aldford near Chester about thirty years ago.† A male, now in the Warrington Museum, was obtained by Mr. F. Nicholson from a gamekeeper at Bowdon on May 27th, 1872. The bird, which was shot in Mr. Nicholson's presence, had just despoiled the nest of a Song Thrush ; fragments of egg-shell were at the base of its beak, and there were two young birds in its stomach.‡ We have seen a Honey Buzzard which was shot in the early eighties at Wood Bank, Stockport, and an adult female of the dark form which was killed

* Dobie, p. 314.

† *Id.*, p. 315.

‡ F. Nicholson, *Zoologist*, 1874, p. 4237.

at Capesthorpe in July or August, 1897. In Sir Philip Brocklehurst's collection at Swythamley there is a young bird which was killed within recent years at Back Forest on the Cheshire side of the Dane.

On June 5th, 1903, a Honey Buzzard was shot by a keeper in a wood on the Mobberley side of Tatton Park; the bird, which was not sexed, had no grey on the head, and was probably immature; it had been feeding upon small birds.* An immature bird was killed on September 26th, 1908, at Broadbottom. It was sent to Mr. F. Stubbs by Mr. J. Middleton, with the information that it was shot when hovering over a Pheasant; its crop and stomach were crammed with wasp-grubs.† In the same month another immature bird was killed in eastern Cheshire.

GREENLAND FALCON.

Falco candicans, J. F. Gmelin.

A very occasional wanderer to Cheshire.

In the collection of the late C. S. Gregson there was a Greenland Falcon that had been obtained from a sailor, who killed it on a vessel coming into the Port of Liverpool. The evidence as to the locality where it was captured is not altogether conclusive, as the bird had been skinned by the sailor before it came into Gregson's possession. This example was originally recorded by H. E. Smith‡ as an Iceland Falcon, but Mitchell alludes to it as a Greenland Falcon.§ It is in adult plumage and is undoubtedly referable to the Greenland species, in which the prevailing ground colour is pure white.

* C. O., *Zoologist*, 1903, p. 315.

† F. Stubbs, *Naturalist*, 1908, p. 456.

‡ H. E. Smith, p. 235.

§ *Birds of Lancashire*, p. 131.

In the middle of October, 1865, the late R. S. Eddleston observed two large white Falcons near Bowdon, which were sporting with a flock of Starlings.* A few days later a "Jer Falcon" was shot by John Shaw, a farmer at Biddulph, just beyond the Staffordshire border.† As Biddulph is less than twenty miles from Bowdon, it is probable that this was one of the birds seen by Eddleston, but our efforts to trace the specimen have been unsuccessful. It is impossible to say to which of the three British species of Gyr Falcon it should be attributed.

PEREGRINE FALCON. *Falco peregrinus*, Tunstall.

Local name—GYR FALCON (Longdendale).

A not infrequent wanderer to Cheshire on migration; a few birds are practically winter residents.

The sandy coasts of Cheshire offer no inducement for the Peregrine Falcon to breed, and although some of the rugged escarpments in Longdendale afford suitable nesting sites, the constant vigilance of the gamekeepers makes it impossible for the birds to establish themselves. There are now no resident Peregrines in the county.

A statement made by the late J. F. Robinson, that within recent years there was an eyrie at Manley in Delamere Forest, is hardly supported by the appearance of Simmonds Hill, where he says the birds nested annually "in the crags" for some two or three seasons. A young male in Robinson's possession, which had been shot at Manley in 1880, was probably a bird of passage.‡

Brockholes does not appear to have noticed the Peregrine in Wirral, but one or two birds annually frequent the

* H. Harrison, *Zoologist*, 1866, p. 30.

† *Manchester Courier*, November 4, 1865.

‡ *Manchester City News*, July 8, 1882.

marshes and estuary of the Dee in autumn and winter, where they may frequently be seen in pursuit of the wild-fowl. The late Captain Congreve had one in his collection which was shot at Burton in 1840.* Mr. Edward Comber has another which was killed on the marsh when in pursuit of a Sheld Duck. Mr. S. G. Cummings saw an immature bird on the Chester golf-links, which border the marshes, on August 18th, and we have noticed them at various times in winter and as late as the middle of March.

Elsewhere in western Cheshire the Peregrine Falcon occurs not infrequently in the winter months; there are birds in the Grosvenor Museum, Chester, which were obtained at Eaton near Chester on January 16th, 1890, and November 17th, 1891, and at Hatton on February 13th, 1901; others have been obtained on the Eaton Estate, at Aldford, Ince, Barrow† and Malpas.

In mid-Cheshire the bird is not often met with, but Mr. James Kenyon has seen it on the Tatton Estate.

The bird is well known as a visitor in autumn to the grouse-moors of Longdendale, and scarcely a winter passes without one or more being killed. Birds in both mature and immature plumage, shot or trapped within recent years, are preserved in gamekeepers' cottages in the valley, and we have seen the Peregrine in spring on the moors at the head of Crowden Brook.

Mr. R. Newstead is of opinion that the passage Falcons follow the Redwings; he has found the remains of Redwings in the stomachs of birds that he examined. Homing pigeons crossing the Dee marshes are a favourite quarry; we have on several occasions found the remains of pigeons which have been struck down, and have seen a Peregrine in hot pursuit of a passing bird. On one occasion a Falcon was standing on the grass at the edge of the marsh, evidently waiting for some Wigeon, which were crouching beneath the "knobs" near it, to rise. Indeed, for want of a more suitable perching place in the wide expanse of the estuary,

* Dobie, p. 315.

† *Id.*, p. 315.

the Peregrine often rests on the grassy saltings. On December 28th, 1908, Mr. J. A. Dockray, when out in his punt, saw two Peregrines chasing a Redwing that was crossing the Dee, but the bird escaped them by settling on the water, and afterwards flew to the punt, where it rested for some time on the gun.

HOBBY. *Falco subbuteo*, Linné.

An uncommon visitor on migration ; an odd pair occasionally remains to nest.

Mr. F. Nicholson, writing in 1875, stated that the Hobby had occasionally nested in Cheshire,* but we only know of two instances since that date, and both relate to the same neighbourhood. In 1895 a pair nested in Vale Royal New Park, and a young bird, taken from the nest, was kept captive by a gentleman residing at Winnington. Three years later a pair bred in the Burnt Wood, Oakmere ; one of the young is now in the Oxford Museum. The old and young birds frequented a rabbit-warren near Oakmere throughout the summer of 1898.

In Wirral, Brockholes says that the Hobby "is occasionally obtained in spring and autumn." Dr. Dobie mentions that one was shot at Oulton Park, and Sainter records the occurrence of another near Macclesfield.† The late Wright Johnson of Prestwich had a female in his collection that was obtained in Cheshire many years ago, and Mr. W. Beaumont tells us that in 1879 he stuffed a bird that had been captured between Stalybridge and Mottram-in-Longendale. Mr. A. Newman shot a Hobby on Frodsham Marsh in October, 1892. Early in August, 1906, a male, now in the Grosvenor Museum, Chester, was killed at

* *Manchester City News*, July 24, 1875.

† *Nature*, IX., 1873-4, p. 132.

Tarvin.* Mr. J. Porter has a bird in his possession which he killed at Warburton in the autumn of 1904 or 1905.

In June, 1894, Mr. Percy Shaw of Buxton found the Hobby breeding near Goyt's Bridge. The eggs were laid in an old nest, probably that of a Magpie or Carrion Crow, in a tree overhanging a small ravine on the Derbyshire side of the Goyt, about three hundred yards from the county border. Mr. A. H. Evans has one of the eggs in his collection. Although the nest was in Derbyshire the record is of value, proving as it does that the bird has bred on the Cheshire border.

MERLIN. *Falco aesalon*, Tunstall.

Local names—STONE FALCON ; STONE HAWK.

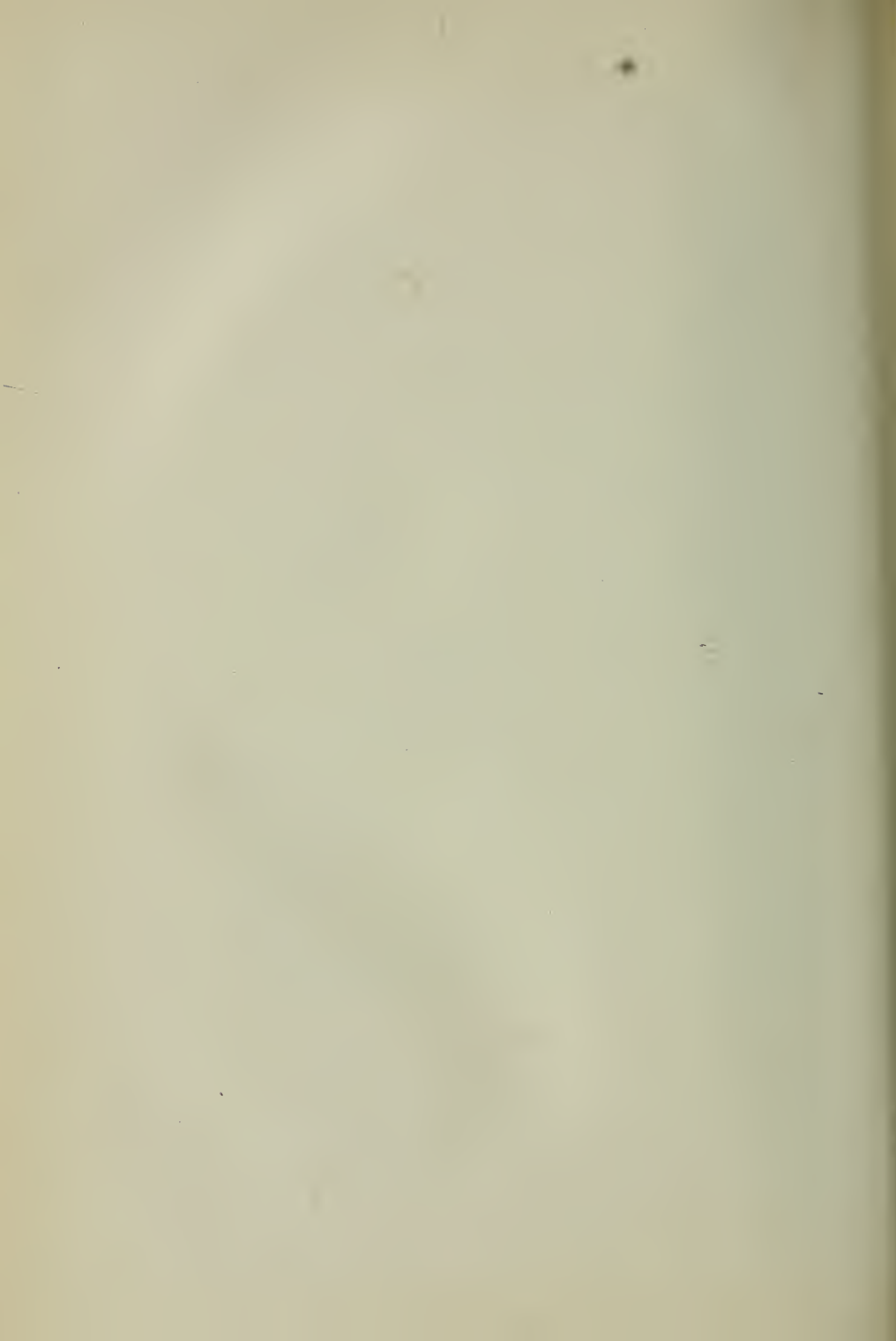
A scarce summer resident on the moors in the east; bird of passage and winter resident on the coast and marshes, and, less commonly, on the plain.

The older shepherds and gamekeepers of Longdendale remember the Merlin as fairly common, and although its numbers have greatly decreased within recent years, a few pairs still nest annually amongst the heather or on the crags in the more lonely cloughs. In the Grosvenor Museum, Chester, are four young birds in down which Oldham obtained alive on June 18th, 1894, from a keeper who had taken them from a bare spot on a ledge of rock near the head of Crowden Brook. The feathers of the wings and tail hardly showed through the down, but the little creatures, already exhibiting the gameness and ferocity of their kind, threw themselves on their backs when handled and showed fight with beak and talons. We have observed the same characteristic in even younger birds which we have found amongst the ling or in disused nests of Carrion Crows on

* A. Newstead, *Zoologist*, 1906, p. 393.



LADDOW ROCKS, LONGDENDALE.



the Anglesey cliffs. Possibly an odd pair of Merlins may succeed in rearing their brood on the moors east of Macclesfield, as they undoubtedly do just beyond the Staffordshire border; "Peregrine," who resided at Forest Chapel, stated in one of his articles, written in 1859, that the bird then occasionally bred in Cheshire.*

Brockholes described the Merlin as a spring and autumn visitor to Wirral, adding that a few birds remained through the winter on the Dee marshes, where they preyed upon the Ring Doves which came there to feed. Mr. R. Newstead has met with the bird occasionally on the marshes at Ince and Thornton-le-Moors.† We have seen birds on the Dee marshes at various times in autumn and winter, and Mr. S. G. Cummings saw a male in the act of devouring a Thrush near Chester on May 8th, 1907.

Examples, chiefly in immature plumage, are obtained from time to time in autumn and winter on the plain; we have seen the bird occasionally in October, November and December in the Delamere Forest country, at Marbury near Northwich, and near Bowdon.

It is probable that the Merlin used to nest on the extensive mosses of the plain before their reclamation. On May 5th, 1883, we found a freshly killed bird gibbeted on Carrington Moss, which was at that time an extensive grouse-moor.

RED-FOOTED FALCON. *Falco vespertinus*, Linné.

Once recorded.

The Red-footed Falcon has been obtained once in Cheshire. An adult female was shot by the gamekeeper of Mr. R. H. Greg, at Styal near Wilmslow in May, 1873.‡

* *Field*, XIII., 1859, p. 27.

† Dobie, p. 316.

‡ F. Nicholson, *Zoologist*, 1874, p. 4238.

KESTREL. *Falco tinnunculus*, Linné.

Local names—WINDHOVER ; STONE HAWK (Longdendale).

A permanent resident ; not uncommon throughout the lowlands and on the eastern hills.

Undoubtedly the Kestrel is the best known hawk in Cheshire, being met with in all parts. It suffers, however, at the hands of gamekeepers, and although it nominally receives the protection of the law in the breeding season, examples may often be seen on keepers' gibbets—as a rule, two or three Kestrels to every Sparrow Hawk thus exposed.

In Wirral and the lowlands generally the Kestrel breeds in woods and plantations, utilising the old nest of a Ring Dove, Magpie or other large bird. Brockholes has known the eggs to be laid in the old nest of a Sparrow Hawk, and states that the bird sometimes breeds in a hollow tree. On the hills the eggs are usually laid upon the rocky ledge of an escarpment or in a disused quarry.

The Kestrel, usually credited with devouring insects and small mammals only, will occasionally kill creatures of comparatively large size. On April 18th, 1904, Coward saw a male Kestrel flying with laboured flight a few feet above the ground, bearing in its talons a quarry of considerable size. After the over-burdened bird had settled once or twice on the ground it was frightened by a passing vehicle and dropped its prey—the decapitated body of a still warm Leveret. Mr. S. G. Cummings on October 29th, 1904, saw a Kestrel at Blacon carrying a Starling ; it dropped its quarry, which though partly eaten was still warm. The bird, however, though it may occasionally kill young game, is undoubtedly useful, doing far more good than harm to the farmer.

Newton* describes the Kestrel as “almost entirely a summer migrant,” but in Cheshire the bird is as frequently met with in winter as in summer.

* *Dictionary of Birds*, p. 478.

OSPREY. *Pandion haliaëtus* (Linné).

A wanderer to Cheshire on spring and autumn migration.

The Osprey has occasionally wandered at the seasons of migration to the county, where the well-stocked meres and other waters have usually induced it to remain for a few days.

The late Lord de Tabley* mentions two instances of its occurrence; one killed on Tabley Lake on May 1st, 1822, another, on the authority of the late Sir Philip Egerton but without date, killed at Oulton Pool.

About the end of April, 1865, an Osprey frequented Rostherne Mere for several days, and was seen to capture fish and convey them to a solitary tree on the margin in order to devour them. The bird was shot in the act of eating a two pound Bream.† The late H. Harrison exhibited the bird, an adult, at a meeting of the Manchester Literary and Philosophical Society on May 15th, 1865.

On or about May 20th, 1890, one was shot by Lord Delamere's head keeper at Petty Pool, Vale Royal.‡

In the winter of 1893-94 two Ospreys were observed by Mr. J. Kenyon, head keeper to Lord of Egerton, who saw them take fish on several occasions from Tatton Mere. One of the birds was shot by an under keeper, but it dropped in a thick wood and was not recovered.

In September or October, 1900, another bird was shot at Petty Pool. It passed into the hands of Mr. J. E. Reiss, then residing at Cassia, Winsford, where we saw it; it was an immature bird, with pale edgings to the feathers of the upper parts and distinct bars on the tail.

From the end of September to the middle of October, 1903, an Osprey frequented the reservoirs of the Stockport Corporation in Lyme Park, where it levied heavy toll on the

* *MS. note-book.*

† *Zoologist*, 1866, p. 30.

‡ Dobie, p. 317.

Rainbow and Loch Leven Trout. Its usual perching place was a dead tree in a covert which borders the upper lodge, and it conveyed its prey to a railing that projects above the water; when we visited the place on October 16th, the day after that on which the bird was last seen, this rail was smeared with the blood and entrails of fish.

A female, now in the Grosvenor Museum, Chester, was shot at Capenhurst on May 7th, 1909.

*STEGANOPODES**PELECANIDAE.*CORMORANT. *Phalacrocorax carbo* (Linné).

A non-breeding resident in the estuaries; an occasional wanderer inland.

The Cheshire coast offers no suitable nesting place for the Cormorant, but the bird breeds in some numbers on the rocky headlands of Anglesey and Carnarvonshire, and is, as might be expected, "not uncommon at times in the estuary of the Dee and on the Dee marshes."*

Indeed it is of so frequent occurrence in the estuary that it is practically a resident. The majority of the birds which frequent the marsh in autumn and winter are immature, but in spring mature birds, showing the white patches characteristic of the breeding season, may often be seen on the banks. At high tides the Cormorants will rest in a line on the wire railings which cross the marsh, waiting there, often with wings extended, until the water recedes. The bird ascends the Mersey, even so far as Warrington, and may be met with fishing on the sandbanks in Liverpool Bay. Occasionally birds ascend the Dee above Chester; two were seen and one killed above Farndon in September, 1903.

Cormorants, generally immature, not infrequently visit the meres and other inland waters. Dr. Dobie mentions

* Brockholes, p. 16.

one at Ashton Hayes in 1893 and two at Oakmere in the late seventies. A bird is recorded from Marbury Mere near Northwich,* and others visited this water in the winter of 1899-1900,† in September and October, 1903, and August, 1907. On April 24th, 1909, Mr. A. W. Boyd and Coward saw one on Marbury. On the neighbouring water at Pickmere one was shot on September 15th, 1903. The late Lord de Tabley‡ mentions two others at Pickmere, and one, preserved at Tabley, which was killed in the forties on Tabley Lake. There was a bird for some days in October, 1902, at Redes Mere, and in August, 1906, one at Tatton. Two in the possession of the Hon. Maurice Egerton were killed on Rostherne Mere in September, 1908. Mr. J. M. Etches saw a Cormorant on Quoisley Big Mere in the extreme south of the county about the year 1906.

On the meres Cormorants are conspicuous objects both in the water and when at rest, for they perch on the mooring stakes which in many places project above the surface. At Oulton on April 19th, 1903, one perched repeatedly on a dead branch of a tall larch at the edge of the Pool.

SHAG. *Phalacrocorax graculus* (Linné).

An occasional wanderer to the estuaries and meres.

The Shag nests sparingly on the coasts of Anglesey and Carnarvonshire but it does not regularly frequent the Dee and Mersey Estuaries. Possibly it is at times overlooked amongst the many Cormorants which frequent the banks, since Mr. L. N. Brooke has occasionally seen it in the Dee. On February 5th, 1901, an adult female was found, alive but exhausted, in the garden at Burton Hall.§

* J. E. Smith, *Manchester City News*, May 16, 1874.

† T. A. C., *Naturalist*, 1901, p. 124.

‡ *MS. note-book*.

§ C. R. T. Congreve, *Naturalist*, 1901, p. 75.

The bird has twice been noticed inland. In the winter of 1898-99 a Shag was seen on Marbury Mere near Northwich by Miss L. Hargrave,* and in the Warrington Museum is a male which was picked up at Thelwall on February 3rd, 1907.

GANNET. *Sula bassana* (Linné).

Occurs occasionally in Liverpool Bay and is sometimes storm-driven inland.

At certain seasons the Gannet visits Liverpool Bay in some numbers, but it is not often seen close inshore. It even occurs offshore in the breeding season; we have seen a mature bird fishing in Liverpool Bay on June 4th.

The Gannet has been observed occasionally in the estuaries. The late Captain Congreve had an immature bird which was obtained at Burton in June, 1830, and Mr. Townshend Logan once saw two birds flying over Upton near Chester, evidently passing between the Mersey and Dee.† Brockholes had an immature bird that was killed on the Dee.

On September 10th, 1897, the Rev. H. Dowsett of Holcombe found one dead on the shore at West Kirby, and an adult bird, now in the Grosvenor Museum, Chester, was obtained between Heswall and West Kirby early in February, 1899. Another adult bird in the Grosvenor Museum was picked up at Queen's Ferry on October 17th, 1902.‡

Storm-driven immature Gannets have occurred in various inland localities. One, now in the Warrington Museum, was picked up alive at Lymm by Mr. E. Gibson on January 15th, 1865, and we have seen another that was found in an exhausted condition in a farmyard at Ringway in October, 1894, and died two days after its capture. In the autumn

* T. A. C., *Naturalist*, 1901, p. 124.

† Dobie, p. 318.

‡ A. Newstead, *Field*, C. 1902, p. 689.



EATON HERONRY.

of the same year a dead Gannet was found by a grouse-driving party on the moors at the head of Little Crowden Brook, Longdendale.

HERODIONES

ARDEIDAE.

HERON. *Ardea cinerea*, Linné.

Local names—CRANE ; YARN ; YERN ; VARN ; LONGNIX.

A common resident in Cheshire.

Until quite recent times there were heronries on many of the larger estates in Cheshire ; the meres, trout-streams and marl-pits, and the shallow waters of the estuaries furnishing an abundant supply of food for the voracious Heron. Owing to a variety of causes—the felling of nesting trees, increased fish-preservation, and the destruction by prowling gunners—Heron has been reduced in numbers, and at the present time only two colonies—at Eaton near Chester, and Tabley—exist within the county. The bird may, however, be met with in all parts ; eight or nine may be occasionally seen together on the Dee saltings, and one or two are usually standing motionless in the shallows of the larger meres ; even in Longdendale and on the hills near Macclesfield the Heron fishes in the streams and reservoirs.

The largest of the Cheshire heronries is situated in the Duckwood in Eaton Park, about five hundred yards from the river Dee. The wood, mostly of willows, is intersected by deep ditches, and in wet weather is frequently flooded. Mr. F. Nicholson, in 1874, estimated the strength of the colony at about thirty nests,* and Mr. R. Newstead says that in 1893 there were from forty to fifty.† In 1907, the

* *Manchester City News*, Nov. 14, 1874. *Manchester Guardian*, Dec. 28, 1881.

† *Chester Society of Nat. Science and Lit.*, Proc. IV., pp. 226-243.

Hon. C. T. Parker tells us, there were seventy-eight nests, and his estimate of sixty in 1908 was certainly not above the mark ; on March 28th in that year we counted over forty, but owing to the flooded condition of the wood were only able to traverse a portion of the heronry. All the nests which we saw were built in the tops of large willow trees, and in some cases there were many nests in one tree ; in four trees there were nineteen bulky nests, in one seven and in another five. Mr. Newstead in 1893 counted twenty-two nests in one group of eight trees. He writes : " Those [nests] that I examined . . . had little or no lining in them ; one nest was lined with a few dead stems of the purple loosestrife (*Lythrum salicaria*, Linné), which grows abundantly in and near the wood ; the others had nothing but thin sticks broken very short." Speaking of the well-mounted group in the Grosvenor Museum, which was obtained from Eaton, Mr. Newstead says : " When taking the nest and young, one of the birds flew away into an adjoining tree, and when dislodged it came down in an almost perpendicular direction. Intervening between it and the ground there was a small branch, upon which the bird tried to alight ; failing this, it hooked its long beak over the branch and tried to gain a foothold, but was unable to do so. I thought it very remarkable that a bird should be able to hang to an object by simply placing its closed beak on the branch, but such was the case, and as I kept the birds for many days after as living models, I was much interested to see them on several occasions use their beaks for supporting their bodies, in situations where it was difficult to get a foothold."* The nests varied considerably in size, and in one or two cases there were two nests actually in contact. It is stated that there was formerly a small heronry on the Dee near Eaton at a spot called Heron Bridge, where the branches of two large willow trees, meeting above the river, formed a natural arch. The origin of the name has, however, been disputed by archæologists.

* R. N., *Chester Society of Nat. Science and Lit.*, Proc. IV., p. 234.

The other heronry, at Tabley Park near Knutsford, was established in 1871, when a single pair nested. In 1874 there were three, and in 1881 about a dozen nests. The increase has been gradual and subject to fluctuation; in 1891 there were about fifteen, in 1900 nineteen and in 1901 twenty-one nests, but in this year six were blown out of the trees when the eggs were on the point of hatching, and on March 8th, 1902, we only found sixteen completed nests and the foundations of another. In the following year many of the Herons deserted their nests owing to the disturbance caused by the dredging of the lake, and a branch colony was formed in the Round Wood, a short distance from the original heronry. Towards the end of March, however, the dredging engines having then left, some half-dozen pairs returned to the old site. Owing no doubt to this disturbance in the usual breeding season—February to April—there were young in the nests at Tabley so late as July 20th. In 1904 birds again attempted to nest in the spruces in the Round Wood, and at the old heronry the number of nests was considerably below the average. On March 25th, 1906, we counted sixteen occupied nests, but on April 13th, 1907, there were twenty-three nests, though two of them did not appear to have been occupied that season. The nests are built in an isolated clump of horse chestnuts, willows and other trees on the margin of the lake; in the Round Wood they were in spruce firs.

There are records of at least nine heronries, which, owing to various causes, are no longer in existence. There was one near the pool at Arley, but the nesting trees were felled about the middle of the last century; another existed at Aston near Frodsham, which Mr. Nicholson says is referred to by Sir Arthur Aston in letters dating back to the first quarter of the last century. This heronry consisted of at least twenty nests when it was at its best, but it ceased to exist about 1890. In 1857 a pair of Herons chose some firs on the bluff at Burton Point for a nesting site. Ten years later there were about twenty nests, but here, as at Arley

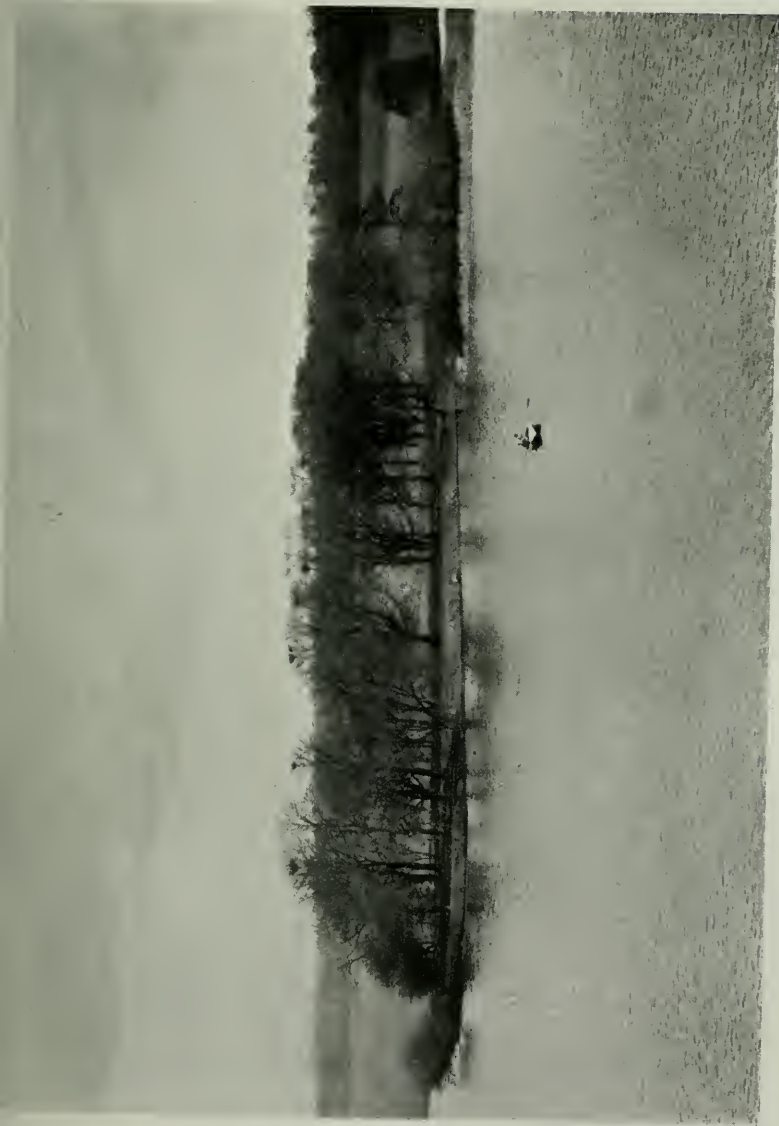
and Aston, the birds were constantly persecuted by the Rooks and Jackdaws, and in 1874 only two broods were hatched out. In 1880 a heavy gale, which blew down several of the trees, was the death blow of the colony. A heronry at Carden was, it is said, destroyed on account of the effluvium arising from the putrid fish refuse. About 1850 the heronry at Combermere Abbey was destroyed on account of the havoc which the birds wrought amongst the fish.

In the early part of last century there was a heronry near the Old Man Pool in Dunham Park; there is no record of its origin, but owing to persecution and the fact that some of the nesting trees were blown down, the birds left the locality in 1833, and after an ineffectual attempt to settle at Tatton, migrated to Arley.* At Hooton, a heronry, perhaps the oldest in Cheshire, was destroyed by the construction of the Manchester Ship Canal about the year 1890. Mr. Nicholson says that the birds abandoned the place in 1870, but returned in 1874, when there were six nests. Mr. Newstead states that at the time of its demolition there were about twenty nests in the colony. A few Herons used to nest some years ago in the Marsh Plantation at Ince, but they have not bred there lately. An island in the pool at Oulton Park was tenanted by a number of Herons until about the year 1850, when the birds deserted the locality.†

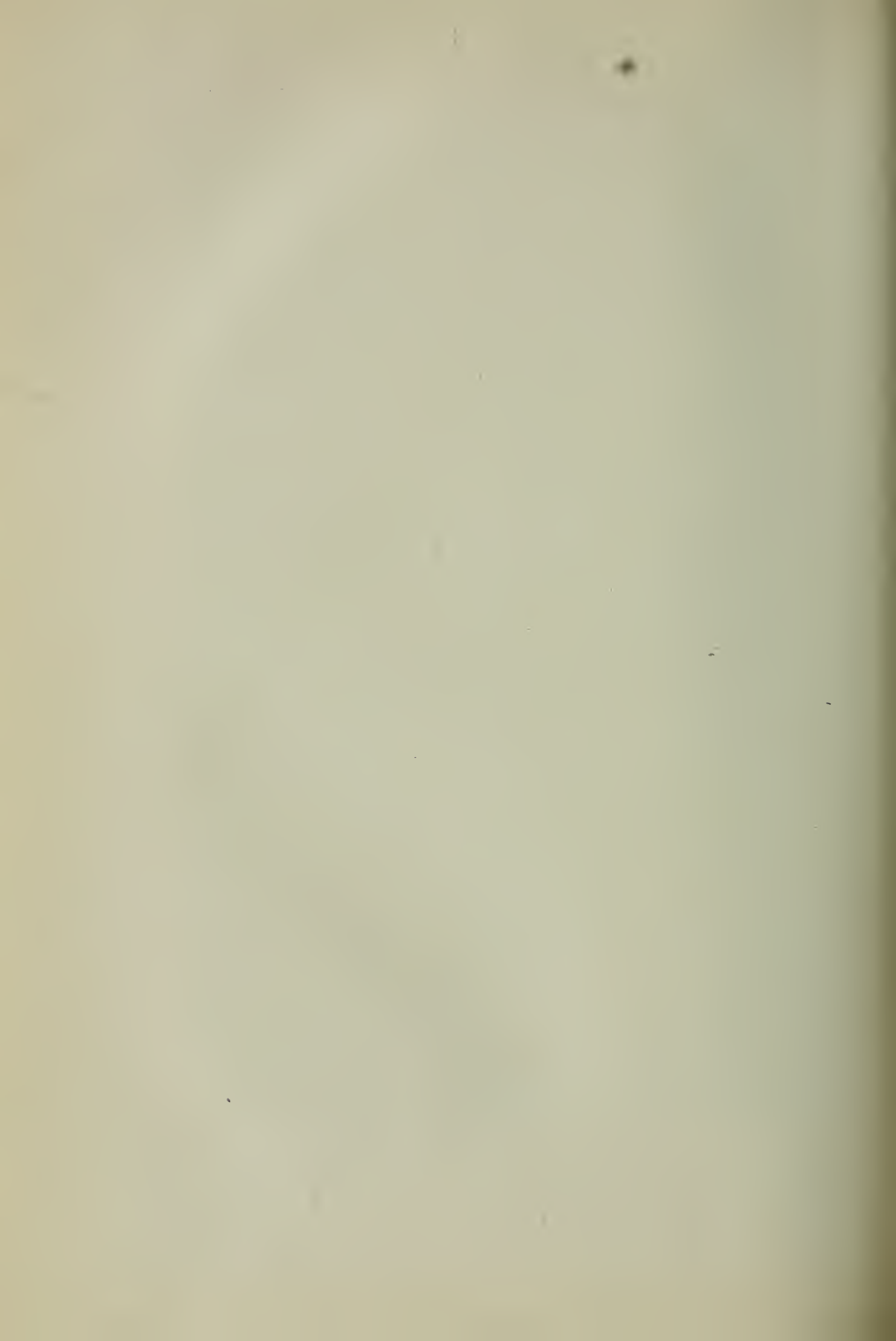
Odd pairs occasionally nest in secluded woods. Byerley mentions that a pair nested at Newton-cum-Larton. In 1888 a brood was reared in a wood at Balderton near Chester, and at one time a pair used to nest in the beech wood in Alderley Park; isolated pairs have nested on the Tatton Estate, at Adlington, in Lyme Park, and, so lately as 1902, at Redes Mere. Mr. S. E. Thomason tells us that one or two pairs nest annually in the woods at Taxal; in the

* J. E. Smith, *Manchester City News*, May 16, 1874.

† F. Nicholson, *Manchester City News*, Nov. 14th, 1874. *Manchester Guardian*, Dec. 28th, 1881. R. Newstead, *Chester Society of Nat. Science and Lit.*, Proc. IV., pp. 226-243.



TABLEY HERONRY.



springs of 1907 and 1908 he saw nests, but no large colony has been formed.

The ordinary call of the Heron—*frank*—is not, as is often stated, an alarm cry only, but frequently serves as a call note. In addition to this cry, we heard at the Eaton heronry at the end of March, when the birds had well-grown young in the nests, a deep growling *gurronk*, which was apparently a note of welcome, for it was loudest and most emphatic when one bird alighted on the edge of a nest in which its mate was sitting. The younger birds in the nest utter a thin piping note, and when older a curious chattering cry, which reminds one of the alarm *tac, tac* of the Blackbird.

The diet of the Heron is by no means confined to fish, though Bream are largely eaten on the meres. Pellets of the bird picked up at Eaton and Tabley consist of a dense felted mass of the fur of the Water Vole, and occasionally contain many broken fragments of bone of this animal and skulls of the Water Shrew, together with the elytra of water beetles, often of the larger species of *Dytiscus*.

At Redes Mere, on March 26th, 1904, when we were watching a Great Crested Grebe struggling with a fish that was apparently larger than it could swallow, a Heron rose from the bank and flapped low across the mere. When it reached the Grebe, that bird dropped its prey and hurriedly dived. The Heron settled on the water, remained there for a moment, and then rose and flew off with the fish it had secured. The Heron will occasionally swim for a few yards in deep water. At Tatton we have seen a bird fly out to the middle of the mere, alight for a few seconds, and then rise again; on one occasion Coward saw one drop a fish when it was flying, alight on the water, swim until it picked up and swallowed its quarry, and then return to the bank.

PURPLE HERON. *Ardea purpurea*, Linné.

Has been obtained once.

On April 7th, 1887, an adult Purple Heron was shot in the fields between Alderley Edge and Wilmslow. It was erroneously attributed to Lancashire in the *Zoologist*,* and the mistake was repeated in the second edition of the *Birds of Lancashire*.† The bird is now in the collection of Colonel Dixon at Astle Hall.

NIGHT HERON. *Nycticorax nycticorax* (Linné).

A rare wanderer to Cheshire.

The Night Heron is a not infrequent visitor to the southern and eastern counties, but in the west it is rarer, and has only once been obtained in Cheshire. In the summer of 1865 an adult was shot on the Mersey near Northenden by a man named George Smith. His son, in whose possession we saw the bird, informed us that he remembered hearing it on several occasions in the evening "at haymaking time, making a noise like a person vomiting." In the case containing this Heron there was a cutting from a local newspaper, recording the shooting of the bird, across which the date "July 16th, 1865," was written in ink.

LITTLE BITTERN. *Ardetta minuta* (Linné).

A rare wanderer to Cheshire.

The Little Bittern, a rare visitor to Britain, has been obtained twice in Cheshire. A female was shot by the late C. H.

* T. Pickin, *Zoologist*, 1887, p. 432.

† p. 145.

Poole on Marbury Mere, South Cheshire, in July, 1881.*
 On October 29th, 1893, Mr. James Gibson killed a male,
 now in the Grosvenor Museum, Chester, on the marshes near
 Wallasey.†

BITTERN. *Botaurus stellaris* (Linné).

Local names—BITTOR ‡ ; BITTER-BUMP.

At one time a resident, now an occasional winter visitor.

Until early in the last century the Bittern nested regularly in the reed-beds fringing the meres, for in many parts of the county we have been told by men advanced in years that their parents were well acquainted with its booming notes. In Cheshire, as elsewhere, the bird is now only known as a winter visitor, but few years pass without one or more being shot in various places in the lowlands.

Upton, Bidston Marsh, Hoylake and Irby are localities given by Byerley in which the bird has been seen, and on January 12th, 1854, a male was killed on the Mersey at Thelwall.§ Brockholes says that one was shot at Higher Tranmere in 1857 or 1858.

The late Lord de Tabley mentions four birds—one shot on the ice at Pickmere in the winter of 1858–1859; one, now preserved at Tabley House, which was killed at Tabley in the fifties or sixties; one taken at Withington near Chelford; and one, in 1862, at Oulton.||

* Forrest, *Fauna of Shropshire*, p. 140.

† *Field*, LXXXII., 1893, p. 791.

‡ *Bittor* occurs in the Chester Plays of the thirteenth and fourteenth centuries.

§ N. Cooke, *Zoologist*, 1854, p. 4254.

|| *MS. note-book*.

At least three were taken on the Eaton Estate near Chester prior to the seventies, and Mr. H. Garland, who has a specimen in his possession, informed Dr. Dobie that the bird used frequently to visit the Duckwood in Eaton Park. In the seventies a Bittern was shot at Oakmere, and in 1887 Mr. A. Cookson killed one at Delamere. Mr. Bulkeley Allen has a bird which was killed on Carrington Moss many years ago, and the late T. W. Barlow had one that was shot on Rudheath by Isaac Gallimore, who informed him that the boom of the bird might frequently be heard in former years at Brereton Mere.† In 1886 one was killed at Marbury Mere near Northwich by the late David Hindley.

In January, 1892, a Bittern was shot between Upton and Greasby in Wirral, and on January 24th, 1893, one, now in the Grosvenor Museum, Chester, was killed on the Tarporley racecourse by Mr. J. Rutter, who saw another bird in company with it. Dr. Dobie mentions a bird from Tiverton. One was shot at Marbury near Northwich early in 1892.

In 1895 the Bittern was placed by the County Council on the list of birds to be protected throughout the year in Cheshire, but, unfortunately, the order did little to prevent the slaughter of such Bitterns as visited the county. Two, at least, were killed in this year—one, we are told by Mr. J. W. Lewis, in the neighbourhood of Alsager, and the other at Marbury Mere near the Shropshire border on December 21st.‡ Mr. W. H. Peterkin has seen a bird that was obtained at Lymm in December, 1897, and we have seen another that was shot near Hoo Green in 1898.

In February, 1900, one, in the collection of the Hon. Maurice Egerton, was killed at Rostherne, where Mr. J. Kenyon saw a second bird in the same spring; indeed it is probable that many of the Bitterns which visit the Cheshire meres are paired birds since couples have frequently been noticed

* T. W. Barlow, MS.

† Forrest, *Fauna of Shropshire*, p. 140.

in the same locality. In 1901 birds were killed at Tarvin in January, and on the Ship Canal at Lymm in December,* and in January, 1902, Mr. S. Cawley shot one at Peckforton.†

A Bittern frequented Marbury Mere near Northwich for many weeks in the winter of 1902-03. It was first observed by Mr. W. Wright of Great Budworth, who found it, in November, crouching on the litter of dead reed stems at the edge of the mere, and who was struck by its brown plumage and green legs when it rose. It was subsequently seen on many occasions, and on January 21st and 25th we put it up from the reed-bed near the Hall. When it first rose, its long dangling grass-green legs and thick outstretched neck gave it a peculiarly ungainly appearance, but when it was clear of the reeds it drew its head back between its shoulders and trailed its legs behind it in the manner of a Heron; its flight was heavy and deliberate. The bird, which was last seen on February 19th by Mr. J. Hindley, almost certainly escaped, though one, which had probably come with it, was killed on the neighbouring water at Pickmere on the 3rd or 4th of January.

In the winter of 1904-05 an unusual number of Bitterns visited England, and early in the latter year no less than six were recorded from various parts of the country, four of them being in Lancashire and Cheshire.‡ On January 27th, 1905, one, now in the collection of the dowager Duchess of Westminster, was shot at Combermere, and on the following day one was noticed on Marbury Mere near Northwich. It frequented the same reed-bed as the bird in 1902-03, and on February 2nd Mr. S. G. Cummings and Coward, and, three days later, Oldham put it up from the reeds. It remained about the mere until the 28th of that month. As was the case in 1902-03, the bird was probably accom-

* *Manchester Guardian*, Dec. 10, 1901.

† *Chester Society of Nat. Science and Lit.*, Report 31, p. 19.

‡ T. A. C., *Manchester Guardian*, Feb. 17, 1905.

panied by a mate, for at the end of January or early in February one was shot at and wounded somewhere in the neighbourhood. This bird fell exhausted in a farm-yard at Pickmere, where it was despatched with a stick. It was photographed, and the picture of its body and a paragraph recording its death appeared in several local and London papers. The matter was taken up by the police, but the person who shot it was not discovered. In 1908 one was shot at Stoke near Chester on January 28th, and on February 1st, 1909, one was seen in a reed-bed at Rostherne by a gamekeeper.

It is evident from the above list, which is probably far from complete, especially as there are many specimens with unknown histories in cottages and farm-houses, that the Bittern, even if it did not again establish itself as a breeding species, might be a regular winter resident on the meres if it was not molested.

PLATALEIDAE.

SPOONBILL. *Platalea leucorodia*, Linné.

A rare wanderer to Cheshire.

The Spoonbill, rare in the west of England, has occurred at least twice in Cheshire. Brockholes says that "a specimen was shot about the year 1859 on the Dee Marsh near Burton," and H. E. Smith refers to one killed at the same place in 1864, but as Dr. Dobie suggests, these are probably one and the same bird. The late James Kemp, who shot this bird, told us that he had killed many "Spoonbills"—his name for the Shoveler—but that this was the only "big white Spoonbill" he had ever heard of. An adult in summer plumage, now in the Grosvenor Museum, Chester, was

formerly in the collection of the late R. Nunnerley of Congleton, who told us that it was shot by his father on Tatton Mere about the middle of the last century.

*ANSERES**ANATIDAE.*GREY LAG GOOSE. *Anser anser* (Linné).

A rare winter visitor to the Dee Estuary. Has been shot inland.

The Grey Lag Goose is at the present day uncommon even on the east coast, and in the west it is very rare; it has, however, occasionally been recognised in Cheshire. Dr. Dobie informs us that the late Captain Congreve had a water-colour sketch of a goose, in which the nail on the bill was distinctly white, marked "Grey Lag or Common Wildgoose, Burton, October 18th, 1841, *Anas anser*." In the winter of 1894-95 a Grey Lag was shot in the Dee Estuary by Mr. L. N. Brooke's puntsman. Early in January, 1908, Mr. S. G. Cummings saw a gaggle of fourteen geese, which were not Pink-footed Geese, on the marsh near Puddington, but he was not able to identify them all. It is possible that some of them were the Bean Geese that he saw about a week later at the same spot, but amongst them was one undoubted Grey Lag; it had a flesh-coloured or pinkish-yellow bill with a white nail.

In 1846 the late T. W. Barlow recorded that a "Gray Goose (*Anser palustris*)" was taken about that date near Holmes Chapel.* Some years ago the late R. Nunnerley shot a Grey Lag out of a skein of eight or nine birds which was crossing the Buxton Road about a mile and a half east of Macclesfield; the bird was not preserved, but Mr. Nunnerley, who had wide experience as a wildfowler,

* *Zoologist*, 1846, p. 1501.

was certain of its identity and remarked the characteristic white nail.

On January 7th, 1905, we saw two "grey geese" approaching Tatton Mere from the north-east. The birds dropped down to the water, but when about to settle, veered round and flew in the direction of Rostherne. Their cry—*uck, uck*—was unlike that of either the Pink-footed or White-fronted Goose, but we were unable to identify the species.

It is not possible to determine the species of the grey geese, which we have often heard and seen flying at a height in V-shaped formation over the country near Bowdon and Sale. The same remark applies to the geese which used to be shot on Carrington Moss until a few years ago, but which were always relegated to the pot without being identified.

WHITE-FRONTED GOOSE. *Anser albifrons* (Scopoli).

Local name—LAUGHING GOOSE.

Occurs occasionally in small parties in winter in the Dee and Mersey Estuaries.

The White-fronted Goose was at one time a well known visitor to the tidal waters of the Mersey in winter, coming down at night from the adjacent mosses,* and Brockholes knew it in the Dee. Mr. R. Newstead examined one in the flesh which had been shot at Ince on the Mersey in the winter of 1885, and his father saw another freshly killed bird at Thornton-le-Moors on January 29th, 1894.† The geese which now visit the Mersey Estuary are seldom recognised, but this species, though less common than the Pink-footed

* *Naturalists' Scrap Book*, p. 228.

† Dobie, p. 320.

Goose, occurs with some regularity as a winter visitor to the Dee.

In the winter of 1903-04 Mr. J. A. Dockray noticed more in the Dee Estuary than usual, and on February 6th, 1904, Mr. R. H. R. Brocklebank shot one out of a gaggle of about a dozen; he informs us that towards the end of that month the number of White-fronted Geese was considerably above the average, and that they were actually more plentiful than Pink-footed Geese.

On January 27th, 1905, Mr. S. G. Cummings saw three White-fronted Geese with some Pink-footed Geese on the Burton Marsh, and on February 11th in the same year he saw a single bird. Mr. L. N. Brooke obtained one in the winter of 1906-07. A skein of thirty-eight passed close over Coward when he was standing on the Burton Cop on February 21st, 1909.

BEAN GOOSE. *Anser fabalis* (Latham).

A rare winter visitor to the estuaries.

The Bean Goose has been obtained occasionally in the Dee Estuary, but it is rare. A bird shot in January, 1872, near Burton was examined by Brockholes and referred by him to this species. One, shot by Mr. L. N. Brooke in 1887 or 1888, is now in his collection at Gayton. On January 19th, 1900, Mr. J. A. Dockray killed one out of a gaggle of six, presumably all of this species, and on another occasion Mr. Brooke killed four birds at one shot, but he has no note of the date.

In the third week of January, 1908, Mr. S. G. Cummings saw fifteen Bean Geese on the stubbles opposite Puddington; he was able to approach near enough to them to make out distinctly their orange legs and black-nailed orange bills.

They were less wary and easier to approach than the Pink-footed Goose.

PINK-FOOTED GOOSE.

Anser brachyrhynchus, Baillon.

A winter resident in the Dee Estuary, and in former years in the Mersey ; occasionally met with inland.

The Pink-footed Goose is undoubtedly *the* goose of the Dee Estuary. It arrives as a rule in October, and from then until March flocks of birds, varying in size in different years, frequent the sandbanks and marshes. Mr. L. N. Brooke, who has had many years experience of wildfowling in the Dee, considers that on or about October 8th one may expect to see Geese in the river, but occasionally the birds arrive at the end of September, and in 1907 Mr. J. A. Dockray saw a gaggle of about thirty on the 14th of that month. The majority of the birds come at the end of October. Many years ago the flocks of Pink-footed Geese are said to have been much larger than they are today, but apparently the numbers have increased during the last few years. Eight or ten years ago it was not unusual for there to be only about a couple of hundred birds, but during the last four or five years the numbers have varied between eight hundred and a thousand, and may have even exceeded the latter number. The majority depart about the middle of March, but occasionally a few remain until April ; on April 23rd, 1906, Mr. Dockray saw a skein of one hundred and fifty birds at Heswall, flying NNE., some weeks after the main body had left, and on April 24th, 1908, Mr. Brooke observed between three and four hundred Geese still in the river.

At high tide the Geese congregate on the saltings above the Burton Cop, and frequently feed in the Sealand fields about Shotwick ; they occasionally visit the fields in and bordering on the now cultivated Saltney Marsh. During the ebb they generally come down the river, and may be seen in skeins of one or two hundred birds passing high above the marsh in shifting V-shaped lines, "honking" loudly as

they fly. They then resort to some freshly uncovered bank, where they crowd together, but except when rising or flying are silent. Mr. Dockray is of opinion that they spend more of the day feeding in the fields than was formerly the case, but gaggles may be met with on most days, either on the saltings, where they feed on the short grass, or on the river. The bird was formerly common in the Mersey but it is seldom seen in the estuary now. In the late Nicholas Cooke's MS. note-book there is only one reference to the birds—their arrival in the river on September 23rd, 1845.

Although the Pink-footed Goose feeds constantly in the stubbles or fields of young corn on Sealand and in the neighbourhood of Burton it is not often noticed further inland. There are birds in the Grosvenor Museum which were obtained at Tattenhall on December 29th, 1890, and in January, 1893.

BARNACLE GOOSE. *Bernicla leucopsis* (Bechstein).

Local name—BRENT GOOSE.

Formerly a common winter visitor to the estuaries ; now rare.

The Barnacle Goose was at one time a regular winter visitor in considerable numbers to the estuary of the Dee, but within the last fifty years it has practically deserted the river. Brockholes says that prior to 1862 it was common, but that at the time of writing—1874—it was scarce, and Dr. Dobie states that it is “now very rare, if indeed it ever visits us.”

Mrs. Hilda Gamlin gives some particulars of the former occurrence of the Barnacle,* but it is possible that in some cases her informants confused this bird with the Pink-footed Goose, since she makes no mention of the latter species. The Barnacles, she says, “would always fetch

* *Twixt Mersey and Dee*, pp. 217-219.

2s. 6d. each at Chester Market ; they were very good to eat, and, from feeding on the short grass, there was no fishy taste about them." Dee wildfowlers of the past generation all maintained the former abundance of the bird. Lawton, in 1894, told Mr. J. A. Dockray that Barnacles deserted the locality when the marshes "carried so many sheep"; James Kemp, whose father, William Kemp, was the first punt-gunner on the river, assured us that Barnacles were, years ago, far more numerous than Pink-footed Geese, and added : "I hear they're gone to Ireland"! Since Messrs. Brooke and Dockray have known the river they have only occasionally met with the bird ; on March 2nd, 1886, Mr. Dockray saw eight near Hilbre. There is an example from Burton in the Grosvenor Museum, Chester, which was in the collection of the late Captain Congreve, and Mr. L. N. Brooke has another, which he killed on the river near the Burton Marsh on September 29th, 1901.

On November 4th, 1905—a thick misty day—we put up a small solitary goose from the marsh, which was undoubtedly not a grey goose of any species, nor from its pale coloration and light markings on the face was it a Brent Goose. It flew rapidly and was almost immediately lost in the mist, giving us no opportunity of confirming our impression that it was a Barnacle Goose.

BRENT GOOSE. *Bernicla brenta* (Pallas).

Local name—BRANT.

A regular winter visitor in small numbers to the estuaries ; an occasional wanderer inland.

The Brent Goose visits the Dee Estuary almost every winter in small numbers ; Mr. L. N. Brooke generally notices it first in September or October. As a rule the flocks are not large, but on February 7th, 1888, Mr. A. O. Walker saw about

two hundred on the marshes.* There is one in the Grosvenor Museum, Chester, which was obtained at Burton on December 24th, 1884, and Mr. L. Jones has another which was shot at Hilbre in February, 1895. In the winter of 1904-05 Mr. J. A. Dockray noticed a few Brents; the largest party, which he saw on the marsh on January 1st, 1905, consisted of eighteen birds. On December 17th, 1905, Mr. Brooke killed one amongst some Mallards. Mr. Dockray saw a few near the Point of Air on September 27th, 1907, and on December 30th, in the same year, he killed four; one of these is now in the Warrington Museum.

The Brent only occasionally visits the Mersey Estuary; one was obtained on the Ince Marsh in February, 1895. Inland, one was shot at Combermere on November 5th, 1895.†

The Canada Goose, *Bernicla canadensis* (Linné), has been long naturalised in England, and exists in a perfectly wild state in Cheshire, breeding on many of the meres. There is no reason to suppose that any of the birds shot in various parts of the county were immigrants from the American continent. Canada Geese may usually be seen on the larger meres and even on smaller sheets of water and secluded ponds. The numbers vary considerably in different years, but in winter flocks of from half a dozen to two or three hundred birds may be seen feeding in the fields or flying from one sheet of water to another.

WHOOOPER. *Cygnus cygnus* (Linné).

An occasional winter visitor to the estuaries.

The Whooper is a not infrequent visitor in winter to the estuaries of the Dee and Mersey, but it seldom ascends as

* Dobie, p. 321.

† Forrest, *Fauna of Shropshire*, p. 145.

high as the marshes. Byerley mentions examples seen near Upton and Leasowe, and Brockholes records that in the winter of 1870-71 Lawton of Denhall secured one on the Dee. This was perhaps one of the herd of about thirty seen by Mr. A. O. Walker on January 12th, 1871, between Bagillt and Holywell, on the Welsh side of the estuary.*

Mr. L. Jones has often seen Whoopers passing Hilbre Island; on one occasion a herd of sixteen frequented the neighbourhood for some time, and some of the birds were shot on Burton Marsh.

Mr. L. N. Brooke has on several occasions seen the Whooper as far up the river as Heswall, and on March 6th, 1892, he saw about forty close to Moorside, Parkgate. On November 24th, 1901, he saw twenty-one birds, and in 1904 Mr. J. A. Dockray saw twenty-five. The bird has been occasionally observed on the Mersey at Ince by Mr. R. Newstead, Senr.†

BEWICK'S SWAN. *Cygnus bewicki*, Yarrell.

A rare visitor in winter.

The earliest reference to Bewick's Swan in Cheshire is in the late Lord de Tabley's note-book; the only details given are: "Bewick's Swan. Oulton. Sir P. Egerton."

On at least three occasions the bird has been noticed in the Dee Estuary. Brockholes examined one that had been shot by Lawton of Denhall on December 14th, 1871, and Mr. L. Jones has one which he shot at Hilbre, during very cold weather, on October 27th, 1897. On December 15th, 1907, Mr. L. N. Brooke saw a herd of twenty-seven—adult and immature birds—in the estuary. Mr. Brooke's attention was called to them by their barking cries; the

* Dobie, p. 321.

† *Id.*, p. 322.

noise was described by Tom Evans, Mr. Brooke's puntsman, as "just like a lot of poodle puppies."

The Mute Swan, *Cygnus olor* (J. F. Gmelin), exists in a semi-domesticated condition on most of the meres and ornamental waters in Cheshire, and birds may frequently be seen flying at a slight altitude across country from mere to mere. The beat of their immense wings, audible at a considerable distance, attracts the attention of passers-by, who often report the birds as "Wild Swans." Mute Swans occasionally feed on the ooze and sandbanks of the estuaries, but there is no reason to suppose that any of those shot from time to time on the Dee or elsewhere are really wild birds.

COMMON SHELD DUCK. *Tadorna tadorna* (Linné).

Local names—SHELL; BURROW DUCK.

An abundant resident in both the Dee and Mersey Estuaries; the numbers largely augmented by migrants in autumn.

The increase within recent years in the numbers of the Sheld Duck which frequent the estuaries is remarkable. A few years ago the bird had almost deserted most of its Cheshire nesting haunts, and the majority of the Sheld Ducks which were to be seen in summer on the sandbanks and mud-flats at low water bred in the sandhills near the Point of Air, in Flintshire.

Byerley, in 1854, said of the bird: "Not uncommon about the Dee. Breeds occasionally in the rabbit warrens of the coast, and in the Middle Hilbre Island." Mr. A. O. Walker saw immense flocks at the mouth of the Dee in January, 1865, and birds with young on Salisbury Bank on June 25th, 1858.* H. E. Smith, in 1865, said that the bird

* Dobie, p. 322.

then nested in the neighbourhood of Little Meols and on Caldý Hill, and that twenty years previously it bred along the whole range of sandhills on the Cheshire shore. In 1874 Brockholes wrote: "In summer and early autumn, many Shelldrakes bring their young on the tide to the Dee Marshes and return with the tide. They nest occasionally on Hilbre Island and in suitable places on the Cheshire side of the Estuary of the Dee." Mr. W. E. Sharp, writing to Dr. Dobie of a nest which he took on the sandhills at Hoylake in 1876, said: "This must have been one of the last occasions of its breeding, as that year the golf-links were extended over the ground which they frequented."

Most of the sandhills along the Wirral shore of Liverpool Bay have vanished, and many of the former haunts of the Sheld Duck have been built upon, but in spite of this the bird has greatly extended its breeding area, and is probably as plentiful today as it has ever been in Cheshire. On Hilbre Island, where it nests every year, Mr. L. Jones in 1892 dug out eight eggs from a burrow within ten yards of the look-out station.

In 1907 Dr. J. W. W. Stephens, though he did not actually find a nest, was sure that one or two pairs of birds which constantly frequented the Hoylake golf-links were nesting in the immediate neighbourhood. At Heswall and Thurstaston, in spite of the increase in population, a few pairs still bring off their broods, and in the neighbourhood of Burton, whence the bird was never entirely driven away, the number of nests in the burrows in the cliffs and in the Burton Cop is increasing year by year. In June and July large numbers of birds, in attendance on families of young, may be seen on the banks or swimming in the channels.

In the Mersey the increase is even more remarkable. Dr. Dobie states that prior to 1873 nests were frequently found between Stanlow and Ince, and in 1902 there were at least two pairs nesting at Stanlow Point. Now the bird nests in the embankment of the Ship Canal for the whole of its length from Eastham to Frodsham, and is particularly

abundant in the rabbit-burrows on Mount Manisty, a large spoil-bank at Hooton. Many nest on the Lancashire side of the river in the neighbourhood of Hale, where the bird has greatly increased within the last few years. It also nests in a spoil-bank on Norton Marsh which is above Runcorn and less than three miles below Warrington.

Not only has the Sheld Duck increased as a breeding species on the shores of the estuaries, but it now nests at some distance from the tidal waters. In the spring of 1907 a female and twelve young were captured at Catten Hall on the Weaver, four miles from where the river joins the Ship Canal. Of late years a few pairs have nested on the Helsby and Overton Hills, and on several occasions the ducklings have been captured as the old birds were leading them down to the estuary. In May, 1907, Mr. S. G. Cummings and Oldham met with a pair of Sheld Duck at Upton near Chester, and others at Stoke and Thornton in the Goway marshes. In one place, about two miles from the sea, they saw ten, and later, fifteen birds together, resting on the grass and preening their feathers. In March, 1907, a female Sheld Duck frequented Marbury Mere near Northwich for about a week, and on June 1st Mr. T. Hadfield saw two birds on the same water. On April 17th, 1907, Coward saw two pairs of birds on Oakmere; the males were chasing the females and indulging in the antics and display incidental to courtship in this species. Two birds were still on the mere on the 28th. In 1904 Miss Cookson, niece of a former keeper at Oakmere, gave us a circumstantial account of the nesting of a pair of Sheld Ducks in the warren on the bank of the mere some four years before. The eggs were dug out of a rabbit-burrow and put under hens; two young were reared and remained with the other ducks on the water, but were subsequently killed by Foxes. On July 21st, 1908, Coward saw a female Sheld Duck on Rostherne, but it was not visible on the following day.

In autumn the numbers of the resident birds are largely augmented by immigrants, and throughout the winter

months large flocks of Sheld Ducks frequent the banks in the Dee and Mersey Estuaries. In September flocks many hundred strong, consisting of adult and immature birds, may be seen daily on the Dee banks, drifting up the channels on the flood and returning with the ebb. On February 25th, 1906, between eight and nine hundred birds were feeding together on the banks near Denhall as the tide ebbed, and on February 23rd, 1907, we estimated that at least six hundred were feeding in a loosely scattered flock on the Mersey sands south of Hale Point; there were many others in the tideway and on the shore higher up the river. On December 26th, 1908, we saw very large flocks in the Mersey near Stanlow Point.

In June and July it is not unusual to see a pair of birds followed by a number of young obviously of more than one brood. Coward has seen a pair of adult birds with twenty young, comprising birds of two distinct sizes, and on July 12th, 1908, Messrs. L. N. Brooke and J. A. Dockray watched a pair at Gayton with between forty and fifty young, all about one month old, the produce, no doubt, of several pairs.

The Sheld Duck, which is looked upon as a "spoil spert," is not sought by Dee wildfowlers, but its rank flesh is actually appreciated by the flatmen and dock-hands in the neighbourhood of Connah's Quay, on the Welsh side of the estuary.

MALLARD. *Anas boscas*, Linné.

A permanent resident, and abundant winter resident.

The Mallard, or Wild Duck as it is usually called, is a common resident, breeding in all parts of the county. The nest is often placed amongst brambles or bushes in the vicinity of meres and ponds, and many pairs breed in the

coverts at a considerable distance from any water. The late Rev. C. Wolley-Dod stated that at Edge a pair or two generally nested in the trees,* and this is a not uncommon habit elsewhere. In 1900 a bird nested at Tabley in a hollow in a horse-chestnut, twelve feet above the ground, and in 1907 one at Oulton laid in a hollow in an oak about seven feet above the ground. On the moors in the east the eggs are laid under the shelter of the ling, as was the case on Carrington Moss prior to its reclamation.

On many shootings large numbers of Mallards are reared by hand, but in autumn flocks of immigrant Mallards arrive in the estuaries and on the larger waters inland. Here they rest and sleep in security during the day, fighting at dusk in pairs and small parties on their way to their feeding grounds in the surrounding country. A few birds arrive before the end of August, but as a rule October is well advanced before there are any considerable numbers on either salt or fresh water. Even in November and December an increase frequently takes place, and if during winter the weather is severe and the inland waters are frozen immense packs congregate on the open waters of the estuaries. On the inland waters the numbers fluctuate, for the birds move from mere to mere; on Rostherne, one of the deepest and latest to freeze of the meres, there are often thousands of Mallards when the shallow and more exposed waters are frost-bound.

Throughout the winter the birds, even when packed closely together, keep more or less in pairs, and when disturbed the female is almost invariably the first to get on the wing; the birds spring cleanly from the water, always rising head to wind. Early in March their numbers decrease, the residents leaving to nest and the migrants departing; by the end of the month the northern breeders have all left. When the females are sitting, parties of drakes may be seen on the water, resting in security during the day.

Mr. J. A. Dockray has found the crops of Mallards shot

* Dobie, p. 323.

on the Dee Estuary full of acorns which they had procured inland, but the birds also feed on the sands and saltings. He has at times found the crops full of small cockles, and from that of one bird, killed in November, 1907, he took a number of small black seeds, which when planted proved to be the seeds of seablite, *Suaeda maritima*, Dumortier, a common plant of the saltings.

There are no duck-decoys in Cheshire at the present day, but one was worked in the middle of the seventeenth century by Sir William Brereton, the Parliamentary General, at Dodleston, close to the then extensive and undrained marshes of the Dee, and therefore admirably suited for the purpose. Sir William appears to have taken great interest in decoys, and constantly refers to those which he saw when travelling in Holland and elsewhere. In describing a visit he made to one Gabriel Direckson of Delft in 1634, he says: "His coy is seated near his own and divers other houses and the highways and navigable rivers on both sides, nearer by much than Doddleston Bridge or Findloes House is to my coy. His coy hath five pipes as mine, but better compassed, and two of them almost meet."* These remarks furnish a clue to the situation of the decoy; a farm on the road between Dodleston and Chester is still known as Decoy Farm. It is, however, obviously incorrect to suppose, as the editor of the *Travels* does, that the decoy was at Handforth, Sir William's home in east Cheshire; and there is no foundation for Mr. Fletcher Moss's statements that the site of the decoy is now a calico-printing works at Handforth, and that "Shovelers, Teals, Wigeon, Pellstarts (Pintails), Smeathes" (Smews?) were formerly taken there.† The author of the *Travels* says that these birds were captured at certain Dutch decoys, but gives no particulars of the species taken at his own. Apart from his definite statement as to the position of the decoy, Sir William Brereton owned property at Dodleston, and made

* Brereton, *Travels in Holland, etc.*, p. 23.

† *Zoologist*, 1895, p. 106.

the place his head-quarters when opposing the king's forces in South Cheshire in 1645.*

The Decoy Farm stands in Lache Lane, about half a mile on the Chester side of Balderton Bridge and about two miles from Dodleston. Mr. Rowe Morris, in March, 1908, showed us the site of the decoy, which was destroyed by the construction of the Great Western Railway from Chester to Shrewsbury in the early forties. The railway runs right across the site of the decoy, but the depression of the former pond, which was filled up with rubbish from the farm, shows that it was about as large as the existing Lancashire decoy at Hale. Moles had, when we saw the site, been working extensively in this portion of the field; the rest of the ground, Mr. Morris said, was peaty. A man, still living at the time of our visit, remembered the pond well, and said it was deep and the margin marshy. It was surrounded by large trees, and the sodden trunks of these still lie in the ditches which surround the site. Some of these ditches, which are flooded by the tide, are within a few yards of the site of the pond, and in the opinion of Mr. Morris are portions of the moat that have not been filled in. The curved depression of three pipes is discernible; two of them, on the east side of the line, converge and the other two were probably destroyed by the railway. Mr. Morris has in his possession documents concerning the Brereton property at Lache. A few pairs of Mallards nest on the farm, which is situate on the edge of the old saltings of Saltney Marsh. Mallards and other ducks and not infrequently Pink-footed Geese visit the neighbouring fields in some numbers in winter.

There is reason to believe that a decoy formerly existed in Moss Wood, Acton Grange, but no trace of the pond remains, nor has Mr. C. Madeley of Warrington been able to find documentary evidence of its existence. In a map, which is the frontispiece to a *History of Inland Navigations*, published in 1779, the word "decoy" is printed in the centre

* Hanshall, *History of Cheshire*, p. 38.

of Moss Wood, which, significantly enough, was formerly known as the "Bird Wood."

Duck-traps of various kinds—mostly wired-in enclosures, into which the birds are lured through "bob-wires" by "feeding" or by decoy-ducks—are in use on various meres; at Tatton, in the winter of 1907-08, about one hundred and fifty Mallards and other ducks were taken in one of these traps, and in 1908-09 over three hundred Mallards, a Pintail and a Teal were captured.

GADWALL. *Anas strepera*, Linné.

A rare visitor to the Dee Estuary.

The Gadwall seldom occurs in the west of England, and we only know of the existence of two Cheshire examples. A bird in the Grosvenor Museum, Chester, formerly in the collection of the late Captain Congreve of Burton, is labelled "March 13th, 1845."* Brockholes' remark, "Has been shot some years ago on the Dee," probably refers to this specimen. A drake in the Museum was killed at Blacon near Chester on October 23rd, 1908. It was accompanied by a duck, which was shot but not preserved and was possibly of the same species.

SHOVELER. *Spatula clypeata* (Linné).

Local name—SPOONBILL.

Bird of passage in spring and autumn, and occasional winter resident. Possibly a few pairs nest in the county.

The Shoveler is a regular visitor on migration to the estuaries and inland waters. Brockholes states that in

* Dobie, p. 323.

Wirral flocks are occasionally met with on ponds as well as on the marshes, and Dr. Dobie, that it is not uncommon in winter on the Eaton Estate, whence specimens in the Grosvenor Museum, Chester, were obtained.

It is possible that the Shoveler occasionally nests in the county. Although no nest was discovered, there is presumptive evidence that a pair nested in 1908. On August 15th, in that year, Mr. James Kenyon killed two young Shovelers on Tatton Mere, and on the 22nd he shot another. These birds were little more than flappers, and certainly could not have flown for any great distance.

The bird is never numerous on the tidal waters, but occasionally a few are seen with Mallards and Pintails; as a rule it rests during the day on ponds. On August 11th, 1904, Mr. J. A. Milner shot a duck on his pond at Barnston, Wirral.* On April 1st, 1905, Mr. S. G. Cummings saw three pairs on the marsh at Burton, and on September 3rd we flushed a bird in brown dress from a pond in the same neighbourhood. On February 23rd, 1907, we saw an old drake in the decoy pond at Hale, Lancashire, where Mole, the decoyman, says that they come occasionally but are not common; in December, 1906, and January, 1907, he captured Shovelers in the pipes. On September 23rd and 24th, 1908, Oldham saw five and six birds respectively, feeding on the tide and mud-banks at Stanlow Point; they were in brown dress, but one, by a few white feathers on the breast and underparts, showed signs of regaining full plumage.

On inland waters the spring passage is most noticeable in March and April; in these months we have repeatedly seen birds, usually in couples, at Marbury near Northwich, Tatton, Booths, Tabley, and the pools on Newchurch Common. In 1909 there were two drakes on Rostherne Mere so late as May 22nd. The birds are seldom in pairs, but two drakes are often seen together. On April 2nd, 1907, there were four drakes and one duck

* *Field*, CV., 1905, 32.

on Marbury Mere. The autumn passage begins at the end of July; on the 24th of that month, in 1905, there was a single bird on Marbury Mere. In August, Shovelers have occurred occasionally on Tatton and Marbury, but the main movement is from September to the beginning of November. In these months small parties, on occasions numbering six or seven birds, may be seen with the Mallards at Marbury, Tatton, Tabley, Oulton and Oakmere, and doubtless on other waters. Drakes in August and September are still in eclipse, but at the end of October they are in good plumage. The birds remain as a rule for only a few days, but their appearance on the inland waters is not confined to the periods of migration; at the end of November, in December, January and February, we have seen birds, in most cases singly, on the meres.

The paucity of information about the Shoveler from other parts of the county is probably due to the fact that in autumn—the period of its greatest abundance—the drakes are still in eclipse, and are often overlooked amongst the migratory Mallards and other ducks on the waters. A female was shot at Tushingham near Malpas on October 14th, 1875* ; and in April, 1890, Mr. N. Neave and Dr. J. H. Salter saw two Shovelers which had been found on March 31st on the western side of a wall that runs along the summit of Kerridge, a hill north-east of Macclesfield. The birds were not decomposed, and had evidently met their death a few days before by striking the wall as they were flying in an easterly direction. They were lying within a few feet of one another, and the beaks of both had been crushed and broken by the force of the impact.

A pair of Shovelers were shot about the year 1900 near Broadbottom in the Etherow Valley.† A female was killed in December, 1904, at Marbury near Whitchurch.‡

The Shoveler may be easily recognised in flight; the

* D. Vawdrey, *Field*, XLIV., 1875, 504.

† F. Stubbs, p. 36.

‡ T. C. Duggan, *Field*, CIV., 1904, p. 1111.

wings are set far back, and the broad bill gives the bird a short-necked, heavy-headed appearance, which is strikingly different from that of the Mallard. On the water its pose is as distinct; it swims, as a rule, with the head resting on the shoulders, and the fore part of the body low in the water, and has the appearance of being "down in the bows."

PINTAIL. *Dafila acuta* (Linné).

A not uncommon winter resident in the estuaries.

The Pintail is an annual winter visitor to the estuary of the Dee; its numbers vary in different years, but as a rule it is fairly plentiful. In the Mersey it has increased within the last few years; in 1903, Mole, the decoyman, informed us that the Pintails now outnumber the Mallards at the Hale decoy, whither the birds retire to spend the day in security; in the Dee, however, Mr. J. A. Dockray thinks it has decreased in numbers since 1895. The Pintail generally arrives in October, but its numbers are usually augmented during November and December; it remains until March or even later.

Occasionally birds may be met with inland, but it is not a regular visitor to the meres. A male in the Grosvenor Museum, Chester, was obtained on the Eaton Estate on December 26th, 1890, and Brockholes shot an old drake in the winter of 1868-69 on a pond at Ness. On April 8th, 1903, there was a solitary drake on Booths Mere, Knutsford, which was not on the water on the following day. For a few days, towards the end of October in the same year, a duck frequented Tabley Lake. On January 9th, 1904, and April 3rd and December 1st, 1906, single ducks were consorting with the large flocks of Mallards which spend the winter on Tatton Mere, and in 1907 there was a female on this water on March 1st, and a pair at the end of December.

The drake, much easier to recognise than the duck, was on the water on several occasions between the 15th and 27th, but it was only on the last date that we saw that he was accompanied by a duck. The ducks may be distinguished from the female Mallards by their longer necks and wings, short bills and high foreheads, even when the pointed tail and paler underparts are not distinctly visible. The Rev. G. Egerton-Warburton has a female that was shot some years ago at High Legh. On December 19th, 1908, there was a pair on Tatton Mere, and in January, 1909, a drake was captured out of a party of seven which visited the mere.

On September 10th, 1909, Coward saw a Pintail drake in eclipse on Rostherne, which remained on the water for many weeks, attaining full drake plumage about the middle of October. On December 14th there were two adult drakes on this water.

When the birds are pairing in January and February, the drake swims round and round the duck with his neck erect and his tail elevated almost vertically; at the same time he constantly utters a musical *quuck, quuck*, which resembles the note of some stringed instrument—a harp or violin for instance—rather than of a reed or wind instrument. Mr. J. A. Dockray has heard the drakes on the Dee uttering their “violin-like notes” so early as January 5th.

There is no instance of the Pintail nesting in Cheshire, but late in the nineties a drake Pintail paired with a duck Mallard at Toft near Knutsford, and the brood was brought off. In 1903 Oldham examined a drake Pintail in the possession of Thomas Sarjent, a gamekeeper at Toft, who told him that four or five years previously this bird was noticed for about a fortnight on the pool in Toft Park, and that it often crossed to Booths Mere. It paired with a Mallard duck at Toft, and the birds always rose together when he disturbed them on the pool. When the duck began to sit, he shot the drake, took the eggs and set them under a hen. He described the ducklings as being like Mallards, except that they were nearly white on the under parts; as they did not

exhibit any of the characteristic markings of the male bird he thought they had no special interest and turned them down on the pool with the other birds, where they were shot in the following autumn.*

When the Pintail is alarmed the tail is not carried in the elevated position, and Mr. S. G. Cummings has observed that when the bird is feeding and the head and breast are immersed in the water the tail is deflected.

TEAL. *Nettion crecca* (Linné).

A permanent resident and winter visitor.

A few pairs of Teal still nest in various parts of Cheshire though the reclamation of the marshes and cultivation of the mosses has curtailed the number of suitable localities. There is no recent record of the bird nesting in western Wirral, but Brockholes obtained eggs from three nests near Leasowe in 1857; he was of opinion that all the eggs were the produce of one pair, the nests having been found and the eggs taken at different dates in May and June though only one pair of birds was seen.† Mr. H. M. Davis of Frodsham tells us that a few pairs nest every year in the Gowy marshes near Stanlow Point.

The Teal nests in the Duckwood at Eaton near Chester,‡ at Bagmere, Brookhouse Moss and elsewhere in the district between Sandbach and Somerford, in a few places in the Delamere country, and in some of the more secluded parks and woods, as at Tabley. In the east of the county the bird nests in the vicinity of Bosley, where birds may often be seen on the reservoir in the breeding season, and in other places on the hills east of Macclesfield. Eggs have been taken at Newton near Hyde. On most of the Cheshire

* C. O., *Zoologist*, 1903, pp. 229, 274.

† Brockholes, *Zoologist*, 1857, p. 5365.

‡ Dobie, p. 324.

meres in the north of the county, such as Marbury and Rostherne, a few Teal may be met with in April or even later, and no doubt an odd pair remains occasionally to nest.

In Tatton Park, where some seven or eight years ago two captive ducks escaped and apparently nested, there is now a flourishing colony; at all seasons of the year the birds frequent the mere, a mill-pond, and the marshy valley of a brook in the park. In February, 1909, there were between sixty and seventy birds on this brook.

The Teal is well known on the Cheshire waters as a winter resident. On the estuaries, where it arrives in August or September—the drakes being then in eclipse—it is more abundant as a bird of passage than a winter resident; more Teal than any other duck are captured in the Hale decoy on the Lancashire side of the Mersey Estuary. On inland waters birds may be seen so early as the beginning of August, but these may have nested in the neighbourhood. From the end of August until March parties of from two or three up to a score of birds constantly frequent the meres. In January, when the birds are pairing, the constantly repeated, sharp whistling *krit* of the males is very noticeable amongst the quacks and chuckles of the Mallards.

The speed of this little duck is astonishing; a Mallard flying down wind travels at a great pace, but, when watching the wildfowl at the meres in winter, we have often noticed Teal overhaul and forge ahead of Mallards in full flight without apparent effort.

AMERICAN BLUE-WINGED TEAL.

Querquedula discors (Linné).

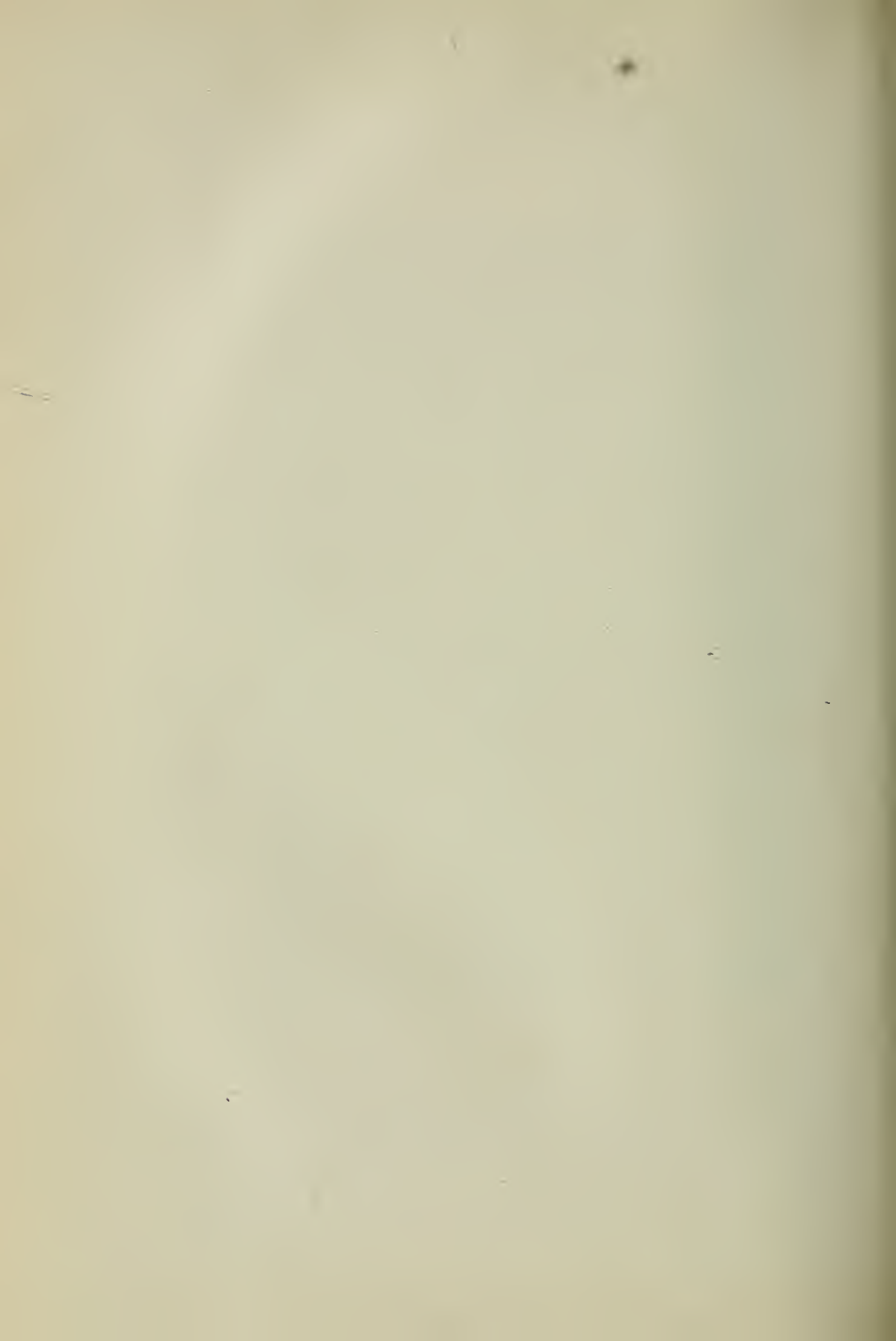
Once recorded.

There is, in the possession of Mr. C. T. Kemp of Burton, a female Blue-winged Teal, which was shot by his father, the late James Kemp, on the Dee Estuary about fifty years



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A FOREST POOL, DELAMERE.



ago. The bird was identified by Dr. W. H. Dobie,* who points out that "the blue is quite a different colour from the blue-grey on the wing of the Garganey, and the alar speculum is shot with green." This American species is not likely to have been kept in captivity in the middle of the last century, and there is every reason to suppose that the Burton bird was an accidental visitor from the American continent.

GARGANEY. *Querquedula circia* (Linné).

A rare visitor in autumn to the Dee Estuary.

The late James Kemp shot a Garganey drake, which is now in the possession of his son, Mr. C. T. Kemp, in or about the sixties, in the Dee Estuary near Burton. This is possibly the bird referred to by Brockholes as having been shot in the Dee Estuary. Mr. R. H. R. Brocklebank has seen another, in a farm house at Burton, which was killed on the river. About August 8th, 1899, Mr. Francis Congreve shot a Garganey on the marsh near Burton.† Messrs. L. N. Brooke and J. A. Dockray have never obtained the bird in the estuary, but in November, 1898, Mr. Brooke saw about twenty small ducks together, which he is certain were not Teal, and though he was not able to identify them with certainty is of opinion that they were Garganeys.

WIGEON. *Mareca penelope* (Linné).

A winter resident and bird of passage in the estuaries and on inland waters.

During the winter months great numbers of Wigeon frequent the estuaries, and although the bird is less common inland it frequently visits the meres, and even the Longdendale

* *Chester Society of Nat. Science and Lit.*, Report 1899-1900, p. 24.

† Dobie, *op. cit.*, p. 23.

Reservoirs, over thirty miles from the nearest salt water, in spring, autumn and winter.

The first Wigeon usually reach the estuaries in September, and during the winter the numbers are frequently augmented by fresh arrivals. The birds remain on the river and marshes until the middle of March, and exceptionally until early in April. Mr. J. A. Dockray is of opinion that the Wigeon which arrive in the Dee in September and October are on passage, and that the winter residents come later. Inland, small parties visit the meres at nearly all seasons—indeed the bird is practically a winter resident on the meres, although individuals do not as a rule remain for many days on any particular water.

Mr. A. B. Stock saw six Wigeon on a small pool on Little Budworth Common on August 7th, 1908, but we have not, personally, seen the bird in July or August. Towards the end of September birds are to be met with occasionally; on September 30th, 1905, we saw between thirty and forty at Tatton. From October until early in April, single birds, pairs, or small parties of four to six Wigeon often visit the larger waters, and occasionally small pools such as those in Delamere Forest. The numbers are seldom considerable in winter, but on December 11th, 1908, Coward saw between fifty and sixty birds on Rostherne Mere. The males, some of them in beautiful plumage, were constantly whistling. Throughout the winter of 1908-09 the numbers of Wigeon on Rostherne, Tatton and Marbury Meres were above the average. At the end of April we have seen single males on Oakmere, and in 1900 there was a drake on Redes Mere from May 30th to June 8th.

Brockholes says: "I have known two instances of the Wigeon nesting and rearing young at Puddington," and "on July 20th, 1863, I shot a Wigeon at Puddington close to where some young ones were reared in the spring." He informed the late A. G. More of this fact, and added that he had killed a Wigeon at the same place in August, 1862.*

* More, *Ibis*, 1865, p. 444.

Although it was assumed by More that these birds were wild, in the absence of further details it seems probable that they were pinioned birds or had escaped from confinement. At any rate, since that date the Wigeon has not been known to nest in Cheshire.

Mr. Dockray has found the crops of Wigeon, shot early in autumn on the Dee, to be crammed with blackberries which the birds had gathered from the bushes surrounding the neighbouring ponds.

Saunders says* that the Wigeon rises in silence, but on November 15th, 1907, Coward put up a couple of ducks, which repeated a harsh *kraak* as they rose. At dusk on March 8th, 1904, Oldham saw nine birds arrive at Booths Mere, Knutsford; they circled round the pool for several minutes before alighting, and, both when they were on the wing and after they had settled on the water, he heard in addition to the long *whee-you* of the drakes a low, querulous chuckling note, which reminded him of the hunger cry of the young Great Crested Grebe.

POCHARD. *Fuligula ferina* (Linné).

Local names—RED-NECK; RED-HEADED WIGEON.

An abundant winter resident on the meres; less plentiful on the tidal waters.

Apparently the Pochard has increased as a winter resident during the last twenty years. It is essentially a freshwater duck and only occasionally occurs in the estuaries; Messrs. L. N. Brooke and J. A. Dockray see small parties in winter, but as a rule only when the inland waters are frozen. Byerley, who remarks upon its rarity, says it has been shot on flooded meadows at Hoylake, and Brockholes mentions one example, a male shot in the winter of 1869-70 on a pond at Ness.

* *Manual of British Birds*, p. 438.

The late Lord de Tabley refers to a single example, shot at Pickmere in 1862, but as he mentions a local name—"Red-neck"—it is probable that the bird was recognised by gamekeepers and others; nowadays the keepers, as a rule, fail to identify the Pochard, and usually refer to it as the "Wigeon." A few specimens are preserved in different parts of the county in farmhouses and cottages, indicating that the bird has always been present in winter, but if twenty years ago it was as plentiful as it is today, it is extraordinary that no local naturalist should have mentioned the fact.

Throughout the winter Pochards, usually associated with Tufted Ducks, frequent the inland waters in considerable numbers. Small parties occasionally arrive in August or September, but often the bird is not seen until October, and the numbers are seldom considerable until November. Mr. F. S. Graves saw a single young Pochard on Redes Mere on July 19th, 1906; on August 5th, 1905, there were three adults and one young bird on Marbury Mere near Northwich, and on August 17th, 1908, four adult birds on Rostherne. Probably some of these early birds and others which are observed in February and March are on passage through the county; at the seasons of migration the numbers on the waters fluctuate considerably from day to day. Occasionally mixed flocks of two or three hundred Pochards and Tufted Ducks frequent the larger waters—Rostherne, Redes Mere, Tatton and Marbury—for many weeks between November and February, but the largest numbers may be seen on Rostherne Mere when the smaller and shallower waters are ice-bound. During hard frosts in January, 1903, and December, 1906, there were many hundreds on this water.

The majority of the birds leave in March, but in most years a few remain until the first or second week or even the end of April, and in 1908 Mr. A. W. Boyd saw a couple on Tatton Mere on May 13th. Many of the Pochards which appear on the meres in March are birds of passage; in the winter of 1903-04 very few were noticed until the beginning

of March, but in the first half of that month they were plentiful on various waters. Again, in 1906 there were no Pochards on Tatton Mere on February 3rd, but about fifty on the 4th, on the 10th about forty, and on the 11th about one hundred, but on March 3rd there were two hundred and twenty-eight restless birds, which kept rising and flying up and down the mere; the flock at last rose to a considerable height, formed into a long unstable V, and flew off in an easterly direction. On the next day there were no Pochards on the water.

As a rule the diving ducks, both Pochard and Tufted, are not easily put up; they will draw off into the middle of the mere rather than take flight; this is especially the case when the birds first appear in autumn.

The Pochard occurs occasionally on the reservoirs amongst the hills; it has been noticed at Bosley, Whaley Bridge, and on Hollingworth Reservoir, Longdendale, where two were seen on March 17th, 1907, by Mr. F. Stubbs. During the frost in January, 1907, a Pochard was shot on the Bollin near Bowdon, but as a rule all the birds leave if the meres are frozen.

TUFTED DUCK. *Fuligula fuligula* (Linné).

A common winter resident and bird of passage on the meres; within the last few years has nested in the county.

Prior to the passing of the Wild Birds Protection Act of 1880 the Tufted Duck was, apparently, rare in Cheshire. Byerley mentions no Cheshire locality, and Brockholes only knew the bird as occurring occasionally on the Dee. The late Nicholas Cooke shot one on the Mersey near Warrington on December 13th, 1844, and two on November 22nd, 1846.*

* These dates are taken from Mr. Cooke's MS. note-book in the possession of his son, Mr. Isaac Cooke of Liscard, and no doubt these are the three birds referred to by the Editors of the *Naturalists' Scrap Book* as having been obtained on the Mersey near Warrington.

Lord de Tabley refers to Oulton as a locality, but does not state if the bird occurred there regularly.

On January 15th, 1876, Colonel George Dixon shot three Tufted Ducks on the pool in Astle Park, the first he had ever seen in the county,* but a few years later the birds came regularly every winter to the water. Since that date the Tufted Duck has been steadily increasing in numbers and almost yearly extending the time of its stay, but for many years it remained unrecognised by the majority of gamekeepers and others who frequent the meres, being vaguely classed with the Pochard as "Wigeon."

The numbers of the Tufted Duck vary considerably in different years, and it is probable that many of those which are noticed in spring and autumn are on passage; at any rate, it is not often that large flocks—fifty to two hundred birds—appear before December, and sometimes the largest flocks are of birds returning north in March. As a rule, however, there are Tufted Ducks in varying numbers—from one or two to thirty or forty birds—on most of the meres and pools from August to May, and during the last few years there have been birds on some waters in every month in the year.

Prior to 1900 we had never seen the Tufted Duck between March and October, but on June 6th of that year there was a drake on Marbury near Northwich, and on May 5th, 1901, a pair of birds on Rostherne. In 1902 two pairs or more were constantly on Booths Mere, Knutsford, throughout April, and a pair were on Oulton Pool on May 27th; in 1903 five drakes remained together on Rostherne until May 5th; and in 1904 a pair was on a pool in Delamere Forest on May 4th, and at the end of August and beginning of September there were a few birds—mostly drakes—on Marbury; in this year there were more Tufted Ducks in October and November than is usually the case. In 1905 there were birds—pairs on Marbury, Redes Mere and Oulton Pool—in May, June, July, August and September, and in

* *Field*, XLVII., 1876, p. 84.

1906 and 1907 a few were seen during the summer ; but, as in former years, the birds were not always visible on the waters and there was no evidence that any had actually nested.

In 1908, again, a few birds remained throughout the summer ; they were noticed from time to time on Marbury, Rostherne and Redes Mere, and on the last named water, on July 5th, Mr. F. S. Graves saw a duck accompanied by three half-grown young in down. On the 13th of that month Coward watched these young birds feeding ; they remained beneath the surface for from eleven to fourteen seconds, as long, indeed, as did the adult duck. The bills of the young were bluish, but darker than that of the old bird ; their bellies were white, the upper parts and breasts sooty brown, and the flanks lavender. The duck was constantly on the alert, and swam with her neck straight and head elevated, in striking contrast with the usual pose of the bird. A few birds remained on Rostherne ; on July 12th there were eight, and on the 15th, ten, seven of them being drakes. On August 17th the numbers were increased by five young birds, but as these were in full feather and could fly well, it is possible that they had arrived from elsewhere ; at the end of the month, or early in September, two flappers of a later brood were obtained on the mere. We saw young birds again in 1909 on both Rostherne Mere and Redes Mere. Although there is no proof that the Tufted Duck nested in Cheshire prior to 1908, there is presumptive evidence that some of the pairs seen on various waters in June, July and August bred in the county.

The largest flocks of Tufted Ducks are to be seen on Rostherne Mere ; when this water is open and the other meres are frozen, they seek it with Mallards, Teal and Pochards. The majority of the winter residents leave in March, but small parties remain throughout April.

The bird is distinctly a freshwater duck, and is never abundant in the estuaries. In the west of the county it is not so plentiful as in mid-Cheshire, but birds have been

obtained in winter at Hatton, Eaton,* Appleton and elsewhere. It occasionally visits Longdendale; Mr. F. Stubbs has observed it in November and December on Torside and Arnfield Reservoirs.

The Tufted Duck, like its constant companion the Pochard, is reluctant to leave the water when disturbed; the Mallards and Teal rise immediately a man approaches if they are swimming near the edge of the mere, but the diving ducks draw out towards the centre and are with difficulty induced to get on the wing. The birds feed during the day, diving at the edge of the lily beds or in shallow weedy water. They spend the night on the meres and pools, but frequently there are no diving ducks to be seen until dusk, when parties come in from a distance and shoot down obliquely to the water with rigid half-closed wings; their rapid descent is accompanied by a loud rushing noise as the air whistles through their pinions.

SCAUP. *Fuligula marila* (Linné).

A winter resident in the estuaries; rarely met with inland.

The Scaup, more maritime in habits than the other diving ducks which visit Cheshire, occurs in small numbers in winter in Liverpool Bay and the estuaries. As a rule it does not come far up the Dee, but is frequently met with about Mostyn and Hilbre and on the banks at the mouth of the Mersey; it is especially numerous in March. Messrs. L. N. Brooke and J. A. Dockray have, however, occasionally met with Scaup as far up the Dee as the Burton Cop. There is a specimen from the Dee, shot on November 14th, 1888, in the Grosvenor Museum, Chester, and we have seen birds which have been obtained in the same locality in October, November and February. On March 2nd, 1907, Coward

* Dobie, p. 325.

saw a female or young bird, in company with an immature Goldeneye, fishing in the Marine Lake at West Kirby. The Scaup reaches the Dee as rule in October, but the late H. Durnford, commenting on the early appearance of the bird in the autumn of 1872, stated that he saw fifteen or twenty birds at the mouth of the Mersey on September 21st.*

Lord de Tabley mentions two birds inland—one at Oulton, and another, a male, killed at Higher Peover prior to 1867.† In the Warrington Museum there is a bird that was obtained on Walton Reservoir.

For about a week in January, 1901, a drake Scaup consorted with some Tufted Ducks on Marbury Mere near Northwich; Coward saw it on the 9th, and at close quarters on the 16th.‡ On January 17th, 1905, there was a female or young male with some Tufted Ducks and Pochards on Tatton Mere; the white mask at the base of the bill was conspicuous even when the bird was at a considerable distance from the bank.

GOLDENEYE. *Clangula clangula* (Linné).

A bird of double passage on the meres and estuaries; a few remain through the winter.

The Goldeneye occurs frequently on Cheshire waters at the periods of migration, and birds are also met with occasionally during the winter months. Brockholes described it as sometimes common in the estuary of the Dee, and Byerley remarks that this is especially the case in severe weather. Young birds were formerly abundant on the Mersey above Dingle Point,§ and Mr. R. Newstead says that they are frequently met with in the neighbourhood of Ince.|| As

* *Zoologist*, 1872, p. 3339.

† *MS. note-book*.

‡ T. A. C., *Naturalist*, 1901, p. 124.

§ *Naturalists' Scrap Book*, p. 228.

|| Dobie, p. 325.

a rule, however, the Goldeneye is not plentiful in the estuaries ; Mr. J. A. Dockray says that the majority he has seen or shot have been immature birds. Adult drakes are seldom seen on the inland waters. Coward has seen the bird in March on the Marine Lake at West Kirby.

The spring migration of the Goldeneye is noticeable on the meres ; we have seen birds on different waters between March 5th and April 14th. From the end of October until the beginning of December the birds are moving south, but throughout the latter month and in January and February, odd birds and sometimes parties of half a dozen may be met with on the meres. On December 4th, 1909, Mr. T. Hadfield saw seventeen on Tatton Mere, but so large a party is exceptional. These passing Goldeneyes show a distinct predilection for certain waters ; Oakmere is a favourite resort, Marbury near Northwich and Tatton are often visited, but other meres less frequently.

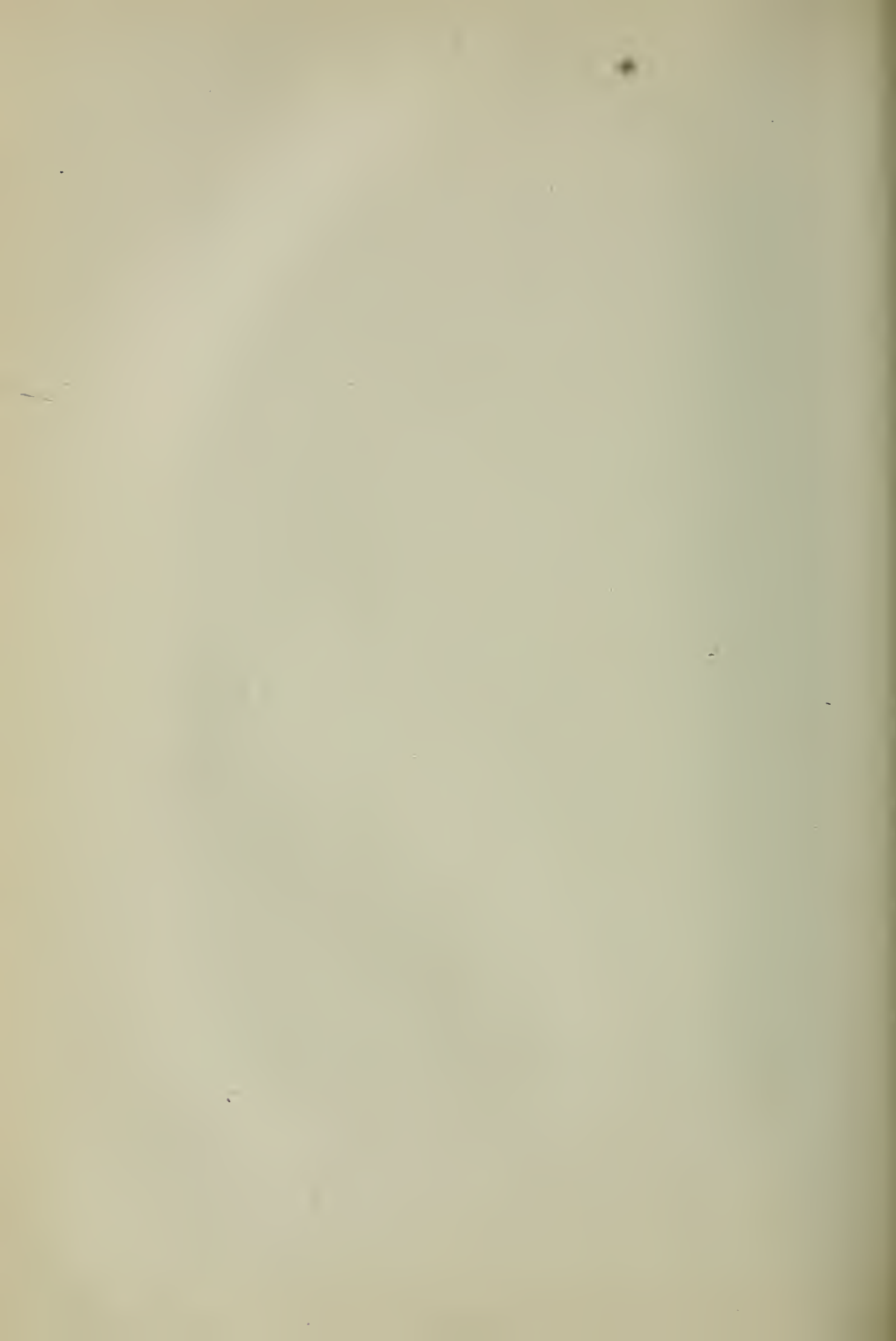
A Goldeneye in the Grosvenor Museum, Chester, was shot on the Dee at Eaton on December 4th, 1889, and a female in the same collection was killed at Oakmere in December, 1893. One in the Warrington Museum was obtained at Walton Reservoir. We have seen a female which was shot on the flooded meadows of the Mersey at Sale in February, 1897, where an adult male was killed four years previously. On October 31st, 1897, Oldham saw a party of three birds on Bosley Reservoir.

In the spring of 1905 a drake Goldeneye was shot in the wing at Marbury near Northwich, and though the wound healed the bird was not able to fly. In April its cheek-spot was not very prominent ; it appeared to be a nearly adult male. Early in June it was passing into eclipse ; its beak was then brown, its white flanks dusky, and the white on its back was gradually being obscured. By the second week in July its head was quite brown and the cheek-spot had entirely disappeared, but the white on the neck, though broken with grey, was still visible, and the white on the wing pronounced. The back, even in August, was never



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brown as in a female or immature male, but was greyish, suggesting the back of a Pochard. At the end of August it was still in eclipse, but in the second week of September its head was decidedly black though no cheek-spot had appeared; one wing was whiter than the other, possibly owing to the wound. Unfortunately the bird was shot in the autumn before it had regained its full plumage. An immature brown-headed Goldeneye was similarly wounded in the spring of 1908, its right bastard-wing being shot away; it remained on the water through the summer, but was probably killed when duck-shooting began, as we did not see it after the end of July.

The Goldeneye does not as a rule associate with the other diving ducks on the meres; it swims and feeds alone. It is much shyer than either the Pochard or Tufted Duck, and takes wing at once if alarmed. It is an even more expert diver than either of those birds, and often remains below the surface for twenty-four seconds at least. The dives follow one another in rapid succession, and when the bird is on the feed it is more beneath the water than on the surface. The immature Goldeneye is easily recognised in flight by the amount of white which shows on the wings, and on the water by its "buffel-headed" appearance; the pied old drake is unmistakable.

The stomach of a young drake, shot on the Dee Marsh on January 19th, 1894, contained over one hundred and fifty water beetles, *Helophorus aquaticus* (Linné), and one *Dytiscus punctulatus*, Fabricius.*

LONG-TAILED DUCK. *Harelda glacialis* (Linné).

A rare autumn and winter visitor to the Dee Estuary.

The Long-tailed Duck is seldom met with on the west coast of England, but occasionally immature birds have been

* R. Newstead, *Food of Birds*, p. 76.

obtained in autumn and winter in the estuary of the Dee. Brockholes records it from the Dee, and there are specimens in the Grosvenor Museum, Chester, which were obtained at Burton in December, 1839,* and on December 2nd, 1886.† Messrs. L. N. Brooke and J. A. Dockray have shot it on three occasions. They obtained an immature drake on November 21st, 1900, and a young female which was in its company, two days later; one of these birds is in Mr. Brooke's collection, and the other was sent to Sir Ralph Payne-Gallwey. On November 9th, 1901, they killed a bird in the Cop Gutter, opposite Connah's Quay. On October 11th, 1904, Mr. Dockray and Coward punted up to an immature bird at the entrance to Denna Gutter; it was very tame and dived repeatedly close to the nose of the punt, but when within oar's reach took wing.

EIDER DUCK. *Somateria mollissima* (Linné).

A rare wanderer to the coast; has been obtained inland.

The Eider Duck is an accidental wanderer to Cheshire and has only once been observed on the coast. On December 31st, 1905—a bitterly cold day when a south-easterly gale was blowing—Oldham watched a duck or immature drake which was diving in comparatively calm water under the lee of the sea-wall at Leasowe.‡

Inland the Eider Duck has been obtained on three occasions. On December 7th, 1894, an adult female in an exhausted condition was captured by a dog on the Eaton Estate at Newball near Saughton. It was kept alive for two or three days, but refused food and was subsequently presented to the Grosvenor Museum.

In January, 1895, Mr. J. M. St. John Yates was present

* This bird was formerly in the late Captain Congreve's collection.

† Dobie, p. 326.

‡ *Zoologist*, 1906, p. 75.

when an Eider Duck was shot by a gamekeeper in the employ of the late Charles Bailey on the Weaver, two miles above Nantwich; and on November 11th in the same year a female was killed on the Dee at Aldford near Chester.*

COMMON SCOTER. *Oedemia nigra* (Linné).

Local name—BLACK DUCK.

A common winter resident and bird of passage in Liverpool Bay; occasionally ascends the estuaries, and, rarely, occurs inland.

During the winter months the Common Scoter occurs in considerable numbers in the Dee and Mersey Estuaries. Byerley says it is "very abundant about the sandbanks," and Brockholes describes it as "an abundant duck at sea off the north of Wirral," adding that it "occasionally comes to the Leasowe shore, and is sometimes storm-driven to land."

The Scoter arrives in Liverpool Bay as a rule in the latter half of September, but birds are sometimes noted earlier. In 1884 "black ducks" were first seen at the Dee Lightvessel on September 10th, and in 1885, when they were unusually abundant all winter, on August 31st.† As more birds are seen in October and November and in March and April than during the winter months, there is evidently a double passage along the coast, a fact borne out by the observations made at the Dee Lightvessel and other west coast stations. Indeed, in some years at any rate, the return passage of the Scoter is in progress so late as the end of May. "Vancouver," writing to the *Field*, remarks on the immense numbers—"many thousands"—which he noticed late in May, in 1904, off the North-west Lightship in Liverpool Bay.‡

As a rule the Scoter does not ascend the estuaries to any

* R. Newstead, *Food of Birds*, p. 77.

† *Migration of Birds*, Report 6, p. 120; Report 7, p. 124.

‡ *Field*, CIV., 1904, p. 84.

great distance, but Messrs. L. N. Brooke and J. A. Dockray see small parties occasionally in the Dee. Birds not infrequently feed in the Marine Lake at West Kirby; in the winter of 1906-07 the late Dr. J. Hodgson saw "black ducks" on the lake on several occasions, and Mr. C. K. Siddall tells us that he noticed immature Scoters there on several occasions in December and January. The shallow waters near Hilbre Island are their favourite feeding grounds, and birds are often obtained by sportsmen in that locality. Mr. L. Jones has one which was captured alive at Hilbre during the severe frost in February, 1894. Mr. R. Newstead has seen this species off Stanlow Point, but says that it is not very common in the Mersey.*

The Scoter has been noticed occasionally on inland waters. A female was shot at Oakmere in November, 1889,† and an adult male, now in the Grosvenor Museum, Chester, was shot on Tatton Mere in October, 1890; and on April 1st, 1906, Mr. T. Hadfield saw six birds on this water; five were in adult and one in brown plumage.‡ Five of these birds did not remain, but one, an adult drake, was on the water for the next two days; we saw it on the 2nd and 3rd. It fed in the detached pool at the northern end of the mere, a favourite feeding place of diving ducks. When unaware of our presence it swam high in the water, but when alarmed partially submerged its body. Occasionally it uttered a subdued *tuk, tuk*. On September 22nd in the same year there were three Scoters—an adult drake and two young birds with conspicuously greyish-white cheeks—on Marbury Mere near Northwich. Mr. F. Brownsword noticed the first Scoters of that autumn in Colwyn Bay on the previous day.

Mr. F. Stubbs has seen an adult bird that had been shot at Swineshaw in East Cheshire.§

* Dobie, p. 326.

† R. Newstead, *Food of Birds*, p. 77.

‡ C. O., *Zoologist*, 1906, p. 277.

§ F. Stubbs, p. 36.

We have seen specimens of the Velvet Scoter, *Oedemia fusca* (Linné), which had been shot at Formby, and Saunders says that a pair or two are found in company with nearly every flock of Common Scoters near Southport.* The bird has also been observed to the west of Cheshire waters; Mr. R. W. Jones tells us that he saw four females or immature birds in Llandudno Bay on November 30th, 1909. It is almost certain that it occurs on the Cheshire coast, where a little vigilance on the part of local ornithologists would probably result in the addition of the Velvet Scoter to the county fauna. Messrs. Brooke and Dockray, however, have never seen the bird amongst the Common Scoters in the Dee.

GOOSANDER. *Mergus merganser*, Linné.

A not uncommon winter visitor to inland waters; rare in the estuaries.

The Goosander is not often met with on the tidal waters, but inland it is by no means rare. Byerley says: "In severe weather occasionally," and Brockholes, that it "occasionally occurs on the Estuary of the Dee and on the Dee Marshes." Mr. J. A. Dockray has neither seen nor heard of a Goosander in the Estuary of the Dee, and it is possible that the statements of Byerley and Brockholes were founded on incorrectly identified birds, for the Red-breasted Merganser is not uncommon in the Dee and Mersey. A Goosander was shot, however, by the late Nicholas Cooke on the Mersey near Warrington on January 1st, 1845,† and there is one in the Grosvenor Museum, Chester, that was shot by Mr. T. H. Hignett out of a party of four birds on the Dee Cut, half a mile below Saltney Ferry, on January 9th, 1894.‡ A bird which was killed

* *Manual of British Birds*, p. 467.

† N. Cooke, *MS. note-book*.

‡ Dobie, p. 326.

in the estuary on January 6th, 1890, was examined by Mr. R. Newstead.*

Inland, the Goosander has occurred occasionally during the winter months, and in some years birds have remained on the meres for several weeks. In the first half of the last century, one, in the possession of Mr. J. E. Newton of Denfield Hall, was killed at Rostherne, and the late R. Nunnerley had one from the pool at North Rode. The late Lord de Tabley states that four were seen on Pickmere in 1864, one of which was shot. In 1886 a couple were killed on Marbury Mere near Northwich by the late David Hindley. There is a bird from Eaton near Chester, shot on December 4th, 1889, in the Grosvenor Museum.†

It is possible that the visits of the Goosander have been more frequent than these few occurrences suggest, for from December, 1902, to March, 1907, there were birds each winter on the mid-Cheshire meres. On December 14th, 1902, there was an adult drake on Tatton Mere, and three days later we saw that it was accompanied by a female; on the 27th there were two drakes and three brown-headed birds on Tatton, and on the same day two on Rostherne. As the birds moved from mere to mere, it was not easy to estimate the actual numbers in the district, but at least five birds frequented Tatton, except during a short interval when the mere was ice-bound, until January 24th, 1903, when the number was raised to eight at least, for though we did not on that day see the two green-headed drakes, there were six brown-headed birds on the water. The oldest drake—the bird seen on December 14th—was not seen after the frost in early January, but until March 1st we often saw seven or fewer birds on Tatton. We did not see any after that date on Tatton Mere, but on March 21st there was a green-headed drake and a brown-headed bird on Tabley Lake. One brown-headed bird, shot on Rostherne during the winter, is preserved in a farmhouse at Hoo Green.

* *Food of Birds*, p. 78.

† Dobie, p. 326.

In the winter of 1903-04 we first saw two birds, both drakes, on Booths Mere on December 13th. On January 2nd two drakes and a duck were on Tatton, and these three birds remained in the district until the 10th. A single brown-headed bird was on Redes Mere on the 17th. Three Goosanders, adult and immature drakes and a duck, were on Tatton Mere on January 14th, 1905, and three days later there were five birds—two of them adult drakes—on the water, but we did not see them after the 17th. In the following winter no Goosanders appeared until January; on the 6th a single old drake, and on the 27th an old drake and five brown-headed birds were on Tatton. This party remained in its entirety until February 10th, but on the 17th the old drake had disappeared; there were two birds on Tatton on March 17th, the latest date on which we saw them. In the winter of 1906-07 we noticed Goosanders first on December 9th, when there were four brown-headed birds on Tatton. On January 12th there were seven, all brown-headed birds, but early in February the mere was ice-bound, and on the 3rd three old drakes were standing on the ice on the mere at Rostherne at the edge of a small patch of open water which was crowded with frozen-out fowl from other meres. From the latter end of February until the 17th of March there was a single brown-headed bird on Tatton Mere. During the winter of 1907-08 we neither saw nor heard of any Goosanders on the meres, but on January 1st and 9th, 1909, there were two—one an adult drake—on Tatton Mere.

The Goosander sits low in the water and swims with great rapidity; when consorting with Mallards it is remarkable how rapidly it forges ahead when swimming alongside them. It dives frequently, and remains below the surface for intervals varying from ten seconds to a minute and a half; the longest dives we have timed were one hundred and ten seconds in duration. It does not rise cleanly from the water, but patters along the surface like a Coot or Moorhen; once on the wing, it flies with great speed, its cigar-shaped body

being equally adapted for rapid progression through either air or water. When alarmed it will sink its body until its back is awash and little but its head and neck shows above the surface. On the water Goosanders are usually silent, but on one occasion a bird uttered a harsh *karr*, the only note we ever heard.

RED-BREASTED MERGANSER.

Mergus serrator, Linné.

A not uncommon winter visitor to the estuaries ; rare inland.

The Red-breasted Merganser occurs in small parties in winter in the estuary of the Dee, where Mr. J. A. Dockray considers that it is fairly common at times. There is a brown-headed bird in the possession of Mr. C. T. Kemp at Burton, which was shot by his father, James Kemp, many years ago, and a male and female in the Grosvenor Museum, Chester, which were obtained at Burton in 1885. Brockholes does not seem to have observed the bird, and Byerley's remark : "Taken rarely in severe winters," is vague. On November 4th, 1907, Mr. Dockray obtained three out of a party of five birds in the Dee Estuary, and three were killed on the Dee on December 22nd, 1908. A female was killed at Eaton on December 5th, 1889 ; in its stomach were five small Roach and two Gudgeon.*

Mr. W. I. Beaumont informs us that in December, 1893, on the 11th and again on the 14th of the month, he watched an adult male Red-breasted Merganser on Tatton Mere, at sufficiently close quarters to enable him to make out the details of its plumage. A female frequented the same water for about a fortnight in November, 1903. Oldham saw the bird first on the 1st, and we watched it on several occasions between that date and the 14th. It

* R. Newstead, *Food of Birds*, p. 78.

spent much of its time in the company of some Great Crested Grebes, but never associated with the flocks of Mallards as the Goosanders that frequent the mere generally do.*

SMEW. *Mergus albellus*, Linné.

A rare winter visitor to the coast and inland waters.

In severe winters the Smew has been occasionally observed upon the Cheshire coast. Byerley mentions the occurrence of two examples in the Mersey; one shot at Weston in January, 1854, and another taken at Tranmere. In January, 1861, birds obtained on the Dee near Chester were sent to Shaw of Shrewsbury for preservation.† The late Captain Congreve had in his collection a bird which was shot at Burton on January 22nd, 1838.‡

In 1891 several Smews frequented the tidal waters of the Dee. Mr. R. Newstead supplied Dr. Dobie with the following notes: "During the severe weather of January 1891, seven . . . were seen on several occasions . . . in the neighbourhood of Saltney Ferry. Three of them, two males and a female, were shot by Mr. T. H. Hignett on the 14th, and were presented to the Museum." "On the 18th I was fortunate in seeing two males swimming near the Chester side of the river, a little below the Saltney Ferry. The birds saw me immediately I approached the river bank, and got as near the opposite side as they thought safe, and there remained for twenty minutes." "Both birds were in adult plumage; but from the size of its crest, and cautious manners, one was evidently an old bird; this fellow acted as sentinel while the other continually dived. Eventually

* C. O., *Zoologist*, 1903, pp. 459, 460.

† H. Shaw, *Zoologist*, 1861, p. 7388.

‡ Dobie, p. 327.

the birds took wing, apparently rising with little difficulty ; at first they flew towards the city, but gradually wheeled round towards me, flying straight down the centre of the river. When swimming the neck is much arched, and the bill scarcely extends beyond the breast. During the whole of the time that I watched them the crest was carried semi-erect, and at all times the beautiful greenish-black feathers were conspicuous. The black wing-feathers were hidden by the marginal breast-feathers, which gave the birds a much whiter appearance than I anticipated. The birds uttered no note as they rose from the water ; their flight, too, was very silent. They had evidently resorted to our river for the sake of the Flukes (*Platessa flesus*, Fleming) which abound, as I found ten of these fish and a Salmon fry in the gullet of a male which was shot by Mr. Hignett."

In the severe weather of February, 1895, several Smews were observed in the Mersey Estuary near Ince. An adult male, now in the possession of Mr. R. Newstead, Senr., was obtained on the 2nd of the month.

In the collection at Tabley House there is a young bird, labelled : "Tatton, shot with another in hard frost, January, 1867."

A young male was shot on Marbury Mere near Whitchurch on January 27th, 1905, and on March 5th in the same year Mr. T. Hadfield and Oldham saw a brown-headed bird swimming with some diving ducks on Oulton Pool. When disturbed, it rose with two Goldeneyes and made off with them in the direction of Cotebrook Mill-pond, where they saw it later. The bird, an immature female, swam low in the water, travelling with great speed on the surface and frequently dived.* In flight, which was very rapid, the broad lozenge-shaped white wing-spot was very conspicuous. On January 13th, 1907, we saw a brown-headed Smew on Tatton Mere.†

During the winter of 1908-09 Smews were recorded

* C. O., *Zoologist*, 1905, pp. 143, 144.

† *Id.*, *Zoologist*, 1907, p. 71.

from several inland localities in England and Wales, and apparently one bird remained for many weeks on the meres in the neighbourhood of Knutsford. It was first seen by Mr. A. W. Boyd and Coward on Tatton Mere on January 23rd, 1909, and on the 25th of that month, Tatton being then frozen, it had moved to Rostherne Mere. Coward saw a Smew in similar plumage on Tatton on February 24th, and Mr. T. Hadfield saw one, presumably the same bird, on March 13th. It was a brown-headed bird—a female or young male. When the bird was on the water, unsuspecting of danger, its neck was arched, but when nervous it raised its head and straightened its neck, at the same time sinking its body lower in the water; at other times it swam with more of the body exposed than is the habit of the Goosander. It rose frequently, being exceedingly shy, and flew with great rapidity, but after long flights at a considerable elevation returned to the mere, always dropping in patches of open water, and never, like Mallards or Teal, alighting on the ice. It was never heard to utter a sound.

COLUMBAE

COLUMBIDAE.

RING DOVE. *Columba palumbus*, Linné.

Local names—WOOD PIGEON; QUEEZE; CUSHAT; COWSHAT.

An abundant permanent resident: large numbers of immigrant birds usually arrive in autumn and remain through the winter.

Throughout the whole of Cheshire the Ring Dove is a well known resident, and is said to have increased in numbers within the last fifty years. Naturally, it is most abundant in the woodlands of Wirral and the plain, but large numbers breed in the plantations and fir woods on the hills in the

east. In autumn flocks of migratory birds visit the county, but the numbers vary in different years, as they do in other parts of England. In the winter of 1893-94, which is memorable for an exceptional invasion of the species, hordes of Ring Doves were to be seen in Cheshire; in December, 1893, we saw great numbers in the neighbourhood of Northenden and Baguley, and Mr. R. Newstead and the late Rev. C. Wolley-Dod, who observed a similar influx of migrants at Eaton near Chester and Edge near Malpas, both commented upon the unusual abundance of acorns in that season.* In the winter of 1904-05 the Ring Dove was very abundant in Cheshire; the flocks which nightly roosted in a covert near Rostherne in January, 1905, contained several thousand birds. Again, in the winter of 1908-09, when the acorn crop was exceptionally heavy, the numbers of Ring Doves were above the average, but the flocks at Rostherne, though large, were considerably smaller than in 1904-05.

The male Ring Dove usually begins to call early in March, and it frequently coos again in autumn and on warm days in winter; in autumn, too, the upward flight followed by a descent towards the tree-tops on motionless expanded wings, usually associated with the pairing season, may occasionally be noticed.

The Ring Dove, a voracious feeder, does considerable damage to crops when present in large numbers. We have seen birds that had been shot, whose crops, distended with turnip-tops and Brussels sprouts, had burst through the impact of the fall. Some idea of the amount of food consumed by this species may be conveyed by the fact that at Ashton Hayes sixty-nine acorns of medium size were taken from the crop of a single bird.† The market gardener may well regard the Ring Dove with disfavour; we have seen birds shot in July on the extensive strawberry fields in North Cheshire, whose crops were crammed with the ripe juicy fruit. Mr. J. J. Cash has noticed that these birds

* Dobie, p. 327.

† *Id.*, p. 328.

are partial to the young leaves of the ash, upon which he has observed them feeding in the tops of the trees on several occasions in spring, and the fresh young leaves of the beech are eaten extensively in April and May ; we have seen large flocks feeding on the beeches at Alderley Edge and Peckforton at the end of April. In winter the bird eats haws ; the crop of one picked up in Tatton Park was full of the fruit, which had been swallowed whole.

Apart from the necessity of keeping down the numbers of this destructive bird, the Ring Dove is much sought after on account of its value as an article of food. The absence of fear, born of security, exhibited by the fat, well-favoured birds in the London parks, contrasts strongly with the wariness which is such a marked characteristic of this species in an agricultural county. In winters when the birds are numerous, the farmer builds a screen of boughs round a tree trunk close to some favourite feeding ground. From this shelter he is able to shoot the birds, which it would be almost impossible to approach in the open.

STOCK DOVE. *Columba oenas*, Linné.

Local names—BLUE ROCK ; SAND PIGEON ; HILL PIGEON.

A not very abundant resident ; occurs in all parts of the county.

The growth of West Kirby, Hoylake and New Brighton, and the conversion of sand-dunes into golf-links, have destroyed many of the stations on the Wirral coast where the Stock Dove was at one time a common resident. It still, however, nests in rabbit-burrows, holes in the marl cliffs, and the sandstone rocks at Burton Point. Brockholes says that on Caldy Hill the bird sometimes nested beneath gorse bushes as well as in rabbit-burrows, and H. E. Smith, who speaks of its former abundance at Hoylake and Meols as well as along the Dee shore, says that at Caldy it was called the

"Hill Pigeon," but at Meols was known as the "Sand Pigeon." It is sparingly met with, nesting in trees, in other parts of Wirral and throughout the plain, being locally plentiful in parks, where it nests in hollows in the trees or in the dense growth of twigs so often found on the trunks of old limes. A few pairs nest in the rocks in Longdendale, where Mr. F. Stubbs found eggs near Crowden in 1899,* and on the hills east of Macclesfield, but it is nowhere abundant in the hill-country.

Apparently the numbers of the resident birds are increased in winter by immigrants, for Mr. S. G. Cummings has on many occasions seen considerable flocks, often associated with Ring Doves, feeding in the Sealand fields. He saw between one hundred and one hundred and fifty opposite Sandycroft on November 7th, 1903, and noticed flocks so late as April 30th in 1905.

The alleged occurrence of the Rock Dove, *Columba livia*, Bonnaterra, in Cheshire is undoubtedly erroneous. It must be borne in mind that the name "Rock Dove" is often applied to *Columba oenas*, and that the Cheshire coast is utterly unsuited to the habits of *C. livia*. There can be little doubt that the birds which nested in a rabbit-hole on Middle Hilbre, and were recorded as Rock Doves by H. E. Smith, were really Stock Doves, as were the birds which "frequented the high portions of the river bank between Eastham Ferry and Hooton,"† unless they were feral dovecot Pigeons.

TURTLE DOVE. *Turtur turtur* (Linné).

A common summer resident.

The Turtle Dove, which sixty years ago was hardly known in Cheshire, is steadily increasing in numbers, and is now

* F. Stubbs, p. 37.

† Brockholes, *Liverpool Lit. and Phil. Soc. Proc.*, XV., 1860-61, p. 26.

a common summer visitor to most parts of Wirral and the lowlands, and in many places is even plentiful.

The earliest record of this species relates to a bird that was shot at Bidston-cum-Ford in 1851.* In the summer of 1863 a pair was observed near the beach at New Brighton.† Two years later a pair took up its quarters in Arley Park near Northwich,‡ and an inquiry whether the species had ever been observed in Cheshire elicited several replies. The late Rev. W. D. Fox stated that four or five years previously a pair was seen about the Old Pale Farm in Delamere Forest, one of which was shot, and that later in the season another was killed in Oulton Park.§ The late John Price reported the presence of Turtle Doves at Kinnerton near Chester, and said that he had frequently seen them between Birkenhead and Chester||; Brockholes also stated that a few pairs visited Puddington, Burton and Ness every year,¶ and in his Wirral list, published nine years later, he describes the bird as a common summer visitor.** Dr. Dobie remarks upon the increase of the bird in recent years in the Chester district, and the late Rev. C. Wolley-Dod, writing in 1893, said that at Edge near Malpas it had become common during the previous twenty years.††

The bird was apparently plentiful in south Cheshire some years before it became so in the north of the county; in the early nineties we found it common in the neighbourhood of Bar Mere and Quoisley Mere, and saw eggs which had been taken at Shavington-cum-Gresty, but it was not until 1893 that we first heard of it nesting near Bowdon. In that year three birds were killed at Ashton-on-Mersey, one

* Byerley, p. 17.

† H. E. Smith, p. 239.

‡ J. H. Donald, *Field*, XXVI., 1865, p. 43.

§ *Field*, XXVI., 1865, p. 69.

|| *Field*, XXVI., 1865, p. 254.

¶ *Field*, XXVI., 1865, p. 69.

** Brockholes, p. 10.

†† Dobie, p. 329.

at Timperley and one in Dunham Park, where a pair nested in the Headsman's Covert. At Alderley Edge, however, Dr. H. H. Corbett found a nest in 1870.

Since 1893, and probably in many places before that date, the bird has nested in all parts of the county, and almost yearly in greater numbers; in August, 1908, we saw a dozen or more in one covert near Rostherne feeding on corn thrown down for the Pheasants.

The arrival of the Turtle Dove is usually announced by its purring notes during the first or second week of May, but, exceptionally, it comes at the end of April; on the 21st of that month in 1909, Mr. A. G. Hogg saw one in his garden in Dunham Park, and another was seen by Mr. H. Dobie about the same time at Chester. On April 28th, 1905, Mr. S. G. Cummings saw one at Chester, but we did not see any in the east of the county in that spring until May 8th. By the end of August most of the birds have left.

PTEROCLETES

PTEROCLIDAE

PALLAS'S SAND GROUSE.

Syrrhaptes paradoxus (Pallas).

A rare wanderer at irregular intervals.

On three of the occasions—the irruptions of 1863–64, 1888–89, and 1908—when hordes of this Asiatic species travelled westward and overran Europe, a few examples reached Cheshire. The congenial conditions afforded by the Wirral sandhills appear to have attracted the birds, inducing them to linger in that neighbourhood, and only a few were noticed in the central and eastern parts of the county.

On May 29th or 30th, 1863, two Sand Grouse were seen at Hoylake, and on June 2nd a male was shot; it was secured for the Liverpool Museum.* The late C. S. Gregson states, on the authority of John Price, that birds were seen at Upton near Chester.† The Sand Grouse seems to have remained among the Wirral sandhills for some months, for early in November another male was shot near Leasowe Castle.‡ On the 28th of the same month one was killed about four miles east of Warrington,§ possibly the bird which Gregson states was shot near Warrington on Christmas Day.

The late Thomas Comber of Parkgate furnished us with the following particulars of the occurrence of birds in Wirral during the invasion of 1888–89. “A large colony established itself at Storeton on land belonging to Mr. Brocklebank (Sir Thomas Brocklebank), who allowed his keeper to shoot several specimens for friends. Plenty were, however, left to breed, and it was hoped that they would do so, but this was not realised. It was probably an outlying lot of this colony which was watched several times on the few sandhills below Heswall Church. On one occasion a flight of five or six flew over my tennis-court at Parkgate, and we at once spotted them as strangers, but it was not until afterwards that I discovered what they were.” An adult female, in the Liverpool Museum, was shot at Storeton on June 1st, and Mr. G. Sherewood has two others which were captured in the same locality.|| A male, now in the possession of Mr. W. Beaumont of Southport, was shot in 1888 on the hillside between Arnfield Clough and North Britain Farm, near Stalybridge. The bird, which was alone, was shot on the wing.¶

* T. J. Moore, *Naturalists' Scrap Book*, p. 70. Brockholes, p. 10. Newton, *Ibis*, 1864, p. 210.

† H. E. Smith, p. 239.

‡ T. J. Moore, *Zoologist*, 1864, p. 8889.

§ J. Cooper, *Zoologist*, 1864, p. 8958.

|| Dobie, p. 329.

¶ C. O., *Chester Soc. of Nat. Science and Lit.*, Report 33, 1903–04, p. 13.

A couple of birds, probably a pair, were seen on or about the 11th of June, 1908, in a field of roots at Wythenshawe near Northenden by Mr. H. V. MacMaster; the birds called *chack, chack* when they rose, and flew with remarkably strong and rapid flight.*

GALLINAE

TETRAONIDAE.

BLACK GROUSE. *Tetrao tetrix*, Linné.

Formerly a resident in fir woods in various parts of Cheshire, now restricted to the wooded slopes of the eastern hills.

The breeding area of the Black Grouse in Cheshire is now restricted to the wooded cloughs and slopes of the hills to the east of Macclesfield. The bird is reported to have nested at Hollingworth,† but it does not occur on the treeless moorlands of upper Longdendale. A few pairs nest at Lyme and on Bakestonedale Moor, and the bird is fairly plentiful in the woods of the Goyt Valley from Whaley Bridge to Goyt's Moss, in the Dane Valley from Wincle to Bosley, on Bosley Cloud, and in the cloughs between Bosley and Sutton.

The Black Grouse formerly bred on the wooded heaths in the plain, but it is now extinct even in Delamere Forest, where, in the sixties, the late J. C. Stevens used to get four or five brace in a day's shooting‡; there are birds in the Grosvenor Museum, Chester, which he killed in the forest, and in a cottage at Hatchmere there is a Blackcock that was shot locally in the sixties or seventies. In the early part of the last century the Black Grouse was plentiful at Rudheath, where the birds were often shot at roost on

* T. A. C., *British Birds* (Mag.), II., 1908-09, p. 167.

† F. Stubbs, p. 37.

‡ Dobie, p. 329.

moonlight nights or by the light of torches. It was also found at Roe Park, some three miles south of Congleton.*

In 1901 Lord Delamere attempted to re-establish the Black Grouse at Vale Royal; he procured birds and eggs and reared the young in pens, and then released both young and old birds on Newchurch Common and in the woods round Abbot's Moss. The experiment failed owing to the abundance of Foxes, and few birds survived the first season. Mr. B. R. Lucas tells us that four years later the gamekeepers believed that only one cock bird remained in the woods at Vale Royal.

Blackgame have occasionally been obtained in places far removed from their usual haunts. In November or December, 1885, a cock, now in the Grosvenor Museum, Chester, was killed on the Ince Estate, and a Greyhen, in the same collection, was shot on November 21st, 1892, at Boughton near Chester. The late Thomas Worthington told us that a Greyhen was killed at Wythenshawe near Northenden some time in the seventies.

RED GROUSE. *Lagopus scoticus* (Latham).

Local name—MOORGAME (Longdendale).

An abundant resident on the moors in the east of the county. Formerly plentiful on Carrington Moss.

Thousands of acres on the hills in the east of Cheshire are devoted to the preservation of the Red Grouse; on many of the moors large bags are obtained. From the hills of Lyme southward to Bosley Minn and east to the Derbyshire border, the bird abounds wherever the moorlands are uncultivated. In the upper part of the Goyt Valley and elsewhere in Macclesfield Forest, the hillsides for miles are clothed with ling, heather, bilberry and cranberry;

* T. W. Barlow, MS.

cotton-grass flourishes in the marshy spots, and on the highest ridges the cloudberry occurs in patches—furnishing ideal conditions for this species. In the north-east, where the hills along the Yorkshire border attain a height of nearly two thousand feet, the whole country above the rough hill-pastures, from Stalybridge to Woodhead, is one continuous grouse-moor. Although in spring and summer bird life is plentiful, the Red Grouse is the only species that inhabits these moorlands throughout the year; except in the worst weather, it may be met with in the bleakest and most exposed situations. An exceptionally heavy fall of snow or a blizzard sweeping across the tops will, however, cause the birds to seek a temporary refuge in the valleys. On December 26th, 1895, we crossed the moors from Greenfield to Crowden in the teeth of a gale which drove the frozen particles of snow into our faces with such violence that we could hardly stand upright. Whilst ascending, we met the Red Grouse flying down wind in hundreds to find shelter on the Yorkshire side, and when we reached the watershed not a bird was to be seen.

At one time the Red Grouse was probably abundant on most of the mosses of the plain; until its purchase by the Manchester Corporation in 1886, Carrington Moss was a well-stocked grouse-moor. As the moss was brought under cultivation the birds rapidly decreased in numbers, and finally disappeared in 1895. On July 25th, 1894, Oldham flushed five Grouse from a field of cabbages in which they had sought cover, the last patch of heather having been broken up a few days previously. Mr. H. C. Harrison has in his possession a bird—probably the last which was shot on the Moss—that was killed in 1895. Ten years before, numbers of Red Grouse might be seen in autumn feeding on and among the shocks of corn in fields surrounding the Moss.

The Red Grouse has occasionally wandered to Wirral; Byerley mentions one which was shot at West Kirby, and a pair at Claughton Firwoods; Mr. Charles Kemp killed one on Burton Marsh in the winter of 1894–95.

About the year 1902 Lord Delamere attempted to colonize Abbot's Moss and Newchurch Common with Red Grouse, but the experiment was not successful.

The Red Grouse when tending young will simulate disablement to lure an intruder from its offspring, but the young birds when their colour and markings would give them protection often neutralize the benefit they might derive from the parental instinct by refusing to remain quiescent, and flutter, cheeping loudly, over the heather and bilberry.

PHASIANIDAE.

PHEASANT.

Phasianus colchicus, Linné.

Phasianus torquatus, J. F. Gmelin.

Extensively preserved throughout Cheshire.

Except in upper Longdendale and in those parts of the hills east of Macclesfield where there is no suitable cover, the Pheasant is extensively preserved and exists everywhere in a semi-domestic condition. Hand-reared birds are turned down in thousands in woods and coverts, which are maintained and often planted solely for their benefit. In recent years the influence of the ring-necked Chinese *Phasianus torquatus* has become increasingly apparent, and the true *P. colchicus* is practically extinct. Most of the birds are either pure-bred *P. torquatus*, or are affected by the crossing of that species or the more recently introduced Japanese *P. versicolor*, Vieillot, with the old form.

Colonel G. Dixon has in his collection at Astle a dark-coloured bird—a hybrid between a Pheasant and a Black Spanish Fowl; and in the Grosvenor Museum, Chester,

there is a hybrid which was shot at Eaton on January 12th, 1897, the result of interbreeding of a Plymouth Rock cock and a hen Pheasant.

PARTRIDGE. *Perdix perdix* (Linné).

An abundant resident on preserved land.

The Partridge, owing to protection, is abundant throughout the Cheshire lowlands, and occurs in some numbers on the higher land. Near Wincle, and possibly in other districts, it is not so plentiful as when, owing to the high price obtainable for British wheat, more land was under corn.

Latham, in 1823, described specimens of the chestnut variety of this species—the *Perdix montana* of Brisson—as the “Cheshire Partridge” in the following words: “This bird is somewhat larger than our Common Partridge. The bill black; head and neck, to the breast, brownish buff-colour; the ear feathers much tufted, and standing out as in an old bird of the Common Sort; body, and wing coverts tawny brown, each feather whitish down the shaft, and continued as a large mottled white mark, occupying the whole end of the feather; under parts of the body, from the breast, chestnut brown; quills, tail, and legs, pale brown.

“A second of these differed in having a greater mixture of white on the upper parts of the body and wing coverts, and some few mottlings of buff on the breast; beyond this chestnut brown, as in the other, with a little mixture of white; the thighs in both pale ash colour.

“The above two, most elegant birds, were shot in Cheshire, and were in Mr. Bullock’s Museum. Whether they belong to the Common Partridge, as a Variety, we are unable to determine: as far as the head and neck, they coincide greatly with the Mountain Species, but not in any other circumstance, as the latter bird is uniform in its colours, having no markings of white on any part of the body. We

have not been able to ascertain the sex of the above described birds.”*

The Partridge pairs early—at the end of January ; nevertheless a few unbroken coveys are to be met with in the first half of February. Late broods are occasionally still unable to fly in July, and in 1905 Mr. F. S. Graves found a bird sitting eggs at Birtles in the first week in August.

The Red-legged Partridge, *Caccabis rufa* (Linné), is occasionally reared from introduced eggs, but has never succeeded in establishing itself in Cheshire, and the birds which are shot from time to time have no claim to a place in a local avifauna.

QUAIL. *Coturnix coturnix* (Linné).

Local name—BUT-FOR-BUT.

An irregular summer resident in Cheshire.

The Quail, an occasional summer visitor to Cheshire, has only been noticed at irregular intervals. In the summer of 1870, when the species was plentiful in many parts of England, it was several times observed in Cheshire. A nest was taken at Delamere,† and the late Rev. C. Wolley-Dod heard the bird in August near Malpas.‡ Brockholes described the Quail as a scarce summer visitor to Leasowe, Bidston, Rock Ferry, Bebington, Ness and Burton. His remarks probably refer to the invasion of 1870, as does J. E. Smith's record of a bird at Timperley.§ Dr. Dobie states that some years ago the Quail was frequently killed on Sealand.

On September 7th, 1882, Mr. S. H. Woodhouse flushed

* *General History of Birds*, VIII., pp. 286, 287.

† W. D. Fox, *Field*, XXXVII., 1871, p. 20.

‡ *Field*, XXXVII., 1871, p. 38.

§ *Manchester City News*, May 16th, 1874.

three Quails at Kingsley, and he states that six had been killed at Oulton a few years previously.*

The year 1893 was remarkable for the influx of Quails, and birds nested in many places in Cheshire. Dr. Dobie says that they were frequently heard in fields adjoining the Dee Cop, and were reported from Saughall and Aldford. In September Sir Delves L. Broughton came across a bevy, out of which four young birds were shot, at Doddington,† and in the same month the late R. Nunnerley shot two out of a bevy of three on Mossley Moss, Congleton. In the autumn of this year Colonel Dixon obtained a Quail at Withington, and he tells us that others were seen in the neighbourhood. In the Mersey Valley the bird was particularly abundant. During May and June Mr. J. J. Cash repeatedly heard birds at Northenden, Baguley and Ringway, and in the meadows near Sale. Of a visit to the last locality on June 11th, he says: "In the river meadows this evening a considerable number of Quails called simultaneously; so many, indeed, that I would have found it difficult to distinguish the individual notes. No one passing along the river bank could fail to be struck by the incessant and curious call notes of the bird tonight." He adds that he obtained satisfactory evidence of the occurrence of the Quail during the summer at Ashley, Bramhall, Tabley and Delamere. On May 24th a farm servant, who with Mr. Cash was listening to a bird near Northenden, said that one summer about twenty years before, the "But-for-Buts" frequented that field, but that he had seen none since. This would probably be in 1870, and Mr. Cash learned from other sources that Quails had been heard at Northern Etchells and Baguley about that date. Mr. C. J. Edmondson has in his collection broken egg-shells, which he obtained in 1893 from a nest at Deanwater near Handforth after the young had been hatched.

* *Field*, LX., 1882, p. 407.

† *Field*, LXXXII., 1893, p. 491.

In July, 1900, we heard Quails on several occasions on Lindow Common ; there were at least four birds calling in the fields near the Moss or on the Moss itself.* The cry—*whit, whit, whit*—is usually repeated three or four times in quick succession. On July 6th, 1902, a bird was heard at Congleton.†

*FULICARIAE**RALLIDAE.*LAND RAIL. *Crex crex* (Linné).

Local names—CORNCRAKE ; GRASS QUAIL ; QUAIL ; DAKERHEN.

A common summer resident.

During the last week in April or the first few days of May the familiar call of the Land Rail, or, as it is usually called in Cheshire, the Corncrake, may be heard in the lowlands and on the bill-pastures up to the edge of the moors. In 1892 a female was picked up under telegraph wires at Helsby on April 7th,‡ and in 1905 the bird was first heard calling in the county on April 15th, but these are early dates.

If the grass be short when the bird first arrives it seldom calls by day, but later, during May, June and July, its presence is advertised day and night by its monotonous and incessant *crake*. Mr. J. J. Cash has timed the call, and found that the dissyllabic note is sometimes uttered sixty times per minute. Towards the end of July the note becomes less frequent, and in August it is seldom heard.

* C. O., *Zoologist*, 1900, p. 428.

† A. J. Solly, *Field, C.*, 1902, p. 88.

‡ Dobie, p. 331.

When, however, partridge-shooting begins in September, Land Rails are often flushed and shot. Most of the birds leave in September, but individuals, wounded or from some reason unable to migrate, have occasionally been obtained in Cheshire during the winter months.

SPOTTED CRAKE. *Porzana porzana* (Linné).

A rather uncommon bird of passage in autumn.

The majority of the Spotted Crakes recorded from Cheshire have been obtained during the autumn migration. In the breeding season the bird is apt to be overlooked owing to its retiring habits, but possibly it occasionally nests in the reed-beds of the meres and other suitable situations. There is a specimen in the Warrington Museum that was obtained near that town in June, 1892, and we know of an instance of the bird nesting just beyond the Lancashire border. Mr. F. Nicholson informs us that some years ago some newly hatched young were seen and one captured on swampy ground at the confluence of the Mersey and Irwell.

Byerley says that three Spotted Crakes were shot at Hoylake in 1852; Brockholes mentions one that was picked up beneath the telegraph wires near Ness, and on August 26th, 1890, another was found under similar circumstances near Parkgate Station.* Two in the Grosvenor Museum, Chester, were obtained in October, 1888, one at Great Sutton and the other at Upton near Chester. Dr. Dobie records one from Hoole on September 11th, 1889, and states that others have occurred at Burton, Aldford, Thornton-le-Moors, Ince and Helsby. One was obtained at Oakmere on October 3rd, 1889.†

* E. Comber, *Zoologist*, 1890, p. 390.

† R. Newstead, *Food of Birds*, p. 79.

The Spotted Crake does not perhaps so frequently pass on migration over eastern Cheshire, since the records from this portion of the county are fewer. Dr. H. H. Corbett tells us that one was shot at Handforth some years ago, and Colonel G. Dixon obtained one at Astle in 1868. Mr. H. Harrop says that one was killed at Matley near Stalybridge many years ago.* On October 3rd, 1891, a Spotted Crake was picked up beneath the telephone wires on Bosley Cloud, and was erroneously recorded at the time as a Little Crake, *Porzana parva* (Scopoli).† Dr. M. S. Wood shot a male at Gatley near Cheadle on September 9th, 1909.

In the stomachs of four Spotted Crakes, examined by Mr. R. Newstead, were the skins of moth larvae, fragments of geodephagous beetles, many rudimentary shells of slugs (*Limacidae*), and the seeds of grass and other plants.‡

BAILLON'S CRAKE. *Porzana bailloni* (Vieillot).

Once recorded on the spring migration.

An adult male Baillon's Crake, now in the possession of Dr. C. Cairnie of Manchester, was captured near Stockport in May, 1905.§ It is not certain that this bird was actually captured in Cheshire, as we have not been able to trace the exact locality where it was obtained and Stockport is partly in Lancashire, but we have thought it advisable to include the species provisionally in the county avifauna.

* F. Stubbs, p. 38.

† H. S. Claye, *Field*, LXXVIII., 1891, p. 582.

‡ *Food of Birds*, p. 79.

§ T. A. C., *Zoologist*, 1906, pp. 395, 396.

WATER RAIL. *Rallus aquaticus*, Linné.

A resident in the lowlands.

The Water Rail is a not uncommon resident in Cheshire, but owing to its shy and retiring habits it has been overlooked in many parts of the county. The late T. W. Barlow stated that it occurred throughout the year in the neighbourhood of Holmes Chapel,* and Byerley and Brockholes describe it as not uncommon in winter in Wirral. No doubt the bird is migratory—one was shot high up on the moors at Woodhead in the autumn of 1894—but the fact that this skulking species is more frequently seen in winter than in summer is not proof that it is really more abundant at the former season.

In central and northern Cheshire the Water Rail breeds in the dense beds of aquatic vegetation which margin the meres, in withy-beds and similar marshy places. It nests on Knutsford Moor, in the marsh bordering the Serpentine in Tabley Park, in an alder-swamp at Redes Mere, and a withy-bed at Rostherne, and doubtless in many similar situations in other localities.

Although it usually keeps well out of sight, the Water Rail when surprised in the open will sometimes trust for protection to its resemblance to surrounding objects. On November 19th, 1887, Coward saw one running on the margin of Rostherne Mere. When he was still a long way off it mounted on a bare tree stump and squatted on the top, holding its head horizontally so that the beak appeared to be a twig projecting from the trunk. It allowed him to approach within two or three feet before it ran into the water and swam to the reeds. In March, 1893, he saw another, near Agden, which ran into some brambles and reeds and there remained motionless, and in 1909 one at Rostherne which ran into the reed-bed and stopped immediately it had gained cover; the red bill and barred

* *Zoologist*, 1845, p. 1025.

plumage in both cases harmonized wonderfully with the surroundings.

The food of the Water Rail is varied ; in the stomachs of seven Cheshire birds, all obtained between November and February, Mr. R. Newstead found land and water beetles, freshwater and land molluscs, the seeds of the knapweed, dog-rose, grass, and other vegetable matter.*

MOORHEN. *Gallinula chloropus* (Linné).

Local names—WATERHEN ; COOT ; DABCHICK.†

An abundant resident throughout the county.

The marl-pits of Wirral and the plain are the chief resorts of the Moorhen, and there are few of these ponds in which one or more pairs do not nest. The reed-beds and the undergrowth on the margins of the meres are also favourite nesting places, and many pairs rear their young on rivers and streams, even in the hill-country in the east. In winter, when the ponds are frozen, it resorts to running water, and at that season hunger often drives the bird to seek its food in the farmyard amongst the fowls.

On migration the Moorhen has once—on September 3rd, 1886—been killed at the lantern on the Dee Lightvessel,‡ but there is no other evidence of the bird on passage, and there is every reason to suppose that the note of a Moorhen which one often hears after dark—coming as it does from different points of the compass in a circumscribed area—is produced by a single bird during the nocturnal flight to which this species is addicted, and not by a migrating bird or birds pursuing a course in one direction.

The nest of the Moorhen is usually placed on the ground,

* *Food of Birds*, pp. 78, 79.

† Leigh, *Glossary*, p. 56.

‡ *Migration of Birds*, Report 8, p. 88.

among sedges or in a low bush, but occasionally it is built in a tree. We have seen one in a fir eleven feet above the ground, and Mr. J. J. Cash found one built upon the disused nest of a Ring Dove. At Astle in 1874 a Moorhen built in a spruce, eighteen feet above the ground, and after laying four eggs was evicted by a Pheasant, which added eight eggs of her own. These were removed, but the Pheasant continued to incubate the Moorhen's eggs.* On June 17th, 1903, a clutch of seven white eggs of the Moorhen, now in the Grosvenor Museum, Chester, was obtained near Chester, and on July 15th five more eggs were found in the same marl-pit. The eggs in both clutches are irregular in shape, and in the larger clutch several resemble in form and colour those of the Little Grebe. The nests, however, were typical of the Moorhen. Mr. R. Newstead saw the parent birds, and no Little Grebes were known to inhabit the pit.†

If suddenly surprised on a large sheet of water, the Moorhen usually takes wing, flying along the surface and striking the water with its dependent legs; but in the confined area of a marl-pit it often submerges itself until only the beak is left above water, and remains quiescent until the danger is over. This power of submergence is acquired at a very early age, and we have seen black downy chicks, only a few days old, leave the nest on which they were resting and sink quietly beneath the surface.

COOT. *Fulica atra*, Linné.

Local names—BALD COOT; BALD-PATED COOT.

A common resident on the meres.

The Coot does not nest in the marl-pits but is confined to the meres and larger waters, where it is locally abundant.

* A. B., *Field*, XXXVII., 1871, p. 443.

† R. Newstead, *Chester Society of Natural Science and Lit.*, Report 33, 1903-04, p. 13.

In Wirral, owing to the lack of large sheets of water, it is rare in the breeding season; Brockholes only knew it as a winter visitor, and Mr. W. E. Sharp said that a pair or two which every year visited ponds near Ledsham were always killed or driven away.* We have, however, seen it within recent years in spring on ponds at Meols and Heswall.

The Coot breeds in some numbers on all the meres of the plain, being particularly abundant on those waters where there are extensive reed-beds; indeed, at all seasons, the black birds may be seen dotting the surface, or "coverts" of Coots be noticed feeding on the banks. The sharp metallic call is uttered both by day and night, and the birds are especially noisy during the breeding season, when they constantly chase one another and fight, performances accompanied by much splashing. The lack of cover is sufficient reason for its absence from the reservoirs among the hills, but it nests regularly at Lyme, Adlington, Poynton and Bosley Reservoir, on the eastern confines of the plain.

In severe winters the Coot is common in the Dee Estuary, and probably frequents the tidal waters of the Mersey, although Mr. R. Newstead, Senr., has only once seen it at Ince.† When the meres are ice-bound, however, many of the birds still remain in their immediate vicinity. In 1886, when Rostherne Mere was completely frozen so late as the middle of March, Coward saw the Coots, disturbed by the skaters, rise repeatedly from the reeds and wheel overhead in compact flocks. Again, at Tatton in January, 1891, he saw the birds feeding on the grass in large numbers, some hundreds of yards away from the mere, which was covered with skaters. In January, 1909, there were one hundred and eighty-eight Coots on a small patch of open water at Rostherne.

There is no direct evidence that the Coot is a migrant in Cheshire, but occasionally in spring it flies at night, and it is possible that birds which have dropped in spots remote

* Dobie, p. 332.

† *Id.*, p. 332.

from the meres may have been on passage. On March 20th, 1885, a Coot in good condition was captured in a garden in Sale, many miles distant from any breeding haunt of the bird. On the night of February 28th, 1906, one alighted in the back-yard of a house in Altrincham, and on the night of April 2nd, in the same year, one dropped on to the glass roof of a greenhouse in Bowdon. All three birds were captured and examined; they did not exhibit signs of having been in captivity.

When the Coot is swimming on the surface, the legs move alternately, the "feathering" of the lobes of the toes being similar in action to those of the grebes. In the forward stroke the toes are gathered together and bent, the lobes falling back behind the toes, but in the back stroke the feet are spread, and the combined expanded lobes furnish a wide area of resistance. When the bird dives the feet are used simultaneously, and though placed further forward than in a grebe are visible from above on both sides of the bird's body; the wings, as in many diving birds, are held close to the body, and are not used as organs of propulsion beneath the water. A captured Coot, held in the hand by Coward, not only bit fiercely but made several determined attempts to strike at his eyes with its beak.

The nest of the Coot, which, if circumstances permit, is built in a reed-bed, seldom rises more than a few inches above the water-line, but in case of a flood the bird makes considerable additions to the structure. In June, 1886, we found several nests at Rostherne which were supported on bulky foundations of reeds and stood two or three feet above the level of the mere, whose waters had receded at the termination of a long spell of wet weather.

When lying on the dead reeds, spotted with black fungoid growth, the stone-grey eggs, minutely speckled with black, are peculiarly adapted to their environment, being almost invisible. The significance of this coloration is apparent when the eggs are deposited under unusual conditions. At Bosley Reservoir, where there are no reeds,

the nests, built amongst the osiers, are constructed of black water-stained sticks, and in these the eggs are conspicuous. On some of the Anglesey lakes, where a large *Scirpus* takes the place of reeds and is used by the birds in the construction of their nests, the eggs gain no protection from their colour, but are in strong contrast with the green of the nests, which the rushes themselves are neither high nor dense enough to conceal.

*LIMICOLAE**OEDICNEMIDAE.*

STONE CURLEW. *Oedicnemus oedicnemus* (Linné).

Has occurred once.

The Stone Curlew, rare in the north-west of England, has been obtained once in Cheshire. A specimen in the Warrington Museum, labelled "Hoole, Chester," was purchased by Mr. F. Nicholson from a Chester bird-stuffer.* Mr. Nicholson saw this bird in the flesh, and was satisfied that the record was genuine.

Byerley's remark that the bird is "said to have been seen on the Hoylake shore" is too vague to be of any value.

CHARADRIIDAE.

DOTTEREL. *Eudromias morinellus* (Linné).

A bird of passage, only observed on the spring migration.

The Dotterel is only known in Cheshire as a passing migrant in spring. There has probably been a considerable decrease

* Dobie, p. 332.

in its numbers during the last fifty years, but small trips are seen almost every year in May and June by the gamekeepers on the moors in the neighbourhood of Crowden and Woodhead. In 1874 Mr. J. E. Smith described the bird as a regular spring visitor to Hale Moss,* a tract of boggy land close to Altrincham which has since been reclaimed. Brockholes, in the same year, said that the Dotterel had been shot a few years previously on the shore at Denhall, but that the bird was scarce in Wirral. Dr. Dobie mentions one that was shot near Frodsham on May 2nd, 1887.

In May, 1903, a Dotterel, in nearly full breeding plumage, was shot on the hills near Rainow, and on May 8th in the same year Mr. S. G. Cummings saw a trip of fifteen on a fallow close to the Sealand Road at Blacon Point. The birds were bathing and preening their feathers in a rain-pool in the field.†

RINGED PLOVER. *Aegialitis hiaticola* (Linné).

Local names—TULLET; SAND LARK.

An abundant bird of passage on the coast; occasionally met with on passage inland. Formerly bred in some numbers on the coast, but now only an odd pair nests; present as a non-breeding summer resident and as a winter resident.

The status of the Ringed Plover in Cheshire is not easy to define, for although it has ceased to nest in any numbers on the coast, birds are present in varying numbers throughout the year. At the periods of migration its numbers are greatest, but at any time birds of either the large resident or the small migratory race may be seen on the shore and in the estuaries.

* *Manchester City News*, May 16th, 1874.

† *Zoologist*, 1903, p. 230.

So long ago as 1865 H. E. Smith said that owing to molestation the Ringed Plover had ceased to nest in its old haunts on the Cheshire shore, but Mr. W. E. Sharp found it breeding on Middle Hilbre in 1876,* and in recent years a few pairs have succeeded in bringing off their broods in the Dee Estuary. In the spring of 1904 Mr. R. H. R. Brocklebank found young on the shore at Heswall, and early in May, 1907, a pair near Caldy, though they had probably not then laid, indicated by their behaviour that they had selected a nesting site. Mr. S. G. Cummings tells us that the bird has nested recently on the Chester golf-links. During June and July a few birds of the large resident race frequent the shore.

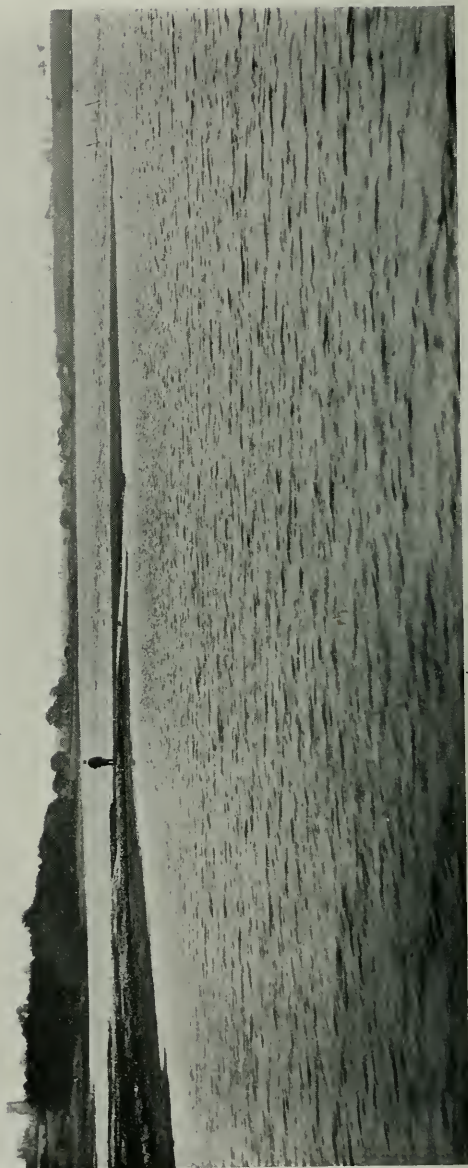
As a winter resident the Ringed Plover is plentiful, both in the Dee and Mersey. We have seen large flocks consorting with Dunlins and Redshanks in December and January, and in February the numbers are often very great. On February 8th, 1901, there were unusually large numbers all over the low-lying land behind the Leasowe Embankment when the banks were covered at high tide, and on February 16th, 1908, Dr. J. W. W. Stephens saw Ringed Plovers in thousands on the Leasowe shore. In March the bird is at times numerous, but the migrants from the south do not appear in any quantity before the middle of April, and the stream of migrants reaches its height early in May; in 1908 Dr. Stephens found the bird plentiful at Hoylake between the 7th and 10th, but a week later hardly any remained. On May 14th, 1894, we came across Ringed Plovers and Dunlins in thousands scattered over the saltings between Burton and Queen's Ferry.

Early in August the birds are returning, and throughout the autumn mixed flocks of small waders, consisting of Ringed Plovers, Dunlins, Sanderlings and occasionally other species, move about the banks with the ebb and flow of the tide. At low water they are distributed over the exposed sands, but when the tide is full they rest on the

* Dobie, p. 333.

shore, saltings, or the rocks at Hilbre. They may be seen flying swiftly over the water in compact flocks, hardly discernible at a distance, until, the birds turning with one accord, their white bellies flash in the sunlight like a gleam of silver. At times a flock will rise into the air and pursue its course for some distance; then all the birds, actuated by a common impulse, will turn and drop suddenly to their feeding grounds; this evolution when seen from a distance in bright sunlight produces a remarkable effect—a shower of falling flecks of light. In August an odd bird occasionally comes up the river so far as Chester.

Birds of passage are occasionally met with inland in spring and autumn. On May 26th, 1907, Oldham saw a bird of the small race in company with a Sanderling on a mud-bank at Cotebrook mill-pond; on May 16th, 1908, there was an adult bird at Marbury near Northwich, and on the 23rd and 24th of the same month Mr. F. S. Graves saw one at Redes Mere. On April 20th, 1909, single birds in the company of Dunlins were seen by Coward at Marbury, and by Dr. M. S. Wood at Gatley near Cheadle. We have seen birds many times in August and September, singly or in twos and threes, often in the company of Dunlins, on the border of Marbury Mere near Northwich, where a sandspit at the mouth of a brook is a favourite resting place for migratory waders. The earliest date on which we have seen Ringed Plovers on the mere is August 5th, the latest September 8th; the birds are both adult and immature. We have seen an example that was shot at Poynton Pool. On August 7th, 1899, Oldham saw one at Redes Mere, and on August 27th, 1905, an adult bird on the mud at Bosley Reservoir; it had probably dropped out of a flock of passing waders, since, in addition to a number of Lapwings, a Greenshank and a Ruff were on the mud. Ringed Plovers on migration sometimes pass over mid-Cheshire in autumn; Oldham heard several passing at Knutsford in 1902 on the night of August 13th, and on the 29th Coward heard birds calling as they passed over Bowdon.



THE SANDSPIT, MARRBURY MERE NEAR NORTHWICH ; A HAUNT OF PASSAGE WADERS. [379]

KENTISH PLOVER. *Aegialitis cantiana* (Latham).

Has been once observed.

The Kentish Plover is almost unknown in the west of England north of Devon, but it has occurred once on the spring migration in Cheshire. On April 29th, 1908, Coward saw two in company with six Dunlins on the margin of the mere at Marbury near Northwich. He identified them by their incomplete pectoral bands, black legs and bills, sandy backs, and by their size as compared with that of the Dunlins. The birds, a male and a female or immature bird, were exceedingly tame and allowed him to approach within a dozen yards. In the paler bird the cheeks, frontal band, and patch in front of the wing, which in the male were black, were of a darker brown than the rest of the sandy plumage, but the lores, as in the male, were black. The birds were paler than Ringed Plovers. On this date—April 29th—there were a number of passing migrants about the mere which were not there two days later, when the Plovers had also gone. Amongst these were Yellow and White Wagtails, Common Sandpipers and Common Terns.*

GOLDEN PLOVER. *Charadrius pluvialis*, Linné.

Local name—SHEEP'S GUIDE (Longdendale).

Summer resident on the moorlands in the east; a bird of passage and rather local winter resident in Wirral and the plain.

The Golden Plover nests regularly in small colonies on the higher moors of Longdendale and of the country east of Macclesfield. The birds reach the moors at the end of March or early in April and remain until the end of August, when the families unite in flocks and leave the breeding

* T. A. C., *British Birds* (Mag.), Vol. II., 1908-09, pp. 32, 33.

grounds. The Longdendale shepherds know the bird as the "Sheep's Guide"; they say that its alarm note warns the sheep on these lonely moors of the approach of a human being, and causes them to run from the intruder.

Throughout the lowlands the Golden Plover is a winter resident, but is decidedly local in its distribution. In certain localities, and even in certain favoured fields, it is to be met with from autumn to spring, if the weather be open, but from many considerable areas it is absent. For example, flocks may be met with during the winter months at Baguley, in the water-meadows at Sale, at Ashley, Ringway, and between Bucklow Hill and Bowdon, but in the country to the south and west, in the neighbourhood of Knutsford, Northwich and Lymm, the bird is very uncommon; exceptionally a passing flock will feed with Lapwings, but the birds never frequent the fields as they do in the localities named above. The bird, however, may be met with in the Dane Valley, a few miles to the south of Knutsford, and at Anderton to the west of Northwich. In the west, the Golden Plover is common at Storeton in Wirral and on the Sealand fields, especially about Shotwick and Blacon, but it does not often frequent the saltings or shore. Mr. S. G. Cummings, however, has seen the bird on the saltings at Burton, and on August 18th, 1908, noticed small parties of birds which had just arrived scattered over the marshes; and on February 23rd, 1907, during a frost, we saw some on the Mersey shore near Hale.

At the end of August or early in September flocks of Golden Plovers on passage halt in the neighbourhood of Ashley and Rostherne to feed in the identical fields which are afterwards frequented by the winter residents. In 1908 there were a few birds about in the third week of August, and on the 23rd over a hundred in one field at Ringway. In October there is usually a considerable increase, and apparently many birds then remain, for after the middle of the month the numbers to be seen in any locality are more constant than earlier in the autumn. The majority of the

winter residents depart in March, but possibly some may remain, and throughout April the favoured localities are seldom deserted for many days, flocks on passage northward constantly alighting to rest or feed. These passing flocks are seen a little later on the Sealand fields than further east in the county; Mr. S. G. Cummings has frequently seen them late in April, and in 1903 he saw a single bird on May 1st. One district in the east—Wythenshawe near Northenden—is apparently exceptional, for Mr. H. V. MacMaster assures us that if birds do not sometimes remain there for the whole summer they certainly linger until July; in 1906, 1907, and 1908 he had a small flock of non-breeding birds under observation until this month, but as he was absent during August he could not be sure whether they remained until the autumn flocks arrived.

The birds generally feed in company with Lapwings, but if disturbed the species quickly separate and wheel overhead in distinct flocks, the pointed wings and rapid flight of the Golden Plovers being in marked contrast to the deliberate movements of the round-winged Lapwings. When changing their feeding grounds, Golden Plovers, especially when in small numbers, generally fly in an irregular V-formation, which Lapwings seldom do.

The winter flocks number from a score to two hundred birds as a rule, but at the periods of migration they are often considerably larger, and exceptionally large flocks arrive during the winter months. On December 20th, 1908, the numbers in the Ashley fields were greatly increased, and upwards of a thousand birds were congregated in one field. A few days later the numbers had sunk again to the average, and during a frost at the end of the month the fields were deserted.

In March the birds show black on the belly, and early in April many individuals are in full summer dress; birds which arrive in August and September usually retain traces of the nuptial plumage.

In frosty weather, when unable to find food in the fields,

the Golden Plovers move with the Lapwings to the coast, returning so soon as a thaw sets in. Migratory flocks pass through the lowlands after the resident birds have returned to their nesting quarters on the moors; indeed it is possible that the Golden Plovers which nest on our hills are only resident in Cheshire during the summer, and that all the winter residents leave us in the spring. On April 9th, 1887, we saw birds in breeding plumage on the moors at the head of the Goyt Valley, and five days later met with three small flocks in the low-lying meadows near Sale.

GREY PLOVER. *Squatarola helvetica* (Linné).

Local name—SILVER PLOVER.

Bird of passage in the estuaries; a few may remain for the winter.

The Grey Plover is a regular spring and autumn visitor to the estuaries, where it feeds, sometimes in considerable flocks, on the sandbanks and mudflats. It is more of a shore bird than the Golden Plover, and we have no record of its occurrence inland in Cheshire. The late H. Durnford, speaking of the large numbers of Grey Plovers which frequented the mouth of the Mersey in September, 1873, remarked that they did not associate with other waders, although occasionally a straggler might be seen with a party of Dunlins.* This, however, is not always the case; we have seen, in October, from eighty to one hundred on the edge of the saltings consorting with Oyster-catchers, Red-shanks and other waders.

The bird arrives in the Dee in September, and on the 25th of that month in 1908 we saw one at Little Hilbre, amongst a number of Knots, which was still in summer dress. A few may remain throughout the winter; Dr.

* *Zoologist*, 1874, p. 3912.

J. W. W. Stephens has seen it at Hoylake in all the winter months, and in 1909 a considerable number early in January. Passing parties may be observed late in the spring; Oldham has seen them on the Lancashire coast so late as the middle of June.

The Grey Plover is a noisy bird; the cry is not liquid like that of the Golden Plover, but is shrill and penetrating. When the birds are resting on the banks or grass their black axillaries are very conspicuous, when, as is their wont, they raise their wings above their backs.

LAPWING. *Vanellus vanellus* (Linné).

Local names—PEEWIT; PUETT*; PEESNIPS; PLOVER; GREEN PLOVER; HAPPINCH; LAPPINCH.

A common and generally distributed breeding species; an abundant winter resident and bird of passage.

The Lapwing, one of the most familiar of our resident birds, is present throughout the year in all parts of the county, except in winter, when it is absent from the moorlands. Towards the end of February the birds begin to pair, the noisy aerial love-antics of the males at this season forcing themselves upon the notice of every one in their neighbourhood. By this time those birds which nest upon the hills and moors in the east have arrived at their breeding quarters, but a spell of frost or snow will drive them to the lowlands. Equally at home in the pastures and amongst the heather, the Lapwing abounds throughout the hill-country during the breeding season. The flocks usually leave the uplands in October, but in mild seasons, such as that of 1897-98, they will remain on the moors east of Macclesfield throughout the winter.

* Puett is described as obsolete by Holland (*Glossary*, p. 257). The name occurs as *Puit* in King's *Vale-Royall*, published in 1656, but is there apparently applied to the Black-headed Gull.

In spite of systematic egg-gathering by farm-labourers and others, the Lapwing holds its own in Wirral and the lowlands generally. In rural districts almost every field supports at least a pair of birds, whose vociferous anxiety on behalf of their eggs or young often defeats its purpose.

So soon as the young are able to fly the birds begin to pack; parties of twenty or thirty may be seen at the beginning of June, and in late summer these parties amalgamate, forming flocks of from fifty to two or three hundred birds. It is, however, practically impossible to distinguish summer residents from immigrant winter residents or birds of passage, and we are unable to say if the birds which nest in Cheshire leave in autumn and return in spring, or if some, at any rate, remain all the winter in company with the birds which arrive from further north.

The arrival of winter visitors and birds of passage is generally noticeable towards the end of August. Not only are the birds more numerous in the fields about this time, but on August 29th, 1902, Oldham heard numbers passing over Knutsford about midnight. Throughout the autumn the numbers frequently increase, but by no means do all the birds remain. On November 4th, 1907, a still foggy night, for instance, Coward heard Lapwings in large numbers passing over Bowdon from 10 p.m. until after midnight; prior to the 4th there had been perhaps from five hundred to a thousand birds in the fields at Ashley, but on the morning of the 5th there were from three to four thousand at the lowest estimate. In a few days the numbers had dwindled again to their average strength.

There is little evidence from the Dee Lightvessel of the passage of this species along the Cheshire coast; on October 19th, 1885, some were observed in company with Blackbirds, Redwings and other birds from midnight to sunrise,* but during severe frost or deep snow in winter Lapwings, with many other ground-feeding species, leave the county for more hospitable districts. During the extraordinary

* *Migration of Birds*, Report 7, p. 113.

westward movement observed in many parts of England and Ireland in the great snowstorm at the end of December, 1906, Mr. J. A. Dockray noticed large numbers in the Dee Estuary; on the 26th Lapwings and Skylarks were passing over the estuary, flying N.W. by W. the whole of the day. On December 28th, 1908, during a sharp frost, Coward saw many flocks, all travelling south-west, in the neighbourhood of Bowdon and Rostherne, and on the same day Mr. Dockray noticed Lapwings in company with Redwings, Skylarks and other birds, crossing the Dee Estuary in very large numbers, and all travelling in a westerly or south-westerly direction. On the same date immense flocks of these and other species passed westward over Llandudno. During frost the inland districts are deserted temporarily, and at such times enormous flocks of Lapwings—thousands strong—congregate on the saltings and marshes of the estuaries.

The winter residents depart northward at the end of February and in March, and at this time the summer residents reach the hills in the east, but the aerial nuptial dances and the love-calls of the summer residents may be observed long before the flocks have left.

Marshy land was formerly known as "pewit-land" in Cheshire, irrespective of the presence of the birds.*

TURNSTONE. *Streptilas interpres* (Linné).

A not uncommon bird of passage in spring and autumn.

Brockholes described the Turnstone as scarce on the shores of Wirral, but this is hardly the case today; it is a not infrequent visitor in small flocks in spring and autumn, but as there are few rocks or shingle beaches on the Cheshire coast the bird does not remain long.

The Turnstone arrives in the Dee, in most years, about

* Wilbraham, *Glossary*, p. 63.

the end of March or beginning of April, but we have no notes of the bird passing on the spring migration later than the beginning of May. Many of the birds which appear in spring are immature; in one flock of over twenty Turnstones, which Coward saw on the shingle at Caldby on May 1st, 1907, there was only one adult bird.

The autumn migration is more prolonged, continuing from early in August until November. In the autumn of 1899, when the birds were plentiful, Mr. R. H. R. Brocklebank shot one at Hilbre on September 29th, but in 1900, when they were even more abundant, he did not see any after the end of August. On August 17th, 1907, a dozen birds seen by Dr. J. W. W. Stephens at Hoylake still retained much of the chestnut colour of their summer dress. In the same autumn he saw a flock at Hoylake on October 26th, and a single bird amongst Redshanks on November 17th. Occasionally the Turnstone is met with in winter; on January 13th, 1907, Dr. Stephens saw a single bird on the Red Rocks at Hoylake, and on January 3rd, 1909, six near the same place. There are many specimens of the bird from the Dee and Mersey in the museums at Manchester, Liverpool and Chester, and in private collections.

We have seen a Turnstone which was shot at the Hague, Mottram-in-Longdendale, in 1901.*

OYSTER-CATCHER. *Haematopus ostralegus*, Linné.

Local names—SEA-PIE; PIE.

An abundant spring and autumn migrant; a winter resident.

The Oyster-catcher, although it does not now nest on the Cheshire coast, is seldom, if ever, absent from the Wirral shore and the estuaries. There is, unfortunately, no actual

* Cf. F. Stubbs, p. 39.

evidence of the bird having nested in the county in the past, although Brockholes believed that it had done so, and it still nests on the Welsh side of the Dee in the neighbourhood of the Point of Air. It is most abundant as a bird of passage in spring and autumn. From early in March until the beginning of May very large flocks frequent the banks in Liverpool Bay and the estuaries; single flocks may contain from five hundred to a thousand birds. In autumn the bird is abundant from the beginning of August until November; on August 19th and October 16th and 17th, 1887, Oyster-catchers, flying north-east, were observed all day long at the Dee Lightvessel.*

Considerable numbers of Oyster-catchers remain in the Dee and Mersey as winter residents; on various dates in December we have been struck with the large flocks which feed on the banks at low tide, and crowd together on the Hilbre rocks, the edge of the marsh or the shore, when the tide is up. A few non-breeding birds remain all summer, but from the latter end of May until the beginning of August the bird is not abundant. At all seasons it is more plentiful near the mouth of the Dee than higher up the estuary, but at spring tides numbers congregate on the edge of the marsh beyond the Burton Cop. As the flowing tide covers the banks the birds are forced to fly up the estuary in search of fresh feeding grounds, and there are few sights on the "Sands o' Dee" more pleasing than a massed flock of Oyster-catchers as it wings its way over the open water; the striking pied plumage contrasts strongly with the sombre banks and grey water. The birds call constantly as they fly, and are particularly vociferous before alighting; the wild ringing *kle-eep*, coming from hundreds of throats at once, produces an effect as delightful as it is harmonious. Mr. S. G. Cummings on August 27th, 1905, saw a couple of birds so high up the river as Saltney.

The Oyster-catcher is rare inland. The late Lord de Tabley refers to one which remained by the lake at Tabley

* *Migration of Birds*, Report 9, pp. 91, 97, 98.

for some time in October, 1863,* and on December 4th, 1904, Oldham saw one at Marbury Mere near Northwich.† Mr. Linnaeus Greening on one occasion saw a couple of birds on the edge of Walton Reservoir near Warrington.

BLACK-WINGED STILT.

Himantopus himantopus (Linné).

Has been recorded once.

An adult male Black-winged Stilt was obtained on the Mersey at Latchford by the late R. Nunnerley, Senr. He shot the bird and other rarities in the county about fifty or sixty years ago, but unfortunately the exact dates have not been preserved. His son, the late R. Nunnerley of Congleton, himself a keen sportsman and collector, vouched for the localities, having heard his father frequently recount the circumstances under which the specimens were obtained. The bird is now in the Grosvenor Museum, Chester.

GREY PHALAROPE. *Phalaropus fulicarius* (Linné).

A bird of passage observed occasionally in autumn.

The Grey Phalarope has occurred on several occasions on the autumn migration, both on the coast and inland. When it does appear its characteristic tameness or indifference to the presence of man often leads to its destruction.

Dr. Dobie tells us that the late Captain Congreve had a water-colour sketch of a Grey Phalarope, marked "Burton, October 4th, 1853." At a meeting of the Manchester Natural History Club, held on September 28th, 1863, the

* *MS. note-book.*

† C. O., *Zoologist*, 1905, pp. 35, 36.

late Dr. T. Alcock exhibited a specimen which had been shot on the Mersey, and a communication was made to the effect that another had been killed on a pond near Nantwich some years previously.* In the memorable invasion of this species in 1866, one was shot at Bidston Hill on September 19th, and another at Warrington,† whilst inland one was killed on a reservoir at Handforth by Mr. P. Cunliffe, and is now in his possession. The late Lord de Tabley, whose note-book was written during the years 1864 to 1868, refers to a bird at Tatton, but does not give any date. Mr. H. S. Claye has an example which was obtained on Gaws-worth Fishponds in 1868. On October 6th, 1874, Admiral A. J. Clark-Kennedy watched a Grey Phalarope swimming in one of the brackish pools on the landward side of the Leasowe Embankment. The bird was so tame that he was almost able to touch it with his stick.‡ On November 5th, 1880, one was shot on the shore at West Kirby by Mr. M. R. Meredith.§

There was a considerable migration of Grey Phalaropes to our coasts in the autumn of 1891, when several were obtained in Cheshire and North Wales. One in the Grosvenor Museum, Chester, was killed on the Dee at Queen's Ferry on October 17th, another was taken on the river at Connah's Quay, and a third at Northwich.|| An example, still retaining summer plumage, was shot at Wallasey early in August, 1893, and was presented by Dr. Dobie to the Grosvenor Museum. Mr. L. N. Brooke shot one, now in his possession, in Denna Gutter in the Dee Estuary on February 4th, 1894. We have seen birds which were killed on October 3rd, 1896, on a pit at Malpas, in November, 1898, at Hilbre, and on September 28th, 1900, at Burley Hurst, Mobberley.

* *Manchester Natural History Club, Minute Book*, p. 166.

† J. H. Gurney, Jun., *A Summary of the Occurrences of the Grey Phalarope in Great Britain during the Autumn of 1866*, p. 21.

‡ *Zoologist*, 1874, p. 4239.

§ *Field*, LVI., 1880, p. 715.

|| Dobie, p. 335.

On September 19th, 21st, and 23rd, 1905, we watched a Grey Phalarope, sometimes at close quarters, on Redes Mere; it remained in the neighbourhood until the 29th. The bird was in winter dress—the back pearl grey without brown markings, and the under parts pure white. It swam quickly, with its body well out of the water, and moved its head and neck in the same jerky manner as a Moorhen; it frequently mounted on the lily-pads and at times took short flights of a few yards. When feeding, both when swimming and on the wing, it darted first to one side and then to the other as it snapped at gnats or other small insects. When, as it did once or twice, it took longer flights across the water it uttered a short low whistle; the flight was not unlike that of the Common Sandpiper.*

RED-NECKED PHALAROPE.

Phalaropus hyperboreus (Linné).

A rare wanderer to Cheshire.

The Red-necked Phalarope, always rarer in England than the Grey Phalarope, has occurred at least three times in Cheshire, but the information concerning two of the occurrences is meagre. Byerley records one, killed on a pit in Wirral, and there is an old specimen in the Grosvenor Museum, Chester, said to have been obtained in the neighbourhood of that city.†

In the autumn or winter of 1899–1900 a Red-necked Phalarope was shot on the Dee Marsh by a collier; the bird is now in the possession of Mr. F. L. Congreve.‡

* T. A. C., *Zoologist*, 1905, pp. 435, 436.

† Dobie, p. 335.

‡ *Id.*, *Chester Society of Nat. Science, etc.*, Report 29, 1899–1900, p. 24.

WOODCOCK. *Scolopax rusticola*, Linné.

A winter resident in varying numbers : a few remain to breed.

The Woodcock occurs in all parts of Cheshire from October to March, but the numbers which visit us are by no means constant. The winter of 1893-94, for instance, was noticeable for the large numbers which were shot, whereas in 1896-97 very few were obtained. In most years a few arrive in October, but Mr. J. Baddeley tells us that in the neighbourhood of Stockport there is always an increase in the numbers about the third week in November. His experience is supported by that of sportsmen in other parts of the county.

The majority of the birds leave in March, but probably a few pairs remain every year to breed, nests having been recorded from widely separated localities. The late W. C. L. Martin, in an editorial note to the fourth edition of Mudie's *Feathered Tribes of the British Islands*, says : "We have ourselves disturbed the bird while incubating, within the precincts of a small wood near the banks of the Bollen (*sic*), in Cheshire."* Brockholes says : "During the spring of 1860, three or four pairs of Woodcocks frequented woods near Birkenhead until an advanced date. In the evening of August 24th, 1856, I saw a Woodcock between Bidston and Upton. I have also seen a Woodcock in one or two other instances in summer. I therefore think there is little doubt that this species occasionally breeds in Wirral although I have no authentic instance of a nest." On April 20th, 1858, a nest containing four young birds was found at Somerford,† and Mr. F. Nicholson informs us that in Tatton Park some years ago a bird was killed on a nest which contained four eggs. On July 31st, 1867, a Woodcock was caught in a hawk-trap near Holmes Chapel ; the bird

* Vol. II., p. 213.

† *Field*, XI., 1858, p. 472.

had presumably bred in the district.* Mr. F. S. Graves tells us that a nest containing three newly hatched young birds was found in the spring of 1897 at Astbury. On April 10th, 1909, Coward flushed a Woodcock in a covert near Rostherne; the bird fluttered along the ground with trailing wings and deflected and outspread tail for some yards before it took flight, suggesting that it had either eggs or young in the vicinity.

In the upper valleys of the Dane and Goyt the bird has frequently nested; both eggs and young have been found in the plantations above Goyt's Bridge and in the cloughs near Bosley. In 1905 a pair of Woodcocks brought off their young on Mr. G. N. Midwood's shooting at Bosley. Mr. N. Neave flushed a Woodcock on April 5th, 1891, in a wood below Tegg's Nose near Macclesfield, and in July, 1902, Mr. F. F. Grafton put one up, at twelve hundred and fifty feet above sea-level, at Walkerbarn in the same neighbourhood.

The Woodcock has been recorded from the Dee Light-vessel; one, perhaps emigrating from Wales, was killed at the lantern on March 24th, 1886.†

A uniformly dove-coloured bird was shot in Alderley Park some years ago.‡

GREAT SNIPE. *Gallinago major* (J. F. Gmelin).

An occasional winter visitor.

The Great Snipe is said to have occurred in Cheshire on several occasions, but as large examples of the Common Snipe are often mistaken for it, and as evidence of identity is adduced in only a few instances, some of the records must be regarded with caution.

* G. Leigh, *Field*, XXX., 1867, p. 165.

† *Migration of Birds*, Report 8, p. 82.

‡ *Land and Water*, December 25th, 1886, p. 640.

Byerley reports two occurrences at Upton near Birkenhead and several at Hoylake, and two birds are said to have been shot near Chester in the winter of 1857-58.* Three others are recorded by Dr. Dobie: one shot by the late E. C. Walker on the site of the Chester General Railway Station; another at Stanlow Point; and a third in the meadows of the Gowy at Barrowmore in the winter of 1889.† One in the collection of Colonel Dixon was shot at Withington near Chelford about sixty years ago. A Great Snipe in the Grosvenor Museum, Chester, killed in Brereton Park on September 7th, 1901, was examined and its identity confirmed by the late Howard Saunders.‡

COMMON SNIPE. *Gallinago gallinago* (Linné).

Local name—LADY SNIPE.

A local resident and abundant winter visitor.

During the winter months the Common Snipe is generally distributed throughout the county, frequenting pit-sides and damp meadows, often singly or in couples, but sometimes in wisps of considerable size. In the early spring the majority of these migrants leave, and except in the hill-country in the east the Snipe is local during the breeding season.

Brockholes knew of no authentic instance of the Snipe nesting in Wirral, although it breeds at Aldford near Chester and in the marshes at Frodsham, Helsby and Thornton-le-Moors,§ where we have heard several drumming in May. It nests in several places in Delamere Forest and

* T. Mather, *Zoologist*, 1858, p. 5976. "Tribune," *Field*, XI., 1858, p. 81.

† Dobie, p. 336.

‡ *Chester Society of Nat. Science, etc.*, Report 31, pp. 10, 19.

§ Dobie, p. 336.

in other parts of the plain, as at Mobberley, Handforth, Cheadle and Siddington. Within half a mile of Knutsford Station several broods are reared annually on a strip of boggy ground, and on Knutsford Moor the birds frequent the reed-beds and bog all the year round; at dusk in autumn and winter many may be seen leaving the moor in ones and twos, and after it is too dark to see the birds their cries may be heard in all directions as they rise and fly high over the surrounding houses on their way to their feeding grounds.

The great stronghold of the Snipe in Cheshire in the spring is the high ground in the east; the bird breeds in considerable numbers throughout Longdendale, on the moors near Swineshaw Brook, and on the hills east of Macclesfield. The nests are found as frequently in marshy spots in pastures as on the moors, and the drumming of the birds, together with their cry—*chipper, chipper, chipper*—as they fly high overhead, cannot fail to attract the attention of anyone crossing the hills.

It is difficult to say when the numbers of the resident birds are augmented by the immigrants, but on August 28th, 1904, Oldham flushed a wisp of sixteen from a marshy spot in a field at Gawsworth. The only observation of passage Snipe at the Dee Lightvessel was that of one found dead on deck on the morning of November 11th, 1887,* but Snipe are, in most years, common in Cheshire at a much earlier date than that. Dr. J. W. W. Stephens saw a single bird on the beach at Hoylake on July 4th, 1908, and three on November 1st in the same year.

Snipe begin to drum in March, the date on Knutsford Moor varying from the end of the first to the beginning of the third week.

At Oulton, in November, 1875, a Snipe was shot while running about upon the slate roof of a building two storeys high, where it was apparently searching for insects.†

When flushed in winter the Snipe almost invariably

* *Migration of Birds*, Report 9, p. 106.

† P. G. E., *Field*, XLVI., 1875, p. 561.

calls *scape* as it rises, but if the bird is disturbed in spring when tending young it usually, if not invariably, rises silently, and the weak piping notes uttered by the downy young when handled call forth no vocal response from the parent birds, which generally fly to a distance, but sometimes circle high overhead, drumming as they fly.

JACK SNIPE. *Gallinago gallinula* (Linné).

A not uncommon and widely distributed winter resident.

The Jack Snipe, a regular winter resident, is less plentiful than the Common Snipe in most parts of Cheshire, though Mr. H. S. Claye tells us that it outnumbered the larger bird on the hills between Bosley and Wincle. Brockholes states that until 1863 it was abundant in Wirral, but that after that date he noticed a falling off in its numbers; and Dr. Dobie is also of opinion that the bird is rarer than it was some years ago.

The Jack Snipe reaches the plain at the end of September; Dr. M. S. Wood has noticed it at Cheadle so early as September 25th. It remains until March and, exceptionally, until April.

DUNLIN. *Tringa alpina*, Linné.

Local name—SEA LARK.

An abundant bird of passage and winter resident; formerly bred in Wirral. Occurs inland at periods of migration.

The Dunlin formerly nested on the Dee marshes. Brockholes says: "A few birds breed in suitable places in Wirral.

In the spring of 1871, I received eleven eggs which were taken by a boy on the Dee Marshes near Puddington and Shotwick." The authenticity of these eggs is vouched for by Dr. Dobie. The greater part of the marsh in the neighbourhood of Puddington and Shotwick is now drained and cultivated, and there is no evidence that the Dunlin breeds there now, nor do we know of it nesting on the Cheshire side of the Mersey, although within recent years it has nested on the Lancashire side of the river a few miles below Warrington.* The bird nests in several places on the Pennine Range, but up to the present no eggs have been found on the moors in eastern Cheshire.

A few non-breeding birds frequent the coast during the summer months, but the Dunlin is most abundant at the periods of migration. Even at the end of July the northern birds are returning, and in August the flocks of Dunlins on passage are often of great size; these birds linger in the estuaries, and throughout the autumn their numbers remain large, but it is difficult to say what proportion of the immigrants remain for any period, since the passing flocks are constantly arriving and departing. The abundance of food, moreover, on the huge expanse of sandbank, mudflat and salting induces the Dunlin to remain as a winter resident, and at this season it is plentiful. Apparently the spring immigration begins in January or February, since in 1908 Dr. J. W. W. Stephens observed that the numbers were unusually large on the Leasowe banks on February 16th, and in 1909 on January 23rd and February 20th. In March and April more birds come in, but early in May the movement is at its height; it is then that countless thousands of Dunlins, associated with Ringed Plovers, frequent the banks and saltings. In 1908 Dr. Stephens found them in greatest numbers between the 1st and 10th of May; and on the 14th, in 1894, we found the Dunlin in breeding plumage in thousands on the saltings between Burton and Queen's Ferry.

* A. Jackson, *Zoologist*, 1906, pp 21-25.

The bird occurs inland on migration in spring and autumn, and occasionally in winter. On April 12th, 1902, there was a single bird in summer dress on the mud at Oakmere ; and on April 29th, 1905, seven, all in summer plumage, at Marbury near Northwich. These birds waded belly-deep in the shallow water in characteristic manner, and at times swam for a short distance ; they floated lightly and held their tails high out of the water. On April 24th, 1906, there was a single bird ; on April 29th, 1908, six, in company with two Kentish Plovers, on the edge of the mere at Marbury ; and in 1909 four on April 17th, six on the 20th, and one on the 24th, at the same spot. On the 20th Dr. M. S. Wood saw one with a Ringed Plover at Gatley, and about the same time other passing birds were observed by Mr. F. Stubbs in the neighbourhood of Oldham, in south-east Lancashire. In July and August we have seen Dunlins on various dates at Marbury, and on August 19th, 1906, one on the mud at Bosley Reservoir. In early August adult birds have not lost their black bellies. There were six birds at Marbury on January 24th, 1907.

The bill varies considerably in length ; those of four adult birds, shot by Mr. L. N. Brooke from the same flock near Connah's Quay on December 30th, 1905, measured 38.6, 37, 29.5, and 26 mm. The bird with the short bill was considerably smaller than the other three, and was probably of the form known as Schinz's Dunlin, *Tringa schinzii*, Brehm ; it is known that birds of both the long- and short-billed races feed in the same flock.* On May 11th, 1907, Coward saw two birds at Marbury near Northwich which were certainly of this short-billed form.

* Sharpe, *Handbook to the Birds of Great Britain*, Vol. III., p. 230.

LITTLE STINT. *Tringa minuta*, Leisler.

A spring and autumn visitor to the shores of Cheshire.

The Little Stint is a bird of passage along the Cheshire coast, and has been more frequently noticed in autumn than in spring. Brockholes describes it as scarce. There was a local specimen in the late Captain Congreve's collection at Burton, dated 1838, and Mr. F. L. Congreve shot two on the marsh at Burton in August, 1897. Early in September, 1892, three Little Stints were shot from a small flock on the Chester golf-links, near Queen's Ferry, by Dr. Herbert Dobie; two of these birds are now in the Grosvenor Museum, Chester. Mr. L. N. Brooke shot one, now in his collection, some years ago on Burton Marsh.

In the Mersey Estuary several examples were obtained on the sands above Runcorn in October, 1854.*

On August 30th, 1905, when a large number of migratory waders were on the Dee sands and marshes, Mr. S. G. Cummings and Coward saw a Little Stint near the edge of the marsh at Burton; there were other small birds with the Dunlins and Sanderlings which kept at too great a distance to be identified.

On May 1st, 1907, Coward saw two Little Stints amongst a party of Dunlins on the shore at Caldy; apart from their small size they were conspicuous on account of the contrast between their white under parts and the black bellies of the Dunlins.

The Little Stint has been once noticed inland. On August 29th, 1903, Oldham saw one in autumn plumage on the margin of the mere at Marbury near Northwich; it was so tame that it repeatedly allowed him to approach within five paces before it rose, and returned again and again to the sandspit after a short flight over the water. It constantly uttered a low trisyllabic note—*weet, weet, weet*.†

* N. Cooke, *Zoologist*, 1855, p. 4560.

† C. O., *Zoologist*, 1903, pp. 392, 393.

CURLEW SANDPIPER.

Tringa subarquata (Güldenstädt).

A rather scarce bird of passage; generally met with in the autumn. Has occurred inland.

The Curlew Sandpiper occurs in small numbers on our coast in autumn. Brockholes describes it as not uncommon at that season, when it consorts with Dunlins, and Dr. Dobie has occasionally seen examples in the Chester shops in strings of Dunlins from the Dee marshes.

Mr. J. A. Dockray sees it now and then in the Dee, and Mr. R. H. R. Brocklebank has a bird in his possession which he shot at Heswall. The late Nicholas Cooke recorded several, shot on November 6th, 1854, on the Mersey sands above Runcorn,* and Mr. R. Newstead has not infrequently seen it on the shore near Ince. On October 9th, 1904, Mr. S. G. Cummings and Dr. Dobie saw one amongst Dunlins in the Dee Estuary; on August 30th, 1905, Mr. Cummings and Coward saw two on the sands at the edge of the Burton Marsh, and on October 9th, 1909, Mr. Cummings saw two on the marsh.

Dr. Dobie states, on the authority of Mr. W. Bell, that a Curlew Sandpiper was shot at New Brighton in January, 1901, a remarkably late date, but it has even been met with in February; on the 19th of that month in 1905 Mr. Cummings and Oldham watched a bird in winter plumage at close quarters on the Dee Marsh.†

Inland, the Curlew Sandpiper has been reported from Tushingham near Malpas, where two were observed by the side of a pool on October 14th, 1875.‡

* *Zoologist*, 1854, p. 4560.

† S. G. Cummings, *Zoologist*, 1905, pp. 145, 146.

‡ D. Vawdrey, *Field*, XLVI., 1875, p. 504.

PURPLE SANDPIPER.

Tringa maritima, J. F. Gmelin.

An occasional wanderer to the Cheshire shore.

The sandy shores of Wirral offer no attraction to the rock-loving Purple Sandpiper, and consequently it has been seldom observed. Brockholes mentions that one was shot near Parkgate about 1866, and Dr. Dobie records that two or three were killed at Moreton in the autumn of 1893. Mr. R. H. R. Brocklebank has one in his collection that was shot in January, 1898, out of a small flock feeding amongst the rocks at Hilbre Island, and Mr. L. N. Brooke has one, killed on December 6th, 1903, on the stones of the Burton Cop. On April 25th, 1909, Dr. J. W. W. Stephens saw twelve very tame birds near the Hilbre rocks.

KNOT. *Tringa canutus*, Linné.

Local name—DUN.

An abundant spring and autumn migrant; a winter resident.

The Knot is abundant in spring and autumn in the estuaries of the Dee and Mersey and on the banks in Liverpool Bay; it is in some years numerous during the winter months.

The bird appears in the Dee Estuary towards the end of September, but on August 18th, 1886, thirty were noticed round the lantern of the Dee Lightvessel from 9 p.m. to midnight.* On August 30th, 1905, Mr. S. G. Cummings and Coward saw two young Knots with marbled backs and buff-tinged breasts feeding in a mixed flock of waders on the banks at the edge of the marsh. In October and November the numbers increase, and though, no doubt,

* *Migration of Birds*, Report 8, p. 113.

many pass further to the south, the flocks which frequent the river and the banks in Liverpool Bay in winter are in many years of great size; on December 31st, 1905, Oldham estimated that one flock alone that he saw between Thurstaston and West Kirby contained upwards of two thousand birds, and there were several other flocks many hundreds strong. These birds were feeding in a closely packed mass, and looked like a moving grey carpet as they moved along the shore. On March 3rd, 1906, there were still many large flocks in the neighbourhood of West Kirby. The late James Kemp told us that he once killed two hundred and forty Knots in the Dee at a single shot with his muzzle-loading punt-gun.

As a rule, the birds remain near the mouth of the river, but on October 11th, 1904, we saw a single bird in winter dress on the stones of the Burton Cop, and in the Mersey we saw large numbers on the mud near Stanlow Point on December 26th, 1908. By the end of September the majority of the Knots are in winter dress, but on September 25th, 1908, we saw one, amongst perhaps one hundred and fifty at Hilbre, which was still in summer plumage. Dr. J. W. W. Stephens, on November 9th, 1907, picked up several dead birds on the beach at Hoylake which were in moult.

The birds leave in March, but passing flocks occur much later, since Oldham saw large numbers on the Lancashire coast on June 15th, 1908. In 1909 Dr. Stephens found them abundant so late as March 26th, when many were showing spring plumage, and noticed about fifty near Hoylake on April 24th.

The Knot has occurred inland on migration. On October 24th, 1902, one, in the possession of Mr. Arthur Gaddum, was picked up alive though badly injured beneath telegraph wires in Bowdon.* On December 30th, 1905, a female, now in the Grosvenor Museum, Chester, was shot at Marbury Mere near Northwich.†

* T. A. C., *Zoologist*, 1902, p. 467.

† *Id.*, *Zoologist*, 1906, pp. 76, 77.

SANDERLING. *Calidris arenaria* (Linné).

An abundant bird of passage in spring and autumn ; a scarce winter resident. Has occurred inland.

The Sanderling is plentiful on the Cheshire shores at the periods of migration, when it frequently consorts with Dunlins and Ringed Plovers. It usually arrives in the Dee Estuary towards the end of August ; in 1900 the Rev. H. Dowsett saw a single bird at West Kirby on August 15th ; in 1903 Mr. S. G. Cummings found that a number had arrived on the 22nd, and in 1907 Dr. J. W. W. Stephens saw a flock at Hoylake on August 4th. By the end of August the birds are losing their summer dress, and on September 11th we have seen numbers in the grey plumage of winter. By the beginning of November most of the birds have passed, but a few linger, in some years at any rate, as winter residents ; on December 31st, 1905, Oldham saw a few consorting with Dunlins at Hoylake and Leasowe. In the winter of 1908-09 Dr. Stephens saw some at Hoylake in each month between October and April ; they were most abundant at the end of November.

The Sanderling is not so common in the Dee in spring as in autumn, and is more frequently noticed in May than in any other spring month ; indeed it is a late spring migrant, and has been obtained at the mouth of the Mersey so late as June 11th ; on this date in 1872 the late H. Durnford shot one out of a flock of fifteen.* Oldham has seen Sanderlings at Ainsdale on the Lancashire coast even later than this ; on June 15th, 1908, he saw several parties, one of which contained fifty-eight birds.

The Sanderling has occurred inland in May on the spring migration, and at least once in winter. In May, 1887, a bird was obtained at Tarporley† ; on May 19th, 1901, Oldham saw one feeding in shallow water at Oakmere, and

* *Zoologist*, 1872, p. 3149.

† Dobie, p. 338.

on May 26th, 1907, one, in almost full breeding dress, on the mud at Cotebrook Mill-pond, in company with a Ringed Plover.* On December 7th, 1902, he saw a Sanderling at Marbury Mere near Northwich, but the occurrence of the bird inland in winter can only be regarded as very unusual.

When Sanderlings and Dunlins in winter dress are feeding together they may be recognised by differences in appearance and habit; the upper parts of the former are hoary and their bills are short and black. Dunlins run with their long bills close to the ground and probe the sand, but Sanderlings, quicker in their movements, carry their heads higher and peck at their food like Ringed Plovers. The note of the Sanderling, a sharp *wick, wick*, or *tchik, tchik*, is very distinct from the *purre* of the Dunlin. The flight of the Sanderling is not unlike that of the Common Sandpiper.

RUFF. *Machetes pugnax* (Linné).

A bird of passage in spring and autumn, both on the coast and inland; never abundant.

It is of course possible that at one time the Ruff bred in Cheshire, but no proof exists. The Rev. Edward Hinchcliffe, writing in 1856 and describing the neighbourhood of Barthomley as he remembered it some twenty years previously, says†—"Several species of wild-fowl frequented Manneley Mere, when it was larger and wilder than it is now; among these the *rough* and *reeve*." Manneley or Monneley Mere, which lay between Barthomley and Crewe Hall, was even in the forties quite a small sheet of water, but the surrounding country was marshy. Hinchcliffe, however, does not even say that the birds frequented the mere in the breeding season.

* C. O., *Zoologist*, 1907, p. 237.

† *Barthomley*, p. 151.

Even on migration the Ruff is far from common ; it has been observed both on the coast and inland more frequently in autumn than in spring. Brockholes says that a few occur almost every autumn on the Dee marshes, and that several were obtained there one spring. The late Captain Congreve had a specimen in his collection which was shot at Burton.

Mr. L. N. Brooke has two in his collection, both of which were killed on Burton Marsh, one of them in 1894. Mr. R. H. R. Brocklebank killed a Ruff in the same locality in September, 1897, Mr. F. L. Congreve obtaining a Reeve at the same time. An immature bird in the Grosvenor Museum, Chester, was killed at the mouth of the Dee in 1880.* Byerley mentions one shot at West Kirby in October, 1852, and another is recorded by H. E. Smith from the Dee marshes. Mr. Brocklebank informs us that Ruffs were fairly plentiful on the marshes in August, 1899.

The occurrence of the Ruff on migration is not confined to the coast. On August 27th, 1905, Oldham saw one, a male in the plumage of the first autumn, feeding with Lapwings and a Greenshank on a wide expanse of mud at Bosley Reservoir.† In 1908 two birds were obtained inland. Dr. M. S. Wood shot a male at Gatley on August 22nd ; this bird, now in Dr. Wood's collection, is remarkable for its bill, which is as much curved as that of a Curlew Sandpiper ; the legs were distinctly greenish. On September 30th an immature male, now in the Grosvenor Museum, Chester, was killed on the Gowy marshes.

The Ruff has occurred on the spring migration, the males being then in nuptial plumage. Mr. H. Garland has a bird in breeding plumage that was killed some years ago on the Eaton Estate,‡ and there are two with partially developed ruffs in the Warrington Museum, one of which was obtained on Frodsham Marsh in 1884, and the other, shot by Mr.

* Dobie, p. 338.

† C. O., *Zoologist*, 1905, p. 393.

‡ Dobie, p. 338.

T. Dainteth in March, 1889, on the Lancashire side of the Mersey at Cuedley. It is not known in what month the bird was obtained in 1884, but it is certainly strange for one to be killed in March with so full a ruff as adorns the Warrington specimen dated 1889.

COMMON SANDPIPER. *Totanus hypoleucus* (Linné).

Local names—SAND SNIPE ; SUMMER SNIPE ; JACK SNIPE (Longdendale).

A common summer resident in suitable localities in all parts of the county ; a bird of passage on the marshes in autumn.

The Common Sandpiper abounds in summer on all the streams and reservoirs in the hill-country of east Cheshire, and on all the meres and many of the rivers of the plain it is common. It nests on the banks of the Dee, Dane, Bollin and other streams, and within recent years a few pairs have even reared their broods on the polluted Mersey between Stockport and its confluence with the Irwell. One or two pairs breed on most of the meres and larger pools, where it is interesting to see a bird, usually associated in one's mind with a brawling hill-stream, perfectly at home as it runs about on the lily-pads floating on the still water.

After the breeding season the Sandpiper is common on the shores and marshes, and it occurs on passage in spring, but as a nesting species it is not so plentiful in Wirral as elsewhere in the lowlands. Brockholes, in 1874, thought its numbers had decreased, but it still nests in a few localities.

In east Cheshire, during May, June and July, the Sandpiper abounds, not only on the Goyt, Etherow and Dane, but on every streamlet amongst the hills ; whilst

on the margin of the reservoirs in Longdendale, at Bosley, and elsewhere, no bird is more plentiful. It is even more characteristic of this district than the Dipper and Grey Wagtail. By the end of July most of the Sandpipers have left the hill-streams, and on the 1st of August we have walked from the source of the Goyt to Whaley Bridge without seeing a single bird. A few frequent the reservoirs, however, until the time of migration, about the end of that month or the beginning of September.

The Common Sandpiper usually reaches mid-Cheshire at the end of the first or during the second week of April, and in many years it is noticed on the meres a few days before it is seen in the west of the county or on the hills in the east. On the morning of April 17th, 1903, after a sharp frost, a Sandpiper, the first of the season, was running on the ice at Booths Mere, Knutsford. Early in July, small parties of perhaps half a dozen to a score of birds frequent the margins of the meres and appear on the saltings of the Dee. We have seen six together—possibly a family party—on the edge of Marbury Mere near Northwich on July 3rd, ten at the same place on the 19th, and thirteen on the Dee saltings on the 17th of the month, and on July 4th, 1903, Mr. S. G. Cummings saw ten on the Dee between Chester and Saltney. In early August these little flocks become more numerous, and at times the birds, as a rule singly, are scattered over the marshes. Even so early as the 4th of August we have heard the call of Sandpipers migrating over Knutsford at night. By the end of August the majority of the birds have left, but it is not unusual to meet with one or two, probably on passage, on the meres during the first half of September; in 1905 there was a single Sandpiper at Marbury near Northwich on the 16th, and in 1904 on the 17th of September. In 1905 a few were noticed by Mr. Cummings on various dates in early October on the Dee Cop opposite Sandycroft; he saw the last on the 11th of that month.

In May, when the birds are pairing, the cock flies round

the hen in circles varying from a few feet to a hundred yards in diameter. In the course of this flight, which is exceedingly rapid, he rises to a considerable height, trilling the while his pleasing song. Every now and then he swoops down suddenly and passes close to the hen, which is apparently little impressed by his extravagant antics. Sometimes he runs, with wings raised above his back or drooping by his sides, in some exposed situation, such as the top of a wall or the trunk of a fallen tree, from which he strives to attract her attention.

When the eggs are much incubated the sitting bird on being flushed slips from the nest and runs for several yards with depressed body and trailing wings as if disabled. It then usually rises and flies with a plaintive *weet, weet, weet* to a safe distance. Occasionally, however, the bird after simulating disablement will fly off silently, and at Bosley in 1900 one, sitting on a full clutch of eggs, remained motionless on its nest until Oldham's hand was within eighteen inches of it, when it flew straight away without uttering a note. Both parent birds generally display great solicitude for newly hatched young. We have seen a female run shrieking along a wall, with trailing wings and expanded and deflected tail, while we, only a foot or two away, stood over the downy chicks huddled together at the foot of the wall. This demonstration failing to lure us from her offspring, she dropped from the wall and rolled and tumbled in the grass at our feet. The male meanwhile kept up an anxious clamour from a stone wall at a more respectful distance. We have, however, seen both parents, though anxiously calling, retreat to a distance of several yards from the spot where we were searching for the young, whose presence is often betrayed by their feeble answering pipe as they lie concealed in the grass. Their behaviour in this respect differs from that of the young of many wading birds, which crouch absolutely quiescent on the ground, where their protective coloration would be discounted if they replied to their parents' warning cries.

GREEN SANDPIPER. *Totanus ochropus* (Linné).

A spring and autumn migrant ; a winter resident in small numbers ; an occasional bird has been observed in summer.

The Green Sandpiper occurs in all parts of lowland Cheshire in autumn, and has been observed by Mr. N. Neave at Rainow on the eastern hills in September. Brockholes says : " About half a dozen occur every autumn at Puddington and neighbouring parts of the Dee Marsh," and Mr. J. A. Dockray has frequently seen the bird at this season on the Shotwick and Burton marshes.

The Green Sandpiper reaches the marshes and inland localities in August or September. In 1886 Mr. Dockray shot one at Burton on August 2nd ; in 1905 we saw one at Cotebrook on August 6th ; in 1908 Mr. A. W. Boyd saw one at Marbury near Northwich on August 7th, and Dr. M. S. Wood shot another at Gatley on the 13th of that month.

Throughout August and September we have frequently flushed the Green Sandpiper from small streams in the parks at Marbury near Northwich and Tatton, and on August 25th, 1897, saw a party of four on the margin of the mere at Marbury. In most years a few remain in favoured localities throughout the winter months ; we have known a bird, presumably the same individual, to frequent a stream at Marbury from the beginning of December until the middle of February. This was the case in 1902 and 1906, and in the latter year there were one or two—on one day four birds—on the stream in Tatton Park throughout November and December. It has been shot at Barrowmore in January and at Aldersey in February.*

We have not met with the Green Sandpiper in either March or April, but on May 9th, 1904, Mr. R. H. R. Brocklebank saw one, presumably a bird on the return migration, on the beach at Heswall, a day or two after he had observed a

* Dobie, p. 339.

number of passing Pied, White, and Yellow Wagtails and Common Sandpipers. On June 30th, 1903, Oldham put one up from the margin of Tabley Lake. Mr. F. L. Congreve tells us that the bird has been observed on the Dee marshes throughout the summer months.

The Green Sandpiper is as a rule a solitary bird, but sometimes it associates in small parties of four or five. It is very wary, and if flushed rises at once to a height with a loud *tui, tui, tui*, and flies off to a distance, usually disappearing from sight before it alights again. On the wing its dark back and wings and white upper tail-coverts and under parts suggest a more decidedly black and white bird than it actually is. Notwithstanding the fact that the bird is easily scared and flies to a distance it usually returns to its feeding ground and may be flushed from the same spot on the following day.

REDSHANK. *Totanus calidris* (Linné).

A permanent resident and abundant spring and autumn migrant.

A few pairs of Redshanks nest annually on the Dee marshes, and though at one time the colony, owing to persecution, was much reduced, it is now in a satisfactory condition. In May, 1894, we estimated that seven or eight pairs nested, but in 1907 there were not only many more birds but the area over which they were nesting was greatly extended. In the Gowy marshes between Stoke and Thornton-le-Moors a large colony of Redshanks is established; Oldham, in 1907, estimated that it contained at least fifty pairs. For several years a few pairs—eight or ten perhaps—have occupied a strip of marsh and spoil-bank on the Norton Estate near Runcorn.

On the Dee Marsh, where the grass is closely cropped by sheep, the nests are seldom concealed, as is usually the case

with this species, but are merely depressions in the ground ; we have, however, found nests on an enclosed portion of the marsh that were screened by the long grass, which formed a partial arch above the eggs. At the end of the second week in May, 1894, some nests contained eggs, but the young birds had left others ; one bird in down sought refuge in a gutter, taking to the water to avoid capture and swimming with ease. So long as we were in the vicinity of the nests the parent birds showed their anxiety by "yelping" incessantly ; indeed, anyone crossing the marsh at this season is escorted and almost mobbed by a clamorous crowd of shrieking Redshanks. In March, when the birds are pairing, the males perform a curious aerial love-dance, trilling the while a pleasing song ; and the birds frequently settle on the railings which in several places run across the marshes.

For the last few years a pair or two of Redshanks have come in March to enclosed land at Gatley, and have remained through the breeding season, but it was not until 1908 that actual proof of their nesting was forthcoming, although a nest had been reported three or four years previously. In that year the birds arrived in March, and at the end of May began to haunt a rush-grown field near their ordinary feeding ground. On June 14th Dr. M. S. Wood, when searching for the nest, heard the birds utter a warning cry to young, and on the 20th he discovered a young bird which could then flutter a few yards. The field, the haunt of numerous Lapwings, is regularly hunted for "plovers' eggs," and no doubt the first clutch had been taken.

Passage Redshanks arrive in the estuaries in March and April, and in early May after the resident birds have begun nesting operations on the marshes migratory flocks are constantly appearing. The return movements are often noticeable so early as the middle of July, and the autumn passage continues until November. In December, January and February there are generally a few winter residents

about the shores and marshes, and we have seen very large flocks at the end of December on the Mersey sands near Eastham and Stanlow.

At the seasons of migration and at times in winter Redshanks visit the meres and inland waters. We have seen birds, generally singly but sometimes as many as five together, by the side of Tabley Lake in April and October, at Oakmere on July 13th, at Hatchmere in August, and at Marbury Mere near Northwich in July, August, October, November and once—in 1906—on January 11th. In November and December, 1908, a flock numbering thirty or more frequented the mud on a drained flash near Marbury for several weeks; one, a young bird, was shot. A few birds remained in this spot throughout the winter and spring of 1909.

SPOTTED REDSHANK. *Totanus fuscus* (Linné).

Has occurred once.

Brockholes, in his list, said: "A bird was killed about the year 1864, which from description was probably referable to this species. Dee Marsh, near Burton." We rejected this species in the *Birds of Cheshire** on account of insufficient evidence, but Dr. Dobie has since proved the authenticity of the record. In Brockholes' diary, which he has seen, is a note: "One was brought to Mrs. Brockholes about the year 1864, which, I believe, was shot by Charles Kemp." Mrs. Brockholes made a coloured sketch of this bird, which she showed to Dr. Dobie, and he says: "its size and dark colouring leave no doubt in my mind that it was *Totanus fuscus*."†

* p. 223.

† Dobie, *Chester Society of Nat. Science, etc.*, Report 29, p. 24.

GREENSHANK. *Totanus canescens* (J. F. Gmelin).

A rather scarce visitor to the estuaries and inland localities on migration.

Brockholes states that the Greenshank is occasionally met with on the Dee marshes ; it also occurs on the Mersey. The bird has been usually noticed in August or early September. The late Nicholas Cooke shot one on the Mersey near Warrington on August 2nd, 1845.* A bird in the Grosvenor Museum, Chester, was obtained with two others out of a flock at Burton on August 29th, 1891,† and one in the possession of Mr. L. N. Brooke was shot by him at Burton in August, 1894. Mr. F. L. Congreve tells us that in August, 1897, there were a number of Greenshanks with Bar-tailed Godwits on Burton Marsh, and in the following August Mr. Brooke shot one in that locality. On September 3rd, 1905, Mr. S. G. Cummings and Oldham saw one on the marsh near Burton Point, and on September 24th, 1908, Oldham saw a bird on the Mersey at Stanlow Point.

We have, on one occasion only, seen a Greenshank in winter. Messrs. R. Newstead, Cummings and Coward watched one for some time near Burton Point on January 13th, 1904 ; the bird was at first alone, but after a time it joined a party of Redshanks, when its green legs, superior height, and the characteristic pose of its body—the belly practically at right-angles to the legs—made it particularly noticeable. It appeared black and white when on the wing, but when on the marsh, with the sun upon it, the grey and white of its winter dress was conspicuous.

The Greenshank has occurred inland. Mr. R. Newstead examined one that was killed at Barrowmore on December 4th, 1890,‡ and on August 27th, 1905, Oldham saw one with a Ruff and a Ringed Plover on the mud at Bosley

* Cooke, *MS. note-book*.

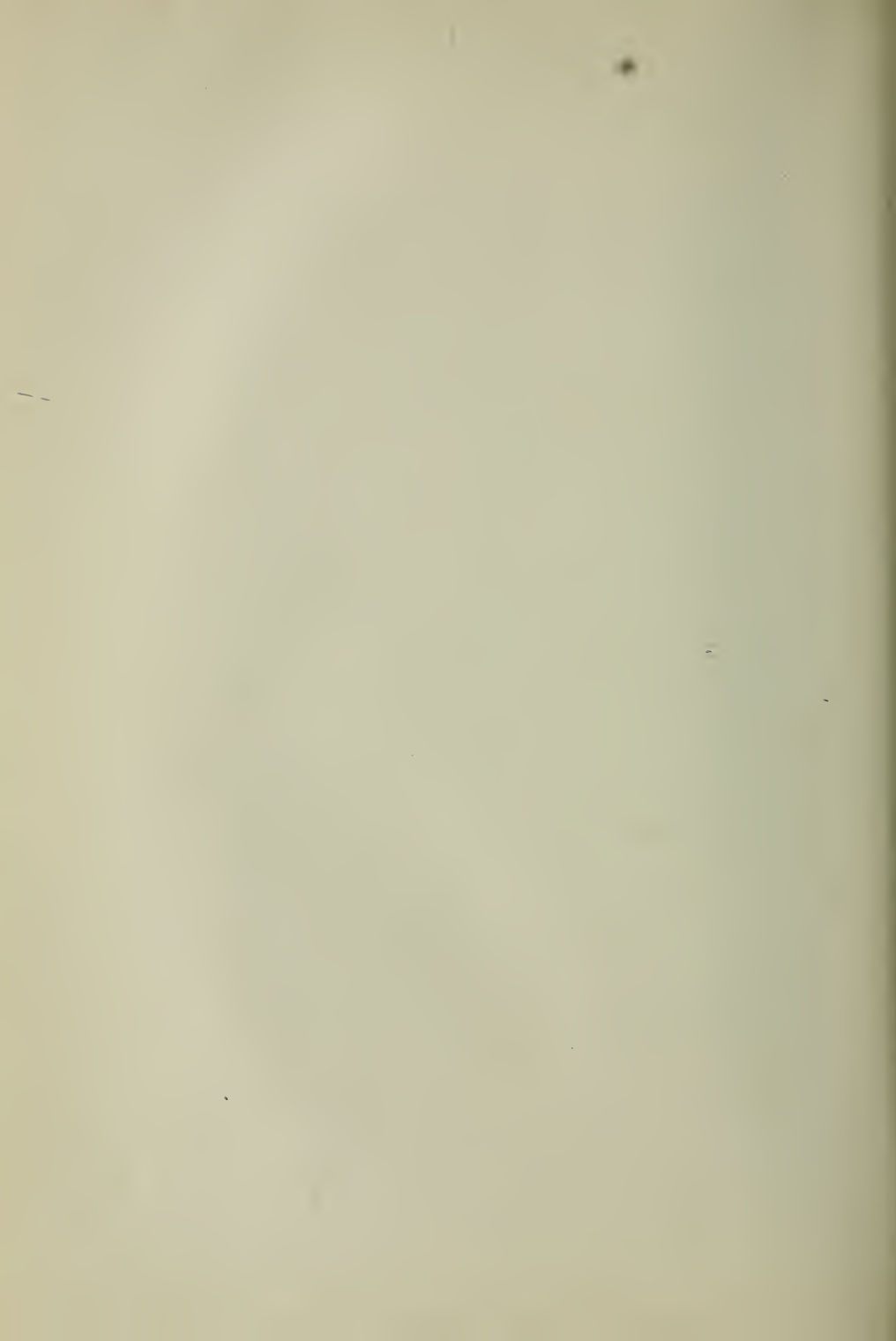
† Dobie, p. 340.

‡ R. N., *Food of Birds*, p. 83.



BOSLEY RESERVOIR.

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Reservoir. At times it waded into the water, running quickly through the shallows, with its bill partially submerged, in pursuit of the fry of some fish which kept leaping in a flashing silvery mob in front of it. It appeared to catch a fish at nearly every rush. Like the bird we saw in January at Burton, it was very noisy, uttering a dissyllabic *chee-weet, chee-weet* whenever it rose on the wing.*

BAR-TAILED GODWIT. *Limosa lapponica* (Linné).

Local name—STONE CURLEW.

An irregular spring and autumn migrant and winter resident.

The Bar-tailed Godwit visits our shores in varying numbers on migration. Brockholes describes it as sometimes common in autumn in the Dee, and Dr. Dobie saw large flocks there in the autumn of 1892, when he obtained a number of birds. Mr. R. Newstead says that examples from the Dee are often brought to the Grosvenor Museum, but he has not seen any from the Mersey Estuary, where the bird is apparently scarcer. On September 23rd and 24th, 1903, Oldham saw a few at Stanlow Point.

Not only do the numbers vary in the Dee, but in some autumns and winters the bird is practically absent. Mr. J. A. Dockray states that for two or three seasons, about the years 1890-92, the Bar-tailed Godwit was abundant, and that many remained about the estuary all winter; on December 30th, 1891, a flock of about two hundred flew over his punt near Burton Marsh. In 1894 there were practically no Godwits nor Grey Plovers in the river during the autumn, and for ten years or more thereafter the Bar-tailed Godwit was rare. In 1904 we saw a few in October and Mr. Dockray shot some during the autumn;

* C. O., *Zoologist*, 1905, p. 393.

in 1906-07 the bird was practically absent ; Mr. Dockray only saw two the whole season. On May 1st, 1907, Coward saw a single bird with some Oyster-catchers on the beach at West Kirby. In the autumn of 1907, however, Godwits arrived in fair numbers ; Mr. Dockray noticed the first, a flock of about one hundred, on September 29th ; and in the autumn of 1908 the numbers were extraordinary. On September 25th we saw several lots of about fifty birds at high tide on the rocks at Hilbre, and on the 28th Mr. R. H. R. Brocklebank noticed large numbers in the river near Heswall. On September 27th Mr. L. N. Brooke met with the largest flock he had ever seen, a short distance above Flint ; he estimated that it contained from fifteen hundred to two thousand birds. In 1909 Godwits were again plentiful during the autumn migration ; they were first noticed by Dr. J. W. W. Stephens and Major C. L. Williams in small flocks at West Kirby and Hoylake on September 25th and 26th, and on October 2nd Coward saw many hundreds at Hilbre. By the end of the month most had departed.

Inland, Dr. Dobie reports the occurrence of two on the Mersey at Arpley, and Mr. C. F. Fish tells us that on two occasions he has seen Bar-tailed Godwits in the water-meadows of the river near Sale. In February, 1896, we saw a bird that had been shot at High Legh early in that month. On September 18th, 1909, Mr. G. F. Gee received one which had been shot on or about that date at Goostrey.

Adult Bar-tailed Godwits in late September still show traces of the rufous summer plumage in the grey on their breasts. At this season, at any rate, the colour of the bill is not, as it is generally described, "reddish-brown," but is pale pink or rosy for about two-thirds of its length, the distal third being black or very dark brown ; this was the coloration of the bills of at least fifty birds seen at close quarters on September 25th, 1908. When these birds were massed together on a small rock at high tide individuals

kept leaping into the air—an upward flutter of a few inches—and alighting elsewhere amongst the crowd, probably striving to get a better position on the rock. The call note is a rather harsh bark, uttered repeatedly when birds are flying together.

BLACK-TAILED GODWIT. *Limosa limosa* (Linné).

A rare visitor to the estuaries on migration.

The Black-tailed Godwit is only known in Cheshire as a rare visitor on migration; it has been obtained both in spring and autumn. On May 10th, 1846, the late Nicholas Cooke purchased three immature birds at a market-stall, which he was told had been shot in the Mersey.* The bird is not included in Brockholes' Wirral list, but there was a specimen in the collection of the late Captain Congreve which was shot some years ago at Burton, and Dr. Dobie has seen another that was killed on the Dee. Mr. L. N. Brooke twice shot the Black-tailed Godwit in the Dee Estuary during the years 1890-93, in which the Bar-tailed Godwit was plentiful. One of these birds was obtained on September 27th, 1890, two Bar-tailed Godwits and two Grey Plovers being killed at the same shot.

Godwits, with Oyster-catchers, Knots and other waders, rest on the islands and rocks of Hilbre at high tide during the periods of migration. On October 2nd, 1909, Coward was on the Little Eye, Hilbre, at high tide. Among a large number of Bar-tailed Godwits which were flying round the islet, afraid to settle because of his presence, he saw five Black-tailed Godwits, his attention being attracted by their larger size, longer bills and darker legs. These

* *MS. note-book.* There is nothing in the note-book to indicate in what market the birds were purchased, but it was probably either Warrington or Liverpool.

five birds separated from the Bar-tailed Godwits and flew round the island several times, when their black tails were repeatedly conspicuous. On the same day and practically at the same time Dr. J. W. W. Stephens watched a single Black-tailed Godwit which was feeding with a few of the commoner species on the beach at Hoylake. He noticed that it was distinctly taller, more slender, and had longer legs and bill than the other birds. He observed its white-fringed black tail, its "Stilt-like gait," and that when feeding it never plunged its bill to the base into the mud after the manner of the Bar-tailed Godwits.

CURLEW. *Numenius arquata* (Linné).

Local names—COLLIER ; COLLIERJACK.

A summer resident in eastern Cheshire; an abundant bird of passage and winter resident on the coast; a non-breeding summer resident in the estuaries.

The Curlew breeds in some numbers on the Longdendale moors and in many places on the hills east of Macclesfield. In some districts, such as Shuttlings Low and the neighbourhood of the Cat and Fiddle, several pairs may be found nesting within a limited area. When the birds are pairing they lose to some extent their habitual wariness and become a prominent feature in the bird-life of the moorlands. It is then easy to approach them as they rise to a height of about forty feet above the heather and sail with outstretched wings, uttering their curious bubbling cry; but when the eggs are laid, the birds generally leave the vicinity of the nest at the slightest alarm. When the young are hatched, parental affection overcomes caution, and the old birds are loth to leave their offspring, evincing their anxiety by distressful cries. Curlews nested annually on Carrington Moss prior to its reclamation, and we often used to see

birds there in spring. In former years they bred on Macclesfield Moss, and probably on Lindow and other mosses of the plain. The birds arrive on the hills early in March, and leave as a rule before the middle of July; at the end of that month we have crossed wide stretches of moorland without seeing a Curlew.

At all seasons of the year the Curlew may be seen on the sandbanks and mudflats of the estuaries of the Dee and Mersey. Even in the middle of May, when the breeding season is at its height, we have seen considerable numbers of immature and non-breeding birds on the saltings and banks; whilst in winter we have observed flocks, generally comprising from fifty to a hundred birds, scattered all over the miles of banks exposed at low tide. The Curlew is, however, most abundant during the spring and autumn passage. It has been observed in autumn on several occasions at the lights at the mouth of the Dee; in 1881 large numbers, flying east, passed the Point of Air Lighthouse on July 18th, but in 1880 the first were not noticed until August 9th, when "a large quantity passed"; in that year a second immigration was observed on October 4th. In 1885 the first were noticed passing the Dee Light-vessel on August 7th, and in 1884 there were no movements of importance until the end of the month.* It is worthy of note that in autumn Curlews reach the Dee from the west, if the line of flight—invariably easterly—is a safe indication of the quarter whence they come. In spring the birds arrive in March and April.

Curlews often pass over inland Cheshire; one's attention is usually called to them as they fly overhead by their characteristic call. Birds visit the meres from time to time, and are most numerous at seasons of migration. It is impossible to say if these are residents moving to and from the hills or passing migrants. We have noticed them in March and April on many occasions and in various places;

* *Migration of Birds*, Report 2, pp. 112, 113; Report 3, p. 72; Report 6, p. 122; Report 7, p. 126.

and in July, August and September they are even more abundant. At this latter season we have often seen the Curlew in the Delamere country—sometimes singly, sometimes in small parties; as a rule they are flying high overhead, though once or twice we have observed birds settle at Oakmere. Mr. A. W. Boyd has noticed them in this locality early in November, and in 1904 we saw four on the 11th of December.

Wildfowlers are well aware that a wounded Curlew or other wader will swim, and birds which are washed off a rock or bank by the incoming tide will often swim for a few feet. On October 9th, 1909, however, Mr. L. N. Brooke witnessed the unusual sight of a Curlew swimming without any apparent reason. Mr. Brooke was setting to some Wigeon in the Dee Estuary when he saw a Curlew fly from a bank to the ducks, settle on the water and remain swimming amongst them. When the Wigeon rose the Curlew rose with them, and later, when he again came up with the party, the Curlew was still swimming with them and picking up food from the surface of the water.

WHIMBREL. *Numenius phaeopus* (Linné).

A bird of double passage on the coast and inland.

The Whimbrel is a regular visitor on migration in spring and autumn to the Cheshire coast and Sealand fields, and is often heard passing at these seasons in inland localities. It does not arrive amongst the earlier migrants, and in most years is not noticed before the end of April or the beginning of May. In 1904, however, Coward heard one or two passing over Bowdon on April 18th, and on the 21st Mr. R. H. R. Brocklebank saw some on the Dee shore. In 1908 Dr. J. W. W. Stephens did not see any at Hoylake until May 10th, when he noticed two, and on

the following day several birds ; the last he saw that season were on July 11th. In 1909, however, he observed them first on April 17th. On May 21st, 1904, Mr. W. Murray Marsden noticed one on a ploughed field at Hazel Grove. On May 12th, 1907, Mr. S. G. Cummings and Oldham saw numbers in the fields between Stoke and Thornton-le-Moors ; in one place there were thirteen together.

Early in August the birds are returning south ; we have seen them in the Dee Estuary on the 5th of that month and as late as October 11th ; on October 16th, 1903, one was shot at Wrenbury in south Cheshire. Mr. N. Neave tells us that a Whimbrel was caught in a net at Rainow in 1885 at the end of November or the beginning of December—a very late date for this species. Dr. J. H. Salter, who examined the skin, confirms Mr. Neave's identification.

The Whimbrel, like the Curlew, must be classed amongst birds useful to the farmer ; Mr. R. Newstead has found numbers of larvae of the crane fly in the stomachs of birds he has examined.*

GAVIAE

LARIDAE.

Sub-family *STERNINAE*.

BLACK TERN. *Hydrochelidon nigra* (Linné).

An occasional visitor on passage in spring and autumn.

The Black Tern occurs occasionally in Cheshire on migration in spring and autumn, and at times the birds remain for several days on the meres, attracted by food to be obtained near the large sheets of water. Brockholes only mentions one, a bird he saw on the marsh near Puddington in autumn.

* *Food of Birds*, p. 83.

but the late W. Thompson told Dr. Dobie that one year he received several examples from the Dee Estuary. In the Mersey a young bird was shot near Runcorn on August 12th, 1845.*

In the collection of local birds at Symthamley Manor there is an adult Black Tern, labelled "Macclesfield Forest, 1862." The late Dr. E. Crew of Alderley Edge possessed another mature bird, which was shot on Radnor Mere about 1885.

On August 1st, 1887, Mr. J. J. Cash watched two Black Terns feeding at Rostherne Mere. They frequently settled on a stake projecting from the water, and when on the wing beat slowly up against the wind, then turning, flew rapidly down wind to repeat the manoeuvre. Two birds were shot at Oakmere on April 22nd, 1893; one of these, an adult male, is now in the Grosvenor Museum, Chester.† We have seen one in a cottage at Poynton, which was shot some years ago on the Pool.

Three Black Terns were seen at Marbury near Northwich on June 4th, 1900, by Messrs. F. S. Graves and P. G. Ralfe.‡ Mr. F. Stubbs picked up the decomposed body of one from the mud of the Tame at Reddish Vale on July 7th, 1902.§

In 1903 we saw one at Marbury Mere near Northwich on September 6th|| and 12th, and on the 20th Oldham found the remains of another at Oakmere. In August, 1905, there were two birds at Marbury, one on the 19th and the other on the 26th; the first was a young bird with brown, pale-edged feathers on the mantle, a dark band on the carpal joint, a black crown, the forehead and under parts white. The one that we saw a week later was apparently a bird in its second autumn; the wings and mantle were frosty grey,

* N. Cooke, *MS. note-book*.

† Dobie, *Zoologist*, 1893, p. 227.

‡ F. S. Graves, *Zoologist*, 1901, p. 188.

§ F. Stubbs, p. 40.

|| C. O., *Zoologist*, 1903, p. 393.

and the black on the carpus less pronounced than in the other bird; the legs were pale reddish-brown, not black as in the younger bird; the bill black with a little orange-red near the gape.* These birds, as is the wont of the species, constantly settled on the mooring-posts which stand above the water. They flew in a desultory fashion, generally from ten to twenty feet above the water, and constantly swooped towards the surface, at times touching the water with their bills, and at others apparently catching an insect which was flying some inches above the water. The swoop was always made in a slanting direction, and, though once or twice both birds struck the water with a splash, the manoeuvre was never similar to the vertical plunge of a Common or Arctic Tern which was feeding on the mere at the same time as the Black Tern on the 26th. On April 29th, 1908, a day when a number of passing migrants of various species were about the mere, Coward saw an adult male Black Tern.† This bird, when in flight, swooped repeatedly but never struck the water; it often rose almost vertically for several feet, and then swooped downwards with a graceful curve. When perched upon one of the stumps, its pose was characteristic—the head and breast depressed and the tips of the long wings, extending far beyond the tail, considerably elevated above the plane of the body. On May 2nd five Common Terns which were on the water on April 29th had left, but the Black Tern, or a bird in similar plumage, was accompanied by another in paler dress, probably an adult female. On July 1st, 1908, Mr. A. W. Boyd watched a bird on the same water for over an hour, and tells us that it once or twice plunged into the water with a considerable splash, completely submerging itself for an instant.

* C. O., *Zoologist*, 1905, p. 393.

† T. A. C., *British Birds* (Mag.) II., 1908-9, pp. 33, 34.

COMMON TERN. *Sterna fluviatilis*, Naumann.

Local name—SEA SWALLOW.

A spring and autumn migrant and non-breeding summer resident in the estuaries and Liverpool Bay.

Brockholes was of opinion that the Common Tern formerly bred in Wirral ; we have failed to obtain confirmation of this supposition, and it certainly does not nest in Cheshire at the present day. It is, however, so constantly to be seen in Liverpool Bay and the estuaries that it is practically a non-breeding summer resident. It nests on the Lancashire coast only a few miles north of the Mersey Estuary.

It is not easy to distinguish between the Common and Arctic Tern on the wing, but birds of one species or the other arrive in the bay early in May ; Dr. J. W. W. Stephens has seen them at Hoylake on the 12th, and, occasionally, throughout June, July and August, but seldom after the end of the last month.

“ Sea Swallows ” are frequently seen inland in spring and autumn on the meres and reservoirs, and though seldom identified are probably, in the majority of cases, referable to this species ; we have seen birds in spring on Pickmere and Marbury Mere near Northwich on various dates between April 29th and June 22nd, and on June 30th, 1907, Oldham found the remains of a dead Common Tern on the margin of Oakmere. There is a young bird in a public house at Gawsworth that was killed there in the late nineties.

The autumn migration of the Common Tern apparently begins in July, and lasts in some years until October. As terns do not usually frequent the estuaries in September it is probable that birds seen in this month or October are on passage from more northern haunts. We have seen Common Terns on July 13th at Marbury near Northwich, and on July 22nd at Tatton, and others inland in August and September. On October 8th, 1904, we saw a tern, probably of this species, at Marbury, and in the same year

one remained for some weeks about the canal basin at Chester, where it was last seen by Mr. S. G. Cummings on September 23rd.

ARCTIC TERN. *Sterna macrura*, Naumann.

Local name—SEA SWALLOW.

Occurs on the coast in summer and occasionally inland at seasons of migration.

Byerley and Brockholes appear to have overlooked the Arctic Tern, but as the bird breeds on the North Wales coast it probably occurs in Cheshire waters more frequently than is generally supposed. We have seen a bird that was killed at Hilbre in the autumn.

Terns shot inland are seldom available for reference, being usually exhibited in glazed cases, where it is impossible to ascertain the proportion of black and white on the primaries, but the majority of these specimens are probably Common Terns. We have, however, identified two Arctic Terns from inland localities; the first, a bird in immature plumage, was obtained by Oldham on September 21st, 1894, at Swineshaw Reservoir near Stalybridge, where it had been shot on the previous day. It is now in the Grosvenor Museum, Chester. The other, in the Manchester Museum, was shot, together with a Common Tern, on a reservoir at Furness Vale a year or two later.

LESSER TERN. *Sterna minuta*, Linné.

A non-breeding summer resident; has occurred inland.

The Lesser Tern breeds in several localities on the north coast of Wales, but there is no evidence that it has ever

nested in Cheshire. In summer, particularly at the periods of migration, it is at times plentiful in the Dee Estuary, where it has been noticed early in May. In August and early September we have seen numbers fishing over the submerged banks both in the neighbourhood of Hoylake and so high up the river as the edge of the marsh at Burton. Mr. S. G. Cummings saw half a dozen with some Common Terns on the river between Chester and Saltney on July 6th, 1903.

A Lesser Tern, now in the Brown Museum, Liverpool, frequented Witton Brook—the flash at Northwich—for about a week in 1888 ; it was picked up dead by a ferryman and passed into the hands of the late J. E. Higgin.

Sub-family *LARINAE*.

LITTLE GULL. *Larus minutus*, Pallas.

A rare wanderer to Cheshire in winter.

The Little Gull, rare on the north-west coast of England, has seldom been observed in Cheshire. Byerley records one from New Ferry. The years 1869–70 are memorable for the large numbers of Little Gulls which visited the east coast of England, and about this time several were obtained on the marshes of the Dee near Queen's Ferry.* Mr. W. Bell has one that was shot on the Mersey near New Brighton on November 1st, 1880.† On January 4th, 1895, Mr. R. Newstead saw a Little Gull close to Chester. He says : “ When crossing the Dee Bridge my attention was attracted by what I at first thought was a species of Tern. The bird was in company with three or four Black-headed Gulls, but it did not seem at all pleased with their society, as it constantly

* Dobie, p. 342.

† W. Bell, *Zoologist*, 1881, p. 27.

made away from them. Time after time the bird flew quite close to me, giving me every opportunity to note its colour-pattern, etc. It was immature, and I have not the least doubt as to the identity of the species."

On December 26th, 1902, we saw an adult Little Gull on the Ship Canal about a mile above Eastham; when the bird flew past us we had ample opportunity of seeing the wings—without dark marks above and smoky black beneath.* Its desultory flight was strikingly different from that of the Black-headed Gulls in the river and on the canal, and its wings appeared more rounded. At the beginning of January, 1903, Mr. S. G. Cummings saw a bird alone in a field near the Sealand Road, Chester, which, although he did not see it at close quarters, he believes was a Little Gull. The Rev. F. C. R. Jourdain records that one was seen by the Rev. W. B. Tracy in the Mersey off New Ferry on December 16th, 1903.†

BLACK-HEADED GULL. *Larus ridibundus*, Linné.

Local names—SEAGULL; SEA-CROW; SEA MAWE (obsolete); PUIT (obsolete).

A resident, nesting in one inland locality; present at all seasons on the coast and inland waters. Increasing in numbers.

The well-established and growing nesting colony of the Black-headed Gull on some flashes in Delamere Forest is, perhaps, the only regular breeding haunt of the bird in Cheshire, but the late James Kemp assured us that one or two pairs formerly nested on Burton Marsh, and it is possible that within recent years a few pairs may have bred in other parts of the county.

The history of the present colony is uncertain; local

* T. A. C., *Zoologist*, 1904, pp. 172, 173.

† *Zoologist*, 1904, p. 193.

report gives the date of its origin as about 1887, but this is evidently an error, though it is possible that the birds moved from another locality to the present site about that time. The late Lord de Tabley, whose notes were written between 1864 and 1868, stated, on the authority of Sir Philip Egerton, that the Black-headed Gull then bred in the Forest, and a still earlier reference to the birds is made by William Webb, who, in King's *Vale-Royall*,* describing Delamere Forest in 1617, speaks of "great store of Fish and Fowl in the Mears, Puits or Sea Mawes, in the flashes." It is evident that "Puits" is here synonymous with the modern name of Pewit Gull.

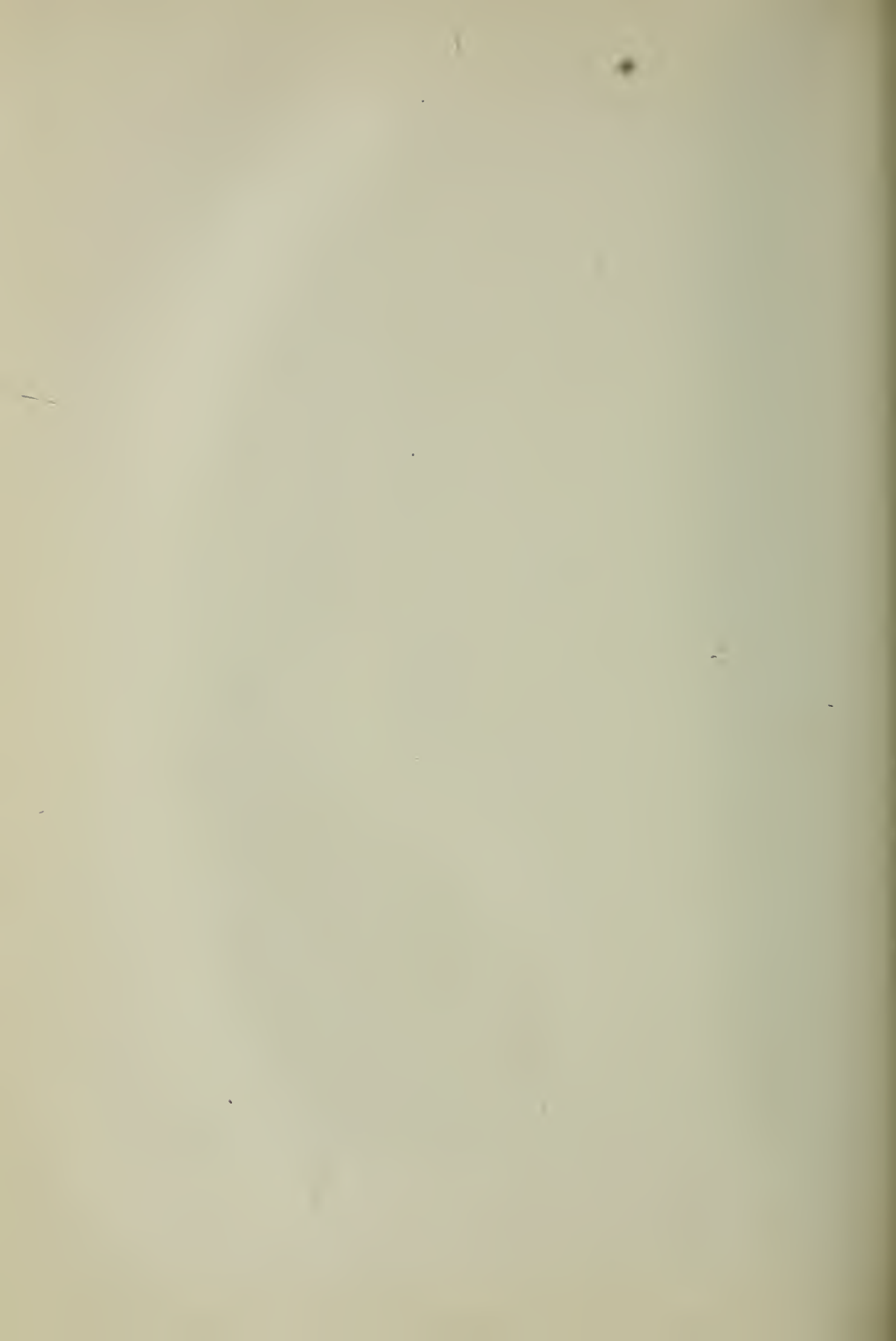
The gullery at Delamere is situated on a stretch of sandy waste covered with gorse and ling and surrounded by the birch and fir plantations of the forest. The nests are built amongst the rushes and other aquatic plants growing in some swampy pools, which have originated, like many other pools in the district, through the subsidence of the land overlying salt-deposits. When visiting the place in June, 1899, we counted thirty adults at one time as they flew clamouring above the water, and we occasionally caught sight of downy young ones skulking in the rushes. It is improbable that the birds we saw represented the full strength of the colony, which at the lowest estimate then numbered fifteen pairs. The people in the district know the birds as "Sea-crows," a name which has evidently originated from their habit of following the plough.

On May 12th, 1901, we counted fifty-eight adult birds at the gullery, and six days later twenty-nine nests. In the following spring there were at least one hundred and fifty birds, and by 1907 perhaps three hundred pairs were nesting. The birds reach the gullery early in April, and by the end of July most of them have left; on August 3rd, 1901, only four adult birds and half a dozen young ones remained, and on the 18th not a bird was to be seen. At the gullery the adult birds are clamorous in defence of their eggs or young,

* p. 117.



THE GULLERY, DELAMERE FOREST.



and fly screaming above the pools ; we have seen them mob and drive away a Heron which attempted to alight at the water's edge. Often, some bird, bolder than its fellows, will hover over an intruder, then, with an angry *kek, ek, ek, ek*, stoop with half-closed wings at his head, sheering off, however, when a foot or two above him and never actually striking. If one withdraws to a short distance to watch the home-life of the community, the screaming cloud above the pool soon breaks up, many of the birds settle on the water, and the others, with confidence restored, return to brood on the eggs or newly hatched young among the rushes. The cries of anger and fear cease, it is true, but only to give place to the customary clamour of the gullery ; the thin piping notes of the downy young mingle with the calls of the old birds, and the hubbub is punctuated now and again by the metallic clanking of a Coot or the rippling trill of a Dabchick. The scene is one of bustling activity, Gulls constantly leaving in search of food or returning with it to the young, when suddenly the tumult ceases, a weird hush comes over the whole colony, the bulk of the Gulls rise, and actuated by a common impulse fly swiftly and silently from the pool. The strange uncanny hush lasts for but a few seconds ; the mob which has flown off in one direction rapidly breaks up, and the birds straggle back, calling as usual. We have known three of these unaccountable hushes to occur in the course of an hour on a June afternoon. The same curious habit—a sudden silence and departure of a large body of birds—may be observed in colonies of Common and Arctic Terns.

Dr. J. W. W. Stephens noticed that at the end of May, 1907, many birds, either non-breeders or early arrivals from nesting places, were about the beach at Hoylake. At all seasons of the year, however, the Black-headed Gull is common round the coast ; large numbers frequent the river and docks at Birkenhead, in close attendance upon the shipping for the sake of any scraps they may pick up.

The increase inland of this gull is remarkable ; twenty-five

or thirty years ago the presence of a number upon one of the meres or on the flooded water-meadows of the Mersey valley was considered a sign of bad weather, but now the birds are always present in numbers on certain waters, Marbury near Budworth and Witton Brook for instance, and on others, such as Rostherne, Tatton, Oakmere and Lymm Dam, there are usually a few and at times large flocks. The bird now regularly frequents the fields in the north, and may be seen more occasionally in other parts of the county, but the increase is most noticeable along the line of the Ship Canal, which is followed by the Gulls from Eastham to the docks at Manchester. Within the last few years Rostherne Mere has become a regular roosting place for the Black-headed Gull. The birds come in at dusk, the largest number from the north and north-west; they arrive in small parties, and in winter, when they are most numerous, many hundreds gather in the centre of the mere for the night. We have seen the largest congregations between the end of November and beginning of February, but the mere is not only occupied in winter, for in March and April Mr. A. W. Boyd has seen the birds flying in the direction of the mere and flocks of thirty or more alighting at dusk. When flocks are making for the mere they frequently fly in the *chevron* formation adopted by geese, ducks and waders.

The food of the Black-headed Gull is varied. Small fish are captured; we have seen the cast-up bones of a small Dace at the gully, and in September Oldham once saw an immature bird wading in the shallows at Bosley Reservoir and successfully hunting the young of some fish. The birds are constant attendants on the plough, and devour large quantities of worms and larvae. When, after the plague of "leather-jackets" on the Sealand fields in 1900, the crane flies were emerging in countless thousands, they were attacked by flocks of Black-headed Gulls; the cast-up pellets of the birds, which were scattered over the land in hundreds, resembled "little bundles of tightly-packed

dead grass." One of these pellets, analysed by Mr. R. Newstead, contained the remains of four hundred crane flies and sixteen hundred eggs, which had evidently been devoured in the bodies of the flies.* The Black-headed Gull feeds largely on beetles and their larvae; Mr. Newstead has observed that it will eat the unpalatable *Coccinellidae*,† and it destroys many dung beetles, *Aphodius* and *Geotrupes*, and the destructive wireworm, the larva of an *Agriotes*. The stomach of a bird killed in the Dee Estuary in November was "completely filled with shrimps."‡

The brown hood of the nuptial dress is, as a rule, assumed early in March, but exceptionally during the winter; indeed it seems possible that, though rarely, birds may retain it after the moult. On November 14th, 1906, there was one bird with a full hood amongst some sixty or seventy in winter plumage at Marbury near Northwich, and on December 31st, 1904, Mr. S. G. Cummings saw one near Chester.§ In January and early in February we have at times seen a bird with a complete hood. At the Delamere gullery, on June 8th, 1907, there was one adult bird—red bill, red legs, and without tail-bar—which had not attained the hood; it had dusky crescents on the ear-coverts, but the remainder of its head was white. The winter plumage is often complete early in August.

COMMON GULL. *Larus canus*, Linné.

A common winter resident.

Except in the months of April, May, June and July, the Common Gull is abundant on the Cheshire coast and in the estuaries, and occurs in numbers on the meres and fields

* R. Newstead, *Gardeners' Chronicle*, Jan. 21st, 1905, p. 34.

† *Entomologist*, XXIV., 1891, p. 122.

‡ R. Newstead, *Food of Birds*, pp. 84, 85.

§ S. G. Cummings, *Zoologist*, 1905, p. 36.

inland, sometimes at a considerable distance from the sea. The bird arrives in Cheshire in August, and in some years at the end of July. In 1905 Mr. S. G. Cummings saw one on the Cop near Chester on July 25th, and five on the Roodee on the following day; we have seen a couple of birds on Marbury Mere near Northwich on August 1st, and fair numbers in other inland localities towards the end of that month. From then until the end of March the Common Gull occurs singly or in small parties in the fields in the neighbourhood of Chester and in northern Cheshire; birds often remain on Tatton and Rostherne Meres for many weeks at a time. In spring we have seen them at Tatton so late as the 3rd of April, and on Witton Brook on the 6th of that month; in 1904 Mr. Cummings saw one on the Cop near Chester on April 24th. In southern Cheshire the Common Gull is not well known, but it occurs in winter in the neighbourhood of Macclesfield, and we have, on several occasions, seen it at Cotebrook in the southern part of the Delamere country.

The Common Gull is the only gull that we have seen dropping molluscs in order to break them. On February 25th, 1906, Oldham saw a bird at Parkgate repeatedly drop a small mussel on to the sand, and on September 25th, 1908, we watched a score or more of birds searching for and smashing cockles in this way on the rocks and sands near Hilbre. A Gull would fly with a cockle in its bill to a height of fifteen to twenty feet, then deliberately hang motionless in the air for a moment, drop the cockle, and immediately swoop down upon it. If, as frequently happened, the shell was not fractured at the first attempt, the bird rose with it again and repeated the manoeuvre; one bird picked up and dropped the same cockle ten times. The cockles were smashed sooner or later, whether they fell on the rocks or on the sand, and we picked up many from which the birds had just extracted the contents; in a few cases both valves of the molluscs were fractured, but as a rule only one. There were numbers of Black-headed Gulls feeding with these

Common Gulls, but we did not see one of them attempt to smash a cockle in this way. Either this is not an invariable habit of the Common Gull or portions of the broken shells are sometimes eaten, for, mixed with a little grass, fish bones and grit, were fragments of cockle shells in the stomach of a bird killed in the Dee Estuary on October 8th, 1901.*

HERRING GULL. *Larus argentatus*, J. F. Gmelin.

A non-breeding summer resident and winter resident on the coast; not often seen inland.

The Herring Gull, like the Lesser Black-backed Gull, nests on the Anglesey and Carnarvonshire coasts, and occurs on Cheshire waters at all seasons of the year; in autumn and winter it is abundant in Liverpool Bay and the estuaries, and immature and non-breeding birds may be seen even in the height of the nesting season.

It is not met with inland so frequently as the Lesser Black-backed Gull, but mature and immature birds occasionally visit the meres and water-meadows and consort with the Black-headed and Common Gulls in winter. On April 25th, 1904, we saw four adult birds flying over the fields near Knutsford, but as a rule the Herring Gull is only seen inland in autumn and winter. On March 1st, 1908, Mr. A. W. Boyd saw an unusually large gathering of Herring Gulls on a field at Carrington which had been manured with fish-offal from the Manchester markets. There were over one hundred birds in a corner of this field, and many in other parts of the field and in fields near, but out of the whole number there were less than a dozen mature birds. A few Common Gulls were with them, but none of other species.

* R. Newstead, *Food of Birds*, p. 86.

This species, like other gulls, is valuable as a scavenger on the shores and in the estuaries. In the gullet of one, shot at Ince in December 1886, Mr. R. Newstead found the foot and tarsal bones of a dog. The stomach of a bird from the Dee Estuary, shot in September, was filled with the remains of the edible and shore crabs.*

LESSER BLACK-BACKED GULL. *Larus fuscus*, Linné.

A winter resident and non-breeding summer resident; met with inland at all seasons.

There is no breeding station of the Lesser Black-backed Gull in Cheshire, but, like the Herring Gull, it is met with all the year round on the coast, though not, in the estuaries, in such numbers as the latter species. Adult birds are to be seen in the Mersey in May when the majority are at the nesting colonies, the nearest of which is on Puffin Island.

The Lesser Black-backed Gull is not infrequently met with inland, and by no means only in winter. It is a more frequent visitor to the meres than the Herring Gull; at Marbury near Northwich we have seen adult birds in March, April, May and June. These birds, when disturbed, sometimes rise and wheel high overhead, uttering the note *ha, ha, ha*, usually only heard at the breeding stations. In 1907 there were often birds on Marbury, sometimes singly but usually in couples, from early March until the middle of August. We have on many occasions, between June and February, seen adult and immature birds on this water and on the meres at Rostherne and Tatton, the Ship Canal at Latchford and Lymm, and the water-meadows at Sale, where, from time to time, birds have been shot. In winter one or two occasionally spend the night on Rostherne Mere with the Black-headed Gulls.

* *Food of Birds*, p. 86.

GREAT BLACK-BACKED GULL.

Larus marinus, Linné.

Local name—PARSON GULL.

A winter resident; a non-breeding summer resident.

The Great Black-backed Gull, which is known by the Wirral fishermen as the Parson Gull, is not uncommon in the estuaries of the Dee and Mersey in autumn and winter, and during the summer months immature birds frequent the banks and shores. On December 26th, 1908, we counted twenty—mostly adult birds—in sight at the same moment on the Mersey banks near Stanlow. These voracious birds feed on the dead fish and fowl left on the banks and saltings by the tide, and the corpse of a sheep occasionally provides them with a meal. Mr. J. A. Dockray has often seen the bird attack and devour a duck crippled by a gunner, and once he saw a Black-backed Gull chase and capture in flight a small passerine bird that was crossing the estuary; the Gull carried its quarry to a sandbank and there devoured it.

The bird does not often wander far from the sea, but at the end of October, 1898, an adult was shot on the subsidence at Witton Brook, Northwich, and was recorded in a Manchester newspaper as an "Albatross."

ICELAND GULL. *Larus leucopterus*, Faber.

A rare wanderer to Cheshire waters.

The Iceland Gull, rare at all times on the west coast of England, has only been observed occasionally in Cheshire. In 1897 we examined an immature bird in the possession of Mr. Edward Stanley of Manchester. He informed us that it had been shot by his brother at Hoylake "about twenty

years ago"—probably during the winter of 1872-73, when the bird was unusually plentiful on the coasts of Britain.

On June 2nd, 1909, an unusually late date for this species, Dr. C. Cairnie, when leaving Liverpool on an outward bound vessel, saw an immature Iceland Gull amongst the other gulls which were following the steamer. He first saw it when off New Brighton and it followed for more than a mile, often coming close to the stern of the boat. It was uniformly dull white, the primaries, back, under parts and tail being all of the same shade. About this date Mr. R. Newstead, when crossing the Mersey, noticed a gull without any black on the primaries which from its size he thought was of this species.

KITTIWAKE. *Rissa rissa* (Linné).

Not uncommon as a winter resident; occurs during the summer months.

The Kittiwake nests on the rocky headlands of Anglesey and Carnarvonshire, and is frequently met with round the shores of Wirral, especially in winter. We have seen adult birds in the Mersey Estuary near Stanlow Point in May.

Kittiwakes, mostly immature, occasionally wander inland, usually during rough weather, and are at times met with at a considerable distance from the coast. One was shot on a pond at Rostherne in the summer of 1894, and Dr. Dobie mentions another from the Dee above Chester.

In February, 1903, an adult bird was killed at Lower Peover, and about the same date three or four others were obtained in the neighbourhood of Knutsford. In February, 1906, after strong north and north-westerly winds, an adult bird frequented Tatton Mere for two or three days; we saw it on the 10th and 11th beating up and down the mere. Mr. F. Stubbs saw two birds, one being immature, at Crowden in Longdendale on October 13th, 1907.

Sub-family *STERCORARIINAE*.

GREAT SKUA. *Megalestris catarrhactes* (Linné).

Twice recorded.

The evidence of the occurrence of the Great Skua in Cheshire is only meagre. Byerley says that one was shot in the act of attacking some chickens at Bidston-cum-Ford, and Brockholes thought that a skua that he saw at New Ferry belonged to this species.

POMATORHINE SKUA.

Stercorarius pomatorhinus (Temminck).

An occasional visitor in autumn.

The Pomatorhine Skua, though less common on the west than on the east coast of England, has been obtained several times in Cheshire, chiefly on the autumn migration. One was shot at Hoylake in September, 1852,* and there is a bird in the Brown Museum, Liverpool, that was killed in the Mersey. Two immature birds in the Grosvenor Museum, Chester, were obtained in the Dee Estuary near Queen's Ferry on October 20th, 1890, and at Saughall on October 18th, 1902.† Dr. Dobie has examined a bird in immature plumage that was shot inland at Bruera about the year 1880; it was killed when feeding, in the company of another Skua, upon a dead Rabbit. An immature bird, which we have examined, was killed at Baguley in autumn about the year 1892.

* Byerley, p. 23.

† A. Newstead, *Field*, C., 1902, p. 689.

RICHARDSON'S SKUA.

Stercorarius crepidatus (J. F. Gmelin).**A wanderer to Cheshire on the autumn migration.**

This species occurs upon our coasts more frequently than any of the other skuas. Examples have several times been killed in the Mersey Estuary.* The late H. Durnford considered that an example obtained on the Cheshire coast in September, 1872, had the characters of the dark form specially pronounced.† Some years ago a man killed a Richardson's Skua, with a potato, near Dunham Massey Station.‡ This bird, which we have seen, is an immature example of the dark form.

Two in the collection of Mr. L. N. Brooke were killed near the Shotwick Cop on September 21st, 1891, on a "big tide" when it was blowing hard; twenty years ago the tide in the Dee Estuary flowed regularly up to the Shotwick Cop. On August 17th, 1907, Mr. L. Jones saw several dark plumaged skuas in company with a number of terns which were fishing off Hilbre Island; the birds remained in the neighbourhood for two or three days. Though the species was not identified, it is probable that the birds were Richardson's Skuas.

BUFFON'S SKUA. *Stercorarius parasiticus* (Linné).**Once obtained.**

Buffon's Skua has, to our knowledge, only once been met with in Cheshire. A young bird, now in the Warrington Museum, was obtained on the Ship Canal at Latchford on October 3rd, 1894. This bird was at the time erroneously recorded as a Richardson's Skua.§

* Byerley, p. 23.

† *Zoologist*, 1872, p. 3339.‡ J. E. Smith, *Manchester City News*, May 16th, 1874.§ *British Naturalist*, 1894, p. 271.

ALCAE

ALCIDAE.

RAZORBILL. *Alca torda*, Linné.

A summer visitor to Cheshire waters ; has been met with in winter.

The sandy shores of Wirral are wholly unsuited to the habits of the rock-breeding auks. Razorbills and Guillemots, however, breed on the cliffs of Anglesey and Carnarvonshire, and a few birds may often be seen at sea off the Cheshire coast and in the estuaries. Storm-driven Razorbills are occasionally picked up inland ; one was caught in a garden at Chester on September 27th, 1894,* and in the following month one was captured on the Ship Canal at Carrington. We have seen a bird that was picked up on Knutsford Moor late in the nineties.

COMMON GUILLEMOT. *Uria troile* (Linné).

Common in Liverpool Bay in the summer months, and occurs, when driven inshore, in winter.

Like the Razorbill, the Common Guillemot is plentiful in Liverpool Bay in the summer months, and is often driven close inshore in winter. At all seasons dead bodies of this bird and the Razorbill may be found lying amongst the débris washed up by the tide.

There are two examples of the ringed form—*Uria ringvia*, Latham—in the Grosvenor Museum, Chester. One was taken alive in the Mersey at Ince in 1882, and the other was picked up dead at Great Sutton near Hooton on April 18th, 1903. One in the Warrington Museum was obtained near Frodsham prior to 1851.

* Dobie, p. 345.

BLACK GUILLEMOT. *Uria grylle* (Linné).

Has occurred once.

According to Pennant, the Black Guillemot used to nest on the rocks at Llandudno,* but at the present day the nearest breeding station to Cheshire is the Isle of Man, and even there the bird is not common. Under these circumstances it is not surprising that the species is almost unknown on the Wirral coast. Dr. Dobie tells us (*in lit.*) that the late Captain Congreve possessed a water-colour sketch of an immature bird, marked "Burton, 1837."

LITTLE AUK. *Mergulus alle* (Linné).

A storm-driven wanderer to Cheshire.

The Little Auk has occurred in Cheshire at irregular intervals during the winter months, but even in many years when large numbers have been observed on the eastern coasts none has reached our shores. An example taken alive at Sale on December 10th, 1824, was preserved in the collection of the Manchester Natural History Society.† Brockholes records one from Hoylake, and he once saw a bird in rough weather in the river near Liverpool. Dr. H. H. Corbett examined a Little Auk, found alive on Alderley Edge some time between 1875 and 1880. A bird, which was shot on the wing at Manley during a heavy gale in the winter of 1886, is now in the Grosvenor Museum, Chester.‡ In the winter of 1895-96 Little Auks invaded the east coast of Britain in thousands, and were recorded from many inland localities. We have seen one which was taken at this time during heavy

* *British Zoology*, II., 1812, p. 164.

† J. Blackwall, *Loudon's Magazine of Natural History*, II., 1829, p. 275.

‡ Dobie, p. 346.

weather on Marbury Mere near Northwich, and another that was picked up dead on a farm at Broomhall near Nantwich. On November 27th, 1900, one was brought to Hutchinson's shop at Chester for preservation ; it had been picked up at Tattenhall.*

PUFFIN. *Fratercula arctica* (Linné).

A non-breeding summer resident in Cheshire waters ; occasionally storm-driven to land in autumn.

The Puffin breeds in considerable numbers on Priestholm, or, as it is generally called, Puffin Island, at the eastern entrance to the Menai Straits, and individuals often wander into Cheshire waters. Byerley states that the bird has been taken on the Mersey so far up as Runcorn. Storm-driven birds are sometimes picked up in an exhausted condition inland ; one was taken alive on the Eaton Estate in the winter of 1885-86, and another was found in a wood at Crabwall near Chester on October 27th, 1893.†

PYGOPODES

COLYMBIDAE.

GREAT NORTHERN DIVER.

Colymbus glacialis, Linné.

An occasional wanderer to the Cheshire coasts and inland waters in winter.

The Great Northern Diver is an occasional winter visitor to the coast and inland waters, and birds passing northward have been met with in spring. On April 9th, 1868, Admiral

* Dobie, *Chester Society of Nat. Science and Lit.*, Report 30, 1900-01, p. 25.

† Dobie, p. 346.

A. Clark-Kennedy observed one swimming between Hoylake and Hilbre Island, about two hundred yards from the shore.* In the winter of 1890-91 a Great Northern Diver was shot at New Brighton,† and the late Thomas Comber told us that an immature bird was taken some years ago in a fisherman's net at the mouth of the Dee.

Inland, a Great Northern Diver was shot many years ago on Styperson Pool, Adlington; fourteen large Perch were found in its gullet.‡ One in the collection at Tabley House was shot at Tabley prior to the sixties.§ In 1887 one was shot at Cuddington, and about the same time Mr. A. Cookson killed an immature bird at Oakmere.|| We have seen one that was killed at Godley Reservoir more than thirty years ago, and there is a bird in the Grosvenor Museum, Chester, that was shot on Helsby Marsh on December 21st, 1891.

Two Great Northern Divers visited inland waters in 1901. We saw one of these birds on Marbury Mere near Northwich on January 1st and 2nd, after a violent westerly gale. It kept severely to itself, not associating with the grebes or ducks, although it often passed some of them at close quarters in swimming from one part of the mere to another. Even at a distance it was easily distinguished from the Great Crested Grebes by its superior size and the fact that it swam higher in the water, carrying its stouter neck bent and not erect. Many of the bird's actions on the other hand were very grebe-like; it dived in the same clean fashion, and often careened on the water to preen itself, displaying the silver-white of its belly and under parts. Occasionally, too, it protruded and shook a leg above its back, and at times swam for a few feet with neck outstretched along the water. When diving it usually remained beneath the surface for

* F. N., *Manchester City News*, October 9th, 1875.

† J. Wrigley, *Notes on the Bird Life of Formby*, p. 18.

‡ Stanley, *General History of Birds*, 7th edition, pp. 421, 422.

§ De Tabley, *MS. note-book*.

|| Dobie, p. 347.

about half a minute. Once or twice it uttered a deep guttural growl. It remained on the mere until the 5th. On January 20th, Mr. F. S. Graves and Oldham saw one on Radnor Mere, Alderley.*

On January 8th, 1902, Coward saw a Great Northern Diver swimming close inshore on Rostherne Mere; it was feeding, and, timed by his watch, remained below the surface once for more than two and once for more than three minutes; other dives were of less duration; the bird at times travelled a long distance beneath the surface. On December 13th, 1908, Mr. Graves saw one on Redes Mere.

BLACK-THROATED DIVER. *Colymbus arcticus*, Linné.

Twice recorded.

The Black-throated Diver has, so far as we know, only occurred twice on the Cheshire coast. Mr. E. J. Mostyn tells us (*in lit.*) that one was shot, probably by his father, the late Captain E. H. Mostyn, about the year 1853 on Puddington Marsh. In December, 1876, Mr. J. Bushby of Formby killed one when shooting from a boat at the mouth of the Dee; he was told that another had been shot the week before.†

RED-THROATED DIVER.

Colymbus septentrionalis, Linné.

A passing migrant in spring and autumn; a wanderer to Cheshire waters in winter.

The Red-throated Diver is not uncommon in spring and autumn in Liverpool Bay, and frequently ascends the

* C. O., *Naturalist*, 1901, p. 150.

† *Field*, XLIX., 1877, p. 85.

estuaries. In March we have seen fifty or more off the Welsh coast near Colwyn and Abergele, and have had so many as five together within the field of a telescope, and in September and October it is at times numerous in the Bay. A few are met with in winter, usually when driven inshore by rough weather.

Brockholes states that, previous to the year 1860, it was common in winter on the "lake" at Hoylake, and the bird is more commonly seen at the mouth of the river than far up the estuary of the Dee. Mr. J. A. Dockray killed one at the Point of Air in the autumn of 1885 which had a full red throat, and on November 22nd, 1886, he saw another with a red throat, perhaps the bird, caught in a fishing-net near Flint on that day, that is now in the possession of Dr. Dobie.* On November 11th, 1907, Mr. Dockray saw another bird in summer dress, and there is one, in the Grosvenor Museum, Chester, that was obtained in the Dee. An immature bird and one with a red throat were shot off the Point of Air in September, 1888,† and Mr. L. Jones has one in his collection that was killed at Hilbre in October, 1894.

The Red-throated Diver occasionally ascends the rivers for some distance. One in the Warrington Museum was taken near Warrington Bridge on January 31st, 1849, and Mr. R. Newstead tells us that one was killed on the Dee at Saltney Ferry in February, 1895; another was found alive in an ice-boat moored in the canal within a few yards of the Weaver at Acton Bridge in the autumn of 1897.‡ In Sir Philip Brocklehurst's collection at Swythamley there is a Red-throated Diver that was killed a few years ago at Bagstone, Wincle.

In November, 1904, a Red-throated Diver frequented Tatton Mere for some days. We watched it on the 12th and again on the 19th, and with a telescope were able clearly to make out the white edgings of the feathers on the

* Dobie, p. 347.

† *Id.*, p. 347.

‡ F. Moss, *Manchester City News*, Sept. 25th, 1897.

back and the slightly recurved bill. The length of its dives, when feeding, varied from twenty-four to thirty seconds.*

We have no other records of the Red-throated Divers on the meres, but have seen an example that was obtained on the reservoir at Combs just beyond the Derbyshire border.

PODICIPEDIDAE.

GREAT CRESTED GREBE.

Podiceps cristatus (Linné).

Local names—DIVER ; GREAT DIVER.

A common resident on the meres ; a winter visitor to tidal waters ; a partial migrant in severe weather.

Except in Wirral and some parts of western Cheshire, where it is only known as a winter visitor, the Great Crested Grebe is resident throughout the county, being abundant on all the large sheets of water on the plain, as well as on some of the reservoirs among the hills. Indeed this handsome species is found in greater numbers in Cheshire than in perhaps any other county in England. Grebes may be seen on the meres throughout the year, except when a hard frost drives them to the coast or running water.

There is, however, a distinct migratory movement noticeable in Cheshire. In autumn, when perhaps some of the residents leave the meres, Great Crested Grebes, especially immature birds, are often seen in the estuaries, sometimes two or three together, and during the winter, even when inland waters are open, a few frequent salt water ; we have seen them in the Dee in December and

* C. O., *Zoologist*, 1905, pp. 36, 37.

January. In autumn and early winter the numbers on the meres are frequently less than at the end of the breeding season, but in January and February, especially after gales, there is often a marked increase; on January 1st, 1901, after a westerly gale, there were between forty and fifty on the mere at Marbury near Northwich. If driven away by frost the birds return immediately the water is open; thus after the frost at the end of 1901 the birds returned with the thaw, and on January 1st, 1902, there were twenty-seven on Marbury, six on Witton Brook, and nineteen on Tatton.

The present satisfactory position of the Great Crested Grebe in Cheshire is, doubtless, largely owing to protection. Mr. J. E. Smith, writing in 1874, said: "The tippet grebe . . . was formerly common on Rostherne Mere, Tatton Mere, and the waters of Mere Hall. Owing to the price paid by ornithologists for them, 30s. each, they are now very scarce, and will soon be extinct."* Since the passing of the Wild Birds Protection Act of 1880, however, the bird has increased, and now from half a dozen to ten or more pairs nest on each of the larger waters.

The following are the principal haunts of the Great Crested Grebe during the breeding season:—The meres and pools at Rostherne, Mere, Tatton, Tabley, Arley, Marbury near Northwich, Pickmere, Lymm, Norbury Booths, Alderley, Capesthorpe, Rode Heath, Little Budworth, Oulton, Oakmere, Hatchmere, Vale Royal, Cholmondeley, Bar Mere, Quoisley, Marbury (South Cheshire), Combermere, Walton Reservoir, and the flashes at Winsford and Lach Dennis. So far as we know the bird does not breed on any of the Longdendale reservoirs, but a few pairs nest annually at Bosley Reservoir, and occasionally a pair rear their young on smaller reservoirs, such as the one at Higher Sutton on the hills east of Macclesfield. One seen by Mr. F. Stubbs on Arnfield Reservoir in April was probably on passage.†

* *Manchester City News*, May 16, 1874.

† Stubbs, p. 41.

We have often in spring and summer seen a score or more of adult birds on the larger waters.

When the Great Crested Grebe is swimming the body is so deeply sunk in the water that the upper parts between the neck and back are often submerged, and at a distance the bird would frequently escape notice were it not that, as it rolls to preen its feathers, the satin-like plumage of its under parts flashes like silver in the sunlight. The birds, which are seldom seen except on the water, present a curious appearance when on the wing. We have seen them flying high overhead, their necks outstretched and tippets expanded, and their lobed feet held stiffly behind them like a Puffin's.

When the birds are pairing, and at times in winter, without any apparent cause, one or two will take wing and fly to some other part of the water. In flight the long neck is outstretched and deflected, the head being below the plane of the body. The white wing-bar is then conspicuous. This species and other grebes alight in an entirely different manner from a duck or swan, for whereas the latter throw the hinder part of the body forward, and strike the water with outstretched feet and tail, a grebe impinges with the breast, and the feet protrude behind it as it ploughs through the water.

The adult Grebe dives with extraordinary grace and agility, generally remaining under water from twenty to twenty-five seconds, and sometimes for more than half a minute. We have seen them make their way below the surface through dense beds of water-lilies fifteen yards or more across. The habit of diving, however, is not perfected until the bird is some weeks old, the downy young being fed by their parents. Young Grebes dive, as a rule, in an inefficient manner. They swim just below the water, their course being indicated by a small wave, and a foot is frequently protruded above the surface. Never out of sight for more than a few seconds, they only traverse a dozen yards or so at each dive. When about eight weeks

old, and before their parents have ceased to feed them, they can dive well, remaining below for from twenty to thirty seconds.

The winter plumage of the Great Crested Grebe is, normally, assumed in August, but there is much irregularity in the time of the moult. By the end of December there are often signs of the tippet on adult birds, and at the end of January many of the birds are in full change; once, on January 27th, we saw a bird in apparently full nuptial dress. At the end of February most of the adults have assumed full plumage, but in February and March, birds still in the dress of immaturity may be seen on the meres; these all disappear before nesting begins, and are possibly driven away by the old birds.

By the middle of February the birds may be seen swimming in couples, engaged in fantastic love-making. Face to face, with ruffs expanded, raising themselves in the water, and stretching their necks vertically, they toy with one another's bills. This fencing is not, however, confined to the spring; we have, on more than one occasion, observed it in December, and once on November 8th.

The floating mass of rotting vegetable matter which constitutes the nest is generally built in the dense reed-beds fringing the meres. At Bosley Reservoir, however, where there are no reeds, the nests are moored in small clumps of osiers, often in an exposed situation. At Redes Mere, where there is no lack of reeds, the nests are frequently in the lily-beds fifty yards or more from the shore in places where the water is several feet deep. At one spot on the same mere, the stump of a large tree rises several inches above the surface of the water about fifteen yards from the shore; it is in open water, away from reeds or other cover, but in 1899 a pair of Grebes selected this exposed position, built a nest on the flat top of the stump, and succeeded in bringing off their young. At Tatton, Oulton and elsewhere the nests are sometimes floating in the beds of *Potamogeton* or *Polygonum* at some distance from the shore. Building

operations generally begin in March ; we have seen birds carrying dead reed stems to a nest on the 17th of that month, but as a rule the nests are not completed until the end of April, and the eggs are laid in May. On April 19th, 1903, however, Oldham found eggs at Oulton. Four is the normal clutch, but we have met with two or three instances of five in a nest.

A considerable time elapses between the laying of each egg, for those in the same clutch are always in different stages of incubation. It is well known that Grebes cover their eggs with nesting material during incubation, but the reason for their so doing is not clear. Single unstained, and consequently conspicuous eggs are never covered ; whereas when incubation begins, and the need of concealment is less, the eggs are almost invariably covered by the sitting bird on leaving the nest and uncovered on its return. The rotting and fermenting mass generates considerable heat, as may be easily proved by thrusting the hand deep into the nest, and it is possible that the object in covering the eggs is actually to assist in incubation during the bird's absence.* The porous chalky surface of the eggs readily absorbs the juices exuding from the rotting vegetation, and they become increasingly discoloured as incubation advances. Both sexes participate in incubation, and until the eggs are hatched additions to the structure are continually made by the bird which is not sitting.

The old Grebes are assiduous in their attention to their offspring for several weeks after birth. When first hatched the young are carried on the back of one of the parents whilst the other adult is engaged in fishing, and during the first few days of their existence they are never in the water for more than a few seconds at a time. The old bird, when carrying the young, sits higher in the water than usual, and by slightly raising the wings provides a safe cradle for the nestlings. The young at first are invisible from the shore, and their presence is only indicated by the pose of the

* Cf. Seebohm, *British Birds*, III., p. 457.

old bird. We have never known this species to swim under water with the young on its back, as some grebes are said to do.* When about to dive, the parent bird usually raises itself in the water, and by flapping its wings shakes the young ones from its back, but sometimes it dives without giving warning, and the young birds rise like corks to the surface. The tiny nestlings appear ill at ease in the water, and follow their parents closely in order to regain their resting place, which they do by scrambling up over the tail. On the appearance of the other parent with food the young ones, in their eagerness to be fed, will sometimes take the water by slipping off at the neck of the old bird which is carrying them. Occasionally, however, the young are fed whilst on the parent's back. Numbers of the young probably fall victims to the voracity of the Pike, which attain a large size in the meres, for it is a common occurrence to see the parents accompanied by only one or two nestlings.

As a rule, the care of the young is divided, each parent taking charge of a couple. It is not unusual to see newly hatched young in August, and well grown birds following their parents with querulous cries at the end of September. In 1904 three young birds at Tatton were being fed up to the middle of October, and two other birds were following their parents and receiving food on November 6th, and one even so late as November 12th.† When older, the young birds spend more of their time in the water. They keep up an incessant querulous cry, very different from the harsh croak of an adult Grebe, and are noisiest when one of the parents approaches with a struggling fish in its beak. Oldham heard the hunger cries of young birds at Oulton at 2.50 a.m. on July 13th, 1905. They retain traces of the curious striped nestling plumage until they are as big as their parents and after the crests have appeared in autumn. Saunders says‡ that "little crest or

* Cf. Seebohm, p. 471, and Saunders, *Manual British Birds*, p. 722.

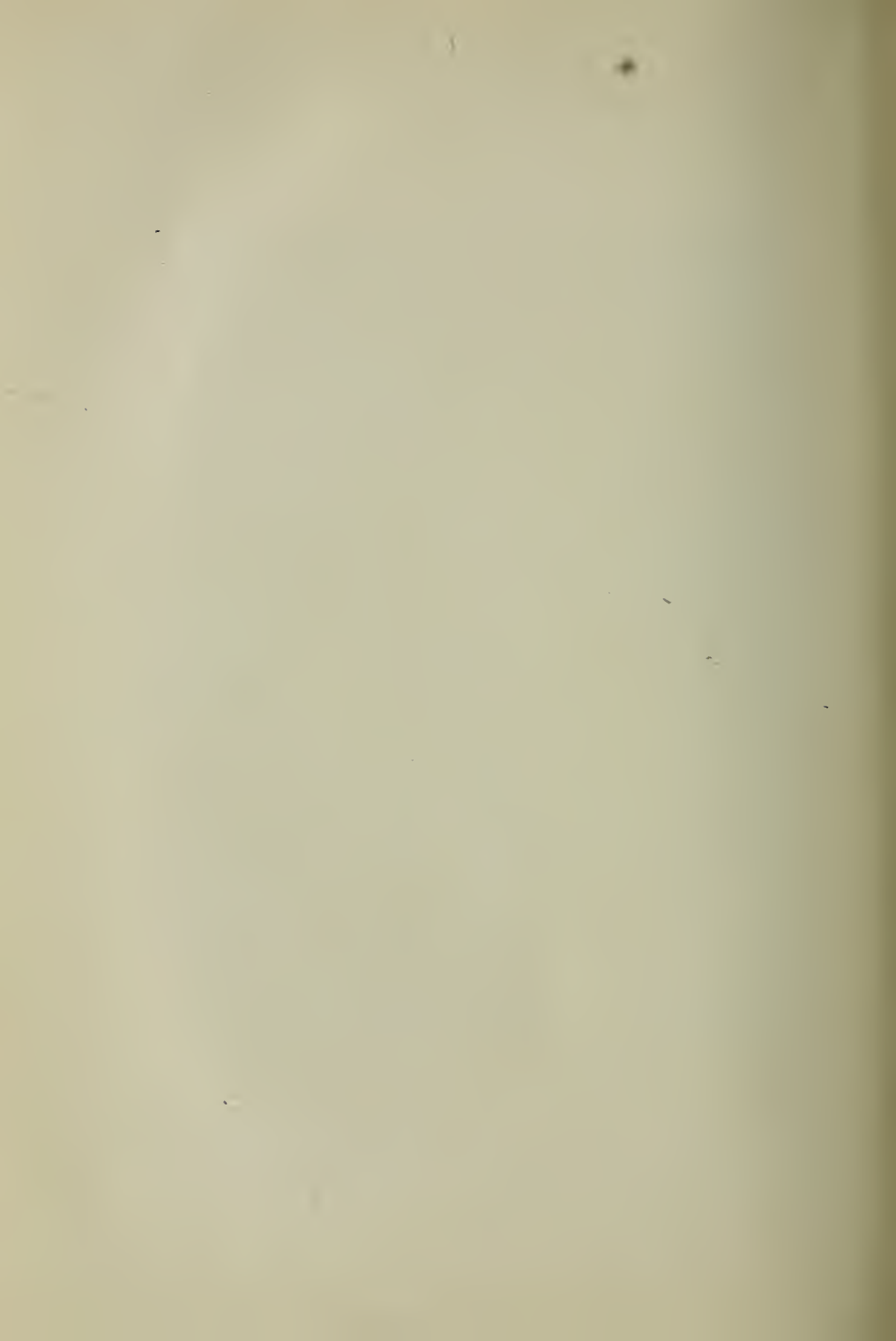
† C. O., *Zoologist*, 1905, p. 37.

‡ *Manual British Birds*, p. 718.



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chestnut colour is shown by the young until the second year," but even in their first August the crest is often plainly marked and by the middle of September an incipient tippet is visible, which, however, is not fully developed until the third year.

When a captured fish is brought to the surface, the Great Crested Grebe appears to adjust its grip before swallowing it, but never throws its prey into the air to catch it again as it falls head downwards, a trait noticeable in the mode of feeding of the Cormorant and Shag.

Considerable misapprehension still exists as to the method of progression of grebes when on land. Many of the earlier ornithologists asserted that the bird could not walk upright, and when on land shuffled along on its belly, pushing itself forward by its feet; and even in the illustrations of several modern works on birds, grebes are represented as sitting upon the tarsus or standing bolt upright on their legs. Ungainly and awkward as these illustrations and stuffed specimens in similar attitudes appear, the Great Crested Grebe is an elegant and graceful bird when walking. The neck is curved, the body inclined forward, and the leg is flexed at the heel (*suffrago*) so that the tarsus is clear of the ground, with which it forms an acute angle, and the bird actually walks upon its toes. The bird's movements on land, though not rapid, are perfectly easy and natural.

RED-NECKED GREBE.

Podiceps griseigena (Boddaert).

A rare winter visitor to Cheshire.

Brockholes says that the Red-necked Grebe occasionally visits the Dee Estuary, and Mr. J. A. Dockray has several times in winter seen grebes, rather smaller than the Great Crested Grebe, that he could not identify with certainty, but which were probably referable to this species.

Mr. E. J. Mostyn tells us (*in lit.*) that he has a note, made by his father, the late Captain E. H. Mostyn, about the year 1853, to the effect that a Red-necked Grebe was killed on Puddington Marsh. In the possession of the Mossley Field Naturalists' Society is an immature bird with rich red-brown neck and the white cheeks streaked with greyish-brown, which was shot in 1868 or 1869 on the Tame at Mossley by Giles Andrew.*

We have seen a Red-necked Grebe in summer plumage, in the collection of Mr. John Ball of Henbury, that was shot about the year 1872 on the pool at Rode Hall near Alsager.

SLAVONIAN GREBE. *Podiceps auritus* (Linné).

A rare wanderer to Cheshire.

The Slavonian Grebe has seldom been observed in Cheshire. One in the Grosvenor Museum, Chester, formerly in the collection of the late Captain Congreve, was obtained at Burton in January, 1839. One in breeding dress in the same collection was formerly in the possession of the late R. Nunnerley, who told us that it was shot by his father on Tatton Mere about the middle of the last century.

BLACK-NECKED GREBE.

Podiceps nigricollis (C. L. Brehm).

A rare winter visitor to the estuaries.

The Black-necked or Eared Grebe is a rare straggler to the Cheshire coast and estuaries. Byerley records one from the

* C. O., *Chester Society of Nat. Science and Lit.*, Report 33, 1903-1904, p. 13.

Mersey near Tranmere, and there is one in the Grosvenor Museum, Chester, which was taken in a fishing-net at the same place in December, 1897. In November, 1906, one was killed on the Dee Marsh.*

A young male was shot in rough weather on September 27th, 1856, on a pond at Bagillt, on the Welsh side of the Dee Estuary.†

LITTLE GREBE. *Podiceps fluviatilis* (Tunstall).

Local names—DABCHICK; DIVER; LITTLE DIVER; DOUKER; DOWKER; JACKY DOWKER; FOOT-IN-ARSE; FOOTARSE.

A fairly common resident on the meres.

The Little Grebe is widely distributed throughout the Cheshire lowlands in the breeding season, and in winter is often seen on waters where it does not nest. At this latter season, even when the ponds and meres are not frozen, it occurs on swift-flowing streams and rivers. Brockholes, writing in 1874, said that he had not seen the bird in Wirral for ten or twelve years, but now it is not uncommon on ponds at Meols, Heswall and elsewhere. On most of the meres in the plain it is common, and it also nests in secluded marlpits, and ponds in woods; it breeds in some numbers on the flashes in Delamere Forest which are occupied by the Black-headed Gull, and a few may usually be seen on the big subsidence at Witton Brook close to the town of Northwich, while several pairs nest in the rushes and vegetation surrounding the pools on Knutsford Moor. A few pairs breed in the hill-country, on a pool in Lyme Park, on Bosley Reservoir, and probably in other places.

* A. Newstead, *Zoologist*, 1907, p. 153.

† A. O. Walker, *Zoologist*, 1856, p. 5321.

The nesting habits of this species agree in many respects with those of the Great Crested Grebe ; the eggs, five or six in number, are always in different stages of incubation, and they are exposed when there are only one or two in the nest, but nearly always covered during its absence after the bird has begun to sit. The Little Grebe does not readily forsake the nest after it has begun to lay. We have on two occasions known birds to lay again in nests from which the eggs had been removed. In one case the clutch which was taken was in an advanced stage of incubation.

The loud, clear, chattering trill, a note heard most frequently in the pairing season, is not referred to in many text-books ; it is, however, the most noticeable sound uttered by the bird, and often reveals the presence of the Little Grebe when, owing to its habit of frequenting reeds and other dense aquatic vegetation, it would escape notice.

The Little Grebe is loth to take wing, and when disturbed immediately seeks safety by diving. It swims, when diving in shallow water, close to the bottom, rowing itself through the water. When swimming on the surface, the tarsi project on either side at an angle of about forty-five degrees with the body, but when under the water, the angle, when the legs are at the forward part of each stroke, is about ninety degrees, while at the end of each stroke the tarsi and feet are extended far beyond the tail. We have frequently watched the bird in a shallow trench which drains Rostherne Mere, and our observations in the open are borne out by watching a captive bird in a bath. The head and neck are outstretched, the wings held closely to the sides, and in no way used to aid progression under water, and the legs, set far back, strike out sideways, simultaneously and not alternately as in a paddling duck. The appearance of the bird as it traverses the bottom of a stream in an erratic course—now thrusting its head into the vegetable refuse which has collected in the hollows, now disappearing bodily beneath it, with its flattened body, closely folded wings, and apparently disproportioned feet—suggests some huge

frog rather than a bird.* The air-bubbles, clinging to the plumage, make it appear a silvery grey. In the forward stroke the toes are gathered together, the anterior edges cutting through the water, whilst the flattened tarsus is turned so as to offer a minimum resistance; in the back stroke the tarsus is half rotated, and the toes spread, providing a large area to grip the water. The anatomical construction which explains the mechanism of swimming, and the curious way in which this bird, in common with other grebes and divers, will shake a leg above its back when resting on the water, have been demonstrated by Mr. R. Newstead.†

If threatened with danger, the Little Grebe will, on coming to the surface after a dive, protrude only its head and neck, the body remaining submerged until it dives again. It will then frequently swim below the surface to an overhanging bank, where it will lie with the body submerged and the head only above the surface. Under these circumstances it may if cautiously approached be captured by hand. Birds thus captured—we once caught three in an afternoon—usually appear to be unable to stand if placed on the ground; they lie prone, the head drawn back between the shoulders, and the feet spread out, apparently helplessly, on either side of the body at angles of about thirty degrees with it. The captured bird, however, does not remain in the prone position long, but suddenly spreading its wings, half runs, half flies to the water, where it instantly dives. When normally at rest and asleep, the head is pushed under and concealed by the raised scapulars, and the bird looks like a ball of brown feathers; the feet are then laid close alongside the wings, clear of the ground, the tarsus being reflexed against the tibia.‡

The Little Grebe can stand upright and run with ease. Birds, captured at Redes Mere by Mr. F. S. Graves and by

* Cf. C. O., *Zoologist*, 1906, pp. 351-353.

† *Research*, January 1st, 1889.

‡ Cf. Newstead, *loc. cit.*, and C. O., *Zoologist*, 1906, p. 352.

Oldham at Rostherne, stood erect with the body inclined slightly forward and the tail perhaps a couple of inches above the ground; the tarsi were clear of the ground, and formed with the toes an angle of rather more than ninety degrees. The birds progressed in a quick pattering run, treading only on the anterior portion of the toes. When alighting after flight the Dabchick, like the other grebes, does not thrust its feet forward to check its course, but strikes the water with breast and belly, and glides along the surface for some distance with feet projecting behind the body and above the water.

On February 21st, 1902, when Rostherne Mere was frozen and there were more Dabchicks than usual in the stream which drains the mere, we found one bird floating dead in the brook with a Bullhead, *Cottus gobio*, firmly wedged, belly upwards, in its mouth. The fish, which was seventy-two millimetres in length, had spread out its gill-covers and driven the sickle-shaped spines with which these are armed into the flesh on either side of the bird's mouth just below the angle of the gape. The Grebe had been choked, and so firmly was the fish fixed in its mouth that we could not by a direct pull extricate it, but had to cut the gape open to release the spines. The stomach of this bird contained a few small pebbles, one full-grown and unbroken *Bythinia tentaculata* (Linné), several fragments of that mollusc and fragments of aquatic larvae.* The stomachs of three Cheshire birds, all killed in winter, contained fragments of hydradephagous beetles, a few fish bones, and vegetable matter, and mixed with these in one case were a few feathers from the bird's own breast. Three larvae of a caddis fly, two water boatmen, *Notonecta glauca*, Linné, and many remains of water beetles were in the stomach of a bird in down.†

* C. O., *Zoologist*, 1906, p. 353.

† R. Newstead, *Food of Birds*, p. 87.

TUBINARES

PROCELLARIIDAE.

STORM PETREL. *Procellaria pelagica*, Linné.

A storm-driven wanderer to Cheshire.

Heavy weather occasionally drives the Storm Petrel upon our coasts, and exhausted birds have been picked up in inland localities. Brockholes, who saw this species not infrequently on the Mersey near Birkenhead, had one that was found dead at Puddington. It has been observed at Ince in the Mersey, and in the winter of 1880–81 several were shot at New Brighton.* On November 10th, 1885, a Storm Petrel struck the lantern of the Dee Lightvessel.†

In the winter of 1856 an exhausted bird was picked up near Stockport,‡ and two are said to have been taken in the east of the county in March, 1894.§ The late R. Nunnerley of Congleton had a Storm Petrel which he shot at Macclesfield some years ago. An example from Walton, in the Warrington Museum, was obtained in 1898.

On November 11th, 1909, Mr. L. N. Brooke saw several petrels in the estuary of the Dee, and on the morning of the same day a Storm Petrel was picked up by Mr. G. Owen in his garden at Barnton near Northwich.

LEACH'S FORK-TAILED PETREL.

Oceanodroma leucorhoa (Vieillot).

A storm-driven wanderer to Cheshire in autumn and winter.

The Fork-tailed Petrel has occurred on several occasions, usually after heavy weather in autumn and winter. One

* Dobie, p. 349.

† *Migration of Birds*, Report 7, p. 116.

‡ L. Grindon, *Country Rambles*, p. 289.

§ *Manchester Guardian*, March 20th, 1894.

was found dead in a field near Wilmslow about the year 1824.* In the stormy winter of 1886-87, when Fork-tailed Petrels were recorded from inland localities in different parts of England, one was picked up near the Northgate Station, Chester, on December 8th, and another was shot at Queen's Ferry on January 10th.† An exhausted bird was picked up in Eccleston Meadows near Chester on October 10th, 1892,‡ and a few days later a dead bird was found near Macclesfield.§

In the east of the county one was procured near Mossley in February, 1896.|| There is one in the Warrington Museum, obtained at Latchford in 1897. During the latter half of September, 1899, a number of Fork-tailed Petrels were obtained in Cheshire. Dr. Dobie examined five from Sealand and the Dee Estuary; one, shot on the 28th, is in the Grosvenor Museum, and another is in the possession of Mr. F. L. Congreve.¶ A bird shot on Frodsham Marsh at this time was reported as a Storm Petrel.** On the 13th or 14th of November, 1899, a Fork-tailed Petrel, now in the collection of Mr. J. Hamilton Leigh, was picked up beneath the telegraph wires on the railway at Adswold near Stockport.

The bird was again present in the autumn of 1900, for Mr. R. H. R. Brocklebank tells us that several were washed up on the shore at Denhall in September. On November 27th, 1905, Mr. A. G. Newling tells us, one dropped on the deck of a New Ferry ferry-boat when it was crossing the Mersey; it was captured, but flew off down the river when subsequently released. On November 6th, 1909, one, now in the Grosvenor Museum, Chester, was picked up on the bank of the Dee below Chester.

* J. Blackwall, *Loudon's Magazine of Natural History*, II., 1829, p. 275.

† Dobie, p. 349.

‡ *Id.*, p. 349.

§ N. Neave, *Natural History Journal*, XVII., No. 145, 1893, p. 16.

|| Stubbs, p. 42.

¶ Dobie, *Chester Society of Nat. Science and Lit.*, Report 29, p. 24.

** *Manchester Guardian*, Sept. 25th, 1899.

PUFFINIDÆ.

MANX SHEARWATER. *Puffinus puffinus* (Linné).

Occurs in summer in Liverpool Bay; has been obtained on the coast and inland on the autumn migration.

During the summer months the Manx Shearwater not infrequently wanders into Liverpool Bay; we have seen birds in June in the Rock Channel off the mouth of the Dee, and on the 20th of that month in 1909 Mr. L. N. Brooke saw four in the Dee opposite Gayton. It is, however, in autumn that it is most frequently noticed, for at that season exhausted birds are picked up on the coast and in inland localities.

The great southward autumnal migration of the Manx Shearwater takes place with remarkable regularity at the very end of August or during the first few days of September, and the body of migrating birds, as a rule at any rate, appears to travel overland as well as across the seas. The exhausted birds that are at this season picked up in all parts of England are not, as generally described, "storm-driven," but are the individuals which have dropped out of passing flocks. No other explanation can account for the repeated appearance of this bird inland at this particular time irrespective of the weather conditions.

The date of the occurrence of one of the eight birds which at various times have been picked up or shot in Cheshire is not known, but six out of the remaining seven have occurred between September 1st and 6th; one only so late as the third or fourth week of September. Two birds in the Grosvenor Museum were obtained near Chester, one picked up dead at Upton on September 1st, 1892, and the other found three days later in an exhausted condition in the goods-shed at Chester General Station. In 1887 one was shot

at Saltney on September 1st.* On September 1st or 2nd, 1897, a Manx Shearwater was captured at Northwich and sent to Manchester for preservation; another was taken alive on a pond at Sale about the year 1889.

Colonel G. Dixon tells us that between the 18th and 21st of September, 1904, a Manx Shearwater was picked up dead in a garden at Chelford; Mr. F. Stubbs examined one that was captured at Shaw Moor near Hollingworth on September 6th, 1906, and there is one in the Warrington Museum that was obtained at Runcorn Bridge on September 6th, 1908.

SCHLEGEL'S PETREL. *Oestrelata neglecta* (Schlegel).

A single occurrence.

The occurrence of Schlegel's Petrel in Cheshire—and indeed in England—is one of those remarkable instances of pelagic birds wandering from their usual haunts which happen from time to time. On April 1st, 1908, one was picked up dead in a field at Tarporley by a farmer who attends the Chester market. On the fourth day after it was found it was purchased by Mr. Arthur Newstead, and is now preserved in the Grosvenor Museum. The bird, which belongs to the dark form of the species, was carefully examined in the flesh by Mr. R. Newstead, and later by Coward; they decided that it could only be referred to this species, and their identification was confirmed when the specimen was submitted to the late Dr. Bowdler Sharpe and Dr. Godman. The bird was exhibited, by Coward, at a meeting of the Zoological Society on May 12th, 1908,† and subsequently at a meeting of the British Ornithologists' Club on May 20th, 1908.‡

* Dobie, p. 349.

† *Proc. Zool. Society*, 1908, p. 433.

‡ *Bulletin of the British Ornithologists' Club*, CXLIII., Vol. XXI., p. 101; Newstead and Coward, *British Birds* (Mag.), II., 1908-1909, p. 14.

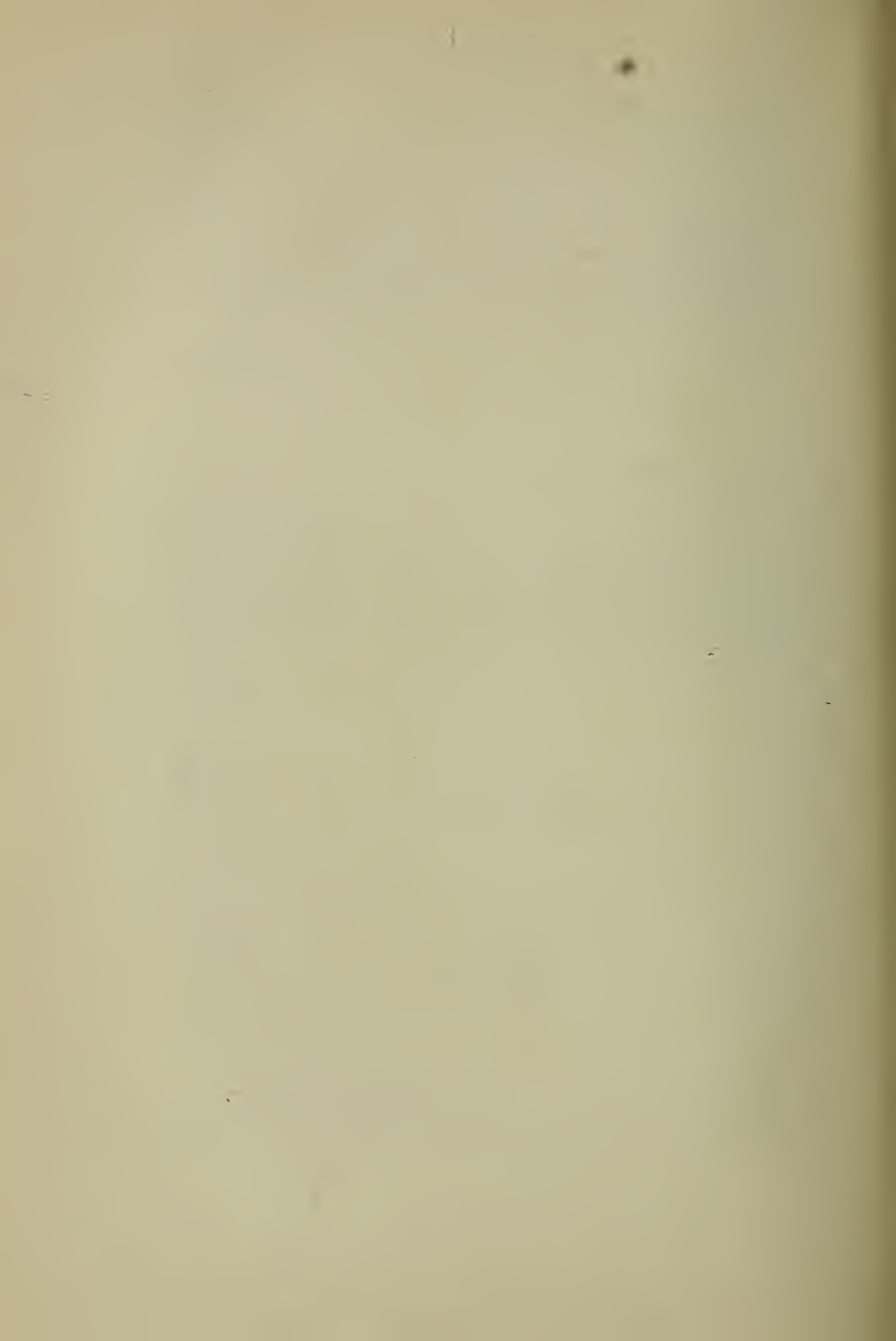
Schlegel's Petrel, which had not been previously recognised in the Atlantic, is known only as a South Pacific species, occurring in the neighbourhood of the Kermadec Islands, although it is possible that it may have other, hitherto undiscovered, breeding haunts. At any rate, the Tarporley bird, like other petrels of the genus *Oestrelata* that have occurred in Britain, must have strayed to a great distance from the customary habitat of the species.

FULMAR. *Fulmarus glacialis* (Linné).

Has occurred twice as a straggler.

The Fulmar has, so far as we know, only been observed twice in Cheshire waters. Byerley records one from Wallasey, during stormy weather in the spring of 1854, and there is one in the Grosvenor Museum which was picked up dead on the river bank at Chester on October 4th, 1894.

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