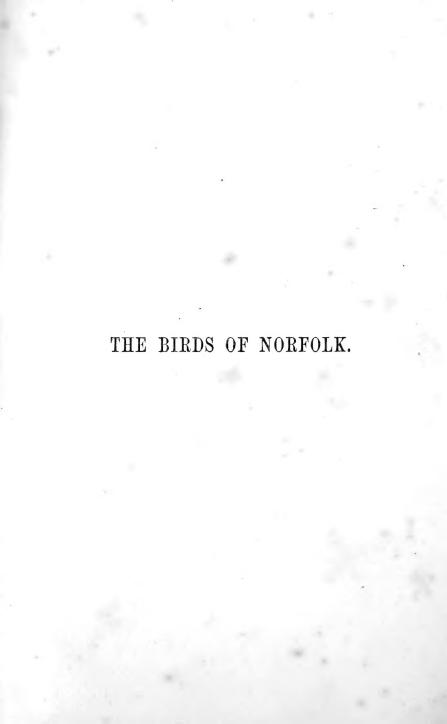


Taul Leverkühn.









"BARCATE" SURLINGHAM BROAD

6/2/30 Resce

# BIRDS OF NORFOLK,

WITH

59.82(A2.61)

REMARKS ON THEIR HABITS, MIGRATION, AND LOCAL DISTRIBUTION:

BY

# HENRY STEVENSON, F.L.S.,

MEMBER OF THE BRITISH ORNITHOLOGISTS' UNION.

Three

IN (TWO VOLUMES.

VOL. I.

"Etiam si sint alia graviora atque meliora, tamen nos studia nostra naturæ regula metiamur."

Cic. de Officiis Lib. I., cap. 31.

LONDON:

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MATCHETT AND STEVENSON. 1866. 30-11738-9-June 2

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#### ERRATA AND CORRIGENDA.

Page. Line.

xv ... 35. For inclosed read enclosed.

xxxiv ... 14. For Hanworth read Hunworth.

4 ... 8. For chrysaëtos read chrysaëtus. After spring read (1865).

14 ... 14. 43 ... 29. In the two foot notes, transpose the \* and †.

60 ... 27. For Little Gallimot read Little Gallinule.

78 ... 18. For what it doth resemble, read what does it resemble?

83 ... 12. For apparently read undoubtedly.

For Mr. Samuel Blyth, read Mr. Samuel Bligh; vide 185 ... 8. also pp. 203, 275, and 302.

191 ... 25. For quacking, read quaking. 240 ... 23. After larger species, read which is.

263 ... 19. For some other fowls, read and other wild fowl.

363 ... 27. Dele comma after Besides.

materials have been chiefly collected, are as follow:-

"Extracts from the Household and Privy Purse Accounts of the Lestranges, of Hunstanton, from 1519 to 1578." [Published by D. Gurney, Esq., in the Transactions of the Royal Society of Antiquaries, for 1833.7

That the "items" in this "private ledger" would assume, in after years, a literary importance, was of course, never contemplated by its compilers, but from many of its quaint entries an insight is obtained, not only into the



### PREFACE.

The extreme richness of the Ornithology of the county appears to have early attracted the notice of Norfolk naturalists, and fortunately the records of their observations are to a great extent preserved to us, though scattered amongst the "Transactions" of Learned Societies, and other publications, not always accessible to the general reader. To combine a resumé of the facts thus handed down to us, with the result of personal observations extending over several years, was the idea that first originated the present work; and there is, perhaps, no better motive for incurring the labours and doubtful honours of authorship than the desire to supply to others a want that has been personally experienced.

Chronologically arranged, the sources from whence my materials have been chiefly collected, are as follow:—

"Extracts from the Household and Privy Purse Accounts of the Lestranges, of Hunstanton, from 1519 to 1578." [Published by D. Gurney, Esq., in the Transactions of the Royal Society of Antiquaries, for 1833.]

That the "items" in this "private ledger" would assume, in after years, a literary importance, was of course, never contemplated by its compilers, but from many of its quaint entries an insight is obtained, not only into the

habits and customs of the period, but also as to the scarcity or abundance of certain birds in this county, and their use at that time for the table or sporting purposes.

"An Account of Birds found in Norfolk." By Sir Thomas Browne, but not published till after his death in 1682. [Wilkin's Edition of his works, vol. iv.]

This short but most valuable list of species, which dates only a century later than the L'Estrange accounts, affords the means of comparing, with singular accuracy, the present state of the county with its ornithological condition about two hundred years ago. In some few instances, also, we get glimpses of a still earlier period, in the "hearsay" evidence of that most enquiring and universal genius.

"British Ornithology." By John Hunt. [Norwich, 1815.]

Next in point of date, though after a long interval, this work, compiled and illustrated by the late Mr. Hunt, an engraver and bird preserver in Norwich, but unfortunately never completed, contains many valuable notes on Norfolk Birds, and in both the drawing, colouring, and engraving of its numerous plates, exhibits a very considerable amount of talent in the artist.

"A Catalogue of the Norfolk and Suffolk Birds, with remarks." By the Rev. R. Sheppard and the Rev. W. Whitear. [Transactions of the Linnean Society, 1826.]

This admirable paper, the first part of which was read before the Society in 1824, contains a complete list, to that date, of the birds of both counties, and was evidently the result of a gradually awakening interest in Natural History subjects. Arranged in a scientific form, its ample details supply many interesting particulars at a time when certain species, now no longer resident, were gradually becoming scarce.

"A List of Birds," contributed by Mr. Hunt to Stacey's History of Norfolk. [1829.]

This contribution to the general history of the county contains notices of many rare specimens either in the possession of the author or other local individuals, and here, again, the gradual decrease in the numbers of certain species is specially noticed.

"Sketch of the Natural History of Yarmouth." By C. J. and James Paget. [1834.]

Confined exclusively to the fauna of Yarmouth and its neighbourhood, the ornithological portion, of course, forms a prominent feature in such a district, and though the remarks on each species are extremely brief, yet the carefully written introduction contains many curious facts with reference to the amount of wild fowl and other shore birds then visiting our coast.

"Observations on the Fauna of Norfolk." By the Rev. R. Lubbock. [1845.]

This deservedly popular work, and the one with which our local naturalists are best acquainted, professes only to treat of the rarer kinds amongst our land birds; but of such species as are found in the "Broad District,"—of the peculiar features of that portion of the county, and of the formation and working of decoys, the author's descriptions leave nothing to be desired. Both for its felicity of style and abundant information, it must rank as one of those happy efforts of the "out-door" naturalist, for which White's Selborne, as the first example, created a fresh demand.

"An Account of the Birds found in Norfolk." By Messrs. J. H. Gurney and W. R. Fisher. [Published in the "Zoologist" for 1846.]

It is greatly to be regretted that this, the latest and most perfect list of the "Birds of Norfolk," has never been

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re-published for general circulation. With the exception of a few subscribers to the "Zoologist" at the time, scarcely any of our local naturalists are aware of its existence. Indeed, with the exception of Lubbock's "Fauna," the same may be said of nearly all the rest, whilst both Mr. Hunt's and the Messrs. Paget's works are out of print, and extremely scarce. With this catalogue, comprising short notes on each species, and including many rarities not hitherto recorded, was also given a very valuable introductory paper, in which the natural attractions of the county for the feathered tribe, the local changes that have of late years affected our residents, and the chief causes of the predominance of migratory visitants to our coast, are all briefly discussed in a manner which established the reputation of its authors as sound naturalists.

As may be imagined the interval of just twenty years, since this last publication, has not passed without many and great changes being effected in the physical condition of the county; and much that was then accurately descriptive of its ornithological status, is now but a tale of the past. Residents have become migrants, and migrants resident, though the latter in fewer instances, and from very different causes; whilst no less than eighteen species, all rare and accidental visitants, have been added on good authority. Of such occurrences since 1846, records have been made, from time to time, in the pages of the "Zoologist," and from these details, together with the communications of local naturalists and a careful analysis of my own note-books for the last sixteen years, I have been enabled to bring down to the present time the history of the "Birds of Norfolk."

Having recently visited, during the summer months,

<sup>\*</sup> The chief contributors, from this county, to that storehouse of ornithological facts, being Mr. J. H. Gurney, Mr. W. R. Fisher, Messrs. A. and E. Newton, the Rev. H. T. Frere, and the author of the present work.

nearly all the principal Broads, and the coast-line, with but little intermission between Yarmouth and Lynn, I can speak with some confidence as to the species that still nest in those localities, as well as to the total absence of others formerly common enough during the breeding season. I have also taken much pains by an inspection of both private and public collections to identify, whilst it was yet possible to do so, the rarer birds recorded as having been killed in this county during the past half century; but, although in many instances I have been enabled to ascertain the existence and present location of "historical" specimens, the absence of any memoranda attached\* has, in other cases, through lapse of time, entirely defeated my object.

The biographical sketches of the more common species have been written, rather with the hope of exciting an interest in the study of birds amongst those but little given to natural history pursuits, than with the idea of adding anything to the knowledge of such readers as are accustomed to observe for themselves, in their outdoor rambles. Presuming, also, that all who are interested in the study of British ornithology, either possess their "Yarrell," or the means of referring to such works in our public libraries, I have not attempted any description of form or plumage, except where rare and little known species have come under my notice in a recent state; thus enabling me to note down the more evanescent tints, or to take accurate measurements before preservation.

That the very modest plans with which I commenced my task have gradually assumed proportions I could

<sup>\*</sup> The importance of affixing written particulars as to date and locality to all cases containing rare local specimens cannot be too strongly impressed upon collectors of stuffed birds, the absence of any such means of identification materially affecting their value, in a scientific as well as pecuniary sense, if subsequently disposed of.

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never have anticipated, is owing mainly to the encouraging suggestions of those who take a like interest in the birds of their native county; and though I trust that in no instance the sources from whence I have derived information have passed unnoticed, there are still some friends to whom my thanks are especially due.

To Mr. J. H. Gurney and Professor Newton I am indebted not only for the interest they evinced from the first in the objects I have had in view, but for the invaluable assistance afforded me through their perfect acquaintance with ornithological subjects, whether local or general. To the latter, also, I owe the advantage of a personal supervision of these pages, whilst passing through the press, an act of genuine friendship which will ever be held by me in very grateful remembrance.

Through the courtesy of the late Sir William Hooker I have been enabled to include several very interesting MS. notes, made by himself and other naturalists at Yarmouth and its environs, between 1807 and 1840; and to Mrs. E. P. Clarke, of Wymondham, I am similarly indebted for extracts from the private memoranda of the late Mr. Edward Lombe, when forming his magnificent collection of British birds.

The Rev. E. W. Dowell, of Dunton, whose practical knowledge, as a sportsman and naturalist, of the forms and habits of our littoral species renders his information of peculiar value, has also, in the most liberal manner, placed his MS. notes entirely at my disposal, which, I need scarcely remark, will add materially to the completeness of the latter portion of the work.\*

<sup>\*</sup> Mr. G. D. Berney has very kindly forwarded me particulars of the protection afforded to the Barn-Owl, on his father's estate at Morton, and in other parts of the county, but these having unfortunately reached me too late for insertion in my notes on that species, will appear in an appendix to the second volume, with the latest incidents of any special interest.

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To those correspondents, also, in different parts of the county, who have supplied me with the earliest intimation of rare occurrences in their respective districts, I here beg to express my best acknowledgments. But for their kindly co-operation many important facts would, in all probability, have escaped my notice, and in recording the names of Capt. Longe and Mr. F. F. Frere, of Yarmouth; Mr. Rising, of Horsey; Mr. Newcome, of Feltwell; the Rev. H. T. Frere, of Burston; Mr. Dix, of West Harling; Mr. F. Norgate, of Sparham; the Rev. T. Fulcher, of Old Buckenham; and Mr. T. Southwell, of Fakenham, I feel no little pride in having interested so many zealous naturalists and collectors in the occupation of my leisure hours.

Nor can I omit testifying at the same time to the unvarying civility and assistance I have received from our provincial taxidermists. To the late Mr. John Sayer, his assistant Mr. Gunn, and Mr. Knights, of Norwich, I owe many opportunities of examining in the flesh the rarer specimens that have passed through their hands for some years past, and in most cases of ascertaining, by dissection, peculiarities of food, or internal construction. My thanks are also due for various communications to Mr. Ellis, of Swaffham, and Mr. Baker, of Cambridge, as well as to Mr. Phear and Mr. Cole, but recently established in this city.

In conclusion, I may state that as a contribution only to the wider field of British ornithology, I have adopted both the nomenclature and systematic arrangement of Yarrell's "British Birds," as being the most familiar and, therefore, easiest of reference. In such few cases, however, as I have deemed it necessary to differ, even from such an authority, for the sake of specific distinction, (vide Falco candicans, Salicaria strepera, &c.), the motive for so doing has been fully explained in the text.

It would be needless to offer any comment upon the productions of Mr. Wolf's gifted pencil, but having been

fortunate enough to secure his services, I have additional gratification in remarking the care and skill with which his exquisite drawings have been re-produced by the colourist Mr. William Smith, and Messrs. Hanhart and Co., the lithographic printers.

The Frontispiece to the present volume was executed by Messrs. Wolf and Jury, from a water-colour drawing taken on the spot by Mr. Reeve, Curator of the Norfolk and Norwich Museum.

H. S.

Norwich,

December, 1866.

## INTRODUCTION.

Norfolk, bounded on the north and east by the German Ocean and the great estuary of the Wash, is insulated, as it were, in every other direction by rivers—the Waveney and Little Ouse dividing it from Suffolk on the south, and the Great Ouse, Welney, and Nene from Cambridgeshire on the west. In form it is nearly oval, being in length about sixty-five miles, from Yarmouth on the east to the most westerly point at Walton on the Ouse, and in width extends just forty miles, from Blakeney on the north to the Waveney at Lopham on the south. Its circumference, taking the coast line at high water mark, may be reckoned at two hundred and twelve miles; and, geographically speaking, it lies between 52 deg. 22 min. and 53 deg. 1 min. North Latitude, and 9 min. and 1 deg. 42 min. East Longitude from the meridian of Greenwich.

Thus favourably situated with reference to the opposite coast of Holland, which presents so many features in common; as well as to the north-east coast of our own island and the west coast of Norway, the pre-eminence of Norfolk, as a rich ornithological district, is sufficiently accounted for, independently of the favourable conditions afforded by the diversity of its soil and sudden transitions from one formation to another. As a maritime county, also, with a projecting coast-line—extending over eighty miles from Yarmouth on the extreme eastern point to Lynn and Marshland on the north-west, this inviting district forms

not only a place of "call" for periodical migrants, but a welcome haven to the storm-driven wanderer or chance straggler from all quarters of the globe. Birds in their wanderings are apt to follow coast lines,\* especially in autumn, when seeking their winter quarters to the southward—a bird, therefore, striking the east coast of Scotland, or north-east of England, follows the land southward and is "brought up" sharp by Norfolk, which first presents an obstacle to its southerly progress. Consequently its stay here is somewhat protracted, and it becomes observed, and most commonly killed if rare or particularly attractive in plumage. And thus it happens that a classified list; of the birds of Norfolk shows an excess of migrants over residents amounting to nearly two-thirds, whilst the latter are even outnumbered by rare and accidental visitants. However much then the habits of certain birds may have been affected, of late years, by local causes, the actual number of species in the Norfolk list appears still on the increaset—the study of ornithology as a popular science having led to the identification of many formerly overlooked, and rarities being far too keenly sought for to pass long unnoticed.

<sup>\*</sup> Birds, also, striking the coast of Norway, and following that to the Naze, attempt to cross the North Sea in the same general direction, and consequently alight upon Norfolk. In this way Professor Newton is inclined to explain the occasional appearance on our coast of American Sandpipers and Ducks.

<sup>†</sup> A statistical table of species will be found appended to the second volume, showing under the head of Residents the indigenous birds, and those which receive additions to their numbers in autumn and winter; and under the head of Migrants, the periodical, occasional, and accidental visitants.

<sup>‡</sup> In 1846 Messrs. Gurney and Fisher gave the total number of species as two hundred and seventy-seven, and yet omitting two or three hitherto included on insufficient authority, they amount to not less than two hundred and ninety-one at the present time.

In taking a general survey of the county, with reference simply to its attractions for the feathered tribe, the whole area appears divisible into, at least, six different sections, each possessing some features of a distinctive character, adapting it specially for the habitation of certain species. At the same time there are a few birds, and those chiefly belonging to the Insessorial order, that have a general distribution, their numbers varying only according to local conditions of food or temperature. These faunal divisions, then, if one may so term them, may be thus enumerated:—

1st. The "Broad" district in the vicinity of the coast, on the extreme eastern boundary.

2nd. The "Cliff" district lying further to the north, with its furze covered hills, heaths, "half year" lands, and richly wooded valleys, contrasting strangely with the bleak level of the eastern fens.

3rd. The "Meal" district with its warrens on the coast, its flat shores, creeks, and saltmarshes; yet in close vicinity to some of the finest estates and most picturesque spots in the county.

4th. The "Breck" district to the west and south-west—formerly the haunt of the Great Bustard (Otis tarda), and now the home of the Norfolk Plover (Ædicnemus crepitans)—with its wide open fields of light land, mixed with some of the wildest and most extensive tracts in the county of heath, fir-covert, warren, and sheep-walk.

5th. The "Fen" district, being a portion of the Great Bedford Level, which, commencing close to the border-town of Brandon, extends over the south-western part of the county to Lynn, and still retains, in spite of drainage and cultivation, sufficient traces of its normal character to constitute a separate section.

6th. The "Inclosed" district in the eastern division of the county, more particularly around Norwich and

in the south-eastern corner, with its small fields, clustering homesteads, rich meadows, and well timbered hedge-rows.

#### THE BROAD DISTRICT.

To enter more fully, however, into the physical peculiarities of these different sections, we shall commence with the Broad District, both as possessing the greatest amount of interest for the naturalist and sportsman, and presenting, notwithstanding the results of agricultural enterprise, certain local conditions peculiar to the north-eastern portions of Norfolk and Suffolk. It is only necessary, as Mr. Lubbock remarks, to draw an imaginary triangle on the map from Lowestoft to Norwich, and thence in a north-easterly direction to the sea at Happisburgh, to include the whole of that "great alluvial flat, once the bed of the Garienis ostium," whose sluggish waters give rise to those shallow lakes or lagoons, here locally termed Broads. It is, moreover, worthy of notice that the wide extent of coast-line which would thus form the base of the triangle, presents (with the exception of a low range of cliffs between Lowestoft and Yarmouth) the same level features as the surrounding country. The flat sandy shore, raised here and there by beds of "shingle," is backed only by such natural barriers against the influx of the tides, as are presented by the undulations of the grassy "Denes" in the vicinity of Yarmouth, or the "Marram" hills, extending northward as far as Happisburgh, which consist of steep banks of blown sand loosely bound together with the roots of marram\* (Arundo arenaria) and other grasses. Further inland, again, are marshes in every stage of reclamation, and an

<sup>\*</sup> This local word is nearly identical with the Danish name of the same plant, Marehalm—i.e., Mere-haulm or sea-straw.

extensive warren at Winterton has peculiar attractions for the larger Raptorial migrants.

With no more decided boundary between the two counties than the rivers Waveney and Little Ouse, it is impossible to speak of the Norfolk Broads without reference also to those of the sister county, since the mere accident of a bird's landing a few yards further to the north or south may decide the claims of either to some rare specimen. On the Suffolk side of the Waveney, then, are Lake Lothing, Oulton, and Fritton waters (the latter with a decoy still in working order), all of which have contributed much to the avi-fauna of that county; and nearest to these, within our own boundary, and immediately abutting on the town of Great Yarmouth, lies the far famed Breydon. This great tidal basin, the common embouchure of the Yare, the Waveney, and the Bure on their seaward course towards the mouth of the Haven, presents, alternately, a wide sheet of shallow water, three miles in length and a mile and a-half in width, or extensive mud "flats" when the converging streams are confined for a time to their narrow channels. flood tide, however, the navigable portions are indicated by long lines of posts on either side, and thus wherries and other light craft are enabled to avoid the shoals. It is impossible to imagine a spot more attractive than this both to the grallatorial and natatorial tribes, the "flats," at low water, affording throughout the year an inexhaustible supply of food in the shape of Crustacea, Mollusca, and various aquatic insects. The harder the winter the greater are the flocks of Dunlins and other Tringæ, Gulls, and wild fowl collected here as to one common banquet, when frozen out from more inland waters; and incredible almost are the numbers killed in some seasons by the gunners, whose flat-bottomed boats float in the little creeks, or are pushed easily over the "muds" when a "lumping" shot presents itself.

Probably more rare birds have been killed on Breydon than in any other part of the United Kingdom; and since, owing to the experienced eyes and constant watchfulness of our fowlers few rarities escape them, in several instances, as shown by Yarrell and others, species new to the British list have been procured here for the first time.\* A low embankment surrounds the whole area of these "flats," and protects the surrounding marshes, now drained for grazing purposes, from constant inundation; but they are still at times laid under water from the effects of extremely high tides, or a rainy season, and are then as attractive as ever to the ducks and waders. This large tract of marshes, both salt and fresh water, stretches away for miles to the north of Yarmouth running parallel with and close to the sand-hills at Ormesby, Hemsby, and Winterton, and the saline character of those nearest to Breydon, as at Caister, Burgh, and Bradwell, is indicated by the large number of shrimps and other Crustacea to be found in the drains.

Could we now, looking inland from the "Denes" at Yarmouth, obtain a sufficiently elevated position—say from the summit of the Nelson Column, if twice its present height, we might take a literally "bird's eye" view of this singularly level district; and tracing back from its junction with Breydon the winding course of the Bure, and its tributaries the Ant and the Thurne, should perceive, with a good glass, the exact localities of the principal Broads in this neighbourhood. First of all, looking in a north-westerly direction over the town of Yarmouth, and within five or six miles, Filby, Rollesby, and Ormesby, a perfect cluster of small

<sup>\*</sup> Amongst these may be noticed the Broad-billed and Pectoral Sandpipers (Tringa platyrhyncha and T. pectoralis), the Buffelheaded Duck (Fuligula albeola), and the Hooded Merganzer (Mergus cucullatus.)

lakes, would attract our notice, and appear, probably, in the distance as one large sheet of water. Ormesby, the Yarmouth Water Works receive their supply, and the whole chain, comprising some seven hundred acres, discharges through the "Muck-fleet" into the Bure, below Acle Bridge. Beyond these, and somewhat further to the north, we should see Martham Broad on the Thurne, and connected also with the "Hundred stream," on the further bank, Ludham Broad, and the wide expanse of Heigham Sound. communicating both with Hickling and Horsey Mere. Hickling Broad, with the exception of Breydon, the most extensive, is computed at upwards of three miles in circumference, and covers about four hundred acres: Horsey Mere, within a mile of the sea, one hundred and thirty acres.\* Further still, in the distance and to the west of Hickling, a bright glimmer amongst the trees would mark the site of another group, including the fine waters of Barton and Irstead, with Stalham and Sutton Broads in close proximity, all communicating at various points with the navigable river Ant. And Dilham Broad, within three miles of Happisburgh, with East Ruston Common (one of the few "wet" commons now remaining in Norfolk), would still come within the limits of our imaginary triangle.

Again, tracing back the course of the "reluctant Bure" from its junction with Breydon water, we should find, massed together as it were, between the mouth of the Thurne and Wroxham Bridge, South Walsham Broad and Ranworth, with its decoy, Salhouse, Wroxham, and

<sup>\*</sup> The estimated extent of the larger Broads has been taken from "White's Gazetteer" and Nall's "Handbook of Great Yarmouth and Lowestoft." I have never been able to obtain a satisfactory explanation why Horsey should be so commonly termed a Mere, whilst all similar waters, in this neighbourhood, are as constantly called Broads.

the two Hovetons, each presenting in some degree distinctive features, though alike in their general aspect. Here, twisting and turning in its dubious course, the river itself resembles the main channel of some gigantic Broad, its narrow borders being still further contracted by encroaching vegetation and the mud and shoals which almost stop the navigation in some places. Drainage has effected but little change in these wild districts, preserved, as they are for the most part, for sporting purposes, and the level marshes below Acle Bridge, with their lofty steam mills and trim margins, give place, as we proceed up-stream, to a more natural and unrestrained fertility. Deep sedgy "ronds" or dense masses of reeds and rushes, shut out, at times, the adjacent marshes. On the one hand a wide expanse of swampy ground, relieved here and there with belts of alder and birch, or dwarf coverts, suggestive of Pheasants and Woodcocks in autumn, blends Broad with Broad; on the other, some slight recess in the waving reed-screen is covered in summer with a profusion of water-lilies; or an alder-carr, fringing the water's edge, casts a grateful shade in strange contrast to the surrounding glare. Everywhere the rich aquatic herbage teems with birdlife. Reed and Sedge-Warblers (Salicaria strepera and S. phragmitis), with their constant companion, the Black-headed Bunting (Emberiza scheniclus), are heard on all sides, and occasionally, though yearly becoming more scarce, the beautiful little Bearded-Titmice (Calamophilus biarmicus) may be seen uttering their sweetly musical notes as they flit amongst the reeds. Coots, Rails, and Water-Hens, appear and disappear at every bend. Black-headed Gulls (Larus ridibundus), from their breeding grounds at Hoveton, mingle their incessant cries with the warning notes of the Lapwing (Vanellus cristatus) and Redshank (Totanus calidris), and the Common Snipe (Scolopax gallinago), which here

breeds regularly and in considerable numbers, adds its strange drumming noise, at intervals, to this "armony of fowles." Wild Ducks (Anas boschas) in large quantities. and many a "coil" of Teal (A. crecca) are also reared on these waters, and afford good "flapper" shooting in July and August; and of the rarer species that may still be named as summer residents on the larger Broads, are the Shoveller (A. clypeata), Garganey (A. querquedula), and Great-crested Grebe (Podiceps cristatus); the Ruff (Machetes pugnax), now confined entirely to Hickling, and the Marsh-Harrier (Circus æruginosus), if by chance escaping the doom of its race. The Spotted-Crake (Crex porzana), as well as the common Water-Rail (Rallus aquaticus), nest in the almost impenetrable swamps, which accounts for their eggs being so rarely obtained; and the accidental discovery, at Potter-Heigham, during the past summer, of the nests and eggs of Baillon's Crake (Crex baillonii), never before known to breed in Norfolk, shows that even greater rarities may pass unobserved in such localities.

It would be needless to enumerate every little pool which, surrounded by a wide tract of marsh, or reedground, derives its local appellation from some adjacent village. Of such there are many scattered here and there, these waters varying in size, as Mr. Lubbock remarks, from the "provincial pulk-hole to the wide expanded lake," but those above mentioned comprise all, in this neighbourhood at least, deserving of special notice.

The Yare, in its less winding course between Norwich and Yarmouth, with a stronger current and a deeper channel, gives rise to but three of these shallow backwaters—Surlingham, Rockland, and Hassingham—which complete our list. The first of these, within five or six miles of Norwich, and comprising, with the surrounding marshes, nearly a hundred acres,

is situated in the valley between Brundall and Coldham-Hall, and has two outlets to the river. Further down, but also communicating with the main stream, is Rockland, covering about sixty acres; and Hassingham, a much smaller but exceedingly pretty Broad lies on the opposite side between Buckenham and Cantley. In this locality, however, in strange contrast to the banks of the Bure, cultivation and drainage assert their supremacy. The Great Eastern Railway, between Norwich and Yarmouth. traverses some of the finest Snipe grounds of former days, and, where Ruffs and Reeves abounded at no distant period, grazing stock find pasturage at almost all seasons. A considerable outlay also of late years for dredging and setting back the ferries and other obstructions, has deepened and widened the bed of the river, and though broad "ronds" between Buckenham and Reedham, covered with a profusion of coarse vegetation, afford ample harbour for many marsh breeding birds, there is still a certain trimness, as compared with the Bure, which accounts at once for the absence of several former denizens.\* Yet, if these are

<sup>\*</sup> The Rev. Kirby Trimmer, in his "Flora of Norfolk," treating of the geological formations of the county with reference to the distribution of plants, thus speaks of the peat in the alluvial district of East Norfolk:—"The peat of the Yare borders both sides of the river with an average breadth of about a mile and a-half from the Yare and Waveney canal to Surlingham; above which to Trowse, near Norwich, it contracts to half a-mile. The widest part of the peat of the Bure is below the confluence of the Ant and the Hundred Stream with that river, the breadth varying from three miles at its northern and southern extremities, to about a mile and a-half in the centre. Along the separate course of these streams the breadth of the peat varies from half a-mile to a mile on the banks of the Bure, from its junction with the Ant to Wroxham; on the banks of the Ant from the junction before mentioned to Stalham Broad; and on the banks of the Hundred

wanting on the reclaimed lands, their place is taken during the nesting season by immense numbers of ground-breeders amongst the Insessorial birds, such as Larks, Pipits, Buntings, and Wagtails; and the same marshes in autumn and winter are frequented, in large numbers, by Starlings, Jackdaws, and Rooks, attracted in a great measure by the presence of the stock. A few Lapwings still haunt the rougher spots, in spite of constant persecution, and in the marsh drains the patient Heron (Ardea cinerea), knee-deep, waits its prey—

"Where Coots in rushy dingles hide, And Moorcocks shun the day."

Though differing much in their general features, the Broads are still characterised, more or less, by the shallowness of their waters. Wroxham certainly affords depth enough for an annual regatta, and a similar water frolic is held occasionally at Hickling, but the latter is nowhere more than five feet deep, and the channel, but indifferently marked out with stakes, is by no means easy of navigation. Many are accessible only by means of flat-bottomed boats, and even these get aground in some places on the peaty bottom, which may be seen only a few inches below the water, wherever duck-weed or other minute vegetation has not coated the surface. Some, as at Ranworth, Barton, Wroxham, and Horsey, present a wide expanse of water, surrounded by reed-beds and rushy borders, with occasional islets of a similar growth; or shrubs and plantations of birch and alder sloping gradually down to the water's edge. Others with a variety of little

Stream to Hickling and Horsey Broads. The upper parts of the Yare and Wensum above Norwich, and of the Bure and Ant above Wroxham and Stalham, as well as their tributary streams, are, in many places, fringed with peaty meadows, varying from one-eighth to one-fourth of a mile in breadth."

channels traversing the reed-beds in all directions, or with small reed-locked pools, opening into each other by the narrowest "gat-ways," offer unquestionably the prettiest and most novel effects. How long, in this utilitarian age, these last strongholds of so many marshloving species may still be spared to us, it is hard to speculate, when we consider the marvellous changes effected during the last fifty years in our own and adjoining counties. Whittlesea Mere, which once extended over sixteen hundred acres, with a circumference of not less than nine miles, no longer exists. The railroad and the plough have alike passed over its reclaimed soil; and the fen districts in the southwestern parts of Norfolk, have, of late years, undergone an exactly similar change. But, independently of reclamation by artificial means, and the gradual substitution of waving corn crops for the swampy growth of reeds and rushes, there are other and natural causes at work, which, unchecked by man, must eventually close up a great many of these Broads. Wherever on the more strictly preserved waters, the reeds and rushes are left uncut to afford better harbour for the fowl, the gradual decay and subsidence of such vegetable matter, added to the rapid growth of the bog-moss and tussucky grasses, quickly chokes up the water-courses, and in an incredibly short space of time affords a footing, firm enough at least for a dog to pass over. At Surlingham, from this very cause, some few channels, which were traversable by boats six or seven years ago, are fast filling up, and there is no doubt that many of the smaller pools, now presenting scarcely more water than a large sized fish-pond, were far more extensive in former times.\* It is also supposed

<sup>\*</sup> The Rev. John Gunn, in his "Geology of Norfolk," published in the third edition of "White's Gazetteer," says—"The discovery of several coins in digging turf in Catfield, near Ludham, the

that this consolidating process is accelerated to a great extent by the soil, washed down after floods, from the roads and uplands; but whether this be the case or not, there seems little doubt that wherever a peaty substratum is permitted to carry on its reclamatory action. the existence of such a Broad, as a shallow reservoir, becomes a mere question of time. Hickling, of course, with a gravelly foundation, is free from danger on this account. As to the rest we must hope that the marketable value of reeds and rushes will henceforth increase, and the area of demand be extended far beyond our own borders. Thus by a yearly harvesting of such marsh produce, the slow processes of nature might be effectually checked, and the majority of our Broads preserved to us for many years to come, to afford sport and pastime to the gunner and angler, and hours of recreation to the scientific collector of birds, plants, and insects. Yet, even now, though in many places cultivation borders closely upon the actual swamps, a stranger visiting these watery wastes, would—amidst the luxuriance of the aquatic herbage, and the stillness. broken only by nature's sounds—experience such a feeling of perfect isolation as few would deem it possible to realise, at the present day, anywhere in the old country.

Before quitting the Broads, properly so called, it may be as well to allude, here, to several natural pools or "Meres," which are all situated within a comparatively small area near the southern boundaries of the county. These inland waters, originating in landsprings,

latest of which was of the reign of Edward VI., proves that there was water when the coins were sunk, and the peat has grown up since, and become a solid turf ground. It is formed by the annual growth and decay of several marsh plants, as the *Typha latifolia*, and angustifolia, Scirpus lacustris, Cladium mariscus, &c., and is estimated at the rapid growth of a foot in twenty years."

and increased by the surface drainage into their wide basins, have also great attractions for aquatic species; and, existing for the most part on private property, are subject to but little disturbance. In size and depth they vary considerably. The largest at Scoulton, which from time immemorial has been a breeding place of the Black-headed Gull (Larus ridibundus), covers with the "hearth" or flat island in the middle, over seventy acres, and is a mile and three-quarters in circumference; but in some places it is quite possible to wade across to the island. Hingham Mere, within two miles of Scoulton, covers over twenty acres; Saham, near Watton, twelve acres; and Diss Mere, in the very centre of that town, five acres—the latter, though the smallest, having an average depth of seventeen and a-half feet. Besides these, in the parishes of East and West Wretham, near Thetford,\* are several similar pools, varying from about twenty roods to fifty acres in extent, and on some of these waters, which are strictly preserved, Teal, Shovellers, and Garganey, are known to breed, and even the

<sup>\*</sup> A new and peculiar interest has been excited of late years in these Wretham Meres, from the discovery through drainage, and the emptying out of the mud, of the remains of "pile buildings" resembling the ancient lacustrine habitations of Switzerland. Professor Newton, in a paper read before the Cambridge Philosophical Society in 1862, gives a most interesting account of the discovery made by Mr. Birch of Wretham, when draining "West Mere" in 1851, and the "Great Mere" in the same locality in 1856. Both in West Mere, with about eight feet of mud, and in Great Mere, with not less than twenty feet, in some places, hundreds of bones were discovered, consisting almost entirely of the red-deer (Cervus elephus) and the now extinct Bos longifrons, but amongst these was a goat's skull, and the skull of a boar or pig. In this district, also, was made the singular discovery, for the first time in the British Islands, of the remains of comparatively recent specimens of the European Fresh-water Tortoise (Emys lutaria). Vide "Annals and Magazine of Natural History," 3rd series, vol. x., p. 224, pls. vi., vii.

Red-headed Pochard (Fuligula ferina) has been seen during the summer months. On most of the large estates, also, throughout the county, extensive lakes and other ornamental waters, adorn the finely timbered parks and pleasure grounds, a two-fold attraction for the feathered race; and besides the rivers already mentioned, the Wensum, Tas, Thet, Wissey, Glaven, Nar, and Babingley, with a few smaller streams, and one or two canals, constructed for navigable purposes, permeate the county in all directions and fully maintain the reputation of Norfolk as a well watered district.

#### THE CLIFF DISTRICT.

To continue our survey of the coast-line, the Cliff District, with its surrounding country, presents a strangely different scene. The wide expanse of sands and shingly deposits are still there, but the sand-hills give place to a long range of "mud" cliffs extending some twenty miles between Happisburgh and Weybourne. These diluvial formations, for the most part varying in thickness from twenty to a hundred feet, attain their greatest altitude (about two hundred and fifty feet), in the neighbourhood of Cromer, and thence, rising or falling in like manner as they proceed westward, are suddenly lost altogether beneath the deep bed of flints on Weybourne beach. Composed chiefly of consolidated mud and blue clay, with "pockets" of gravel, sand, chalk, or marl, their various "contortions" have a special interest for the geologist, apart from the richness of their shelly fragments and the fossil treasures of the mammaliferous crag. Landsprings, from time to time undermining the soil, bring down huge masses on to the beach to be consumed at leisure by the encroaching waves, and the debris thus carried away and deposited again far out to sea, helps to form those sands and shoals which render our coast so

extremely dangerous. The entire face of the cliffs shows evidences of these combined forces. In some places precipitous from top to bottom; in others, with a loose gravelly soil, they slope gradually to the beach; and frequent evidences of former land-slips exist in the deep indents of the upper surface, and in the grass covered boulders, of all shapes and sizes, that form a rugged undercliff. In these wild tracts the roving flocks of Linnets and Finches find a rich seed-bed, and Chats, Wagtails, and Titlarks, a safe resting place when scared from their haunts above. Beneath the brow of the cliff the softer portions are perforated almost continuously by Sand-Martins (Hirundo riparia), and the Kestril (Falco tinnunculus) breeds occasionally in some convenient fissure, but beyond these, in the actual face of the cliff, there are no feathered residents. Between Mundesley and Sherringham are several lofty bluffs, which, though wanting the grandeur of the chalk precipices on our southern shores, are noble objects as viewed from the beach, and here and there the outline of the cliffs is broken by a deep ravine or "gangway" communicating with the neighbouring village. A clear run of water, half hidden by the verdure it creates around, trickles through the hollow to the sands below. a tempting spot to the weary migrant, and one which, at all seasons, like an oasis in the desert, is enlivened by the notes or sprightly forms of our smaller feathered residents. At the base of the cliffs also, extending without interruption between Cromer and Sherringham, are large beds of flints denuded from the chalk, locally termed "rocks"; and these, together with other "travelled fragments" of true primitive rocks form, to some extent, a barrier against the inroads of the sea, which, at low water, exposes their rugged surfaces, picturesquely covered with seaweeds -green, red, and brown. In some parts the chalk

itself crops out above the sands, in others the sands envelope the "rocks," and in the little pools just left by the waves (nature's aquaria on the grandest scale), a dainty feast awaits the littoral tribes in the shape of various shell-fish, sand-worms, and insects, with an abundant supply of Crustacea in shrimps, crabs, and "jumpers." Here Rooks and Gulls, in strange contrast, assemble in flocks during autumn and winter; wandering Terns and Tringæ of different kinds often pause in their flight as they pass along the coast, and the plaintive whistle of the Ringed-Plover (Charadrius hiaticula) is heard at all seasons at the fall of the tide.

Above cliff, throughout the entire range, we find such an alternation of hill and dale, heath, arable, pasture, and woodland as suggests at once an abundant representation of nearly every family amongst our Insessorial and Rasorial birds. In some parts cultivation extends almost to the edge of the precipice; in others, and more especially in the vicinity of Cromer, gentle undulations are covered with the richest turf, and grassy knolls rise here and there from the plains with their sloping sides, and intersecting valleys, covered with a profusion of broom, furze, and brakes, enlivened with the sprightly actions of Chats and Titlarks. Strictly preserved and admirably adapted for sporting purposes, there is here no lack of game. Rabbits burrow in all directions in the loose sandy soil, and their holes, when deserted, form the usual nesting places of the few Wheatears that frequent these hills in summer. The Grey-Partridge, (Perdix cinerea), everywhere plentiful, affords splendid shooting on these rough grounds; and the French Partridge (Perdix rufa) from causes elsewhere mentioned, has also of late become exceedingly numerous. Cromer again to the westward, a wide breadth of pasturage, only occasionally encroached upon for

purposes of cultivation, skirts the edge of the cliffs to their furthest extent; and, more particularly at Runton the banks and pathways exhibit in summer such a profusion of wild flowers as never fails to attract the notice and admiration of visitors.\* The luxuriance of their growth is not less surprising than the variety of colour, nor can we wonder at the flocks of Linnets, Finches, Buntings, and Larks that seek the fragrant shelter of these flowery pastures during the nesting season, and feast in the autumn, with their young broods, on the rich harvest of seeds. The great Corn-Bunting (Emberiza miliaria), amongst others, is very abundant in this locality, and its nest, on the ground, is not unfrequently hidden amongst the thick growth of the modest "rest-harrow."

Still further inland a second range of hills, running parallel with, and extending beyond, the cliffs, adds greatly to the beauty of this romantic scenery, which, in places, may bear comparison with many choice spots on the south coast of the Isle of Wight. From these grassy heights, covered, in many parts, with furze, brakes, and heather, or thickly planted along their sides and hollows, a perfect panorama of the district presents itself; and, looking seawards, the valley beneath is so thickly dotted with clustering villages that one fails not to recall the quaint old couplet—

"Gimingham, Trimingham, Knapton, and Trunch, Northrepps, and Southrepps, are all of a bunch."

<sup>\*</sup> Walter White, in his charming work on "Eastern England from the Thames to the Humber," specially mentions this floral luxuriance, greater than he had observed in any other part of the English coast, and suggests the probability that the presence of chalk and marl in the cliffs may have something to do with it. He also states, on the authority of Professor Babington, "that out of one thousand seven hundred and sixty-seven species of flowering plants found in Britain, one thousand and sixty-seven are found in Norfolk."

The chequered fields lie mapped out before us, mixed with dark patches of wood and belts of fir-covert; or strips of heath, and village greens with little rivulets winding their shallow course towards the "falls" by the sea, afford the truest characteristics of an English landscape. At Runton, also, the "half-year" lands, or unenclosed portions of the parish, present a singular appearance from the fields, being divided, according to ancient custom, by a "mere balk" or boundary instead of fences; the "balks" consisting of small strips of land, from one to two feet in width, which are never ploughed. and being usually covered with a rough growth of thistles and grasses, are frequented, in large numbers, by seed eating birds. Looking, too, from so commanding a situation, over the wide expanse of the German Ocean, one can fully realise the attractions of such a coast to the migratory species. In close vicinity the plantations at Bacton, Northrepps, Felbrigg, Cromer-Hall, Beeston, and Sherringham, invite our summer warblers to "rest and be thankful," and the large flights of Woodcocks that arrive during autumn and winter, here drop into cover on their first arrival or, passing on but a short distance, as the crow flies, reach the still more extensive woods\* at Gunton, Hanworth, Barningham, Wolterton, Blickling, and Westwick. Amongst the fine old timbers on these large estates, the arboreal birds are plentifully distributed, with the exception only of the prescribed Raptors. Of this class, however, many autumnal migrants are either trapped or shot on the hills near the coast, and at times, in

<sup>\*</sup> As Mr. Trimmer remarks, in his "Flora of Norfolk," "There are but few traces of natural woods remaining. Of the numerous other woods, more strictly speaking plantations, those at Raynham, Houghton-juxta-Harpley, Mileham, Blickling, Wolterton, Gunton, Thursford, Swanton Novers, and Foxley, may be specified as some of the oldest and most extensive."

hard weather, even young Sea-Eagles are seen on the high grounds at Beeston and Sherringham. Upon the the common-lands, also, which form a portion of the Beeston Hills, the Norfolk Plover (Edicnemus crepitans), still bred until very recently.

Between Lower Sherringham and the western extremity of the cliffs, at Weybourne "Hope," the shore assumes a very different aspect. Immense beds of shingle gradually usurp the place of the sands, till at Weybourne and Salthouse large rounded pebbles,\* massed together to a considerable depth and covering the whole surface of the beach, rise in long terraces from the water's edge, and form a natural breakwater. At Weybourne, taking advantage of the extreme depth of water close in-shore, the International Telegraph Company have connected their wires with a cable, laid direct from the beach to the opposite coast of Holland, and vessels of considerable size can here run close in with safety. Beyond the beach is a wide tract of marshes, still subject to partial inundations during high tides, and a small "lagoon" or backwater thickly covered, in part, with a coarse vegetation. At this spot there are no shore-breeding birds, but at Salthouse, where the pebbles again become smaller, the Lesser Tern (Sterna minuta) and the Ringed-Plover are found nesting on the shingle, though from the wanton destruction of these birds, and a constant system of egging, their numbers are gradually but surely decreasing.

<sup>\*</sup> Mr. Pengelly, in his geological lectures delivered in Norwich in 1862, thus alluded to the extraordinary deposit of flints on Weybourne beach, all rounded and polished by the action of the waves:—"Every flint proclaims trumpet-tongued the work which it has taken innumerable ages to perform, in the destruction of vast beds of chalk, from which these flints have been liberated. How many ages, too, must it have taken to polish these flints so beautifully."

Parallel with the shore, and extending over a considerable area, are the far-famed Salthouse marshes, which, prior to their drainage and embankment, in 1851, were the resort of hundreds of wild fowl in hard weather, and the breeding grounds of the Avocet (Recurvirostra avocetta) within the last forty or fifty years, when they became exterminated by the same thoughtless persecution as is now fast depriving us of both Terns and "Stone-runners." A shallow tidal lake, known as Salthouse "Broad," three-quarters of a mile wide, and situate between the high lands and the sea, was also, prior to the general reclamation, a noted spot for fowl and waders, and a favourite resort of the Stork (Ciconia alba) and the Spoonbill (Platalea leucorodia), amongst the rarer grallatorial migrants; in fact, next to Breydon, there is no point of the coast where more rare birds have been procured than on Salthouse beach and marshes. In the winter of 1862, owing to extraordinary high tides, a large portion of the embankments was swept away, and the waters once more spreading over their old level, and even extending to the wide basin of the "Broad," were soon covered with immense flocks of Gulls and other sea-fowl; nor has the damage then caused to the banks been altogether repaired up to the present time. A very favourite resort too, at this point, for Ducks and many other aquatic species, is a long narrow back-water, running parallel with the beach, between the raised banks on one side and the shingle on the other. Here the local gunners shoot most of the fowl they obtain in winter, by lying up for them behind the banks; and Grey Phalaropes (Phalaropus lobatus), Little Auks (Mergulus alle), and other rarities, are procured in like manner. In sharp weather, also, it is by no means uncommon to find the Lesser Grebe (Podiceps minor), when frozen

out from more inland waters, desporting itself on this salt lake with the true marine Divers.

More inland, the view is bounded by hills, stretching away to the west like a small mountain chain, and wide heaths and furzy commons, abounding in game, are remnants of a yet wilder district before inclosure and cultivation effected many changes. The "stubbing up" of such fine old woods, as till very recently existed at Holt and Edgefield, has all helped to change the features of this portion of the county; but the pretty vale of the Glaven is richly wooded, and within easy flight from the coast, at either Weybourne or Salthouse, are the Letheringsett plantations, with the Kelling, Hanworth, Stody, and Hempstead preserves. Further inland, again, are the noble park and woods of Melton Constable, comprising altogether some eight hundred acres, which, with those adjoining at Swanton Novers, are the most noted for Woodcocks of any in the county. At Hempstead, a chain of small ponds, and a now unused decoy, lying in the very midst of the coverts, are the constant resort in winter of Teal, Wigeon, Pochards, and other fowl, whilst the reed-beds and swampy borders are well stocked with Coots, Rails, and Water-Hens. On the great heaths and "brecks," also, about Weybourne, Hempstead, and Kelling, the Lapwing, and Norfolk-Plover bred formerly in large quantities, but are now almost exterminated through egging and other causes, and where large baskets full of Lapwing's eggs were taken some twenty years ago, scarcely a nest can be found at the present time. The great increases however, in firelentations half beauty like. increase, however, in fir-plantations both here and in other districts, and the absence of any resident Raptores to thin their ranks, has led to an enormous increase in the number of Wood-Pigeons (Columba palumbus); and the Turtle-Dove (Columba turtur), not many years ago considered a rare summer visitant, is now like the Missel-Thrush (Turdus viscivorus), extremely common.

## THE MEAL DISTRICT.

In this District may be included the entire range of sand-hills between Salthouse and Hunstanton, broken only by the various creeks and small harbours which abound on the northern portions of the Norfolk coast. The "meals,"\* properly so called, like the "marram" hills in the neighbourhood of Yarmouth, are bound together and consolidated by the roots and fibres of such grasses as grow vigorously on the shore in spite of winds and waves. In some places broken up into irregular hillocks, ranged in double rows, the occasional inroads of the sea, during spring tides, are marked by the flat oozy plains between. In other parts they present a bold cliff-like front, rising perpendicularly from the beach to the height of several feet, with here and there a deep bay, hollowed out by the waves and strewn, far above the ordinary high water mark, with the debris of shells and seaweeds.

For the most part preserved for sporting purposes, the "meals" abound in Rabbits, which attract the notice, at once, of the larger Raptorial migrants; and Stock Doves (Columba ænas), in large numbers, breed in the deserted burrows, whilst a sprinkling of Wheatears nest every year in the same locality. On these barren wastes, also, so well adapted to their natural habits, a large proportion of the Sand-grouse (Syrrhaptes paradoxus) that visited this county in such remarkable

<sup>\*</sup> This term, used in Norfolk to designate a wild tract of sandy hillocks lying between the shore and the cultivated lands, is derived from the Anglo Saxon, mel; German, mahl, a boundary; Dutch, meilje, a pier-head; also Icelandic möl, strand-sands, strand-stones. Ir., maol, a headland, hillock, heap. [See Nall's "Handbook of Great Yarmouth and Lowestoft."]

numbers in 1863 located themselves throughout the summer, and specimens were obtained along the whole line of coast from Blakeney to Holme, where the last of the flight still lingered as late as November. Of other shore-breeding species that still nest on the sand-hills or shingle, even in this comparatively wild district, the list is now sadly limited. The Ringed-Plover, of course the most common, is scattered at intervals over the entire range, and a colony or two of the Lesser Tern frequent their old haunts on the beach, or the noisy "crake" of the Common Tern (Sterna hirundo) reveals their home somewhat further from the sea, amidst the coarse herbage of an oozy salt-marsh. Oyster-catchers (Hæmatopus ostralegus) and Sheldrakes (Tadorna vulpanser) once plentiful enough, are to be found breeding only in small and decreasing numbers in the most retired spots about Blakeney and Thornham, and soon, like the Lesser and Common Terns, must be classed with the Black Tern (Sterna fissipes) and Black-tailed Godwit (Limosa melanura), the Bittern (Botaurus stellaris), the Avocet, and other marsh-breeders, which have only ceased to be residents within a very recent period. Stretching away for miles at the back of the sand-hills, a wide tract of marshes, both salt and fresh water, as at Morston, Stiffkey, and Warham, fronts the villages along the coast beyond Holme point; and though at Burnham, Holkham, and Cley, great changes have been effected by extensive reclamation, the whole country is yet strangely wild and attractive to the sporting naturalist. Swamps, pools, and little creeks are the chief features of the marshy levels, and the small ports and tidal channels at Blakeney, Cley, Wells, Burnham, and Brancaster, afford rich feeding grounds for the shore birds on their sandy flats. At these spots, and more especially along the Blakeney channel, and that portion

of the harbour called "Stiffkey freshes" (where the river "Stew" falls into the sea) many rarities in the shape of wild fowl and other littoral species, have been procured from time to time by the punt-gunners.

Hunstanton, alone, throughout this wide extent of sea-board, affords an exception to the unvarying character of the Norfolk "meals;" and here, fortunately, owing to the encroachments of the sea at St. Edmund's point, a solid barrier is presented to the waves by a short but extremely interesting range of chalk cliffs,\* flanked on either side by the brown water-worn formation of the carstone or lower greensand. In the deep fissures of these chalk precipices large numbers of Starlings rear their young as well as Swifts (Cypselus apus) and Jackdaws in smaller numbers; and a few Starlings, and many Sand-martins, excavate their nestholes in the upper portions of the carstone cliff, where, as usual, the Sparrow occasionally usurps possession. The Peregrine, however, (Falco peregrinus) no longer sweeps over the edge to its "eyrie" in the same wide clefts of the chalk, where the nest of the "Gentil Falcon" had been found from "time immemorial," as recorded by Hunt, and whence, in former days, "eyesses" were doubtless taken to replenish the "mews" at the Hall. With the Peregrines are gone also the Common Guillemots (Uria troile), of which a few pairs still lingered in their sea-girt home till within the last thirty or forty summers,

<sup>\*</sup> For the geologist the rocks at Hunstanton have a special interest owing to the fine stratum of red chalk, which, resting on the carstone, underlies the white chalk, and commencing in a thin red line at the extremity nearest the Railway Station, soon attains a thickness of about four feet, and extends nearly a mile to the further end of the cliff. This stratum is said to be peculiar to the counties of Norfolk, Lincolnshire, and Yorkshire, and its colour is attributed by most geologists to peroxide of iron.

and with Stock-doves, Gulls, and Sea-pies, served as a convenient "quarry" for their noble neighbours. It is much to be feared, too, that as a "fashionable watering place," this locality, till lately but little altered in its main features since the fowler and falconer replenished the larder of the L'Estranges' with the same species that are now most abundant on the coast,\* will be despoiled altogether of its former attractions.

The peculiarly flat shores of the Wash, and the distance to which the tide recedes at low water, exposes an immense tract of sands teeming with marine life in the shape of worms and shell-fish, and covered with little runs and pools of water. Beyond these, extensive mussel-scalps, running far out into the sea, afford a constant supply of food at all seasons to both wading and swimming birds; and rough marshes beyond the sand-hills, with small springs of fresh water, are tempting resting places for the migratory fowl, and are still the haunt of a few pairs of Redshanks and Lapwings during the breeding season. No sooner are the mussel-scalps exposed+ in long

<sup>\*</sup> The birds mentioned most frequently in the "Household and privy purse accounts" are Curlews, Spowes (Whimbrels), Plov's, Redeshancks, Knotts, Stynts, Sedotterels, Malards, and Telys.

<sup>†</sup> On examining the largest of these living breakwaters, which extends in a circular form about half a mile, the whole mass will be found composed entirely of myriads upon myriads of small mussels from half an inch to an inch and a half in length, all firmly fixed in the sand with their broadest ends uppermost, and bound and matted together with their fibrous threads or "byssus." To tear up one is to remove a score, and so much are they thus supported by each other that even treading upon them seems of little consequence. Buried in the soft sands they merely give way with a springy sensation beneath the pressure of the feet, and even horses and carts traverse them from end to end, and carry off tons of these prolific molluscs, as manure for the land. Boundless, however,

black lines, by the falling tide, like some huge Whale rising from the "vasty deep," than Gulls, before unseen for hours, with all the punctuality of instinct appear at once, and dot the surface with their glistening Sanderlings (Calidris arenaria), Whimbrels (Numenius phæopus), Turnstones (Strepsilas interpres), Dunlins (Tringa variabilis), and Grey Plover (Squatarola cinerea), each in separate flocks, seek the same goal, their numbers varying only with the mildness or severity of the season, and cautious Curlews (Numenius arguata) in extended line, come slowly flapping to the general feast. Oyster-catchers by hundreds throng the water's edge, and further out in the direction of the "Oyster sea"-where many kinds of fish abound, and where occasionally a Seal (Phoca vitulina) may be seen sunning itself on the raised sand-banks, or rearing its dark head for an instant from the deeper waters-long lines of Scoters (Œdemia nigra), swimming and diving, are feeding their way down towards the outer margin of the scalp. On one portion of the beach a stratum of blue clay, soft and slippery to the tread, appears on the surface, whilst in the dark peaty substance which,

as appear the powers of reproduction of these little shell-fish, an enemy is found in the "five finger" or star-fish, far more destructive than either birds or men. These curious creatures may be found by dozens in the pools left by the tide upon the larger scalps, and strange as it may seem are carted away also by the tumbril load at a time, for the same purpose as the mussels themselves, which in time, no doubt, they would utterly destroy. The means by which this sea-pirate effects an entrance into the shells of both mussels and oysters has been thus described by Mr. F. Buckland:—"He grasps the unfortunate oyster tightly with his five fingers, and then from the centre of his star protrudes some four or five jelly like bags filled with a clear fluid; with patience and perseverance, and upon the thin end of the wedge principle, he manages to squeeze these bags between the shells of the oyster, and then clears out the shell till it is as empty as a soap bubble."

there also, marks the site of a submerged forest,\* large trunks of trees are plainly visible, and these, now the home of the boring Pholas and the wary Crustacean, are searched as busily for food by the Sea-pie, the Dunlin, and the Ringed-Plover, as in their normal state by the Titmice, the tiny Gold-Crest (Regulus cristatus), or the Creeper (Certhia familiaris). Again, about two miles from Hunstanton, near to Holme Point, a deep channel, traversing the beach, alternately fills and empties a wide basin between the sand-hills, which, at low water, presents at one end a tract of level sands, at the other a swampy marsh, intersected with a number of little streams, and covered with a profusion of coarse grass, samphire, and other marine plants. Here in summer the fishing Terns resort, and the smaller waders find a daily renewed banquet, whether scattered, almost invisible to the eye amongst the rank herbage, or tripping over the flats with their quick nervous actions, stopping abruptly now and again to secure their prey.

<sup>\*</sup> This submerged Forest, being post-glacial, must not be confounded with the "Forest bed," rich in Elephantine and Cervine remains, which is met with on other portions of our coast; since in the formation above referred to, as Mr. Gunn shows in his "Geology of Norfolk," not only the Mammalia of the "Forest bed" have disappeared, but also of the post-glacial Hoxne and valley formations. "One very decided change in the fauna," he states, "is observable, namely, the disappearance of the Elephas primigenius, Rhinocerus tichorinus, the Hippopotamus major, and the Reindeer; and the appearance of the remains of man and his works, and of animals still living on the surface of the earth, as the Horse, Ox, Red-Deer, Wild-Boar, Wolf, Badger, and others. \* \* \* "At the Holme and Thornham scalphs, near Hunstanton. no human bones have been discovered, but a polished Celt, of the stone period, was found in the Holme scalph by the Rev. George Mundford, Rector of East Winch, and is now in the Norwich Museum." \* \* \* "The trees are the ordinary trees of the neighbourhood, the stools are in situ, of great size, and the wood turned black, but so sound as to be used for carpenters' work."

In strange contrast, though to these dreary wastes, the inland country presents all the softer features of a sylvan district. A pretty valley, with a clear running stream, leads to the finely timbered park and pleasure grounds of Hunstanton Hall, so rich in old associations interesting alike to the antiquary and the naturalist. Still further from the sea a deep ravine, winding between the lofty sides of undulating chalk cliffs, enriched with foliage in every hollow, and covered with verdure to the very summit, transports us in imagination to more southern shores; so difficult is it to realize the abrupt transition from the "meals" and marshes to the bold grassy slopes of Ringstead "Downs." Nor are such attractions of hill and dale, woods, pastures, and flowing streams confined only to this small portion of the "meal" district. The vale of the Stiffkey has been long and deservedly noted, and Arthur Young, nearly a century ago, extolled its beauties, before the bleak hillsides by the coast were clothed with belts of fir and hardy shrubs, rendering picturesque those once barren slopes and in many places forming a screen to lands and houses from the fury of our north-easterly gales. From Stiffkey again, through Warham, Holkham, the Burnhams, and Brancaster, the distant views of the sea between richly wooded heights, the low grounds, chequered with the many hues of the cultivated soil, and occasional strips of heath and plantations, form, with the different villages, a charming landscape. Indeed, it may be fairly said that the scenery which presents itself from the coast road, along the entire northern and north-western parts of the county, is such as no stranger entering Norfolk by its south-western boundary can form any conception of.

As in the Broad district we have seen cultivation so closely bordering upon the swamps, that the birds of the farm, the grove, and the homestead, are "within call" as it were of the denizens of the marsh, so also in the once wild portions of our coast line, reclamation, planting, and high culture have changed alike the features and the fauna of such districts. We need no better illustration of this than is presented by Holkham, where taste, judgment, perseverance, and capital, have changed the once "open barren estate" into the most ornamental, best farmed and, probably, the most remunerative in the county. As the eye now wanders over that magnificent park, with its rich meadows, lawns, plantations, and shrubberies—its noble avenues and extensive lake, with green islets and winding, wooded, shores—the whole affording sufficient scope for a sevenmile drive within its ample boundaries, it seems almost impossible to realise its condition, when in 1734 the first Earl of Leicester commenced building upon and planting the dreary waste.\* How many species then strangers to the soil, have since been added to the list of its feathered denizens? Summer warblers in abundance now enliven the groves, and the Songthrush and Blackbird, finding a sheltered haunt, join

<sup>\* &</sup>quot;It was about the years 1725 and 1726 that the Earl of Leicester, determining to fix his family seat at Holkham, after making several purchases of intermixed lands and estates, began to enclose the parish of Holkham. In 1728 he built a new farmhouse, &c., upon the distant fields on the west side of the parish, at a place called Longlands. In 1735, he built another new farm upon the old heath, on the east side of the parish, at a place called Brenthill, and enclosed and cultivated the heath-land; thenceforward, he gradually proceeded with enclosing and improving the whole parish, dividing to himself, round about where he intended to build his seat, and enclosing with pales, a park containing about eight hundred and forty acres of land, and therein made many plantations of wood, laid out lawns, gardens, water, &c., with many useful and ornamental buildings, and nearly completed his manorhouse, begun in 1734, before he died." [See Stacy's "History of Norfolk."

with the Robin and Hedge-sparrow, the Chaffinch, Greenfinch, and other sylvan forms, to give life and animation to this strangely altered scene. The fir-belts resound with the soft notes of the Turtle-Dove, and throughout the coverts the beautiful Wood-pigeon now outnumbers the hereditary Stock-Doves of the coast. Game is reared in abundance, where, in former times, the wild rabbit nibbled a bare subsistence, and the once bleak home of the Lapwing and the Norfolk Plover affords some of the the finest Partridge shooting in the whole county. Indeed, as regards the more common species comprised in the great Insessorial group, there are probably none that might not now be procured in that neighbourhood, where, less than a century ago, when rye was the only cereal grown, the common House Sparrow was comparatively scarce. That which the first Earl of Leicester, however, had so well begun was destined to arrive at the highest pitch of perfection through the genius and energy of his great successor, till the name of Coke as a master of the science, and of Holkham as the school of agriculture, became as "familiar in our ears as household words."

Besides the enclosure and cultivation of heaths and other waste grounds, much valuable land has been reclaimed from the sea at Holkham,\* and adjoining portions of the coast, both under the present and former proprietors of the estate, and many hundreds of acres secured from inundation are now richly productive; thus narrowing again the haunts of the wild-fowl and waders, and extending the area of all granivorous

<sup>\*</sup> About the year 1659, John Coke, Esq., the then proprietor, and fourth son of the famous Sir Edward Coke, enclosed from the sea three hundred and fifty acres of salt marshes, and four hundred acres more were embanked by his successor, the first Earl of Leicester.—[See Stacy's "History of Norfolk."]

species. A curious circumstance also may be here noted, arising out of the altered condition of the marshes, and the closing of Decoys once profitable enough in these parts. Of late years, since both the Holkham and Langham Decoys have ceased to be worked, flocks of Wigeon (Anas penelope) have resorted to the lake, in the park, during the day time, a few only appearing at first, but their numbers increasing during each successive winter.

With the subject of reclamation, however, we must return once more to Hunstanton, and following the deeply indented shores of the Wash, continue our inspection of the coast line, from Heacham, Snettisham, and Wolferton, to Lynn harbour. One main feature is apparent throughout, the extreme shallowness of the water: so much so that, as Walter White happily remarks, "if you chance to be studying the view when the tides are at the lowest, you might fancy the land was gaining on the sea." Immense tracts of level sands, stretching far into the distance, are left bare for hours; but never actually dry the soft slippery surface is a very paradise for the Gulls, and dark objects scarcely distinguishable by the naked eye will be found, through a glass, to be busy cockle gatherers with their carts and horses, who at ebb tide follow the retreating waves for nearly a mile and a-half. Only slight barriers, whether natural or artificial, are here needed, and banks of shingle, bordering the sands, are backed, as at Snettisham, by a wide breadth of grassy "Denes," sloping gradually away from the sea and sparkling with blown sand and minute pebbles. A dreary district this, and one from which the eye turns inland with a sense of relief to the rich marshes, hedgerows and long grassy lanes that bespeak a more habitable country.

Quitting, then, altogether the sands and "Denes," the more inland country between Hunstanton and Lynn,

still maintains those pretty features we have observed throughout. A lofty range of grassy downs stretches away from Snettisham to Dersingham and Wolferton, covered with heather and gorse in parts, or thickly planted with belts of fir, and though this district abounds in sandy heaths and warrens, an ample mixture of arable, pasture, and woodland, renders these otherwise bleak portions a not unpleasing feature in the landscape. Several small parks, surrounded with plantations, adjoin the principal villages, and the preserves at Sandringham, now the sporting residence of the Prince of Wales, are of considerable extent. Snettisham the great Ken-hill wood is celebrated for Woodcocks, and in this neighbourhood only, in Norfolk, is the Blackcock (Tetrao tetrix) found as a naturalized species. From Snettisham and Sandringham the range of this Grouse extends southward as far as Bawsey and Leziate, near Lynn, and, consequently, with a dry sandy soil on the one hand, and rough moist grounds on the other, comprises a wild tract of country peculiarly favourable to its existence. The Lapwing, also, is still very plentiful here during the breeding season, and more particularly about Castle Rising.

At Lynn, as may be seen by a glance at the map, a perfect maze of sands and shoals, extending from the mouth of the harbour to the open "deeps," are traversed in all directions by the main channels, or the outlets of minor streams. Such feeding grounds are, of course, at all times attractive to the oceanic Ducks and other marine-fowl, but in severe weather, or when heavy gales, outside, have driven them in for shelter, enormous flocks of fowl and waders are collected together, and large numbers are killed by the gunners. The little Storm-Petrels (Thalassidroma pelagica) during autumnal gales, have been seen in the harbour "flying thick as Sand-martins," to use the words of an eyewitness; and amongst other rarities obtained on this

point of the coast is a specimen of the Great-Shearwater (Puffinus major), in the Lynn Museum, the only one known to have occurred in Norfolk. A novel mode of netting most kinds of shore birds, suggested by the shallow waters and flat shores of the Wash, has been occasionally adopted here of late years with much success. Long nets stretched on poles, about six feet high, are placed in double lines upon the sands towards dusk, one line below high water mark and the other beyond the reach of the tide. A dark still night is most favourable for this sport as the nets are not only invisible, but are in no danger of being blown down. In this manner some eighty or ninety birds have been taken at one time, having struck the nets in their nocturnal flight, and become hopelessly entangled. Even Skylarks and Dunlins (Tringa variabilis) are not unfrequently captured, in spite of the meshes of the nets being large, and when gathered in the morning, a large proportion of the birds are secured alive, including Godwits, Knots, Plovers, Woodcocks, Oyster-catchers, Sheldrakes, and other fowl, with many Gulls.

No wonder, on this portion of the coast, where the sea appears almost to meet reclamation half-way by a sort of voluntary abdication, that great engineering skill and vast capital should have been devoted to this object. Much has already been accomplished, although the magnificent scheme for which the Estuary Company was originally formed, namely—to make a straight channel from Lynn to the sea, and reclaim not less than one hundred and fifty thousand acres from the Wash has been restricted within far narrower limits; probably not more than fifty thousand acres being now contemplated.\* Even of this quantity scarcely a tithe has been

<sup>\*</sup> For the above facts respecting the proposed and actual achievements of the Estuary Company I am indebted to Mr. George Webster, of Lynn.

accomplished at present, though much capital has been fruitlessly sunk in attempting too much at one time; so that of late the contractors have confined themselves to smaller operations. What has really been accomplished, however, is the completion of a fine straight channel for a length of two miles or thereabouts, through lands in West Lynn and North Lynn, from Lynn harbour to the sea, in lieu of the old tortuous course of the Ouze. This latter has been blocked out by a cross-bank at the North end of Lynn harbour, and has "silted up" to such an extent, since that bank was made (about twelve years ago), that last year the company ventured, and successfully, upon the construction of another crossbank, about half a mile below. By this enclosure about two hundred and twenty acres of good land were reclaimed, and a considerable portion of this is now in tilth. Other enclosures have been made along the east shore of the Wash, by throwing out shelter banks; and it is found that when, by these banks, the flow of water is excluded, the process of accretion goes on rapidly outside the banks so formed. Thus what proved impossible of accomplishment on a large scale is being done little by little; for only a year or two ago nearly six hundred acres, in the neighbourhood of Babingley and Wolferton were added to the estates of the Prince of Wales and the Hon. Mrs. Howard, and very recently the Estuary Company's enclosure, number three, was completed, consisting of two hundred and seventy acres of land which had warped up outside the Babingley shelter-bank. and other similar enclosures are in progress or contemplated. It may be also mentioned that the cut before alluded to, called the Marsh Cut, terminates at a bend of the old channel, and that from this point "guide-banks" are being slowly constructed, to take the channel two miles further out to sea, through a sand called Vinegar-Middle. Much of the loss originally incurred was

occasioned by attempting to force on this lower cut, the material used in making the "guide-banks" being washed away almost as fast as it was deposited. It is now sought to persuade the channel to take the desired course by gradually throwing out jetties from the banks in the neighbourhood, and this process appears likely to be successful in the end. The total amount of land, then, actually reclaimed amounts to just one thousand and seventy acres.

## THE BRECK DISTRICT.\*

The exact limits of this most important division are more easily traced on the map than rendered clear to the comprehension of the reader by a mere topographical description; its outline, however, may be briefly given as follows:—On the west it is bounded by the "Fen" district (to be next considered), as far as King's Lynn, and thence by the shores of the Wash as far as Heacham; whilst, towards the east its limits are very nearly identical with that marked division on the Ordnance map of the county, which, by a closer "filling up" on the surface, sufficiently distinguishes the enclosed and thickly populated portions on the one hand, from the large holdings and wide open tracts on the other. Nevertheless, for our present purpose, it will be necessary to make a slight detour, near the southern boundaries of the county, in order to include certain "breck" lands and heaths in that neighbourhood, extending somewhat further to the east. Commencing, therefore, in the vicinity of West Harling, an imaginary line might be drawn in a north-westerly direction

<sup>\*</sup> For the following descriptions of the "Brecks" and "Fens" I am indebted to the pen of a friend and naturalist, who, from a residence for some years on the borders of both districts, is intimately acquainted with their peculiar features.

towards Swaffham, and thence northwards again, with but slight deviation as far as North Creake; passing to the west of the Rainham estate, but including the princely Houghton with its park and plantations, and its noble beeches of a far older date. From North Creake, turning sharp towards the west and skirting the "meal" district about Burnham and Brancaster the line would run direct to the coast, once more, below Hunstanton.

The soil of this district, even at the present time comparatively unenclosed, is composed in great part of very light land, of a depth varying from a few inches to several feet, lying upon hard chalk, but in places, and these sometimes of no inconsiderable extent, it is sufficiently interspersed with clay to produce very fair wheat, barley of the best quality, and valuable rootcrops. Until within the last half-century, however, wheat was scarcely ever grown, and rye was the staple grain. The greater part of this district consists of what are locally called "brecks"—that is, ground which at some time or other has been "broken-up" by the plough and hence the name here assigned to it. Many of these "brecks," never very fertile to begin with, through bad farming and consequent exhaustion of the soil, have been long abandoned as arable land, and are now used as sheep-walk; but others form, in many cases, commons or heaths, on which the hasty observer would never recognize the trace of a plough. Not that there are not, however, some extensive tracts, which have, probably, never been under cultivation. With the improvement of husbandry, about the beginning of the present century, came into vogue the practice of making plantations,\* for the whole country, with a few

<sup>\*</sup> On Wretham heath are, or were a few years ago, some very fine old Scotch fir-trees (Pinus sylvestris), stated, though on doubtful authority, not to have been planted by the hand of man.

exceptions, chiefly in the immediate neighbourhood of villages, was singularly destitute of trees. Hardly a hedge existed, the "brecks" were merely separated by "balks," left at first as mere track-ways, but eventually raised by the drifting sand, when the adjoining land was in fallow, a couple of feet or more in height.

A country so open as this, and so unlike the rest of the county, could not fail to differ from that in its birdpopulation. Some of its peculiarities in this respect still exist, others are remembered by men now living, more are to be gathered by tradition, a few, perhaps, have to be inferred. Thus we shall probably not be wrong in recognizing in this district "the champian and fieldy part" of Norfolk, spoken of by Sir Thomas Brown as the resort in the severe winters of his day of the Crane (Grus cinerea). The Sea-Eagle (Haliwetus albicilla) still almost annually visits the large Rabbit-warrens near Thetford, and when it was more abundant in the northern parts of this island, may be safely presumed to have been a more frequent visitor to the rest of the district. Falcons, too, must always have resorted plentifully to prey on the Partridges, which are probably here more numerous than in any other part of the kingdom. Kites (Milvus ictinus) may have not uncommonly swept over this wide expanse in quest of their prey—whether the Rabbits which swarm on all sides, or the offal cast away by the warreners in the operation of "hulking" them—but the birds remembered still, by old men in the district, as "Kites" seem to have generally been what are now called Harriers. Of passerine birds—the Sky-Lark has probably been always the most numerous, though in summer the sprightly Wheatear must have rivalled it in numbers. The Warblers, the Titmice—in a word, all the woodland-birds must have been nearly, if not altogether, wanting till the hand of man clothed this

open country with plantations. The Stock-Dove was, probably, the only species of its order met with. But the ornithological glory of the district was the Bustard (Otis tarda). Its history will be found so fully detailed in the body of this work that it is needless now to enter into particulars. It will suffice to say that the bird became extinct about the year 1838, when the two last examples were known to have been killed in the county. It is the prevalent belief that the latest survivors of this noble species were unmercifully destroyed to satisfy the desires of sportsmen, collectors, or epicures. no reason for such a belief. Its extirpation was doubtless caused by man, but indirectly, and not, as the extirpation of Eagles is still being compassed in Scotland, directly. Its chief destroyer was most assuredly the agriculturist. He found his crops wanted shelter, and planted long belts of trees to keep the wind from carrying his soil to the next parish, and removing his own or his neighbour's landmark.\* This intersecting of the open country was intolerable to the Bustard, which could not bear to be within reach of anything that might conceal an enemy. Its favourite haunts were, therefore, year by year restricted. But more than this, the substitution of wheat for rye, as the system of tillage improved, aimed a still more fatal blow at its existence. The hen Bustard almost always laid her eggs in the winter-corn. When this came to be wheat, it was still more an object to save as much seed as possible, so the drill was invented. It was also worth while to keep the land well clear of weeds, and the horse-hoe, therefore,

<sup>\*</sup> The effect of high winds, after dry weather in this district, is not easily described. The whole air is filled with sand, till it resembles a London fog. Nearly every particle of fertilizing matter is blown away from the land, as is shown for years afterwards by its barrenness.

followed. This decided the Bustard's fate. Not a nest was there in the wheat-fields, but was either accidentally trodden down, or if seen in time, for the eggs indeed to be secured from the horses' feet, it was only that they might be taken by the man or boy employed, and given to his master's wife, by whom they were set under a hen, or more commonly kept as "curiosities." The Bustard is now very inadequately represented by its poor cousin the Norfolk Plover or Stone-Curlew locally called "Culloo"—which is as yet abundant in certain localities, but yearly diminishing in numbers. Humble as is this distant relative of the lordly bird we have lost, it is still the species most characteristic of the district, and its loud and musical "clamour," rendered classic by the pen of Gilbert White, can never be heard by one who has lived where it has been a familiar sound without re-calling a thousand pleasing recollections, and by its melody charming the stranger whether he be an ornithologist or not.

The scarcity of streams or rivers throughout the district renders it unsuitable for the countless numbers of water-birds which throng from arctic lands to the coast of the county, whereon first

"Breaks the long wave that at the pole began."

A few ponds, mostly artificial, and some insignificant streams supply very insufficient attraction to the waders and swimming birds, yet the Golden Plover (Charadrius pluvialis) and Dotterel (C. morinellus) annually frequent the wide fields and warrens, whilst the Ringed-Plover (C. hiaticula) in early spring, comes up from the sea shore, and miles away from the coast selects for its domestic hearth the most barren spots; such as that must have been on which Lady Mary Wortley-Montagu saw "two Rabbits quarrelling for one blade of grass." Here the wanderer will see in plenty, at any time of the

year, the pebble-paved nests of this pretty little bird—for the materials of which they are composed are so lasting that their traces are visible for months. Nor does the Lapwing fail to enliven the scene, though its numbers have decreased of late years most remarkably. Wild Geese—for the most part, probably, the Pinkfooted species (Anser brachyrhynchus)—were formerly abundant in winter time, but the spread of plantations which first restricted the limits of the Bustard seems to have acted in like manner towards them, and their number is now probably not one-fiftieth of that which used to resort to the district of the "brecks."

From this threnody over a vanished or vanishing fauna, it is pleasant to turn to the new one which has now suceeeded it, and which still retains some traces of the bygone order of things. Nightingales (Philomela luscinia), Blackcaps (Curruca atricapilla), and Willow Wrens (Sylvia trochilus)—the last in number, hardly, perhaps, exceeded in any other part of England, throng the plantations which have driven away the Bustard and the Wild Goose, singing and making merry in their abandoned haunts. The restless Titmice wander among the branches, industriously searching for their living. The glad voice of the Chaffinch, and the less melodious twitter of the Redpoll, resound through the larch "slips," and the attentive observer by the side of the sombre Scotch firs recognizes the musical warble of the Wood-Lark (Alauda arborea), mingling with the more attractive song of his more aspiring cousin the Sky-The Green Woodpecker (Picus viridis) laughs cheerfully among the trees of older growth, and a pair of Ravens (Corvus corax) from the adjoining countythe sole survivors, perhaps, of their race for many miles around-extend their beat to the southern limits of the district, and seem by their hoarse croak to threaten those who have changed the entire aspect of nature so

effectually and so unconsciously, except in the case of one species—the Red-legged Partridge (Perdix rufa)—which has been purposely introduced, and the doubtful merits of which are a warning to those who expect to reap advantage from Acclimatization Societies.

## THE FEN DISTRICT.

In almost every respect differing from the district last mentioned is that which still remains to be described on the western side of the county. The Fens of Norfolk formerly possessed, in an extreme degree, all the features of that extensive tract of country, which under the name of the "Great Bedford Level," has for years, almost for centuries, been the battle-ground of civil engineers-Englishmen and foreigners—and the same district still presents a good many of its chief peculiarities. northern part, the "Marshland" as it is commonly called, was "won from the raging deep" in days almost pre-historic—at least an inspection of its firm sea-banks and "droves" tells the enquirer more respecting it than he can gain by the study of annals or records. Whether the Roman or the Norman laid the foundation of these bulwarks against the ocean matters little nowa-days to the naturalist. Laid they were at a time of which history takes next to no notice, and they still stand.

The eastern boundary of the "Fen District" commences immediately below the town of Brandon in the low ground through which the Little Ouze winds its way, and rounding the uplands of Hockwold turns northwards towards Methwold, then running up the course of the Wissey, nearly as far as Stoke Ferry, it bends to the westward in the direction of Denver, whence it pursues a comparatively straight course to King's Lynn, being, however, slightly diverted to the

eastward up the valley of the Nar. The other boundaries of the district coincide with those of the county.

Except a few low knolls locally and expressively termed "islands," the whole of this district is one vast level plain, through, or skirting, which the great rivers that drain a considerable portion of England from the confines of Essex, Hertfordshire, Buckinghamshire, Oxfordshire, Warwickshire and Northamptonshire, make their way sluggishly to the sea. The soil is unequivocally "black," and mostly composed of a great depth of peat, below which lies a marl, having its surface in many places coated with gravel of the "drift" period. Hardly a hedge is seen, but the surface is intersected every few hundred yards by deep ditches, cut at right angles to each other, and communicating with wider ditches, which are locally called "lodes," and, running into the still larger water-courses, assist the more thorough drainage of the land. Belts and small plantations of trees, known as "holts," and consisting chiefly of black poplar, ash, and alder, with an occasional windmill, or the chimney of a steam-engine—for both wind and steam power are used to get rid of the water are the principal objects which break the line of the horizon.

It may be doubted if at the present time any part of this district can be truly said to preserve its natural aspect. The spectator must draw upon his imagination to picture to his eye the whole of this level plain as it appeared even a hundred years ago, when in place of the luxuriant crops of oats, mangel-wurtzel, mustard, and swedish turnips, it was one uniform bed of sedge, varied only by a few low sallow bushes. It is beyond his imagination to conceive an older state of things, when a forest of goodly oaks flourished amid thickets of hazel, though the trunks of the former and the nuts of the latter are still found admirably preserved in the

peat, side by side with the bones of the Beaver and the Wolf, the Wild Boar and the Urus. If he enquire of the inhabitants he will find their traditions extend only a short way back—and he will be in doubt whether the Goslings which his octogenarian informant may say were tended in the fens by his grandfather, when a boy, were the reclaimed offspring of really wild parents or merely the tame race. The Gossard's occupation has been gone for many a year—that of the professed fowler still lingers, but it has entirely changed in character, and a few more years will probably number the Snipeshooter among the things that were. There are, or at least until very recently were, people who recollected that a comfortable living might be made by netting Ruffs and Reeves (Machetes pugnax) in summer, and in winter by snaring Snipes, when the true fen-man—who was seriously believed in other counties to be born with a "speckled belly" and a web between his toes—did not think his Sunday's dinner complete unless he had a roast Bittern (Botaurus stellaris) on his board.

But it will be more profitable to dwell on the changes which have taken place within the last thirty or forty years. No longer ago than that the three species of Harriers (locally called "Buzzards"—and the grey males of the two smaller ones, "Millers") with the Short-eared Owl (Otus brachyotus) swarmed in some parts of the district—but as the water was carried off by the powerful engines employed, and the sedge-fens converted into corn-fields—their haunts were one by one destroyed, and they themselves banished. The Marsh-Harrier (Circus œruginosus) was the first to go, and then the Hen-Harrier (C. cyaneus), but even now the Montagu's-Harrier (C. montagui) and the Short-eared Owl still linger about such few of their ancient abodes as have not passed under the plough, and occasionally may yet be heard of as breeding there. The Grasshopper-

Warbler (Salicaria locustella) also, in such few spots, still maintains a precarious footing—perhaps it is even more abundant than one is apt to believe, for its shy and skulking habits avoid observation. Ruffs and Reeves and Godwits (Limosa melanura) have vanished as inhabitants of the district, but the Redshank (Totanus calidris) was induced to return to its old haunts by the extraordinary flood of November, 1852, which burst the river bank near Southery, and laid many thousand acres under water for more than six months, making a paradise for wild fowl of all kinds, and furnishing ornithologists of this generation with a vision of times past and gone. This same flood acted in like manner upon the Black Tern (Sterna fissipes) and the Black-headed Gull (Larus ridibundus), both of which, in 1853, stayed to breed in places which had been so long abandoned by them, that their names even were unknown in the land. The Snipe (Scolopax gallinago), the Water-Rail (Rallus aquaticus), and the Spotted Crake (Crex porzana) still, but in very small numbers, frequent the Fens for the purpose of breeding, and with them concludes the list of those birds which still abide in the district of which they must have been at one time most characteristic; for the Heron (Ardea cinerea), which formerly had a large and thriving establishment on the borders of Feltwell and Hockwold Fens, where the nests were placed either among the sedge on the ground, or built in low sallowbushes, some sixty years since emigrated to a wood of lofty fir-trees at Didlington, whence the members of the diminished society spread themselves over the adjoining country to seek with difficulty the living their forefathers had found so much more abundantly.

On the other hand, in the room of those species whose place knows them no more, very many new denizens of the district have made their appearance. Spots which had only heard the hurried twitterings of the Sedge-bird (Saliacaria phragmitis) the reeling note of the Grasshopper-Warbler, and the harsher melody of the Reed-Sparrow (Emberiza schæniclus) now re-echo to the songs of the Blackcap, the Willow-Wren, the Sky-Lark, and, indeed, of nearly all the commoner birds of this country. Of predatory species, the Kestrel (Falco tinnunculus) and the Carrion-Crow (Corvus corone) exist in probably larger numbers than may be found in any other part of the county-while the Partridge and the Quail (Coturnix vulgaris) have descended from the uplands, not merely to glean where the farmer has reaped, but to wage war with his worst enemies, the wire-worm and the slug. The Lapwing still occurs in considerable though reduced numbers, in summer breeding over almost the whole district, and in winter flocking from one part of it to another, performing, as it were, countless small migrations that are influenced by almost every change in the weather. In spring the Dotterel (Charadrius morinellus), in small "trips," tarries for some ten days for rest and refreshment on the fallows during its northward journey, and, in winter, the Goldenplover (Charadrius pluvialis) often haunts the ploughed fields. But the great inducements for nearly all the aquatic tribes have disappeared, and, with little left to attract them, the modern condition of the "Fen" district is to the ornithologist fond of ancient memories almost the "abomination of desolation."

## THE ENCLOSED DISTRICT.

Properly speaking, the "Enclosed" district comprises the whole of the eastern division of the county, but the present description refers only to such portions as have not already been included in other districts bordering the coast-line to the north and east. On the western side it immediately adjoins the "brecks," and is bounded on the south by the river Waveney.

Taking Norwich and its Hamlets, then, as a convenient starting point, we have, within a comparatively small area, a locality rich in its attractions for almost all classes of birds, and one in which, not only the more common species are plentifully distributed, but many of the rarest have occurred at times. Norwich has been well termed "a city in an orchard," and, inspite of the additional space required for a largely increased population, may still claim that title, owing to the number of its gardens and the general distribution of foliage, which gives so rural an aspect to the older portions of the town. The venerable walls, enclosing the gardens themselves, afford in their many chinks and crannies abundant harbour for insects and their larvæ; and, in destroying these hidden pests, the busy Titmice, the Redbreast, Hedge-Sparrow, Chaffinch, and many summer visitants, do invaluable service. The wall fruit, also, attracts the Blackbirds and Thrushes, which, nevertheless, atone for their depredations by a wholesale destruction of worms, slugs, and snails, and the Spotted-Flycatcher (Muscicapa grisola) and the beautiful Redstart (Phænicura ruticilla) return year after year, with the apple and pear blossoms, to the same nest on the vine-stem, or in the ivy-covered wall. With these, also, return to their accustomed haunts the Swallow and the House-Martin, which are seen in the streets throughout their brief sojourn, and nest in the chimney shafts and under the eaves of the houses, even in the busiest thoroughfares. A few small colonies of Rooks have been established, for years, within the bounds of the city, and whatever may be the spiritual wants of the laity, the ecclesiastical Jackdaw can scarcely put in a claim to "additional church accommodation." The useful Starlings find abundant nest-holes in ancient gables or the crumbling walls of monastic and other

buildings of a bygone age, and with two or three broods in the season to each pair, their collective progeny form no small proportion of those huge flocks which, in autumn, frequent the marshes and the reed-beds on the Broads.

In Mr. Hunt's time even the Lesser Spotted-Woodpecker (Picus minor) occasionally visited his garden in Rose Lane, having flitted over the river from the neighbouring woods at Thorpe; and in more than one instance, since the commencement of the present century, a pair of Peregrines have been known to fix their abode in the Cathedral spire. Not many years back, also, a Hobby (Falco subbuteo) was shot from a church tower in the very heart of the city. The rare Dipper (Cinclus melanogaster) has been killed on the river near the Lower Close-ferry, and Black-Terns (Sterna fissipes), on their vernal migration, have been shot near the same spot, from the Foundry-bridge, whilst the list of accidental visitants includes many migratory species, either attracted on their passage, by the lamps of the city, or storm-driven from their ordinary course. A Pochard (Fuligula ferina) has been known to dash at night through the window of a house, attracted by the glimmer of a candle, and wild fowl not unfrequently alighted to rest on the reservoir of the water-works, when situated, a few years ago, in Chapel-Little Auks (Mergulus alle) have in several instances been picked up dead or dying in our streets, as well as Little Grebes (Podiceps minor), during their nocturnal movements, and on one occasion, also, a Storm-Petrel was taken alive in Rose-Lane.

In the immediate vicinity of the city, the modern system of planting ornamental trees, more particularly of the fir-tribe, and the introduction of many foreign shrubs amongst our indigenous plants, has caused even the smaller gardens and shrubberies to offer a congenial shelter to birds, which were formerly but seldom seen in such localities. The Nightingale, some few years back, confined almost entirely to the vicinity of Thorpe, is now heard during the summer on nearly every road leading out of the city; and the Blackcap, the Willow-Wren, and the Garden-Warbler, join their melody to the rich notes of the Thrush and Blackbird, and with their young broods in autumn, hide amidst the thick foliage of the laurustinus and other bushy shrubs, till the time for migration arrives.

The same remarks as to planting apply as well, though in a far greater degree, to the Hamlets, and the country immediately surrounding them, and few spots in the county afford more picturesque scenery than the rich valleys of the Yare and the Wensum. To the north and east of the city are the wooded heights of Thorpe and Whitlingham and the far-famed Mousehold-heath, so often mentioned in historical records. In early times, as we learn from Blomefield,\* a large portion of this wild district consisted of sheep-walks, and the heath itself abounded with timber and brushwood, but all this had disappeared long prior to its enclosure in 1810, although even in the time of our county historian (who died in 1751), it was some four or five miles in length and breadth. It would be amusing to speculate on the rarer species that in former times may have frequented this "breezy common," but the Lapwing and Norfolk-Plover were always plentiful, nor has either species ceased altogether to breed in that neighbourhood up to the present time. Of the latter a pair or two have bred regularly for the last twenty years, near the same plantation, on the high grounds at Thorpe, and being strictly preserved will, it is to be hoped,

<sup>\* &</sup>quot;An Essay towards a topographical history of the county of Norfolk." By Francis Blomefield, Rector of Fersfield.

continue to do so. The Dotterel (Charadrius morinellus) has been seen on the borders of the heath, resting for a while on its migratory course, and the "whirr" of the Nightjar is heard in the summer evenings when the "dors" fly thick over the prickly furze. Here, also, the Titlark and the graceful Wagtail chase their insect prey over the smooth turf, and the Stonechat, Whinchat, and Wheatear, amongst the rough patches of gorse and fern, enliven the waste with their sprightly actions.

East, west, and south, the rich grazing marshes bordering the winding course of the Wensum and Yare, are not less abundant in aquatic species; and though too firm now to afford the sport which the Snipeshooter enjoyed some forty years ago; yet still when driven to the open springs through the severity of the frost, or flooded out from the "broad" district, a few couples, and particularly "Jacks" (Scolopax gallinula) may be found by the sedgy margins of the drains and smaller streamlets. In the many little carrs, reed-beds, and dwarf-islets, which form so pretty a feature of these tortuous rivers, whether at Lakenham, Keswick, Bowthorpe, or Hellesdon, the prattling notes of the Sedge and Reed-Warblers are heard in summer, and the Water-Hen and Dabchick nestle and hide in the tangled undergrowth. A few Wild-Ducks (Anas boschas) are bred annually in the most retired spots, and in winter are joined by others, with an occasional "coil" of Teal, but it is only in the sharpest weather that the rarer species appear so far inland. At such times, however, both the Whooper (Cygnus ferus) and Bewick's Swan (Cygnus bewicki) have been shot, even of late years, on the Yare at Bowthorpe, about three miles to the west of Norwich; on the same portion of the stream, which some thirty or forty years ago acquired the name of "Swan-river," from the frequent occurrence of these birds during the then severe winters.

Costessey, with its beautiful park and woods, bounded by heathery hills on the one side and the rough marshy borders of the Wensum on the other, now boasts, with the exception of the one before mentioned at Didlington, of the only Heronry remaining in Norfolk. This small remnant of a once thriving colony-whose various wanderings since their expulsion from Acle wood (cut down about the year 1810), will be fully detailed elsewhere—have but recently migrated from Earlham, in the same neighbourhood, to their present quarters. Here, it is to be hoped, if not, as hitherto, molested by the Rooks, and under the protection of the noble proprietor of the estate, this much persecuted race may yet "increase and multiply." It is impossible not to mourn the fate of the gallant Falcon, which, once petted by Kings and Princes is now classed in the list of feathered "vermin"; but still a something of its former glory attaches to the Heron, and the sight of the great bird returning with laboured flight from some distant stream, never fails to recall the time-honoured associations which inseparably connect the "Hawk and the Harnsey." How different the prestige of both these birds, when, in August, 1578, Queen Elizabeth, leaving Norwich "by St. Bennet's-gates went towards Cossey-Park to hunt," and when, in 1866, the heir apparent to the throne paid a Royal visit to the same estate. At the former date, although we find no record as to hawking parties, there is little doubt that Herons graced the board, being in those days esteemed a "dainty dish to set before the Queen;" whilst even the hospitality of the noble entertainer would have been called in question by the introduction of such a dish, on the last occasion.

Amongst the larger estates in this division of the county, not already referred to in the "cliff" or other districts, are Merton, with its venerable oaks, and Rainham, Elmham, and Kimberley, with their extensive

parks and plantations and fine sheets of ornamental water. It would be needless, however, to attempt to enumerate, here, the smaller parks and pleasant country seats, which, scattered in all directions, form so agreeable a feature in this portion of the county; not only its richly wooded character, but its highly cultivated condition, may be gathered from the fact that at least nine or ten Rookeries exist within five miles of Norwich, and but few estates of any extent are without some colonies, large or small, of these social birds.

Although, on the better soils, the old natural woods have yielded by slow degrees to the encroachments of the plough, yet, with the improvements in agriculture, was also introduced, as shown by Kent in his survey of Norfolk farming,\* a general system of planting. Great numbers of firs, Scotch, larch, and spruce, either planted in belts and "slips," or intermixed with forest trees, were reared for the ornamentation of parks and pleasure grounds, and, as may be seen at Stratton-Strawless and many other places, barren commons and sandy wastes were thus made to assume a much more cheerful aspect. The Horstead chalk-pits present a remarkable example of the picturesque effects, which may be thus produced. The sloping sides of the older cuttings have been thickly planted with firs of various kinds, rising, as it were, in terraces from the banks of the stream, which winds its way between the now verdant heights; and, from the peculiar character of the scene, this spot has acquired the very appropriate name of "Little Switzerland."

Besides the more modern game preserves, however, for which the county is now so celebrated, there are some remnants of far older woods, whose history

<sup>\* &</sup>quot;General View of the Agriculture of the County of Norfolk," by Nathaniel Kent. Published in 1813.

would carry us back to a somewhat early period. Woods, in whose dense coverts the Wild-cat (Felix catus) and the Martin\* (Martes foina) once ranged in safety, or, still more recently, the Raven and Carrion Crow, with the Buzzard (Buteo vulgaris) and Kite (Milvus ictinus), amongst the larger Raptores, nested undisturbed, and Hawks and Owls in plenty performed their part in the great scheme of nature, as verminkillers, not vermin. Of such may be noted more éspecially the great Foxley wood, described by Kent, in 1813, as covering over three hundred acres, and Hockering, Ashwelthorpe, Hethel, Brooke, and others, even now of considerable extent and for the most part well stocked with game, both feather and "felt." With the great woods, also, as relicts of former times, we have, even in this closely cultivated district, several wide heaths and rough commons, lying chiefly to the north and west of Norwich, and which, in some localities, though not continuous, extend for several miles in an almost direct line.

On the stiffer soils, again, to the south and southwest, we find a "green" country, with rich meadows

<sup>\*</sup> This species was still trapped, occasionally, in Brooke wood, until near the close of the last century.

<sup>†</sup> These older woods may be grouped together, as it were, in different localities, lying as they now do in close proximity to each other, whilst in former times, no doubt, they were still more closely connected. Thus, in one group, we have the woods at Rainham Elmham, Horningtoft, Foxley, Mileham, and Godwick; in another, those at Saham, Merton, Necton, and Bradenham. Hethel, Ketteringham, and Ashwelthorpe would form a third; and a still larger group includes Brooke, Hedenham, Ditchingham, Kirby-Cane, Shottesham, and Hempnall. In like manner, also, might have been classed the woods at Edgefield, Plumstead, Holt, Hempstead, Stody, and Hunworth, together with Melton and Swanton, before the chief portion were either "stubbed up" altogether or re-planted.

and abundant rivulets; and the fields being divided into an infinity of small enclosures by lofty fences, thickly studded with trees, give a character of its own to this portion of the county. At Hapton, Flordon, Forncett, &c., although drainage has everywhere diminished the haunts of the Snipe, yet the black soil of the drains has at all seasons an attraction for the Green-Sandpiper, (Totanus ochropus). This species is also frequent about the chain of small fens which are situated on the river Thet, near Hargham, Buckenham, and Attleborough; where Snipe are still plentiful, and from whence, amongst other rarities, Baillon's Crake (Crex bailloni), has been obtained in some two or three instances. The Great Northern-Diver (Colymbus glacialis) has been likewise killed on the lake at Quiddenham, in the same neighbourhood, many miles from the sea, being about equidistant from the coast either at Lynn or Yarmouth.

"All England," wrote Dr. Fuller, "may be carved out of Norfolk, for here are fens and heaths, light and deep, sandy and clay lands, and pastures, arable and woodlands." Nor is this description altogether inapplicable at the present time, though the proportion of arable to heath, fen, and woodland, has been reversed through the necessities of an increased population. Even now the "enclosed" district, as here shown, is strangely diversified in its features, and in spite of all the changes effected during the last half century throughout the county, the main points of difference between East and West Norfolk are as marked as ever. The very term "enclosed" suggests at once the antipodes of such wild open tracts as have been already described under the name of "brecks." Small farms and small fields take the place of large holdings and wide open lands, and the foliage on all sides, in the thickly timbered hedgerows, plantations, gardens, and orchards, gives every where a tone of warmth and homeliness to the landscape; whilst clustering around the many farmsteads, we find in abundance all those species which affect more particularly the habitations of man and are dependant to a great extent on his labours for support.

It is not, however, merely of late years that this portion of the county has acquired its distinctive features. On this point Mr. C. S. Read\* informs us that, "its naturally fertile soils have been productive for centuries," and at a very early period, the great oak woods, of which so few traces remain to us, clothed a landscape, in which arable land+ already struggled for mastery, against sandy-heaths and warrens on the one hand, and marshy grounds and bogs on the other. As far back as 1549, during the short reign of King Edward VI., we find the attempts made to enclose certain commons and waste lands about Attleborough, Wymondham, and Hethersett, resulting in the great rebellion under Kettt, when, not content with throwing down the more recent enclosures, the rebels demolished hedges and ditches, and laid waste parks and other private

<sup>\*</sup> See an "Essay on the Agriculture of Norfolk," in White's Gazetteer (3rd ed.), by C. S. Read, M.P.

<sup>†</sup> In the Hamlets of Lakenham and Eaton, by "a survey made in the beginning of Edward I., the jurors valued each acre of land at 15d. a year, and that then there were 150 acres arable in demean, 44 acres of meadow, &c." \* \* \* "In 1379, their water-mill was re-built, and the Sheeps-walk, wood, and warren are mentioned." [See Blomefield, folio ed., vol. ii., p. 857.]

<sup>‡ &</sup>quot;The occasion of this rebellion (writes Blomefield) was because divers lords and gentlemen, who were possessed of Abbey lands and other large commons and waste grounds, had caused many of those commons and wastes to be enclosed, whereby the poor and indigent people were much offended, being thereby abridged of the liberty that they formerly had to common cattle, &c., on the said grounds to their own advantage." [Hist. of Norwich, vol. i., p. 222.]

grounds, throughout their march from Hethersett to Eaton wood, and thence to the great camp on Mousehold-heath. Thorpe wood was demolished, at the same time, in order to prevent any surprise from that quarter, and the timber used for huts, tents, and fuel.\* No wonder, after so serious a check as was experienced by this formidable rising, and the long and sanguinary struggle that ensued between the King's troops and the rebels, if, for a long period the enclosure system progressed but slowly. Even as late as the reign of Charles II., as Mr. Trimmer states in his "Flora of Norfolk," "a heath, extending, with little interruption, from Dunston, south of Norwich, northward, to Hevingham, and from thence, westward, to Lynn, was computed to be a hundred miles in circumference," and from this we may infer the general condition of the county in 1671, when that "witty monarch" made a Royal progress from Yarmouth to Norwich, and passing thence to Oxnead, Blickling, and Rainham, formed the quaint idea "that it was fit only to be cut into roads for the rest of the kingdom."

Of its ornithology in those days, we fortunately possess the most valuable records in the writings of that learned Dr. Browne, who, for his great and varied accomplishments, was knighted by the King during his short stay in Norwich; and from his notes we arrive at the rather startling conclusion that, with the exception only of the Spoonbill (Platalea leucorodia) and the Cormorant (Phalacrocorax carbo), the same species found nesting here in 1671 were still residents up to the commencement of the present century. Yet such, undoubtedly, was the fact, since, as Mr. Lubbock remarks, it was not "until the extravagant

<sup>\*</sup> See note from Norw. Roll in Blomefield's History of Norwich, vol. 1., p. 226.

prices, caused by continued war, excited a general eagerness to enclose all available land, that the improvement and extension of agriculture struck the first blow at the feathered inhabitants of the waste." "Less than one hundred years ago (as stated by Mr. Read), Norfolk did not produce enough wheat to feed its scanty population," and the whole district of the broads, but imperfectly drained, and subject at times to wide spread inundations, presented many of its normal features. Decoys in every favourable locality were a considerable source of profit, and "rye and rabbits" were the chief products of the western division. Assuming, moreover, that the statement in White's Gazetteer that, "two hundred thousand acres of commons and sandy heaths have been enclosed during the last ninety years" is only approximately correct, there can be no question as to the time when the former denizens of the moor and the fen first experienced the effects of a gradual but certain encroachment upon their respective haunts. By the commencement of the reign of George III., though East Norfolk, with the exception only of the great heaths and breck-lands towards the north, had been, generally speaking, enclosed throughout, yet in the western portions of the county but little change had as yet been effected. however, through the triumphs of scientific husbandry, the comparatively poor soils of the west were about to rival the kindlier lands of the east in productive qualities; and Holkham was to set an example to the county at large. In other words, to quote once more from our highest agricultural authority, "Mr. Coke was successfully establishing those great improvements, and introducing those liberal and salutary alterations in farm practice, which soon placed Norfolk foremost in the van of agricultural progress."

It was then, only, that the turnip, introduced early

in the previous century by a member of the Townshend family, was becoming universally cultivated, and when drilled in ridges instead of sown "broadcast," taught even the Grey-Partridge the use of its legs, and enabled the recently imported "Red-legs" to baffle their pursuers, both human and canine. The "four-course" system of cropping, also, with closely mown stubbles and thinned hedgerows, changed materially the operations of the sportsman, and as has been already remarked, with reference to the breeding of the Bustard, the very implements invented and the new methods adopted for the better cultivation of the soil, had, to a certain extent, a prejudicial effect upon the ground-breeding birds, both small and great. As Mr. Lubbock, however, so truly observes "there is a compensating principle continually at work in nature," and though drainage and cultivation have been the main cause of the banishment of so many former residents, we have experienced, in others, a corresponding increase. As the Snipe and the Redshank recede before the inroads of the plough, the Partridge every where extends its area. and the Black-headed Bunting and the Bearded Titmouse are replaced by other Buntings and Finches, with more granivorous appetites. Our summer warblers, and indeed. almost all arboreal species, have increased in proportion to the accommodation afforded them, and game preserving, however fatal to the Raptores as a body, and their Corvine cousins the Raven, the Magpie, and the Carrion Crow, has on the other hand acted as a protection to many other birds, besides Partridges and Pheasants. Wood-Pigeons, Blackbirds, and Thrushes, freed from their natural enemies, have become more and more plentiful; and those which wisely seek the shelter of the woods during the breeding season, now rear their young in blissful security, no birds' nesting boys having a chance of robbing them in the well watched coverts. The

Turtle-Dove, the Missel-Thrush, and the Long-eared Owl, all more or less scarce within a comparatively short period, are now, through the attractions of our woods and fir-coverts, become plentifully distributed throughout the county, and from the same cause the little Golden-crested Wren, with the Coal and Marsh-Titmice have greatly increased in numbers of late years. The Woodcock remains with us to breed more frequently, and the Hawfinch (Coccothraustes vulgaris), from some cause not so easily explainable, may be classed as a resident, though till lately considered only as a scarce winter visitant.

Amongst minor influences, however, prejudicial in a general sense, or affecting certain species or groups in particular, may be instanced the cheapness of firearms, and the consequent increase of gunners, together with a ready access by railroad to all parts of the county. To these must be added, also, a wholesale and indiscriminate system of egging, and through the modern taste for collecting, the high prices offered for rarities in both birds and eggs. But these, after all, are but secondary causes, since egging, shooting, and collecting combined had failed to exterminate certain marsh-breeders, which yet vanished altogether with the altered features of their favourite haunts, and year by year the same operations are slowly but surely extending their influences. Indeed, were it possible, to restore the whole face of the county to its former condition, we should win back, even now, many feathered emigrants, and that this is no idle speculation has been already shown by the fact that, after the great flood in the winter of 1852-3, no less than three species remained to breed in the Fens about Feltwell and Hockwold, previously unknown in those parts for many years. The success, too, which has attended the praiseworthy exertions of the Rev. T. J. Blofeld, at Hoveton, to found, as it were, a colony of Black-headed Gulls on his estate, and the protection at the same time afforded to the Grebes, Garganey, and other wild fowl, proves, in comparison with similar and quite as favourable localities, how much may still be effected, within a limited area, by a conservative rather than an exterminating system.

In bringing our survey, then, to a close, we may arrive at one conclusion, at least, of a satisfactory nature. Whilst the larger mammalia, once inhabiting this county have passed away for ever under the influences of civilization, the feathered race, owing to their volant powers, have suffered only in degree. We have here no wingless birds to become extinct through their very helplessness, and even the Great Bustard still claims a place in the Norfolk list as an occasional migrant. Thus, though former residents may become accidental visitants only, they are not lost to us altogether; and so long as the ocean shall continue to wash its boldly projecting shores, and the periodical movements of the feathered race be actuated by the marvellous instinct of migration, so long, in spite of all internal changes, will Norfolk maintain its ornithological reputation.

# THE BIRDS OF NORFOLK.

# HALIÆETUS ALBICILLA (Linnæus).

#### WHITE-TAILED EAGLE.

NEARLY every autumn or winter affords specimens of this eagle in immature plumage, and it appears also at times late in spring, but in no instance have I known the adult bird to occur in this county.\* The predominance of the young amongst all migratory Raptorial species that visit our coast in autumn, including peregrines, ospreys, merlins, buzzards, &c., is attributable, no doubt, in a great degree, to the fact of the old birds in this class driving their young away from their own nesting places as soon as they are able to provide for themselves, to seek in other districts a home and a helpmate, and in their turn to practise the customs of their ancestors. That this marked characteristic of the Raptorial tribe

<sup>\*</sup> In the autumn of 1864, a skin of H. albicilla was brought to one of our Norwich bird-stuffers, with a statement that the bird had been shot on Breydon during the previous winter. This bird exhibited the white tail and other indications of adult plumage, and from this and other appearances, more than doubting its history, I at once instituted enquiries at Yarmouth. From a resident ornithologist there, upon whose information I can implicitly rely, I ascertained that no sea eagle had been either seen or shot on Breydon in the winter of 1863, and that the bird in question was brought by a fisherman about Christmas-time from Norway as a skin, and had been offered to various collectors in Yarmouth for £1.

was recognised long ago, by sportsmen and naturalists, is shown by the following quaint passage in Turbervile's "Booke of Falconrie," printed in 1575, where, speaking of the "Eagle royale" or golden eagle (Aquila chrysaëtos), instructing its young how to "Kyll their praye and feede them selves;" the author adds-"But no soner hath she made them perfit, and throughly scooled them therin, but presently she chaseth them out of that coaste, and doth abandon them the place where they were eyred, and will in no wise brooke them to abide neare hir, to the ende that the countrey where she discloseth and maketh her eyrie, bee not unfurnished of convenient pray, which by the number and excessive store of eagles might otherwise be spoiled and made bare. For the avoyding of which, this provident and carefull soule doth presently force her broode to depart into some other part and region."

The male specimen of this sea eagle in the Norwich museum (No. 5 in the British series), although marked adult, was taken whilst young off Winterton some years since, and attained its present plumage in confinement. The following curious particulars respecting its capture and subsequent history are thus recorded by Messrs. Gurney and Fisher, in their "Birds of Norfolk:"\*— "Some boys having thrown out a line and hook into the sea, baited with a herring, for the purpose of catching a gull, the bait was spied and pounced upon by the eagle, and the hook becoming fixed in the inside of his foot, he was found by the boys, upon their return to examine their line, floating on the surface of the water. They immediately went off in a boat, and completed their capture without much difficulty. This bird was

<sup>\* &</sup>quot;An account of the Birds found in Norfolk, including Notices of some of the rarer Species which have occurred in the adjoining Counties." By J. H. Gurney, Esq., and W. R. Fisher, Esq., published in the "Zoologist" for 1846.

subsequently kept in confinement for some years, but accidentally escaping, was shot a few days afterwards by a gamekeeper in the neighbourhood." No less than three of these fine birds, two females and one male, were shot in different parts of the county during the winter of 1855-6; and in the following winter of 1856-7, between the months of November and January, three more were obtained on the coast. Two of the latter were killed at Winterton, near Yarmouth, a very favourite locality, and nearly at the same spot; the last specimen being shot whilst hovering over a rabbit warren, and on examination of the contents of its stomach, (besides a stoat) was found to have been feeding on the remains of a large whale, which had just previously been stranded on the Winterton beach. In January, 1859, one or two of these eagles were observed at Horning and other parts of the county, and in the severe winter of 1860-1, a fine pair frequented the lake at Holkham for some weeks, where, in spite of the ravages they committed amongst the wild fowl, the noble owner of the estate would not allow them to be disturbed. A fine young male was killed at Hickling on the 23rd of March, 1861; and about the same date in the following year, a female was shot at Westwick. This was, no doubt, the same bird that had been seen only a few days previously at Northrepps, near Cromer, where Mr. Gurney's keeper observed it sitting on a tree, perfectly indifferent to the mobbings of a flock of jackdaws. In the spring of 1863, an immature bird was shot near Fritton decoy, in the adjoining county; and in November of the same year, another was observed, for a few days, in the neighbourhood of Wymondham, in Norfolk.

Mr. Lubbock\* states that on one occasion, in very

<sup>\* &</sup>quot;Observations on the Fauna of Norfolk, and more particularly on the District of the Broads." By the Rev. R. Lubbock (1845)

severe weather, he saw a fine sea eagle as near this city as Postwick Grove, "beating leisurely up the river, apparently searching for coots or wild fowl in the wakes which remained unfrozen." The late Mr. Girdlestone, of Yarmouth, also informed Mr. Lubbock that in the sharp winter of 1837 "he had three of these eagles in sight at once" on Horsey warren.

I have omitted the Golden Eagle (Aquila chrysaëtos) from the present list, since, although more than once recorded to have been taken in Norfolk,\* it is extremely doubtful whether that noble bird has ever appeared in this county. From one or two of the best authorities in this neighbourhood, I find that no authentic instance of its occurrence has ever come to their notice, and the so-called golden eagles I have myself examined, have invariably proved, on more careful inspection, to be young birds of the cinereous or white-tailed eagle in their various stages of immature plumage. Sir Thomas Browne† also, writing some two hundred years ago, speaks of the not unusual appearance of "the Haliwëtus or Fen Eagles," but adds "the great and noble kind of eagle, called Aquila gesneri (chrysaëtos), I have not

<sup>\*</sup> Under the head of the Golden Eagle, Mr. Lubbock says in his local "Fauna," "Our museum possesses a specimen of this rarer kind" from which one might infer that we had a Norfolk killed specimen in the Norwich museum. This, however, is not the case, either amongst the British or general Raptorial series.

<sup>† &</sup>quot;An account of birds found in Norfolk," see Sir Thomas Browne's works, edited by Simon Wilkin, F.L.S., vol. iv., p. 313. [MS. Sloan, 1830, fol. 5, 22 and 31].—Also, "Animals found in Norfolk," copy from Sir T. Browne's MS. in the British museum, published in the "Monthly Magazine" for 1805, pp. 106 and 410.

These lists were undoubtedly written after 1636, in which year Sir Thomas took up his residence in Norwich. He was born in London in 1605, was knighted by Charles II. in 1671, died in this city in 1682, and was buried in St. Peter's Mancroft.

seen in this country." It is probable that, besides being a much scarcer species than the white-tailed eagle, the flatness of our own county, compared with the usual haunts of the golden eagle, may account for its nonappearance on our Eastern coast, since, neither in Europe, North Africa, Asia, or North America, is it found to wander far from the mountainous districts. Yarrell, in the first volume of his "British Birds," has most clearly pointed out the marked difference at any age in the feet of these two eagles, and it is only necessary to remember that the sea eagle has "the whole length of each toe covered with broad scales," and the golden eagle only "three broad scales at the end of each toe," with the legs feathered to the division of the toes, to determine at once the species to which any local specimen properly belongs.

## PANDION HALIÆETUS (Linnæus).

### OSPREY.

The Osprey or Fishing Hawk, as this bird is sometimes called, still visits us as a regular migrant in small numbers; but though formerly, as stated by Messrs. Gurney and Fisher, most plentiful during the autumn months, it has of late years entirely altered its habits in this respect, and appears almost invariably in April and May, and occasionally even as late as the middle of June. It is more than probable that their total extermination on the Scottish lochs may in some degree account for this change; certainly whatever the cause, out of 30 specimens that have come under my notice since 1847, only ten were procured in the autumn months, and for the last five years at least, with but two exceptions, the ospreys have appeared in spring. Of these birds the

greatest number were in immature plumage, and were met with on the coast or close by, in the vicinity of the larger broads, whose wide tracts of open water are well suited to their habits. Stragglers are, however, occasionally found inland, in places far less likely for their appearance, as at Scoulton, near Hingham; at Stanfield Park, near Wymondham; and in October, 1859, four or five were observed in the neighbourhood of Thetford. undisturbed, they seem to confine their fishing to one spot as long as their finny prey remains plentiful, particularly in such favourite localities as Hickling and Horsey broads. In April, 1851, three ospreys were killed at Hickling in one week by the same man, who shot them whilst perched on the posts which there mark the course of the river through the broad, and in each case the birds appeared to have been resting after a rich repast, their stomachs being literally crammed with roach. I have particularly mentioned this fact, having since met with the following interesting note in the "Ibis," by Mr. Osbert Salvin,\* which proves that the habit of resting after a meal so generally adopted by the Raptorial tribe, is thus commonly, and often fatally, indulged in by these piscatorial gluttons:-"In the lagoon of El Baheira, a number of posts are fixed to direct the boats that ply between Tunis and La Goletta. These are the favourite perches of several ospreys, which, during the winter months, fish in the lagoon, and retire to these posts to feed on and digest their prev."

<sup>\*</sup> Mr. O. Salvin's "Five Months' Birds'-nesting in the Eastern Atlas."—"Ibis," vol. i., p. 183.

# FALCO CANDICANS (Gmelin).

#### GREENLAND FALCON.

The late Mr. Hunt, of Norwich, in his "British Ornithology,"\* has figured, or perhaps more correctly speaking, caricatured a bird of this species which was killed many years back on Bungay common, and being only slightly wounded in the pinion, lived for some time in This bird, says Mr. Hunt, from its confinement. extreme tameness, "eating readily from the hand of the servant who attended him," was generally supposed to have escaped from some falconer. From Mr. T. M. Spalding, of Westleton, I learn that this same specimen was given by King, the man who shot it, to the late John Cooper, Esq., of Bungay, and at his death it was purchased at the sale at North Cove Hall, for the present Lord Huntingfield, in whose collection it is still preserved. Mr. Spalding, who had many opportunities of examining this falcon both at Bungay and Cove, says,-"It was preserved by W. C. Edwards, and was a beautiful male, the spots of black very minute, and the upper portion of the beak much elongated, the only symptom I could see of its ever being in captivity," and this peculiarity is particularly marked in Mr. Hunt's drawing.—The statement of Messrs. Sheppard and Whitear, † that this bird formed part of Mr. Spalding's

<sup>\* &</sup>quot;British Ornithology, containing portraits of all the British birds, including those of Foreign origin which have become domesticated; drawn, engraved, and coloured after nature." By J. Hunt.—3 vols., 8vo.; Norwich, 1815; printed by Bacon and Co.

<sup>† &</sup>quot;A Catalogue of the Norfolk and Suffolk Birds, with Remarks. By the Rev. Revett Sheppard, A.M., F.L.S., and the Rev. William Whitear, A.M., F.L.S.," published in the 15th vol. of the Linnean Society's Transactions, MDCCCXXVI.

collection is not correct, since, as before stated, it was purchased for Lord Huntingfield, Mr. Spalding bidding up to £5. Since that time, however, this noble falcon has been fully installed amongst the Norfolk rarities, from the occurrence of an undoubtedly wild specimen at Beeston, near Cromer, in February, 1848. This beautiful example, a fine adult male, is in the possession of Mr. J. Gurney Hoare, of Hampstead. In the "Zoologist," p. 3028, will also be found a notice by Mr. T. Fowell Buxton, of a falcon, supposed, from its "snowy whiteness," to be of this species, which was seen by himself and other gentlemen whilst shooting at Trimingham, on the same part of the coast, in November, 1851. In the adjoining county of Suffolk, large white falcons have been observed on more than one occasion, though not of late years; and a man named Martin, formerly keeper to John Lee Farr, Esq., of North Cove Hall, assured Mr. Spalding\* that he once shot a "large white hawk" at Cove, which he had watched for some nights, always making for a particular wood to roost, and which, from his description, as being pure white with a few black spots, was most probably a Greenland falcon. Unfortunately, the bird was given to a farmer and was not preserved. The distinctions established of late years by Mr. Hancock and other eminent ornithologists, between the three forms of great northern falcons, viz., the Greenland falcon (F. candicans, Gmel.), the Iceland falcon (F. islandicus, Gmel.), and the true gyrfalcon, of Norway (F. gyrfalco, Linn.), render it particularly desirable that all British-killed specimens of these noble birds should be fully identified. As the white or Greenland

<sup>\*</sup> Mr. T. M. Spalding, of Westleton, and formerly of Ditchingham, in Norfolk, contributed the excellent list of Suffolk birds to Suckling's history of that county.

form, therefore, has alone appeared in this county, I have in this instance departed from the nomenclature of Yarrell, whose specific term *gyrfalco* belongs neither to the bird here referred to, nor to the specimen figured in his "British Birds."

Some very clear and interesting remarks upon the distinctive characteristics, at any age, of these three forms, be they races or species, will be found in the "Ibis" for 1862,\* the accuracy of which can be best verified by an inspection of the magnificent series of the three forms, in the Raptorial collection of the Norwich museum. It will suffice here, however, to state in general terms, that the Norwegian bird, as a rule, does not become so light in plumage as the Icelander, whilst the Greenland form, with the exception of the dark spots on the back and wings, becomes pure white by age, which the true Icelander never does.

# FALCO PEREGRINUS, Gmelin.

### PEREGRINE FALCON.

The Peregrine visits us annually in spring and autumn on its migratory course, and though in small numbers, is met with from time to time in every month between September and May. By far the larger portion of these are in immature plumage; and adult males, as is generally the case amongst Raptorial migrants, are much more scarce than females. I am not aware of any recent instance of the peregrine breeding with us; but Mr. Hunt, writing in 1815 (Brit. Ornithology, vol. ii., p. 9), says, "A nest of the gentil falcon has from time immemorial been found on Hunstanton cliffs." They have also

<sup>\* &</sup>quot;Review of Drs. Blasius's and Baldamus's Continuation of Naumann's 'Vögel Deutschlands.'"—"Ibis," vol. iv., p.p. 43 to 53.

been known at different times to frequent the spire of Norwich Cathedral, and according to the above-mentioned author (vol. i. p. 63), a Mr. Kittle, of this city, particularly noticed a bird of this species, which "arrived at the Cathedral by the middle of September, and left it about the first week in March, and continued to do so for eight successive years; he also remarked that it was generally to be seen near the top of the spire, and invariably on that side which by sailors is called the leeward, from whence it used to fly at pigeons and other birds who were so unfortunate as to approach its station. From the number of feathers found in the tower of the Cathedral, he supposed that after it had taken its prey it used to retire to that part to eat it free from molestation." More recently a female, who with her mate frequented the same spot, was shot whilst chasing a pigeon on one of the bridges. Mr. Lubbock also states, that "during the time the late Mr. Downes practised falconry near Yarmouth a pair of these birds used to breed in the steeple of Corton church. The nestlings were taken and trained to the chase, the clerk having a regular retaining fee for their preservation." The occurrence of three adult specimens, two males and one female, near Thetford, in the spring of 1848, is noticed in the "Zoologist," p. 2134; in the following spring, a very fine pair, in perfect plumage, were killed near the same place, and one or more old birds are still seen there every year, usually in the month of March, the adjacent warren having peculiar attractions. A fine adult female, now in my possession, was killed at Rockland in March, 1858; and two others, in equally good plumage, were taken in April, 1859, at Fransham and Woodbastwick. The autumn of 1859 was remarkable for the unusual number of these birds that appeared on our coast; but out of eight or ten which came under my notice at that time, none had attained more than

their first year's plumage. Amongst these was a fine young female, picked up on October 12th, on the Yarmouth line, near Reedham, having one wing broken at the shoulder-joint, and a deep cut at the base of the upper mandible, from coming in contact with the telegraph wires. The poor bird, when found, was still alive, but did not long survive its injuries; whether these were received from its coming in contact with the wires on its nocturnal migration, as occurs so frequently with snipe and woodcocks during the autumn, or from its too impetuous chase of some intended victim during the day, it is difficult to determine-most probably the former, as an instance is recorded by Messrs, Gurney and Fisher of a young peregrine being killed in the autumn of 1843, by "dashing during the night against one of the light-houses on our eastern coast." In the early part of 1862 they were again extremely numerous, seven or eight specimens being killed between January and March, in the neighbourhood of Swaffham. Amongst these were a pair of old birds, in magnificent plumage; and a fine old female was shot at Gunton, near Cromer, on the 12th February, and an adult male at Weybourne, on the 3rd of April. In the following autumn two old males and one female were killed in different parts of the county. In January, 1863, an old female was shot at Horsey, in the act of carrying off a waterhen, the hawk weighing 1lb. 15oz., and its quarry 13oz. A singular instance of deformity in the beak of this falcon, arising probably from some accident, occurred in an old female killed at Woodrising, in April, 1859, by Major Weyland's gamekeeper. In this bird the upper mandible, instead of projecting over the lower with a sharp hooked point, rested upon the under mandible, both being equal in length and much thickened and blunted at the tips. The cutting edges of the beak, however, did not meet at the sides, but had

a hole quite through, looking very much as if a stray shot had caused all the mischief and thus given to the whole head a much more Corvine than Raptorial character.

#### FALCONRY IN NORFOLK.

Of the "decline and fall" of falconry in this county, there is but little to add to the interesting and elaborate paper on the subject in Lubbock's "Fauna of Norfolk." The introduction of fire-arms, with the increased facilities thus afforded for the killing of game, was no doubt the primary cause of its gradual decay, and the rage for "preserving" of late years has given the last blow to this once Regal sport; whilst the laws which now protect the partridge and pheasant, represent, in our own times, the pains and penalties which formerly attached to the theft or destruction of either hawk or falcon.\* Yet,

<sup>\*</sup> The late Col. Hamilton, in his "Reminiscences of a Sportsman," writing on the history of falconry, remarks-"In the 34th of Edw. III. it was made felony to steal a hawk; to take its eggs even out of a person's own ground, was punishable with imprisonment for a year and a day, besides a fine at the King's pleasure. In Queen Elizabeth's reign the imprisonment was reduced to three months, but the offender must find security for seven years, or be in prison till he did."—Any person finding a falcon, or any species of hawk, was likewise compelled by law to carry it to the Sheriff of the County, who was bound publicly to announce the fact that its owner might claim it, and if not claimed within four months it became the property of the finder if a qualified person; if not he received a reward and the Sheriff kept the hawk. The church even at times extended its formidable Ægis over these favoured birds, as in the above year of the reign of Edward the III. "The Bishop of Ely excommunicated certain persons for stealing a hawk that was sitting upon her perch in the cloisters of Bermondsey, in Southwark; but this piece of sacrilege was committed during Divine service, and the hawk was the property of the Bishop."—The costliness also of this ancient pastime may be gathered from the fact, that "In the reign of James the 1st, Sir Thos. Monson gave £1,000 (about £2,000 of our present money) for a cast of hawks."

though once deemed of so great value as to form no small item in a heavy ransom, or the tenure by which estates were held of the crown, or important privileges were secured to individuals, the noble falcon and his doomed race are now included in the list of *vermin*, and the price set upon their heads depends solely on their rarity in the collectors' hands. Well might some patriarch of the tribe exclaim—

"Tempora mutantur nos et mutamur in illis."

The late Lord Berners (Col. Wilson) kept heron hawks\* at his seat at Didlington for many years. These were afterwards supported by subscription, but were given up in 1836, and since that time falconry has ceased to be practised in this county, except as a private amusement by one or two individuals. Mr. Newcome, of Feltwell Hall, near Brandon, who probably knows more of the science of falconry than any man in England, continued to keep hawks for some years after the subscription club at the Loo had ceased to exist. In 1843, Mr. Newcome possessed two remarkable heron hawks, De Ruyter and Sultan, which were brought from Holland by the falconer Pel, and having been flown one season at Loo, took in their third year, at Hockwold and Loo, 54 herons, and in the following season of 1844, in the same localities, 57 herons. De Ruyter was unfortunately lost in that year, on Lakenheath warren, when flown at a rook; but in the autumn of 1845, Sultan caught 25 rooks and three herons. This splen-

<sup>\*</sup> Messrs. Salvin and Brodrick, in their highly interesting work on "Falconry in the British Isles," remark, that these falcons were "Passage hawks" from Holland, and the stock was kept up by obtaining fresh birds from that country. On one occasion, soon after the breaking out of the war with France, the falconers, who were bringing a supply of falcons to Didlington, were taken prisoners, and sent to the Hague, and subsequently to Paris." They also state that "The hawk-catchers in Holland have, on several occasions, taken hawks that have escaped from Norfolk."

did bird, in full hawking gear, with hood, bells, and jesses complete, is still preserved in a glass case at Hockwold Hall, in honour of his high achievements. Mr. Newcome had also at one time several trained merlins, which exhibited remarkable sport in hawking skylarks, and two female sparrowhawks, which were flown at blackbirds with great success; of late years, however, he has done but little in his favourite pastime, but a small club, with Robt. Barr as falconer, has been recently formed, of which Capt. Salvin, Mr. Newcome, Mr. Knox, Mr. C. Duncombe, and one or two more, are members, and the hawks, numbering about a dozen, are now at Feltwell, preparatory to their being flown in the spring on Salisbury plain. John Pel above alluded to, one of the few professional falconers still existing in England, is descended from a Dutch family long noted for their skill in that particular science, and, as stated by "Peregrine," (to whose account of "Pel's hawking career," published in the "Field" of 1860, I am indebted for many of the following particulars,) was born at Lowestoft in 1815, his father being a native of Valkenswaard, in Holland,\* and master falconer to the Didlington subscription club. About 1830 both father and son resided at Lowestoft, where they kept hawks for the Duke of Leeds and the Earl of Aberdeen, and subsequently both of them entered the service of the Duke of St. Alban's at-Highgate. In 1842 the younger Pel had the management of Mr. Newcome's hawks at Hockwold, and in the summer of 1845

<sup>\*</sup> Mr. Lubbock refers to a letter from Sir Anthony Pell, 1621, as given by Pennant in the appendix to his birds, forbidding "Any one importing hawks to move them from ship-board or the custom-house, until the said Pell, master falconer, should have made his selection for the King's use," and adds—"It is singular that the last family practising the art of hawking in England, natives of Valkenswaard, should be Pell or Pells."

proceeded to Iceland for the Duke of Leeds, to procure the larger falcons, and succeeded in taking and bringing over fifteen birds (falcons and tiercels), of which eight were presented by the Duke to the Loo club, and the remaining seven were retained by his Grace under the management of Pel. Of late years he has resided chiefly in Norfolk, only occasionally going abroad on professional visits, and is still falconer to the Duke of St. Albans (Hereditary Grand Falconer of England), and keeps his hawks at Lakenheath. No locality in England is perhaps better suited for hawking than the wide open country in the neighbourhood of Brandon, where, selecting a somewhat rising ground, the flight of both falcon and quarry may be watched as far as the eye can reach. Through the kindness of my friend Mr. Newcome, I have more than once enjoyed the now rare opportunity of witnessing a flight at rooks or pigeons, admiring the graceful circlings and fierce stoops of the peregrines, and the skill and mastery of the professional trainer. Wm. Barr, junr., a Scotch falconer, visited Norwich in 1851, and gave a public exhibition of his art on Hellesdon brakes and other places close to the city. The crowds, however, attracted by the novelty of the exhibition, interfered materially with the sport itself, as the pigeons thrown up took refuge in the carriages or amongst the crowd, whilst overhead the falcon, "waiting on," was frightened and confused by the noisy throng, and even if a successful stoop was made, it needed all the agility and strength of the falconer to keep back the populace whilst transferring the falcon from the quarry to his wrist.-At the present time, the only hawking establishment existing in this part of the country is that of the Maharajah Duleep Singh, a most enthusiastic sportsman, who recently purchased the Elveden estate, for many years the property of the late Mr. Newton.

In the L'Estrange "Household Book" are many curious entries with reference to the purchase, keep, training, and other expenses of the various hawks used at that time (1519 to 1578), at Hunstanton Hall, including peregrines, goshawks, hobbies, and sparrowhawks, for whose care and training a falconer was kept, who probably occupied the same position on the estate as a head gamekeeper at the present time. In the eleventh and following years of the reign of King Henry the VIIIth we find—

	£	s.	d.
Itm pd to John Maston for mewyng and kepyng of			
ye goshawks from Chrostyde (the feast of the			
exaltation of the Holy Cross) unto ye xvth daye of			
Novembre	_	X	_
Itm pd at Lynne whan ye went on hawkyng to Wool-			
ferton wood for fyer and dryncke			viij
Itm pd yr ye sam tym for horsmete		_	xiij
Itm delyvyd to hym the sam daye for a byll alowyd			
to Edward for hauks mett	_	vij	хj
Itm in reward same day to Saunder the fawken			
for the tyme that he was wt me, or he entred			
into wage	_		xvj
For yor goshawk. Itm delyved to yow the xxij day			
of August by the hands of David to bye yor			
goshawk	_	xl	
Itm delyved you the xxij day of January, when yow			
went a hawking wt my uncle Roger Woodhous	_	vij	vi

The following entries also indicate the kinds of game at which the different species of hawks were flown:—

Itm a fesant kyllyd wt ye goshawke.
Itm vj rabetts of store and ij ptriches kylled wt ye sperhawke.
Itm xiiij larks kyllyd wt the hobbye.
Itm xij larks kyllyd with the hobbye.
Itm ij ptrychys kyllyd wythe the hauks.
Itm ij fesands and ij ptrychys kyllyd wt the hauks.

Particular mention is made of the crossbow throughout the earlier portion of these records, and the birds

killed with that weapon, as, cranes, mallards, wild geese, bitterns, herons, swans, and bustards, and in one instance "viii mallards, a bustard, and i hernsewe" are entered as killed at the same time. Soon, however, these entries become less frequent, although notes on the hawks and spaniels continue, till in 1533, in the 24th year of the reign of King Henry the VIIIth, the crossbow at last gives place to the gun, and thenceforward are chronicled only the victims of the new weapon, destined to work as great a change in our national sports as in the more terrible arena of the battle-field. Large birds, or those most easy of approach, would appear by the following extracts to have been specially sought by the yet unskilled gunner, whose unwieldy piece, with its slow and often uncertain discharge, must have made even "sitting" shots a difficulty, whilst as yet the higher art of "shooting flying" had scarcely dawned as a possibility on the mind of the sportsman.

Itm a watter hen kylled wt the gonne. Itm a cranne kylled wt the gonne. Itm ij mallards kylled wt the gonne. Itm a wydgyn kylled wt the gonne.

Itm pd the xxviij day of February to Southhous for yor sadell xiiij\*.

and for gn powder and other things that he bought for you at London, xxj\*. xd.

Itm delyved the same daye to Barms of London to bey gunpowder wthall, xx<sup>s,\*</sup>

<sup>\* &</sup>quot;Extracts from the Household and Privy Purse Accounts of the Lestranges of Hunstanton, from A.D. 1519 to A.D. 1578;" Communicated to the Royal Society of Antiquaries by Daniel Gurney, Esq., F.S.A., in a letter to Sir Henry Ellis, K.H., F.R.S., Secretary. March 14th, 1833.

## FALCO SUBBUTEO, Linnæus.

#### HOBBY.

A very regular summer visitant, though in small numbers, arriving in June, and is met with both in adult and immature plumage. Mr. Lubbock speaks of its breeding at Hargham in the nest of a crow, and Mr. Spalding has taken its eggs, both at Thorpe Abbots, near Harleston, and at Kingswood, near Broome, invariably from crows' nests, the eggs of the crows being purposely removed to insure the occupation of the nest by the hobbies later in the season. A raven's nest, in High Grove, Geldestone, (Suffolk,) was also yearly tenanted by hobbies after the young ravens had flown. Of late years of course such instances have become more and more scarce, but a pair were known to breed at Bixley, near Norwich, in 1844; and the following facts respecting a similar occurrence in 1853, show the courageous and persevering adherence of this species to any favourite locality. A pair of these birds were observed to frequent a wood at Hockering, and, doomed by the very name of hawk, the male soon fell a victim to the keeper's gun. A second and a third time the female returned with a fresh mate, but only to share the fate of its predecessors; still she managed, herself, to escape all dangers, and, undaunted by her repeated losses, returned with a fourth consort to the same spot. This time the persecution was stayed, and the gallant little bird was allowed to rear her young ones undisturbed, which were seen later in the season flying about the wood. Of the three males which were brought successively to a bird preserver in this city, the first was in immature, the others in adult plumage; and it is the more remarkable

that the female in this instance should so soon and so often have obtained fresh partners of her own species, since the hobby, as above stated, is by no means numerous throughout the county. In the "Zoologist," p. 248, a hobby is recorded to have occurred at Yarmouth as early as the month of February, and a female was shot near this city, on the 20th of March, 1858, and one at Northrepps, on the 25th of March, 1863; but these are amongst the very few instances in which I have known this species to deviate from the extreme regularity with which it annually visits us in June, and even one at least of these birds had received such injuries as had most probably compelled it to remain here throughout the winter. The young male (No. 10.b) in the museum collection was shot whilst perched on St. John's Maddermarket church, in the very heart of this city.

# FALCO RUFIPES, Beseke.

### RED-FOOTED FALCON.

I can find no earlier record of the occurrence of this rare species in Norfolk than the year 1830, when the following note, by the late Mr. Yarrell, appears in Loudon's "Magazine of Natural History" (vol. iv., p. 116):—"Three examples of this small falcon were observed together at Horning, Norfolk, in the month of May, 1830, and fortunately all three were obtained. On examination they proved to be an adult male and female, and a young male in immature plumage. A fourth specimen has also been shot in Holkham park." Of the three first I am now able to give somewhat fuller particulars than have yet been published, the gentleman who shot them, Mr. Heath, of Ludham Hall, having kindly answered all my enquiries. They had been

noticed for some days before they were killed frequenting the arable lands adjoining the marshes, where they perched on the small bushes stuck up in the fields to prevent partridge netting, or settled on the ground apparently searching the soil for worms or insects. The old male and female were presented by Mr. Heath to Mr. Gurney, who still has them at Catton; and the young male to the late Mr. Edward Lombe, of Melton, whose fine collection is now at Wymondham, in the possession of his daughter, Mrs. E. P. Clarke.\* 1832, as stated by the Messrs. Paget, + another example was obtained on a marsh near Breydon, which came into the possession of Mr. D. Preston, of Yarmouth; but these gentlemen were decidedly in error in stating that Mr. Heath's specimens were procured "in the same year." No others appear to have been recognised from that date until August, 1843, when an adult male, presented to our museum by Mr. J. H. Gurney (No. 11), was procured near Norwich, and had the remains of various beetles in its stomach. This is, I believe, the last that has occurred in this county, but an immature specimen, in my own collection, was shot near the Somerleyton station, on the Lowestoft line (Suffolk), as recently as the 12th of July, 1862. The orange-legged hobby, as this species is sometimes called, may be distinguished at any age from that last described by its white talons.

<sup>\*</sup> I have also a further corroboration of Mr. Heath's statement in the following note, made by Mr. Lombe, in his copy of "Bewick's Birds," most kindly extracted for me, with many others, by Mrs. Clarke:—"They were mostly seen in the middle of a fallow field, and the female was shot flying from the thorns. The male (immature) now in my collection was shot from an oak in the same field. The male (mature) shot on a heap of thorns. The stomach contained insects."

<sup>† &</sup>quot;A sketch of the Natural History of Yarmouth and its neighbourhood." By C. J. and James Paget, 1834.

# FALCO ÆSALON, Gmelin.

#### MERLIN.

The Merlin still continues to visit us in autumn, though in small numbers, appearing chiefly in the month of October, but specimens are occasionally met with throughout the winter, and sometimes, though rarely, in March. Adult birds of both sexes have been always considered rare, more especially the elegant little males with their "pinions of glossy blue." The following are the only examples in full plumage that have come under my notice of late years:—an adult female, in my own collection, shot in a garden on the Earlham-road, near this city, in October, 1852; an old male in very beautiful plumage killed at Winterton, in October, 1856; and another at Melton, near Norwich, in October, 1859. Several of these little hawks were observed in different parts of the county during the intense frosts in the winter of 1860-1, but apparently the only specimen obtained was a fine male, killed at Shottesham, on the 16th of January. In the following winter, however, of 1861-2, when the weather was almost equally severe, an adult pair were killed in January, at Merton, and a female, also adult, about the same time, at Martham.

# FALCO TINNUNCULUS, Linnæus.

### KESTREL.

The Kestrel, in spite of all its persecutors, is still, I am happy to say, a common resident amongst us, though by no means so numerous as in the south of England, where three or four may be frequently seen at a time circling

over the open downs. Migratory specimens from the north also appear on our coast in considerable numbers towards the end of autumn, when many are trapped and shot on the hills by the sea-side, particularly about Northrepps and Beeston, near Cromer. It is probable, I think, that some of our native birds proceed further south during severe weather; and I believe, as a rule, like our common song thrush, they quit altogether the more exposed parts of the county in the depth of winter. In more sheltered localities, however, they are observed at all seasons. A pair which regularly frequent the ruined steeple of Keswick Church, near Norwich, have been seen by my friend, Mr. Edwards, skimming over the fields in search of prey whilst the snow was lying deep; and the thrashing out of a stack in autumn or winter is sure to bring them at once to the spot to seize, at a respectful distance, on the mice thus expelled from their snug quarters. That some kestrels carry off young partridges, as well as other small birds, during the nesting season, is too well authenticated as a fact for even their warmest advocates to gainsay; yet, still the amount of good which the species generally effects throughout the year by destroying large quantities of mice, moles, insects, and worms, should entitle it rather to protection at the hands of the farmer than annihilation for occasional raids upon the keepers' preserves, whilst every true lover of nature would plead for so striking an object in our rural scenery as the hovering kestrel, poised on quivering wings, or swooping down upon its prey. The museum collection is rich in local specimens, showing the differences in plumage of age and sex, and some are occasionally netted by our bird-catchers from their habit of pouncing down upon the "call" birds.

### ASTUR PALUMBARIUS (Linnæus).

#### GOSHAWK.

The Goshawk appears occasionally both in spring and autumn, but at uncertain intervals, and has of late years become even more scarce than formerly. adult male (No. 14) in our museum was killed at Colton in 1841; and the young female (No. 14.b) at Hingham in the following year; but so rarely are the old birds met with in this district that the above is probably the only example in mature plumage known with certainty to have been killed in Norfolk. An old male, however, in my possession, formerly in the collection of the late Rev. C. Penrice, of Plumstead, was, I believe, taken either in this or the adjoining county, although no record remains as to the exact locality.\* Of more recent occurrence may be noticed a young bird killed at Stratton Strawless in November, 1850, and an immature female, shot in November, 1851, near Norwich, whilst preving on a hare; a male, also immature, in very beautiful plumage, taken at Catfield in April, 1854; a female in its first year's plumage, killed at Hempstead about the 23rd of November, 1858; and a young bird trapped at Riddlesworth, in the autumn of 1863. Another female, much resembling this last specimen, was shot by Mr. John Gould, the celebrated ornithologist, in February, 1859, whilst staying with Sir Morton Peto, at Somerleyton, in Suffolk.

<sup>\*</sup> Mr. T. M. Spalding possesses a very beautiful male Goshawk, shot by himself in a wood, at Benacre, Suffolk, January 12th, 1841. This bird has the tail brown with cross bars, and the whole of the under parts transversely barred on a white ground. In the Dennis collection, at Bury St. Edmund's, there is also a young bird, said to have been killed at Aldborough.

### ACCIPITER NISUS (Linnæus).

#### SPARROWHAWK.

That so rapacious a bird as the little Sparrowhawk should not be a very abundant resident in a county where game is so strictly preserved as in Norfolk, can scarcely be a matter of surprise, but on the contrary it is rather remarkable that so many are still resident with us throughout the year, though, from the large number at times brought to our bird stuffers during the autumn and winter months, I feel sure that these birds, as well as kestrels, migrate to our coast from more northern localities. Under this impression, I carefully noted down the age and sex of every bird of this species that came under my notice between November, 1862, and the following April; and of some twenty-four specimens, at least eighteen were blue barred females, four immature, and two old males, with the red bars of their mature plumage. So large a number of adult females appearing consecutively throughout the winter season is, I think, pretty good evidence of their foreign origin, whilst the paucity of young birds in the above list is easily accounted for by the fact, that when killed they are generally thrown away, being hardly thought handsome enough for preservation. The beautiful little male in its adult state, with rich reddish bars on the breast and flanks, is rare in Norfolk, and very old females, with the same chesnut tints, are even more scarce, not one of the specimens above referred to showing any indication of this third change. Anecdotes are not wanting in this district of the boldness of the sparrowhawk in pursuing its prey through the windows of dwelling-houses, or snatching up young partridges or

chickens, in the very face of a spectator, and their fierceness in defence of their nests and young is well known. Mr. T. M. Spalding, who has had many opportunities of observing the habits of most of our British Raptores in a wild state, assures me that on one occasion, when climbing to the nest of a pair of these birds, the female kept dashing past him again and again, almost brushing his face with her wings, and on the arrival of the male, attracted by her cries, she became so violent that, as he laid his hand on a branch near the nest, she swooped over it, leaving the marks of her talons in deep scratches. The hobby in like cases is very fierce, but differs in its actions, pitching up and down in its anxious flight instead of swooping horizontally over the intruder's head.

A curious instance of the sparrowhawk pairing with the hobby occurred at Witchingham in 1851, as recorded by Mr. L. H. Irby in the "Zoologist," p. 3276. In this case five eggs were laid in a ring-dove's nest, placed in a fir tree, of which one was taken by a gamekeeper, who unfortunately shot both the old birds as soon as the other eggs were hatched, thus leaving the young to starve, and losing the opportunity of observing the result as to plumage of this cross breeding. The egg first procured from the nest is described as having "more red about it than is usual in those of the sparrowhawk, but less than in those of the hobby." Mr. Irby also refers to a similar fact in another part of the county, where the birds were shot before any eggs were laid. The great difference in size between the male and female in most of the Raptorial tribe is in none, perhaps, so conspicuous as in this species. A pair which were weighed by Mr. J. H. Gurney, exhibited the following extraordinary difference:-Male, 5 oz.; female, 104 oz., being more than double the weight of her partner. A young male sparrowhawk, perfectly

white, excepting a few dark feathers on the back, was killed at Riddlesworth in 1851; and, together with another specimen of the same variety obtained a few weeks later, is preserved in the collection of Mr. Thornhill, of that place. The first of these is described in the "Zoologist," p. 3276, by Mr. Edward Newton, as having the beak white, but the irides and legs as usual. This species is occasionally netted by our bird-catchers in the same manner as the kestrels before alluded to.

### MILVUS ICTINUS, Savigny.

#### KITE.

The Kite, once the terror of our farm-yards, is so no more; the "war of extermination" against the race having fairly banished it from the county of Norfolk, and, only as an accidental visitant on its migratory course, can it be included in the present list. In former years this bird occasionally remained with us to breed, and Mr. Lubbock, referring to the fact of its doing so in Huntingdonshire,\* observes—"It used half a century

<sup>\*</sup> These birds have, I believe, ceased to breed in Huntingdonshire for some years, where Monk's wood was formerly a favourite haunt. Mr. Alfred Newton, in his "Ootheca Wolleyana," page 112, records three eggs in the late Mr. Wolley's collection, as taken in that county-two in 1843 and one in 1844, with the following extract from Mr. Wolley's notes appended to the latter:-"Kites are becoming very rare near Alconbury hill. I am not sure that I saw one this year during my five days' stay at Sawtry." From Lincolnshire, as I learn from the same work, eggs of this bird were received in 1853, 54, 56, and 57, but none more recently; and to the last record the following note is added by Mr. Newton:-"Mr. Adrian informed my brother that the kites in Lincolnshire were becoming scarcer every year. This he attributed partly to the destruction of the birds, and partly to that of their favourite haunts, by the felling and stubbing of the woods, in two of which one hundred acres had been cut down since the beginning of the year, and this in the best locality."

back to be rather common in Norfolk," being used in the days of hawking as a prey to the nobler falcons, and Messrs. Brodrick and Salvin (Falconry in the British Isles,) speak of Thetford warren as a favourite locality for "Kite hawking," which was pursued by the Earl of Orford and Colonel Thornton in 1773, and by Mr. Colguhoun, of Wretham, about 1775. Probably the last specimen obtained in this county was a female, trapped at Croxton, near Thetford, in November, 1852. The sternum of this bird is in the collection of Mr. Alfred Newton, of Magdalene College, Cambridge, although I have been unable satisfactorily to trace the skin; but either this or one killed on the Suffolk side of Thetford warren in 1857 is, I believe, (unticketed,) in the Dennis collection, which was recently purchased for the Bury museum. A splendid old male in Mr. T. M. Spalding's\* collection at Westleton, was shot at Caistor, near Yarmouth, about five and twenty years back, but this species is described by the Messrs. Paget, in 1834, as "very rare" in the neighbourhood of Yarmouth; indeed it appears to have been always more plentiful on the other side of the county. Sir Thomas Browne accounts for their being scarce in the neighbourhood of Norwich in his time "because of the plenty of Ravens."

# BUTEO VULGARIS, Bechstein.

### COMMON BUZZARD.

The Common Buzzard visits us annually in small numbers both in spring and autumn, but rarely in mature plumage. It has probably ceased for some years to breed

<sup>\*</sup> Mr. Spalding informs me that the Rev. J. Farr, of Gillingham, Norfolk, has two Kites killed at Benacre, in the adjoining county, one of them within the last ten years. This bird was trapped by one claw, and the readiness with which they are attracted by any bait is probably the chief cause of their extermination.

in this county, although, when the term common was really applicable to this species, it was frequently known to do so, and the large woods at Hethel and Ashwelthorpe are specially mentioned by Lubbock as amongst its former haunts. A single bird has, however, been observed for the last 14 or 15 years to return regularly to Cossey Park, near Norwich, where I learn from Mr. Fountaine. of Easton, it has been allowed to remain unmolested. A very singular variety, a young male, was trapped at Holkham in 1855, exhibiting a great deal of white about the head, with whitey-brown feathers dotted all over the body, the party colour extending even to the talons; and a somewhat similar example occurred in the autumn of 1861. The only adult specimens that have come under my own notice, during the last twelve years, are a remarkably dark-coloured female in the Dennis collection\* at Bury, killed near Thetford in 1852; one shot at Filby on the 13th of February, 1861; and one at Northrepps in 1862 (No. 18.a) in the Norwich museum.

<sup>\*</sup> The Rev. J. B. P. Dennis, whose sudden and premature death in January, 1861, at the age of 45, was a great loss to science in more than one field of research, was not only a most zealous and accomplished naturalist, but an amateur taxidermist of very considerable excellence, and though residing chiefly at Bury St. Edmund's, paid constant visits to Yarmouth at certain seasons, for the purpose of collecting some of the rarer British birds which occur on Breydon. At the same time, whilst a good many of his specimens were thus the product of his own gun, he also left directions in his absence with old John Thomas, the noted Yarmouth gunner, to purchase anything out of the common way obtained in that neighbourhood. By this means many good birds, which from the local interest attaching to them, one could have wished had found a place in the Norwich museum, passed into the adjoining county, and in their admirable attitudes, and perfect condition of plumage, (the Raptores more especially), testify to the patience and skill of this scientific collector. Most of the cases are very carefully ticketted with the age, sex, and locality of each specimen; but as before alluded to in reference to the kite, such notes are here and there wanting, and as too often happens under similar

Messrs. Gurney and Fisher state that a bird of this species, killed near Cromer, "was so closely pursued by two young sparrowhawks, that the latter were both killed by a discharge from the second barrel of the same gun with which the buzzard had just been shot."

## ARCHIBUTEO LAGOPUS (Linnæus).

### ROUGH-LEGGED BUZZARD.

The Rough-legged Buzzard, distinguished by having the tarsi feathered down to the toes, appears here in

circumstances, the "master spirit" having passed away, complete identification is no longer possible. Although locally his memory will be chiefly associated with the "Dennis Collection of Birds," he was even better known to the scientific world by his microscopical researches into the structure of bone. On this subject the Bury Post remarks, in a brief memoir published in 1861: "His investigations into the internal structure of bone may indeed be considered to have opened a new door to natural science. A few of its results are given in his two papers contributed in 1857 to the Journal of Microscopical Science, and briefly noticed at the time in our columns, the value of which has been recognised by Professors Henslow and Owen, and other savans. \* \* \* He says in one of his papers, 'each bone is a study in itself, and involves a knowledge of the muscles that move it, as well as of the use it is designed for; and in the bird of flight the shape of the wing, the extent of surface covered by the quill feathers, whether it is pointed or round, whether the secondary quills are strong or weak, are all matters of deep consideration and comparison with the internal construction of the bone, which the microscope reveals to the eye.' \* \* \* A single point will show the importance of Mr. Dennis's discovery and the sagacity of the discoverer. A number of bones having been secured by one of our University museums, the curator sent the more perfect bones to Professor Owen, and a few minute fragments to Mr. Dennis, stating that nothing was known about them. The Professor and Mr. Dennis arrived at the same conclusion, ascribing the bones to the same fossil reptile."

autumn and throughout the winter; but the specimens obtained are nearly all in immature plumage. Indeed, so rare is the occurrence of this bird in its mature dress, that I know of but four specimens killed in this district which can be properly called adult, and these have occurred in each instance so immediately on the borders of the two counties, that they may be claimed equally for Norfolk or Suffolk. The first in the collection of Mr. Newcome, of Feltwell, was trapped at Santon-Downham in July, 1848 ("Zoologist," p. 2382); the second in the possession of Mr. Thomas Dix, of West Harling, was taken on Thetford warren in November, 1857; and another from the same locality is in the hands of Mr. Doubleday, of Epping, as I have lately ascertained through my friend Mr. Dix; whilst the fourth is in Mr. Gurney's collection at Catton, together with a less matured bird, obtained at the same time, some few years back. In the cross-barred markings of the thighs and flanks, the bars on the lower part of the tail and the bluish tinge in the feathers of the back and wings (but this more especially in the first and second), these birds closely resemble the adult specimens from Lapland, in the Norwich museum, collected by the late Mr. Wolley, to whom British naturalists are indebted for the means of pointing out the true difference in plumage betwixt the young and the old in this species. These buzzards vary considerably in numbers in different seasons, being in some years very scarce, and in others visiting us in great quantities, as was particularly the case in the winter of 1839 and 1840, when, according to Messrs. Gurney and Fisher, "During the three months of November, December, and January, no less than forty-seven specimens were ascertained to have been taken within eight miles of the town of Thetford, besides many others which were procured elsewhere." Since that date but few had been observed from year to year until the autumn of

1858, when they were again numerous; and between October and January of the following year, about twenty specimens were obtained, principally in the neighbourhood of Thetford and Yarmouth. A fine male from Hickling in January, 1859, had a mouse and the remains of a rabbit in its stomach. Still more recently, in the autumn and winter of 1862-3, several fine specimens were killed in different parts of the county, one of which contained the recently swallowed remains of a skylark, with its long claws, legs, and beak quite perfect, presenting a decidedly uncomfortable and indigestible appearance.—The following curious anecdote is extracted from a MS, volume, relating to the fauna of Yarmouth and its environs, now in the possession of Sir W. J. Hooker, K.H., who most kindly allowed me a perusal of it, and from which I am enabled to supply many interesting notes relating to this district: \*-"On Friday, December 6th, 1816, the Holkham shooting party repaired to Warham, and were followed during the greater part of the day by a bird of prey, which constantly attended their motions, and was repeatedly fired at while hovering over their heads, without betraying the smallest symptoms of apprehension and alarm, even though the shot was heard to rattle on its feathers. the afternoon it descended on a tree, where it allowed Mr. Coke, attended by a boy holding a dead pheasant dangling in his hand, to approach sufficiently near to get a shot at it, which brought it to the ground. It proved to be a most beautiful female specimen of that rare bird the F. lagopus, or rough-legged buzzard, measuring very nearly five feet across the wings, and two feet one inch in length. The male bird had attended

<sup>\* &</sup>quot;Memoranda touching the Natural History of Yarmouth and its environs, from 1807 to 1840, by Sir W. J. Hooker, K.H., Thos. Penrice, Esq., Mr. Lilly Wigg, Rev. John Burrell, Rev. R. B. Francis, and Dawson Turner, Esq."

the chase at Wighton, just in the same manner, two days before, and had boldly carried off from a heap of game two partridges. It was next day caught in a trap by the keeper, and both of them were presented by Mr. Coke to the Rev. G. Glover, as a most valuable accession to his collection of 'British Birds.'"

# PERNIS APIVORUS (Linnæus).

### HONEY BUZZARD.

The Honey Buzzard, now either more frequent or more observed in its visits than formerly, has been met with in almost every month between May and November, but is mostly an autumnal migrant, at which time the specimens obtained exhibit all the variety of changes that take place in its immature stages of plumage. adult bird is extremely scarce, so much so that I am aware of but two or three instances of its occurrence in this county, and probably the first ever recognised as such, was a female killed at Holkham in July, 1854, now in the possession of the Earl of Leicester. It has been fully ascertained of late years that the grey head in this species denotes the adult state, all other peculiarities of plumage, from the deep brown of the earliest stage. being either gradual advances to maturity or more often accidental varieties. Usually occurring in small numbers, the year 1841\* was remarkable for the large number of these birds obtained in various parts of the county, exhibiting a most singular diversity of plumage,

<sup>\*</sup> See a paper by W. R. Fisher, Esq., in the "Zoologist" for 1843, p. 375—"On the changes in the plumage of the Honey Buzzard," with illustrations of specimens killed in Norfolk at that time, some of which are in the Norwich museum. Mr. Fisher, however, was not then aware of the distinctive characteristics of the mature plumage.

but still not including a single adult. About the same time with the Holkham specimen an immature female was taken at Saxmundham, in Suffolk. The stomachs of both these birds were found well filled with young wasps, and in the latter a few pieces of moss, which had no doubt been accidentally swallowed during the destruction of the wasps' nest.

In September, 1854, a young male having the head yellowish white, with a few dark patches, and more or less resembling both the varieties in the museum collection (British series), was captured at Holkham, and in this case the bird was observed by a keeper to rise from a bank near a wasps' nest, and was trapped soon afterwards on the same spot. With reference to the food of the honey buzzard it may be worthy of remark, that in the stomach and crop of one killed near Lowestoft in the spring of 1854 ("Zoologist," p. 5249), were found the remains of blackbirds' eggs; also in the throat of a specimen shot at Lynford, near Thetford, in 1851, several small fragments of the eggs of the song thrush. The following are the more recent instances of the appearance of this species on our eastern coast:—

1856. A female killed at Burlingham, in Norfolk, towards the end of June, exhibiting some grey about the head; and two young males, one taken alive at Gunton, and another at Pakefield, near Lowestoft, Suffolk, a rather favourite locality.

1857. Two male birds, in full adult plumage, shot on the 25th of August, at Northrepps, near Cromer, now in the collection of Mr. J. H. Gurney. A third specimen was also seen at the same time, but was not obtained. On the 28th of the same month, an immature female was killed at Salhouse; and on the 7th of September another, also immature, at Woodbastwick, and a young male, about the same time, on the Somerleyton estate, near Lowestoft, Suffolk. The

following interesting particulars respecting the Northrepps specimens were communicated by Mr. Gurney, at the time, to the "Zoologist," p. 5789:—"About 9 o'clock this morning, I was riding along a broad green drive which runs through a wood in this place, when a honey buzzard rose from the grass, and alighted on a tree on the edge of the wood. I shortly after sent my gamekeeper in pursuit of it, and he succeeded in shooting it near the spot where I saw it. Hearing, afterwards, that before he shot this bird it had been seen flying in company with a second specimen, he returned to the drive, and succeeded in shooting that also, very nearly at the same spot where he had procured the first specimen, being guided in his search by loud whistling cries which the bird was making, probably as a call-note to the one which had been previously shot. About two hours later, my son, who was passing through the drive, saw a third specimen rise from the ground and alight on a tree, in a similar manner and nearly in the same place as the first. The gamekeeper was again sent in pursuit; but when he succeeded in getting a view of this bird it had risen so high in the air that it was out of shot, and continued flying at a great height in an inland direction till it disappeared. Both specimens that were procured were in full adult dress, and possessed the beautiful grev tinge on the head which always distinguishes the adult examples of this bird. On dissection both of these specimens proved to be male birds. The stomachs of both contained the remains of wasps and wasp-grubs."

1860. An immature female, in the collection of the Rev. C. J. Lucas, occurred at Burgh, near Yarmouth, during the first week in August.

1861. A nearly adult bird, having slight traces of grey around the eyes and beak, was killed at Honingham on the 27th of May.

1863. A young female at Northrepps, also in

Mr. Gurney's collection, and an immature male near Wymondham, were procured in October about the same date.

1864. An immature male, in dark brown plumage, prettily spotted about the head and neck with white, each feather being slightly tipped, was killed in Norfolk on the 24th of September, at Gatesend, near Fakenham, and another was seen on several occasions near the same locality. The stomach of this bird contained portions of wasps and honeycomb.

## CIRCUS ÆRUGINOSUS (Linnæus).

### MARSH HARRIER.

The habits of the Harriers in this county of late years, have been more influenced by the changes which have taken place in the character of the soil, through extensive drainage, than almost any other group. In the south-western parts of Norfolk, the changes thus effected have resulted in the perfect extermination of our three British species, which formerly bred freely in that portion of the county; and Mr. Alfred Newton, in a communication to Mr. Hewitson on this subject, observes, (Eggs Brit. Bds., 3rd ed.)—"The Moor Buzzard was the first to cease from breeding there, then the Hen Harrier, and lastly the Ash-coloured species." Newcome, of Feltwell, also informs me that the marsh harrier was always the most scarce in his neighbourhood. In the eastern districts however, where the broads still retain much of their normal character, these birds have suffered only in degree; but undoubtedly even here, the formation of railroads through an extensive tract of marshes, together with the facilities thus afforded to a greatly increased number of gunners of visiting the fenny districts, have rendered these birds yearly more and

more scarce; whilst their breeding grounds are confined almost entirely to such quiet and preserved localities as Ranworth, Barton, Horsey, and Hickling, where the shriek of the railway whistle has not yet scared them from their natural haunts. In the above districts a few pairs of the marsh harrier, as I learn from the most reliable sources, remain with us throughout the year, and I feel justified, therefore, in still retaining the moor buzzard, as this species is frequently termed, in the list of residents, whilst at the same time I believe that some migratory specimens occur at times. A nest, with three young ones, was taken near Yarmouth in the summer of 1862. Formerly, as Mr. Lubbock observes, this species might fairly be termed "The Norfolk Hawk," so universally was it spread over the whole district of the broads, one or two being always observed in the day, during a shooting or fishing excursion. Adult specimens of this harrier are extremely scarce, the examples obtained being almost invariably young birds, and a large proportion exhibit the straw coloured head, from which they have been termed by some authors the white-headed harpy and bald buzzard. It is, I think, rather generally supposed, that these capped birds are in an intermediate stage of plumage; but Mr. Newcome, who has had more opportunities of observing our British harriers than most naturalists, assures me that it is very commonly the case for young moor buzzards to have this light coloured patch on their heads, though it is not always the case, as he believes he has had birds from the same nest, some of which presented this feature and others not. From my own notes of late years, I certainly find that of the specimens brought to our bird-stuffers, those with light coloured heads are more numerous than those which are brown all over, and Mr. Hunt, in his "British Ornithology" (vol. 1, p. 50), remarks—"The Rev. G. Glover favoured us with a note on this species, in which he says,

that of two taken from the same nest and brought up tame, one of them had a bright luteous mark on the head, and the other was entirely of a dark chocolate The nest was built on a tree." Of the habits colour. of this harrier in confinement the same author adds-"The bird now in the possession of the Rev. G. Glover is particularly fond of rats and mice, which it devours with avidity. In rainy weather it invariably makes a hole in the earth with its beak, for the purpose of retaining the water, which it seems to enjoy as a luxury." Mr. Rising, of Horsey, possesses a fine adult specimen of the marsh harrier, killed some years back in that neighbourhood, which like the figure in Yarrell's "British Birds," exhibits more grey than brown on the wing coverts, tertials, and tail feathers; and a splendid old male, purchased at Yarmouth some 15 years ago by Mr. Spalding, of Westleton, has the tail coverts, thighs, and crest, rich reddish yellow, the latter streaked with dark brown, and the tail and wing primaries very grey. These birds may be taken with a steelfall baited with an egg, being apparently very partial to such diet, and there is no doubt that Sir Thos. Browne refers to this species when he says, "Young otters are sometimes preyed upon by buzzards, having occasionally been found in the nests of these birds. \* \* \* There are the grey and bald buzzards in great numbers, owing to the broad waters and warrens which afford them more food than they can obtain in woodland countries."

## CIRCUS CYANEUS (Linnæus).

### HEN HARRIER.

At no time so numerous in this county as the last species, at least as regards the district of the broads the Hen Harrier can be classed only amongst those

migratory species which remain, in rare instances, to breed in Norfolk. Messrs. Sheppard and Whitear thus speak of its breeding in the channel fen at Barton:-"We have more than once thought ourselves in danger of being attacked by it, when we had approached the place where undoubtedly its nest was concealed;" and Mr. Lubbock says, "The Hen Harrier always breeds here in a few instances, although not a bird of frequent occurrence. Many years back I have known of its breeding at Surlingham." For the last eight or ten years, however, I have known of but one instance of its nesting even in such localities as the marsh harrier and Montagu's still frequent, and although adult females (the ringtail harrier of some authors) and immature specimens occur nearly every year, these are most probably spring and autumn migrants, from their appearance invariably between October and March, and for the most part near the coast. The adult male, in its delicate blueish grey plumage, has been long considered a rarity in this county; the only one that I had heard of for some years prior to 1859 (now in my collection), was shot at Ranworth in November of that year, and a few days later an adult female, most probably the companion bird, was taken close by at Horning and being only winged was sent to Mr. J. H. Gurney, who still has it alive in his aviary. In the following winter, however, amongst other rarities that visited this county during the almost unprecedented frosts of December and January, 1860-61, were two fine old males, killed, one at Hickling on the 12th January, the other at Hargham about the same time. The latter bird, although beautifully blue and white, still retained a small patch of brown on the nape of the neck, with a few brown feathers on the back. An unusual number of immature birds, and some old females, were also killed in different parts of the county in 1862. The only recent instance of its nesting

in this county to my knowledge, as above alluded to, occurred at Horsey in the summer of 1861, when I was informed by Mr. Teasdel, of Yarmouth, that he received two fresh eggs from that neighbourhood, and an old bird, I believe a female, came at the same time into the hands of a Yarmouth game-dealer. Occasionally, but still very rarely, I have found the adult male of this species to exhibit slight dashes of red on the lower parts of the body and under tail coverts, resembling the markings of the old male in *C. cineraceus*. Mr. Gurney has one of these varieties at Catton, in a case with other Norfolk specimens, which are pure grey and white.

## CIRCUS CINERACEUS (Montagu).

### MONTAGU'S HARRIER.

This species, now fully distinguished in all stages of plumage from that last described, is certainly less rare than is generally supposed, and whilst the hen harrier has ceased almost entirely to nest even in the eastern portion of the county, the ash-coloured harrier, as this bird is also termed, has been known to breed with us in several instances of late years, though not regularly enough to be still looked upon as a resident species. As before remarked also, prior to the entire drainage of the south-western fens, this harrier was not only the most plentiful in that locality, but was the last to quit altogether those once favourite haunts. Probably the last eggs of this species, known to have been laid in that district, were taken from a nest in Feltwell fen on the 9th of June, 1854, the particulars of which are recorded by Mr. Alfred Newton in his "Ootheca Wolleyana," p. 149, with many other interesting notes relating to the ornithology of this and adjoining counties. In July, 1858, a nest, which proved to be of this

species, was discovered on a rushy marsh near Ranworth decoy. The old birds had been watched by the broad-man flying backwards and forwards with food, and on making a search he soon found the nest containing three young ones. Of these one only was feathered, the next partly feathered mixed with down, and the smallest covered with down only, showing that the hen bird, as is often the case with the Raptorial tribe, had begun sitting after laying the first egg. In the aviary of Mr. Gurney, at Catton park, these nestlings thrived wonderfully, and in a few weeks even the youngest had become fully fledged, and all three exhibited the rich chocolate colour peculiar to their immature plumage, with the facial disk complete. On moulting their mature plumage, two out of the three proved to be males, which lived in confinement some four or five years, and one is now preserved in the Norwich museum (British series (No. 23). The female still survives. In May, 1862, two adult females were shot about the same time, one at Surlingham and the other on the coast near Cromer; and an old male, in Capt. Longe's possession, was killed at Yarmouth in October. In the same year, about the 10th of August, three young birds, taken from a nest at Sutton, were brought to one of our Norwich birdstuffers, who, at my suggestion, forwarded a pair alive to Mr. Bartlett, for the Zoological Society's collection in London, and I have just seen (October 12th, 1864) a remarkably fine young bird, also taken from a nest at Sutton, in the summer of this year, together with another which died soon after. This specimen is now in the rich chocolate colour of its immature dress, with the irides pearl white (instead of straw yellow as in mature birds), and is in good condition and very tame. In the summer of 1863, an extremely perfect adult male, in Mr. Newcome's collection, was killed at Feltwell; together with five other specimens

of this and the marsh harrier, all killed in the same locality ("Zoologist," p. 8765); these birds appearing still partial to their former haunts, though now so changed in character and unsuited to their nesting habits. Mr. Lubbock mentions Grimston common, near Lynn, and the neighbourhood of Thetford, (meaning most probably the fen district below Brandon,) as places where the nests of this harrier used to be found; and the following notice in the "Zoologist," p. 1496, from Mr. C. B. Hunter, of Downham Market, records the occurrence of two nests in that district in 1846:-"On the 23rd of May I took a nest of this rare bird with two eggs in it, and on the 13th of June another nest with two eggs also. The eggs in both were quite fresh, and there would probably have been five in each. The nests were composed of dead grass and sedge laid closely together on the ground. The eggs in one were spotted with brown." The male specimen (No. 23.c) amongst the "British Birds" in the Norwich museum, was taken when young, with four others, from a nest at Feltwell some years back, and attained its present appearance in confinement; and the young and very dark female (No. 23.e) in the same series was killed near Yarmouth, in September, 1853, and was most probably bred in that neighbourhood. This bird is extremely interesting as exhibiting a melanism in the plumage of this species, occasionally, though rarely noticed in foreign as well as British specimens, and which thus, accidentally as it were, completes the chain between the moor buzzard and the ordinary harrier type. Mr. Gurney, who has met with several examples of this variety, informs me that "the old male is of a very dark smoky grey, the female and young an entire purplish chocolate brown." Two French specimens, an adult male and a nestling, will be found in the Raptorial collection of the Norwich museum, and Mr. Gurney has also seen another female

from Abyssinia besides the three following, all killed in England. One immature example, much resembling the Yarmouth bird, preserved in the Canterbury museum, and killed in Kent; a young male, shot at Selsea, in the Chichester museum; and a female, most probably adult, but not so dark as the Yarmouth bird in Mr. Newcome's collection, shot by himself some years back, from a nest in Feltwell sedge-fen, in this county. To these last I can also add two other British killed specimens of this melanite type; one, as I am informed by Mr. Alfred Newton, a male, shot at North Chapel, near Petworth, Sussex, in either 1855 or the following year, now in the possession of Mr. Knox (author of the "Birds of Sussex"), who examined it in company with the late Mr. Yarrell, and the other, an adult female, killed at Yarmouth in July, 1855, which I recently discovered in the Dennis collection at the Bury museum. "Vieillot (writes Mr. Gurney) made this form a distinct species under the name of Circus ater ('Dict. Hist. Nat.' iv., p. 459); but in the 'Revue de Zool.' for 1850, p. 82, is a note by Dr. Pucheran, intended to shew that it is only a variety of C. cineraceus. Prince Bonaparte also confirms this view in p. 492 of the same volume, and I have no doubt that it is merely a variety, though I suspect it may be an hereditary one from so many instances of it occurring."

# SCOPS ALDROVANDI, Bonaparte.

# SCOPS EARED OWL.

This rare little Owl is recorded by various local authors to have been killed in Norfolk in three or four instances. According to Messrs. Gurney and Fisher it has occurred twice in the neighbourhood of Yarmouth,

and as often near Norwich, and no doubt the one mentioned by Hunt\* as obtained at Bradestone in 1828. and the Brundall specimen, which Mr. Lubbock says formed part of the collection of the late Mr. Penrice, are included in these,+ but I have also a record in the late Mr. Lombe's notes of one killed at Strumpshaw in June, 1824. The specimen, however, belonging to Mr. Gurney, also noticed by Mr. Lubbock as "killed near Norwich," is, as far as I can ascertain its history, decidedly doubtful. Of late years this species has been recognised but once on our coast. On the morning of the 27th of November, 1861, an adult male was picked up at the foot of the lighthouse hill, at Cromer, by one of Mr. Gurney's keepers, who found the bird still alive, but evidently much injured from flying against the glass, attracted by the glare of the lamps during the previous night, when, half stunned, it had fallen to the ground and fluttered down the hill to the spot where it was picked up. This bird, now in Mr. Gurney's collection at Catton, had a mass of fur in the stomach about the size of a walnut, amongst which was discernible an almost perfect skeleton of a mouse, together with the heads and forceps of several earwigs, and three stout caterpillars nearly an inch in length. The head exhibited no marks of injury, and the plumage was perfect, but the flesh on the breast and the point of one wing showed symptoms of having sustained a very severe blow.

<sup>†</sup> See Hunt's "List of Norfolk Birds" in "Stacy's History of Norfolk" (1829).

<sup>\*</sup> In a catalogue of the late Mr. Stephen Miller's collection of birds, "principally Norfolk shot specimens," I find, amongst other rarities, a Scops eared owl, but whether this was one of those recorded as killed near Yarmouth, or not, I have been unable to ascertain satisfactorily.

### SCOPS ASIO (Linnæus).

#### AMERICAN MOTTLED OWL.

This small North American species was first included amongst the accidental visitants to this country, by the late Mr. Yarrell, in the third edition of his "British Birds," in which will be found the notice of a specimen shot in the neighbourhood of Leeds in 1852, and of which a figure and description were given in "The Naturalist" for the same year (p. 169). Mr. Gurney informs me that some years back he purchased from the late Mr. Thurtell, then a nurseryman, at Eaton, (when selling off his collection of Norfolk Birds,) an adult specimen of this rare owl, said to have been killed near Yarmouth, but till then supposed to be only an European Scops Owl. This bird was unfortunately destroyed after it came into Mr. Gurney's possession.

## OTUS VULGARIS, Fleming.

### LONG-EARED OWL.

The Long-eared Owl is another instance of the changes which have taken place in a few years from local causes, in the habits of some of our feathered visitants. Whilst drainage and the plough are fast driving the harriers and other marsh breeders from their accustomed haunts, the rapid increase in our fir plantations, especially near the coast, affords such inducements to this species to remain and breed with us, that the autumn visitant of a few years since, only occasionally known to stay through the summer, may now be more properly termed a numerous resident, receiving additions

to its numbers in autumn. The Rev. Mr. Lubbock, writing of this owl some 20 years ago, though mentioning the fact of its sometimes remaining to breed, says, "The bird may be considered altogether rare," which statement is in strange contrast to the number of specimens now, at all seasons of the year, brought to be preserved in this city (particularly the case in 1854), and but for the thoughtless persecution of keepers and collectors, a pair or more might be found located in almost any of our woods or plantations of sufficient extent. In the spring of 1856, no less than ten young birds were taken in a plantation at Sprowston, near Norwich, and several old ones were shot: vet since that date a few pairs have still continued to frequent the same locality, and they are more particularly plentiful in the extensive fir coverts in the vicinity of our east coast. In the western and south-western parts of the county they are also very plentiful. Mr. Alfred Newton, writing from the neighbourhood of Thetford, says, (Hewitson, Eggs Brit. Bds., 3rd ed.) "The long-eared is the most plentiful species of owl hereabout, and there are few plantations of any size which do not contain a pair; as far as my own experience goes, though it is opposed to Messrs. Tuke's opinion, quoted in your former edition, I should say that the usual number of eggs laid by this owl is four; this year the gamekeeper has found a nest with five eggs, and my brother has seen six young ones in the same nest. The long eared owl usually adapts a squirrel's nest, called hereabouts a drail, to its own purposes. It appears to feed much on small birds. I have found wheatears, willow wrens, and chaffinches, or at least their remains, in its nest as often as not. think it delays the act of incubation until its clutch of eggs is completed." The same accurate observer and describer of bird life has also contributed the following

notes on this owl to Mr. Gould's magnificent work on "The Birds of Great Britain," which I quote more especially from their testimony to the useful qualities of this attractive species. "I do not know many sights more engaging to a naturalist than one which often presents itself on peering into a thickly growing Scotch fir-tree. A family party of some half-dozen long-eared owls may be descried perched in close proximity to the observer's head. Their bodies are drawn up perpendicularly, and attenuated in a most marvellous manner, the ear-tufts nearly erect, or, if not exactly parallel to one another, slightly inclined inwards. Except these, there is nothing to break the stiff rectangle of the birds' outline. Thus they sit, one and all, swaying slowly upon one foot, and gravely winking one eye at the intruder. Underneath such an owl-roost as this is certain to be found a large quantity of the pellets ejected by its frequenters, and a good notion of their usual food is to be gathered from an examination of the same. Halfgrown rats and mice, chiefly the former, constitute the staple, but small birds contribute no small share; and I have recognised among the remains, unquestionable bones of the wheatear, willow wren, chaffinch, greenfinch, bullfinch, and yellow bunting. How the owls catch them I am unable to say, but I am bound to mention that never in a single instance have I discovered a trace of any game-bird, and I feel assured that the keepers, who wage war against the long-eared owl for the protection of their young pheasants or partridges, are not only giving themselves unnecessary trouble, but are also guilty of the folly of exterminating their best friends; for the number of rats destroyed by this species is enormous, and I look upon the rat as the game preserver's worst enemy." Mr. Spalding, of Westleton, informs me that on one occasion he knew of a long-eared owl snared on her nest, which was placed amongst the heather at the foot of a fir tree; the bird and eggs having been brought to him, quite fresh, at a time when he was endeavouring to procure specimens of the eggs of the short-eared species. A very singular variety of this owl, in the collection of the Rev. C. J. Lucas, of Burgh, was killed in that neighbourhood on the 5th of July, 1861. This beautiful specimen had the wings, lower part of the breast and vent, outer feathers of the tail, feet, and legs, and the edges of the facial disk pure white, the feathers of the back and upper part of the breast also slightly mottled with white. This example is the more remarkable from these birds being so rarely subject to any variation in plumage.

Although the Eagle Owl (Bubo maximus,) has not, I believe, occurred in a wild state in Norfolk, I think that the fact of a pair having regularly bred in confinement at Easton, near Norwich, for the last fourteen years, is worthy of record in the present work. Mr. Edward Fountaine, the fortunate owner of these prolific birds, purchased the female in 1848, at which time she had been already twenty years in confinement, but the male bird, procured at the same time, was said to be only a year old. Of the first nest and eggs, in the spring of 1849, Mr. Gurney forwarded the following description to the "Zoologist," (pp. 2452 and 2566,) which, with slight alterations in dates and minor incidents, may be taken as a fair summary of subsequent proceedings. After describing the eggs as deposited in a hollow scratched in the ground in the further corner of the cage, into which a little straw was afterwards introduced, and that during the time of incubation the birds were unusually bold and savage, he says-"The first egg was observed on the 13th of April, and the two others about a week afterwards. Two young ones were found to be hatched on the 19th, and the other on the 22nd of May. They were entirely covered with white down when first hatched. When they were about three weeks old they began to exchange the first or white down for the second down, which was of a brownish grey colour, and at the age of about five weeks the feathers began to appear, and the young owls are now (July 23rd) able to fly up to their perches, are nearly as large as their parents, and, in fact, much in the same stage as the specimens usually imported from Norway at this time of year by the London bird dealers." In the "Tbis" also for 1859 (vol. 1, p. 273), will be found a yearly statement from the pen of Mr. Fountaine himself, continued down to the spring of that year, which shows that the usual number of eggs laid has been three, and, in a majority of cases, three young have been hatched, the time of nesting varying between the months of January and April, whilst the period of incubation lasted about thirty days, and one week usually elapsed, in addition, between hatching the first egg and the last. From 1855 to 1859 two nests were made in each season, owing to the first batch of eggs being destroyed through the severity of the weather, having been laid either in January or February, and in 1855 even the second laying shared the same fate, and for the first and only time no young were reared. The last six nests, in 1857, 1858, and 1859, contained but two eggs respectively, and Mr. Fountaine considers that in several instances the young birds perished in his absence from home from being egg-bound, as on one occasion he extracted a nestling from the shell, though it took him three days to accomplish, and this one lived and was brought up. Of the young birds thus reared, year after year, three pairs had at different times laid eggs and sat on them, but with no result till the year 1859, when, as further noticed in the same volume of the "Ibis" (p. 473), three eggs were laid and one

young bird hatchel, the offspring of a female then ten years old, and a cock bird about half that age. Mr. Fountaine had come to the conclusion that birds of this class inter-breeding so closely were not prolific, but in this case the parent birds, although the offspring of the same old pair, were bred in different seasons. Through the kindness of that gentleman I am now enabled to bring down these nesting accounts, both as to young and old birds, to the present time, although the same success does not seem to have attended the later hatchings. In 1860, a pair of young birds brought up one nestling, but there were none from the old pair. In 1861, two young ones were brought up by the old pair only. In 1862, an old blind female, presented to Mr. Fountaine some time ago, paired off with a male hatched in 1850, and two young birds were brought up. In the same year a young pair also had one nestling, but which was instantly devoured by its unnatural parent in consequence, says Mr. Fountaine, "of my putting a hen's egg under her to keep her on the nest until she was inclined to sit, and as I forgot to take away the hen's egg she hatched it and eat it, and served her own young one the same." No young that year from the original pair. In 1863 the blind bird laid, but her eggs proved of no use. The old pair brought up one nestling, and the young pair also had one young one, but the hen bird pulled its head off when about two weeks old, in consequence, it is supposed, of her being alarmed one night by the light of a lantern. In 1864, another young pair nested towards the end of February, and laid three eggs, but from the severity of the weather and high winds all the time there was not sufficient warmth to hatch them. Neither the original pair, nor the blind female, did anything this year, but another young pair had three good eggs, which should have been hatched in the end

of April, but, in Mr. Fountaine's absence, these were unfortunately taken away under the impression they were bad. In spite of all these disappointments, however, Mr. Fountaine has now in his possession twenty-six of these noble birds, and has given away thirteen others at different times. They are fed on rats, rabbits, and small birds. A young pair of these owls, in Mr. Gurney's aviary at Catton, the offspring of Mr. Fountaine's old pair, also hatched for the first time in 1860, when they brought up two young ones; in 1861, two more, and in 1862, three young ones. In 1863, three were hatched and two brought up; and, in 1864, two were reared and presented to Mr. Fountaine, to supply his losses.

# OTUS BRACHYOTUS (Linnæus).

#### SHORT-EARED OWL.

This species visits us regularly and pretty numerously in the autumn, though scarcely in such numbers as in former years, arriving in September and October about the same time as the woodcocks, from which circumstance it is generally known as the woodcock owl. In the spring these birds again proceed northwards towards the end of March, having, I believe, entirely ceased to breed in Norfolk,\* where, especially in the once fenny districts of the south-western parts of the county, they were commonly met with during the breeding season. Mr. Hoy, writing about 30 years ago in "Loudon's Magazine," observes—"I am acquainted with two localities in the south-western part of Norfolk, where pairs of this bird breed, and I have known several

<sup>\*</sup> I have recently seen eggs of this species in Mr. Alfred Newton's magnificent collection, at Cambridge, taken at Littleport, Isle of Ely, in 1864.

instances of their eggs and young being found. One situation is on a dry heathy soil, the next placed on the ground amongst high heath; the other is on low fenny ground amongst sedge and rushes. A friend of mine procured some eggs from the latter situation during the last summer (1832)." Mr. Alfred Newton possesses eggs of this owl taken in Feltwell fen in the summer of 1854 (Ootheca Wolleyana, p. 159); and in a recent letter to myself he writes-"In the first week of August, 1854, my brother Edward and I found on a heath at Elveden, not three miles from the Norfolk boundary, two young birds of this species, nearly full grown, but unable to fly. We searched in vain for the nest in which they had been hatched, hoping to find an addled egg in it. Though we visited the place several times only one of the parents appeared. This bird was extremely fierce in its behaviour, swooping close to us, and with plaintive screeches threatening the dogs by which we were accompanied." This, as far as I can ascertain, was the last instance of their nesting even in that district, but in the vicinity of the coast, as at Horsey, near Yarmouth, where, as Mr. Rising informs me, they used to be met with occasionally during the summer months, they had previously ceased to breed for some years. In the autumn of 1859, I was shown a bird of this species that had been picked up under the telegraph wires, one wing having been severed during its nocturnal flittings, as is not unfrequently the case with the woodcock and snipe in their migratory movements.

## STRIX FLAMMEA, Linnæus.

# BARN OWL.

The Barn Owl is resident with us throughout the year, but I wish I could add that the term "common" H 2

is as applicable now as in former times. The plea raised for the protection of the kestrel may indeed be urged for this true "farmer's friend," whose peccadilloes, if any, are slight indeed in comparison with its nightly services. "When it has young," says Mr. Waterton from personal observation, "It will bring a mouse to its nest about every twelve or fifteen minutes; but, in order to have a proper idea of the enormous quantity of mice which this bird destroys, we must examine the pellets which it ejects from its stomach in the place of its retreat. Every pellet contains from four to seven skeletons of mice. In sixteen months, from the time that the apartment of the owls on the old gateway was cleaned out, there has been a deposit of above a bushel of pellets." Think of this; whoever would, wantonly, discharge his gun at so useful a bird! and let not the sins of his race be visited upon him, nor his soft white plumage be left to flutter in the wind, amongst the feathered felons of the "Keeper's Museum." What a pleasure it is in an autumnal evening, when returning at sunset after a long day's sport, to watch this owl on noiseless wings flitting about the homestead. Now skimming along the fences in search of prey, now rapidly turning the corner of the stack-yard, it suddenly seizes upon some luckless victim, and is off in an instant to its roost in the tower, or disappears for a time through the little opening in the gable end of the barn. Its wild screech uttered in the "stilly night" is certainly somewhat startling to the nerves, and, heard amidst the ruins of some crumbling cloisters, may well scare the listener unaccustomed to the sound; yet scarcely would one wish the rustic mind altogether disabused of its old superstitions, if the association of this owl with "uncanny things," might aid in preserving it from unreasoning persecution. I would rather that every thoughtless clod, who compassed the death of either old or young, might share the horrors of that luckless wight who, having killed the church owl as it flitted past him, ran shrieking home, and, with his hair on end, confessed his awful crime—"I've been and shot a Cherubim!" This species occasionally, like the tawny owl, feeds its young upon fish, which it has been seen to catch in the most dexterous manner, and I have also known several instances in which it has been picked up dead, or wounded, under the telegraph wires.

An extremely dark variety of this owl in the Norwich museum (British series, No. 29.b), was killed near Norwich about the 13th of December, 1864, and is particularly interesting from its similarity, both in colour and markings, to a specimen in our Raptorial collection, presented by Professor Reinhardt. Of the latter, this gentleman writes, in a letter to Mr. A. Newton (Oct. 9th, 1860), "I have ordered a stuffed Strix flammea to be put up in a little box, which will be despatched to the care of Mr. Goddard, one of the first days. The bird is from Fyen (Fünen), but it is, I think, no peculiar race; at least not peculiar to the said island where the bird is rare: I should rather suppose that all the examples of S. flammea from Sleswig Holstein and the northern parts of Germany are nearly as dark beneath as the specimens you saw in Copenhagen." I am not aware that this dark variety\* has received any specific distinction, but it is quite possible, as Mr. Newton is inclined to believe, that the bird in question may have come across from the Danish locality, whence Professor Reinhardt's example was procured. Supposing this to be really the case, the question naturally arises, whether barn owls from more

<sup>\*</sup> The dark coloured variety is figured by Kjærbælling (Danmarks Fugles, pl. vii.), but it is there called *Strix flammea*. It is rather rare in all parts of Denmark.

eastern localities\* may not, occasionally at least, visit our coast in autumn? Of this I have no direct proof at the present time, but all I have known to be killed or wounded here, by the telegraph wires, have been invariably picked up in the three last months of the year. The Norwich specimen differs from any I have ever seen killed in this country (although the young birds of the year are more or less dark on the under parts), in having the whole of the lower surface of the body rich reddish fawn colour; the facial disk rusty red, becoming greyish white only, near the outer edge, and the upper portions of the plumage ash grey spotted as usual, but still with a little more intermixture of buff than in the Danish bird.

# SYRNIUM STRIDULUM (Linnæus).

#### TAWNY OWL.

This species I am sorry to say, from constant persecution, is becoming extremely scarce in this county, although still resident in some of the more densely wooded localities; but if the benefits it confers as a vermin killer were only fairly considered, its wild hoo, hoo, hoot, in the still twilight, would be a welcome sound to both farmer and naturalist. Mr. Gould has well remarked—"Were it possible for a pair of brown owls to produce a yearly record of the number of nocturnal moles, Norway rats, and destructive field mice they have destroyed, against a similar account of what has been done in this way by any five keepers, I question whether

<sup>\*</sup> The Barn Owl does not seem to range further north than Jutland. In Sweden it is only of accidental occurrence, and that in the extreme south.—Nilsson, 'Skand. Fauna,' Foglarna, i., p. 134, 3rd ed.

the balance would not be in favour of the owls. \* I believe the brown rat to be far more destructive to leverets and young pheasants than this owl can be." So rarely is the opportunity now afforded of studying the habits of this species in Norfolk, that I may be excused for quoting the following graphic account by Mr. Alfred Newton, in his "Ootheca Wolleyana," of a pair, which, for several years nested regularly in the vicinity of the hall at Elveden, near Thetford:-"From 1844, and probably for a much longer time, a pair of brown owls had frequented some clumps of old elms, near the house at Elveden. There were three of these clumps, in one or the other of which they invariably laid their eggs. The trees were of considerable age, and mostly quite hollow, with an abundance of convenient nesting-places. By waiting quietly about an hour after sunset, my brother Edward or myself could generally discover whereabouts the owls had taken up their quarters for the season; but it sometimes happened that we did not find the nest until the young were hatched. Throughout the winter the owls kept pretty much in company; but towards the middle of February they used to separate, the cock bird often passing the day in a tree at some distance from where the hen was. As soon as he came out in the evening to hunt, he announced his presence by a vigorous hoot. Upon this the hen would emerge silently, and, after a short flight, would reply to her mate's summons by a gentle note. He then generally joined her, and they would fly off together to procure their living. The eggs were commonly laid about the second week in March, and the nests were almost always very accessible. I never knew these birds occupy the same hole in two successive years; but, after the interval of two or three years, they would return to the same spot. There were never any materials collected to form a nest, the eggs being

always placed on the rotten wood, which in most cases formed a sufficient bedding. If all the eggs were taken, as was the case in 1854, the hen bird laid again in another tree. We never found more than four eggs in the nest. These often, but not always, proved to have been incubated for different lengths of time, showing that the hen bird sometimes began to sit as soon as the first egg was laid; but we could never divine what might be the cause of this irregularity of habit. After the young birds had left the nests, it was some time before they began to shift for themselves, and they used to sit in the shadiest trees for the best part of the summer, uttering a plaintive note like 'keewick,' night and day, almost without cessation, to attract the attention of their parents, who would assiduously bring them the spoils of the chase. \* \* \* Late in the spring of 1859, to the great regret of those who knew them, the old birds suddenly disappeared, and I never succeeded in ascertaining their fate. I think it due to their memory to insert this account of their habits, the more so as I fear the species is daily becoming more uncommon in England." In its first plumage this bird is grey, changing to brown or tawny as it attains maturity, and again becoming grey in advanced age, but I never remember to have seen a Norfolk killed specimen in this latter stage. An unusually fine pair, killed at Stratton Strawless in 1858, weighed together 2½ lbs.—the female 1 lb., and the male 1 lb. Many authentic instances are on record of the brown owl feeding its young on fish, taken by itself in its nocturnal forays; and the following singular eccentricity in the breeding habits of this species is thus recorded by Messrs. Gurney and Fisher: "We have known this owl to nest in a deserted rabbit or fox's hole on the side of a wooded hill near the coast. The nest was about two feet from the mouth of the hole."

## SURNIA NYCTEA (Linnæus).

### SNOWY OWL.

This rare and beautiful species has occurred several times in this county, although an interval of nearly 30 years elapsed between the appearance of the earlier recorded specimens and those more recently obtained. Mr. Hunt, in his "British Ornithology," states that one was shot at Felbrigg during the spring of 1814, and adds-"The weather had been previously exceedingly severe during nearly three months. This specimen, we are informed by the Rev. G. Glover, was presented to It had been observed for Lord Stanley. \* several days standing on a heap of snow which had been blown against a fir; it had been often roused, and was at length taken with difficulty." The same author subsequently recorded a second example in his "List of Norfolk Birds," published in Stacy's "History of Norfolk," which was said to have been shot at Gunton, near Cromer, in January, 1820, and came into the possession of the late Lord Suffield. From that time I am not aware of any notice of its appearance on our coast until the summer of 1847, when, as Mr. Gurney informs me, a specimen, shot in the spring of that year, by a gamekeeper at Beeston, on the estate of Mr. J. Gurney Hoare, was, horribile dictu, seen by that gentleman hanging up as a scarecrow, and too much spoilt for preservation. On giving directions, however, that if any such bird should occur again, it was to be sent to him in the flesh, Mr. Hoare received, in 1848, the beautiful Greenland falcon from the same locality, already referred to (p. 8) in the present work. In the early part of 1847, a large white owl was more than once observed in

the neighbourhood of Brooke,\* and in 1849-50, no less than three specimens were met with in different parts of the county, in the short space of half a year, as stated by Mr. J. H. Gurney, in the "Zoologist" (p. 2765). Of these the first was seen, but not shot, at Swannington, during the autumn of 1849; the second, an immature male, was shot by Mr. Cremer at Beeston, on the 22nd January, 1850, the same village where this species had occurred just three years before; and the third, a young male, though somewhat more advanced in plumage, was killed at St. Faith's, by Mr. Reynolds, in February of the same year. The two latter are preserved in Mr. Gurney's collection at Catton-park. The late Mr. Stephen Miller, of Yarmouth, had also a specimen of this noble bird, which, if not obtained in this district, was most probably British killed.

<sup>\*</sup> A young bird, in Mr. Spalding's collection at Westleton, was shot on the 19th of February, 1847, at St. Andrew's, in the adjoining county of Suffolk, and one having been previously observed at two other neighbouring places, it is not improbable that the Brooke and the Suffolk birds were identical. Of this specimen Mr. Spalding says, in a communication to Messrs. Gurney and Fisher, "Zoologist," p. 1769:—"It was first observed at Hedenham wood, and was, when first seen there, remarkably tame. It visited a farm-house and barn at Thwaite, where some white pigeons were kept, all of which soon after disappeared. While shooting at Tindal wood, this owl came over us, but at too great a distance to be brought down; from this time I heard no more of our northern visitor till I was told that a bird of this kind had been shot at St. Andrew's, in Suffolk, by a person named Adams, and carried by him alive to Bungay. I shortly after visited St. Andrew's, and obtained a sight of the bird, which seemed perfectly well, with the exception of a broken wing. It was shot from the stump of a pollard elm, whence it had been seen to dart down into the field and then to return to its perch. It had been observed in the locality for several days, and was shot on the 19th of February, and brought to my house dead on the 13th of April. It proved to be a large female in rather dark plumage, and measured two feet in length and five feet in extent of the wings."

# NOCTUA PASSERINA (Gmelin).

#### LITTLE OWL.

I know of but two instances of the occurrence of the Little Owl in Norfolk of late years; one taken alive at Easton in 1846, by Mr. Gurney's keeper, which lived in confinement till December, 1848, having laid eggs in the previous spring; and an adult male, also taken alive on board a fishing smack about ten miles off Yarmouth, on the 6th of February, 1862. This specimen, less fortunate than its predecessor, when brought to a bird-stuffer in this city, showed evident symptoms, from its ragged and dirty plumage, of having died in some small cage or box, where it had refused all nourishment in its efforts to escape. Previous notices of this species appear to be limited to the following statement by Mr. Hunt, in his "British Ornithology":-- "We recollect a nest of these birds being taken at no great distance from Norwich;" the record of one, in Mr. Lombe's notes, as killed at Blofield in 1824, and the two instances referred to by the Messrs. Paget of its having been taken near Yarmouth. As I have alluded to the fact of the eagle owl (Bubo maximus) having bred in confinement in this county, I will here quote from the "Zoologist," p. 3207, a very interesting account, by Mr. J. H. Gurney, of the nesting of this little owl in that gentleman's aviary when residing at Easton, near Norwich, the same village in which the larger species above-mentioned first reared their young:—"A pair of passerine owls, which I had in confinement, nested this spring (1851) in a small covered box, which was placed in a corner of their cage. They laid four eggs about the middle of

the month of May, two of which they soon broke, but hatched the other two early in June. The two young ones did not long survive; how they disappeared I am unable to say, and am almost disposed to think the old birds must have devoured them. I regret that, owing to the nest having been placed in a covered box, I was unable correctly to ascertain the period of incubation."

# NOCTUA TENGMALMI (Gmelin).

#### TENGMALM'S OWL.

An adult female of this very rare species was killed at Burlingham about the 6th of April, 1857, and is now in the possession of Mr. H. N. Burroughes. This is probably the only one known to have occurred in this county, but a single specimen is recorded by Messrs. Gurney and Fisher to have been taken some years since at Bradwell, in the north-eastern part of Suffolk; and may have been the bird which was formerly in the collection of Mr. Stephen Miller at Yarmouth.\*

<sup>\*</sup> This celebrated collection, to which I shall have frequent occasion to refer, was sold by auction at Yarmouth, in September, 1853, subsequent to Mr. Miller's decease, but the bad state of preservation of many of the specimens, unfortunately rendered them of little value. In a catalogue now before me are the following amongst the rarer birds, described as "principally Norfolk shot":-Eider Duck\*, Red-crested Whistling Duck, Buffel-headed Duck, Great White Heron,\* Purple Heron,\* Little Egret,\* Water Ouzel,\* Castaneous Duck,\* Bimaculated Duck,\* Golden Orioles, Night Heron, Roller, Red-breasted Snipe, Black-winged Stilt, Squacco Heron, Pine Grosbeak,\* Ibis,\* Little Guillemot\*, Gyr Falcon (in Mr. Gurney's possession, evidently stuffed from a skin), Ivory Gull, Little Gull,\* Caspian Tern,\* Storm Petrel (white var.), Scop's-eared Owl,\* Tengmalm's Owl,\* Snowy Owl,\* Eagle Owl,\* (probably a skin,) and Little Dotterel.\* I have taken some pains to trace these rarer specimens into the hands of their present owners, but of

# LANIUS EXCUBITOR, Linnæus.

#### GREAT GREY SHRIKE.

The Great Grey Shrike may be termed both a spring and autumn visitant, though by no means common; the few specimens obtained every year occurring almost invariably between the beginning of October and the end of the following March. Several of these birds were killed in the neighbourhood of Downham in 1847, and a single specimen was shot at Carrow, near Norwich, in the winter of the same year. Messrs. Gurney and Fisher state that a very young bird of this species "was procured near Diss, some years ago, early in the month of July," but I am not aware that the nest has ever been found in this county. The same authors also refer to an instance of a grey shrike being netted by a birdcatcher, having pounced upon the call-bird after the manner of the smaller hawks, a not uncommon occurrence, I am told, with this species. With reference to its carnivorous propensities, I find the following interesting note in the "Zoologist" for 1854, from Mr. H. T. Partridge, of Hockham Hall, near Thetford:-"I procured a great grey shrike on the 21st of December last,

those to which I have affixed an asterisk I have been unable to learn any particulars at this distance of time. Such as are still existing, or of which any record remains, will be found noticed under their respective headings, in other portions of this work. Mr. Rising, of Horsey, who has very kindly made enquiries respecting them for me, states, that, with the exception of a few lots of foreign skins at the end of the catalogue, "Mrs. Miller always understood from her husband they were all *British killed* specimens, and that the water birds, including the waders, were shot on or in the immediate vicinity of Breydon water."

in the act of carrying a skylark in its feet, which it had flown about with for some time previous to my shooting The lark was hardly half an ounce lighter than the shrike." In confinement this species is very amusing, darting from perch to perch with amazing rapidity, and soon becomes tame enough to take its prey from the hand, but is not generally long-lived. A male, shot at Rollesby, near Yarmouth, on the 26th of October, 1864, was found to have the remains of a small bird, wasps, and the imago of Vanessa urticae in its stomach, the latter readily identified by the wings, which had been swallowed with the body of the insect. I have examined at different times two or three old females, which showed no trace of the usual semi-lunar markings on the breast, and were distinguishable, therefore, only by dissection, from adult males.

## LANIUS COLLURIO, Linnæus.

### RED-BACKED SHRIKE.

A constant summer visitant, though not in large numbers, and regularly breeds in the county, but is at the same time local in its distribution. To its carnivorous and insectivorous tastes, its thorny larder abundantly testifies, and Messrs. Gurney and Fisher, speaking of a brood of young red-backed shrikes having been fed by the old birds in a cage, purposely hung near the spot whence the nest had been taken, remark, "Among the remains of the food which was brought to the cage, we noticed the skulls of small birds, and parts of some insects apparently humble bees." This species, like the great grey shrike, has also been known to attack the call-birds of bird-catchers in the most determined manner. An instance of this, which came under

his notice, is thus recorded by Mr. J. H. Gurney in the "Zoologist," p. 3981. "This morning (June 28th, 1853), a bird-catcher was following his vocation near Norwich, when a red-backed shrike pounced on one of his call-birds a (linnet), and attempted to carry it off, but being prevented from doing so by the linnet being fastened to the ground with a string and wooden peg, the shrike tore off the head of its victim, with which it made its escape. The bird-catcher then drew out from the ground the peg which held down the dead linnet, and left the dead bird lying in the net. In about half an hour the shrike again appeared, pounced upon the body of the dead linnet, and carried it off in its beak, with the string and peg hanging to it; the weight of the latter probably was the cause of the shrike not carrying its prev quite away, as it dropped it after flying about fifteen yards, when the bird-catcher again picked up the dead linnet, and replaced it in the net. The shrike, in the mean time, retreated to some neighbouring bushes, from which it soon made a third pounce upon the nets, this time attacking the second call-bird, which was a sparrow. On this occasion, however, the bird-catcher was on the watch, and, drawing his nets, captured the shrike, which proved to be an adult female of Lanius collurio." This species also becomes extremely tame when brought up from the nest in confinement, and Mr. Lubbock, on the authority of his friend Mr. Girdlestone, states that the late Mr. Downes, of hawking celebrity, used to amuse himself, after he had given up falconry, by watching his tame shrike catch flies in his sittingroom. The eggs of this bird, as is well known, vary considerably both in colour and markings; one in my possession, taken in 1853 from a nest in this neighbourhood, is pure white, and of two others found with it, one had a single dark blotch on the larger end, and the other a few brown spots dotted over a white ground.

Whether or not the female ever attains the same plumage as the adult male, as asserted by some naturalists, undoubtedly the hen bird, in her mottled dress, pairs with the mature male.

# LANIUS RUTILUS, Latham.

#### WOODCHAT SHRIKE.

Mr. Hunt, in his "List of Norfolk Birds," has the following note on the Woodchat:--" Mr. Scales assures me that he has killed this rare species in the neighbourhood of Beechamwell, where he has known it to breed and rear its young." This statement, except on the authority of two good naturalists, might almost have been questioned from the rarity of this bird, and its occurrence only at uncertain intervals, as a merely accidental visitant, since, with the above exception, I know of only two authentic instances in which specimens of this shrike have been obtained in Norfolk. Mr. Lubbock has recorded one, as killed near Swaffham some years ago, said to have been in Mr. Hamond's collection, and on the 29th of April, 1859, a male woodchat, now in the possession of Mr. J. H. Gurney, was killed at Yarmouth. This bird had nearly completed its spring moult, but from the appearance of some immature feathers still remaining, had probably but just attained its adult plumage. The chesnut patch on the back of neck, and the tints of the back and wings, were somewhat lighter than in older specimens. On the 2nd of May, however, of the same year in which the Yarmouth example was obtained, an adult male was shot in the adjoining county of Suffolk, at Lound, near Lowestoft; and Mr. T. M. Spalding, of Westleton, has a fine old male, killed by himself in Lord Stradbroke's park (Henham Hall), in the same county, on the 10th of May, 1860. Messrs. Paget also refer to one killed at Bradwell, Suffolk, in April, 1829.

# MUSCICAPA GRISOLA, Linnæus.

### SPOTTED FLYCATCHER.

One of our latest though most common summer visitants, appearing generally in May, and leaving, with its young, early in autumn. From its frequent habit of placing its nest on the branch of a wall fruit tree, this Flycatcher is here locally termed the "wall bird," and its habits are too well known to need much description. Though plain in plumage, and by no means endowed with song, yet its useful and energetic pursuit of insect food, and tameness when unmolested in our gardens and orchards, renders it a general favourite. Perched on a stake or iron fencing, or the end of a projecting branch, it darts off after the flies as they come within range, and again and again returns to the same spot, and in autumn the old birds may be seen in constant motion, supplying the wants of a small family, ranged side by side on a gate or railing; the more precocious occasionally imitating their parents, by trying a little fly-catching on their own account. A remarkable instance of the pertinacity of this species in the choice of a nesting place occurred at Catton Park in the summer of 1858, the very interesting particulars of which were thus described by Mr. Gurney in the "Zoologist," p. 6238:-" About the end of June last, a spotted fly-catcher began to build a nest over the door of the lodge at the entrance of my grounds. The woman who lives in the lodge, not wishing the bird to build there, destroyed the commencement of the nest; every day for a week the bird placed new materials on the same ledge over the door, and

every day the woman removed them, and, at the end of the week, placed a stone on the ledge, which effectually baffled the flycatcher's efforts at that spot; but the bird then began building at the latter end of the ledge, from whence it was also driven, and three stones being then placed on the ledge, the bird relinquished the attempt to build at either end of it, and commenced building a nest on a beech tree opposite, which it completed, and laid two eggs in it. When the bird was thus apparently established in the beech tree, the stones over the door were taken away, when the flycatcher immediately forsook its nest and eggs in the beech, and again commenced building over the door on the part of the projecting ledge, which it had first chosen. The nest was again destroyed, and two slates placed over the spot: the bird contrived to throw down one of the slates from a slanting to a horizontal position, and then began to build upon it. The nest was again destroyed, and the three stones replaced and kept there a fortnight, after which they were again removed, and, directly they were taken away, the bird again began building. The nest was subsequently destroyed several times in succession; the bird was twice driven away by a towel being thrown at it; a stone, wrapped in white paper, was placed on the ledge to intimidate it, but the flycatcher still persevered, completed a nest, and laid an egg. On hearing the circumstances, I directed that the persecution of the poor bird should cease, after which it laid two more eggs, hatched all three, and successfully brought off its brood,"

### MUSCICAPA ATRICAPILLA, Linnæus.

### PIED FLYCATCHER.

The habits of this species as a summer migrant, only, to the British islands, are somewhat singular, from the

limited area within which it is known to remain and breed, and the fact of its rare occurrence in the southern counties, although a visitant to our shores from the coast of Africa. Mr. Gould ("Birds of Great Britain") describes it as plentiful in Westmoreland, Cumberland, Yorkshire, and Durham, but scarce in Scotland; and its appearance south of either Norfolk or Suffolk, is unusual enough to be considered an accidental circumstance. As far as my own observations extend, it appears to visit this county pretty regularly in spring, arriving early in May, but, with the exception of the year 1849, in small numbers, and appearing almost invariably in certain favourite localities, either immediately on the coast or close by in the vicinity of the larger broads, as at Horsey and Hickling. Of its frequent occurrence in the former locality, Mr. Rising very kindly furnished me with the following particulars some four or five years ago:-"The pied flycatcher is a constant visitor here in the spring, and I believe as constantly breeds here. I obtained one nest, or at least three eggs, in the spring of 1848, which had been taken by a chimney sweep, but, on seeing him sometime afterwards, he either could not or was afraid to tell me where he found them." From more recent enquiries, however, I find that these Horsey birds, having been disturbed and shot at on one occasion, have not been seen in their old haunts for the last two or three years. The spring of 1849, as above stated, was remarkable for the unusual quantity of these flycatchers that were met with in different parts of the county, Mr. Gurney having recorded in the "Zoologist" for that year the occurrence of no less than nineteen specimens within thirty miles of Norwich. It is also worthy of notice, that all these occurred between the 9th and 17th of May, and since that time all that have come under my notice have been killed between the 1st and

30th of the same month. From the total absence, therefore, of specimens during the autumn, although stated by Messrs. Gurney and Fisher to have occurred at that season as well, it would seem that of late years, at least, their course has been somewhat varied on their southward migration. Mr. A. Newton tells me, that a bird, which could hardly have been of any other species than this, was seen by his brother Edward, at Elveden, about three miles from the borders of Norfolk, on the 30th of April, 1859. The same year, on the 3rd of May, a male bird was killed at Hickling, and one at Hunstanton about the same date, which is preserved at the Hall, in the late Mr. L'Estrange's collection; and on the 18th, a pair which would probably have bred there, were shot at Beeston, near Cromer. Probably the last obtained in this county was killed near Foulsham on the 14th May, 1861. The same remarks as to time of appearance and numbers, apply equally to the north-eastern portions of the Suffolk coast, where at Gunton, near Lowestoft, an old male and a young female were shot during the first week of May, 1862. Sir Wm. Hooker, in his M.S. before referred to, also notices a pair killed at Gunton on the 29th April, 1813; and the late Mr. Leathes, of Herringfleet, once showed Mr. Gurney a hole in a small tree, standing by the side of Fritton broad, in which a pair of these birds were said to have nested some years ago.

# CINCLUS AQUATICUS, Bechst.

### COMMON DIPPER.

The Water Ouzel can be considered only as an accidental visitant to this county, the few specimens obtained from time to time appearing between the months

of November and February (usually in severe weather), upon our inland streams, as well as in the vicinity of the Whether or not the black-breasted water ouzel, the Cinclus melanogaster, of Gould's "Birds of Europe," is specifically distinct from the ordinary British form, with a chesnut band across the abdomen, or merely a climatal variety, undoubtedly our Norfolk specimens belong to the former type. I have at different times examined six or seven examples, all killed in this county, which, with one exception to be hereafter mentioned, exhibited no trace of chesnut on the under parts, but were identical with a Lapland specimen in the Norwich museum (No. 40.b), collected in that country by the late Mr. Wolley. We may naturally suppose, therefore, from this circumstance, and the season at which our few Norfolk specimens invariably appear, that they are chance stragglers from the Scandinavian peninsula; and that this opinion is entertained also by Mr. Gould, to whom I communicated the above particulars for his new work on "The Birds of Great Britain," is shown by his concluding remark-"I can account for their occurrence in no other way." The Messrs. Paget refer to one example of this bird in the collection of Mr. Youell, of Yarmouth, as having been killed at Burgh in November, 1816; and Mr. Hunt in his "List" mentions Costessey and Taverham as places where the dipper had occurred to his knowledge. Mr. Stephen Miller, and the Rev. Mr. Penrice, of Plumstead, had also each a specimen in their collections, both of which I have no doubt were obtained in this county. The specimen (No. 40.a) in the Norwich museum is the one mentioned by Mr. Lubbock in 1845, as "lately" shot at Hellesdon Mills, and two others are stated, by the same author, to have been seen at different times, by trustworthy observers, at Marlingford and Saxthorpe. Of more recent occurrence, I may notice a male in my own collection, which was

brought to me in the flesh, having been shot in November, 1855, whilst hovering over the river between the Foundry bridge and the ferry. It is not a little singular that a bird so accustomed to the clear running streams of the north, and the quiet haunts of the "silent angler," should be found as in this case, almost within the walls of the city, sporting over a river turbid and discoloured from the neighbouring factories, with the busy noise of traffic on every side. About the same time that this bird appeared near the city, three others were observed on more than one occasion on the Earlham river, by Mr. Fountaine, of Easton, who is well acquainted with our British birds, but these suddenly disappeared, and were not seen again. Mr. Cremer, of Beeston, has one killed in that neighbourhood, on the 25th of December, 1860; another in the possession of Mr. Hubbard, a bird-stuffer, in Norwich, was also procured in that year; and a third, in my own collection, on the 29th of January, 1861. All these birds were shown me in the flesh, and had black breasts like my first specimen, and were in good plumage and condition. There is also a similar example in the late Mr. L'Estrange's collection, at Hunstanton-hall, amongst the birds said to have been killed in Norfolk, and which was most probably obtained on that part of the coast. From the winter of 1861 I know of no others either seen or procured in Norfolk until the 24th of November, 1864, when a male bird was shot at Buxton by Mr. J. Gambling, who very kindly presented it to the Norwich museum (British series, No. 40.c). This specimen, which was brought to me in the flesh, is the one before alluded to as slightly exceptional in plumage, as, when fresh killed, there was a decidedly reddish tinge below the white on the breast, but by no means so bright or so extended as in two Scotch skins in my possession. This tinge.

however, has much faded since the bird was preserved, and I do not, therefore, think that my previously expressed opinion respecting our Norfolk specimens, is thereby upset. Mr. Alfred Newton, to whom I referred this point, is of the same opinion, and remarks-"All birds vary, and they vary so as to resemble allied races or species. Therefore, this may vet be a Scandinavian example, and if so it would only go to prove that in the Scandinavian form the black belly is not a constant feature." On dissecting this last, I found the stomach filled with the remains of insects, nothing else, consisting of fragments of the elytra and legs of a little water beetle, and of some small Notonecta. It is also particularly worthy of notice that in almost every instance in which this bird has been obtained in Norfolk, away from the coast, it has been found in the vicinity of the water mills upon our inland streams, attracted no doubt by the noise and splash of the tumbling flushes, the nearest approach to its native waterfalls.

The great interest taken of late years in the subject of pisciculture, and the experiments made in the artificial rearing of salmon and trout, have also led to enquiries as to the truth or not of the assertion, that the water ouzel is destructive to the ova of fish. I have read with much interest the statements of various writers in the "Field," "Zoologist," and even the "Times" on this point, and am happy to find that the evidence tends most decidedly to the acquittal of this most interesting bird from a charge, which at best only rested on suspicion, and may be classed with that long list of "vulgar prejudices" which the careful researches of our modern naturalists are fast sweeping away. When the dipper is seen to dive down into the stream with that strange power of submersion which it shares with the rails and the cunning waterhen, it is neither fry nor spawn that he is then seeking, but on the contrary the larvæ of innumerable water insects, amongst which, those of the dragon fly (Libellulæ), of various water beetles and of the May fly\* (Ephemera), are known to be especially destructive to spawn. The dissection of many examples of the dipper, killed in the very act of feeding, has failed to prove anything but their usefulness as insect eaters, and on this point I believe I cannot quote three more decisive authorities than Macgillivray, Gould, and Buckland. Macgillivray remarks (Brit. Bds., vol. ii., p. 59), "I have opened a great number of individuals at all seasons of the year, but have never found any other substances in the stomach than Lymneæ, Ancyli, Coleoptera, and grains of gravel." Mr. Gould also, writing from personal observation, ("Birds of Great Britain," part 1) says, "During my visit in November, 1859, to Penoyre, the seat of Col. Watkyns, on the river Usk, the water ouzels were very plentiful, and his keeper informed me that they were then feeding on the recently deposited roe of the trout and salmon. By the Colonel's desire, five specimens were shot for the purpose of ascertaining, by dissection, the truth of this assertion, but I found no trace whatever of spawn in either of them. Their hard gizzards were entirely filled with larvæ of Phryganea and the water beetle (Hydrophilus).

<sup>\*</sup> Mr. Wm. Brown, in his interesting little work on the experiments made in hatching the ova and rearing the fry at Stormontfield, on the Tay, says (p. 35)—"The Messrs. Ashworth, proprietors of the Galway fishings, experimented on the May fly, and their report is 'that the larvæ of the May fly are known to be most destructive.' In proof of this being the case, they say—'that one year we deposited 70,000 salmon ova in a small pure stream, adjoining to a plantation of fir trees, and these ova we found to be entirely destroyed by the larvæ of the May fly, which in their matured state become the favourite food of smoults or young salmon.'"

One of them had a small bull-head (Cottus gobio) in its throat, which the bird had doubtless taken from under a stone. I suspect that insects and their larvæ, with small shelled mollusks, constitute their principle food, and it may be that their labours in this way are rather beneficial than otherwise; for as many aquatic insects will attack the ova and fry, their destruction must be an advantage." Lastly, Mr. Buckland, whose experiments in, and writings upon, the art of pisciculture, are so well known to the readers of the "Field," remarks in a letter to the "Times" (April 4th, 1863)—"It may be observed that I do not mention the water ouzel as destructive to spawn—this advisedly, as of late I have carefully examined the gizzards of several of these beautiful little birds, and have found only the remains of water insects in them; write the water ouzel, the friend and not the enemy of the fish spawn." With such witnesses to character, we may, I think, consider the charges made against this most interesting bird as wholly unfounded, whilst the experience obtained of late years, through the rearing of salmon and trout, as to the best means of protecting both spawn and fry, ought to lead to the suppression of tame swans on our shallow waters, as the worst enemies of the "Anglers' Society." The only occasion in which I have had the pleasure of seeing this bird in a wild state, and that in a locality in which I should have least expected to find it, was at Torquay, in Devonshire, in the spring of 1859. Here a single dipper frequented a quiet little rock girt bay, called the "bathing cove," where it flitted from one range of rocks to the other, flying low over the waves as they broke on the shingly beach, or perched now and then on the huge stones that form the breakwater jutting out into the sea. I had not expected to find the water ouzel as in this instance frequenting the very sea-side itself, but it certainly

appeared as much at home amidst the sound of the billows, as it would amongst the foam and splash of the the torrent, in its mountainous and more usual haunts.

## TURDUS VISCIVORUS, Linnæus.

#### MISSEL-THRUSH.

The Missel-Thrush is undoubtedly one of those resident species whose numbers, through the attractive shelter of our large plantations, have greatly increased of late years. It is common enough in our gardens and orchards during the breeding season, noisily and boldly defending its nest and young against feathered marauders, or even man himself, often dashing at the head and face of the intruder in the most determined manner. Yet this very bird, which, like the rook and wood-pigeon, draws near to our homes for nesting purposes, is at other times amongst the most difficult of approach; indeed, I have often thought that the term missel, said to have originated in its fondness for mistletoe berries, might, with a very little alteration in spelling (mizzle), as appropriately indicate its wary nature. In autumn and winter we see them in considerable flocks, scattered over the grass lands, in parks and pastures, or feeding on the various berries at that season, and it is not improbable, although at present I have no direct proof of the fact, that their numbers are increased at such times by migratory arrivals from the north. I believe that in many cases these birds, congregated together, are mistaken by ordinary observers for fieldfares, and hence many of the stories of the early appearance of those winter visitants. In this county, also, the term "dow fulfer," in allusion to its large size, is commonly applied to the missel-thrush. A

curious pied variety was killed in this county in 1853. This bird had all the upper parts of the body white, with the exception of one or two brown feathers on the back, the chin and throat also white, but the usual spots appeared on the lower part of the breast.

# TURDUS PILARIS, Linnæus.

#### FIELDFARE.

To the lover of nature in all her varied aspects, there is something peculiarly attractive in the first fall of snow, be it early or late, before or after Christmas. It is not the less cheering because of the cold, when, for the first time in the season, upon drawing up our blinds in the morning, a white unsullied covering presents itself, with a glare that makes our eyes blink again, as the sun struggling through the heavy clouds lights up the brilliant landscape. How exquisite is that delicate white fringe that hangs upon the branches of the leafless trees, each twig, however small, each sturdy limb, bearing on its surface its proportioned weight—the "giant of the forest" as completely powdered as the little sapling by the road side. In our gardens and shrubberies the thick white puffs are hanging in masses on the plants and shrubs, and the dark green of the laurel, the privet, and the box, looks almost black beside the dazzling snow. Every breath of wind scatters a gentle shower to the ground, and a constant succession of little avalanches are falling in all directions from the laden branches. Contrasted with that emblem of purity itself, all else assumes a darker shade. The walls of our dwellings, with every "coin of vantage" picked out in relief by the penetrating drift, look more than dingy, though the spotless roof has almost

lost its outline against the clear back-ground of the wintry sky. The cattle in the yards, the sheep in the pens, nay, if possible, the pigs look dirtier than before, whilst even the white cat as she daintily but reluctantly picks her way in the snow, shows a tinge of yellow on her soft fur, and the pretty fantails on the pigeon-locker are as little able to bear the contrast. Already the birds show symptoms of privation, and are gathering around our dwellings for any crumbs of comfort. The pert robin alights upon the window-sill, and ruffles his feathers as, with head a little on one side, he looks in upon us with his large bright eye, a mute but eloquent appeal to our sympathy. A lump of sparrows, looking half as big as usual, are collected together in the freshly swept drive, and others, like little feathered bunches, sit huddled up upon the trees, scattering the snow in showers to the ground as they quit or settle on the branches. The timid hedge sparrow becomes more confiding, and shuffles its way to our very door-steps, or creeps about beneath the wide spread laurels, where still a little space, thus sheltered, affords a snug retreat. We know where the blackbird has been seeking his breakfast by that long double trail across the grass-plot, and a perfect fretwork of mingling footsteps shows where the meal was shared with others. The song-thrush, now more pinched than any, is finishing the last of the scarlet rowans that looked so pretty on the mountain ash, but those once gone, and the worms and insects buried beneath the snow or the hard crust of the frozen soil, this delicate bird will fall the earliest victim if, warned in time, he seeks not a warmer climate. Such is the morning of the first snow; on the morrow perhaps a stinging frost may have added crystals to our winter carpet, glittering like diamonds in the bright sunshine, but soon the glory of that matchless whiteness is lost, through the minute particles that are blown over its surface, and that which but now had the charm of novelty will weary from its monotony in a long winter.

Now is the season for the noisy Fieldfares, chattering amongst the trees in the open country. How large they look in the dark foggy mornings as they hurry across the fields on the slightest alarm, looming through the mist as big as ring-doves, and whether singly or in flocks always wary; trying the patience of the youthful gunner, who may reckon amongst his holiday exploits many fruitless attempts, to stalk up to and bag the Christmas fulfer. Regular and numerous winter visitants to this county, they usually make their appearance in November and leave us again towards the end of April, but their movements in both cases depend much upon the season, having occurred as early as the 14th of October, and in the cold spring of 1860 small flocks were still met with up to the middle of May. An instance is also recorded by Messrs. Sheppard and Whitear, of a fieldfare having been killed at Cromer during the first week in June, but I am not aware that the nest of this species has ever been found in Norfolk, although Yarrell has recorded one or two doubtful instances in more southern counties. Mr. St. John, in his "Natural History and Sport in Moray," speaks of the fieldfares in severe weather doing much damage by feeding on the Swedish turnips, scooping pieces out with their beaks, and thus letting the frost into the roots, a charge which I never remember to have heard made against them in this county. A specimen nearly white was killed at Hickling in 1848, and a beautiful variety with the back and upper portions of the wings and tail light buff, marked with a few darker blotches, and the under parts of the body and wings cream coloured, was shot at Swardestone in March, 1858.

## TURDUS MUSICUS, Linnæus.

#### SONG-THRUSH.

The Song-Thrush or Mavis, as it is more commonly called in this county, is plentiful enough, and in the spring and summer months its sweet notes fill our gardens and groves with the choicest melody. How exquisite are the rich thrilling tones of this bird, as in the light spring evenings he sings longest and latest, till at times the varied beauties of his strain, induce some wondering listeners to believe that the nightingale is come already. There is no author who has written more truthfully or more charmingly of our familiar British species than Macgillivray, and amongst many passages in his "British Birds," unrivalled for the minuteness and accuracy of their details, is his sketch of the habits of the song-thrush, as studied by himself amidst the wild scenery of the Hebrides. "Listen (he says) to the clear loud notes of that speckled warbler, that in the softened sunshine pours forth his wild melodies on the gladdened Listen again, and say what it does ear. resemble-

"Dear, dear, dear,
Is the rocky glen;
Far away, far away, far away,
The haunts of men.
Here shall we dwell in love
With the lark and the dove,
Cuckoo and corn rail;
Feast on the banded snail,
Worm, and gilded fly;
Drink of the crystal rill,
Winding adown the hill,
Never to dry.

With glee, with glee, with glee,
Cheer up, cheer up, cheer up; here
Nothing to harm us; then sing merrily,
Sing to the loved one, whose nest is near,
Qui, qui, qui, kweeu, quip,
Tiurru, tiurru, chipiwi,
Too-tee, too-tee, chiu choo,
Chirri, chirri, chooee,
Quiu, qui, qui."

This is indeed the "Poetry of nature," and a marvellous imitation of a song as remarkable for its varied modulations, as for its surpassing richness and beauty. The good effected by these birds in the destruction of innumerable snails, worms, insects, &c., might well insure them protection at our hands, independently of their charms both of song and action. How handsome is the thrush as he appears on our walks or grass-plots, with his rich spotted breast, and neat trim figure, all energy and life. Just venturing from the shelter of some laurel fence, he stands with head erect and slightly turned to listen, now leaps a pace or two and stops, his full bright eyes searching the ground for food; then with a short quick run he reaches some worm protruding from the ground, extracts him with a jerk, and bolts his prey. How often too in some retired corner of our gardens we find his snailery, if one may be allowed the expression, where, round the stone that serves him for an anvil, are the debris of his feasts, the numerous empty snail shells thus ingeniously broken, proving at once the value of his services in ridding us of these garden pests. In autumn our resident thrushes receive very considerable additions to their numbers by migratory flocks from the north,\* as

<sup>\*</sup>Sir Thos. Browne was evidently well acquainted with this fact, as in speaking of our regular spring and autumn migrants, he says—"They are observed to come in great flocks, with a north-east wind, and to depart with a south-west; nor to come

must be evident to every sportsman who finds the turnip fields at that season everywhere full of them, rising two or three at a time, from the thick "whites," and more particularly near the fences, or in snug corners with plenty of cover. These, together with the majority of our native birds, again proceed southwards on the approach of winter, till, in severe weather, a few pairs only remain in the vicinity of our towns, picking up a scanty subsistence in our shrubberies and sheltered gardens, drawing nearer and nearer to our dwellings as the cold increases and the berries begin to fail. Mr. Alfred Newton, in a paper "On the migratory habits of the Song-Thrush" (Ibis, 1860, p. 83), thus writes of them as observed by himself and his brother, in the wide open districts in the south-western parts of the neighbouring county:-"Since the autumn of 1849, my brother Edward and myself have paid much attention to the presence or absence of the so-called resident' species of Turdus. The result of our observations is such as to leave on our minds not the slightest doubt of the regular migration of the Song-Thrush, as far as concerns the particular locality whence I write. Year after year we have noticed that, as summer draws to a close, the birds of this species (at that season very abundant) associate more or less in small companies. As autumn advances, their numbers often undergo a very visible increase, until about the middle of October, when a decided diminution begins to take place. Sometimes large, but more generally small flocks are seen passing at a considerable height overhead, and the frequenters of the brakes and turnip-fields grow scarcer. By the end of November, hardly an example ordinarily appears.

only in flocks of one kind, but teal, woodcocks, fieldfares, thrushes, and small birds to come and light together; for the most part some hawks and birds of prey attending them."

It is true that sometimes, even in severe weather, an individual or so may be found here and there, leading a solitary life in some sheltered hedge-bottom or thick plantation which may afford conditions of existence more favourable than are elsewhere to be met with; but this is quite an exceptional occurrence. Towards the end of January or beginning of February, their return commences. They reappear at first slowly and singly; but as spring advances, in considerable abundance and without interruption, until, in the height of the breeding season, they by far outnumber their more stay-at-home cousins, the Blackbirds." The same thing may be also noticed in our eastern district. although probably from its cultivated and more sheltered character, the "Exodus" does not take place so early; yet, with the first indication of severe frost, their "southern proclivities" are proclaimed by their absence, and even of the very few that still linger about our cities and suburbs, many are starved with both cold and hunger, or meet a less lingering but not less certain death, from the school-boy gunners at Christmas.

The curious fact of a song-thrush having laid and hatched her eggs on the bare ground in a plantation at Sprowston, is recorded by Mr. J. H. Gurney in the "Zoologist," p. 3475. In this case the nest consisted "simply of a little hollow scratched out at the foot and under the shelter of a small bush." The same gentleman has also noted in the above journal for 1864 (p. 9105), the singular fact of a pair of song-thrushes having built on the top of a straw beehive, resting on a covered stand in his kitchen garden, at Catton; when probably owing to the hive being fully tenanted, the female deserted her nest after laying three eggs. One of the most extraordinary nests, however, of this species that has come under my notice, both as to locality and construction, was shown me in 1861 by Mr. R. N. Bacon, who was

then residing at Intwood. It had been built in an open summer-house near the drive, and the bird had selected for nesting purposes, an earthenware pan, accidentally left on the top of a bracket, in which receptacle, the materials, composed of moss and bents, were compactly arranged, though necessarily flattened from the shallowness of the saucer. In spite, however, of frequent intruders to watch the progress of her novel proceedings, the hen bird succeeded in hatching and bringing off five young ones from this most unusual and uncomfortable little nursery. The thrush is one of our earliest breeders, incubation commencing generally by the middle of March; and in the spring of 1864, a nest, with three eggs was found in the vicinity of Norwich on the 10th, the bush in which it was placed being covered with snow, a heavy fall having occurred on the previous night. Pure white and pied varieties of this bird are occasionally met with. A very beautiful specimen of the former, without spot of any kind, was killed near Norwich in 1862, a year particularly remarkable for the number of "varieties," amongst our common species of birds, as observed in this county; and I have also noticed more than once, that varieties in eggs will abound in particular seasons, though I am unable to assign any probable cause.

### TURDUS ILIACUS, Linnæus.

### REDWING.

A common winter visitant, arriving rather later than the fieldfare, and leaving again earlier in the spring. This species has probably never been known to breed in Norfolk,\* but a single specimen was killed

<sup>\*</sup> In Sir Wm. Hooker's MS. is the following statement, with the name of Mr. Crow appended as the authority:—"The Redwing

in an ozier ground at Heigham, in 1850, as late as the 3rd of June, and on the 9th of the same month I picked up one, very recently dead, in a garden on Bracondale, which appeared to have been shot, having one leg broken. Mr. H. E. Dresser, in the "Zoologist," p. 8484, states that a fine albino specimen, seen by himself in the shop of Mr. Wilson, bird preserver, of Lynn, was killed in that neighbourhood in February, 1863. It was nearly white, having only here and there faint cream coloured markings.

# TURDUS MERULA, Linnæus.

#### BLACKBIRD.

Common throughout the year, and migratory specimens apparently arrive in the autumn, but being a much hardier species than the song-thrush, most of our native birds remain throughout the sharpest winters. However deep the snow or intense the frost, the alarm note of the blackbird is still heard in our gardens and shrubberies, as he scatters the flakes from the powdered laurels in his hurried exit; or his jetty plumage contrasts with the white covering of the ground, when, half running, half leaping, he leaves the well-known imprint of his feet, diverging here and there as his quick eye detects some chance morsel, till, head erect, he listens to approaching footsteps, and then a little scuffle in the snow, and the slight markings of his outspread wings show where he took to flight. White, buff, and pied varieties, in almost every degree of albinism, are not unfrequently met with. A very beautiful

breeds at Lakenham every year; its song is far superior to that of the Throstle." I cannot but think that if this were really correct, the fact would have been known to, and recorded long ago by our many resident naturalists.

example of the latter kind was shot in a garden on Bracondale, near this city, in November, 1856, having the head and neck with portions of the wings and tail pure white, and being an old male, the deep black of the other parts, mottled with white, had a very showy appearance; the legs were black, with the toes and claws flesh colour. I have also in my possession a specimen killed at Shottesham, in November, 1863, which, with the exception of one black feather in each wing, exhibits the strange anomaly of a pure white blackbird. In the spring of 1852 I was shown a nest of this species, which had been built so close to that of a thrush on the same bank that the materials of both nests were completely interwoven, and remained so when removed from the spot. Mr. St. John alludes to the great increase of blackbirds in Moray owing to the destruction of hawks for the preservation of game, the sparrow hawk especially being a determined foe; and in this county the abundance of both blackbirds\* and thrushes may be attributed, in a great degree, to the same cause, since not only are their natural enemies destroyed, but our strictly preserved coverts afford them immunity from all bird-nesting boys, no intruders being allowed during the breeding season for fear of disturbing the sitting pheasants.

# TURDUS TORQUATUS, Linnæus.

RING OUZEL.

A regular migratory visitant, though, for the most

<sup>\*</sup> The following entry in the L'Estrange "Household Book" refers, no doubt, to this species, although the association of blackbirds and woodcocks is somewhat singular:—"It pd to Stephyn Percy for ij woodcocks and iiij blackbyrds iiijd." A preceding entry shows also the small sum given in those times for what is now reckoned the greatest delicacy in the way of game—"It pd to John Long of Ingaldesthorpe for vj woodcocks xd."

part, in small numbers, passing northward in spring and southward in autumn, appearing generally in April and October. The Ring Ouzel has been known occasionally to nest in this county, and although probably overlooked from its general resemblance to the common blackbird and the similarity in the eggs of the two species, it is not improbable that a few pairs may do so nearly every year in favourable districts, and I have reason to believe that such is the case at Holkham. Mr. Spalding, of Westleton, who has paid much attention to their habits in Suffolk, assures me that he has himself taken several nests and eggs in his neighbourhood, where they remain till late in May should the winds be contrary, and then frequently nest and lay; but he has never known the young to be hatched, as the old birds appear to leave at once with the first favourable wind, for more northern localities. They build on the stubs in low damp cars, both at Westleton and Yoxford, where the birds have been watched, and would appear to remain in all cases at no great distance from the coast. About thirty years ago a nest of this species, with the old bird sitting upon it, was found by Mr. Rising in his garden at Horsey, and the same gentleman has kindly supplied me with the following observations on their annual appearance in that locality. He says, "We generally see several of them every year in the early spring; and in May, 1857, I watched four of them, morning after morning, on the grass in front of my window, and as constantly did an old missel-thrush descend from an oak hard by where she had a nest, and attack first one and then another until she drove them fairly away. I fear these incessant attacks forced them to some other locality, as on a sudden they were gone, otherwise I felt a strong conviction that they would have remained to breed." In 1856, ring ouzels

were unusually numerous during their autumn migration, as appeared from the various notices at the time of their occurrence in different parts of England; and in April, 1859, when these birds and hoopoes were unusually plentiful at the same time, at least thirty specimens were brought to one bird preserver in Norwich to be stuffed. Their numbers, however, in autumn are generally very small compared with those that arrive here in spring.

# ORIOLUS GALBULA, Linnæus.

#### GOLDEN ORIOLE.

This rare and beautiful species is described by the Rev. R. Lubbock and Messrs. Gurney and Fisher as having occurred several times in this county, and since the date of their respective publications no less than eight specimens have been killed in Norfolk, as recorded on good authority in the "Zoologist." It is extremely doubtful, I think, whether the Oriole has really been known to nest in Norfolk, since, of the only two recorded instances, one is undoubtedly inaccurate, and the other founded merely on "hearsay" evidence. Yarrell remarks, in his "British Birds," "I have been told that Mr. Scales, of Beechamwell, had eggs of the golden oriole in his collection, which had been taken in Norfolk," but Mr. Alfred Newton was assured by Mr. Scales himself that the eggs here referred to were brought from Holland, whilst the statement of Messrs. Sheppard and Whitear amounts only to the fact of their having been "informed that a pair of these birds built a nest in the garden of the Rev. Mr. Lucas, of Ormesby." It is not at all improbable that if unmolested they might occasionally attempt to nest here,

occurring as they do for the most part in pairs, between spring and autumn, but the brilliant plumage of the male bird at least, must inevitably attract notice, and in these "collecting" days the fate of a visitant so rare and so beautiful is unhappily sealed at once. The subjoined list, I believe, includes all the examples obtained in this county during the last seventeen years.

1847. On the 8th of May, an adult male was shot in the garden of the Dolphin public-house, at Heigham; and another bird, probably the female, was observed near the same spot on the following day. This specimen is now in the collection of Mr. J. H. Gurney.

1850. On the 1st of August a female was killed near Yarmouth; another, supposed to be the male, being seen at the same time.

1851. In July of this year, an adult female was obtained near Bungay.

1853. About the 17th of May, two males, in full plumage, were killed, one at Kenninghall and the other at Dilham. The former specimen was particularly rich in plumage.

1856. On the 18th of May, a pair were shot together near Lakenham. These birds, which are now in my possession, are also in full adult plumage, the male bird extremely beautiful, from the rich contrast of black and yellow.

1861. A male, in full plumage, picked up dead at Felbrigg, near Cromer, about the 17th of May. This bird, in the collection of Mr. J. H. Gurney, exhibited no appearance of having been shot, but, although perfect in plumage, had from some cause almost wasted away.

The following are all the earlier notices of the occurrence of this species in Norfolk that I have been able to find in either published or MS. notes:—According to Yarrell, a pair shot at Diss, in 1829, were in the collec-

tion of the Rev. Francis Henson, of Cambridge; and Mr. Hunt, in his "List of Norfolk Birds," says-"I have three specimens killed in different parts of this county; and recently (April, 1824), a fine male specimen was shot at Hethersett, which is now in the possession of J. Postle, Esq., of Colney." Of this bird, which is also referred to by the late Mr. Lombe in his MS. notes, the Rev. Edwd. Postle, of Yelverton, kindly sent me the following particulars only a few weeks before his death:-"It is now in the possession of my sister at Thorpe, and was shot by my father at Hethersett. He only saw the male bird, and had the good fortune to secure it by means of a crow keeper's gun. It was reported that the female had been seen with it, and Mr. Lombe for several days had the place watched by his keeper, but it was never reported by him as seen. The male was very tame, as he allowed my father to go some little distance for the weapon which brought him to death." Mr. Lombe also mentions another male, as shot at Burlingham in 1830. An old male, and an immature bird in Mr. Gurney's possession, were purchased at the sale of the late Mr. Stephen Miller's collection, and I recently destroyed a moth-eaten female, formerly belonging to the Rev. C. Penrice, of Plumstead, all of which I have no doubt were obtained in this county.

# ACCENTOR MODULARIS (Linnæus).

### HEDGE SPARROW.

Next to the house sparrow and the redbreast, this is one of our most familiar species, resident with us throughout the year, and nesting in our city and suburban gardens, as well as in the hedgerows of the open country. Although in summer rather heard than seen amongst the dense

foliage, in winter they boldly join the robin and other pensioners upon our bounty; coming close to our windows and doors for crumbs, as they peck right and left with their short shuffling gait, or with a succession of long rapid leaps, or jumps close feet, seek the nearest shelter when suddenly disturbed. With myself the Hedge Sparrow has been always an especial favourite, from its gentle unobtrusive nature, assimilating so well with the neat russet and grey of its finely marked though quiet plumage; retiring yet not shy, and if never quarrelsome, still always "holding his own," even with the pert sparrow and still more saucy redbreast. Perfect contentment and self respect seem stamped in every action; its little song is heard as cheerily whilst sheltering in the hedge bottom from the driving snow storm, as on the brightest morning in the early spring; whilst in the aviary he still utters his little notes, low, soft, and warbling, and though to a great extent an insect eater when at large, seems equally happy on an exclusively seed diet. Considering the large number of their nests that are yearly taken or robbed, it is somewhat singular that these birds should continue so plentiful, their beautiful little blue eggs forming the chief spoil of our bird-nesting boys, being so easily detected during the early spring, when as yet the leaves are but sprouting in the bare fences. Macgillivray alludes to a singular disease to which this species is peculiarly subject, and which he describes as "tubercular and apparently carcinomatous excrescences upon the eye-lids and about the base of the bill." This is observable in some examples, both in a wild state and in confinement, but perhaps more frequently in caged birds. I never remember to have had a hedge sparrow in my aviary that did not sooner or later throw out one of these excrescences just over the eye, and which after a time would come away quite whole, about the size of a

small pea, leaving a slight hollow completely bare of feathers. The bird has not appeared to be otherwise in ill health at the time, but the first tubercle was usually followed by others. A curious white variety was shot in this neighbourhood in 1854, having only two or three brown feathers in the wings and tail; and one shot at Eaton, near Norwich, in December, 1862, was also mottled with white on the upper parts of the plumage, a rather unusual circumstance, as this species is rarely subject to any variation in plumage.

The Alpine accentor (Accentor alpinus) has not been added to the Norfolk list; but Mr. Lubbock mentions having seen one in 1824, on a grass-plot at Oulton, near Lowestoft, and this, with Dr. Thackeray's specimen, are probably the only instances known of the appearance of this rare species in the eastern counties.

### ERYTHACA RUBECULA (Linnæus).

### REDBREAST.

Everywhere welcome and protected, and therefore everywhere common, the history of the Robin in Norfolk, as in all other counties in England, is but a "twice told tale." Resident with us throughout the year, each garden and shrubbery in town and country, each fence by the roadside, or in the open fields, has its pair of Redbreasts, ever ready "to do battle" for their rights, against all kindred intruders upon their prescribed domain. In winter, drawing nearer to our homes, they claim our sympathy, and with that bold confiding nature which has won for them an almost sacred place in every English heart, seek at our doors and windowsills the proffered crumbs. Nor does our bright-eyed friend, wander far from us in the summer months, though the

thick foliage of the trees and fences, and the rich medley of our migratory songsters, render him then but little heard or seen. Now and then his trim figure and his ruddy breast appears upon our walks and grass-plots, or flits before us down the wayside fence, where, perched on some projecting spray, bowing, he utters his little note and flirts his tail; next moment, lost amongst the tangled briars, unseen, he threads some well-known path to seek his nest and young. His presence too, throughout the summer, in the close vicinity of our homes, is proclaimed at times, after a sultry day, when as late as nine or ten o'clock his song is heard in our gardens, all other notes but those of the nightingale being hushed for the night. There is no portion of the year, however, when for me the robin has so many pleasant associations as in the shooting season. The leaves are falling and the groves are still, the merry group of summer songsters have left us once again for the sunny south, and winter migrants are fast arriving to supply their place. Then gladly welcomed is his autumn song, which seems to tell us that one friend is left to cheer the "waning year." How strangely it breaks upon the ear at first, as when some well remembered tune calls up old memories. Clear and sharp it sounds in the fresh morning air, whilst still the hoar frost hangs upon the trees, or glitters on the threads of endless gossamer. The sportsman hears it by the covert side as at midday he rests awhile, and seeks refreshment after all his toils; and later still, as he "homeward plods his weary way," that simple note, in some mysterious manner, awakens recollections of the past, when the same sport was shared with dear and absent friends. Again, in the months of September and October, as the day declines and the evening "draws in," how we listen to him in our gardens and shrubberies, now clattering his little mandibles as he jerks up and down on some projecting branch,

now singing sweetly, or at short intervals waiting for, and answering some neighbouring songster. As a weather guide to those who closely study the habits of birds, the robin is indeed a feathered barometer, and often have I proved the truth of an old countryman's remark-"'twill be fine yet, sir; that robin is singing higher up the tree than he did this morning." Should a bright interval also occur before sunset, after a day's rain, he still cheers us with a merry note, though at such times, as I have frequently noticed, he perches only midway on the trees and bushes. On the other hand, though his song may be heard at times during unsettled weather, how doleful he seems when the clouds are heavy with impending rain; how his little mandibles then vibrate together with a peculiarly querulous sound, as though his spirits fell with the occasion, and no doubt they do! for watch him again on some fine autumn evening, when the sun setting leaves a glorious sky and gnats in waltzing myriads proclaim a fine to-morrow, where is he then? There! on that highest twig nearest to heaven, where every leaf stands out, clear and distinct against the deep blue sky, warbling his heartfelt satisfaction in the scene, his little vesper hymn.

Who shall say that British ornithology is an exhausted theme, when even the robin itself, still forms a subject for discussion amongst enquiring naturalists; and are there not many of our most common species, whose habits are literally less known than those of rarer birds, simply because, being always with us, no one takes the trouble to observe them thoroughly? Much has been written of late in the "Field" and "Zoologist" as to what becomes of the large number of robins, which, from their very immunity from persecution, must necessarily be reared in this country. Many, and ingenious have been the theories advanced for their not increasing in proportion beyond all other birds; some alleging that

the young kill the old, others that the old, and especially the hen birds, are migratory in autumn, whilst their natural pugnacity, the cat, and cold winters, have been each in turn alleged as the chief cause. That they do fight, and that to the death, is a well known fact, and many probably from their very tameness fall victims to the cat; but I believe the robin to be as capable of braving our winters as any of our resident birds, and from its very boldness in seeking the protection of man is less likely than many to suffer privation. There is one other point, too, which has often struck me, that whatever the cause that thins their numbers, a dead robin is after all about as rarely seen as Mr. Weller's dead donkey or defunct post-boy; and yet, though puss from her very love of destroying life does "kill cock robin," so far as my experience goes she never eats him, he being one of those birds whose peculiar odour or flavour seems particularly obnoxious to the feline race. With reference, however, to the supposed migratory habits of the redbreast, I quote the following passage from a most interesting paper, by Mr. Edward Blyth, in the first volume of the "Field Naturalist" for 1833 (p. 466); the facts stated having been communicated to him at the time by a friend, a good observer of nature, who had just come from Aberdeen on board a trading smack:-"On the 16th of September, on the voyage from London, northward, when off the coast of Yorkshire, and about ten or twelve miles from Redcliff, several small birds alighted on the vessel." After enumerating tree pipits, willow-wrens, whinchats, and a female redstart, he adds, "On the following day (Sept. 17th), other species made their appearance; several wheatears, robins, and one male stonechat. All these birds migrate by night; and they all left the vessel on the first night after their appearance excepting two robins, which remained for some time, being fed by the

passengers, and which, with the characteristic effrontery of their species, stationed themselves, the one at the front of the vessel, the other at the stern, and fought on the least intrusion into each other's territory." There is, unfortunately, no statement as to the course these birds were observed to be taking; but from the time of year and the species enumerated, we may infer they were proceeding more or less in a southerly direction; and whilst it raises the question whether robins from more northern countries may not swell the numbers of our resident birds in autumn, as is the case with the tiny goldcrests and other delicate forms, it renders it by no means improbable that some of our home-bred robins may in like manner leave us for a warmer climate. At present, at least, I have no direct proof of their arrival on our coast, either from their being picked up under the telegraph wires, or at the foot of our light-houses; but I have certainly been struck on more than one occasion in the autumn months, with the very unusual number of robins observed by the roadside. On the 11th of October, 1864, when driving early in the morning, between Wymondham and Fundenhall, a distance of about four miles, my attention was attracted by the constant succession of robins (from their pale breasts and unfinished plumage, apparently birds of the year), that appeared on the trees and fences on either side. As usual scarcely two birds were seen together, but single individuals appeared nearly all the way at short intervals, and if collected like linnets into one flock, would have given the impression of numbers even more forcibly. Could these then have been for the most part autumnal migrants, or indications only of the large quantities reared in this county as a favoured race? If merely the latter, then undoubtedly we have little need to repeat the enquiry so often made, "what becomes of the large number of robins annually reared in this

country?" Whether some portion of our robins however, do or do not, proceed southward during the winter months, I can see no reason for supposing (as alleged by certain writers), that such an exodus would be confined to the females, a fact, which only a "slaughter of the innocents," owing to the similarity of plumage in the two sexes, could satisfactorily determine. Of the migratory habits of this species on the Continent there is no doubt, and the following passage with reference to this fact appeared in a very interesting paper in the "Ibis" for 1864, by Lieut. Sperling, on the ornithology of the Mediterranean: \*-"The Robin (he says), I am certain, migrates regularly, for I have very fregently met them at a long distance from the land; besides which an ornithological friend of mine records it as a regular passenger through Malta." The same writer also, speaking of the redbreast as found in Santa Maura and Greece, describes it as, "more plentiful during the winter than the summer," and adds—"This bird is, I believe, not supposed to migrate. If this be the case, how is it that they are so frequently met with at sea-just in the migratory season?" In the same volume also (p. 413), my friend Mr. Swinhoe, Vice-Consul of Formosa, in recording his ornithological observations during the overland route to China in October, 1863, remarks-"Between Marseilles and Malta, when eighty miles from the latter place, the weather being calm, two male Sparrows (Passer domesticus), and two Robins (Erithacus rubecula), came on board the steamer and staved a short time; they were evidently on their passage across from Europe to the African coast." Anecdotes are not wanting in this county, as throughout the kingdom, of strange situations chosen by these

<sup>\* &</sup>quot;Some account of an Ornithologist's Cruise in the Mediterranean." By Lieut. R. M. Sperling, R.N., "Ibis," 1864, p. 268.

familiar pets for nesting purposes; and occasionally, though rarely, buff coloured and pied varieties have been met with. Mr. T. E. Gunn, of this city, in his notes on varieties occurring in Norfolk, (Journal of the West Riding Naturalists' Society, 1864, No. 10) mentions two examples obtained in this neighbourhood in the winter of 1859, "one of a blueish slate colour, lighter on the breast and abdomen; the other white, mottled with small patches of the usual colour." A correspondent in the "Field" (Feb. 13th, 1864,) also described one recently shot near Lynn, as having the "back a light stone colour, its breast slightly tinged with orange, and its belly light lavender;" and a specimen in my possession, procured near Norwich in February, 1865, has the whole of the upper portions of the plumage light buff colour, the wings pale buffy white, and the under parts as usual.

# PHENICURA SUECICA (Linnæus).

#### BLUE-THROATED WARBLER.

The only example of this most elegant species, known to have occurred in Norfolk, is a male bird in Mr. Gurney's collection, picked up dead on the beach at Yarmouth, on the 21st of September, 1841. The same gentleman has also another male killed about the 15th of May, 1856, near Lowestoft, in the adjoining county, and it is particularly worthy of note, that both these birds, as well as the first recorded British specimen now in the museum at Newcastle-on-Tyne, belong to the form with the red spot prevailing in Scandinavia, and not to the white spotted form which yearly visits Germany and Holland. Of these two the Lowestoft specimen is the most perfect in plumage, both as to

the extent and vividness of the blue, and the purity of the red spot, the same parts in the Yarmouth bird being less clearly defined. How far the white or red spots may be considered as characteristics of two distinct species it is difficult to say; it will suffice, however, for my present purpose, to have shown that the only two examples met with on our eastern coast are like the dippers before alluded to, identical with Lapland specimens, presented to the Norwich museum by the late Mr. Wolley, and are represented by the two figures in Dr. Bree's "Birds of Europe" (vol. ii., p. 11). Having adopted the nomenclature of Yarrell in this work, I have retained his scientific designation of Phanicura suecica, the specific term suecica being perfectly applicable in the present instance, although not correctly so to the white spotted form, figured by that author in his "British Birds." There is no doubt that the red spotted form is the true Motacilla suecica of Linnæus,\* subsequently described by Pallas, as M. cærulecula; and by Schlegel, as Lusciola cyanecula orientalis; whilst the white spotted form which does not seem to extend its range so far northward, is the S. cyanecula of Meyer, and Schinz, improperly called Cyanecula suecica by Brehm and others. Another, and apparently less common form of blue-throated warbler, having the entire throat blue, without either a red or a white spot, has received the name of Sylvia wolfii. Mr. Newcome's collection, at Feltwell, contains an example of this form, which was killed in Holland, and it is by no means improbable that it may some day be recognised in Norfolk.

See Linnæus' diagnosis 'Syst. Nat.' 1766, i., p. 336, "M[otacilla] pectore ferrugineo fascia cœrulia," &c.

# PHENICURA RUTICILLA, Swainson.

#### REDSTART.

A common summer visitant appearing early in April, though sometimes seen by the middle of March, and almost rivalling the redbreast in the singular localities occasionally selected for nesting purposes. This beautiful species, or at least the male bird, with its white forehead and rich black throat, is one of the most striking of our southern migrants, and when perched on a low branch or stake in our gardens, constantly jerking his tail and uttering his sweet and peculiar song, attracts deserved attention. Its dexterity as a flycatcher is something marvellous, springing up into the air and seizing three or four insects one after the other before returning to its perch, and so quick sighted is it, that I have seen one dart off the ground and capture a fly from the wall many feet above it, the sharp tap of the beak upon the bricks being heard at some distance. Year after year it appears with singular regularity in the same locality, seeking, if undisturbed, the same favourite spot for its nest; and like the redbreast and hedge sparrow frequents the walled-in gardens of our towns and cities, as well as the orchards and groves of the open country. At my father's residence, in Surrey-street, a pair always frequented the garden in summer, and were a source of no little pleasure to me, as a boy, when I anxiously watched for their appearance in spring, speculating as to where they would build next. One year, to my great surprise, they nested under the tiles of an adjoining house, in just such a locality as a sparrow would choose, but in these matters they are peculiarly eccentric. Elegant in form, sprightly

in action, and peculiarly bright and diversified in colour, the redstart at all times delights the eye, but never looks more beautiful than when, resting awhile, it sits embowered amidst the clustering blossoms on our apple or cherry trees. As a songster it ranks amongst the earliest and latest in the summer months, as I have heard its singular hweet, tit, tit, between two and three o'clock in the morning, and as late as nine and ten at night.

## PHENICURA TITHYS (Scopoli).

#### BLACK REDSTART.

Until 1848 this rare species had probably not been noticed in this county, but on the 31st of October of that year an adult female was killed near the old battery at Yarmouth, as stated by Messrs. Gurney and Fisher, in the "Zoologist," p. 2345; and two more were obtained about the first week in November of the following year, as recorded by Mr. Gurney in the same journal (p. 2651). With the exception of an occasional specimen or two obtained by the late Mr. Thurtell at Lowestoft, in the adjoining county, the above are perhaps the only instances known of the Black Redstart having visited this district. It is, however, worthy of notice that, both at the time these specimens appeared on our coast in 1849, and also between January and March of the following year, an unusual number of these birds were met with in various parts of England (as noticed at the time in the "Zoologist"), but mostly in the southern counties. It is somewhat remarkable that this species, which, according to Mr. Gould and other authorities, breeds in Belgium, the north of France, and the south of Germany, should be a winter visitant, only, to the British Islands, regularly appearing in Sussex, Devon,

and Cornwall, at a time when its allied species, our common redstart, has left us with other soft billed migrants to winter in a warmer climate. Mr. Gould, however ("Birds of Great Britain"), considers that this apparent eccentricity is owing to a partial westward migration, some even crossing the Irish Channel, whilst the main body do really pass southward in autumn, and cross the Mediterranean.

### SAXICOLA RUBICOLA (Linnæus).

#### STONECHAT.

A common spring visitant, and breeds with us, frequenting the wild open districts abounding in furze. The grassy summits of the cliffs on our seacoast, when gay with the yellow gorse, are also very favourite resorts, where this restless species may be seen incessantly flitting from one bush to another, or uttering its little jerking notes from the topmost twigs. The male, with the rich black head of the breeding plumage, forms a striking object in our rural walks, and both sexes, from their sprightly actions and incessant cries, enliven such scenes as might otherwise weary from their very monotony. If we chance to approach the vicinity of their nests, the excitement of these little creatures becomes intense, each parent endeavouring to lead us on, by perching at short intervals directly in our path, the male still continuing this anxious duty long after the hen bird has slipped quietly back again, to assure herself of the safety of her household treasures. Mr. Blyth has aptly rendered their notes, at such times, by the words hweet, jur, jur; hweet, jur, which to the ear, at least of the field naturalist, will convey a sound, associated always with the yhit, yhit, yhit, of the flickering titlark and the "little bit of bread and no cheese" of the drawling yellow ammer. Some of these birds evidently remain with us throughout the year, having been noticed in the most exposed situations during very severe weather.

# SAXICOLA RUBETRA (Linnæus).

#### WHINCHAT.

Common in summer, and breeds in the county. In habits the Winchats much resemble the last named species, with which they commonly associate on our heaths and sandhills, though less numerous; but in the spring of 1864, I saw the contents of some fourteen or fifteen nests, all taken amongst the furze on Mousehold, near Norwich, with only a few eggs of the stonechat amongst them. Mr. Hewitson speaks of finding the nests of this bird in rough pasture fields and grassy meadows, in Westmoreland; and on one occasion I met with an old pair and a young one, in what seemed to me a very strange locality-namely, on a wet marsh adjoining the broad at Surlingham. This was in the month of June, 1859, when, after spending a night on the water, I was endeavouring to find the nest of some grasshopper warblers, which were "creaking," in various directions, about three o'clock in the morning. A strange note from a neighbouring sallow bush arrested my attention, and, wondering what new discovery I was destined to make, I observed a pair of whinchats jerking their tails up and down, and uttering their peculiar cry in an agitated manner. On searching the bush I soon found a half-fledged young one, but no nest; yet, being unable to fly, it must have been bred on the marsh, a very swampy and unusual locality. Being in want of specimens I secured the whole family, and the nestling is now in the museum collection (British series, No. 58.c). Messrs. Gurney and Fisher have recorded an instance of this species having been observed here in winter; and Mr. T. E. Gunn, who is well acquainted with most of our British birds, states in the "Zoologist" p. 9455, that he observed a male at Hethersett, near Norwich, in January, 1864, and a pair near the banks of the Heigham river, towards the end of November, in the same year; but such cases are, I believe, uncommon in any part of England.

### SAXICOLA CENANTHE (Linnæus).

### WHEATEAR.

A common summer visitant and breeds in Norfolk, arriving about the end of March and leaving in September; a large number also from more northern localities appear here, on their way southward, towards the end of August. This species, like the two pre-ceding ones, is met with in the open parts of the county, on heaths and common lands, or in the vicinity of gravel pits, and abounds on the sandy hills by the sea coast. Mr. Salmon, writing of the Wheatear in Norfolk and Suffolk, says (Yarrell's "British Birds," vol. i.) "it is very abundant on the warrens, and usually selects a deserted rabbit-burrow, in which it places its nest at some little distance from the entrance: it is composed of dried roots, intermixed with feathers, rabbit's down, and other light substances; it generally contains six pale blue eggs. The nest is easily detected by a little observation, for in such situations the old birds amass a considerable number of small pieces of the withered stalks of the brake, Pteris

aquilina, on the outside, at the entrance of the burrow: by noticing this circumstance its nest is sure to be discovered." There is little doubt that this is the species thus noticed by Sir Thomas Browne; "Avis trogloditica or chock, a small bird, mixed of black and white, and breeding in coney-burrows, whereof the warrens are full from April to September, at which time they leave the country. They are taken with a hobby and a net, and are a very good dish." I have frequently observed them on their first arrival in spring, exhibiting a most singular diversity of colouring in the gradual assumption of the breeding plumage, the earliest specimens having the grey of the upper parts much clouded with brown, but in a short time the grey predominates, and in old males becomes quite pure. By the seaside, I have always found them more numerous along the extensive line of marram hills, in the vicinity of Hunstanton, than amongst the brakes and furze, upon the lofty cliffs in the neighbourhood of Cromer, though equally perforated with rabbits' burrows; and on dissction have almost invariably found their stomachs filled with the remains of such small beetles as are seen at the roots or on the blades of grasses, and minute spiders, commonly called "money spinners." A very curious female variety, killed at Thetford, in July, 1850, is thus described by Mr. J. H. Gurney in the "Zoologist," p. 2923, "The colour on the head, neck, wing-coverts, back, rump, tail, throat, breast, and belly, are distributed as usual. The most singular thing about this specimen is, however, the circumstance of the wings being of a pure white with the exception of a few feathers on the shoulders, and two or three adjoining primaries in the centre of each wing, which are of a pale buff colour."

# SALICARIA LOCUSTELLA (Latham).

### GRASSHOPPER WARBLER.

Macgillivray, in his notes on the Grasshopper Warbler ("British Birds," vol. ii., p. 489), gives the following local account of this species, as written by his son from personal observations:-"During a short residence in Norfolk, from the middle of June to the beginning of October, 1838, I had almost daily opportunities of hearing the singular note of this interesting bird, which is nowhere, perhaps, more abundant than in the neighbourhood of Norwich, where I saw it alive for the first time. \* \* \* The note, if once heard, can never be afterwards mistaken for the sound of a grasshopper or cricket, however striking the resemblance; besides, the length of time for which it is continued, provided the bird be not disturbed, is much greater. Thus, on one occasion, while watching some pike lines by the margin of a deep pool, I heard the trill of the grasshopper chirper emitted from a neighbouring hedge for at least twenty minutes, during which time the bird appeared to have been sitting on the same spot. I cannot state the period of the arrival of this bird in the Eastern counties, but I observed it as late as the end of September, up to which period I regularly saw and heard my little friends in a lane through which I passed every second day on my way to the bath-house at Heigham. Although it frequents hedges alone, in so far as I have observed, I once heard two crying in the gardens attached to the Bishop's Palace, at Norwich. \* \* \* On Costessey common, a few miles from Norwich, I never met with it, although it is abundant in all the neighbouring

hedges, so much so that on a fine evening, I have at one time listened to at least a dozen, and have heard their cries even until the goatsucker and the bat flitting about, on noiseless wings, announced the close of day." That these birds are not at the present time thus plentiful in the localities above alluded to I have had many opportunities of ascertaining, and though occasionally heard in the neighbourhood of this city and in many parts of the county, where large woods, intersected with runs of water or thick old-fashioned hedgerows afford sufficient shelter; their great stronghold, together with the allied species, is decidedly the district of the broads. There, large tracts of fresh water communicating with the navigable rivers, are surrounded by the most luxuriant marshes, covered, during the summer, with long tangled grasses and innumerable wild flowers. Reed beds on every side bordered with green sedge, line the water's edge, the treacherous soil admitting of no heavier footsteps than those of moorhens, rails, and coots, thus forming a retreat, better suited than almost any other in the kingdom, for those marsh warblers, which, from their local and distinctive habits. have been classed by Selby under the genus Salicaria.

The desire to obtain some Norfolk specimens of this bird, of which I had never seen more than two or three examples in the hands of our bird-stuffers, induced me, in the summer of 1852, to pay several visits to one of our smaller broads. Many fruitless trips began to try my patience, when, at last, on a still summer's afternoon, when scarcely a breath of wind stirred the feathery tops of the reed, I heard, for the first time, the singular creaking note of this wary songster. Finding it impossible even then to make him break cover, I told the broad-man, who was with me, to pay attention to the note, since, his employment causing him to be early and late on the water, he was

by far the most likely to obtain a shot. This man assured me at the time that he had often heard the same "creaking noise" amongst the sedges without imagining that it was caused by a bird. Two days later I received my first specimen, an adult female, and the above, with one exception, is the only occasion on which I have heard this warbler on the broads in the middle of the day. The want of success, therefore, usually attending the search for this species, will be readily explained by the following description of its habits, as observed in our fens during several successive seasons; and I may add that since 1852, except from one or other of the broads, I have known of but three or four obtained in this county, although I have heard them occasionally on heaths and in hedgerows, at a distance from any water, and have had their eggs from various localities. The same broad-man who procured my first specimen, and from the same marshes, has since obtained many others during the last few years, all of which have been shot between three and six in the morning, or by moonlight as late as ten and eleven o'clock. At these times the grasshopper warbler appears to throw off somewhat of its shyness, continually uttering its loud note, distinguishable at a great distance, and when seen is almost invariably perched on the highest twig of a small bush. If undisturbed it remains "creaking" by the hour together, constantly moving its head from side to side, and if silent may be readily distinguished from the reed or sedge warbler by its sitting more upright, with its tail straight down. When observed on a reed stem (which is very seldom), it is always at the top, keeping a sharp look out, and on the slightest noise it drops like a stone into the thickest cover. In one respect it resembles the sedge warbler, preferring the shelter of the small bushes on the drier marshes to that of the reed beds, and here, no doubt, the nests are usually placed;

but the restless motions of the birds, and the denseness of the herbage, render them more likely to be discovered through accident than by the most diligent search. That they do breed there, however, has been proved by the appearance of the breast feathers in more than one female, and two young birds of the year have been also obtained. It was also formerly abundant in the fendistricts in the south-western corner of the county, where it was known to the sedge-cutters as the "reeler," through a fancied resemblance between the sound of its song and the noise made by a fishing line running off the reel; and even now, in spite of the changes effected by drainage and cultivation, a few pairs still resort there every year. Mr. Newcome's collection contains several eggs of this species from Feltwell fen, and he informs me that a few nests are found there nearly every season. The earliest appearance of these warblers, to my knowledge, is the first week in April, and several have been heard towards the end of August, about which time they probably leave us. The females are, if anything, larger than the males, but the latter, even in their young plumage, are at once distinguishable by a number of minute spots on the throat, and the legs of this, as also of Savi's warbler, are flesh-coloured, and the eggs profusely freckled with minute pink spots on a white ground. On the 7th of June, 1852, a male bird was shot near a pond at Tivetshall, which, from its peculiar tints and small size, might almost be termed a variety. I have only once since met with a similar specimen, also a male; in both cases the underparts exhibited a rich vellowish tinge, reminding one rather of the willow or wood-warbler, and the markings on the back and wings were far more vivid than usual. The latter example in my collection is, however, no longer distinctive in this respect, the brighter shades having

faded like the buff-coloured breast of an adult goosander, so soon lost in a preserved specimen. The account of a nest and eggs of this warbler, taken near Downham Market, on the 24th of May, 1847, is noticed in the "Zoologist" for that year. I have also eggs of this species found in 1859, on the grassy banks of the railway cutting, near a plantation at Ketteringham, and others were taken in Hethel wood, near Norwich, in May, 1864, as noticed in the "Zoologist," p. 9108.

# SALICARIA PHRAGMITIS (Bechstein).

#### SEDGE-WARBLER.

The Sedge Warbler is not only far more numerous as a species, but less local in its habits, than any other member of this small group, arriving about the first week in April, and leaving again towards the middle of September. Not only does this bird abound on every part of the broads, but the sedges bordering the banks of rivers, the reedy margins of our inland lakes, osier carrs and moist plantations, with tangled thickets in low meadows,—where the running stream is lost for a space beneath the overhanging brambles, and struggles on through a thick growth of flags and rushes, alike resound with its incessant notes; in short, wherever a sufficiency of coarse moist herbage affords food and shelter, the hurried chitty, chitty, cha, cha, chit, chit, of this garrulous warbler may be heard throughout the summer. Except in windy weather, when it keeps low down amongst the reeds and sedges, this species is by no means shy, but flits openly from one green covert to another, often singing as it flies, and seeming to sing still louder in defiance of any interruption, whilst it perches on and sings from the

branches of the willow and birch, as well as from the stems of aquatic plants. It is singular that the nest of this species should have been so often confounded with that of the reed warbler, being so different in shape and general character; for the depth and compactness of the one, which suits it so admirably for its position on the reeds, is wholly wanting in the other, which is flat and loosely constructed. Such as I have myself examined have resembled in form the black-headed bunting's, and were built externally of the stems of grasses interwoven with moss, and lined with the feathery tops of umbelliferous plants, neatly arranged round the upper surface, with a small portion of thistle down. Certainly, as far as the broads are concerned, where by far the larger number that visit this county are collected together, I have had every opportunity of observing their habits, and amongst some dozens of nests have found none that, like the reed warbler's, could be termed in any way suspended. Here, amongst the small sallow and alder bushes on the marshes are their most favourite nesting places, the nest being placed near the ground, and resting on the long coarse grasses which hide the stems; I have also found it in some few instances in a little hollow on the ground, but so concealed amongst the surrounding moss as to be discoverable only by the bird rising frightened from the spot. Again amongst the sedges, as its name denotes, it seeks concealment in the treacherous nature of the soil, and the nests may be there found supported, but not suspended, on the dead weed and leaves of the sedge broken down. These birds, together with the reed warblers, sing at intervals throughout the night in the early summer, breaking forth into those bursts of melody which so astonish and delight the ear of the naturalist, who hears them for the first time during the "dark hours;" whilst their power of imitating the songs of other species is equally remarkable. In the breeding

season, and especially when anxious for the safety of its young, the sedge warbler also utters a creaking noise, so closely resembling the grasshopper warbler, that I have shot the bird by mistake for the rarer species. Although generally far outnumbering the reed warblers, I have observed more than once, after an unusually cold spring, that the reed birds were decidedly the most numerous. This I can only account for by supposing that the sedge birds, arriving earlier, suffer from the severe frosts that occur at times after their arrival; but whether this be the cause or not, I have known the broadmen themselves to remark the small number of these birds in some seasons. Mr. Yarrell mentions a rare instance of a sedge warbler being observed near High Wycombe, in Buckinghamshire, in winter, but I have never known of its occurrence in Norfolk later than the 20th of October.

# SALICARIA LUSCINIOIDES (Savi).

### SAVI'S WARBLER.

At least six well authenticated specimens of this very rare British warbler are now ascertained to have been procured in Norfolk, of which the first, though long overlooked, was for many years the only one known to science. This bird (No. 63.b), in the museum collection, was obtained by the late Rev. Jas. Brown, at Limpenhoe, in the early part of the present century, during the month of May, and the following interesting account of it was kindly sent me by Mr. Brown, in 1856, on his hearing that I had lately received one from Surlingham broad. He says—"Its singular note had been observed at Limpenhoe by Sir Wm. Hooker, myself, and another ornithological friend, whilst investigating the natural

history of that district, but for a considerable time not a sight of the bird could be obtained. We called it the reel bird, on account of the resemblance of its monotonous note to the continuous whirr of the reel, at that time used by the hand-spinners of wool. At length it was discovered uttering its singular song (if so it may be called), from the top of an alder bush that grew in the midst of a large patch of sedge, into which it fell like a stone as soon as it was approached. After, however, much patience and caution, it again re-ascended the alder and was shot. It is a very shy bird, and in its habits seems to resemble the grasshopper lark (warbler), creeping among the sedge in search probably of insects and small mollusks. It was submitted to the inspection of the celebrated ornithologist, Temminck, whilst he was in London at the sale of Mr. Bullock's museum.\* He was puzzled, and requested permission to take it with him to the continent, to compare it with specimens in his own splendid collection. He returned it with his opinion that it was a variety of the reed wren, and as such it is noticed in their 'Catalogue' by Messrs. Sheppard and Whitear. I afterwards gave instructions to a marshman at Strumpshaw, of the name of Waters, who procured another specimen, which I presented to my friend, Edward Lombe, Esq., in whose splendid collection of British birds it probably may be found, under Temminck's nomenclature, as the reed wren, or as Sylvia luscinioides. + As the note is peculiar to the male, the female, eggs, and nest are probably desiderata,

<sup>\*</sup> This remarkable sale took place in the spring of 1819. The bird in question was therefore very probably killed in that year, at all events it could not have been obtained later.

<sup>†</sup> I have lately seen this specimen, which, under the name of "Savi's Warbler," is still preserved in the late Mr. Lombe's collection, now in the possession of his daughter, Mrs. E. P. Clarke, of Wymondham.

but by a knowledge of its haunts, and careful and quiet watching, may perhaps be discovered. This bird was also heard between Hoveton and Wroxham broads."

In the summer of 1843, a pair were shot at South Walsham, one of which was presented by Mr. J. H. Gurney to the Norwich museum, the other to the late Mr. T. C. Heysham, of Carlisle, who was anxious to possess a British specimen of this rare warbler; but on the sale of that gentleman's collection in 1859, this bird was also procured for the museum by Mr. Gurney, and, together with its companion from South Walsham and the Limpenhoe specimen, forms a highly interesting group. That the above-mentioned specimens from South Walsham are by no means all that have been heard or even killed in that district, I have very recently ascertained from a communication kindly made to this work by the Rev. H. T. Frere, of Burston, who possesses an example from that locality, and says, "Others have been heard there since. Specimens were sent from thence by the late Mr. W. H. Jary, years ago, before the species was recognised by Savi, and no particular notice was taken of them beyond a formal acknowledgment by the British Museum authorities. It is known as the 'red craking reed-wren' by the marshmen." Presuming that Mr. Frere's bird was procured about the same time as the museum pair, the next occurrence of this species, after an interval of thirteen years, is the specimen now in my collection from Surlingham, which was shot on the 7th of June, 1856, by the same man who had been so successful in procuring the grasshopper warblers. His account of the actions of this warbler agrees very nearly with the remarks of Mr. Brown, but as everything relating to a species so little known is worthy of record, I give it as taken down at the time in my note book. Being

engaged on the broad all night, he first heard the bird "noising" about nine o'clock in the evening, on the 6th of June, and observed it from his boat running up and down the dead reed stems, from the tops of which it kept calling at intervals until two in the morning. He then returned home, but at six o'clock he again found it in the same clump of reeds, though more restless and calling incessantly. Soon after this the wind began to stir the reeds, and it then dropped down and remained silent among the thick sedges. Up to this time he had imagined it to be a grasshopper warbler, although the note seemed unusually loud and clear, and like them it kept moving its head from side to side whilst singing. On the following evening, at eight o'clock, the bird was still in the same place calling as before, and as one or two of the grasshopper warblers were singing at the same time, he distinguished at once a difference in their notes. As soon as he had shot the bird, he saw that it was different to any he had handled before, and observing that it remained so long in one spot, made every search for a nest, but could find no trace of one. About ten years ago, he assures me there were several couple of birds on the broad with similar notes, and he then found a nest with eggs, which, from his description, might be either that of Savi's or of the grasshopper warbler. About the first week in May of the following year, a bird, agreeing exactly in note and appearance with the above, was also seen by this marsh-man in a small sallow bush; not having his gun with him, he watched it for some time, and had no doubt of its identity. From the occurrence of this species in one or two instances in the middle of summer, there is little doubt that it has occasionally nested in our marshes, indeed a nest in the collection of Mr. Newcome, of Feltwell, presented to him by the Rev. J. Burroughes, was said to have been found near Yarmouth. It is also most probable that although so rarely recognised in this county, others may have been shot, and mistaken as the first was, by M. Temminck, for varieties of the reed warbler, since the two species at first sight are very similar, but Savi's is not only a larger bird, but in the reddish tints of the upper parts more resembles the nightingale. My own specimen, a male, like males of the grasshopper warbler, exhibits the small black spots on the throat. The following remarks upon the habits of this rare species, as observed by Mr. Osbert Salvin, in the Eastern Atlas,\* will probably be read with interest, from the perfect confirmation they afford, of the accuracy of the above descriptions:-"I found this bird abundant in the marsh of Zana. On approaching the margin of the reeds, its peculiar rattling note might be heard in every direction. The bird, when uttering this cry, climbs to the very top of a reed, often choosing the tallest, where it sits, if not disturbed, for several minutes, without changing its position. When singing, the head is moved slowly from side to side, by which means it may be that the ventriloquism ascribed to the grasshopper warbler is produced, the apparent change of position of the bird being, in fact, a change in the direction in which the sound of its voice is thrown. On taking alarm, the songster drops instantly into the thickest sedge, when pursuit is hopeless, as it carefully eludes observation, never showing itself in open flight; sometimes, however, its course may be traced by the shaking of the reeds as it springs from one to another. The peculiar nest of this species, a beautifully compact structure, composed entirely of dead flag, is artfully concealed in the thickest parts, and at Zana it can only be found by wading in

<sup>\* &</sup>quot;Five Months' Birds'-nestin in the Eastern Atlas," by Osbert Salvin. "Ibis," 1859, p. 304.

mud and water up to the middle, and even then it is quite a chance to find one."

# SALICARIA STREPERA (Vieillot).\*

### REED-WARBLER.

The Reed-Warbler, as its name implies, is confined almost exclusively to the reed beds on the broads and rivers, being far more local in its habits, and less numerous as a species than the sedge warbler; it also arrives somewhat later in the spring, and leaves us again earlier in the autumn. The beautiful little nests of this species, so carefully and curiously suspended on the stems of the reeds, are, with the exception perhaps of the long-tailed titmouse, the most interesting in construction of any of our British birds. They are formed externally of dried grasses, stalks of plants, and the feathery tops of the reed, the latter generally forming the only lining, with occasionally a bit of wool or a stray feather or two on the edge of the structure. The materials are, however, occasionally much more diversified, especially when, as I shall presently show, the nests are constructed in bushes and garden shrubs. One of these, now before me, is composed externally of dried grasses, studded over with little patches of wool; the interior consisting of a layer of moss, lined with a

<sup>\*</sup> I am compelled in this instance to depart from the nomenclature of Yarrell. The specific name arundinaceus was first applied by Linnæus to a bird—the Great Reed Warbler—which being congeneric with the one mentioned in the text, is properly entitled to that appellation; and the next name in order of priority, as shewn by Mr. G. R. Gray (List Br. B. in Br. Mus., p. 49), is Vieillot's strepera, which I accordingly adopt, as does Mr. Hewitson, in his last edition of his 'Eggs of British Birds' (p. 119).

flax-like substance, procured from the willow, (Salix—?) and mixed with sheep's wool, feathers, and a few black horsehairs. They are for the most part very compactly made, and in some cases will bear much handling without disarranging the materials, yet this is not always the case, as I have seen some taken on Hickling broad, built on very slender reeds, and so loosely constructed, that I wondered they held together at all; but at the spot where these were found, the ground was covered with a sort of wild convolvulus or creeper, whose tendrils encircling both the reeds and nests had a very pretty appearance, and afforded an unusual support. The ordinary number of reeds selected is three, round which the materials are firmly woven, so as to include them all in the structure, whilst the nest is placed with instinctive judgment, neither low enough to be affected by the rising of the water, nor yet high enough to be influenced too powerfully by the wind. Occasionally a nest may be found on four reeds, and I once found one on five, and another on two, but these cases are rare. Arriving here later than the sedge warblers, the nests of the reed birds are seldom completed before the end of May, and the young are hatched about the first week in July. In 1852, a reed-warbler's nest was found built in a small bush near a pond at Bracon Ash, but even in this unusual situation its general character was preserved, being suspended on three twigs of the bush, built into it in place of the reeds. This is one of the very few instances in which I have known these birds to breed in any locality not adjacent to reed beds;\* but at Ranworth, where the broad joins the garden of Mr. John

<sup>\* &</sup>quot;In the 'Zoologist' for 1864, p. 9109, is a very interesting description by Mr. R. Mitford, of the nesting of this species in a garden at Hampstead, near London, 'far away from water in any shape,'" the nests being constructed in lilac and other shrubs. Mr. Hewitson also cites several similar instances.

Kerrison, I have frequently seen the nests of this warbler built into the laurel bushes by the water's edge, in the same manner as I have just described; and in the summer of 1861 I was shown four or five which had been found in various shrubs in a kitchen garden at Lakenham, situated by the riverside, with a reed bed and osier ground in close proximity. In each of these, twigs of the respective plants were ingeniously woven into the structure itself, and though somewhat shallow, they all retained much of their normal character. The most curious fact, however, in connection with these nests, was finding a cuckoo's egg in three of them, and a young cuckoo, of course per se, in the fourth. This youngster was kept alive for some weeks in confinement, and presented the most absurd appearance, when, having grown uncomfortably large for it, it still attempted to nestle down in its original cradle. Occasionally, but rarely, I have known a cuckoo's egg deposited in the nest of this species when placed as usual amongst the reeds;\* but in the above four instances, increased size and depth and easiness of access afforded no doubt peculiar attractions. One nest, which had been built into the centre of a currant bush, presented a most novel and beautiful appearance, the dry materials contrasting with the green foliage, whilst the young fruit hung in bunches above and around it. This species, like the sedge warbler, is an incessant songster, heard at

<sup>\*</sup> Mr. W. H. Thomas, ("Zoologist," 1843, p. 97), in his most interesting description of these birds and their nests, as observed by himself on the banks of the Thames, mentions two instances in which he had found Cuckoo's eggs in nests built amongst the reed stems, and the novel method adopted by the little reed bird, to feed its unwieldy nestling, perching on its broad back, and thus dropping the food into its gaping mouth. Mr. A. Newton tells me also that he has frequently known of similar cases. In one instance he found two Cuckoo's eggs in the same nest.

short intervals throughout the day, except in windy weather, but saving its choicest music for the twilight hours. Its lavish notes are thus associated in my mind with many a calm summer's night on the open broads, the stars shining brightly overhead, and the soft breeze sighing through the rustling reeds, mingled with the hum of insect-life on the water. It is at such times that the song of these marsh nightingales is heard to perfection. All is still around, save those murmuring sounds that seem to lull to sleep; the barking of the watch-dog has ceased in the distance, and the hoarse croak of the coot or the moorhen harmonises too well with the scene to startle with its frequent repetition. Presently, as if by magic, the reed beds on all sides are teeming with melody; now here, now there, first one, then another and another of the reed birds pour forth their rich mocking notes, taken up again and again by others, and still, far away in the distance, the same strain comes back upon the breeze, till one is lost in wonder at their numbers, so startling to the ear of a stranger, so impossible to be estimated at all during the day. About the first week in June, should the weather be fine and still, is the best time to hear these nocturnal warblers; the sedge birds, however, as earlier breeders, have by this time almost ceased to sing during the night, their young being already hatched.

I can imagine few things more delightful to the out-door naturalist than his first introduction to the broads by night. The mere escape for a time during the height of summer from the heat and bustle of a city life, might alone repay the trouble of a visit, were there no further attractions in those sights and sounds which have for the naturalist a peculiar charm. Never, I think, does marsh scenery look more beautiful than on a fine summer's evening, when even distant objects appear distinct against the clear

bright sky. How the rich green of the rushy marshes, and the luxuriant growth of sedge by the water's side relieve the eve after the heat and glare of the day. The whole landscape, flat though it may be, is yet prettily broken by small groups of cattle in every attitude of repose; with here a marsh mill, picturesque in its roughness, or there the tall mast and sail of a wherry alone visible across the next reach of the winding river. Nor does the ear fail to share in the pleasures of the scene: innumerable sand-martins fill the air with their hurried twitterings, as they chase each other over the water in endless evolutions. Every covert seems alive with the merry notes of the sedge bird, now mocking the sand-martins in their passing flight, now pouring forth its own babbling notes, till one's head seems filled with its incessant song. Close by from the bushes on the drier marshes titlarks are rising and falling on quivering wings, and though lost almost to sight, far above all, the skylark's song still mingles with the rest, as

"Higher still and higher the deep blue he wingeth,
And singing still doth soar, and soaring ever singeth."

Such is indeed a fitting evening to prelude a nocturnal trip, and as, wrapt in the enjoyment of these rural sounds, one glides gently down the stream towards the entrance of the broad; the soft breeze rustles amongst the feathery reed tops and the light foliage of the willows by the river side, the wide expanse of water glows with the reflection of the setting sun, whilst the rippling waves upon its surface dance and sparkle on their way, as though hastening onward to those quiet shades, where twilight stealing over the landscape speaks of sleep and rest for the weary.

#### A SUMMER'S NIGHT ON THE BROADS.

It was on the 10th of June, 1859, that I paid my first nocturnal visit to Surlingham, one of our prettiest broads, and, from its close vicinity to the Brundall station, one of the most easy of access by rail from Norwich. The evening train had deposited me in close vicinity to the water, where a marsh-man with his boat was waiting by appointment, and soon the heat and bustle of the city were forgotten in the enjoyment of that quiet scene, as we passed from the main stream into the long narrow channel, which connects the broad itself with the navigable river. The following extracts from my own notes, made at intervals throughout that lovely, and only too short, midsummer night, will best serve to convey to my readers the various little incidents of such an excursion:—

6.30. p.m. Reed birds singing a little, but the wind rather too high to hear them properly. Very few sedge birds heard on the marshes, and none amongst the reeds, as they have been sitting for three weeks, and some have probably hatched off. Sand-martins in plenty playing over the water, and starlings arriving in flocks. One snipe flushed on the marshes, which are tovered at this season with the gayest wild flowers, and a reed bird's nest found with four eggs, and supported on four reed stems.—8 p.m. Starlings settling on the reeds for the night,\* but not in large numbers. Sand-martins and a few swallows still out after insects.—8.30 p.m. Sand-martins in swarms over the water and

<sup>\*</sup> By the 13th of July I have known the starlings assemble here in immense flocks, and when disturbed in the reed beds, after dark, make a noise not unlike the roar of the waves, as their wings seem to rattle against the reed stems in their fright.

high over head; the young of the first broods preparing to roost amongst the reeds, and the old birds to seek their nests in the bank at the back of the Brundall station. Gradually becoming dusk, now the sun is down, but cuckoos still heard in all directions. Two ducks flying round at 9 p.m. Water-hens and coots calling at intervals, and corn-crakes heard in the distance. Martins and starlings all settled by 9.15, saving here and there a benighted straggler hurrying to its roost.— 11 p.m. A sudden and heavy rain from nine o'clock drove us for shelter to the marsh-man's cottage, where supper and a quiet pipe soon passed away the time. The stars were now shining brightly, and the moon breaking from a bank of clouds; the air was filled with the hum of insects, and a light breeze rustling the reeds and sedges, as it passed us by, completed one of those deliciously quiet scenes which only a night on the water at this time of year can possibly afford. On every side as we rowed through the little channels dividing the reed beds, the reed warblers were singing all over the broad, and here and there a sedge bird from the marshes joined in the general medley. Just then, almost startling with its depth and fullness, the cuckoo's note, rich and mellow in its tone, fell upon the ear with unmistakable reality; the bird being evidently close by on some sallow or alder bush in the adjacent marshes, where earlier in the evening we had seen several.—2 a.m. A short nap on the brick floor of a marsh-man's cottage, is refreshing enough to those who can rough it, and as we turn out once more and walk down to the boat, the skylarks are singing from the neighbouring fields, and one in the clouds, though it is too dark to see him. The water looks cold and silvery beneath the star lit sky, and as the dawn keeps breaking and the dark curtain of night is drawn aside, every object becomes each minute more and more distinct,

and a few bats, still flitting about in the uncertain light, seem the last link of connection betwixt night and day. A few minutes later and the reed and sedge birds commence singing again in all directions, and continue so for more than an hour. Then the black-headed bunting begins his note; cocks are crowing from the neighbouring farms, and an early train rumbling over the bridges probably scares, with its shrill whistle, the two ducks which come high over our heads directly afterwards.— 3 a.m. The morning star still shining in the bright blue sky, streaked with purple and fleecy clouds. The martins leaving the reeds in flocks, and spreading themselves over the broad to feed on the myriads of flies and midges that rise at every step from the dewy marshes. Cuckoos singing in every direction, and the reed birds as noisy as if their rest had never been broken during the night. Two or three herons rise lazily from the water's edge as we come suddenly upon them, with the boat, round a projecting reed bed. Corn-crakes answering one another with their peculiar notes, and water-hens and coots crying at intervals.—4 a.m. Large fish rising at the flies on the open water. A bright blue sky, but the sun hidden behind a bank of clouds, indicative rather of wet later in the day. First large flight of starlings leaving the reeds, though stragglers have been rising since the beginning of daylight. A redshank calling from a gatepost on one of the drier marshes, and walking backwards and forwards along the top rail. Two common terns, hovering over the river, are fishing as they pass on their way towards Yarmouth. The next hour is devoted to an al fresco breakfast, with sundry preparations for a speedy start, then a quick row down the river to catch the first train for home, and our trip is reckoned amongst the "pleasures of memory."

Attractive as these localities are, both to the sportsman and naturalist by day, the latter, at least, can never fully realize their beauties without such a visit as I have here attempted to describe,—when the soft air and dewy odours, the rich vegetation and varied sounds, have each their charm; the notes of the rails, the coots, and the moorhens form the bass to the concert of the warblers in the reeds; and the strange sucking noise of the eels, in the muddy channels, sounds as if the nymphs of those quiet waters were giving and receiving the heartiest of kisses, to their own entire satisfaction.

# PHILOMELA LUSCINIA (Linnæus).

### NIGHTINGALE.

A regular summer visitant and breeds with us, arriving in April\* and leaving again in September. Though not visiting us in large numbers, and being at the same time very local in their habits, these lovely songsters are, I believe, in certain localities, much more numerous than in former years. The immediate vicinity of Norwich is particularly rich in their "favourite haunts," and for some weeks on their first arrival they may be heard, both day and night, on the Ipswich, Newmarket, and Unthank roads, and at Bracondale, Earlham, Thorpe,

<sup>\*</sup> The Rev. R. Forby, in his "Vocabulary of East Anglia," assigns to the nightingale the local designation of the "Barley Bird," as appearing in the season of sowing barley, or rather what was formerly the accustomed season, the end of April or beginning of May. I cannot say that I am familiar with this provincial name for "querulous Philomela," and am inclined rather to adopt a suggestion of Mr. Newton's, that the term "Barley Bird" is here applied to the wrong species. It is a common provincial name for the yellow wagtail in many parts of the country, and these wagtails often frequent fields of newly sown spring corn, whence the the name "Barley Bird" would be applicable to them, though by no means so to a purely woodland species like the nightingale.

Spixworth, and other neighbouring places. Though frequenting the thick cover of our groves and shrubberies, the Nightingale is by no means a shy bird, at least on its first arrival, but sings fearlessly throughout the day in the most exposed situations. In my own garden, bordered on two sides by public roads, I have known one sing at intervals throughout the day, on the yet leafless branches of an almond tree, perfectly indifferent to the voices and footsteps of the passers by; and on the 1st of May, 1864, a most exquisite songster stationed himself on a small tree, in Mount Pleasant lane, close to the footpath, where groups of Sunday walkers, both morning and afternoon, stopped to listen to its "sweet descants," and probably for the first time in their lives saw, as well as heard, a nightingale. How strange it seems that a bird, gifted with such wondrous powers of voice, and such exquisite modulations, should be also capable of uttering that harsh croak, which later in the season bespeaks alarm for its young. No one on first hearing that strange sound could possibly guess its origin, or could fail to be astonished, as I was myself, when I discovered the real author. I have watched this species searching for insects in the garden towards the middle of August, when it assumes a much more nervous manner, listening like a thrush with head inclined, to every passing sound, and progressing by little quick runs, or more properly speaking, a succession of rapid hops. Whilst resting, however, it has more the character of a large robin, the eye showing bright and full, the wings slightly drooping, and the tail raised, or flirted up and down with the actions of the body. The light colour of the breast, and the bright reddish tint of the tail and tail coverts, at once distinguish it from other birds even in the absence of song. From personal enquiries in many instances, I am convinced that in a large majority of cases the

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"early nightingales" of newspaper paragraphs originate simply in the exquisite notes of our common songthrush, as heard at a late hour during the long spring evenings.

# CURRUCA ATRICAPILLA (Linnæus).

#### BLACKCAP.

A regular summer visitant, and breeds in Norfolk, arriving somewhat earlier than the last species, and leaving us generally towards the end of September. Occasionally, however, specimens are met with much later, as in 1852, when an old male, in good condition, was killed in this county on the 22nd of December, as recorded at the time in the "Zoologist," by Mr. J. H. Gurney, p. 3753. It would seem from the remarks of various correspondents in the "Field," that late stragglers of this species are also observed in other counties feeding on the berries of the mountain ash, having probably as much penchant for them as for elder-berries in the early spring, of which I once saw a blackcap partaking with such amusing voracity that he finished a large bunch in detail before he noticed my face within a few inches of his fruitstained beak. At that moment his combined expression of fright and repletion was one of the most comic bird scenes I ever witnessed. A small unfeathered biped, caught in the very act of clearing a jam-pot, with his rueful countenance besmeared with the sweets, would perhaps form the nearest approach to the guilty look of that little glutton. I have two eggs taken from a nest at Ketteringham, near the railway cutting, in 1859, which were identified by Mr. Hewitson as "rare and beautiful varieties" of the blackcap warbler's, being richly blotched with red on a white ground.

### CURRUCA HORTENSIS (Gmelin).

#### GARDEN WARBLER.

Visits us in summer and breeds with us, appearing rather later than the blackcap warbler, and leaving again in September. Somewhat local in its habits, this species is nowhere very numerous; indeed this, as well as the blackcap warbler, are far scarcer here than in more southern counties. I have rarely detected the song of this warbler in summer in close vicinity to the city, but in autumn, towards the end of August or beginning of September, a pair or two, with their little families (and the same may be said of the blackcap and whitethroat), invariably appear amongst the shrubs in my garden, betraying their presence by the same anxious cries so aptly described by Mr. Blyth, as "resembling the sound produced by tapping two small pebbles together." This is evidently intended as a note of warning to the young brood, always carefully concealed amongst the thick foliage, their whereabouts being indicated only by a rapid movement of the leaves, as they search the branches for berries and insects.

With reference to the varied notes of birds, a quick eye and a good ear are not more essential to the out-door naturalist than a good memory for sounds; in order to treasure up, not merely the usual note or song of each species, but the strangely different sounds emitted under particular circumstances by the same bird. Taking our ordinary songsters as a class, besides their true song, distinctive in character and easily recognised, they have for the most part a call note as well, such as the pink, pink, of the chaffinch; an alarm note, like the shrill chatter of the blackbird,

when scared from the laurels, and a note peculiar to the breeding season, which, though differing in almost every species, yet in each denotes anxiety as we approach their haunts, and conveys no doubt a timely caution to the objects of their care. Mr. Blyth, to whose valuable communications to the "Field Naturalist" I have before alluded, in his remarks on "British Birds of the Robin kind," (vol. i., p. 434), thus endeavours to render in words the sounds emitted by some of our more familiar species when tending their young; although these again are perfectly distinct from the sweet guttural tones indulged in by many, when feeding or caressing their nestlings, and unconscious of the close propinquity of any human being. "The peculiar double note (says Mr. Blyth) which all the species utter when a person is near their nest is worthy of being noticed; this in the nightingale may be expressed by hweep; hweep, carre: in the redstart by hweet, tit, tit, tit; hweet, tit, tit: in the robin, by a loud tit tit tit; and now and then a long drawn plaintive note (between a whistle and a hiss), which cannot be expressed in writing: the stonechat's note resembles hweet, jur, jur; hweet, jur: the whinchat's is yeer, tip; yeer, tip, tip: and the wheatear also has a note analagous, but which I cannot accurately express in writing from mere memory. The common grey flycatcher has a note of this kind, which may be tolerably expressed by ist, chit; ist, chit, chit." The singularly happy rendering of most of the above notes will be admitted, I am sure, by all who have studied them in garden or grove, and many others might be added amongst our summer warblers; yet even an old observer will not unfrequently find himself at fault, when tracing a sound, apparently new to him, to some familiar form amidst the foliage of the trees in summer. The titmice, with rather a series of call notes than any real song, have a hiss to greet the birdsnester's fingers, and in their pendulous search for food amongst the branches high over our heads, drive one almost wild with the variety of their cries, both natural and imitative; the great tit more especially pirating the notes of many species, and thus leading the collector a fruitless chase after all sorts of imaginary birds. The reed-warbler also croaks like the nightingale when anxious for the safety of its nest and young; and the sedge bird, under like circumstances, "reels" like the grasshopper warbler; at other times, in its merry medley, the notes of the titlark, the sand-martin, and the black-headed bunting, are mingled with its own, till experience teaches the young ornithologist to believe his eyes rather than his ears.

## CURRUCA CINEREA (Latham).

### COMMON WHITETHROAT.

As its name implies, one of our most common summer visitants, appearing about the middle of April, when, until the business of nesting commences, our hedgerows and bushes fast budding into leaf are alive with its simple song, and its trim little figure is seen flitting from spray to spray, or rising into the air, hovering and singing in the pure enjoyment of the renewal of spring. Later in the season the dense herbage of the banks and hedges hides it from view, yet still heard, though rarely seen, it well deserves its rural name of the "nettle creeper," and both old and young together leave us again in the autumn, about the same time as the preceding species.

It is singular how habit gives the power of distinguishing any known species at a glance, whether seen on the wing, or restlessly flitting amongst leaves

and branches. To the unobservant individual, whose "British ornithology" is pretty nearly restricted to the robin, the sparrow, the rook, and the swallow, (the latter, of course, including the martin as well), the power of recognising a variety of forms, by gait, by flight, by particular distribution of colour, such as a white barred wing or tail covert, seen but for an instant, yet recognised at once,—are matters inexplicable; yet these to the true naturalist form the freemasonry of his craft, and strange is that sort of instinctive feeling which tells him when a strange form has crossed his path, and assures the observer that the object seen, however briefly, is something altogether new to his experience. To acquire this habit of quick recognition, I know no better plan than that which I have adopted from boyhood, of always endeavouring to identify satisfactorily, whilst driving or riding, the birds presented in quick succession to the eye upon the trees or fences; and in travelling also by rail, the eye may be accustomed in the same manner to detect not only partridges on the stubbles, or wood pigeons in the turnips, but many smaller and less easily distinguished species, by their flight and actions, when disturbed by the train or whilst settling again in the adjoining fields.

# CURRUCA SYLVIELLA (Latham).

### LESSER WHITETHROAT.

This less numerous species is a regular spring visitant, and breeds in Norfolk, appearing in April and leaving in September, but, though generally dispersed, is decidedly local in its haunts. Mr. Dix has kindly sent me specimens from West Harling, and I have seen its eggs from various localities, but

my own personal acquaintance with it in this county is very slight. Mr. Blyth\* thus speaks of its notes and actions—"The warble of the babillard or lesser whitethroat is pretty and lively, but its song is rendered monotonous in the spring and summer by the constant repetition of its loud note of defiance, analogous to the clear lively note with which the blackcap generally concludes; this may be expressed by the monosyllable see, repeated nine or ten times in quick succession, and at times very loudly. \* \* \* The song of this bird is very superior to that of many whitethroats, but not to all; he has none of those harsh sounding notes which so often disfigure the whitethroat's song. He seems also to be always in such high spirits as not to know how to contain himself, taking frequently a long circuitous flight from tree to tree, and back again a dozen times, seemingly for no other purpose than mere exercise; but he never mounts singing into the air like the whitethroat." He also refers to its preference for lofty elms and other trees, in the place of low bushes or roadside fences, which quite agrees with my own limited observations of its habits in this neighbourhood.

### SYLVIA SYLVICOLA, Latham.

### WOOD-WARBLER.

A regular summer visitant arriving in April, but later than either of the two next species, and leaving us again in September. By no means so numerous as the willow-warbler, this bird is particularly local in its distribution. The few examples that find their way

<sup>\* &</sup>quot;On the British Fruit-eating Warblers."—" Field Naturalist," vol. i., p. 306.

into our bird-stuffers' hands is owing probably as much to their habits being but little known, as to their late arrival in spring, when, in most seasons, the trees are in full leaf and effectually conceal such small objects. Mr. Dix has most kindly furnished me with the following notes on this species, as observed by himself at West Harling, in Norfolk, from which locality he has sent me their eggs, and where I have had the pleasure, in his company, of both seeing and hearing several. He says, "they are not at all uncommon but confined to one wood, and are very local in their habits. There is one peculiarity I have invariably noticed, though I do not remember to have seen it recorded: it is their fondness for beech trees, so much so that I have never seen the bird where the beech is absent. I have found them in several localities, and in four different counties, and even in Epping forest they are confined to two or three limited spots. The call note and song is so distinctive that once heard it cannot be mistaken, and is sure to be noticed by any one at all attentive to the songs of our summer birds; so I do not think it likely I have passed the bird. They feed principally at the top of the high oak and beech trees just after sunrise, and I have seen them there washing in the dew. I once shot an old female in the act, so there could be no mistake. They are, I think, the most lovely and elegant of our summer birds, perhaps, of any we have." To these notes of a true naturalist I may also add that my friend Mr. Alfred Newton, when residing at Elveden, near Thetford, found the wood-warbler in that district extremely local, but frequenting the same oak plantations from year to year. It may be recognised at once by its peculiar note, which is quite different from that of the willow-wren, but by no means easy of imitation. Mr. Blyth, in his usual ingenious manner, gives it as "Twit, twit, twit, tit, tit, tit, ti-ti-ti-i-i,

beginning slow, but gradually becoming quicker and quicker, until it dies away in a kind of thrill;" and Yarrell describes it as resembling "the word twee sounded very long, and repeated several times in succession, at first but slowly, afterwards much quicker, and when about to conclude is accompanied by a peculiar tremulous motion of the wings, which are lowered by the side."

### SYLVIA TROCHILUS (Linnæus).

#### WILLOW-WARBLER.

The great increase in planting of late years will account for the large number of our summer warblers that now visit us, whilst the strict preservation of game in most parts of the county affords them at the same time protection during the breeding season. Amongst the first of that merry group (and later in the season by far the most numerous,) to enliven our shrubberies and plantations with its joyous notes, is the willow-warbler, arriving, except in very backward seasons, towards the end of March, and leaving us again in September. The song of this elegant little bird on a bright sunny morning in the early spring, when the trees are putting forth their freshest green and all is life and animation amongst the feathered throng, is one of the most delightful and cheering sounds of that tuneful season. If we walk through any large plantation on their first arrival, the whole place seems alive with their merry notes, and as we trace the sound into the topmost branches, nearly every other tree seems to have a separate vocalist, whose song, commencing in a high key, runs down the scale with the most charming modulations. I have also noticed, that, although always plentiful, they occasionally appear in unusual numbers. as was particularly the case in 1857. A rather singular variety was killed at Gunton, near Lowestoft, in August, 1861, of a uniform pale yellow, becoming straw-coloured on the under parts, with the bill and legs straw yellow, remarkable rather from the rarity of any variation in the plumage of these warblers.

# SYLVIA RUFA, Latham.

#### CHIFFCHAFF.

One of our earliest summer visitants and breeds with us, arriving in March and remaining till October; and it is not unusual to hear, at the same moment, the note of the Chiffchaff, and the chatter of the fieldfare, the one already arrived in its summer quarters, before the other has left us for its northern breeding grounds. This diminutive warbler is scarce in comparison with the last species, but its well-known and peculiar note makes it very generally noticed. According to Messrs. Gurney and Fisher, "A low bush, frequently of furze, appears to be a favourite locality for the nest of the chiffchaff." As many as four have been found in such places within a few yards. The melodious willow-warbler of continental authors, the true S. hypolais, has not yet been recognised in this county.

# MELIZOPHILUS DARTFORDIENSIS (Latham).

### DARTFORD WARBLER.

But two specimens of this warbler have been recorded as killed in this county, and in both instances on the Denes, near Yarmouth. The first was obtained

some years since, as noticed by Messrs. Gurney and Fisher; and the last, a young male, was caught by a dog in a furze bush, on the 25th of February, 1859. This bird was sent to a bird-stuffer in this city, together with a stoat killed at the same time, and was intended to be placed in the mouth of "the varmint," when fortunately it was recognized as a rarity. The above Norfolk specimens are preserved in Mr. Gurney's collection at Catton. Mr. Hunt, in his "List" of Norfolk Birds, has the following note on this species:--"A pair of these elegant little birds were shot in the month of June, 1828; they are the only specimens ever found in this part of the kingdom, and are now in the possession of Mr. Crickmore, of Beccles." No locality being named in this instance, it is most probable, I think, that these specimens were obtained in the neighbourhood of the town where Mr. Crickmore resided, and would therefore be the first recorded instances of the Dartford warbler appearing in the Eastern Counties; but as Beccles is situated on the borders of the two counties, they are quite as likely to have been killed on the Norfolk as on the Suffolk side of it .- Mr. Dix informs me, that one in his possession was killed in December, 1860, on Nacton heath, near Ipswich, where others are said to have been seen.

# REGULUS CRISTATUS, Koch.

### GOLDEN-CRESTED WREN.

Exquisite alike in form and plumage, the diminutive little gold-crest is resident with us throughout the year, and braves our sharpest winters, and in summer nesting in our gardens and plantations, is probably far more plentiful and more generally distributed than formerly,

owing to the system, of late years extensively adopted, of planting larch, spruce, and other firs, which form their usual resort. Scarcely less beautiful also than its tiny architects is the marvellously constructed nest of this species, so ingeniously suspended for the most part from the under side of a fir-branch, with the smaller twigs and foliage overhanging and protecting the entrance, the whole presenting a little ball of moss, lined with the softest feathers. That these little fairylike creatures risk the perils of a sea-voyage in autumn, and leaving more northern countries, swell the numbers of our usual residents, has been ascertained of late years beyond a doubt, from their frequent appearance on the coast at such seasons in an exhausted state, and the fact of specimens being picked up dead at the foot of our lighthouses, having flown, with other nocturnal migrants, against the windows at night, dazzled and attracted by the glare of the lamps. I have also recently met with a communication by Mr. Blyth to the "Field Naturalist" for 1833\* (p. 467), containing a record of the Golden-crested Wren, having been actually observed at sea on its southward migration. observer, in this instance, was returning from Aberdeen, on board a trading smack, and states that, "When off Whitby, about fourteen miles from land, on the 7th of October, a flock of gold-crests settled on the ship's tackle; the little creatures, being much exhausted, suffered themselves to be taken with the hand; as did also a solitary chiffchaff, which, together with nine gold-crests, it was attempted to bring alive to London; but they all died on the passage." Chaffinches (females), song-thrushes, fieldfares, starlings, tree-pipits, treesparrows, a nightjar, and a woodcock, are also men-

<sup>\*</sup> I have before had occasion to allude to this most interesting paper in my remarks on the Redbreast, at p. 93 of the present work.

tioned, as either alighting upon or attending the vessel during the same voyage. Perhaps, the most striking instance, however, of the migration of the gold-crest, in large numbers, to our eastern coast, was witnessed by Captain Longe, of Great Yarmouth, on the morning of the 2nd of November, 1862. In a letter to myself at the time, he says, "As I was walking to Hemsby, about 7.30, when it was just daylight, about half-a-mile out of Yarmouth, on the Caister road, my attention was attracted to a small bush overhanging the marsh dyke, which borders the pathway, by the continuous twittering of a small bird. On looking closely, I found the bush, small as it was, literally covered with golden-crested wrens. There was hardly an inch of twig that had not a bird on it, and even from my rough attempt at calculation at the time, I feel sure there were at least between two and three hundred. Most of them were either females or young birds, having a lemon-coloured crest, they were perfectly tame, and although I sat down on the other side of the ditch, within six feet, and watched them for some time, they did not attempt to fly away; but one or more would occasionally rise off its perch, and hover like a butterfly, and settle again in some other position. I went the next morning to look for them, but they were all gone. The wind had been easterly, with much fog." I have lately seen the spot where this flight had settled themselves before proceeding inland, and found it close to the sandhills which run parallel to the coast, and not more than two or three hundred yards from the sea beach. The same thing had been observed many years before in more northern counties, by Mr. Selby, who writes:-"On the 24th and 25th of October, 1822, after a severe gale, with thick fog, from the north-east (but veering towards its conclusion to the east and south of east), thousands of these birds were seen to arrive upon the sea shore and

sand banks of the Northumbrian coast, many of them so fatigued by the length of their flight, or perhaps by the unfavourable shift of the wind, as to be unable to rise again from the ground; and great numbers were in consequence caught or destroyed. The flight must have been immense in number, as its extent was traced through the whole length of the coasts of Northumberland and Durham. There appears little doubt of this having been a migration from the more northern provinces of Europe (probably furnished by the pine forests of Norway, Sweden, &c.), from the circumstance of its arrival being simultaneous with that of great flights of the woodcock, fieldfare, and redwing." The occurrence of large flights in a similar manner on the Caithness and Yorkshire coasts, in October, 1863, during severe gales from the south-east,\* are also recorded in the "Zoologist" for the following year (pp. 8879, 8950). From the above and many other equally trust-worthy instances of actual migration, the sudden appearance amongst us of this species in autumn, in unusual numbers, is fully accounted for, but when either handling a specimen of this most elegant and fragile species, or watching a small family group desporting themselves amongst the foliage of the ornamental firs in our gardens and shrubberies, one is lost in astonishment that this feathered mite should be capable, not only of a sustained flight, but of encountering the vicissitudes of such a journey, at a season when the weather

<sup>\*</sup> The apparent anomaly of migrants from more northern countries appearing during gales from the south, or south-west, is accounted for by the violence of the head-wind which prevents the birds from continuing their journey, and thus large flocks that would otherwise have passed on unobserved, are suddenly found on our coast in an exhausted state. This fact is particularly referred to by Messrs. A. and E. Newton, in their "Observations on the Birds of St. Croix."—"Ibis," 1859, p. 255.

is proverbially unsettled, and the "stormy winds do blow." Mr. Gould, in his new and splendid work on "The Birds of Great Britain," referring to the undoubtedly migratory habits of this species, observes, "It would be highly interesting to ascertain whether these migrants return again in the spring to the countries whence they came, like the redwing and fieldfare; or whether these vast accessions are due to some extraneous cause, such as an unusual severity in the season prompting them to seek a more genial climate, or an undue increase in the number of individuals, rendering the removal of a portion of them necessary for the general welfare."

# REGULUS IGNICAPILLUS (Brehm).

## FIRE-CRESTED REGULUS.

I know of but two recorded instances in which examples of this rare species have been actually obtained in this county. The first was the one referred to by Yarrell as "caught on the rigging of a ship five miles off the coast of Norfolk, in the early part of October, 1836;" the second was procured at Yarmouth, in November, 1843. Of the latter Mr. W. R. Fisher remarks, in the "Zoologist," p. 451, "It was taken, I believe, among some gold-crests, which appear annually about that time in considerable numbers. The dark bands on the cheek, and the white line over the eye, are in this bird very conspicuous, but the colour of the crest is much less vivid than in many of the gold-crests, whence I conclude that it was a young male." I must not, however, omit to mention that Mr. Hewitson (Eggs of Brit. Birds, 3rd ed.) has published the following statement with reference to the fire-crest in this county:-"The Rev. E. H. Browne has watched this species during the summer, near his residence, at Blo' Norton, in Norfolk, and has no doubt it breeds there." It is, of course, quite possible that such may have been the case, but it is, also, far more probable that in this, as in many instances that have come under my own observation, the rich colour on the heads of adult male gold-crests may have caused them to be mistaken for the rarer species; an error which the name of fire-crest tends much to perpetuate, since the tints of the crest in this bird (as seen by Mr. Fisher's remarks) form by no means its only or most decided distinction. Mr. Gould, in describing the chief characteristics of the two species, says-"The fire-crest is larger than the gold-crest, has the centre of the crown orange red, the forehead crossed by a band of buff, terminating in a distinct stripe of white, which surmounts the eye and extends far towards the occiput, while the lores and the ear coverts are blackish brown, and the sides of the neck and upper surface sulphur green, none of which features are found in the common species." The note of this bird has been also described as "shorter, not so shrill, and pitched in a different key to that of the common species."

## PARUS MAJOR, Linnæus.

## GREAT TITMOUSE.

Always active and sprightly our various species of titmice, though with no real song, have nevertheless many powers of attraction, and their varied and occasionally harsh notes are welcomed at a time when few resident species remain in the vicinity of our homes. Omnivorous almost in diet, sharp and fearless by nature, and in action almost realizing

the theory of perpetual motion, this engaging race has always won the attention of observing naturalists, and from its unwearied researches after insect life, deserves at our hands every possible protection and encouragement. The Great Titmouse is common throughout the year, frequenting woods and plantations as well as gardens in the close vicinity of our towns, but the latter more particularly in the winter season. Occasionally, also, this species has been met with during the autumn months under circumstances suggesting the probability of their numbers being increased at that season, and an apparently (return) migratory movement was observed at Yarmouth in February, 1848, as recorded by Messrs. Gurney and Fisher in the "Zoologist" for that year. This bird, like the little bluecap, is often strangely eccentric in the choice of a nesting place, though commonly selecting some suitable aperture in either walls or trees, and is particularly partial to a decayed stump. A nest, which I took myself on the 11th May, 1863, in a plantation at Keswick, was built at the bottom of an old tree stump, having a small hole in its upper surface, through which the wet had penetrated, forming the only entrance to the bird's dwelling. Having enlarged the opening, I caught the hen bird and let her fly, and then found nine eggs lying on the rotten wood which filled the bottom of the trunk, but not in the nest, although close beside it. The nest was formed of moss outside, lined with hair, wool, and a few feathers and shreds of gay-coloured threads, as if from carpets or red woollen cloth. Both Montagu and Hewitson have recorded instances of the eggs of this species, in similar localities, being laid on the rotten wood alone, without any nest; but in this case I took the bird off the nest, and from the eggs being perfectly uninjured and placed in a regular manner, I do not think they had been turned out by the titmouse, in her alarm at my unwelcome intrusion. In the spring of 1853, a pair of these birds built their nest in a wooden pump (not an uncommon occurrence with the tit tribe), near Norwich, a detailed account of which will be found in the "Zoologist" for that year, p. 4015. The birds, who gained an entrance to the interior through the slit made for the handle to work in, passed in and out repeatedly, regardless of observers or the passing up and down of the rod at every stroke of the pump, which was in constant use; and eventually hatched twelve young ones in this strange situation. The most extraordinary nest however, of this species, that I ever saw or read of, was discovered in a plantation at Earlham in the summer of 1859. This natural curiosity, which is carefully preserved in the collection of Mr. John Gurney, of Earlham Hall, was discovered in a rough corner cupboard, fixed at one end of an old shepherd's house, erected in a plantation for the use of the gamekeeper. In the centre of the cupboard was a single shelf, and the door being kept shut, the pair of titmice could only obtain access through a small hole in the woodwork above. Through this opening, however, the enormous amount of materials found must have been introduced bit by bit, until the entire space between the shelf and the top of the cupboard, leaving only just room enough for the hen bird to sit, was filled with a compact mass of twigs, moss, bents, feathers, rabbits' down, horse hair, wool, and even flowering grasses. Moss formed, of course, the chief substance employed, yet so wonderfully had the whole fabric been woven together, that when taken from the shelf upon which it was erected, it retained the exact shape of the three-cornered cupboard, the sides being as firm and neat as a well kept grass edging levelled with a The following dimensions of this remarkable structure will best give an idea of the skill and labour,

thus strangely devoted to it by its untiring architects:—Length in front, 15 inches; height, 9 inches; depth from front to back, measured to the angle of the cupboard, 10 inches. In the centre of the upper part was a slight depression in which the eggs were laid, and here, in spite of frequent intrusions, from curious visitors, the hen bird being even handled on her nest, these little creatures reared five young ones, and carried them off in safety. A similar nest, commenced in the previous spring, was unfortunately destroyed, but since the successful completion of the one above-mentioned, no further attempt has been made to repeat so formidable a task.

## PARUS CÆRULEUS, Linnæus.

#### BLUE TITMOUSE.\*

Who does not love that pert little bluecap; whose cheery notes are heard from the branches overhead, where, without troubling oneself to look up, we know by the very cadence, that he is jerking himself as usual from twig to twig, now under, now over, head up or head down, the same to him, though all the while his sharp eye

<sup>\*</sup> The provincial name of Pickcheese is here generally applied to the blue titmouse, although Forby, in his "Vocabulary of East Anglia," remarks—"Perhaps the word includes most of the Linnean genus Parus, or all its species; yet it does not appear that any of these pretty little ever busy birds are justly chargeable with attacking our cheeses. If they get into dairies or cheese chambers at all, it must be in pursuit of the insects which breed there, insects being their proper food." Mr. Alfred Newton suggests to me that the name is possibly derived from one of the common callnotes of the bird; but with reference to the great titmouse, Mr. St. John states (Nat. Hist. of Moray, p. 17), that he has known that species repeatedly caught in mouse-traps, baited with toasted cheese.

and little stout beak are searching every cranny for insect food? Clinging to the walls in our gardens he digs out the larvæ from their holes and corners, and when he does scatter the blossoms from the fruit trees a still greater evil has been lurking at the base of the bud. Surely, then none, but the surliest old gardener, would grudge him a taste of the fruit or other dainties he has so well helped to preserve, or look otherwise than leniently on such peccadilloes, and even the most obstinate of that opinionated race need but dissect the next victim of his folly to know that he has killed a friend.\* In winter, when his more natural food runs scarce, hardly anything comes amiss, and many a time has he afforded me a fund of amusement, when picking a bone, specially fixed to a stake in the garden for his and my gratification. How he raises his little crest, and flutters his wings, when he first discovers the tempting feast, now hovering around or clinging to the sides, as some scrap of meat comes handy to his bill, or perched for an instant on the broken shank, he makes one laugh outright at his comical expression, as with head on one side, he seems to speculate on the chances of reaching the marrow still remaining in the shaft. In one very severe winter, when many of our resident birds were completely starved, I remember seeing a pair of blue tits following a cart-load of turnips along the road, settling upon and

<sup>\*</sup> Macgillivray, on the authority of that most patient and accurate observer, Mr. Weir, shows that a pair which were closely watched from half-past three o'clock of a July morning, till half-past eight in the evening, fed their young for nearly 17 hours incessantly, returning to the nest with food 475 times; and at certain periods during the day they fed them from 20 to 46 times in an hour. "They appeared to feed them solely on caterpillars; sometimes they brought in a single large one; and at other times two or three small ones. It is therefore impossible to say how many had been carried in by them during the day."

pecking at the roots, for the purpose, no doubt, of extracting maggets from the wart-like excrescences on their surface. It has been remarked also by Messrs. Sheppard and Whitear, that this species in winter frequent, for the same purpose, the sheds in which turnips are kept, and where they are sliced up for the use of the cattle. Thus resident throughout the year, the blue titmouse nests with us in all the quaint situations characteristic of its race, creeping mouselike into the most absurdly small fissures in walls or trees, where its numerous brood is reared with untiring labour, and defended with a spirit which seems perfectly unawed by disparity of size in its enemies. A pair that I watched as a schoolboy with much interest, for two or three seasons, frequented my father's garden in Surrey Street, and nested in a small hole in an old wall where the mortar had crumbled away from the stonework, the aperture running backwards and downwards for several Into this little opening the old birds brought the materials for nesting, consisting of minute twigs as well as the softer lining, and when a larger piece of wool than usual refused to be dragged or pushed into the nest-hole, these tiny creatures would fly off with it to a neighbouring apple tree, and there trim its dimensions to a more convenient size. Here, in this snug retreat, safe from cats or any other marauders, their little families were brought up during two seasons, and loud was the hiss that assailed any intrusive finger. The young once hatched, the old birds were incessant in their search for food, and once every minute, as I found by my watch, one or other returned to their clamorous young. The hole being at least ten feet from the ground, and no tree near within four or five yards, I was particularly anxious to see how the little fledgelings would leave their home; but this I could never succeed in doing, though I found them sitting on neighbouring trees

evidently soon after this difficulty had been accomplished. In the third year, after I had been some time aware that the young were hatched, I one morning found the old pair feeding a youngster, quite unable to fly, on the open grass-plot, and thinking he had somehow tumbled out of the nursery I replaced him for fear of the cats. Next day, however, both old and young were gone, and on afterwards dragging out the contents of the nest-hole, I found three young half-fledged nestlings quite dead, which had evidently been so for some time, and probably from these becoming offensive, the parents had somehow carried off the survivor who was quite incapable of assisting himself; yet, how this was accomplished remains to this day a mystery to me. From that time the hole was deserted, this little catastrophe having doubtless given them a distaste for their old haunt.

The following facts as to a most singular nesting place of this species I can vouch for from personal observation:-In the spring of 1857, a pair of bluetits built their nest in the interior of a door-post, forming part of the back entrance to a house, a short distance from Norwich. On the inner side of the door-post was the usual brass plate, with three square openings for the lock, sneck, and bolt to shoot backwards and forwards in. Through the largest of these, the woodwork being rotted away, the birds obtained access to their strange nesting place. The materials were carried in bit by bit, regardless of the constant passing to and fro of the servants, and their presence was intimated by a loud hiss whenever a finger or stick was intruded into their domicile. most singular thing, however, was the fact that the door, though open during the day, was always locked at night, thus shutting in these little tenants without a chance of escape until morning, the lock

itself filling up the only possible exit. The nest appeared to be placed about six inches below the entrance to it, but how supported could not be seen, and in this place, in spite of every drawback, these little creatures managed to hatch and bring off their young ones in perfect safety. A white variety of this species was observed, with others of the usual colour, at Northrepps, in January, 1848, an unusual occurrence with these birds, which rarely vary in plumage.

# PARUS ATER, Linnæus.

#### COAL TITMOUSE.

This prettily marked species is commonly met with throughout the year, though not so generally distributed as the little blue-cap. In the fir-plantations it associates at all seasons with the little gold-crests, and in spring is found as frequently in the beech and oak woods in company with the willow-wrens. It frequents also our gardens and shrubberies even in close vicinity to the city, and occasionally, as Macgillivray observes, betakes itself to the thickets of broom and gorse. The Coal Tit mostly breeds in the holes of trees, but not far from the ground: and Mr. Newton tells me that at Elveden he has found them prefer a subterranean nursery, the nest being placed a foot below the ground, amongst the roots of an old stump cut level with the earth. Mr. Hewitson also quotes a remark of the late Mr. Salmon, that it has a "great partiality for rabbits' fur, with which it always lines its nest when in the neighbourhood of a warren, and even when at a distance from one." Mr. Blyth, in a most valuable paper "On the British Tits" (Field Naturalist, vol. i., p. 262), alludes to the habit in both the coal and marsh tits (as observed in confinement) of hiding a portion of their food, and again returning to their hoard when hungry; an action not noticed under similar circumstances in the great or blue tits. He also acquits the first two species of those carnivorous or rather predaceous habits, particularly exhibited by the great tit. It would be useless to attempt to render in my present space, even were it practicable, the various notes of our British species; alike in character, yet so strangely diversified, and in the great tit especially, so imitative of others. The most usual cry, however, of the coal tit, resembles if-hee, if-hee, if-hee, repeated sharply and quickly; of the great tit, pincher, pincher, pincher, often changing into the vink, vink of the chaffinch; and the marsh tit's has been given as like tis-yipp, tis-yipp, with an occasional chicka, chicka-chee. The blue-cap's notes, by no means easy of imitation, are happily too well known to necessitate any description of them.

# PARUS PALUSTRIS, Linnæus.

### MARSH TITMOUSE.

The Marsh Tit, like the preceding species, is also resident throughout the year, but is by no means confined to such localities as its name implies. Though commonly met with by rivers and streams and in other low and damp situations, it is also found in our firplantations and in gardens and orchards far from any water, where, in autumn, they feed on the seeds of various berries, being particularly partial to those of the snowberry shrub (Symphoria racemosa). Before I discovered the actual depredators I had often observed that the berries on these shrubs in my garden disappeared very rapidly, and, moreover, that the berries

themselves were strewed about under the neighbouring trees. I was quite at a loss to account for this, until one morning I observed a marsh titmouse flying across the grass-plot with a white ball, almost as big as his head, on the point of his bill. He looked so oddly at the moment I could scarcely at first sight determine either the bird or its burthen, but as soon as he alighted on an opposite tree he gave a little wrench with his beak, and dropping the husk at the same time, flew off direct to the snowberry bush. The whole thing was now explained, and as I watched, another titmouse joined the first, and these continued as long as I had time to wait carrying off the berries on the ends of their bills to the same tree opposite, were they opened and dropped the husks, then back again for more. On picking up these husks afterwards, I found each of them split open down the side, and minus the two little kidney-shaped seeds that grow in either half of the white fruit. I have often observed the coal, marsh, and blue tits at the same time on some small firs in my garden, though scarcely more than half a mile from the city, but the great titmouse less frequently and for the most part in winter. Mr. Gurney has known the nest of this bird to be placed in a rat's hole, burrowed down into a closely mown lawn. In the "Zoologist" for 1847, Messrs. Gurney and Fisher refer to the great abundance of this species in Norfolk, apparently occasioned by migratory arrivals, whose departure was again noticed in the following March.

## PARUS CAUDATUS, Linnæus.

### LONG-TAILED TITMOUSE.

Though so small and delicate in appearance, this beautiful and interesting species remains with us

throughout the year, and even in the hardest winters finds subsistence upon minute seeds or the insect atoms, which, with ceaseless energy, it extracts from the crevices in the bark of trees. How often I have watched them, when covert-shooting in autumn, come streaming along in advance of the beaters, as the game was being driven towards the end of the wood. More curious apparently about the cause of disturbance than alarmed by the guns, they keep up a constant twittering; now passing from tree to tree in one undulating line, their small bunchy figures and long tails looking like so many little arrows going the backwards way, now settling for an instant amongst the "high fell" till the tapping of sticks and the shouts of the men start them again on the wing. Marvellous also is that structure of moss, lichens, and feathers—a perfect triumph of skill and industry-which we find built into our fences and bushes, as well as on the branches of trees, and so securely placed, as Mr. Yarrell remarks, that it is necessary to cut out the portion of the bush containing it to preserve the appearance and form of the nest. I have seen them built into gooseberry and currantbushes, with sprigs passing through and supporting them, exactly in the same manner as the reed-warblers' nests described in my notice of that species. Frequently as I have examined these "feather-pokes," as they are aptly termed (one only having been known to contain 2,379 feathers of various kinds\*), I have never observed the second aperture described by some authors; and impossible as it may appear for the old birds and some twelve or fourteen young ones to find room to move in their soft retreat, every youngster in turn

<sup>\*</sup> Morris's "British Birds," vol. i., p. 278.

receives its food from the parent's beak, fully realising those charming lines, by Grahame—

"But now behold the greatest of this train Of miracles, stupendously minute; The numerous progeny, claimant for food Supplied by two small bills, and feeble wings Of narrow range; supplied—ay, duly fed— Fed in the dark, and yet not one forgot!"

## CALAMOPHILUS BIARMICUS (Linnæus).

#### BEARDED TITMOUSE.

This elegant and very remarkable bird, the only known species of the genus Calamophilus, remains with us throughout the year, but is confined almost entirely to the district of the broads where the swampy nature of the soil and extensive reed beds afford them food and shelter. A long and intimate acquaintance with this species in our eastern fens, enables me to add but little to the admirable description of its habits by the late Mr. Hoy (Mag. Nat. Hist., vol. iii., p. 328), as quoted by Yarrell, Gould, and other authors, but I cannot agree with Mr. Hoy in considering "the end of April" as the usual time for these birds to commence building. I have frequently known their nests completed, and the full complement of eggs laid, by the 7th and 8th of April, and others hard set upon by the 17th, which would carry back the commencement of the nests to about the last week in March. I think, therefore, that the beginning of April may be fairly considered the average time, as the instances I have given were in no way referable to any particular mildness in the season, but occurred even when snow and frost prevailed later than usual. The nests are generally placed amongst the reed stems, close to the water's edge, supported on the loose herbage that

forms the foundation of the reed beds, but never in any way suspended. The materials consist of the dead leaves of the sedge and reed loosely interwoven on the outside, whilst the feathery top of the reed forms the only lining. As soon as the breeding season is over, these birds collect together in flocks, and perform short migratory trips from one broad to another in search of food, sometimes in sharp weather as many as forty and fifty together, and I am assured by the broad-men that even larger flights are occasionally seen. In the Cley and Blakeney marshes, near the sea coast, the Rev. E. W. Dowell has observed this species in small numbers on two occasions, but only in the months of October and November; and as these were not seen throughout the winter, and I am not aware that their nests have been found in that neighbourhood, I should consider them as merely roving flocks, attracted by the reeds on the tidal marshes. When shooting at Surlingham in the winter months, I have more than once observed the arrival of a flock from some neighbouring broad, their presence overhead being indicated by the clear ringing sound of their silvery notes, uttered preparatory to their pitching into the nearest reed bed, and in autumn, after roosting in small parties on the reeds, they will fly up simultaneously soon after sunrise, swarming for awhile like a flock of bees; and uttering in full chorus their pretty song, disperse themselves over the reed beds for their morning's meal. Delicate as these little creatures appear, I have found them during the sharpest frosts, when the snipe had left the half frozen waters for upland springs and drains, still busy amongst the reed stems as lively and musical as ever. It is greatly to be regretted that the demand for specimens from their handsome plumage should lead to the wholesale slaughter of the Bearded Tits throughout the winter; added to which,

the price of late years offered for their eggs, has caused a sensible diminution in their numbers. After the mild winter of 1862-3, these birds were more than usually plentiful at Hickling in the following spring, and from this locality alone about five dozen eggs were procured by one individual, nominally a collector, but in reality a dealer, who thus for the sake of a few shillings would go far towards exterminating this beautiful species (many old birds being also killed at the time), whose numbers we have no reason to suppose are replenished by continental migrants. Already in one or two districts, where only a few years back they were very plentiful, scarcely a pair or two to my knowledge can now be found in the breeding season. Happily our more common and useful species are, by recent legislation, protected in some degree from wholesale and indiscriminate slaughter; can no law\* be made applicable to the preservation of other indigenous and ornamental races, whose extinction would be a continual source of regret to every lover of nature? From enquiries made amongst the older broad-men in different localities, I find no reason to believe that these birds, as has been occasionally remarked, were not known in this county till of late years, and in Sir Wm. Hooker's MS., the entries in which were made some fifty or sixty years ago, I find the following note:-"This beautiful bird is by no means unfrequent in the

<sup>\*</sup> So particular was the old Mosaic law upon this very point, that we find its injunctions coupled even with promises of reward for obedience, as in the following passage from Deutronomy, chap. xxii., v. 6 and 7:—"If a bird's nest chance to be before thee in the way in any tree, or on the ground, whether they be young ones, or eggs, and the dam sitting upon the young, or upon the eggs, thou shalt not take the dam with the young: But thou shalt in any wise let the dam go, and take the young to thee; that it may be well with thee, and that thou mayest prolong thy days."

reedy parts of Surlingham broad, and remains there throughout the year." The provincial name of "Reed Pheasant" is here applied to this species, from its miniature resemblance to the nobler "longtails."

Having adopted the classification of Yarrell in this work, I have, according to his arrangement, and indeed that of foreign as well as British ornithologists generally (with the exception of Macgillivray), retained this bird amongst, or rather appended to, the Parinæ or titmice. I cannot help feeling, however, that Macgillivray, guided by an examination of its that Macgillivray, guided by an examination of its digestive organs, was right in considering it more allied to the Fringilline than the Parine group, and especially to the black-headed bunting (Emberiza especially to the black-headed bunting (Emberiza schæniclus), its constant companion in the fenny districts. In its active and pendulous actions, and perhaps, also, in its gregarious habits in winter, it seems alone referable to the tit tribe, resembling more particularly the long-tailed tit, yet even this species has been long removed by naturalists from the true Parinæ, and placed in a separate genus. In internal structure and the character of its food its affinity to the tits, as shown by Macgillivray, is very remote. It has not, he says, "the bristle-tipped tongue of a tit, and its œsophagus is dilated towards the right side, as in all the birds which I have referred to the order of Huskers. During the autumn and winter they order of Huskers. During the autumn and winter they live chiefly on the seeds of the reeds, which they pick from the husks; but they also, as is related by Mr. Dykes, feed upon Succinia amphibia and Pupa muscorum, he having found the crop of one, which was not larger than a hazel nut, containing twenty of the former, and some of them of a good size, together with four of the latter. Now none of the *Parinæ*, nor indeed any bird of the whole order of Cantatores, has a crop, which on the other hand occurs in a greater or less degree of

development in all the *Deglubitores*." Mr. R. F. Tomes, in a most interesting paper on "The internal structure of the Bearded Titmouse" (Ibis, 1860, p. 317), fully coincides in the above views of the learned professor, and supports them also by osteological evidences from the dissection of specimens which I had the pleasure of forwarding from this county, at the request of Dr. Sclater.

# BOMBYCILLA GARRULUS, (Linnæus).

#### WAXWING.

Of all our occasional winter visitants there are none so eccentric in their movements as the Waxwings. Sometimes appearing during two or three successive seasons in more or less numbers; at other times entirely absent from our shores for as long if not a longer period; in one winter noticed only as the rarest stragglers, in another creating a perfect sensation by their numbers, and though usually appearing in sharp winters, yet often absent when most looked for, and present again when least expected. These beautiful and erratic wanderers are thus no less uncertain in their migratory impulses than in the choice of breeding sites in those northern regions where, of late years, ornithologists have traced them to their homes. Sir Thomas Browne does not appear to have noticed this species, and the earliest record therefore of its appearance in Norfolk and Suffolk, is contained in the "Catalogue" of Messrs. Sheppard and Whitear, who speak of it as an occasional visitant, which "has not unfrequently made its appearance in these counties, and generally from November to March." They also allude to its abundance at Herringfleet, in 1810, and to a "prodigious flock" observed at

Bawdsey, in Suffolk, some years prior to the date of their publication (1825). In 1829, according to the Messrs. Paget, of Yarmouth, they were very plentiful in that neighbourhood, and several were obtained in the winters of 1847 and 1848, in the latter year more especially, but in the following winter of 1849-50, perhaps the largest number ever known in this country were observed along the entire eastern coast of England and many parts of Scotland. Upwards of thirty successive notices, from various places, of specimens obtained, appeared at that time in the "Zoologist," and though even these conveyed but a very small idea of the numbers that actually visited us, they amounted to five hundred and eighty-six birds killed. A very large proportion of these were procured in the month of January, when in Norfolk alone twenty-two specimens were obtained and sent into Norwich for preservation. In a summary of the notes supplied to his journal, on this most interesting subject, Mr. Newman, in his preface to the "Zoologist" for 1850, describes the direction taken by these flights as from "east to west, appearing simultaneously along a great tract of the Eastern Counties, and proceeding directly inland;" he also adds that, "during January, March, and April, the thermometer was unusually low, the wind boisterous, and chiefly from the north and east." During the winters of 1851, 52, and 53, only a few stragglers appeared in any one year, and singularly enough in 1854-55, when the severity of the weather brought over an unusual number of rare winter visitants, not a single waxwing appeared amongst them. Again, from 1856 to 1862, I am aware of only a chance bird or two having been observed in this county, in spite of the intense cold experienced during that period in two successive winters; and their latest arrival in any quantity occurred in Nov., 1863, when some fourteen or fifteen specimens were

killed in different parts of the county, and many others appeared simultaneously (between the 10th and 25th) in more northern counties, as well as in Scotland. (See Zoologist, 1864, p. 8880). The very unusual occurrence of a pair at Cringleford, near Norwich, in 1851, as late as the 20th of April, was recorded by Mr. Gurney at the time in the above named journal; and in 1853 I saw a single specimen, which was killed near North Walsham during the first week in May.

Amongst the valuable ornithological contributions to the Norwich museum by the late lamented John Wolley, there is none more interesting in itself, or more peculiarly associated with the name of that liberal donor, than the nest, nestling, and egg of the waxwing, together with a pair of old birds in their breeding plumage. the untiring researches of that talented naturalist is due the discovery of the nidification of this hitherto mysterious visitant to our shores, sought for in vain for many years throughout the northern regions of America, Europe, and Asia, until both nests, eggs, and young were procured by Mr. Wolley, in Finnish Lapland, in the summer of 1856. A full account of this, his greatest oological discovery, from his own pen, was read to the Zoological Society at their meeting on the 24th March, 1857, and will be found in the "Proceedings" for that year,\* (p. 55). At this meeting a pair of adult waxwings killed from their nest, a young bird, two nests, and several eggs were exhibited by Mr. Edward Newton, and a complete series of these specimens is now in our Norwich collection. It had long been supposed that the waxwing, in its immature plumage, would be found wanting in those wax-like tips to the wing feathers,

<sup>\*</sup> This communication was also reprinted almost entirely in the "Annals and Magazine of Natural History," 2nd ser., vol. xx., p. 308, and in the "Zoologist," p. 5754.

which form so marked a feature in the adult bird, but this theory was completely upset by the appearance of the nestling above-mentioned, in reference to which Mr. Wolley remarks:-"A young bird, caught on the 5th of August, as it fluttered from the nest, had a general resemblance to the adult, though all the colours were more dull. The wax-like ends to the wing feathers, the yellow tip to the tail, the black patch between the eye and the beak, are all there, whilst the rich mahogany of the under tail coverts is of a quieter brown; the blooming vinous colour of the head and back has not vet emerged from a homely neutral, and the crest is but just indicated by the longish feathers of the crown. The most marked difference between the adult and young is in the throat and under surface generally. There is at present scarcely a trace of the deep black patch of the chin, and the delicate tint of the general under surface of the adult is replaced by mottled, neutral, and white. This, upon examination, is found to owe its appearance to those longer webs which, arriving towards the root of each feather, extend as far outwards as the webs which arise nearer its tip, being very pale or white, and thus relieving, on both sides, the last-mentioned darker webs." In the 3rd volume of the "Ibis" (1861, p. 92) will be found a more detailed account of this most interesting discovery, chiefly compiled from Mr. Wolley's notes and letters, by his old friend and fellow-traveller, Mr. Alfred Newton, to whom, at his death in November, 1859, Mr. Wolley bequeathed his magnificent oological collection, comprising, amongst other rarities, a series of some hundreds of waxwings' eggs. From these statements it appears that nests were discovered at Sardio, on the Kittila river, early in June, 1856, by some intelligent lads, employed by Mr. Wolley to collect for him, and the description of his delight, in realizing at last his great ambition, and actually beholding

these long-sought treasures, will find an echo in the heart of every ardent naturalist. Some twenty-nine eggs were taken in the first season; but it was not till the following summer (1857) that Mr. Wolley succeeded in finding a nest himself "close to the house at Sardio," on the 16th of June, but which had been "deserted a day or two before, and from which something had thrown the eggs, one after another, upon the ground as they were laid; of course broken to bits." The waxwings being much more scarce in Lapland during that year, only eight more eggs were brought in by the natives; but in the summer of 1858, when Mr. Wolley was himself absent in Iceland, these birds, considered "the forerunners of famine" in those districts, appear to have been as plentiful in their newly discovered breeding sites as occasionally in winter on our own coasts. Mr. Newton remarks—"Not far from one hundred and fifty nests were found by persons in his (Mr. Wolley's) employment in Lapland, and some of them close to Muoniovara. It seems, as nearly as I have been able to ascertain, that no less than six hundred and sixty-six eggs were collected, and more than twenty others were obtained by Herr Keitel, of Berlin, who happened, without, I believe, any expectation of the luck that was in store for him, to be that year on the Muonio river." A perfectly independent discovery of a waxwing's nest was also made in this year by Mr. H. E. Dresser, on the island of Sandön, off the harbour of Uleaborg. where he succeeded in capturing two out of five young ones, and securing also the old birds and one egg. In this nest were the remains of some dried cranberries. In 1859 the birds were again scarce, and not more than forty-six eggs were obtained by Mr. Wolley's collectors; and in 1860 about fifty-two were procured through the same agents. Mr. Newton describes the various nests "as built mostly in Spruce and Scotch fir trees (Pinus

abies and P. sylvestris), chiefly, I think, the former. The usual complement of eggs is certainly five, but six not uncommonly, and seven and four occasionally were The second week in June seems to be the general time for the birds to have eggs; but there are some which must have been laid in the last days of May, and others (perhaps second broods) a month later." As some proof of the interest attaching to this great oological fact, and the desire of collectors to secure specimens for their cabinets, I may add that on the sale of a portion of Mr. Wolley's duplicates, in London, by Mr. J. C. Stevens (May 30th and 31st, 1860), nine waxwings' eggs averaged £3 3s. each. As a cage bird, from its handsome form and gentle though sprightly nature, the waxwing is a particularly engaging pet, but somewhat difficult to keep in a healthy condition from its voracious and almost omnivorous appetite. In November, 1859, I purchased a pair from Jamrach, of London, which were moulting at the time, and were in anything but a promising state. With careful treatment, however, both as to cleanliness and diet, the male assumed his perfect plumage by the following January, and was then as handsome as any wild specimen I ever saw. The female, however, remained sickly, being too weak apparently to throw off her old feathers, and, though feeding heartily to the last, died a perfect skeleton on the 1st of March. I found bread and egg, with a little hemp seed, the best diet, with berries such as privet and ivy occasionally; and latterly I obtained some of the preserved cranberries, which at that time were much sold by the grocers. They also ate a good deal of old dried mortar, and swallowed a quantity of small stones, having, as I afterwards found, a true and very firm gizzard. Their note is a clear silvery whistle, more subdued in tone than might have been imagined from a bird of its size, and this when

uttered of an evening, with various modulations, after the lamp was lighted in the room where they were kept, was excessively sweet and pleasing. In their actions they somewhat reminded me of starlings, playfully snapping at one another with their beaks, as they sat side by side, and occasionally in the most affectionate manner taking food from one another's mouths. The male when thus excited with play was a very striking object, his whole figure full of life and vigour, being drawn up as if standing on tip-toe, with the crest elevated and curving forwards. At times he would amuse as well as exercise himself, by hopping sideways on his perch in a very droll manner, and when alarmed by a visitor, or listening to any strange sound, his expression of curiosity (the head and neck being stretched out to the fullest extent), mixed with a queer pert manner, was extremely comic. loss of his mate, however, seemed greatly to affect his spirits, and during my absence from home in the following May, he also died, to my great regret, but whether from pining, or from neglect on the part of my servants, I am unable to say.

# MOTACILLA YARRELLI, Gould.

### PIED WAGTAIL.

Resident with us throughout the year,—since, though the majority of our home-bred birds leave us for a time in mid-winter, a few are still met with during the most severe weather,—the Pied Wagtail, with its neat plumage and elegant form, is associated with the enjoyment of our out-door recreations at all seasons. Never far away from the vicinity of water, if only a pond or a little run by the roadside, we find it about our homes and in the open country. Running here and there on our lawns and

grass-plots, it darts right and left at the rising insects, or capturing on the wing some dainty morsel, its rapid flight is arrested by a graceful curve, as it alights again, with a short quick run and vibratory action of the tail. In the farm yard, we find it by the edge of the horse-pond, or amongst the cattle in the open sheds, daintily picking its way amongst the fodder, its long tail and delicate breast-feathers unsoiled, however dirty the locality it frequents. From thence, with a sharp cheeping note and undulating flight, it makes its way to the ridge of the barn, or runs along the parapet of the house, constantly in motion, yet always ready for the passing insect. Further afield we see it in the meadows and pastures, closely following the feeding cattle and fearlessly running about amongst their feet to seize upon the flies which these animals attract. If waiting for the train at any country station, the time seems shorter as we watch this wagtail, busy as ever amongst the rails and sleepers, or, disturbed from thence, settling amongst the martins on the telegraph wires, or chasing one of them in playful flight, with almost inconceivable swiftness. By the river side, or on the open broads, it is still with us, whether shooting, fishing, or sailing be the object of our trip, and even in the sharpest weather is found clinging to the reed stems, or carefully searching for some means of subsistence amongst the sedgy margins of the frozen stream. Once more, let us change the scene, and pay a visit to the sea coast. Here, on the grassy slopes facing the sea, the wagtail runs on before us in our walks, or flits over the edge of the cliffs to catch the flies upon the sandy beach. If the tide is in, we know at once where to find it. Look at those heaps of decomposing seaweed, high up under the sand hills, which have been raked together to be carted on to the land. How the sand-flies swarm about them as the hot

sun draws out their objectionable odours, yet here is the wagtail's feast, and its little friend the titlark comes in for a share. As the tide falls, however, and the rocks become bare, another field of research is opened to its view, and a fierce slaughter is commenced amongst the insect atoms that settle on those slippery weed-covered stones, now exposed for a time. From these it runs along the wet sands, following up the little waves, and even wading at times, but, as Macgillivray has most accurately noticed, so rapid are its actions, and so slight its frame, that it leaves no impress of its little feet, and the tail, though scarcely ever still, is carried too high to be draggled by the soil. Messrs. Gurney and Fisher, in the "Zoologist" for 1847, mention the arrival by a south wind in March of a "considerable number of pied wagtails, several of which were seen to alight in a field at Caister," and small flocks are invariably seen in the course of that month feeding on the newly ploughed lands, or chasing each other over the ridges. There is also no doubt that very considerable quantities appear regularly on our coasts in autumn, resting for a short time, and then proceeding on their southward journey. On the 16th of November, 1858, and on two subsequent occasions, whilst snipe-shooting at Surlingham, I found, towards the afternoon, large flights of pied wagtails dispersed all over the broad, many of them clinging to the reed stems, like the bearded tits, and smaller bodies were continually passing overhead or stopping to join their companions. From the locality in which I found them, and from the fact of their immediately preceding continuous and severe frosts, I have no doubt that these were migratory arrivals, about to rest for the night on their way inland, their numbers and extreme tameness reminding me of similar flights observed in the South of England, on their way northward, in the early spring. Whilst staying at Teignmouth,

in Devonshire, in 1859, a most undoubted arrival of migratory specimens appeared on the morning of the 20th of March. The grassy slopes in front of the sea were covered with them till late in the day, and so unusual was their appearance in such quantities that they attracted general attention; but on the next morning they had passed on, and only a pair or two as usual frequented the "Denes," nor did I subsequently observe any similar accession to the ordinary number of residents. I may remark also that these were all pied wagtails, not a single white wagtail (M. alba) appearing amongst them. It has been more than once questioned in the "Field" of late years, whether the pied wagtail ever perches on trees: that it does do so, occasionally, I can speak from my own observation, as well as on fences, walls, and railings, but when observed on the branches of trees or shrubs, it is generally at the close of the breeding season, when the old birds are accompanied by their young broods. I cannot ascertain that the continental white wagtail, the true M. alba of Linnæus, has ever occurred in Norfolk.

## MOTACILLA BOARULA, Latham.

### GREY WAGTAIL.

A regular spring and autumn migrant, though not in large numbers, appearing generally in March and October; but at neither season remaining long in this district, and but few specimens, at any time, are found in the hands of our bird-stuffers. A male in my collection, killed at Boyland on the 13th of March, 1863, has nearly completed its summer dress, and Mr. Spalding, of Westleton, has also a male, killed by himself at Ditchingham, some years ago, in the month of May,

which is in full breeding plumage, with a pure black patch on the throat. In this state, however, it is very rarely met with in Norfolk, and then only when detained on its way northwards by contrary winds in spring.

## MOTACILLA FLAVA, Linnæus.

#### GREY-HEADED WAGTAIL.

I am not aware that more than three examples of this rare species have been actually identified as killed in Norfolk. Of the first (No. 92) in our museum collection, the following account is given by Messrs. Gurney and Fisher:-"A male bird was killed at Sherringham\* about May, 1842; another wagtail was procured at the same time, which was probably the female; but as the person who shot them only preserved the brightercoloured specimen, the latter was unfortunately not identified." The next example, which occurred at Yarmouth about the 18th of April, 1851, was also a male, and came into the possession of Mr. John Smith, of that town, who recorded its capture in the "Zoologist," p. 3174; and a female in the collection of Mr. Alfred Master, of this city, was killed on the Heigham river, a few years back, very late in the spring. That this bird, though for the most part unrecognised, appears from time to time in this county amongst our yellow wagtails, is extremely probable, from the fact of its having been met with at Lowestoft (Suffolk) on more than one occasion, consorting with the more common species. The late Mr. Thurtell, a bird-preserver of that town, in a communication to Mr. Gurney, in 1854 (Zoologist,

<sup>\*</sup> This is the same bird mentioned by Mr. Lubbock in his "Fauna," as preserved in the Norwich museum.

p. 4440), remarks—"During the protracted dry weather from the beginning of last March to the end of April, we had the wind from the N.E., with light sunny days, and every day, for more than six weeks, there were to be seen some forty or fifty yellow wagtails running upon our Denes; and on the 24th of April I observed a grey-headed one amongst them. I fetched my gun and shot it. On the 25th I killed two more, and on the 26th I killed one. These four were all males, besides which I shot on the 26th two females." Mr. Newcome, of Feltwell, and Mr. J. H. Gurney, have each a pair of these birds in their collections. Another male was also obtained at the same place in June, 1849, as recorded in the above named journal, p. 2499, besides the one recorded by Yarrell and other authors, to have been killed by the late Mr. Hoy, on the 2nd of May, 1836, at Stoke Nayland, in the same county. It is further stated by Messrs. Gurney and Fisher, that "a nest, containing four eggs, was taken on a heath at Herringfleet, in Suffolk, on the 16th of June, 1842, which probably belonged to a bird of this species. The eggs closely resembled an egg of the grey-headed wagtail, which had been taken on the continent, and the situation of the nest, and the materials of which it was composed, also corresponded with the descriptions given of the nest of this bird."

# MOTACILLA RAYI, Bonaparte.

### YELLOW WAGTAIL.

A common summer visitant and breeds with us, appearing in March and leaving again in September. One can scarcely think of this beautiful bird without calling to mind the luxuriant herbage of our meadows

and grass-fields during the spring months. How brilliant are the colours of the male, in his nuptial dress, as he picks his way amongst a profusion of buttercups, assimilating so closely with his own tints, that his actions only betray his whereabouts. busy little flocks upon their first arrival, we find them on the Denes and grassy slopes by the sea-shore, graceful in every movement as they run or flit from one spot to another, enjoying alike the warmth of the sun and the myriads of insects which it calls into being. In autumn again, in little family groups, the young, in their more sombre tints, resembling the females, are learning for themselves the art of fly-catching, and, till instinct warns them of the coming winter, each day finds them busily employed amongst the cattle in our fields and pastures. Though not so constantly seen in the vicinity of water as some other species, this wagtail frequents the margins of rivers and streams, and the marshy grounds adjacent, as well as open downs and furzy commons, with arable land and sheep walks.

# ANTHUS ARBOREUS, Bechst.

## TREE PIPIT.

This species, at once distinguished from the meadow pipit by its short hind claw, is found pretty generally distributed in summer, arriving about the middle of April; and having nested here, leaves us again in the autumn. Amongst the many sweet sounds of the early summer, the notes of this bird may be heard from the trees in our hedgerows, most frequently from the upper branches of a lofty elm—as it sings with all the fervour of the nuptial season; and springing up into the air in its extacy, it trills forth its

lay on quivering wings, returning again and again to the same bough. The eggs of the tree pipit vary greatly both in colour and markings, some of their rich reddish tints being very beautiful.

# ANTHUS PRATENSIS (Linnœus).

#### MEADOW PIPIT.

The Meadow Pipit or Titlark is one of the most common of our resident species, and generally distributed throughout the county. On heaths and commons, by the banks of rivers, in meadows and marshes, on the grassy summits of our lefty cliffs, or the low marram hills upon the sandy beach, the cheeping note of this familiar bird meets us at every turn, and in more cultivated districts, it springs at our approach from the arable land, and, drifting like waste paper down the wind, is gone with a yhit, yhit, almost before we fairly see it. In summer it is nowhere more abundant than in the district of the broads, where it sings from the top of the small alder and sallow bushes, which are scattered in many places over the drier marshes, and cheeping as it ascends from a projecting spray, utters its simple but pleasing song, with quivering wings and outspread tail, as it slowly descends to its station again. I never remember to have found its nest in these localities, when carefully searching for the eggs of the sedge-warbler and the black-headed bunting, but it breeds close by on the grazing lands, near the marsh dykes that drain the soil; and here the cuckoo soon finds it out, and drops its egg, a very "apple of discord," amongst those of the unconscious titlark. I know few things more ridiculous than to watch the great baby cuckoo, helplessly flapping his

wings and opening his mouth, as he sits on a bush or railing, to receive unnumbered delicacies from the beak of its foster-parent. How bright and fresh is the plumage of these pipits in the early spring when, on a warm sunny day, we find them in company with the stonechat and whinchat, amongst the yellow gorse. Flitting from bush to bush, they rise and fall in the full tide of song, or chase each other in amorous flight; and sad, indeed, must be the heart that at such a time catches no inspiration from these sights and sounds. In winter both old and young congregate in flocks, and in sharp weather frequent the stack-yards with other birds; but, as a rule, are not generally found so close to our towns and cities as their rural companion the sky-lark. In autumn their numbers are increased by immense flocks from the north, which keep passing onwards to more southern counties, and many are picked up at the foot of our lighthouses, killed by concussion against the upper windows, as before described of other migratory species.

## ANTHUS RICARDI, Vieill.

### RICHARD'S PIPIT.

Three specimens only of this rare pipit are recorded to have been killed in Norfolk, of which two (Nos. 98 and 98.a) are in the museum collection.\* All three were procured on the Denes between Yarmouth and Caister, the first on the 22nd of November, 1841; the next in the following April; and the third example on the 24th of April, 1843. Of this last specimen Mr. Fisher observes

<sup>\*</sup> No. 98 is the one killed in April, 1842; and 98.a the specimen obtained on the 22nd of November, 1841. Whether the third example is still in existence I am unable to say.

in the "Zoologist," p. 181:-"It was shot by the same person who killed the last specimen, he having instantly recognized its loud note and peculiar manner of walking and feeding. These birds appear to vary considerably in size. Mr. Yarrell makes the length of the male bird six inches and three quarters. The specimen killed here last April was said to measure seven inches and a quarter, while this bird measured, before it was stuffed, seven inches and five-eighths in length, and twelve inches in the extent of its wings. The lower mandible of the beak, when I first saw it, had a purplish tint, which has since changed to a dull red. The second outside tail-feather on each side, described as being in part dull white, and having the brown colour on the inner web extending over a larger surface than in the outside feather, has also in this bird a black shaft, which, being surrounded with white, forms, when the tail is spread, a very conspicuous mark on each side. The base of the outer web of this feather is also black, and the edges of the quill feathers are light brown. I found it, upon dissection, to be a male. The gizzard was filled with several species of flies and gnats. amongst which I noticed the remains of the ladybird and of a species of ichneumon."

# ANTHUS OBSCURUS (Latham).

### ROCK-PIPIT.

This species, which, in most maritime counties of England seems almost to take the place of the meadow pipit in the vicinity of the sea-coast, is a rare bird in Norfolk; and though I believe a few appear regularly on their vernal and autumnal migrations, the specimens obtained are extremely scarce. This may probably in some degree

be owing to their specific distinctions being but little known, since, if shot, and mistaken for the common titlark, they would invariably be thrown away as of no value; but although I have myself sought for this bird in every likely locality and at the proper seasons, I have never met with it here, and indeed have seen but three specimens at any time in the hands of our birdstuffers. In the month of February, 1855, a single bird was shown to me (killed near Yarmouth during very severe weather), which corresponded with specimens procured by myself in Devonshire and Sussex; and two others in my own collection were secured at one shot, on the river's bank, near St. Martin's gates, quite close to the city, on the 7th of March, 1864. These were no doubt passing over us in their migratory course, and had paused for awhile to rest and feed, even in a locality so unusual for the Rock-Pipit, whose haunts are essentially the "rock-girt shore" and the margin of brackish waters. Messrs. Gurney and Fisher speak of the rockpipit as migrating to our coast in autumn; and the Messrs. Paget also remark that "a few are occasionally seen about Breydon wall." Mr. Dix however informs me, that on the brackish margin of the Orwell, near Ipswich, they are not uncommon in autumn, as he has killed them there himself, and one would naturally have expected to find them as plentiful, in similar situations, in our own county. The great difference observable in the plumage of some rock-pipits obtained in this country has, at various times, attracted the attention of naturalists, and the question whether two or more distinct races have not been hitherto confounded, is now occupying the attention of our leading ornithologists. Mr. Hancock, who has recently examined my two Norwich specimens, together with many others submitted for his inspection, decides that one at least of those birds, having a bright buff or cinnamon coloured

breast,\* corresponds with the Anthus rupestris of Nilsson; but though this is not, in his opinion, entitled to specific distinction, his decision, as affecting a Norfolk specimen, is the more interesting from the fact, that the chief home of A. rupestris is in Scandinavia, whence, as has been previously shown in this work, our few examples of the dipper (Cinclus aquaticus) and the blue-throated warbler (Phænicura suecica)—birds which like the present do not breed in the county, but only occur here as occasional visitors—are apparently derived.

## ALAUDA ALPESTRIS, Linnæus.

#### SHORE-LARK.

The first recorded specimen of the Shore-Lark in Norfolk, and probably the first ever recognized in England, is the one thus referred to by Yarrell:—"In the year 1831, I learned of my late friend, Mr. John Sims, then residing at Norwich, that a British killed specimen of the Shore-Lark, the Alauda alpestris of authors, had come into his possession. The bird was shot on the beach at Sherringham, in Norfolk, in March, 1830; it was preserved by Mr. Sims, and is now in the collection of Edward Lombe, Esq., of Great Melton, near Norwich." This bird, which is also described by Messrs. Gurney and Fisher as an immature male, is still preserved in the above collection, which is now in the possession of Mrs. E. P. Clarke, of Wymondham. A second example, purchased by Mr. Gurney some few years ago,

<sup>\*</sup> The other bird, though killed in company, exhibits no indication of this warm colouring. It is probably a female, but unfortunately I had no opportunity of dissecting these pipits, before they were stuffed, to determine their respective sexes.

but in what year I am not certain, was also procured at Sherringham; and an adult male, in Mr. Newcome's collection at Feltwell, was shot at Yarmouth in November, 1850. Next in order of date are two fine specimens, killed on Blakeney beach, near the Preventive station, about the first week in March, 1855. These were brought in the flesh to the Rev. E. W. Dowell, of Dunton, who presented one to the Earl of Leicester, and retained the other in his own collection. Both, I believe, were male birds, Lord Leicester's certainly was, as I examined it at the time when sent to be preserved in Norwich. A further interval of seven years now elapsed, without any more examples being observed in this district, when in the winter of 1861-62. between the first week in November and the 11th of January, no less than five were obtained at Yarmouth, Sherringham, and Blakeney; and about the 24th of April, a sixth, also on the coast, at Yarmouth. Of these birds, which, singularly enough proved to be all males, the first was killed at Yarmouth on the 7th of November; the second at Sherringham on the 9th; the third near Yarmouth (belonging to the Rev. C. J. Lucas, of Burgh,) on the 12th; and two more at Blakeney (I believe in the possession of Mr. Upcher, of Sherringham,) on the 11th of January, 1862. I was unable to ascertain at the time how many were seen on each occasion, or whether these were the only ones observed, but most probably there were others which escaped destruction; and as these birds were performing a southward migration, it is most probable that the specimens described by Mr. J. D. Rowley, as netted at Brighton (three males) on the 15th and 16th of November (Ibis, 1862, p. 88), were a remnant of the same flock, thinned on their passage down our eastern coast. Very severe gales had visited us for some days just previous to the appearance of the three November birds, and several little auks were picked up

at the same time in different parts of the county; but although some of these storm-driven sea-birds showed symptoms of privation, the shore-larks, both in flesh and plumage, were in high condition. I was fortunate enough to examine all the Norfolk shore-larks as soon as they were sent up to Norwich for preservation, and found them exhibiting a transition state between winter and summer plumage; but in those killed in the month of November, the bands of black and yellow on the throat were very bright, and the horns plainly marked, more especially in the one from Sherringham, which had also a richer vinous tint on the wings; but in each the band over the crown of the head was but slightly traceable. Of the two killed at Blakeney on the 11th of January, one was evidently a much older bird than the other, with a perfect black gorget, and bright yellow tints on the throat and neck; the horns were well developed, and the cheeks black. The forehead, however, was more white than yellow, with a very indistinct black band mixed with yellow on the upper part of the head; the points of the shoulders vinous. The younger specimen had a smaller gorget, each black feather being tipped with yellow; the black on the cheeks also blended in the same manner. The horns slight, but quite distinguishable; no perceptible band across the head; forehead yellowish white; and several reddish longitudinal spots on the breast, immediately below the gorget. At the time when these last two birds were obtained, the weather was very mild; but a severe frost had broken up about ten days before. The male shot at Yarmouth in April, 1862, now in my possession, was brought up to Norwich with several sky-larks and wagtails killed at the same time, and most probably formed a remnant of the original flock, once more returning northwards for the breeding season. This specimen, as may be supposed from its appearing so late in the spring, had very nearly assumed its full summer plumage. The gorget on the neck and the patches on the cheeks are pure black, and the yellow portions are very bright, with the horns clearly developed. It is somewhat remarkable, that almost every one of these birds, obtained in Norfolk, from 1830 to the present time, should have proved, on dissection, to be males; and it is also worthy of note, that all but two have occurred during the winter months. On the 26th November, 1862, a male shore-lark, (in the collection of Mr. J. H. Gurney, junr.), was killed at Lowestoft, in the adjoining county, and the man who shot it stated that he had seen lots of snow-buntings, and a few had vellow throats, which were no doubt shore-larks, consorting with the more common species. The subjoined note in the "Field," by Mr. Fenwick Hele, of Aldeburgh, (November 19th, 1864,) also shows how easily these birds may be overlooked, and it is by no means improbable that they may have visited us far oftener than is generally supposed:—"On Thursday, the 10th (November), I obtained a very rare bird at Thorpe (Suffolk), namely, the shore-lark. It is a very good male, with beautifully developed ears; it was in company with another, I suppose its mate. Up to the time of my picking up the specimen I had killed, I quite believed them to be the common sky-lark, so exactly did they resemble that bird both in colour and gait. I was not sufficiently near to observe the very pretty and curious markings about the chin and throat. I was only led to shoot at them at all from a desire to try my big duck gun at such small objects on the ground; you may therefore judge of my surprise, when picking up the dead specimen, at my double stroke of good luck-firstly, chancing to alight on such a rarity; and secondly, firing at it at all. The mate was very badly hit, as a heap of feathers left on the spot where I had

shot at it clearly demonstrated, but it took to wing and I could not see where it eventually went down." In a a further note in the "Field" for the following week. Mr. Hele announces that this second bird was obtained on the 16th, having been brought to him by a gentleman who shot it on the beach at Thorpe. This also proved to be a male. The latest occurrence of this species in the Eastern Counties has been very obligingly communicated to me by Mr. Baker, of Cambridge, who says that three specimens, two males and one female, sent to him for preservation, were killed on the 10th or 12th of February, 1865, out of a flock of about twenty, by Mr. Fowler's keeper, at Gunton, near Lowestoft. The contents of their crops, which he also forwarded, appeared to consist of seeds of Polygonacea and the chrysalis of some small insect.

## ALAUDA ARVENSIS, Linnæus.

### SKY-LARK.

"Up with the lark" is a very common expression amongst early risers, yet in reality the members of the early rising society, with its guaranteed stock of health, wealth, and wisdom, are far less likely to hear the first notes of the sky-lark, than those whom pleasure or necessity have caused to be up all night. Late as these birds are during the light summer evenings in retiring to rest, their song may be heard again by two o'clock the next morning, whilst the stars are still shining brightly in the cold grey sky, and scarce a streak of light yet indicates the approach of dawn. I have often, at such times, when out on the broads, heard the sky-lark's notes high over head, when far too dark to distinguish the bird; or from the neighbouring fields, not

"poised in air," but warbling from the ground, several have simultaneously burst into song. In this position also they may frequently be heard during the day, when a person unaware of this habit, would look around in vain for the songsters. So much, however, does the soil itself assimilate with the plumage of these birds, that often on a sunny day the fallows seem alive with harmony, though scarce a feather can be seen, till a fluttering wing or a pair amorously chasing each other disclose the hidden vocalists. It were unnecessary for me to dwell long upon the ordinary characteristics of a bird so well known to every lover of nature; but I trust there are few who have not experienced a thrill of pleasure, after a long and dreary winter, when, on the first bright sunny morning, the sky-lark's note, with all its pleasant associations, first falls upon the ear. How instinctively one stops to watch his upward flight, as with outspread quivering wings he slowly mounts, yet still his notes come back upon the ear, clear and distinct in all their rapturous fullness, though our eyes grow dim with watching that small dark speck in the clouds. Suddenly, at his greatest height, he makes a slight detour, then steadying himself again, commences his descent; slowly at first and still singing loudly, till, approaching the earth, he stops an instant, then darts swiftly down, and skimming for a space above the ground, alights once more. Besides singing from the ground, as before stated, the sky-lark occasionally perches on a wall or fence, and with swelling throat and fluttering wings, pours forth its song, as from the floor of a cage, but this is, I believe, more generally in the breeding season, when its mate is sitting in some neighbouring corn field; at least, I do not remember noticing this habit at other seasons. In autumn, the immense flocks which at times frequent our stubble

fields, are composed for the most part of migratory arrivals,\* which, after a brief sojourn, continue their journey southward. Our home-bred birds also perform, during the winter months, a kind of partial migration, shifting their ground repeatedly, according to the state of the weather. Not unfrequently after severe frosts, when scarcely a sky-lark has been visible for weeks. we find on the first bright sunny day the stubbles are filled with them, but these soon leave again with the least indication of returning cold, and thus they come and go, till spring has fairly commenced, and all our northern visitants have again passed over us to their distant homes. Yarrell, referring to the migration of this species, mentions having received a communication from the Rev. R. Lubbock, of his having witnessed from Caister Point, near Yarmouth, "the arrival of sky-larks from the sea;" and the same has been noticed on several occasions during the month of October, by the Rev. E. W. Dowell, at Blakeney. They arrive, he says, "all day long in small flocks, and I have observed

<sup>\*</sup> The late Mr. St. John, in his notes "On Natural History and Sport in Moray," thus notices the migration of the Skylark (p. 311):--"During the first days of snow and storm a constant immigration of larks takes place; these birds continuing to arrive from seaward during the whole day, and frequently they may be heard flying in after it is dark. They come flitting over in a constant straggling stream, not in compact flocks, and pitching on the first piece of ground which they find uncovered with snow, immediately begin searching for food, feeding indiscriminately on insects, small seeds, and even on turnip leaves, when nothing else can be found." The same author also remarks (p. 45), "The skylark, as Milton knew, is the bird which sings earliest in the morning. Before the sun is up, I often hear the lark singing over my head before there is light enough to distinguish it. Late in the summer evenings, too, after all is still, and apparently the birds have all retired to their roosting places, I have observed how suddenly every lark rises and sings for a short time as if their evening hymn, and as suddenly and simultaneously all cease."

that these birds, and indeed most of the small land-birds, reach our shores in greater numbers towards the afternoon. Larks frequently burst into song when they make the land." On the Suffolk coast they have been also seen to arrive in the same manner, and their return in February, in "innumerable flocks," is remarked by Messrs. Sheppard and Whitear. It would seem moreover that these flocks are not merely confined to the day time, from the fact of specimens being frequently picked up dead, having flown against the windows of the lighthouses on the coast. Large quantities of sky-larks are netted by our bird-catchers during the autumn and winter, for the London markets,\* the best of the males being reserved as cage birds, and so expert are some of the old hands. that I have more than once heard it asserted that they will tell in the dark the males from the females, as they take the birds from the net, and that, merely by handling them, the former being somewhat the widest across the shoulders. The females are instantly killed for the market, and the males reserved for their vocal powers. So difficult, however, is it to detect, even by sight, any external difference between the sexes, that the above seems at first to be scarcely worthy of credit, but though I cannot actually vouch for it as a fact, I have so often been struck with the practical knowledge of these men, in similar cases, as contrasted with the limited information conveyed in natural history works, that I feel inclined after all to believe that there is really some truth in the story. White, buff, and pied varieties are not uncommon. Of the former, a pure albino, with pink eyes, and the bill and legs straw

<sup>\*</sup> Dr. Wynter, in his "Curiosities of Civilization," writing on the "London Commissariat," gives 400,000 Larks as only an approximate idea of the numbers sent for sale annually into the London markets alone.

yellow, was killed in 1862, near North Walsham, and another example in the museum collection (No. 100.b) has only a few brown streaks on a white ground. No. (100.c) also exhibits the singular effects of extreme age and confinement on the feathered tribe. This bird is stated to have lived twenty-one years, and probably from its artificial food, as is sometimes the case with cage birds, its plumage became black, as it now appears; whilst the beak and claws denote a very advanced stage of life. The hind-claws in this species occasionally assume a length amounting almost to a deformity; in one or two instances I have known them to measure, in birds killed in a wild state, considerably over an inch.

## ALAUDA ARBOREA, Linnæus.

### WOOD-LARK.

This species, by no means numerous in Norfolk, is now confined almost entirely to the western parts of the county, and is there found only in certain localities best adapted to its nesting habits. Mr. Newton, in a communication to Mr. Hewitson (Eggs Brit. Birds, 3rd ed.), states, that in the neighbourhood of Thetford these birds "are most partial to old sheep-walks in the vicinity of Scotch fir-trees. On places such as these the herbage is so scanty that they can hardly be said to choose a tuft of grass as the situation of their nests, though they generally select a spot where the bents are the thickest. I have, however, found a nest where the turf was as short as a well kept lawn, and I have seen one secluded in a clump of heather. Their nests are usually more compact than those of the sky-lark, and will bear being taken up from the hole in which they are built." In the spring of 1864, at West Harling, I

had first the pleasure of hearing and seeing this bird in Norfolk, when crossing just such a locality as that described by Mr. Newton, and from whence Mr. Dix has sent me several specimens during the last two or three years. The note of this lark, so soft and sweet as the bird circles round and round in its flight, is quite unmistakeable, as is the bird itself, from the peculiar shortness of the tail when observed on the wing. It is most probable, I think, that they leave us for a time during the winter months, though returning again very early in spring. On the 26th of February, 1864, writes Mr. Dix, "I saw a flock of seven; they rose close to me. I could scarcely believe I was not mistaken till I heard their call note. I mentioned it to the keeper a day or two after, when he said he noticed them about the same spot a fortnight before, and he knows the birds well, having shot them for me. I have seen the flock several times since, and shot one for you. They squat so close, that though the ground was quite bare I did not see them till they were up. Mr. R. Reynolds, who used to live at Thetford, assured me that he had one specimen of the wood-lark, shot at Rushford, in December; it was killed with several sky-larks out of a flock." Messrs. Gurney and Fisher, in the "Zoologist" (p. 1702), mentioning the fact of a pair having been observed on some hollies, at Easton, in March, 1847, observe-"We are inclined to suspect that the few birds of this species which are found in Norfolk, arrive about this time, and that the opinion which we have expressed as to their remaining in Norfolk through the winter is incorrect." To this statement I may add that the only specimen I have ever seen in this neighbourhood was a female, shot on the 3rd of March, 1858, near Norwich, whilst passing high over head in company with another bird, but from the extremely dingy appearance of its plumage, I much question if it had not escaped from confinement.

Mr. Hunt, however, writing of the wood-lark in 1829, says, "It was common at Hetherset previous to the enclosure of the common lands;" and no doubt to such local changes its absence from these parts, at the present time, is mainly attributable.

## PLECTROPHANES LAPPONICA (Linneus).

### LAPLAND-BUNTING.

On the 26th of January, 1855, during extremely severe weather, a specimen of this very rare bunting was taken alive at Postwick, near Norwich. probably the first ever known to have occurred in this county, was brought to me soon after its capture, and proved to be a young male in winter plumage. Unlike most birds, when first confined in a cage, it seemed perfectly at home, feeding readily on the seed placed for it, and both in its gait and manner of looking up, with the neck stretched out, reminded me of the actions of a quail. In the aviary of Mr. J. H. Gurney this bird assumed its full summer plumage in the following spring, and thrived so well in its new abode, that overfeeding was probably the cause of its death in May, 1856, when, for the second time, it had acquired the black head and plumage of the breeding season, and was certainly a perfect lump of fat when skinned for the purpose of preservation. The only other Norfolk specimen of this bunting, I have either seen or heard of, was shown me on the 14th of April, 1862, by the Rev. E. J. Bell, then residing at Crostwick, which had been netted alive, near Norwich, a few weeks before, and was gradually assuming its summer plumage, having the black on the head and throat imperfect, with a chesnut bar on the nape of neck. This bird was shortly afterwards presented to the Zoological Society by Mr. Bell, but, unfortunately, soon died, the transition from an airy outdoor aviary to the hot parrot-room in which it was placed at the gardens, being scarcely desirable for this northern species.

## PLECTROPHANES NIVALIS (Linnæus).

### SNOW-BUNTING.

The Snow-Bunting is a regular winter visitant, its numbers, however, depending much upon the severity of the season, appearing generally by the middle of October, and leaving us again towards the end of March. If the weather becomes very sharp their flocks are increased considerably, and are then found on our open heaths and warrens as well as by the sea-coast. Captain Longe assures me that at Yarmouth he has frequently seen them in winter pecking about in the road with the sparrows, in front of his residence, not far from the beach, and that when disturbed they fly up to the roofs and parapets of the houses with all the tameness of their common allies. In describing their first arrival on our coast, Mr. Lubbock says,-"They settle the instant they reach terra firma, and often remain for some time on the shingle of the beach, flying a short distance and then alighting in as close a body as possible, so as to have, at a distance, the appearance of a variegated piece of carpet;" to which I may add the following graphic account of this species by Mr. Saxby (Zoologist, p. 9484), as observed by himself in Shetland:-"Seen against a dark hill side or a lowering sky, a flock of these birds presents an exceedingly beautiful appearance, and it may then be seen how aptly the term 'snow-flake' has been applied to the species.

I am acquainted with no more pleasing combination of sight and sound than that afforded when a number of these birds, backed by a dark grey sky, drop as it were in a shower to the ground, to the music of their own sweet tinkling notes." Mr. W. E. Cater, in the "Zoologist" (2415), mentions having met with a flock of five, at Waxham, near Yarmouth, in 1848, as early as the 27th of September; and in 1854, on exactly the same date, a pair were sent me from Blakeney, where Mr. Dowell has also met with them on one or two occasions in the beginning of that month. At the time, however, when my own specimens were taken, the weather was extremely mild. I have never known them to remain with us later than the beginning of April. In confinement, I have found the snow-buntings very gentle in disposition and extremely affectionate to one another, forming an amiable contrast in both respects to the bramling finches. A pair, which were kindly sent me for my aviary in 1862, by Mr. Fowler, of Gunton, near Lowestoft, netted from a very large number at that time frequenting the Corton beach, attained very nearly their full summer plumage, their beaks also, which are yellow in winter, assuming a dark leaden tint. Both these birds, unfortunately, suffered from a diseased state of the feet, which were painfully swollen, and the scutellæ on the anterior portion of the tarsi and toes were greatly enlarged and ragged. With this exception, they lived in apparently good health till the autumn of 1863, when the female wasted away and died, and the male survived his partner only a few weeks. According to Messrs. Gurney and Fisher, this species has been known to nest in confinement, but where, or when this event happened, is not stated.

## EMBERIZA MILIARIA, Linnæus.

#### COMMON BUNTING.

Is resident throughout the year, and pretty generally distributed, though not particularly plentiful as a species. Shy in its habits, and always difficult of approach, the harsh note of the Corn-Bunting is heard in spring, whilst perched on a low wall or fence, or the branches of a small tree, whence a sharp look out is kept in all directions, and in autumn its numbers are apparently increased by migratory arrivals, as is undoubtedly the case with the yellow ammer. A specimen of this bird in my collection, which was netted at Markshall in 1856, exhibits in the malformation of its beak the curious and interesting "means to an end," which nature adopts to obviate the effects of accident. Of the lower mandible, only a stump remains, having probably been carried away by a shot, but the upper mandible being curved downwards, like the bill of a parrot, still comes in contact with it, and by this means the bird was still enabled to collect and crush its food, and when taken was in good condition. Pied varieties of this bunting occur at times. A specimen almost white, having only a few brown feathers in the wings and tail, was killed near Norwich in 1863; and in the previous autumn one, almost entirely creamcoloured, excepting a few dark feathers on the upper surface, and another, mottled with white, were also obtained in this neighbourhood.

# EMBERIZA SCHŒNICLUS, Linnæus.

### BLACK-HEADED BUNTING.

This most striking looking bird, which is resident with us throughout the year, is confined almost entirely, during the summer months, to low marshy districts, where it nests in similar localities to the sedge-warbler; but in winter, and especially during severe weather, it is more generally dispersed, frequenting stack-yards and farm premises in company with its kindred species. Mr. Samuel Blyth, a very accurate local observer, also tells me that he has known a pair or two frequent a large patch of furze, in the centre of a plantation at Framingham, throughout the winter months, although this locality is at a considerable distance from any piece of water. Like the reed and sedge-warblers, however, the broads in this county must be looked upon as the chief home of this species, where they may be met with at all seasons uttering their somewhat harsh and unvaried notes from the tops of the bushes, or whilst clinging to the reed stems; and in these localities the nests are built on the ground, frequently at the foot of a small bush, placed in a hollow amongst the soft moss that forms the foundation. Mr. Hewitson, moreover, (Eggs Brit. Birds, 3rd ed.) after describing the usual position of the nests, says,-"I have, though rarely, found them at an elevation of two feet or more above the water, and supported by a bunch of the common reed, not fixed like the nest of the reed-warbler, attached to the perpendicular stems, but supported upon a bunch of them which had been prostrated by the wind." The upper part of the structure is formed of fine bents, lined with the feathery tops of the reed, the whole so carefully concealed amongst the long grasses, that it is difficult to find until the bird

rises from the spot, when most frequently it will be found to flutter away as if wounded, with one wing trailing on the ground, to decoy the intruder from its nest. Through the term reed-bunting, frequently applied to this bird, it seems to have been erroneously confounded with the reed-warbler (Salicaria strepera), to which it has no possible resemblance, and even the nest of the reed-warbler, suspended on the reeds, has been assigned to the black-headed bunting. To any one at all acquainted with the habits and appearance of the two species; with the marked difference in the construction and position of their nests, and the perfect dissimilarity in the colour and markings of their eggsit must appear almost incredible that so palpable a mistake could ever have arisen. There is, however, in Martin's "Introduction to the Study of Birds,"\* (in many respects a clever little elementary work on general ornithology,) a very pretty illustration of the reedwarbler's nest, with a pair of black-headed buntings in full possession! In the aviary this species is both striking in plumage and extremely inoffensive in disposition. The change from the mottled head of the winter season to the rich black of the summer, seems to commence rather early, the brown tips beginning to disappear by the end of January, though some weeks elapse before the whole is completed. Pied and buff varieties are occasionally met with, and the eggs vary considerably.

As before remarked, so intimately connected is the black-headed bunting with the whole district of the broads, that I can scarcely find a more appropriate place in this work, for a slight sketch of one of the prettiest at least, if not one of the largest, of those attractive localities. In my notes on the habits of the reed-warbler (S. strepera) I have attempted to describe

<sup>\*</sup> Published by the Religious Tract Society.

a summer's night on Surlingham\* broad, and this would, I feel, be scarcely complete, if I failed to add the companion picture. But the task is no light one, and few better than myself know the difficulty of conveying by any power of words, to those who have never seen them, a conception of the beauties of the broads in summer, when the natural flatness of the scene itself is unheeded in the contemplation of the richest verdure:—

Far, far away, in its rich display Of nature's wildest flowers. The marsh resounds with tuneful sounds, Unknown to upland bowers. Aloft the bleating snipe is heard, On trembling pinions soaring, And the titlark sings as he upward springs. His song of love outpouring. The wagtail flits with the bearded tits, Where the feathery reeds are growing, Or flirts his tail on the marsh mill sail, His taste for insects showing. Rich babbling notes from sedge-birds' throats, Enliven the coverts green, And with hoarser cry the coot hard by, Is oftener heard than seen. The hern, too, springs on his lazy wings From the edge of the shallow waters; And wild ducks rise with mingling cries To seek more sheltered quarters. Still here and there, from a distant layer The skylark's notes are ringing, Close to her nest is the hen bird's breast. Her mate in the blue clouds singing. Whilst all around is the twittering sound Of the sand-martins flitting by, As their plumes they lave in the rippling wave, Or dart at the passing fly.

<sup>\*</sup> This broad differs from almost all others I have seen, in the little narrow channels which traverse it in all directions, opening here and there into wide open waters, instead of presenting, as at Hickling, Ranworth, Barton, &c., a wide sheet of water, occasionally dotted with small islands, and bordered with reeds.

#### A SUMMER'S DAY ON THE BROADS.

Choosing for our excursion a bright sunny day in June or July, we enter the broad by a long narrow dyke communicating directly with the navigable river, and as the boatman pulls slowly through the narrow channels, or rests under the shade of the waving reeds, let us carefully note the various objects of interest which at this season present themselves to the eve of the naturalist. Here, as in all these peculiar localities, excepting where the river flows through them, as at Hickling and Barton, the water is everywhere extremely shallow, and where the Confervæ and other aquatic plants have not coated the surface, clear enough to show the myriads of small fry passing in shoals over the weedy bottom; these fresh-water lagoons forming the natural nurseries of the bream, roach, pike, and other fish found in our Norfolk rivers. As we traverse the broad from end to end, we pass through a series of small canals, just wide enough for boats to go up and down, lined on either side by the young reeds, in all the richness of their summer green, with their delicate feathery tops bending to the slightest movement of the passing breeze. How grateful to the eye is the bright fresh verdure, after watching the sand-martins on the glowing stream, or peering up into the sunny sky to follow the snipe on its airy round. Here and there the monotony of the green walls is relieved by the pretty blossom of the flowering-rush (Butomus umbellatus), the bright yellow of the wateriris (Iris pseud-acorus), the bloom of the sedge (Carex riparia), or the lofty stems of the common bullrush (Scirpus lacustris), with their brown heads looking like an artillerist's rammer. On all sides, the chitty, chitty, chit, chit, cha, cha, of the garrulous sedge-bird (Salicaria phragmitis), and the more finished notes of the reed-warbler (S. strepera) are heard from the dense coverts, and occasionally one is seen as it flits over the stream, or climbs the reeds to commence its song; when, scared by our presence, it drops again to the ground. At intervals, also, the black-headed bunting, leaving for awhile the neighbouring marshes, utters its coarse and peculiar notes from the reeds as well; the rich black head and russet coat of the male, with its pure white collar, forming a marked contrast to the verdant background.

Quietly and stealthily, with no splashing oars, let us now take a peep where the next reed bed ends, and a wider channel bounds the further side—hush! not a word, and stoop low as if a "coil" of teal were just "marked down"-now look! Scattered over the open water, within thirty yards, five or six water-hens are swimming about, jerking their heads in their own funny way, with every motion of their paddling feet, and with tails well elevated above the water, showing the pure white of their under coverts. Still further on a pair of coots, with sooty plumage and white foreheads, are lazily crossing to the other shore, and several, partly hidden by the sedges, are picking their way along the treacherous "hove." Ah! even now they have either heard or winded us, see how the water-hens are getting together. There go the coots, splash, splash, scuttle. scuttle, into the depths of the reeds, and dip, dip, dip, go the feet of the others, now fairly alarmed, as they hurry along to the same retreat. But what is that smaller bird just sprung from the sedges in the general "stampede," which dropped again like a woodcock into the thickest cover? That was a water-rail, with its long curved bill, of which many are bred in these impenetrable swamps, but rarely is it possible, with even a well-trained dog, to obtain a shot in such places. and on the marshes their cunning and quickness, on foot, tries the patience alike of man and beast. Again, pulling onwards, the channel suddenly opens upon a wide expanse of water, also bordered with reed-beds and low tussucky marshes, and from the very edge of a small island directly before us rises a noble heron. Slowly flapping his great wings as he launches himself into the air, and sails away with outstretched legs, he utters a hoarse cry of warning to others, and involuntarily, almost, one calls to mind Hood's graphic lines—

"The coot was swimming in the reedy pond, Beside the water-hen so soon affrighted; And in the weedy moat the heron, fond Of solitude alighted.

The moping heron, motionless and stiff,
That on a stone, as silently and stilly,
Stood, an apparent sentinel, as if
To guard the water lily."

Here, under the lee of these tall rushes, let us moor the boat for awhile and enjoy the beauties of this quiet scene. The sun in all its noon-day splendour would be scarcely bearable at such an hour, but for the cool refreshing breeze, which, with a continuous soughing sound, murmurs amongst the reeds and sedges, rippling the sluggish waters with its breath, and curling the broad leaves upon their glistening surface. Strangely somniferous is that æolian music, like the hum of bees upon a shady bank; but readily as one could yield to its soothing influences, we have come to use our eyes and not to close them. See where those stately swans are snorting defiance at our abrupt intrusion; the female is gathering her fleet of cygnets, and the male, with head drawn back between his snowy wings, drives himself towards us with his "oary feet." Scarcely less white too, in their spotless beauty, the cups of the water-lily (Nymphea alba) rest on their leaves, and here and there the yellow

species (Nuphar lutea) contrasts with the simple blossom of the water crowfoot (Ranunculus aquatilis). Innumerable insects, everywhere swarming over the rank vegetation, are beginning and ending their brief existence; and twisting and twittering, till the eye tires of watching their varied flight, sand-martins are feasting amongst the gnats and midges, or at longer intervals the skimming swallow snatches a hasty meal, and is gone again to its mate and young in the chimney of the broad-man's cottage. Though confusing enough at first, the ear soon becomes accustomed to these incessant notes, but like the tunes that escaped from Munchausen's horn, when thawed by the fire, the merry medley of those mingling sounds still rings in one's ears, for hours after quitting the broads themselves.

Thus far then we have taken what may be termed an interior view of the broad, and have yet to explore the surrounding marshes. First, having finished our noon-day meal and that post-prandial pipe, never sweeter than on such occasions, let us land on the nearest point likely to afford a tolerably firm foundation. Be prepared, however, for a wet foot or an even worse ducking, for the soil is treacherous enough in places, and though one person may pass safely over the quacking bog, the next may come to grief.\* Following a beaten path, leading round to the back of the larger reed-beds, we find the marshes on this side stretching down to the river, by no means easy walking

<sup>\*</sup> It is strange to observe how by constant habit, and an instinctive knowledge of the thickness of the crust, a marsh-man will walk in his heavy boots where a far lighter but inexperienced man would break through at once. Each foot is carefully and firmly placed, yet quickly and without hesitation—the great object being to keep moving, and thus though the swamp heaves like billows under his feet, the broad-man, with full confidence in his own powers, gets safely back to his boat.

from the uneven tussucks, around which the water flows in the winter. How different now is the whole scene. No dreary waste, but nature's garden in its gayest colours. Wild flowers and ferns, in the richest profusion, cover the marshes with every variety of tint, and the dwarf bushes of alder, sallow, or birch, are equally luxuriant in their summer verdure. Mind how you tread on this soft rich moss, for many a little life may unconsciously be sacrificed as we pick our way over its yielding surface. See! there, a black-headed bunting, with trailing wing, as though badly injured, is tumbling on before us—it is but a ruse to draw us from the spot. Here's where she rose, and here is the nest, with four callow young, snugly placed beneath an overhanging tussuck, so well concealed with moss and grasses, that we might have searched for it in vain for hours. The sedge-birds' notes too are heard from almost every bush, for here either at the foot of the little trees, or like the buntings on the open marsh, they chiefly build. That pair so anxiously calling from the nearest alder, and nervously creeping amongst the leaves and branches, have some good cause to wish us further. Let us stop and look, not in the bush itself, but close to the stem amongst the coarse grass and prickly undergrowth. See, there is the nest with its little sombre-coloured eggs resting, but not suspended, on the broken stems, and carefully hidden by surrounding herbage. Titlarks on all sides are calling from the taller bushes, springing into the air, with the yhit, yhit, of their monotonous notes; or with outspread wings and quickening song slowly descending upon an open branch. Here, too, the reeling notes of the grasshopper-warbler may be heard at day-break, but rarely, indeed, later in the day, and so wary and mouselike are they in their actions, that it is next to impossible to find their nests in such a locality. High overhead is

heard the drumming of the snipe, and a pair of garganey teal (Anas querquedula) circling round, are apparently too well aware that they are closely watched, to alight again and betray their eggs or young. Hark! how loud and clear is that cry of cuckoo, which all the day has been heard incessantly, though far in the distance. The bird must be close at hand amongst these bushes, hunting for nests. Yes, there it flies, from the top of an alder, skimming like a hawk over the marsh, with a little twittering agitated crowd of warblers following in its wake, and like country beadles, with some idle tramp, only too glad to "pass him on."

broad again to the side nearest the village, we shall find the marshes much more reclaimed, and those nearest the arable land already in good grazing order. Here, in winter, amongst the short green rushes, and particularly where the stock have been turned out, a fair day's snipe-shooting may be had at times as well as off the "hoves," or bare patches by the water's edge, where the reeds have been cut and carried. At this season, however, the titlark and the pied-wagtail are about the only species that we find, flitting about beside the little drains, or a pair of peewits, now rather scarce in this district in summer, may attract our attention by their anxious cries and nervous pitching flight. Having thus traversed the whole circuit of the land, and watched the marsh-mills with their busy sails—now revolving quickly with the wind, now slowly creaking with the slackening breeze,—let us return once more to the boat to spend the remainder of our time upon the water. The broad-man knows of a reedwarbler's nest, not to be passed by without a peep, so leisurely pulling through the green channels we will examine this little triumph of bird-architecture. One might well wonder, amidst that sameness of sedge and

reed, one patch the very counterpart of the next, that he should be able to remember the exact spot, but to him it is easy enough from long habit and attention to little details. The broken head of a bullrush stem, in a line with a small tree still further back, gives him his "bearings," as surely as the "buoy," just "opening out" the steeple on the nearest headland, guides the course of the pilot over the trackless sea. Running the boat close up to the bank, he carefully parts the foremost reeds with his oar, and there is the nest, close to the water's edge, but fairly screened from ordinary observation, and only to be found by watching the actions of the birds. How neatly and strongly the withered materials are wound round the reeds, two green stems and an old one of last year being used in this case as the props of the structure. The eggs are deep down in that pretty basket, with little fear of their rolling out, supported as it is by surrounding reeds, and the wind, though high, waves the whole mass at once, bending to the blast and rising again. Listen to that strange note, not much unlike the croak of the nightingale, it is the hen bird anxiously waiting our departure, and resenting our inspection of her household treasures. There she is, climbing stem after stem, flitting from one to the other, dropping to the ground, and again ascending in a very fever of maternal trouble; and further, unseen, her mate is calling, so let us go, we have seen enough to wonder at and admire, and may well spare the result of such wondrous instinct. On once more to that little island, far out in the open stream, where the heron rose on our first arrival. There most probably we shall find another nest, though very different in size and structure. Row gently then, and as we approach the spot keep a sharp eye upon the fringe of sedges by the water side. Surely she cannot have left already? No! but see, she is off at last, though only that

little bead upon the water tells where the water-hen has dived from her nest. Close as we are, there seems nothing more unusual to be seen than dwarf bushes, thickly planted, amidst a luxuriant growth of coarse vegetation, and a littered heap of dead reeds and flags, contrasting with the green stems of the tall rushes. True! that is all, but if we part those rushes with the end of the boat-hook, and bring ourselves nearer to that withered mass, we shall soon find its real purpose. There are the eggs, so well known to the most juvenile collector, resting, in a slight depression, on the top of that loosely woven mixture of dead flag, rushes, and broken reed, yet fairly raised above the ordinary level of the tide; whilst instances are not wanting, of these birds anticipating a coming flood, by elevating their nests with fresh materials.

So much then for our lesson in practical ornithology, as learnt from nature, on a Norfolk broad. The longest summer's day still has an end, and busy with our later observations the time has passed un-Already the shadows are deepening upon heeded. the waters, and the dark reeds measure their reflected lengths on the margins of the sluggish stream. Here, in the gloaming, the coots and water-hens are leaving for awhile their green coverts, now seen for an instant in the open water, bathed in the glories of the setting sun, now lost to sight in the contrasted darkness of bordering sedges on either side. Still twittering to the last, the untiring sand-martins are supping freely on the swarming insects, and the young starlings hurrying to their roost, are rustling and tumbling amongst the reeds. All nature seeks repose with the bright orb of day-

> "But now the fair traveller's come to the west, His rays are all gold, and his beauties are best; He paints the sky gay as he sinks to his rest, And foretels a bright rising again."

## EMBERIZA CITRINELLA, Linnæus.

### YELLOW BUNTING.

But for the timely suppression of the use of poisoned wheat as an indiscriminate and wholesale bird destroyer, the term common, as applied to this and other allied species, would soon have become as inapplicable to them as it is at the present time to the buzzard or kite. No birds more readily than yellow hammers take the poisoned bait, when driven by stress of weather to the farmers' stack-yards, and yet how much have they contributed during the spring and summer to preserve those crops, of which they are denied a share.\* Besides

<sup>\*</sup> The following extract from a note appended to St. John's "Natural History and Sport in Moray" (p. 19), is but one of the many evidences published of late in deprecation of the system above referred to:-"It is calculated, and apparently on very good authority, that a pair of sparrows, during the season they are feeding their young ones, kill, in the course of a week, about 3,400 caterpillars. Yet farmers and gardeners are so ignorant of their true interests, that they annually destroy hundreds and thousands of these feathered guardians of their crops. Sussex sparrow club alone, last year (1863) destroyed no less than 7,261 of those birds, and a prize was awarded to the most wholesale murderer. In various parts of England, also, there is a stuff used called "sparrow and vermin killer," by which large numbers of our most useful birds are poisoned. One writer mentions that a man, whose trade it is to kill small birds, showed him with pride about "2000 sparrows, 700 yellow buntings, 600 common buntings, innumerable goldfinches, and linnets by the hundred." \* \* \* Almost coincident with this virulent attack upon the feathered songsters of our woods and hedgerows, there has been an increase in the insectivorous enemies of the garden and the farm, and during the past two years especially (in Scotland), whole fields have been devastated by the grub—a foe against which the farmer is next to powerless without his tiny winged allies."

its useful qualifications also, as an insect eater, we should, in the present species, have lost one of our most attractive rural objects. How brilliant is the rich yellow and brown of this handsome bunting, as we find it amidst the whins and brakes upon our open heaths, perching with the sprightly chats and titlarks on the topmost twigs of the furze bushes, and uttering at intervals that monotonous note, which, besides its true and well known song, is so often repeated; whilst the tints of its plumage vie even with the brightness of the flowering gorse. Though resident with us at all seasons, it seems more particularly associated with the recollection of heat and dust, when, perched on a fence or amongst the branches of a roadside tree, its long drawn weary song accords so well with the dry scorching atmosphere, and, through a strange ventriloquial power (possessed by this bird in an eminent degree), its notes are heard, from a distance, as though close to the ear of the listener, and when apparently furthest off, are not unfrequently uttered within a few yards. Even in confinement this vocal peculiarity is equally perceptible, as I have often listened to one in my in-door aviary, and though watching the bird at the time, have scarcely been able to persuade myself that its low soft notes did not proceed, as they seemed to do, from the garden outside. As a cage bird the yellow hammer, though looking a giant amongst the smaller finches, is exceedingly gentle in manner, maintaining his own rights with a quiet dignity that brooks no insult, though he never interferes with others. In fact a feathered gentleman, and graceful in action he floats, rather than flies, from one perch to another, or amuses himself, by repeatedly, springing into the air, and with a rapid turn of the wings, alighting again on the same spot. The numbers of this bunting are undoubtedly increased in autumn by migratory arrivals, specimens at that season being picked up

dead, at the foot of our lighthouses, amongst other species previously mentioned. Varieties in plumage are not often met with, but a pied specimen, in my collection, netted near Norwich in February, 1862, has the secondary quills in one wing, and the primaries in the other white, slightly tinged with yellow; and Mr. T. E. Gunn, of this city, has also recorded in "The Naturalist" (Journal of the West Riding Naturalist's Society), one example, having the back and wings light reddish brown, with the throat, breast, and belly pale sulphur yellow, and another entirely white; both killed in this neighbourhood.

## EMBERIZA CIRLUS, Linnæus.

### CIRL-BUNTING.

This rare species was not included by Messrs. Gurney and Fisher in their "Birds of Norfolk," but the appearance of a single specimen in this county in November, 1849, was recorded by Mr. J. H. Gurney in the "Zoologist" (p. 2651), though neither the exact locality nor sex is mentioned.—A correspondent in the "Field" (May 24, 1856) also states that a pair were killed in Norfolk in December, 1855, one of which is said to have come into the possession of the Earl of Leicester. These are probably the only instances in which this species has been identified as visiting our coast; it is probable, however, that other examples may have occurred, though passing unnoticed from their general resemblance to the yellow bunting.

Since the publication of my paper on the "Ornithology of Norfolk," in the third edition of White's "Directory," I have had good reason to doubt the genuineness, as a local specimen, of the only Ortolan

Bunting (Emberiza hortulana), recorded as killed in this county. This example, in the possession of Mr. J. H. Gurney, is the one thus referred to, in very guarded terms, by Messrs. Gurney and Fisher:—"We have seen a specimen of this bird, which was said to have been killed near Norwich." It is also, I have no doubt, the one thus noticed by the late Mr. Lombe, in his MS. notes of birds not in his collection; "Ortolan Bunting, shot at Earlham in the summer of 1838," as I learn from Mr. Gurney, that the bird in question was said to have been killed near Dalrymple's asylum, just on the borders of Heigham and Earlham. An authentic specimen, however, an adult male, also in Mr. Gurney's possession, was shot on the 5th of May, 1859, at Lowestoft, in the adjoining county.

## FRINGILLA CŒLEBS, Linnæus.

### CHAFFINCH.

Amongst our common residents, there is none more striking from its bright and varied plumage than the male Chaffinch, and if only as scarce, as it is here, everywhere abundant, would be prized alike for its beauty and sweet though simple song. "Gay as a chaffinch," as the old saying goes, is true of this bird at all seasons, for in winter his pert pink, pink, is heard in the stack-yards, or close to our dwellings, as he joins the robins and sparrows, to feed where the snow has been swept from our paths. In the early spring, before the trees and hedges have put forth their leaves, or the summer migrants have returned to our groves, his joyous song greets us in our gardens and rural walks, and the very abandon of his little notes, imparts a kindred feeling to ourselves, of thankful-

ness, at the close of the dreary winter. Later still, when the spring, in all the richness of its bloom and foliage, has attained its perfection, amidst sunshine and showers, this "gay gallant," having won the heart of his more sombre spouse, shares with her the cares and joys of the nesting season; and, in our orchards and gardens, we find that marvellously beautiful result of their joint labours, that dainty compound of moss, wool, and lichens, which draws forth an involuntary Oh! of admiration, from the lips even, of that thoughtless "do-no-good," the bird-nesting boy. Perched amidst the blossoms on the apple and pear trees, the male, in all the brightness of his nuptial plumes, looks handsomer than ever, and in orchards, plantations, or extensive woods, his loud rich notes are mingled and blended with the joyous medley of our summer songsters. Many are the charges brought, by irate gardeners, against the entire race, though the injury they will do, to the young radishes and other garden produce, may be easily averted with a little trouble; and if feathers and string, stretched over the beds, cease to act as a "caution," a little powder fired, without shot, will scare off the rogues, and not double the mischief, by cutting the fruit trees to pieces to kill one victim. Whatever their depredations may be, at least, they are but for a very short period, for as soon as the young are hatched, there are no birds so assiduous, in their useful occupation of clearing our gardens from insects and caterpillars, as the chaffinches, and their incessant labours, in this respect, throughout the summer, well merit a return in winter grain, or even a salad in spring. In autumn the numbers of our resident birds are largely increased by migratory flocks, which, apparently arrive, for the most part, on our coast by night, judging in this, as in many other instances, from the specimens known to be killed at that season through contact with our lighthouse

windows. These flocks, so noticeable in our stubbles and beech-groves consist, as has been remarked by many authors, almost entirely of females and young birds, and in several instances I have failed to distinguish a single male, but although these, with most of our own residents, leave us for the south during severe weather, I have on more than one occasion observed an influx of male birds, only, during a prolonged batch of frost and snow, as though the intense and lasting cold had driven them also to seek a milder climate. I may further add, that in February, 1864, Mr. Dix remarked a very large flock of chaffinches in a plantation at West Harling, which consisted entirely of male birds. is not, however, unusual to see parties of from thirty to forty still flocking together up to the middle or end of March, with the sexes mingled, though in full breeding plumage. Pied varieties are occasionally, though not often, met with, and specimens resembling very light-coloured canaries have also occurred in Norfolk. Of the latter, a very beautiful example (a young male), killed at Brooke on the 30th of August, 1847, now in Mr. Gurney's collection, was thus described at the time in the "Zoologist":—"The ground colour of its plumage is white, but pervaded throughout with a delicate canary yellow colour. This tint is strongest on the back and rump (especially the latter), on the edges of the quill feathers of the wings, and of the tail feathers. The eyes are of the natural colour." The specimen (No. 111.c) in the Norwich Museum, killed a few years back at Cossey, so closely resembles the above that any further description is unnecessary, and a somewhat similar bird, killed on the 10th of January, 1861, had the head and neck white, with a delicate yellow tinge on the neck and back, a few brown feathers mixed with white in the wings and tail, and the throat, breast, and under parts generally, pervaded with a delicate rose colour.

# FRINGILLA MONTIFRINGILLA, Linnæus.

#### BRAMBLING.

A regular winter visitant, arriving at times in immense flocks, but their numbers as well as the time of their appearance and departure, depending much upon the severity of the season. In the cold winters of 1853 and in 1854-55, they were extremely numerous, a flock being observed in the latter year as early as the 12th of October; and in the still more severe season of 1859-60 and 1861, very large numbers were met with throughout the county, as usual consorting chiefly with the chaffinches, and frequenting stack-yards and farm premises during the frost and snow. Several specimens, netted towards the end of February, had already acquired the black head, peculiar to the breeding plumage, and a few stragglers still remained as late as the 30th of March. The general time of their leaving, however, appears to be about the middle of March, although their appearance as late as the 27th of April is recorded by Messrs. Sheppard and Whitear. Mr. Hunt, referring to the numbers that have at times occurred in this county, states, "that one individual, in the winter of 1825 caught seventeen dozen and a half in the course of one forenoon, and in the following year a great number were taken at Cringleford." In the very sharp winter of 1863-64, scarcely any were netted before Christmas, but in the following February, large flocks of more than a hundred together were seen at Cossey, and many beautiful specimens were taken by the birdcatchers. The late long and severe winter (1864-5) has been also remarkable for the abundance of this sprightly and attractive species, whose southward mi-

gration, in extraordinary quantities, was witnessed under the following singular circumstances. Mr. Samuel Blyth, whose local observations, as a thoroughly practical naturalist, I have before referred to, assures me that, just prior to the very sharp weather that set in about the middle of January, he noticed at Framingham, near Norwich, for several successive days, large flights of birds passing low over the fields in a southerly direction. They appeared always at the same time, from about half-past three till nearly dusk, flying for the most part level with the fences, occasionally having to rise at them when higher than usual. After noticing them for several days, he at last shot into one large flock at about sixty yards, and dropped one bird which proved to be a Brambling, and the same result followed on two subsequent occasions. In order to ascertain if they were really making a continuous flight, or merely returning to some favourite roosting place, after a foraging expedition during the day; he watched for them, on one occasion, from the early morning, but not one was seen to come from the contrary direction. At the usual time, however, in the afternoon, large flights again appeared in their accustomed line, keeping straight on with a sort of settled purpose, so noticeable in other species on their migratory course.\*

<sup>\*</sup> The following equally curious statement, respecting the migration of this species, appeared in a letter to the "Times" (March 23rd, 1865), from Mr. A. E. Atkins, of Farnham Court, Slough:— "Some of your readers may be interested by the mention of a fact which in this neighbourhood, at least, is without parallel 'in the memory of the oldest inhabitant.' A large flock of bramblefinches have taken up their residence in Stoke-park. Their numbers may be estimated when I state that the flight, which was seen starting from their roosting place one morning, continued streaming on without intermission for thirty-five minutes. The person who noted this killed forty-five at one shot. I may mention that before they came to their new quarters thousands of starlings congre-

The brambling thrives well in confinement, and is a sprightly handsome bird, though rather inclined to be spiteful to its fellow captives; it is also peculiarly wakeful, and its sharp call note is heard at all hours of the night on the slightest disturbance. Its migratory instinct is also strongly marked in spring by an increased restlessness during the day, and a constant searching for any means of escape; whilst the call of the male bird is repeated night after night (more particularly at the time of the full moon), from the beginning of April till about the end of May. This feverish state of excitement, moreover, recurs periodically in specimens, which have been kept in confinement for several years, but I have not remarked the same symptoms in autumn, the additional influences of the breeding season no longer existing. Mr. Hewitson (Eggs Brit. Bds., 3rd ed.) gives an interesting account of the nesting of the brambling, in the aviary of the late Mr. Dashwood, at Beccles, Suffolk, and Messrs. Gurney and Fisher have recorded a similar occurrence near Norwich, in the aviary of Mr. Chas. Barnard, of this city, who has for many years paid much attention to the rearing of cage birds, and has been particularly fortunate with this species. In 1842, he had a nest and two eggs, both of which were removed and found to be good; in 1843, one nest with two eggs, and subsequently four more in a second nest which was accidentally destroyed; and in 1844, the same pair also laid two eggs, as in all previous instances, during the month of June. From that time this species did not

gated there nightly, but since this invasion of northerners the ancient inhabitants have been dispossessed; but they have not forgotten their former homes, and now that returning spring has warned our new friends to seek more quiet quarters before pairing and building time comes upon them, the starlings are again making their appearance in great numbers."

again attempt to breed in his aviary till 1862, when a pair built one nest and laid four eggs, two of which are now in the museum collection; and in 1863 and 1864, the same birds paired as before, and with a like result; in the latter season, however, young birds were hatched for the first time, though subsequently found to have been thrown from the nest, either by their parents or some other bird. In June, 1861, a pair of my own showed evident symptoms of having paired off, and as the cock bird exhibited a very jealous disposition, I removed the young couple to a breeding mew, by themselves, giving them an ordinary nest-box and building materials. The hen bird began nesting at once, but made slow progress at first, almost invariably pulling out with her feet the moss or wool she had carefully arranged with her beak. As the wooden sides of the box seemed rather to incommode her, I filled it up with part of a chaffinch's nest, and by the 23rd she had completed her own, on this foundation, composed of moss, wool, and grasses. The male bird did not assist, but was exceedingly amorous and attentive, and both indulged frequently and freely in a bath. At this stage of proceedings the hen bird. unfortunately, was taken ill, and no eggs were laid, though she seldom quitted the nest except for food, On the 30th, to my great surprise, I found the whole structure pulled to pieces, and from that time all advances on the part of her mate were violently repelled by the hen bird. On July 2nd, a second nest was built on the old foundation, and the hen remained sitting at times, but eventually she abandoned it, when I turned them off again into my aviary, and though the same pair survived for two seasons after, they did not again evince any inclination to breed.

The beak in this species, as in many others, varies in colour at different seasons, being blue black in

summer and yellow in winter. A singular variety, in many points resembling the beautiful specimen of the chaffinch, obtained at Brooke (p. 201), was killed from a flock at Melton, near Norwich, in December, 1844, and is very accurately figured in Messrs. Gurney and Fisher's "Birds of Norfolk," with the following description (Zoologist, p. 1311):- "With the exception of a brown patch on one or two feathers of one side of the tail, this specimen was entirely white, the greater part of its plumage being also pervaded with an elegant tint of vellow, which particularly showed itself on the sides of the head, and on the edges of the quill feathers of the wings and tail, as well as on the feathers under the wings. The colour of these latter, which is usually vellow, was remarkably bright in this specimen, and extended over a greater space than usual." particularly remarked of this species, by Messrs. Sheppard and Whitear, that Mr. Scales, of Beechamwell, "used to consider them of service to his land, from their devouring, in great abundance, the seeds of the knot grass, Polygonum aviculare."

## PASSER MONTANUS (Linnæus).

### TREE-SPARROW.

The extremely wary nature of this species, with its almost mouse-like habit, of creeping out of sight upon the least alarm, renders it somewhat difficult to speak with certainty of its local history; but although apparently confined to certain districts, and nowhere plentiful, it is resident throughout the year and breeds with us. Messrs. Sheppard and Whitear state that they received a specimen "from the Rev. H. Tilney, of Hockwold, at which place it breeds," and add, "Mr. Scales

pointed out to us this species at Beechamwell, and favoured us with its eggs." I have myself also seen the eggs of this species on one or two occasions, brought in, by lads, to our Norwich bird-stuffers, although unable to ascertain in what situation the nests were found. Yarrell describes them as building "in the thatch of a barn, in company with the house-sparrow, not however entering the thatch from the inside of the building like them, but by holes in the outside;" also in the deserted nests of magpies and crows, in which they form "domed nests," and my friend, Mr. Alfred Newton, informs me that they nest frequently in pollard willows, and that he took a nest, so placed, on the 5th June, 1853, at Wangford, in Suffolk, but adjoining this county, between Brandon and Lakenheath. In winter, and particularly in sharp weather, they appear to disperse themselves more freely in search of food, and a few stragglers are then netted in the stack-yards by our bird-catchers, or are shot with other birds in a common flock. Mr. Dix informs me, that at such times, he has observed them frequently at West Harling, some eight or ten coming to feed at once, but he has never succeeded in finding a nest in that neighbourhood. In January, 1862, a pair were killed by Mr. J. H. Gurney, junr., in Catton Park, by a chance shot into a thick bush, the birds being heard but not seen. I have long imagined that some, at least, of our winter specimens, particularly in localities where they are never seen at other seasons, might be migratory arrivals, but it was not till very recently that I met with the following proof, as it were, of my former impression in the same paper, by Mr. Ed. Blyth, in the "Field Naturalist" (vol. i., p. 467), to which I before alluded in my remarks on the migration of the redbreast and the golden-crested wren. Mr. Blyth's informant, who at that time (Oct. 8th, 1833), had just returned in a coasting vessel from Aberdeen to London, says,-

"A flock of tree-sparrows settled on the ship, and others of this species continued to arrive during the whole day, as the vessel passed the Norfolk and Suffolk coast, particularly when off Hasboro', Yarmouth, and Harwich. Their numbers increased at length to upwards of a hundred, and they remained on board until the vessel almost entered the Thames. The exact direction from which they came could not be very well ascertained, as they descended from an invisible height in the air, to the call of those which were in the ship; and after wheeling two or three times round the vessel to reconnoitre, joined their companions on board. They appeared to arrive from the English coast, and there can be little or no doubt but that they did so." I do not, however, consider this latter remark against the probability of these birds visiting us at that season, since these flights, in pursuing a southerly course, not far from land, would appear to be coming from the English coast, when merely seeking the rigging of a passing vessel, to rest for awhile, or attracted towards it by the "call" notes of others. With regard to the authenticity of the above statement, Mr. Blyth adds-"The number and variety of the species, which my informant observed, are, indeed, so extraordinary, that if I did not know my source of information to be respectable, I should have felt great hesitation in thus making it public. I have seen, however, several of the birds which were taken on board, and can quite safely vouch for the accuracy of all that is above stated." In further corroboration also of the migratory habits of this species, I extract the following note, by Mr. E. H. Rodd, of Penzance, from the "Field" (November, 1860):-"A Norwegian brig put into Penzance a few days since, and among other incidents of the voyage between Norway and England, the master of the vessel mentioned that midway between the two countries thousands of small sparrows passed and

alighted on the ship, covering the deck, &c. The birds were exhausted, and soon died, and some half-dozen were kept from mere curiosity to show to friends. These were brought for my inspection, a day or two since, by a person who begged them of the captain to show me. The six specimens were all Passer montanus, the tree sparrow; the mountain sparrow of Bewick." In confinement the tree-sparrows are certainly the shvest and most untameable of any birds I have ever introduced into my aviary, and even time seems to work but little change in their wild nature, as on the approach of any person, whether a stranger or not, they dash about the cage in a reckless manner, and when exhausted and panting with fright, will creep into any corner, or dark spot, to escape notice. The beak in this species, as in the common sparrow, becomes darker in summer, being of a blueish lead-colour during the nesting season, and according to my own observations, whether frightened or not, these birds have, at times, a singular habit of keeping their mouths open. I can discover no external difference in the sexes, excepting that the white and black tints, on the throat and sides of the head, are somewhat less vivid in the female.

# PASSER DOMESTICUS (Linnæus).

#### HOUSE-SPARROW.

Whilst no one rejoices more than myself that the wholesale and indiscriminate slaughter of our graineating birds, by means of poisoned wheat, has been at length prohibited by law, I cannot, even in defence of my feathered favourites, ignore the fact, that the almost total extermination of the Raptorial tribes,

together with the raven, crow, and magpie, in these game-preserving districts, necessitates the destruction by some means or other of our too abundant finches. That wonderful balance observable in the animal kingdom, by which the necessities of each particular class are made available to keep down the excess of others, has been utterly disregarded, and in the same manner that the undue slaughter of our insect-eating birds, results in a plague of flies and caterpillars, so also the persecution of hawks and owls occasions an undue proportion of small birds, whose ravages, by some means or other, must be kept within bounds. Let the net, the gun, and above all means the "clappers" be used as of old, to scare the feathered marauders from the farmer's corn, whose patience I admit is sorely tried, when he sees whole rows of empty ears, extending some yards into his fields, from the side of each fence; but before he empties the full vials of his wrath upon those "brutes of sparrows," let him pause and consider, for one moment, where would have been those crops, of which a tithe is taken, had those very birds been wanting during the spring and summer. All grain-eating birds feed their young on insects. Those flocks of sparrows, greenfinches, linnets, buntings, &c., so busy pilfering the ripening grain, will pair again in spring, and hundreds and thousands of little mouths will open, every minute in the day, to receive some insect atom from their parents' beaks. Flies, caterpillars, grubs, and worms, of every imaginable description, will then support these little creatures in their earlier stages, and man, with all his powers of thought and skill, would fight in vain against those insect myriads, which none but the microscopic eye of the bird perceives, none but our "feathered friends" can keep in check. Amongst other noxious insects destroyed, in immense quantities, by the common sparrow is that destructive Melolontha, commonly

called "chovies" in both Norfolk and Suffolk. (Mr. Alfred Newton informs me he has seen the mouths of these birds literally crammed with these pests of the garden, the orchard, and the plantation). It is also throughout the breeding season, a veritable flycatcher, as even the least observant persons must have noticed in their walks. Flitting amongst the thick foliage of the trees, it searches the leaves with most assiduous care, or perched on the house-top or an open branch, springs suddenly into the air after the passing insect, and turns and twists about upon the wing, should it fail at first to secure its prey. As I now sit writing, a pair of young sparrows, reared in the eaves of the house, are revelling in the enjoyment of their newly acquired powers, as they flutter along the garden walks with their anxious parents. The old birds, alternately, after their brief excursions, bring back fresh dainties for those gaping beaks, of which the fluttering, trailing wings of the nestlings, bespeak their full enjoyment. And this remember, with untiring energy, goes on from the earliest dawn of our long summer days, till late in the evening, and as has been estimated, on good authority, a single pair of sparrows, in one week, in thus feeding their young, destroy about 3,400 caterpillars; yet, in spite of all

<sup>\*</sup> The following description of the beetle to which this local name applies, is from "Forby's Vocabulary of East Anglia," and speaks volumes for the benefits conferred upon mankind by the sparrow in checking the ravages of such insect plagues:—
"Chovy, s. a small coleopterous insect, which invades gardens and orchards in hot summers, in our sandy districts, and the immediate neighbourhoods of them, in such swarms as to be nearly equal to a plague of locusts; devouring every green thing before them. It is common to drive ducks into a garden, or swine into an orchard, and shake the insects from the trees to be devoured. But their numbers, constantly renewed, are often found insuperable."

this, sparrow clubs, for the wholesale destruction of these very birds, still exist in the country.\*

Too common to need much description of their habits, there is one in particular which annually excites my warmest indignation, and that is the manner in which the sparrows persecute the house-martins, and endeavour to take possession of their nests when built. I am often obliged to come to the rescue and shoot the intruders, even at the risk of disturbing the martins. In the winter the sparrows invariably roost in the martins' nests, carrying in additional straws and other warm Their great fondness for dusting themselves is another troublesome habit, our newly raked flower borders being constantly defaced by a succession of little pit holes, where these birds have half buried themselves in the enjoyment of a dust bath; and in the early spring they attack the crocuses, eating some small portions of the flower and leaving the rest on the ground, whilst in summer the tender shoots of the pinks and carnations are equally attractive morsels. As a citizen, the house-sparrow has certain habits and customs of its own, but little noticed by ordinary observers. When formerly residing in Surrey-street, I remember noticing the invariable absence of these birds, from the garden, during certain hours of the day. In the early morning, and till nearly noon, we had always plenty in the apple and pear trees, but from that time till late in the after-

<sup>\*</sup> Under the appropriate heading of "The Geese and the Sparrows," the following paragraph was recently inserted in the "Sussex Express":—"The thirteenth anniversary of the Sparrow Club, Rudgwick, was celebrated with a dinner at the Cricketers' Inn, on Tuesday last. On reference to the books, it was ascertained that 5,313 birds' heads had been sent in by the members during the year, 1,363 being contributed by Mr. W. Wooberry, to whom was awarded the first prize. Mr. W. Botting, with 912, claimed second honours."

noon, not a bird could be seen, as I have proved over and over again, when wanting to shoot one for a tame kestrel. During this interval, I have no doubt that they regularly visited the fields and roads in close vicinity to the city, as they were always back again towards evening; in autumn appearing just before dark, to roost in the ivied walls, or the clematis and creeper, by the side of the summer-house.

The late Bishop Stanley, in his "Familiar History of Birds" (p. 89), alluding to the range of the sparrow, in all countries, extending with "the tillage of the soil," says, "From certain entries in the Hunstanton Household Book, from 1519 to 1578, in which sparrows (or as they are there written spowes or sparrouse) are frequently recorded, it would appear that these birds took their place in the larders of the nobility as delicacies with other game, from which we may infer that they were at that time as rare in Norfolk as they still are in some parts of Russia, owing probably to the same cause, viz., the limited state of tillage and growth of corn." That the sparrow was probably scarce in that part of Norfolk (Hunstanton, near Lynn) in those days is most probable, and for the causes alleged by our late worthy Diocesan, but at the same time he was in error in supposing that the term spowes, so frequently met with in the L'Estrange "accounts," referred to our Passer domesticus. The term spowe invariably occurs in connection with knots, ring-dotterels, redshanks, and other grallatorial species, common enough then, as indeed they still are, upon the Hunstanton beach, and under this name, as I shall hereafter be able to show, the Whimbrel was invariably designated in those old records. Once only, in the same "accounts," is the word sparrouse used, as "Itm xij. sparrouse of gyste" (articles given in lieu of rent), and these being thus entered alone, were in all probability real sparrows, brought as a delicacy by

some poor retainer. The colour of the beak in this species, as in some others, changes with the season, being horn-coloured in winter, and jet black in summer. White and pied varieties are not unfrequently met with, as shown by the specimens in the Norwich Museum.

### COCCOTHRAUSTES VULGARIS, Stephens.

#### HAWFINCH.

With a bird so difficult of observation as the Hawfinch, from its excessive shyness, it is not easy to determine whether the frequent discovery of its nests, of late years, in this and other counties in England, is owing to a change in its habits, or the more careful researches of modern naturalists. Messrs. Gurney and Fisher, in 1846, describe it as "a rare bird in Norfolk, and, we believe, only occurs as an irregular migrant." Yet Sir Thomas Browne, evidently referring to this species, speaks of it as "a kind of coccothraustes, called a coble bird, bigger than a thrush, finely coloured, and shaped like a bunting. It is chiefly seen in summer about cherry time;" from which it would seem that, in those days at least, it was not uncommon, and from the season in which it was chiefly observed probably bred in the county. That it does so now there is no doubt, and with sufficient regularity to be classed as a resident, whilst, as certainly, migratory specimens visit us during the winter months, in some seasons appearing in considerable numbers. For the last ten years I have never known an autumn or winter pass without some examples being brought in to our bird-stuffers for preservation, the dates of their appearance extending from the middle of November to the beginning of the following April: A large flight which visited Yarmouth during severe weather in January, 1823, is noticed by the Messrs. Paget, and is also referred to in Sir Wm. Hooker's MS., and in 1855 a considerable number appeared in this neighbourhood; but probably the largest quantity ever known to have visited this coast, occurred during the long and severe winter of 1859-60. Between the first week in December and the first week in April of the ensuing year, upwards of forty specimens were brought to one bird-preserver in this city, of which nearly half were obtained in the neighbourhood of East Carlton and Ketteringham. A large flight also alighted, about the same time, in a very exhausted state, in the gardens near the denes at Yarmouth.

In 1856, a single bird was shot near Yarmouth, on the 28th of April, which there is little doubt had remained to breed in that neighbourhood, and in the latter end of June of the same year, Mr. King, bailiff to Lord Wodehouse, at Kimberley, observed an old bird and three young ones on a greengage tree in his garden, which adjoins the park. On fetching his gun, he succeeded in shooting one of the young birds, and the others never returned again. This was the first time he had observed them in summer, but in sharp weather he had frequently seen them on some whitethorn trees in the park, a not unusual resort of the hawfinch. These particulars were very kindly sent me at the time by Mr. King, and the young bird, the first Norfolk bred hawfinch I had ever seen, is now in my possession. In this specimen the head, neck, and upper parts are yellowish olive brown, and the throat yellow, but with no apparent indication of the black patch common to both sexes in an adult state. From that time till the summer of 1860, I could learn nothing further as to their nesting in Norfolk, but on the 2nd and 8th of May in that year two birds were shot having the dark blue beak of the breeding season, and one of them, a female, had evidently been sitting. Besides these, on the 20th of July a young bird, exactly resembling my own specimen, was taken near Attleborough, and is in the possession of the Rev. W. J. Partridge, of Caston rectory. In the following year (1861) another female showing symptoms of nesting was shot on the 14th of June, and on the 29th a very perfect nest in my possession was taken at Weston. The man who found it stated that there were young in it, but these had since died from over feeding. old birds had been seen devouring the green peas in the garden, and were believed to have nested there in the previous summer, as young looking birds were observed, with the old ones, early in the autumn. In April, 1863, a female was shot in the same locality at Weston, and others were observed there throughout the summer; and on the 18th of June an old male was shot at Tibbenham; a female at Weston, on the 26th; and about the same time a young bird was sent up to Norwich for preservation from some other part of the county. Again, in 1864, a magnificent pair in full summer plumage were, I regret to say, shot on the 22nd of June, at Weston, and a nest was said to have been found in a thick hawthorn hedge. They had frequented a neighbouring garden for the sake of the green peas, remains of which were discovered on dissection. To the above evidences of their residence amongst us I can now add, on the authority of Mr. Samuel Blyth, that they have been observed to frequent the garden of Mr. G. B. L. Knight, and an adjoining plantation, at Framingham, for the last three or four years, during the summer months; old and young appearing together; and a nestling, too helpless to take care of itself, was picked up alive amongst the pea-sticks, where no doubt it had been brought by its parents to feast on their favourite food.

That they also breed in the adjoining county of

Suffolk will be seen from the following extracts from the "Bury Post":—About the first week in June, 1857. a paragraph appeared in that journal, stating that a nest of the hawfinch had been found in Ickworth Park, containing five young ones. This statement drew, the next week, some further information from another correspondent, who says, "Some 24 or 25 years since, I saw in the garden of Great Finborough Hall, a nest of young ones, and some had been reared in the garden at least one year preceding. In the following June, Mr. Nicholls, the then gardener, and a most enthusistic naturalist, wrote me to pay him a visit, and in his note he says, "we have two nests of the hawfinch in the kitchen garden at this time, and one is on the same tree you saw them last year. It is but a few days since I saw a nest, full of young ones, in a garden in the neighbourhood of Bury. It is perhaps rather singular that in all cases the birds selected apple trees as their abode. In addition to these we may add, that last year a nest of young were reared in the pleasure grounds of either Ampton or Livermere, at the moment I forget which, but I believe the former place."

A very favourite resort of the hawfinch in winter seems to be in the thick foliage of old yew-trees, affording both close concealment and food in the shape of berries. In December, 1852, and January, 1853, I was shown four of these birds which had been killed at Taverham, near Norwich, as they passed in rapid flight to and from the yew-trees near the hall. The gardener, who shot them with much difficulty, described them as the shyest birds he ever met with. Again, in the winter of 1855, six or eight specimens were procured, at different times, in the village of Blofield, where, as at Taverham, the great attraction appears to have been some yew-trees in a garden. The man who shot them also spoke of the great difficulty he had in approaching them, observing,

"They come with a very rapid flight, and pitch into the vew-trees like sparrows into the ivy." Once there it was almost impossible to catch sight of them, as they kept amongst the thickest foliage, and it was only by concealing himself that he obtained a chance shot, as they rarely exposed themselves on an open branch, and on leaving the trees they again flew with great swiftness. Messrs. Gurney and Fisher refer to a specimen taken some years back at Taverham, which, singularly enough for so shy a bird, was captured alive in a pigeon-house. The fact of the beak, in this species a most prominent feature, having a seasonal change of colour, is thus referred to by Mr. Doubleday\* in the "Zoologist" (p. 5098):—"In the autumn and winter the bill, in both sexes, is always flesh-coloured; in March it begins to change, and by the early part of April is of a deep leaden blue colour, and continues so during the breeding season." I have observed, however, in such birds as are killed here, with the dark bill of the summer months, the under surface of the lower mandible is not blue but pink, becoming yellow in stuffed specimens.

# COCCOTHRAUSTES CHLORIS (Linnæus).

### GREENFINCH.

This well-known and handsome species is still, I am happy to say, a common resident in Norfolk, although in some districts its numbers have been sadly thinned, of late years, through the agents of the great "Caterpillars'

<sup>\*</sup> I am sorry to say that Mr. Doubleday, who has for many years studied the habits of these birds in Epping Forest, and was the first to discover their nests in that locality, informs me, in a recent letter, that they are now comparatively rare. "A large portion of the forest (he writes), where this species used to

Friends Society." The male Greenfinch, with the rich olive green and yellow of its nuptial plumage, and the flesh-coloured tints of its beak and legs has a very striking appearance, and his varied notes, though somewhat harsh, are far from unpleasing, when heard amidst the dense foliage of the trees in summer. It is a hardy bird, as its stout thick-set figure would seem to indicate, and frequenting the vicinity of stacks and farm-premises, remains with us, in flocks, throughout the winter, while migratory individuals also occur in autumn on our coast, passing southward with other allied and equally familiar species.\* A singular double nest of this bird is thus described by Mr. Gurney, in the "Zoologist" for 1852 (p. 3577):—"During the spring of this year, in a thick bushy plant of an ornamental heath, growing in a garden a few miles distant from Norwich, were found two nests of the common greenfinch, which not only were completely interwoven at the adjoining sides, but were built on one common platform, a foundation of fibrous roots and moss. Both nests were complete.

breed in considerable numbers, has been cut down, and I am afraid what is left will soon be enclosed. The London bird-catchers have also, for the last few years, hunted the forest over in May for the nests of the hawfinch, finding a ready sale for the eggs, and have caught the old birds with bird-lime when the nests contained young ones."

<sup>\*</sup> Mr. H. L. Saxby, in his "Ornithological notes from Shetland (Zoologist for 1865, p. 9488), thus alludes to the migratory habits of this species, as observed, though apparently as an unusual circumstance, in that island:—"During the early part of November, greenfinches arrived in immense flocks, which were chiefly composed of females and young birds, although there were many fine old males among them. Up to the 28th of last October, only one individual of this species had been known to occur in Unst. Very large numbers roosted in the garden even a few nights ago, and many were captured as they flew against the windows after dark. None of the inhabitants to whom I have spoken upon the subject have seen this bird before."

except that one of them was deficient in interior lining. When found, I understand there was one egg in each nest, but it was not ascertained whether the nests belonged to two pairs of birds or only to one pair." In the same volume of the "Zoologist" (p. 3388), Mr. Gurney has also recorded the singular fact of a hybrid, between the greenfinch and the common linnet (Linota cannabina), having been captured in a wild state in this county. This remarkable specimen was netted at Easton, near Norwich, in 1851, by Mr. Edward Fountaine, and was afterwards kept in confinement. An exactly similar bird, now in my possession, was netted near this city by a bird-catcher named Carr, in February, 1865, and exhibits, in the most striking manner, the chief characteristics, in plumage, of the greenfinch and common linnet, whilst the beak and general form of the bird is intermediate between the two. So marked indeed are these double features, that I felt certain, from the moment I first saw it, that it could only be a hybrid between the above named species; and Mr. Fountaine, who examined it subsequently, recognised in it at once the fac simile of his own specimen. The following is as accurate a description of its present appearance (May, 1865), as I am able to give in writing, and I am particularly anxious to keep it alive, to observe, if any, and what changes may occur in its plumage. Its voice even partakes of its double origin, the shrill call note of the greenfinch being combined with the soft trill of the linnet, as I have been able, satisfactorily, to determine, the hybrid being kept, in a cage, close to my aviary, in which both greenfinches and linnets are in full song. Beak, bluish flesh-colour on the upper mandible, light pink on the lower. Head, neck, and back hair-brown, with a greyish tinge on the sides of the neck and around the eyes. Irides hazel. The colour of the back wanting the rich chesnut of the linnet in summer, but less

mottled than in the same bird in winter, with the shaft of each feather very dark. Wing-coverts dull chesnut. Primary quills nearly black, the outer margins, which in the linnet are white, being in this bird yellow as in the greenfinch. Secondaries blackish brown, broadly edged with rufous. Upper tail-coverts sulphur yellow. Tail feathers very dark brown, the two middle ones, slightly tinged with yellow on the outer edge, the remainder considerably forked, and having their narrow outer edges bright yellow, and the inner webs broadly margined with white as in the common linnet; the yellow occupying the same proportion as in the greenfinch. Throat, chin, and breast brownish white, strongly tinged with yellow, becoming nearly pure white on the lower parts of the body and vent. Legs and toes brownish pink, claws black.

Our Norwich fanciers occasionally cross this species with the canary, of which I saw a young brood in the autumn of 1864, very odd looking birds, but retaining the distinguishing characteristics of the greenfinch, in the beak and general stoutness of figure. Being of no repute, however, as songsters, this breed is but seldom attempted. Varieties are but rarely met with. A curious specimen, in my own collection, netted at Hellesdon, in February, 1862, has the ground colour of the plumage light grey, changing to brown on the quill feathers of the tail and wings. The back, wing-coverts, sides of the head and breast, in this bird (a male) are also more or less tinged with yellow, the outer edges of the primaries and tail-feathers, with the upper tail-coverts, being bright yellow. "Green Olf," as given by Forby, is the more common name for this bird in Norfolk, and it is also called the green linnet, to distinguish it from the common grey or brown linnet.

## CARDUELIS ELEGANS, Stephens.

#### GOLDFINCH.

This beautiful species is by no means uncommon throughout the year, and though a large proportion of our native birds apparently leave us for a time in the depth of winter, some few still remain, and, like the pied wagtails before referred to, shift for themselves during the sharpest weather. The migratory habits of the Goldfinch are well known to our bird-catchers, although the flights that visit us in spring or autumn, are small indeed in comparison with those observed in more southern counties.\* From my own observation of the birds netted in this neighbourhood, by far the larger number are procured in the autumn, and a more vivid colouring, as in many other continental visitants, marks the plumage of adult birds. Messrs. Gurney

<sup>\*</sup> Mr. Knox, in his "Ornithological Rambles," gives a most interesting account of the migration of the goldfinch, as observed on the Sussex coast both in spring and autumn, where, at either season, its arrival is anxiously watched for by the resident birdcatchers. Mr. Newman, in a recent paper on the "Migration of birds in Great Britain" ("Field," April 22nd, 1865), has also given the following remarkable statistics with reference to the same species:-"Mr. Robert Gray, of Worthing, asserts that the birdcatchers net, within a walk of Worthing, four or five hundred dozen of goldfinches every October. The cocks fetch four or five or sometimes six shillings a dozen, the hens about two shillings. During one particular year, as many as eight hundred dozen were taken." The Rev. Arthur Hussey has also ascertained by careful enquiry, in the same locality, that "none are taken in January, February, March, June, and July, about fourteen dozen of the immigrants in April and May, the astounding number of seven hundred and fifty dozen of the emigrants in October, and three hundred dozen in the beginning of November."

and Fisher have alluded to a belief existing amongst our Norfolk bird-catchers, "that both this species and the bullfinch are polygamous to the extent of three or four females to one male." I am quite unable to substantiate this supposition in either case; but even if considered probable as regards the bullfinch, I think the many little affectionate traits exhibited, in confinement, by the present species opposed to any such impression. Although the improvements in agriculture and the increased cultivation of waste lands have deprived them of many a "breezy common," localities are not wanting, rich in the attractions of groundsel and plantain, or white with the down of the seeding thistle. summer, their beautiful little nests excite our wonder and admiration in garden and orchard, whilst here and there on the foul pasture or rough weed-covered bank, we find them in busy groups, fluttering round the thistle-heads, or passing from stem to stem with sweet musical notes, as the bright red and yellow of their lovely plumage glistens in the sun of an autumn morning. Our Norwich weavers, so celebrated for their breed of canaries, known far and wide as the "Norwich yellows," also cross the goldfinch with the canary, which, in many instances, produces a very handsome "mule," and though but little esteemed for song, it is still a lively cage bird, more endurable in a room than the canary itself, whose powerful, and sustained notes, jar upon the nerves with their thrilling vehemence. Many of these birds, bred from a male goldfinch and an extremely light-coloured hen canary, exhibit the most exquisite variations of plumage, and being hardy in constitution, are by no means difficult to rear. The linnet and siskin are, also, occasionally crossed with the canary, in the same way. Sir Thos. Browne thus refers to the capture and training of this species in Norfolk, some two hundred years ago, on

precisely the same plan as that adopted by our fanciers at the present day:-"A kind of anthus, goldfinch, or fool's-coat, commonly called a drawwater, finely marked with red and yellow, and a white bill, which they take with trap cages in Norwich gardens, and fastening a chain about them, tied to a box of water, it makes shift with bill and leg to draw up the water into it from the little pot hanging by the chain about a foot below." I once saw a goldfinch which, as is not unfrequently the case with the bullfinch, had become quite black in confinement from feeding too freely on hempseed.\* The head was darker than the rest of the plumage, and had a deep bluishblack tinge, the general shape of the bird, and the beak, alone affording any clue to its identity. This is the only instance of the kind in this species I have ever met with, although a bird so generally kept in confinement. A common name for this bird in Norfolk and Suffolk is "King Harry," or King Harry Redcap, in contradistinction to King Harry Blackcap, applied to the blackcap warbler (Curruca atricapilla).

# CARDUELIS SPINUS (Linnæus).

#### SISKIN.

The pretty little Siskins visit us regularly towards the end of autumn, and again on their return northwards about the end of January, but their numbers vary considerably in different seasons, and are not always dependent upon the severity of the weather. I have met with parties of ten or twelve in a flight, in planta-

<sup>\*</sup> Mr. Newman has recorded in the "Zoologist" (p. 4994) the fact of a hawfinch, kept in confinement for six years, having become almost entirely black from the same cause.

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tions, as late as the 27th of January, twittering amongst the top branches of ash and fir trees, but except in solitary cases have never known them to be observed later. A Norwich bird-catcher assured me that on one occasion he caught a hen siskin in May, which appeared to have been nesting, but this in all probability had escaped from confinement, as some of my own birds have done occasionally. As cage pets, I know none which so soon become tame and contented with their new existence, but, like the redpoles, they are liable to grow too fat, from over feeding, with but little exercise. A very interesting account of the nesting of a pair of siskins, in confinement, at Yarmouth, was inserted in the "Zoologist" for 1845 (p. 1065), by Mr. John Smith, of that town. The nest is described as very neat and substantial, composed of moss, and a little cotton wool, mixed with other materials from old nests supplied, and was principally the work of the female. It was built on some soft green moss, placed at one corner of the bottom of the cage, and the first egg was laid on the 6th of June, and six were deposited by the 12th, when the whole were removed, being required for Mr. Smith's collection. I have at the present time a live pair, of which the male by some accident has lost the use of one wing, but, in spite of this drawback, he seems perfectly happy, climbs about the wires with his bill and feet, and nimbly follows my hand to feed on the proffered groundsel. Unable, from his injury, to fly up from the bottom of the aviary, a slanting perch is always placed against one side, up which he climbs to the lowest wire work, and then ascends to his usual roosting place, the whole proceeding being accomplished in the most methodical manner, and with evident appreciation of the ladder supplied to him.

It is very amusing to study the different temperaments, or individualities, if one may use the term,

of birds in confinement. I often supply my own pets with a feast of green food, to observe the various traits and passions excited by the sudden treat greediness and generosity, anger and gentleness, dignity and impudence, alternately marking the character of each feathered inhabitant. The cock brambling illtreats his wife, and pecks at the chaffinches, the hen brambling revenges herself on a hen linnet, and though in full possession of a dainty morsel prefers fighting to eating. Presently a male greenfinch drives her in turn from the illgotten store, and conscious of superior strength, finishes it undisturbed. In another quarter a larger piece of groundsel is causing all sorts of unpleasantness amongst goldfinches, siskins, and redpoles. The hen bullfinch snaps at her mate, and insists on satisfying her wants before him, whilst he, in bodily fear of his spouse, looks the very image of a hen-pecked husband. Tired of watching her, he now dashes amongst the redpoles and other smaller fry, and taking their share to himself, plays bully to perfection. What a burlesque on man! Who does not know the pompous wordy tyrant, who, having found his match at home, revenges himself, for his domestic littleness, by hectoring all he dares amongst his fellows? Great, greedy bullfinch! Buntings, chaffinches, linnets, all give way before him, as he flits from sprig to sprig, not so much enjoying the feast as upsetting those who do. But now comes a little champion, a very David to that proud Goliath! and in an instant the tiny siskin male, with open beak and angry notes, drives at his ruddy breast, and bully fairly scared, makes an abrupt retreat. Generous as brave however, the little hero feeds with the redpoles, and others of his size, in perfect harmony, though ever ready to assert his rights. Yet all siskins are not equally plucky, nor all bullfinches and bramblings spiteful and pugnacious, so varied are the individual peculiarities observable in the same species. The great snow-buntings caring little for this green food, keep by themselves upon an upper perch, and gravely watch the noisy crowd; too gentle to resent the spiteful snappings of the passing birds, whilst treating with contempt such little foes. And thus, amongst the feathered race, we find the semblance of our human failings, with here and there our virtues copied too. Studying each little trait, the mind reverts to scenes in which as strange a diversity of character has presented itself amongst the members of a public school. Who that has seen some fresh caught bird, panting and frightened from its recent capture, turned loose amongst its future mates, but has felt some sympathy for that little stranger; remembering, only too well, the awful day when he himself was "the new boy?"

# LINOTA CANNABINA (Linnæus).

#### COMMON LINNET.

Common throughout the year and breeds with us, migratory arrivals in very considerable numbers adding to the flocks in autumn. Old males of this species, netted, with the rose-coloured breast, at the close of the breeding season, will retain the same in confinement throughout the winter, but once lost through moulting, it is not re-assumed. The general effect, however, of cage life upon the linnets and redpoles, appears to be, to change their red tints into dull yellow, and on one occasion I shot a male linnet in summer, out of a small flock, which had a yellow instead of a rose-coloured breast, even in a wild state. Varieties of this species are not often met with, but Mr. T. E. Gunn, in "The Journal of the West Riding Naturalists' Society," (p. 148), describes one, netted at Costessey, near Norwich,

in the winter of 1863, as "a male bird, with a band of white feathers extending quite round its neck, having the appearance of a collar at a distance." I once found a nest of the brown or grey linnet, as this bird is respectively called in its summer and winter plumage, in a small bush on Surlingham broad, composed entirely, inside and out, of moss gathered from the surrounding marshes. Nothing but the eggs could have identified it as belonging to the common linnet, the bird having in this instance so entirely discarded its usual style of nesting, and contented itself simply with the materials nearest at hand.

## LINOTA CANESCENS (Gould).

#### MEALY REDPOLE.

The Mealy Redpole can scarcely be called an annual winter visitant, although flocks of more or less extent may be met with in several consecutive seasons; but now and then, from some cause not easily explainable, their total absence is remarked upon by our birdcatchers, and as I have frequently experienced when most wanting a specimen to supply some loss in my aviary, not a bird has been netted the whole winter through. Their appearance and numbers also, as with the more common species, cannot always be accounted for by the severity of the weather (in this country at least), either at the time of, or subsequent to, their arrival on our coasts. In 1847 and 1855, the latter a very sharp winter, they were extremely plentiful; and in 1861, from the middle of October to the close of the year, probably the largest flocks ever noticed in this district, were distributed throughout the county. Hundreds of them were netted by

the bird-catchers, being far more plentiful than the lesser species, and many still retained the rich flamecoloured tints of the breeding season. Yet the weather throughout this period was not unusually severe; and in the previous winter of 1860-1, hardly a bird was taken, though remarkable for its intense frosts; and again in 1863 and 64 they were equally scarce, with an almost equal degree of cold. I am not aware that the nest of this species has ever been found in Norfolk; but Mr. Alfred Newton has recorded in the "Zoologist" (p. 2382) the occurrence of a male specimen, in full breeding plumage, at Riddlesworth, in July, 1848, which he had "no doubt had bred there"; I was also assured by one of our Norwich bird-catchers, that in the spring of 1862, after the large influx of the previous autumn, he observed a flock of twenty or thirty as late as the middle of April. Both the mealy and lesser redpoles, from their tameness and engaging actions, are most desirable additions to the cage or aviary, but from their happy contented natures are liable to grow too fat, and like ortolans, when over fed, drop off the perch in a fit of apoplexy. Mr. Charles Barnard, of this city, before mentioned as so successful in breeding the bramblings in confinement, had a brood of young mealy redpoles, hatched off in his aviary at Stoke, in July, 1860, a very uncommon circumstance with this species. A pied variety of this bird, also an unusual occurrence, is recorded by Mr. T. E. Gunn in the "Journal of the West Riding Naturalists' Society" for 1864 (p. 148), which was killed at Heigham, near Norwich, in the winter of 1857.

### LINOTA LINARIA (Temminck).\*

#### LESSER REDPOLE.

The Lesser Redpole may be classed as a resident in Norfolk, as well as a regular and, in some seasons, very numerous winter visitant, its nests being found year after year in certain favourite localities. I have known as many as four taken in one summer from a garden at Bramerton, which has been a favourite resort of these little creatures for a considerable time, and they also breed regularly at Eaton, near Norwich, from whence I have had the young birds in August, as well as their delicate blue and speckled eggs, and the exquisite little structure in which they are laid. In these localities, the nests have been mostly found in the apple and cherry trees, but Mr. Alfred Newton, in a communication to Mr. Hewitson (Eggs Brit. Birds, 3rd ed.), remarks that near Thetford, where it also breeds yearly, the nests are placed "close to the trunk of the tree in plantations of young larch firs of no great height," though he once found one at least sixty feet from the ground, and placed near the outer end of a branch. In Suffolk, several nests have been found by Mr. Dashwood in the neighbourhood of Beccles. the two preceding species, the lesser redpole often retains in confinement, throughout the winter, the rosy

<sup>\*</sup> As this species is almost entirely replaced in Scandinavia by the preceding one, it is clearly the mealy redpole which Linnæus described under the name of *Fringilla linaria*; but as I have endeavoured in this work to follow the nomenclature of Yarrell's "British Birds," I retain the specific name "linaria," with that of Temminck as the authority for it—he having been the first ornithologist who mis-applied it in this sense.

tints on the head and breast, which properly denote their breeding plumage. A male in my aviary netted in November, 1863, and chosen from many for the beauty of its plumage, did not lose its pinky hue until the autumnal moult of 1864. Once lost, however, by the actual shedding of the feathers, the red breast is not re-assumed, and even the red poll changes to a dull yellow, the effect no doubt of an artificial state of existence. Like the mealy-redpole and the little siskins, this species becomes a most engaging pet in confinement; indeed, can hardly be said to be otherwise than tame, from the moment of its capture, so fearless and contented does it appear under any circumstances. I have frequently seen these little creatures, like the true "draw-waters," fastened to an open perch by one leg, and with a little bucket and chain attached to the drinking glass, raising their own supplies of water to a level with their beaks.

## LINOTA MONTIUM (Temminck).

#### TWITE.

The Twite is, I believe, only an occasional visitant to Norfolk, on its migratory course, passing southwards in autumn, and again re-appearing for a brief space in the spring. In this neighbourhood, at least, judging from the few birds in any season netted by our bird-catchers, it rarely appears in any numbers, and is decidedly scarce in comparison with the siskin or either species of redpole. A few were taken near Norwich during the extremely severe weather that prevailed in January, 1861, and from that time until the middle of October, 1864, when some four or five pairs were also captured close to the city, I had neither seen nor heard of them hereabouts. A small flock observed at Eaton in

December, 1864, preceded, by a few days only, the heavy snow which set in during the following week, and I think generally their appearance amongst us is indicative of approaching sharp weather. Mr. Dowell has found them in several instances frequenting the Blakeney harbour in winter, feeding on the samphire in small flocks, and a male killed there on the 4th of March, 1847, had assumed the red feathers on the rump, peculiar to the breeding season, and others had slight traces of the same colour. A small flock, which consorted with a few of the common linnets, were also seen throughout the autumn and winter of 1852-3, in one favourite locality, near the pilot's house at Blakeney. Messrs. Sheppard and Whitear\* likewise allude to the partiality of this species for "the seeds of the marsh samphire (Salicornia herbacea) and sea starwort (Aster tripolium)," and state that they are found in the salt-marshes near Yarmouth, so that it is not improbable that those which visit us in winter may remain in the vicinity of the sea coast until driven inland by stress of weather. The above authors were also informed, by the late Mr. Scales,

<sup>\*</sup> A very remarkable confirmation of the migratory habits of certain birds of the finch tribe, is also recorded by Messrs. Sheppard and Whitear in the following terms:-"At half-past five o'clock in the morning of March 20th, 1820, a very extraordinary migration of small birds was witnessed at Little Oakley, in Essex. The attention of the observer was arrested by an uncommon chattering of birds, and looking up he beheld an incredible number of small birds, flying a-breast in a line extending as far as the eye could distinguish them, and three or four yards deep. Their direction was towards the south-east, the wind favouring them; their height only a few yards from the ground. The flock was supposed to consist principally of chaffinches, linnets, twites, and bramblings. None of the two latter species were seen in the neighbourhood after that time; and there is on those shores in the winter season an immense quantity of linnets, more than can be bred in the neighbourhood."

"that this species of finch visits Beechamwell very early in the spring, and feeds upon the seeds of the alder as they drop from the cones," and one example is said to have been killed as late as the 23rd of May.

### PYRRHULA VULGARIS, Temminck.

#### BULLFINCH.

This handsome bird is met with throughout the year frequenting our gardens and orchards in spring. and retiring into the smaller woods and plantations during the nesting season, but it is by no means so plentiful in Norfolk as in some other counties, and is also somewhat local in its habits. So much has been written upon the destruction of buds in our gardens and orchards, by this species in particular, that I could wish to introduce the following remarks by no less an authority, on entomological subjects, than the Editor of the "Zoologist," to the notice of every gardener in the united kingdom. Writing on the larva of Cheimatobia brumata (Zoologist, p. 8699), he says,— "The apterous female of this very common species lays its eggs in the crevices of the bark of various trees and shrubs during November and December; the larvæ make their appearance early in the spring, and commence their destructive career, by eating into the young unexpanded buds. At this time of the year, the bullfinches and titmice render the most important service to the gardener by their activity in devouring this little garden pest." If to this essential benefit to man we add also the consumption of innumerable seeds of thistles, and other noxious weeds, to which they are particularly partial; one individual, in confinement, having been known (Zoologist, p. 9360) to eat two hundred and

thirty-eight seeds of the spear-plume thistle (Cnicus lanceolatus) in about twenty minutes, though plentifully supplied with hempseed as well, I think we may ask for this much maligned species some little consideration, not only for its natural beauty but for those better traits, which in fairness must be set off against any failings. I have before alluded to the plumage of this bird not unfrequently becoming black, when in confinement, from the effects of hempseed; but a curious instance of this strange variation occurring in a wild specimen, is thus recorded by Mr. J. H. Gurney in the "Zoologist" for 1854 (p. 4252):-" Last autumn a gentleman presented me with a bullfinch entirely black, which had been found of that colour in a nest containing three other young birds, all of the ordinary colour. This bird has subsequently moulted, and in doing so has totally lost its black colouring, and has assumed the ordinary plumage of the female bullfinch." I know of no direct proof of the migration of this species, but the extreme brilliancy of tint in some males netted by our birdcatchers in autumn, suggests rather a continental than an insular origin, like the goldfinches before referred to, which are undoubtedly foreigners. These may, however, be only much older birds, which have acquired, through age, a richer and deeper colouring. The provincial name of "Blood Olph" is commonly applied to the bullfinch in Norfolk, in the same way that "Green Olph" is used to denote the greenfinch, as before stated.

### PYRRHULA ENUCLEATOR (Linnæus).

### PINE GROSBEAK.

This rare species has occurred but in very few instances in Norfolk, and the brief records respecting

it seem to consist of a statement by Messrs. Paget, in their "Sketch of the Natural History of Yarmouth," "That a flight of these birds were observed on Yarmouth Denes in November, 1822;" and the fact of a pair having been shot at Raveningham, in the act of building, as noticed by Messrs. Gurney and Fisher, in their "Birds of Norfolk" (Zoologist, p. 1313). Mention is also made by the latter authors of a pair which were said to have built and laid four eggs in a fir-tree, near Bungay (Suffolk); but in a subsequent note, a doubt is expressed as to the accuracy of this last account, from a comparison of the eggs then taken with foreign specimens. Mr. Lubbock also in his "Fauna" remarks-"A pair are now preserved in Yarmouth, shot near that place, and which are said to have had a nest, which was unfortunately destroyed." This latter record, as I have recently ascertained from Mr. Lubbock, was communicated to him by the late Mr. Girdlestone, of Yarmouth, and he is also inclined to believe, with me, that the pair of birds here alluded to, are those entered in the sale catalogue of Mr. Miller's collection, but which, with other rarities dispersed at the same time, are probably no longer in existence.

# LOXIA CURVIROSTRA, Linnæus.

### COMMON CROSSBILL.

This singular and most interesting species is a frequent but very uncertain visitant, appearing generally in severe weather, and occasionally in considerable numbers. Of late years I have notes of their appearance in 1853-4-5 and 6, and again in 1860-1 and 2; but with the exception of the winters of 1853-4, and 1861, the specimens obtained were very few, and those

invariably during the spring months. One might have imagined that the considerable increase in our fir-plantations of late years, throughout the county, would have caused these birds to visit us, not only more regularly, but in far larger numbers than formerly; but this does not appear to be the case, nor am I aware of any authentic instance of the nest or young of the Crossbill having been found in Norfolk. It is still by no means improbable that they may nest here, at times, though passing wholly unnoticed amongst the dense foliage of the Scotch and other firs, and the localities they frequent being for the most part strictly preserved, few opportunities are obtainable for a careful search. The real time of their breeding, however, is by no means generally understood, since their occasional appearance here during the summer months,—as in May, 1856, when three pairs were shot near Yarmouth; in 1862, when several were procured in the same month; and in 1855, when a single pair were shot at Blickling on the 17th of July,—is usually looked upon as an indication that in such instances the birds had remained for nesting purposes: whilst the observations of most modern naturalists prove that the crossbill nests rather in winter than summer, and amidst the snows of more northern regions in January, February, and March. So that our occasional visitants in May, June, and July are not improbably stragglers on their way southward, consisting of old birds with their attendant broods. Mr. Wheelwright, so well-known to the readers of the "Field" as the "Old Bushman," and whose admirable notes, founded on personal explorations, have done much to advance the science of ornithology, thus speaks of the crossbill in Sweden (Gould's Birds of Great Britain)-"The pairing season begins about the middle of January, when both sexes utter a very pretty song. \* \* \* They commence nesting often in the end of January, always by the

middle of February; we have generally taken the first eggs in March, and in the end of April we have shot young flyers. They then appeared to leave us for the summer, and we rarely saw them again till autumn. That their periods of breeding are regulated by the weather I do not believe, for a bird that can sit when the snow lies deep on the forest, and the fir-trees are covered (which is the usual case), would care little whether the cold was a few degrees more intense than usual." The same writer has also published in his "Spring and Summer in Lapland," a very full and apparently most satisfactory account of the various changes of plumage in this species. Macgillivray, in the appendix to his "British Birds" (vol. iii., p. 704), gives a description of the habits of these birds as observed by Mr. J. M. Brown, in Scotland, in which the following passage occurs as to their early nesting :--"I was attracted one day in the end of February, during a heavy snow-storm, by the peculiar chirping of nestlings in the act of feeding; and on ascending the tree found five or six crossbills almost fully feathered and quite vigorous, notwithstanding the severity of the weather, snugly huddled together in a nest composed of small twigs externally, and lined with matted wool. In mild seasons I suppose they breed even in this country in the month of January." Two other instances are also given by the same author, in which nests were discovered in March and the beginning of April. St. John, Yarrell, and Hewitson in like manner refer to the same peculiarity, the latter remarking that, "their early period of breeding may account for what puzzled us at the time—our seeing the crossbills whilst in Norway, during the months of May and June, always in flocks, most likely accompanied by their young ones." I have more particularly drawn attention to this subject, and given the above extracts in the hope that individuals who take an interest in such

matters and may have the opportunity of searching our fir-plantations, may do so at the season most likely to afford a favourable result, and thus with care and patience I have little doubt that, at least, the occasional nesting of the crossbill in Norfolk, will become an ascertained fact. Sir Thos. Browne, from the following note, evidently regarded this species, in his time, as rather a summer than a winter visitant to Norfolk:-"Loxias or curvirostra, a bird a little bigger than a thrush, of fine colours and pretty note, differently from other birds, the upper and lower bill crossing each other; of a very tame nature, comes about the beginning of summer. I have known them kept in cages; but not to outlive the winter." According to Messrs. Sheppard and Whitear, nests have been found in Suffolk in two authentic instances, in one case completed by the 26th of March, and a notice of the appearance of the crossbill in the same county during the winter of 1821-2, in considerable numbers, was communicated by the late Mr. J. D. Hoy, of Stoke Nayland, to "Loudon's Magazine of Natural History" (January, 1834), and will be found repeated also in Macgillivray's "British Birds," vol. i., p. 426. Amongst other observations on their singular habits, Mr. Hoy alludes particularly to their tameness, both in a wild state and in confinement, and speaks of catching numbers of them with a horsehair noose fixed to the end of a fishing rod, which he slipped over their heads whilst busily feeding, and others were secured with a limed twig. The cones of the larch were cut off with the beak, and held firmly in both claws, but to the Scotch fir and other larger cones they would cling with their feet, whilst they extracted the seeds with their bills in the most dexterous manner. In 1853, when as before stated, crossbills were unusually plentiful, as many as five pairs were shot at one time, in a plantation at Bowthorpe, near Norwich, a very

favourite locality. In this instance, they exhibited a remarkable indifference to the sound of a gun, merely flying off to the next tree after each report, and apparently unmindful of the loss of their comrades till the whole flock was destroyed. They are extremely amusing in confinement, from their quaint parrot-like actions, and are very tame and sociable. I once saw an unfortunate specimen, which had literally been starved to death through a malformation of the beak, the upper mandible, instead of merely crossing the lower, growing straight downwards to more than half its natural length.

# LOXIA PITYOPSITTACUS, Bechstein.

### PARROT-CROSSBILL.

This rare species, by no means easily distinguished from large varieties of the common crossbill, has not hitherto been included amongst the birds of Norfolk, but since the publication of Messrs. Gurney and Fisher's "List," in 1846, one authentic example, at least, has occurred in this county, and entitles it to a place in the present work. This specimen, identified by Mr. Alfred Newton, was described by him in the "Zoologist" for 1851 (p. 3145), as killed near Riddlesworth Hall, where it is still preserved in Mr. Thornhill's collection; and the same gentleman also mentions a "fine red male," in his own possession, which was shot at Saxham, in Suffolk, in November, 1850, and was purchased by him in the following March from Mr. Head, a bird-preserver, at Bury St. Edmund's. From that time I know of no further record of the appearance of this bird in either of the above counties until the following note was inserted in the "Zoologist" for 1863 (p. 8845), by Mr. Thomas

Huckett:—"Seven specimens of the Parrot Crossbill, five of them males and two females, were received by Mr. J. A. Clarke for preservation, having been killed near Brandon, in Suffolk, on the 24th of October, 1863." On communicating with Mr. Clarke, a bird preserver, at Homerton, near London, he most obligingly furnished me with the following particulars:-"They were killed (he writes) on the Norfolk side of Brandon, on some trees near the railway station, but are not in very good plumage, as they were shot when moulting. My friend has three in a case, two males and one female; the other four he gave to me, and I preserved two of them, the other two were so battered about that I did not stuff them, but being rare birds I skinned them, as I wanted some feathers from them to mend one of the others." I am indebted to Mr. Clarke for the two latter now before me; but from the size and form of their beaks, as compared with Mr. Newton's (Saxham) bird, and a foreign specimen in the Norwich museum (No. 126), there is no doubt that these are merely fine examples of the common crossbill, wanting the abrupt curvature and depth of the upper mandible, peculiar to the larger species, also particularly wide across the back of the head, indicative of increased power in its stoutly built and compressed form of beak. If, therefore, these two skins are identical, as they most probably are, with the stuffed specimens, Mr. Huckett has somewhat too hastily announced the appearance of parrot-crossbills so plentifully in Norfolk. On the 2nd of March, 1864, two more crossbills, both red males, were also shot near Brandon, which, from their size, were at first supposed to belong to the larger species, and as such they are described by Mr. Gould, in his "Birds of Great Britain;" but it is only right to add, that he had not himself seen the specimens, but relied upon the information sent him. One of these is now in

the collection of Mr. Newcome, of Feltwell, who kindly presented me with the other, and having recently submitted my own bird to the inspection of Mr. Alfred Newton, and one or two other well-known authorities in such matters, I feel perfectly satisfied with their decision, that it can be considered only as one of the large and very puzzling forms of the common crossbill. Mr. Newton, in communicating the verdict as above, adds, "Your specimen appears to me to belong to Brehm's "Crucirostra montana," which is the most parrot-like of the sub-species, into which he divides Loxia curvirostra of Linnæus. Its beak is almost exactly represented in the plate, illustrating his paper, in "Naumannia" (1853, fig. 9), and it is described by him at length in the same volume, pp. 188-190. Brehm makes six sub-species of parrot-crossbill, and five of common crossbill, besides distinguishing a lesser crossbill and a red-winged one, the latter of which he divides into two sub-species." This is indeed carrying to the very verge of absurdity the too great tendency of certain modern naturalists, to invent specific differences. Mr. Wheelwright thus writes of the nidification of this rare species as observed by himself in Sweden:-"The parrot-crossbill generally goes to nest a little later than the common one. By the middle or end of April the young birds are strong flyers, and we never find a nest with eggs after that month. The nests of both species are very much alike, but that of the parrot-crossbill is thicker and larger than the other. It is built outwardly of dried sticks, and with moss of two kinds, and lined with shreds of the inner bark of the fir-tree, with here and there a feather or two. The eggs of the parrot-crossbill are often scarcely larger than those of the common species, but they are usually shorter, and their markings are of a bolder character. Their full number appears to be three, for we very rarely find four in a nest."

### LOXIA BIFASCIATA, Nilsson.

#### EUROPEAN WHITE-WINGED CROSSBILL.

Until within the last few years, it would seem that under the name of the "White-winged Crossbill," two distinct species had been hitherto confounded, and to M. de Selys-Longchamps, the Belgian naturalist, belongs the credit of pointing out and establishing the real points of difference between the two forms—one, strictly American, the other confined to the northern parts of Europe. Under the original name of the white-winged crossbill, the occurrence of various specimens in different parts of England have from time to time been recorded; but the difficulty now presents itself of determining which were American and which European, or whether indeed individuals of both species have really occurred in this country. Yarrell, in the third and last edition of his "British Birds," has devoted much space and labour to the identification of these two birds, and whilst admitting the difficulty above expressed, states that five white-winged crossbills submitted to him for inspection, all killed in England, undoubtedly belonged to the European species, and that of these one was killed at Thetford.\* I am aware of but one bird of this kind having been killed in Norfolk, and as that was obtained in the neighbourhood of Thetford, I think there can be little doubt that the one mentioned by Yarrell, and that described below, are identical, and that therefore the European species, the Loxia bifasciata of Nilsson, may be fairly placed amongst the "Birds of

<sup>\*</sup> This bird, formerly in Mr. Doubleday's collection, was presented by him to Mr. Dix, of West Harling, who still preserves the specimen.

Norfolk." With reference to this Thetford specimen. the following communication was made by Mr. C. B. Hunter to the "Zoologist" (p. 1498):—"Four or five of these birds were observed on some fir-trees near Thetford, in Norfolk, on the 10th of May last (1846), one of which was shot, and came into the possession of Mr. Robert Reynolds, bird-fancier, of Thetford. About a week before this, Mr. Reynolds purchased a specimen of a bird-stuffer at Bury St. Edmund's, which had but just been set up, and was obtained in that neighbourhood." This latter example from Bury is now in the possession of Mr. J. H. Gurney, and belongs most undoubtedly to the European species. Another whitewinged crossbill is also recorded by Yarrell, on the authority of the late Mr. Hoy, but of which species is not stated, to have been shot in Suffolk some years since, from a flock of five or six, by Mr. Seaman, of Ipswich. The Norwich museum does not at present possess an example of the European species, but the following are the most marked distinctions, as shown by M. de Selys-Longchamps, between it and the American bird, the Loxia leucoptera of Gmelin.-L. bifasciata, larger in size generally, the beak almost as large as that of the common crossbill and less compressed, and the points less crossed over and less elongated than in L. leucoptera. The plumage of a duller red, and the tail feathers less forked and more obviously bordered with yellow. To which may also be added that the claw of the hind toe is shorter and not so stout. One authentic instance of the American species having occurred in England is mentioned by Yarrell; a specimen picked up dead on the shore at Exmouth on the 17th of September, 1845, from which the figure in the 3rd edition of his "British Birds" was taken.

### AGELAIUS PHŒNICEUS (Linnæus).

#### RED-WINGED STARLING.

There is no record of the occurrence of this American Starling, in a wild state, in England, until the 2nd of June, 1843, when a specimen now in the possession of Mr. J. H. Gurney, and purchased by him in the flesh, was shot near Barton broad.\* The figure in Yarrell's "British Birds" was taken from this bird, which is thus described by Mr. Gurney in the "Zoologist" (p. 317), "a male, in the plumage of the second year, and apparently approaching the period of another moult. It was in good condition; its stomach filled with the remains of coleopterous insects, and its plumage free from any marks of having been kept in confinement." It was also said to have been in company with another bird of the same kind, and the locality in which it was found is exactly in accordance with the habits of this species, which, as remarked by Wilson, is called in America the marsh blackbird or swamp bird. A second example is recorded by Yarrell to have been killed "amongst the reeds at Shepherd's Bush, a swampy situation, about three miles west of London," in the autumn of 1844; and very recently a notice appeared in the "Zoologist" (p. 8951) of another having been shot on the 25th of December, 1863, at Sidlesham, Sussex. This bird was purchased in the flesh by Mr. W. Jeffery, jun., of Ratham, Chichester, who described it as in good condition, and showing no signs of having been in con-It had some round black seeds in the gizzard, and was killed out of a hedgerow.

<sup>\*</sup> Not at Rollesby, as erroneously stated by Yarrell in quoting a communication from the Rev. R. Lubbock.

# STURNELLA LUDOVICIANA (Linnæus).

#### AMERICAN MEADOW-STARLING.

The first example of this handsome species known to have been killed in the British isles (or, I believe, in Europe), was obtained in Suffolk in the spring of 1860, as recorded in the "Ibis" for the following year (vol. iii., p. 177) by Mr. Sclater, the indefatigable secretary of the Zoological Society. In the interesting paper in which the above fact is communicated, the same gentleman also refers to the appearance, on several occasions in 1854, at South Walsham, in this county, of a similar bird, and from the authority on which this further evidence is given, I feel justified in placing it also in the Norfolk "List." The following are the particulars given by Mr. Sclater of the occurrence of this rarity in both this and the adjoining county:-" A short time ago the Rev. Henry Temple Frere, of Burston rectory, near Diss, in Norfolk, forwarded for my inspection a specimen of the Meadow-Starling of North America (Sturnella ludoviciana), stated to have been killed in this country in the course of last year. Its plumage was in fine condition, and did not show the slightest traces of the bird having been in captivity. Indeed, though living examples of this species have been occasionally brought to this country, the meadow-starling is certainly not an ordinary cage bird. I may mention that the aviaries of the Zoological Society of London do not at present contain a specimen of it. Being convinced, therefore, that if the bird had really been killed in England it might be regarded as a fresh addition to the already numerous list of "accidental visitors" to these shores from the New World, I requested Mr. Frere kindly to

ascertain all the particulars he could respecting the time and place of its occurrence. In reply, Mr. Frere informed me that the specimen in question was killed in March, 1860, by Robert Baker, servant to the Rev. T. L. French. It was shot close to the railroad in a rough meadow at Thrandeston, in Suffolk. At this time it was picking about among the knots of earth, and would not allow Baker to approach within thirty yards. Mr. Frere also told me that he had good grounds for supposing that this was not the only instance in which this species had been observed in England, his brother-inlaw, Captain Jary, having on several occasions watched, for some time, a bird of similar appearance at Walsham, in Norfolk, in October, 1854. Captain Jary, who though not a scientific ornithologist, has a very good knowledge of English birds, in answer to inquiries on this subject, writes as follows:- 'Having referred to Sturnella ludoviciana in Audubon's plates, I am quite sure it is the bird that I saw at Walsham, in the month of October, 1854. I have it in my diary. I thought when I first saw it that it might be a golden oriole. The first time I observed it was in front of the house, near a plantation. I had no gun with me or could have shot it. I watched it for some time on the soft ground, but heard no note. I saw it again next day in a field among some larks; it flew away with a quick and hurried flight. Two days afterwards I saw it a third time, but I could not get a shot at it, as it flew away when I was about seventy yards off.' After a subsequent examination of Mr. Frere's specimen, Capt. Jary repeated his conviction of the bird observed by him having been of the same species."

In some further remarks on the genus Sturnella and its geographical distribution, Mr. Sclater describes the American meadow-starling as "a well known bird in the United States of America and Canada, where it

commonly goes by the name of the meadow-lark, from the strong resemblance of its habits and flight to the members of the genus Alauda. It has, however, in reality nothing to do with the lark family, being strictly a member of the American Icteridæ or hang-nests. This group takes the place of the starlings in the New World, and is closely allied to them in structure; but besides other differences its members have only nine primaries in the wing, whereas in the starlings (Sturnidæ) of the Old World the tenth outer primary is always present."\* A foreign specimen of this very striking looking bird will be found (No. 129\*) amongst the "British Birds" in the Norwich museum.

# STURNUS VULGARIS, Linnæus.

#### COMMON STARLING.

The pert, lively, noisy starling, is one of my special favourites; everywhere frequenting our homes like the sparrow, yet never absent from our walks, whether, singly, hurrying to its nest in spring, or wheeling in dark masses at the close of the breeding season. I love to listen to its strange whistle, one of the earliest indications of returning spring, when, on the first bright sunny days in February, perched on the parapet or

<sup>\*</sup> Mr. Sclater also gives the following references to the works of American Ornithologists, in which accurate descriptions are given of the appearance and habits of this well-known transatlantic species:—Wilson's "American Ornithology," vol. iii., p. 20, pl. 19, fig. 2 (where the bird is called Alauda magna); Jardine's Ed. of Wilson (1832), vol. i., p. 311; Audubon's "Ornithological Biography," ii., p. 216, and v. p. 492 (Sturnus ludovicianus); Audubon's "Synopsis of the Birds of North America," p. 148; "Birds of America," pl. 136; Baird's "Birds of North America," p. 535.

chimney of the house, it utters a confused song, now low, now shrill, and like the baffling sounds of the ventriloquist apparently coming from any point but the right one. How statelily the old pair that nest in the gable end of the house, pace up and down the fresh mown grass-plot with no little runs, or hasty actions, like the thrush and blackbird, but each foot firmly placed; and as with rapid movements of the head and beak, they pick the insect atoms from the turf, the sun glistens on their shiny plumes, whose rich metallic tints show mingled shades of green and purple. In the choice of localities for nesting purposes no little nook about our homes escapes them. An open space beneath the tiles or slates, the cap of the water pipe, if the wood work is broken, some chance aperture in the eaves or gable, are all made available for their young broods, and none but the pert sparrow, who sometimes pays dear for his impudence, attempts to disturb them. Apart from our dwellings, the ivied wall, the hollow tree, the church tower with its many openings, or venerable ruins, rich in the accommodation afforded by the crumbling stonework, have all attractions for these social birds, and though our sandy cliffs are unsuited to their purpose, they nest in large numbers in that remarkable chalk formation, which crops out by itself on the Hunstanton beach. Here they may be seen, in summer, constantly passing in and out of the various fissures, where, far out of reach even of the most venturous climber, they rear their young in the dark recesses, and the whole cliff resounds with the cries of the nestlings, awaiting the return of their respective parents. In the more yielding surface of the brown Carstone which adjoins the chalk, they either perforate their own nest-holes, or enlarge for their use the previous borings of the little sand-martins; whilst here and there, projecting straws and feathers show where

the lazy sparrow has taken possession, though the starling is anything but exempt from the charge of intruding in like manner upon the homes of others. Being an early breeder, the young of the year in their sombre brown may be seen in small flocks by the middle of May, and later still, in June and July, young and old together combine to form those enormous masses which have at all times excited the attention of naturalists as they gather to their roosts in the evening. By day one sees them scattered about in smaller parties, in meadows and pastures, or in the rich grazing marshes near the rivers and broads, and it is in the neighbourhood of these last named waters, that in Norfolk the chief bulk of these birds may be seen during summer and autumn. Sometimes when enjoying the delights of a cruise, one comes upon a flock of many hundreds together, rising with one accord in indescribable numbers, now lengthened out into an immense grey line, now massed together in a dense black cloud, as they turn and twist with a marvellous precision of movement. Sir Thomas Browne, far too good an observer to pass unnoticed so interesting a sight, thus writes of their collecting amongst the reeds at night-"I went to the marshes about sunset, where, standing by their usual place of resort, I observed very many flocks flying from all quarters, which, in less than an hour's space, came all in and settled in innumerable numbers in a small compass." Any traveller from Norwich on the Yarmouth line, when looking towards the river near the Brundall station, may see them between seven and eight o'clock during the summer evenings, making for the reed-beds on Surlingham broad; and here in some places, as I have had frequent opportunities of witnessing, so great are the numbers that nightly assemble, that the reeds are literally trampled down with their weight. To those at all interested in the

habits of birds, I know few sights more likely to excite wonder and admiration than the regular arrival of the starlings from all quarters to any particular broad. long as ever daylight remains, the different flights may be seen arriving and blending with the earlier masses; now skimming over the reed-stems in their rapid movements, now lost amongst the deepening shades upon the marshes, and again appearing for a moment in the last gleam of daylight on the water, and thus they continue their varied evolutions with no little noise and bustle, till all are at length settled in their accustomed resting places. To have any conception, however, of the numbers thus collected together in no very large amount of space, it is necessary to row quietly about the broad some few hours later, when no sound but the deep notes of the coots and water-hens, or the cry of the dabchick, is heard in the stillness of the night. Presently, in passing the side of a reed-bed, a confused rustling noise bespeaks the roost of the starlings. The least splash of the oars, or the sound of the voice, sends confusion amongst their ranks, whilst a shout or the knocking of an oar on the boat-side causes an uproar so loud and simultaneous, that I can liken it to nothing but waves in a storm breaking heavily on a pebbly beach. With the earliest appearance of daybreak, these birds may be seen again departing, at first singly or in detached parties, followed later by the main bodies, and dispersing in all directions for their morning's meal. As soon, however, as sharp weather sets in, and the reeds are no longer available for their roost, the starlings leave the broads and seek more sheltered quarters in the big woods, or ivied walls and shrubs of our houses and gardens. That these immense flocks are not altogether composed of our resident birds, is evident from their being more frequently picked up at the foot of our lighthouses than almost any other of those common species which receive migratory additions in autumn; indeed, the late Bishop Stanley, in his "Familiar History of Birds," states that in 1836 the astonishing number of seventeen dozen starlings were picked up near the lighthouse at Flamboro' head, "killed, maimed, or stupefied," by flying against the glass. A most extraordinary instance, however, of the appearance of these birds, in enormous masses, was kindly communicated to me in the following graphic terms, by Mr. J. G. Davey, of the Manor House, Horningtoft, about five miles from Fakenham. Under date of September 4th, 1864, he writes,—"One night last week I watched a single flock, which appeared to extend over about five acres as they were wheeling around, when another mass came from the south-west: I can form no estimate of the number; the former flock I considered large till these came, they also circled round and the smaller lot joined this immense flock, and it seemed as if it was putting twenty people into a London crowd, it appeared no larger than before. They settled down in the wood in two parties, and occupied about thirty acres. Having been told that they killed the bushes and underwood, I went the next evening to shoot at them and frighten them away. There were not half so many as the previous evening. I got quite up to them and threw a stone into the bushes, when they rose about fifteen yards off, and I shot into them both barrels. They flew round and alighted again; this I did shooting seven times, and killing so many, that as I found I could not drive them away I was disgusted at such wholesale slaughter, and came away intending to be there earlier and keep shooting to prevent their settling another night; but though a great many came, there were not near so many as before. From whence so many come I cannot conceive; in the day they go off in small parties to feed, and at an hour before sundown begin to return. I cannot think they were all English hatched birds. Starlings build in churches and buildings. Portion them off, therefore, so many to a church; if you like let a few go to chapel. But that is a question for the mathematically minded naturalist or ornithologist to determine." It would be impossible to account for such an influx as this, otherwise than as caused by arrivals from a distance, and this view is quite borne out by the observations of naturalists in other parts of the kingdom.\* The late Mr. Thompson, of Belfast, gives much valuable information on this point in his "Birds of Ireland," remarking from his own observations, "In that portion of the north of the island with which I am myself best acquainted, there is nothing irregular in the migration of starlings; they do not await any severity of weather; and although they may occasionally change their quarters when within the island, yet of all our birds they present the clearest evidence of migration, as they are annually observed for several weeks to pour into Ireland from the north, and wing their way southward." As residents, also, the starlings are spoken of by the same author, as by no means "generally spread over Ireland as they are over England in the breeding season; but are confined to comparatively few favourite localities, which are chiefly in pasture districts." Very recently a notice appeared in the "Zoologist" (p. 9211) of "an extraordinary arrival of starlings in Ireland" during the month of June, 1864; more particularly remarkable for their appearance, in large flocks, at so early a season. In this instance they were seen to arrive "across the sea as if from the Welch coast, due east, and pass over the island in a westerly direction." Being an extremely sociable species, starlings may be seen con-

<sup>\*</sup> In Professor Ansted's interesting work on the "Channel Islands," the starling is described as a winter visitant only."

sorting together in small parties during every month of the year, and whilst some are feeding their first brood, others in parties of eight or ten may be seen still roving about, free from and apparently indifferent to parental duties. The same thing is however observable in many other gregarious species. Flocks of sparrows still frequent our farm premises, whilst others are busy nesting, and even in the middle of May I have found skylarks congregated together, and paired couples, at the same time, tending their recently hatched young ones. From these, and other observations on the habits of seabirds as well, to which I shall hereafter refer in treating of the gull tribe, I have come to the conclusion, that amongst birds as in the human race, there are some individuals for whom an independent existence has greater charms than a wedded life, and whether the summer flocks I have just alluded to, are composed indiscriminately of spinsters and bachelors, or consist, with more propriety, of but one sex, there is little doubt that a portion at least of the feathered tribe are exempt from the obligation to "increase and multiply." Pure white and other varieties are occasionally met with.

### PASTOR ROSEUS (Linnæus).

# ROSE-COLOURED PASTOR.

This beautiful species, as will be seen by the following list of specimens, has occurred in many instances in this county, but although appearing with a strange regularity between 1853 and 1856, I know of no examples, either seen or procured during the last nine years. It is noticeable, also, from the subjoined records, that these birds usually visit us in autumn, appearing singly and in various stages of plumage; but occasionally a straggler

is met with during the summer months, at which time they are more frequently observed in the southern counties.

1853, August 23. A nearly adult male, near Wymondham, now in the collection of Mr. Newcome, of Feltwell. This is no doubt the same bird, recorded by Mr. Gurney in the "Zoologist" (p. 4053), as killed "near Norwich," about the same date.

1855, August 14. An adult male was killed at Hevingham, and came into the possession of Mr. Alfred Master, of Norwich, whose brother, Mr. Geo. Master, of Duke-street, Grosvenor-square, London, has another Norfolk specimen, which, strangely enough, some three or four years before, was shot in the same locality, and, I believe, from the same tree, during the cherry season, the man who killed it being engaged on his cherry-tree\* at the time. On the 23rd of the same month, a male was also killed at Sherringham, which is, I believe, in Mr. Upcher's possession.

1856, September. A female, near Yarmouth; and on October 7th, an adult male at Hunstanton.

The admirable figure in Yarrell's "British Birds" was taken from one shot at Brooke, near Norwich, in July, 1838, which was sent to London for that purpose by the Rev. J. Holmes, of Brooke Hall, on whose estate it was killed. Of earlier specimens, Messrs. Paget mention two killed at Yarmouth in August, 1815, and April, 1820; and Messrs. Shepherd and Whitear one near Yarmouth in the summer of 1818. Several specimens

<sup>\*</sup> These birds appear to be particularly partial to this kind of fruit, since Messrs. Sheppard and Whitear, in recording the occurrence of four specimens in Suffolk, remark,—"One was shot upon a cherry-tree at Chelmondiston, and being only winged, was fed with raw meat, and kept alive three months; another was also feeding upon cherries at the time it was killed at Polstead, in the summer of 1818."

obtained also in the adjoining county are recorded by both the above authors; and the occurrence of a fine adult male at Lound, near Lowestoft, in June 1851, is noticed by Mr. J. H. Gurney in the "Zoologist" (p. 3233).

With this family must also be mentioned the Indian MINO bird or MINOR GRAKLE (Gracula religiosa), an example of which, said to have been shot at Hickling in 1848, was subsequently presented to the Norwich museum by Mr. W. E. Cater.\* From the fact of this species being frequently brought over to this country as an amusing cage bird, our English ornithologists have been loath to include it in the "British series" without further evidence of voluntary migration, and its appearance near the coast in the present instance may be easily accounted for on the supposition that it had escaped from some passing vessel. The above, however, being probably the only specimen observed in a wild state in England, and being included by Mr. G. R. Gray in his "Catalogue of British Birds," (though classed amongst the doubtful species,) the particulars of its capture in this county should, I think, find a place in the present work. Mr. Cater thus writes to the "Zoologist" (p. 2391) respecting it in 1849:—"In the latter end of March, 1848, I was informed by a gamekeeper and others, that two very curious birds had been seen by them, at Waxham, near Yarmouth, resembling the blackbird, but with a white bar on the wing. I concluded a mistake had been made, and that the birds were ring-ouzels; but a week after the above mentioned time unfolded the mystery, for a bird, to a distant observer, answering the same description, was shot at

<sup>\*</sup> The specimen above referred to will be found in the 'British Bird' room, but in a separate case, near the entrance from the Fossil room.

Hickling, two miles from Waxham. I have examined it, and find it to be a beautiful male specimen of the minor grakle (Gracula religiosa, Lewin), the only one, I believe, ever killed in England. \* \* \* From the appearance of its plumage when shot, from the look of its feet, claws, and beak, it seems never to have been a caged bird." In a subsequent note in the same journal (p. 2496), Mr. Cater adds a few other, but immaterial, remarks, on the appearance of this grakle, in answer to doubts expressed by one or two correspondents as to its being a genuine wild specimen.

# CORVUS CORAX, Linnæus.

#### RAVEN.

It is strange to observe the changes effected by local causes in the habits of certain species, some as suddenly and rapidly increasing in numbers, as others, yielding to an inevitable fate, become scarce by degrees and finally The Raven in its past and present history extinct. exhibits a remarkable illustration of this law of nature. Sir Thos. Browne, about two hundred years ago, describes this species as "in great plenty near Norwich, and on this account it is there are so few kites seen hereabouts." From that time till the commencement of the present century, probably but little alteration in its numbers occurred, as, in 1829, Mr. Hunt remarks, in his Norfolk "List,"-"This bird is found in woods, &c., in every part of the county." Our next records, however, tell a far different story-Messrs. Gurney and Fisher, in 1846, speaking of it "as still breeding in Norfolk, but in small and decreasing numbers;" and Mr. Lubbock, in the previous year, remarks, "It is seldom found breeding here; when it does so, its nest is sure to be plundered.

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In winter, especially if severe, their numbers increase." Already the fiat of extermination had gone forth against all "feathered vermin," and the modern system of wholesale game-preserving signed the death warrant of many of our indigenous species. At the present time, so great a change has been effected by the above and other causes, in the local history of this fine bird, that after many enquiries I have been unable to ascertain the existence of more than a pair or two of ravens in any part of the county as actual residents in a wild state. On the 11th of February, 1847, a single bird was killed on the Narford road, near Swaffham, as I learn from the Rev. E. W. Dowell; and in March of the same year, Mr. Spalding,\* of Westleton, took three eggs from a nest in a wood at Stockton; but the most recent instance, to my knowledge, of their breeding in Norfolk, is thus described by Mr. F. S. Dugmore in the "Field," of April 30th, 1859:-"A raven's nest was taken in one of the Beachamwell plantations on the 14th of April; it contained five young ones about twothirds fledged. I myself saw one of the old birds soaring in circles high over the fir-trees in which the nest was found, and have one of the brood still in my possession." The following interesting account of a pair which annually breed near Elveden, in Suffolk, but on the borders of the two counties, is thus given by Mr. Hewitson (Eggs Brit. Birds, 3rd ed.), from the pen of

<sup>\*</sup> The same practical ornithologist also informs me that a pair of Ravens, which bred for many years in Highgrove, near Geldestone, Suffolk, raised their nest annually with fresh materials, till at length this structure, which was placed in the fork of a tree, became so high that in standing on the supporting branch he could barely see into it. The hobbies always used it after the young ravens had flown; and in one year a pair of kestrels laid, but were probably driven away, as he found their eggs amongst the loose lining, when he subsequently took those of the hobbies for his collection.

Mr. Alfred Newton:-"When undisturbed, they have usually re-furnished their last year's nest, always lining it neatly with rabbits' down. It is built on one of some lofty Scotch fir-trees standing far out on a heath. number of eggs laid is generally five, but I have known them to be content with four; while, on the other hand, six were once deposited. While the hen is sitting, the actions of the male bird are well worth watching: he dashes indiscriminately at any bird that approaches, be it stock-dove or peregrine falcon, and when the intruder has been utterly routed, he shoots back to the nest, celebrating his victory by a sonorous croak, turning, as he utters it, completely over on his back, an action which does not, however, in the least degree impede his onward career. He then resumes his look-out station on one of the highest boughs; perhaps leaving it again at the expiration of a few minutes to repel another invasion." It is probable that migratory stragglers still visit us occasionally in winter, more particularly in sharp weather, as Mr. Dix assures me that, a year or two back, he saw seven in a body passing high overhead at West Harling, and was attracted by their harsh notes and quarrelling amongst themselves; but for the last eight or ten years, at least, I have seen but one specimen in our bird-stuffers' hands, undoubtedly obtained in a wild state.

### CORVUS CORONE, Linnæus.

### CARRION-CROW.

It is scarcely to be wondered at that in one of the largest game preserving counties in England, the Carrion-crow should have become yearly more and more scarce, in fact its existence amongst us at all, at the

present time, is probably owing to the difficulty of distinguishing it, at any distance, from its more reputable kinsman the rook. In spite, however, of constant persecutions, a few pairs are still met with in different portions of the county, for the most part frequenting the big woods; and in winter they are known to roost with the rooks and jackdaws, as they are thus occasionally shot by the gamekeepers, who fire up into the "lump" with the hope of shooting a crow or two amongst their ill-fated companions. Mr. Lambert, gamekeeper to Lord Wodehouse, at Kimberley, tells me that he has not unfrequently killed them in this manner. For the last two or three years a pair have attempted to nest in Keswick rookery, near Norwich, and on one occasion, I believe, brought off their young, but it is strange to observe how the rooks forsake the trees near the haunts of these birds, which renders them anything but desirable intruders, to say nothing of their egg-stealing habits and carnivorous tastes. Having observed, at different times, during severe weather, several carrion crows upon the Breydon "flats," I cannot help thinking that migratory specimens visit us at such seasons; and gamekeepers, also, in the neighbourhood of the broads, have told me that they see most of them in the early spring, when apparently inclined to remain and breed, but even in these districts, where, formerly, they were very plentiful, a carrion crow in summer would be pointed out as a rarity by any resident marshman. Towards the western end of the county, Mr. Newton informs me they are regular spring or summer visitants; and they still breed yearly in the Bedford Level district. Messrs. Sheppard and Whitear give the following interesting note on this species, from their own observations:—"We have often been much amused with the sagacious instinct of this bird, and of others of the same genus, in getting at their prey. In the winter season they frequent the sea

shore during the ebb tide, in search of muscles and other shell fish. As soon as the bird has found one, it flies up almost perpendicularly into the air, with the fish in its beak, and lets it fall on the stones in order to break its shell. The bird quickly follows the falling booty, and devours it." The same habit has also been observed in the Danish or Royston crows. An immature pied variety was killed near Kimberley towards the end of July, 1861.

### CORVUS CORNIX, Linnæus.

#### HOODED CROW.

The Royston or Grey-backed Crow, as this species is also called, visits us in autumn in large numbers, arriving about the first week in October, though occasionally earlier, and leaves again by the end of March or beginning of April. They frequent for the most part the broads and marshes near the rivers, particularly the mouths of tidal streams, and are extremely numerous on the sea coast, where they also gradually collect together towards the time of their departure in spring. It is fortunate for Norfolk that this destructive species leaves us so regularly in the breeding season, as no greater enemy to the gamekeeper probably exists, neither eggs nor young birds, nor indeed, in some cases, old ones either, being safe from its prying eyes and carnivorous propensities.\* There are, however, one or

<sup>\*</sup> Mr. St. John thus sums up the iniquities of this species as observed by himself in Scotland:—"It kills newly-born lambs, picking out the eyes and tongue while the poor creature is still alive. It preys on young grouse, partridges, hares, &c., and is very destructive to eggs of all sorts. In certain feeding spots in the woods I have seen the remains of eggs of the most extra-

two instances on record of its having remained to nest in this neighbourhood, but not of late years. Mr. Hunt, of Norwich, in a note to his "British Ornithology," says, "We are informed that a pair of these birds built a nest and reared their young during the season of 1816, in the neighbourhood of King's Lynn;" and Mr. W. R. Fisher has noticed, in the "Zoologist" (p. 315), having observed three of these crows in some marshes near Yarmouth, in July, 1843, one of which from its small size and apparently imperfect plumage, he believed to have been a young bird, and, if so, in all probability bred in that district. I learn also from the Rev. E. W. Dowell, of Dunton, a most accurate observer, that he saw three grey crows at Blakeney, with some rooks on the 18th of May, 1857, and, in 1853, several of these birds kept about Blakeney throughout the summer. He also witnessed on one occasion, in the autumn of 1847, when shooting on the Blakeney sandmeals, "as many as two or three hundred hooded crows, all flying from east to west, in small parties of from two to ten, flying high till out of sight." In the spring of 1853, being at Cromer for some weeks, I was greatly amused, watching the habits of these birds by the seaside, and with the help of a glass could observe their actions very accurately from day to day. I was particularly struck with the instinct they displayed with

ordinary variety and number. No sooner does a wild duck, pheasant, or any bird leave its nest, than the hooded crow is on the look-out, and I have no doubt that a single pair often destroys many hundred eggs in the course of a season. All birds seem aware of this, and peewits, gulls, redshanks, &c., attack most furiously any crow which they see hunting near their nests. The "hoody" is also very fond of young wild ducks, and destroys great numbers. In the mountains it is bold enough to make prize of the eggs of the eagle, peregrine falcon, or osprey, if the parent birds happen to be driven off their nests. ["Nat. Hist. and Sport in Moray," p. 59.]

regard to the tide, arriving as regularly every morning or afternoon on the beach, when the waves began to recede, as if the time of high and low water was as well known to them as to the oldest fisherman on the coast. On these occasions, they collected in groups of two or three, by the water's edge, busily picking the large red sandworms from the wet sands, and pulling at them with all the vigour of a thrush extracting its prey from a grassplot. Now and then a worm resisted stoutly for some moments, when suddenly giving in, the crow would all but topple over on his back from his own unexpected success; to see him then gather himself up, shake his feathers, and walk off with a firm indignant step was particularly ludicrous. These birds have usually a stately manner of walking, but the effect is considerably impaired by a little hop or jump, close feet, which they frequently indulge in, particularly when overtaken by a wave in their search for food. If a fresh clump of seaweed is thrown up by the sea, a number of them at once collect round it, pecking at it and turning it over and over to collect any small mollusks, or other marine substances that adhere to the fibres; they also carefully examine the rocks for shell fish, and are particularly partial to small crabs or "kitty-witches," as they are commonly termed in Norfolk. On one occasion I observed a single individual on the beach, whose curious antics attracted my attention. At first he merely paced up and down, though evidently very uneasy and without attempting to feed, when suddenly he began puffing out his feathers and bowing in the most absurd manner with his mouth wide open. It struck me that he must have swallowed too large a worm and was trying to disgorge it, but on opening the window where I was sitting, I soon found my mistake, as with every elevation of his tail in the air I could hear his loud hoarse notes, given at their highest pitch, apparently calling on his friends to come

and join him. This amusement he continued for a considerable time, but as none of his kindred seemed to answer his call he at last gave it up, and flew slowly towards the fields, probably with the same philosophic conclusion that led Mahomet to visit the mountain. As the usual time for departure approached their numbers on the beach gradually diminished, but although I watched them very closely, I was not fortunate enough to witness any decided migratory movement,\* and from observing them latterly more inland than by the sea, I imagine they may have proceeded in small bodies to some other part of the coast preparatory to leaving. On the Hunstanton beach, I have counted over a score under the sandhills, at one time, towards the end of March. Mr. J. H. Gurnev informs me that when residing at Easton, some years back, a few of these crows, with an amount of instinct approaching very nearly to reason, invariably remained until the geese and some other fowls on his fancy water had laid their eggs, unwilling to lose the chance of such a feast, and having once gratified their oological tastes, soon quitted the scene of their pilferings. The following are a few characteristic anecdotes of the carnivorous tastes of this species. Mr. Robert Birkbeck, in the "Zoologist" (p. 4124) writes, "as a friend of mine was walking on the sands, near Cromer, on the 24th ult. (October), he observed a solitary hooded crow flying over from the sea, evidently fatigued with a long passage. He fired at it, and saw it immediately drop a small bird from its beak, which proved to be a chaffinch, with the skull

<sup>\*</sup> From Mr. Dowell's MS. notes, amongst other interesting particulars of this species, I find that on the 28th of March, 1848, he "witnessed the return of many of these birds to their breeding places, a long string of scattered birds flying high, with much noise, towards the N.E., wind blowing from S. and S.S.W."

fractured. Would not this seem to show that the crow had fallen in with a flock of chaffinches on the passage, and had secured one of his fellow travellers for a meal on his arrival?" In the same journal, Mr. J. H. Gurney has recorded a similar instance in 1857, where a hooded crow was observed at Pakefield, near Lowestoft, during severe weather, "flying in chase of a small bird, which, after repeatedly darting at it, the crow succeeded in capturing with its bill, whilst both birds were on the wing. The crow subsequently alighted to devour its prey, but on the approach of the observer, again picked it up in his bill and flew away with it." Mr. Dowell on one occasion, in 1847, when driving between Holt and Blakeney, saw two hooded crows chasing a lark across a stubble, one taking up the chase when the other was tired, and thus pursuing their prey till out of sight. My friend, Mr. Frederick Mills, also informs me that whilst snipe-shooting on Surlingham broad in the winter of 1862, he came suddenly upon a hooded crow devouring a little grebe (P. minor), by the side of the water. On shooting the crow and examining its victim, it was evident that the latter had been only just killed, and had probably been pounced upon at the edge of the reed-bed. Sir Thos. Browne alludes to this species as the "Corvus variegatus or pied crow, with dun and black interchangeable. They come in the winter and depart in the summer; and seem to be the same which Clucius describeth in the Faro islands, from whence perhaps these come."

#### CORVUS FRUGILEGUS, Linnæus.

#### ROOK.

There are strange anomalies in the habits of certain species, which are hard to be accounted for even by ROOK. 265

the most observing naturalists, and this is particularly the case with the common Rook, whose extreme shyness, so noticeable at all other times, seems almost entirely laid aside during the breeding season. Suspicious beyond most birds when feeding alone, and warned by sentinels when congregating in flocks, no sooner does the time of reproduction arrive than, with a nature apparently wholly changed, this species seeks, voluntarily, the haunts of man, and, for a time at least, appears indifferent to his presence, or the sights and sounds of the busy homestead. There are one or two other points also in connection with the habits of this bird, for which it is equally difficult to find a satisfactory "why or wherefore." Do rooks know Sundays from week-days? and if not actually capable of smelling gunpowder, do they, or do they not, know a gun from a walking stick? Often have I been led to ask myself these two questions, and though scarcely prepared to allow them an instinct equalled only by man's reasoning powers, yet the very actions of these birds, in both the instances I have cited, leads irresistibly to the conclusion that by some means or other they can and do discriminate in either case.

There are probably few counties in England where rookeries are more generally distributed than in Norfolk, this finely timbered district affording every attraction from the nobleman's mansion, with its park and pleasure grounds, to the snug manor-house with its lofty elms or dark avenue of limes.\* In the

<sup>\*</sup> Sir Thos. Browne has the following strange note on these birds, showing their equal abundance in his time, and the fact of the young being esteemed in those days for medicinal as well as edible properties. "Spermelegous rooks, which, by reason of the great quantity of corn-fields and rook-groves, are in great plenty. The young ones are commonly eaten; sometimes sold in Norwich market; and many are killed for their livers, in order to the cure of rickets."

vicinity of Norwich these colonies are scattered in all directions, and rookeries, more or less extensive, have been formed for years at Cossey, Earlham, Keswick, Bowthorpe, Shottesham, Caister, Crown-Point, Bixley, Spixworth, &c., all within a few miles of the city, whilst smaller communities within the walls attest the social habits of these birds, and their indifference even to the busy traffic of our streets. Though born and brought up as a citizen myself, the "mellow cawing" of the rooks in spring has been a sound as familiar to my ears from childhood as to any denizen of the country, my father's residence, in Surrey-street, being immediately opposite the trees in Sir Samuel Bignold's garden and coach-yard, where, for many years, a small party of rooks have regularly reared their young. In the season of 1865, I counted upwards of twenty nests, all visible from the street, besides others at the back of Stanley-house, immediately adjoining. Whether off-shoots or not from this long-established colony, I have discovered stray nests, during the last few years, in several other parts of the city. For some time two or three pairs have built regularly on the elms at the back of St. Faith's-lane, and others have located themselves on some trees near Pottergate-street. A single nest was also tenanted for at least two seasons on one of the lofty elms in Chapel Field; and the clamorous cries of the young brood drew my attention to another solitary nest, on a tree at the back of Mr. Firth's residence, abutting on Bethel-street. The late Bishop Stanley, in his "Familiar History of Birds," mentions a small rookery as having existed formerly in the Palace garden, and thus describes its sudden and unaccountable abandonment-"For several years the birds had confined their nests to a few trees immediately in front of the house, when one season, without any assignable cause, they took up a new position on some trees also in the garden,

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but about two hundred yards distant, where they remained till the spring of 1847, when, before their nests were completed or young hatched, they disappeared altogether, and the heretofore frequented trees are only now and then resorted to by a few stray casual visitors."\* Of the rookeries above named in the vicinity of Norwich, those at Cossey and Spixworth are the most extensive at the present time; but my friend Mr. Edwards informs me, that some twenty or thirty years ago, that at Keswick was probably the largest in Norfolk, and in autumn and winter formed the chief roosting place of the rooks in this district, whose immense flocks, of an evening, quite blackened the adjacent meadows whilst feeding up to the last moment before settling for the night. The Cossey woods are now, I believe, their chief rendezvous, and a most extraordinary and interesting sight is the assembly of these dark masses, with their circlings, pitchings, and noisy manœuvrings, until each individual is fairly accommodated, and their babel of voices hushed for the night. It is very difficult to account for the changeable habits of these birds, suddenly and apparently from no particular motive leaving their accustomed trees for others close by on the same domain, or gradually decreasing in numbers, as noticed at Keswick. There, although still nesting in considerable quantities, large portions of the rookery, once most densely populated, are entirely deserted, more particularly on the side nearest the railroad; the noise of which and the glare of the lamps at night, may possibly, in some degree, account for their leaving, although, at Brandon, the railroad passes through the

<sup>\*</sup> There are no rooks building in the Palace gardens at the present time, and, as far as I can learn, they have ceased to do so for the last sixteen years. Jackdaws are plentiful enough in the old ruins.

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midst of a rookery, as may be seen by any traveller on the line, without materially decreasing the number of nests on either side. It is not improbable, I think, that birds possessed of such known sagacity may be also forewarned of the instability of old timbers, as rats are said to leave a falling house; and the thinning out of some of their favourite trees by any heavy gale, may determine them to seek fresh quarters, or to leave those trees most affected by the wind. But though often shifting their quarters of their own accord, it is by no means easy to drive them from some long accustomed haunt. The common practice of shooting the young birds with rifles and air-canes, when pursued in moderation, has by no means a tendency to diminish a rookery, whose surplus population if spared by man, would only be driven to a distance to found new settle-The noisy use of shot guns is, of course, objectionable as well as unsportsmanlike, but I believe the only effectual plan of exterminating these birds, if desired—and I can scarcely imagine any one so devoid of all appreciation of rural sights and sounds as to attempt such vandalism—is the constant disturbance of the old ones whilst sitting, by which means the eggs are destroyed from frequent exposure to the cold. The difficulty also of inducing them to build in some fresh locality is well known, the placing of old nests in the desired trees, or where possible, the substitution of rooks' eggs, for those of carrion-crows or magpies having often failed after repeated trials. Mr. Newcome has, however, succeeded in establishing a very respectable rookery in the trees round Hockwold Hall, which he effected by first of all substituting rooks' eggs for those of the jackdaws in the nests of the latter. Though for the most part selecting the tallest trees, and placing their nests near the upper branches, they will build also on low Scotch firs, in the most exposed situations. A

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still more novel site has also been chosen by a few pairs at Spixworth Park, where, for the last two or three seasons, they have built in the tops of some fine laurestinus bushes, about twelve or fourteen feet from the ground, and others in a dwarf ilex, close to a flight of stone steps, connecting one part of the garden with the other, yet so low down that the feeding of the young was plainly visible from the windows of the hall.

Whether or not any portion of our Norfolk rooks leave us in autumn for more southern districts I am, at present, unable to say positively. Mr. Gould alludes (Birds of Great Britain) to the enormous flocks of these birds which in winter frequent the large woods in Cornwall; Tregothnan, the seat of Viscount Falmouth, being their most favourite resort. Here their numbers during the winter months so far exceed any probable quantity reared in that district, that he likens their nightly swarms at roosting time to the masses of starlings on our Norfolk broads. Lieutenant Sperling also, in his "Ornithology of the Mediterranean," (Tbis, vol. vi., p. 275), speaking of their abundance in Greece during the winter, says, "all that I shot were young of the year, which leads me to believe that it is only the young rooks that move to the southward during winter. Some of them cross the Mediterranean, as my friend, Mr. C. A. Wright, records it as a bird of passage through Malta." It would be exceedingly interesting, therefore, to ascertain whether our own rooks perceptibly decrease during severe winters, for I believe there is no part of British ornithology which would so well repay the persevering and careful study of the naturalist as the partial migrations of our resident species, properly so called, inasmuch as some individuals are always stationary, though a large proportion of them may frequently shift their ground under the influence of inclement weather.

The question as to the predominance of good or bad qualities in the rook is one which has attracted the attention of most naturalists, and certainly the verdict of more recent observers is decidedly in favour of the utility of the species. If one examines the evidence, for and against, of such trust-worthy authorities as Macgillivray, Yarrell, St. John, Stanley, Knapp, and others, the conclusion undoubtedly arrived at is, that a maximum of good is effected for a minimum of mischief, and no stronger evidence can be offered as to the benefits conferred by the rook upon agriculturists than the necessity which has arisen in some places for re-establishing their colonies where the ignorant prejudices of their persecutors had rendered them extinct. Though easy enough to destroy the birds, man finds himself powerless to arrest the inroads of those insect swarms, which his feathered allies have had no credit for suppressing. Amongst the chief delinquencies laid to their charge are the pilferings of the fresh-sown grain and the soft ears of the ripening corn; attacking the freshly planted potatoes, sucking the eggs of game and poultry, and robbing the herons' nests if near the rookery: occasionally also destroying young birds, and a general partiality for dessert, including cherries, strawberries, apples, walnuts, &c., &c.. This looks perhaps, at first sight, rather a black list, but there is much to be said in palliation, and still more as a set-off against many peccadilloes; whilst nothing can justify the cruel system, of late years adopted, of using poisoned wheat in the breeding season, whereby the old birds in dozens have returned home to die, and their young thus deprived of parental care, have suffered the horrors of starvation. With regard to their attacks upon the growing corn, the farmer, who knows the temptation afforded by his waving crops, must take the ordinary precautions to drive off the depredators, and if thus a

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tithe still falls to their share, have they not fairly earned it?\* I have rarely myself seen them committing havoc amongst the stacks, except during severe frosts in the depth of winter, when the iron-bound soil has stayed their useful labours, and deprived them of their accustomed food. "We often (says Bishop Stanley) hear persons congratulating themselves on a deep snow, a hard frost, or dry weather, as the surest means of destroying insects, whereas it is just the reverse. A hard frost, or a deep snow, or a dry summer, are the very best protection they can have, and for this reason: the rooks and other birds cannot reach that innumerable host which pass the greatest part of their existence underground. In vain the hungry rook, in a hard frost, looks over a fine fallow, or a field of new-sown wheat. He may be seen sitting on a bare bough like Tantalus, in the midst of plenty beyond his reach, with his feathers ruffled up, casting every now and then an anxious glance over the frozen surface, beyond the power even of his strong beak to penetrate." As an egg stealer undoubtedly he shows himself a true member of the corvine race; but again, as some palliation, let me add that I have invariably noticed, when most abused for such pilferings, the spring has been an unusually dry one, and the poor birds have been hard put to it to supply food for themselves and their clamorous young. This was particularly the case in 1864,† when a long drought set in just at the time when the nestlings were

<sup>\*</sup> Mr. Jesse, an accurate observer and true friend of the rook, remarks (Nat. Hist. Gleanings, vol. ii.)—"In order to be convinced that these birds are beneficial to the farmer, let him observe the same field in which his ploughman and his sower are at work. He will see the former followed by a train of rooks, while the sower will be unattended and his grain remain untouched."

<sup>†</sup> See also some most interesting remarks on the same point, by Knapp, in his "Journal of a Naturalist," p. 177.

being hatched. At Keswick, the old birds were observed returning to their nests, long after their usual time in the evening, and most probably, like the herons, they endeavoured to supply the wants of their young during the night as well. Many were the complaints that reached me of their depredations upon the nests of pheasants and partridges, and dire the threats of the keepers, in one case resulting even in an order for the destruction of a rookery; yet where game preserving is carried to so great an extent, and dozens of nests are scattered about in accessible situations, surely the rook errs in ignorance of the heinousness of his crime, whilst, may be, a jury of tenant farmers would scarcely find him guilty. With regard to those essentially useful qualities, however, which must be duly considered in discussing this subject, I will content myself with quoting an admirable passage from St. John's "Sport in Moray" (p. 62):—"For many months of the year, the rooks live wholly on grubs, caterpillars, &c., in this way doing an amount of service to the farmer which is quite incalculable, destroying his greatest and most insidious enemy. In districts where rooks have been completely expelled—this has been seen by whole crops of wheat and clover—being destroyed at the root by the wireworm and other enemies, which can only be effectually attacked by birds. When we consider the short time during which rooks feed on grain, and the far longer season during which they live wholly on grubs and such like food, it will be believed by all impartial lookers on that the rook may be set down rather as the farmers' friend than his enemy. close observation, when the rook appears to be following the harrows for the purpose of feeding on the newlysown wheat, it will be found that it is picking up a great quantity of large white grubs, leaving the grain untouched." To this testimony of a thoroughly practical out-door naturalist, I may add that in the autumn of

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1864, when such portions of the turnip crop in this county as survived the long continued drought, seemed as likely to be wholly destroyed by the thick white grubs,\* which in autumn burrow down to the very base of the roots, I observed unusually large numbers of rooks settling in the turnip fields, busily turning up with their strong bills these destructive creatures, which formed at that time the chief topic of conversation and complaint amongst our farmers.

Much has been written, also, of late in the "Zoologist," and other journals, on the supposed carnivorous tastes of the rook. It is perfectly certain that they will at times devour the young nestlings of other birds, more particularly of the missel-thrush; and I know an instance of a rook being shot with a young song-thrush in its bill, but these, it must be remembered, are exceptional cases, and individual peculiarities by no means establish the rook as a carnivorous species. When occasionally seen on dead carcases, I believe that the maggots engendered by putrefaction are the objects of their search, without any relish for carrion. In common also with their near relatives, the black and the hooded crows, rooks are particularly partial to a fish diet, frequenting the shores of brackish waters, mussel-scawps on the beach or adjacent salt marshes. Large numbers in autumn and winter, and, indeed, a few at all seasons, may be seen at low water, examining the wet sands and rocks for any fishy substances left by the waves; and the late Rev. G. Glover, of Southrepps, in a communication to Mr. Hunt (British Ornithology), thus refers to the extreme regularity with which these visits are made to the sea-shore as observed by

<sup>\*</sup> See an admirable paper on "The Turnip Grub," by Edward Newman, F.L.S., F.Z.S., &c., in the "Field," of December 24th, 1864, p. 442. This grub is the offspring of a moth, Agrotis segetum.

himself during several years:—"A very numerous colony of rooks, inhabiting the woods at Gunton, which is about four miles distant from the sea, I have carefully marked for twelve years, uniformly returning home a few minutes before sun-set, from the same point of destination—namely, the coast, and making the church of Southrepps the land mark by which they steered. What has surprised me is, that this course has been continued through the very height of the breeding season, as well as at other times, though in diminished numbers; and that the only interruption to it has been during the severe days of winter, when they were driven by that necessity which acknowledges neither rule nor law, to seek their subsistence in farm yards, or to plunder the corn stacks in the fields."

The singular scurfy looking white skin, which in old rooks surrounds the base of the bill, and is commonly looked upon as the chief specific difference between the rook and the crow, has long formed a subject of discussion amongst naturalists, some contending that it is the result of abrasion, from boring in the ground after worms and grubs, others that it is simply a natural effect, or, in other words, a specific peculiarity for which even the most learned ornithologist may find no better reason than that it pleased God to make it so. I have long held the latter opinion, and have of late been more than ever confirmed in that impression from the number of instances I have known of rooks, from eight to twelve months old, at least, in full plumage and perfect health, retaining in a wild state the nasal bristles, observable in young birds, without the slightest abrasion of the feathers, either above or below the beak. The great scarcity of carrion-crows in these parts, has led to my observing more particularly these black-faced rooks, which, in my search for a specimen of the rarer bird, have more than once

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deceived me till examined more closely. From these exceptional cases, it is quite evident that the naked skin around the bill can by no means be relied upon as a certain distinction between the rook and the crow, and at the same time, as these birds have been procuring their food in the open country during many months, after the manner of their kindred, without producing the slightest abrasion, there is but little reason for attributing that peculiarity to the friction of the soil. During the past winter (1864-5) I have met with three examples of these black-faced rooks. One killed on the 15th of December; a pied variety (having a white patch under the chin, and several primaries in each wing pure white) on the 24th of January, and another in the normal colouring of the species on the 23rd of February. This bird, which I still preserve, has evidently completed its autumn moult, and, excepting the bristles and the absence of any white skin, is in full adult plumage, distinguishable from the carrioncrow by the silky feathers on the nape of the neck, and the generally glossy appearance of its feathers, though the stoutness of the beak and the dark colour of the head render it, at first sight, very liable to be mistaken for its more sombre relative. In the Rev. Mr. Dowell's note-book, I also find two records of similar examples, one killed on the 21st of January, the other on the 7th of March, and being desirous of ascertaining if rooks, in this state of plumage, paired with others of the ordinary type, I solicited several individuals to watch for their appearance in different rookeries. Subsequently I learnt from Mr. Samuel Blyth that, out of six rooks killed by himself in the act of collecting sticks for nesting purposes (all of which proved to be males), one exhibited a pure black face, with stout bristles, like young birds in their first summer. Singular deformities in the beaks of this species are occasionally noticed, of

which a singular example is figured in the "Field" of May 20th, 1865 (p. 360), from a bird killed at Buckenham, near Norwich, in the previous April. In this specimen,\* the lower mandible projects considerably beyond the upper, which is of about the usual size, and the bare skin above and below the beak occupies the usual space. The editor of the Natural History department of the "Field," commenting on this fact, remarks, "It seems scarcely credible that the bird in question could have been in the habit of plunging this deformed beak so far into the ground as to have worn off the feathers of the head, as is alleged by some naturalists, nor do we think that even the most strenuous supporters of this view could imagine that the bare space behind the eyes could have been caused in this manner." Though perfectly in accordance with my own impressions, yet on the other hand, as has been shrewdly remarked by Yarrell, in describing a similar abnormity of beak, combined with a white face, "it is possible that this nakedness might have been produced before the alteration in the form of the beak had taken place, and the bulbs from which the feathers arise having been once injured might afterwards remain unproductive." A very fair argument, indeed, for those who still hold to the abrasion theory; but in maintaining, myself, the specific nature of this peculiarity, I would rely mainly on the fact of certain year-old rooks occurring with perfect beaks, and, in a wild state, still retaining the feathers surrounding their bills, thus making "the exception prove the rule." In the Norwich museum (No. 136.d) there is also a specimen, which has not only a formidable

<sup>\*</sup> I have also a rook, killed in this county, having both the upper and lower mandibles elongated, and crossing each other in extended curves, so as apparently to exclude the possibility of the bird procuring food for itself, but this bird also has the white skin around the beak, as in most old birds.

projection of the upper mandible, but a perfectly black face and bristly forehead. The museum collection also contains several interesting varieties of this bird which occur at times. No. 136.a is the more usual pied variety. No. 136.b, a singularly brown specimen, and No. 136.c is, or rather has been, pure white. A young bird, also killed in this county, in 1851, had the throat and beak white, the feathers of the wings patched with white, and the claws and first joint of each toe a delicate flesh colour. The following anecdote as to a strange transition in plumage in this species is given by the late Mr. Hunt:—"A gentleman of my acquaintance had, in 1816, a young rook of a light ash colour, most beautifully mottled over with black, and the quill and tail-feathers elegantly barred. This curiosity he was naturally anxious to keep; when, upon the bird moulting, all its mottled plumage vanished entirely, and it became a jet black rook."

## CORVUS MONEDULA, Linnæus.

#### JACKDAW.

The large number of churches in Norwich afford ample accommodation in their various steeples for these noisy denizens, whose nests are for the most part inaccessible to the most daring climbers; and every weather-cock serves as a "place of call," every crocket and finial as a temporary resting place. The immense amount of material collected by these birds at the commencement of the breeding season can scarcely be credited by those who have not witnessed the state of the belfry stairs in some of our churches, littered from top to bottom with the debris of their nests. In St. Peter's Mancroft especially, the ascent

by a narrow winding staircase, at no time easy, to the summit of the tower, is rendered anything but safe by the number of sticks and other rubbish dropped by the jackdaws through the different apertures. Besides the towers of our churches in town or country, and other venerable edifices, lay or ecclesiastical, these birds frequent the holes of decayed trees for nesting purposes, and at Hunstanton the crevices in the chalk-cliff facing the sea. In autumn and winter they collect together in flocks, and are seen feeding with the rooks in fields and marshes, and like them are extremely partial to the margins of brackish waters and other localities affording a supply of shell-fish and such like marine sustenance. With the rooks also they roost at night in the big woods. On one occasion during severe weather, in January, 1862, I observed an immense flock, late in the afternoon, coming direct from the city, and making apparently for Earlham or Cossey, as though all the jackdaws in Norwich had simultaneously left their steeples, after foraging for the day, and were together hastening to some accustomed roosting place.

This species, like others of its class, is by no means particular in its diet, and it occasionally exhibits carnivorous tastes worthy of the grey-backed crow. The following instances of the latter in this district are recorded by Messrs. Gurney and Fisher in the "Zoologist" for 1847:—"One of these birds was shot by a gamekeeper, from the nest of a missel-thrush, whilst in the act of devouring one of the young birds. Another was observed in pursuit of a young pheasant; the latter soon squatted, when the jackdaw hopped upon, and immediately began to peck it, but was shot before it had done any further mischief." Mr. Hunt also brings a further charge against them in his "British Ornithology" (vol. ii., p. 47), where he says—"They sometimes do much mischief in dove-houses,

and we are informed by the Rev. Mr. Whitear that an instance lately occurred at Kingstead, in which a jackdaw killed, and partly devoured, an old pigeon, and then deliberately laid its own egg close to the two on which the pigeon was sitting." A very decided case, I must say, of adding "insult to injury." As pets, in confinement, they are extremely docile and affectionate, and with their quaint actions and knowing looks afford much amusement. The following curious anecdote of one taken from a nest at Rackheath and brought up at Catton Park, was related to me by Mr. Gurney's gardener. This bird being perfectly tame was allowed, with one or two others, to fly about in the garden, and would come at a call to feed from the hand or shoulder. Suddenly, from some freak or fright, they all left, and were last seen flying in the direction of their former home. Nearly twelve months afterwards, no more having been seen of them in the meantime, a single jackdaw was observed flying about the hall, and apparently inclined to settle, by a carpenter's lad, who had been in the habit of feeding the lost birds; on his whistling, in the usual manner, to this new arrival, the jackdaw hovered round him and, at last, settled on his shoulder, and, by his familiar habits and actions, showed plainly that he was one of the missing pets. He allowed himself to be caught, with perfect indifference, and is now living very happily in a cage with a companion of the same species. Sir Thomas Browne, referring to this species, remarks, "among the many monedulas or jackdaws, I could never in these parts observe the pyrrhocorax or Cornish chough, with red legs and bill, to be commonly seen in Cornwall." A perfectly white specimen was shot at Smallburgh, in 1854, and a pied example, near Norwich, in June, 1861; but varieties in this species are not very often met with.

### PICA CAUDATA, Fleming.

#### MAGPIE.

The Magpie, although classed with the carrion-crow in the same proscribed list, is still met with in some parts of the county, where it breeds regularly, but besides the fatality of a "bad name," the improved state of agriculture, resulting in the thinning of hedgerows and such dense tangled coverts as they love to frequent, has rendered magpies, in Norfolk, extremely scarce, as compared with many of the midland and southern At the present time their chief stronghold counties. would seem to be the thickly wooded districts in the north-eastern part of the county. They are scarce in West Norfolk, and around Norwich extremely so-the few met with from time to time in this neighbourhood, being invariably obtained during severe weather, either stragglers dispersed in search of food or, more probably still, migratory specimens from the north. Mr. Alfred Newton, in the "Zoologist" (p. 1694), mentions the occurrence of many magpies and jays in the county during the severe season of 1846-7, evidently strangers, arriving with other winter migrants. An unusual number were also observed in the early part of 1857.

### GARRULUS GLANDARIUS (Linnæus).

#### JAY.

Common throughout the year, breeding in Norfolk, and, like the last species, would seem to receive, at times at least, considerable accessions to its numbers in autumn. Every sportsman knows the small flocks of

these birds, which, occasionally, present themselves during a day's covert shooting, and many a gamekeeper, who prides himself on the extinction of "vermin," is suddenly disgusted, on his rounds, by finding more noisy jays, during one day's round, than he has had a chance of shooting in a twelvemonth. Yet these, most probably, are but native bred birds, which, forming themselves into companies, as is their custom late in the season, rove from one plantation to another in search of acorns and berries as food becomes scarce during sharp weather. The far larger bodies, however, occasionally observed, can scarcely be accounted for in the same manner, of which a very memorable instance, occurring near the coast in the adjoining county, is thus given by Messrs. Sheppard and Whitear:-"Some years since as two gentlemen were sporting at Tunstal, in Suffolk, distant about five miles from the sea, they observed an extraordinary flight of jays, passing in a single line from seaward towards the interior. This line extended further than the eye could reach, and must have consisted of some thousands. Several of them were killed as they passed. But the firing at them did not occasion the rest to deviate from their line of flight." I have also observed these birds in some years to be extremely plentiful in spring, and have known many pairs killed as late as the beginning of April, when they may be supposed to pass us again on their return northwards.

## NUCIFRACA CARYOCATACTES (Linnæus).

### NUTCRACKER.

Three specimens of this rare and most accidental visitant to our shores have been killed in Norfolk up to

the present time, of which the first was obtained at Rollesby, near Yarmouth, on the 30th of October, 1844. This bird, in the possession of Mr. J. H. Gurney, was described in the "Zoologist" for 1845\* (p. 824), by Mr. W. R. Fisher, as having a long pointed beak, the upper mandible slightly projecting, with the tip horn coloured and the rest black. It had been seen about the same spot for a week before it was shot, and the contents of the stomach consisted entirely of Coleopterous insects. During the same autumn, the appearance of these birds in considerable numbers attracted the attention of continental naturalists, and, according to Yarrell, "they were particularly noticed in Germany and Belgium, and many appeared in the southern parts of Sweden." From an examination of various specimens procured at that time, a paper was read before the Royal Academy of Sciences at Brussels, + by M. Edm. De Selys-Longchamps, on a supposed specific difference between the nutcrackers of Central Europe and those of Scandinavia, the former having, it was affirmed, sharp pointed beaks, the latter shorter and stouter bills, from which peculiarity the specific term of brachyrhynchus had been previously applied to them by M. Brehm, in contradistinction to the thin-billed examples (caryocatactes). The next occurrence of this bird in Norfolk is recorded in the "Zoologist" for 1853 (p. 4097), by Mr. James Green, of City Road, London, who says, "I have a fine

<sup>\*</sup> In this notice the year 1843 is mentioned, but this is evidently a mistake, as in Messrs. Gurney and Fisher's "List" the bird is said to have been killed in 1844, the same year in which so many appeared in Belgium and other parts of the continent.

<sup>†</sup> Printed, with illustrations, in the Bulletin of the Academy, tom. xi., No. 10.

<sup>‡</sup> This is also recorded in the same journal by Mr. J. H. Gurney (p. 4124).

specimen of the nutcracker, which was shot by a fisherman off Yarmouth on the 7th of this month (October, 1853); it is in a beautiful state of preservation;" to which the editor, Mr. Edward Newman, appended the following note:-"This bird was brought to me in the flesh." I have been unable to ascertain if this specimen had a pointed or blunt beak, as Mr. Newman cannot remember at this distance of time, nor can I now ascertain to whom the bird belongs. The third and last Norfolk example was shot off a tree in a garden at Gorleston, also near Yarmouth, on the 8th of October, 1864, and is now in the collection of the Rev. C. J. Lucas, of Burgh. I had the opportunity of examining this bird in the flesh, which has a narrow-pointed bill, and proved on dissection to be a male. The stomach, which was very muscular in texture, was filled with the remains of a large dung beetle (Geotrupes stercorarius). The plumage may be thus described:-Upper parts of the head pure hair brown; all the under surface, with the sides of the head and upper portions of the back, mottled with white on a chocolate ground, the patches of white occupying the centre of each feather; a few small white spots on the tail-coverts; lower part of the back plain hair brown; tail feathers, twelve in number, the two centre ones black, all the rest with white tips, deepest on the outside ones, and graduating to the centre; secondary wing-coverts slightly edged with white, showing more on one side than the other. In comparing this specimen with two thick-billed nutcrackers in the museum collection, I found the white margins of the tail feathers somewhat deeper in the thin-billed bird, which is generally darker in its plumage and less inclined to any reddish tinge. The length of the quill feathers in the wings about the same in either case. Tarsi, the same length in both the thick and thinbilled birds, but the legs and feet of the former the

stoutest. In measuring their respective beaks along the upper mandible, the thin-bill was the longest by the amount of its projection beyond the lower mandible, but measuring round the base of each beak the thin-billed example was about three-eighths of an inch less than the others. In appearance the thick-billed bird has a decidedly corvine character, whilst the thin-billed more nearly resembles the sturnidæ. Whether or not this marked difference in the form of the beak may be considered as establishing a specific difference, the fact of examples of both varieties having occurred in this country renders it, as Mr. Fisher remarks in the "Zoologist" (p. 1074),\* a subject of considerable interest to the British ornithologist. The figure in Bewick is apparently taken from a thinbilled bird, and that in Yarrell from a thick-billed specimen formerly in his collection, whilst two at least out of the three Norfolk examples have thin bills, as had also a fourth killed at Wisbech, November 8th, 1859, as recorded in the "Zoologist" (p. 6809), by Mr. F. W. Foster, of the Wisbech museum. The question has been raised, however, whether this strange difference in the beaks of our European nutcrackers may not be, as is the case with the Australian Neomorpha gouldi, a sexual and not a specific peculiarity. That singular and very interesting New Zealand species, as figured by Mr. Gould in his "Birds of Australia," exhibits even a greater variation in the size and shape of the beak, in different examples, than is found even in the nutcrackers; but the researches of modern naturalists have established beyond a doubt that these birds are but the sexes of one species. "The natives (says

<sup>\* &</sup>quot;On the two British species or varieties of the nutcracker," by W. R. Fisher, with a figure of the Rollesby bird and illustrations, showing the difference in form of the thick and thin beaks, &c.

Mr. Gould) regard the bird with the straight and stout beak as the male, and the other as the female. In three specimens I shot this was the case, and both birds are always together." The same point, as regards the nutcrackers, could be easily established by dissection, and will not be, I hope, lost sight of by those who may have the opportunity of examining fresh killed specimens of either kind. The Gorleston bird with the narrow pointed beak was certainly a male, and so also was the Wisbech specimen, but the sex of the Rollesby and Yarmouth birds was, unfortunately, not recorded. A nutcracker is stated by Messrs. Sheppard and Whitear to have occurred some years ago at Southwold, in Suffolk.

## PICUS VIRIDIS, Linnæus.

### GREEN WOODPECKER.

This handsome species is by no means uncommon throughout the year, and but for the attractions of its brilliant plumage would, no doubt, be more generally. met with; the stuffed specimens, however, so often seen in keepers' cottages, and the numbers that pass into the hands of our bird preservers to make "show" cases for casual customers, will in some degree account for their limited increase. The sharp winter of 1860-1 was remarkable for the very large quantity killed in different parts of the county, one bird-stuffer in Norwich having between twenty and thirty brought in for preservation during a short period of severe frost; but with this single exception, I have never known these birds to suffer much from the severity of the weather, or to present themselves, even at such seasons, in more than their ordinary numbers. Their simultaneous appearance

in such extremely unusual numbers, seemed almost to suggest a migratory movement, yet I know of no trustworthy facts which would justify me in classing this woodpecker with such resident species as receive foreign additions in autumn. A very singular and beautiful variety was killed at Hedenham, in December, 1852, which is now in the collection of Mr. J. H. Gurney, who thus described its peculiar plumage in the "Zoologist" (p. 3801). "It exhibits some remarkable variations from the usual colouring of this species, especially on the rump, the feathers of which (including the upper tail-coverts) are in this specimen all margined and tipped with a beautiful flame-coloured red, instead of with the usual edging of yellow. The feathers at the lower part of the back of the neck are also similarly tipped with red, while those on the back are pointed with the beautiful golden yellow edgings which usually characterise the feathers of the rump; and a similar yellow pointing is to be observed on the ends of the feathers forming the three lower rows of the wingcoverts. The other parts of the plumage do not differ from ordinary specimens." That this strange intensity of colouring, however unique in a British specimen, is occasionally met with in other countries, is shown by the following interesting remarks of Mr. Robert Birkbeck, in the "Zoologist" for 1854 (p. 4209), under the title of "Notes on the birds of Italy and Sicily." Speaking of the green woodpecker, he says— "In the museum at Pisa I observed three or four specimens with the feathers on the rump and neck quite flame-coloured, and those on the back of a bright yellow, similar to the specimen noticed by Mr. Gurney in the 'Zoologist.' Some were brighter in colour than others. I think that they were distinguished as varieties of *P. viridis.*" In the "Zoologist" for 1848 (p. 2229), Mr. Alfred Newton described some eggs of the

green woodpecker found in the neighbourhood of Elveden (Suffolk) during the previous spring, as abnormal in their colouring as the plumage of the bird just referred to. After stating that "the hen bird was in the hole when it was cut open," lest any doubt should arise as to the species these eggs belonged to, he says-" Except in size, shape, and high polish, they do not at all resemble the eggs commonly laid by this bird, being blotched and spotted with reddish brown and tawny vellow, so as to be something like those of the common quail or that of the Baillon's crake as figured in Hewitson's illustrations." Again, in the "Zoologist" for 1850 (p. 2923), Mr. Newton writes—"I have again, this year, obtained some eggs of the green woodpecker, coloured like those of which I sent you an account two years since; they were taken from a nest in an elm tree. \* \* \* \* \* From their having been taken near the place where the coloured eggs were found in 1848, they are all probably the produce of the same bird." From a correspondence which ensued upon these notices, it will be seen that Mr. Newton at first, judging from the localities in which they were taken, had great doubts whether the colouring matter on these eggs could be owing to any fungoid juices or the stain of rotten wood, but he now, I know, fully concurs with Mr. Hewitson's opinion thus given in the 3rd edition of his "British Birds' Eggs":- "Mr. Newton has kindly sent me a drawing of the coloured eggs of this species, mentioned by himself and others in the 'Zoologist.' It is smeared over in the same manner as the eggs of the grebes, and I have no doubt at all arises from a vegetable stain." Having also had the opportunity of examining some of these peculiar specimens in the cabinets of Mr. Newton at Cambridge, and Mr. Newcome at Feltwell, I can only say that, whatever may have been the cause of their unusual

colouring, they suggest at once the idea of some external stain, and remind one of those strange-looking swans' eggs occasionally met with in a marshman's cottage, which owe their rich unnatural tints to the "gude wife's" patience and an onion peeling. Mr. T. E. Gunn, of this city, assures me that on one occasion he discovered small fragments of acorns in the stomach of a green woodpecker, which agrees with the statement of Naumann that, besides insects and their eggs, acorns also form an occasional article of diet. Bechstein moreover asserts that they will crack nuts.

### PICUS MAJOR, Linnæus.

### GREAT-SPOTTED WOODPECKER.

The Pied Woodpecker, as it is also called, though by no means numerous and somewhat local in its distribution, is found in certain localities throughout the year, and nests in our woods and plantations; but, like the previous species, probably owes its scarcity, in no small degree, to the attractions of its plumage. During the last few years, I have known both old and young birds. and in one or two instances the eggs as well, obtained during the summer months, at Earlham, Hellesdon, Costessey, Melton, Rackheath, Bramerton, Framingham, Kirby Cane, and Horstead, which shows them to be pretty well distributed in the vicinity of Norwich, and they have also been noticed during the breeding season at West Harling and Attleborough; and an old female, with three young ones, was shot at Salthouse, near Cromer, in June, 1863. Mr. Selby, writing of this species in the north of England says-"In Northumberland scarcely a year passes without some of these birds being observed in the months of October and November.

This induces me to suppose that they are migratory in some of the more northern parts of Europe, perhaps in Norway and Sweden. They arrive about the same time as the woodcock and other equinoctial migrants, and generally after stormy weather from the north and north-east." There is no doubt that the same remarks apply to Norfolk, since I find, on referring to my notes for the last few years, that more than half the specimens which have come under my notice have been killed in the months of October and November, and for the most part in the vicinity of the coast.\* The strongest evidence, however, of the migratory nature of this woodpecker occurred in the severe winter of 1861 when, between the 5th of November and the following February, between twenty and thirty specimens (old and young) were killed in different parts of the county, and some fourteen or fifteen of them in the neighbourhood of Lynn. About the same time an equally unusual number appeared in Cambridgeshire, as recorded in the "Zoologist" (p. 7847) by Mr. S. P. Saville; and Mr. Henry L. Saxby, in the same journal (p. 7932), gives a most interesting account of their visit to the Shetland Isles during September and October of the same year, a still more remarkable direction for any migratory movement. The wind, says Mr. Saxby, was steadily blowing from the south-east at the time, and he was also informed that several were killed in Orkney. those examined by himself he says-"Strange to say, not one female was to be found among them, and, with one single exception, all were first year's birds. first two presented nothing unusual in their appearance, but on taking the third one into my hand, I at

<sup>\*</sup> The Rev. E. W. Dowell had a bird of this species brought to him in the month of November, 1848, which had been taken in a poacher's net, at Salthouse, close to the sea.

once remarked the worn look of the bill, tail, and claws. I immediately suspected that this was caused by the scarcity of trees having driven the bird to seek its food among stones and rocks, and upon opening the stomach, my suspicions were confirmed by the discovery, among other insects, of several small beetles, which are found only upon the hills. I may mention that these beetles are very abundant in Shetland, although I do not remember having seen any of the kind in England; they are about the size and shape of one half of a split pea, black, edged with scarlet. I afterwards saw spotted woodpeckers in various parts of the hills and walls, and even in high sea-cliffs; I also saw them on roofs of houses and upon dung-hills, and, although several were killed upon corn-stacks I never found any grain in the stomach. They were frequently to be met with upon the ground among heather, where at all times they were easily approached, but more particularly in rainy or misty weather, when, their plumage becoming saturated with moisture and rendering them too heavy for a long flight, many were stoned to death by boys. Those in the garden fed largely upon seeds of the mountain-ash, which they broke open the berries to procure, sometimes dropping a whole cluster upon the ground and descending to feed, but more frequently breaking the berries to pieces as they hung upon the trees. But even in the garden they did not confine themselves to the trees; at one time they might be seen busily searching among moss and dead leaves, at another in the midst of a tuft of coarse weeds, and again intently examining the spiders' webs upon the walls. It was quite a common occurrence to see them in the open meadows, scattering aside the horse-dung with their bills, and thus procuring abundant supplies of worms and grubs." This woodpecker, though an unusual cage-bird, thrives well in confinement, and

becomes as amusing a pet as the nuthatch, and about as active and mischievous. One which was kept alive for some time by a person in this city, in 1857, fed upon barley-meal and insects. The latter were extracted from pieces of old bark supplied fresh every day or two, and fastened to the inside of the cage.

With an avi-fauna so rich as that of Norfolk, one may well afford to exclude a doubtful species, and for reasons, therefore, which I will briefly explain, I have considered it desirable to omit from the present work the Great-Black Woodpecker (Picus martius), believing that it has been too hastily and erroneously classed amongst the accidental visitants to this county. Its introduction at all into our Norfolk "list" rests entirely upon the following passage in Yarrell's "British Birds"\* (1st ed., vol. ii., p. 129), where, in enumerating the various instances in which the black woodpecker is said to have appeared in England, he states that "a few years since a communication was made to the Zoological Society of London, that two examples of the greatblack woodpecker had been at that time killed in a small wood, near Scole Inn, in Norfolk." This note, on Mr. Yarrell's authority, has been since copied by Macgillivray and Morris; and amongst local authors by the Rev. R. Lubbock in his "Fauna," Messrs. Gurney and Fisher in the "Zoologist" (1846, p. 1315), and still more recently by myself, in a paper on "the Ornithology of Norfolk," written in 1863 for the 3rd edition of "White's Gazetteer" of this county. † I had long had the impression that, in this instance, a mistake might have arisen between the great-spotted and the great-black woodpecker, when my idea was accidentally

<sup>\*</sup> The fourteenth part of this work, in which the statement occurs, was published in September, 1839.

<sup>†</sup> See also "Zoologist," 1864 (p. 9025).

confirmed by circumstances, originating in a conversation with Mr. Spalding, of Westleton. Whilst inspecting that gentleman's collection in the summer of 1864, I happened to mention the Scole woodpeckers, with some expressions of doubt as to the identity of those specimens, when he referred me to Mr. Francis Drake, of Billingford, as an individual most likely to be able to afford information. At once taking the hint, I shortly received, in reply to my enquiries, the following letter from Mr. Drake, dated June 29th, 1864, who, to my great surprise, proved to be the very person who had shot the birds in question:—"Being equally interested with yourself and Mr. Spalding in birds, I feel now inclined to think the birds I shot many years since at Billingford, near Scole, were the large spotted woodpecker, although I was told at the time they were the black." In a subsequent letter, in answer to further questions, Mr. Drake says—"It must have been more than thirty years since I shot the birds. They were evidently larger than the wryneck, with red heads. I was not aware they were in print until I saw them mentioned in Mr. Lubbock's work on the 'Fauna of Norfolk.' They were not preserved. I cannot remember if they had white about them." Having pursued the enquiry thus far, I was desirous of finding the notice referred to by Yarrell in the Zoological Society's "Proceedings," but failing in this, I wrote to the secretary, Mr. Sclater, to know if he could in any way assist me in discovering by whom the "communication" had been originally made. In a few days I received the following reply, assuring me of that gentleman's persevering though fruitless efforts to comply with my request:-"I have searched in vain in our 'proceedings,' and also in our written remarks, for any traces of the paper you mention. I cannot find anything like it. I fear it was only mentioned in the way of conversation at the

meeting, or perhaps a specimen exhibited, and was never entered in our minutes." Here, therefore, my researches ended, but I think enough has been elicited to render it more than doubtful whether the birds, above referred to, were really specimens of the great-black woodpecker, and that until some more authentic instance of the occurrence of that species should entitle it to be replaced, it will be best removed altogether from the Norfolk "List." Mr. Drake particularly remarks that the birds were not preserved, which would undoubtedly have been the case had they been exhibited before the society in London, and Mr. Yarrell speaks only of a "communication" made, without any reference to specimens. Supposing also, as Mr. Sclater suggests, that the matter was only "mentioned in the way of conversation," without any entry being subsequently made in the minutes, it is most probable that Yarrell was himself present at the meeting, or was informed of the circumstance by some other member of the society.

## PICUS MINOR, Linnæus.

## LESSER-SPOTTED WOODPECKER.

This species, though undoubtedly scarce, probably appears even more so than it really is, its small size and wary nature rendering it easily overlooked. It remains with us throughout the year, and breeds in the county, but is extremely local. Mr. Gurney informs me that within his recollection they were killed occasionally in Cossey Park, where they were supposed to be residents; and Blickling Park would seem to be another favourite haunt, from specimens having been obtained from time to time in that locality, of which two are stated by Messrs. Gurney and Fisher in the "Zoologist" (pp.

1702-1769), to have been killed in the spring of 1847: the first a male, in March, and a female in the following May. In January of the same year, as recorded in the above journal by Mr. Alfred Newton, one was obtained in a wood at Barningham, and a female was shot at Halesworth, in the adjoining county, in February, 1855. Mr. George Master also informs me that he shot one at Snettisham, in Norfolk, in October, 1856. Mr. Hunt, in his "British Ornithology," thus speaks of this bird, as observed by himself in close vicinity to this city, though in a locality where one would be least likely to look for it at the present time\*:--"We have frequently seen this species on some willow trees, at the extremity of our garden, not only during the summer months, but also in the winter season, running up the branches with great celerity."

# YUNX TORQUILLA, Linnæus.

#### WRYNECK.

The cuckoo's leader or cuckoo's mate, as this bird is frequently called, is an annual summer visitant, arriving in April and leaving again in September, and breeds in the county. Mr. Yarrell, on the authority of the late Mr. John Drew Salmon, who formerly resided in this county, mentions a singular instance of the persevering attachment of this species to a particular nesting place, in which case no less than twenty-two eggs were

<sup>\*</sup> Mr. Hunt, as I learn from his son, a cashier in the Norwich Post-office, was then residing in Rose Lane, and his garden occupied the present site of Lloyd's stonemason's yard. It is difficult, however, to realize in that now busy thoroughfare a quiet suburb between Thorpe and the city, rural enough to attract these woodpeckers from the Thorpe woods on the further side of the river.

abstracted from the nest, on four different occasions, before the favourite spot was deserted. A very similar occurrence came under my notice in 1855 at Bramerton, where a Wryneck had fixed its abode in the trunk of an old tree. This bird permitted twenty out of twenty-three eggs to be taken away at different periods, without forsaking the nest, and ultimately brought off three young ones from the eggs that were left. It is even more strange, perhaps, that in the following summer from the same nest, and most probably from the same bird, eighteen out of twenty-two eggs were taken, and yet, one being left each time, she still continued to lay. Whether descendants from this persevering couple still occupy their ancestral abode, it is difficult to say, but in 1857 I was shown four young ones, which had been reared in the same hole. This is no doubt the species referred to by Sir Thomas Browne as "an hobby-bird, so called because it comes either with, or a little before, the hobbies in the spring. Of the bigness of a thrush, coloured and paned like a hawk; marvellously subject to the vertigo, and are sometimes taken in those fits." The strange actions of the wryneck, from which its ordinary name is derived, no doubt originated the quaint conceit of this celebrated Norfolk naturalist.

# CERTHIA FAMILIARIS, Linnæus.

### COMMON CREEPER.

This diminutive and most interesting species is resident with us throughout the year, and very generally distributed; though far oftener heard than seen, from their quick mouse-like actions, and the wonderful assimilation of their brown tints to the branches and stems of the trees they frequent. The practised ear of a naturalist

is, however, pretty sure to detect them, in a quiet ramble through our woods or plantations, and many a time I have watched their active search for food, whilst waiting in a "drive" for a chance shot during the shooting season. The following very interesting note, on the nesting habits of this species, was communicated to me by the Rev. C. Norris, of Briston, from personal observations:—"In May, 1863 (he writes), I found no less than four nests of the tree-creeper, built on the outside of a summer-house in Stody plantation. This building, formed of lath and plaster, was supported on the outside by split fir-poles, and one of these being warped by the sun, left a sufficient aperture for these little creatures to enter and nest in. Two of the four nests were disturbed, and the same birds probably erected the two others, but they were all within two yards of each other. The nests in this instance were composed of the young top shoots or catkins of the sweet chestnut and dead shoots of the larch, lined with moss and a few feathers. The birds were seen by myself, and one of them on the nest." A very common resort, also, of the tree-creeper in the breeding season, as I learn from Mr. Alfred Newton, is the timber-yard on large estates, where the nests are invariably built amongst the "slabs" or split fir-poles. A very beautiful variety, perfectly white, was taken from a nest in this county, in June, 1854, together with another young one in the usual plumage, but they are rarely subject to any variation in colour.

# TROGLODYTES VULGARIS (Fleming).

### COMMON WREN.

The little Wren is not only associated with the robin in our nursery literature, but shares with it

also our sympathies and interest as a resident throughout the year, frequenting the close vicinity of our homes in city and county; at one time creeping mouse-like amongst the branches of the roadside fence, at another startling us almost with the vehemence of its song as, with open bill and tail erect, it pours forth its defiant notes. Like the redbreast, also, this diminutive little creature is famed for the eccentricities of its nesting localities, and the strange assimilation of the materials used to the peculiarities of the situation. How difficult of detection is that ball of moss, placed sometimes on a bank or decayed tree-stem, surrounded with verdure of the same kind; or the nest by the side of the straw or clover stack—built entirely of the materials nearest at hand, which defies even the keen sight of our birds'-nesting boys till the entrance or exit of the bird itself betrays its whereabouts. The most singular and beautiful nest, however, of this species I ever saw was taken in 1863, in a garden at Lakenham, where it had been built amongst the leaves of a Savoy cabbage. Formed entirely of moss, this exquisite little structure was so placed as to rest firmly against one leaf, whilst another hung pendant over the top, and in places even the moss was drawn through these green supports, as though the beaks of the architects had stitched them together. I could only regret, when first shown this natural curiosity, that no means could be adopted to preserve its freshness, but a photograph taken of it at the time, presents in all but colour a very fair representation. This species, like the last, is subject to little variation in plumage, but in June, 1853, a very prettily marked specimen, barred and spotted with white, was killed near Norwich.

## UPUPA EPOPS, Linnæus.

#### HOOPOE.

Of all our rarer migratory visitants there is none whose appearance is more regularly noted than the Hoopoe, its singular plumage striking the most indifferent observer, and, unfortunately, in almost every instance insuring its destruction. Although the annual notices of its persecution, in our local and natural history journals, belie the stereotyped heading of "rara avis," no specimen is safe for an instant on our inhospitable shores, and many an opportunity of examining the peculiar habits, in a wild state, of this very interesting bird are lost to the naturalist through the greed of collectors. That they have of late years visited us in larger numbers, and with far more regularity than they used to do, is a fact well ascertained, although the cause of such a change in their habits is not quite so apparent. It can scarcely, however, be said of this species as of some others, for the very reasons above given, that its appearance amongst us now, is more observed than formerly, since Sir Thomas Brown thus refers to it; "Upupa or hoopebird, so named from its note; a gallant marked bird, which I have often seen, and it is not hard to shoot them,"\*

<sup>\*</sup> The same learned author, in "an answer to certain queries relating to fishes, birds, and insects," gives the following additional notes on this species (Wilkin's edition, vol. iv., p. 183):—
"I cannot wonder that this bird you sent should be a stranger unto you, and unto those who had a sight thereof; for, though it be not seen every day, yet we often meet with it in this country. It is an elegant bird, which he that once beholdeth can hardly mistake any other for it. From the proper note it is called an

Messrs. Gurney and Fisher, writing of the hoopoe in 1846, speak of it as of "not unfrequent occurrence in Norfolk, appearing at irregular intervals and generally in the autumn;" yet, correct as this statement undoubtedly was at the time, and agreeing also with Yarrell's general account of its arrival in other parts of the kingdom, it has since, most unquestionably, become a very regular spring visitant, its appearance in autumn being the exception and not the rule, as the subjoined list of such specimens as have come under my own observation during the last fourteen years, in the counties of Norfolk and Suffolk, sufficiently proves. I do not suppose that this list, although containing a large proportion, comprises nearly all that have been either seen or killed on our coast since 1850, but it shows, at least, that one or more specimens have been seen from year to year, except in 1855 and 1861; when, in both instances, the extreme severity of the weather until late in the season might account for its non-arrival. The great regularity of its appearance in spring is also remarkable, the dates varying between the 11th of April and the 28th of May, and even including the extraordinary number

hoopebird with us; in Greek epops, in Latin upupa. We are little obliged unto our school instruction, wherein we are taught to render upupa a lapwing, which bird our natural writers name vanellus; for thereby we mistake this remarkable bird, and apprehend not rightly what is delivered of it. \* \* \* \* Again, not knowing or mistaking this bird, we may mis-apprehend, or not closely apprehend, that handsome expression of Ovid, when Tereus was turned into an upupa or hoopebird:—

'Vertitur in volucrem cui sunt pro vertice cristæ, Protinus immodicum surgit pro cuspide rostrum Nomen epops volucri, facies armata videtur.'

For in this military shape he is aptly fancied even still revengefully to pursue his hated wife Progne: in the propriety of his note, crying out, pou, pou, ubi, ubi; or, where are you?" taken in 1859, we find but six instances, out of sixty-five specimens, of its being met with during the autumn months—one in August and five in September. To the late Mr. Thurtell, of Lowestoft, I am indebted for the particulars of the thirteen specimens killed in that neighbourhood between the 28th of April and the 5th of May, 1859. These were all met with in the same locality—the Warren and Denes—and were flushed singly, nine being males and four females. In Mr. Hunt's "List" of Norfolk Birds a pair of hoopoes are recorded to have been "shot in a garden in the parish of St. Martin's at Oak, in Norwich."

The singular name of hoopoe is applied to this bird in imitation of its peculiar cry, which is emitted by distending the cheeks with air, and then tapping the beak on the ground. In China, as I am informed by my friend Mr. Swinhoe, Vice-Consul of Formosa, the same species is called "the coffin bird" by the natives, from its habit of nesting in exposed coffins, as well as in the holes of walls. There seems every probability, from these birds being now so frequently met with in pairs in this county during the early part of the year, that in some instances they would remain to breed if not subjected to that exterminating system which all true naturalists cannot too severely deprecate; and for which, in this case at least, as I have abundantly shown, neither rarity nor doubt as to the identity of the species can be urged in excuse:-

YEAR.	DATE.	NO.	LOCALITY.	YEAR.	DATE.		NO.	LOCALITY.
1850	April 11	1	Lowestoft	1852	May	8	1	Martham
			(Suff.)	1853	May	2	1	Yarmouth
1851	May 21	1	Yarmouth	1854	April 2	24	1	Burgh
1852	April 26	1	Lowestoft	99	April 2	26	1	Hethel
,,	,,	1	Belaugh-	99	Sept. 2	28	1	Yarmouth
			heath	1856	April 1	18	1	Winterton
,,	April 29	1	Strumpshaw	,,	May	4	1	Ditto
,,	May 4	1	Barton	,,	Sept. 2	4	1	Bungay (Suff.)
			(found dead)	,,	Sept. 2	29	1	Ditto

YEAR.	DATE		NO.	LOCALITY.	YEAR.	DATE		NO.	LOCALITY.
1857	April	24	1	Yarmouth	<b>1</b> 860	April	24	1	Ditto
,,	May	13	1	Carrow-abbey	1862	April	11	2	Yarmouth
,,	May	P	4	Yarmouth	,,	April	26	1	Burgh
,,	,,		1	Lowestoft	,,	Sept.	5	1	Cantley
,,	Aug.	26	1	Harleston	,,	Sept.	13	1	Crown Point
1858	May	26	1	Yarmouth	,,	April	14	2	Lowestoft
1859	April	12	1	Ranworth	1863	April	24	1	Yarmouth
,,	April	P	1	Stoke	1864	April	14	2	Ditto
,,	,,		1	Thetford	,,	,,	2	1	Wortham
,,	,,		1	Harleston					(Suff.)
,,	April	18	1	Ashill	,,,	April	20	1	Lowestoft
,,	May	4	3	Yoxford(Suff.)	,,,	,,		1	Yarmouth
,,	,,		1	Long Stratton	1865	April	21	1	Lowestoft
,,	May	14	1	Yarmouth	99	,,,	22	1	Plumstead
,,	April	28			,,,	,,	2	1	Yarmouth
	toMag	y 5	13	Lowestoft	٠,,	May			Bradwell

## SITTA EUROPÆA, Leach\*.

#### NUTHATCH.

A not uncommon resident, throughout the county, though oftener heard than seen as it runs in all directions over the rough stems and branches of trees, more particularly those of the beech; hammering at the bark with its stout bill, after the manner of the woodpeckers, or skilfully cracking a nut in some convenient fissure. I have found them frequenting most of the large gardens which abound in the close vicinity of this city, as at Bracondale, Thorpe, and Earlham, and much amusement has been afforded me, after discovering their haunts, by placing nuts, or their kernels only, in such

<sup>\*</sup> Ornithologists are divided in opinion as to the identity of the British Nuthatch with the Sitta europæa of Linnæus. Those who consider our bird to be distinct from that of Scandinavia apply to it the name of Sitta cæsia, Meyer.

situations as would enable me to watch the actions of these birds. In confinement the young become very tame and from their activity and quaintness in every movement are most engaging pets, but sadly destructive to any woodwork within their reach. If constantly supplied with fresh bark, they never tire of searching each corner and crevice for insect food, clinging to it in every imaginable attitude with their strong claws, whilst beating all the while with their beaks a very "devil's tattoo," unpleasantly suggestive, in its persistent monotony, of the busiest moments of a coffinsistent monotony, of the busiest moments of a coffinmaker. The following very interesting particulars
respecting a nest of this species were communicated
to me by Mr. Samuel Blyth, who watched the progress
of the work, and satisfied himself by measurements,
of the arduous task, not only begun but completed
by these ingenious little architects. In the spring
of 1865, a pair of nuthatches selected, for nesting
purposes, the bole of a beech tree at Framingham,
which had a cleft, on one side, nearly a foot and
a-half in length. This opening, being too large and
exposed, the birds proceeded to fill up (leaving only
a hole big enough for themselves to pass in and out)
with clay collected from the edge of a pond about
one hundred and fifty yards off. In the first instance
the whole structure was pulled down by a lad the whole structure was pulled down by a lad when nearly completed; but, nothing daunted, the nuthatches began again and, completing their task, nuthatches began again and, completing their task, eventually hatched and brought off their young. On subsequent examination, the mud-works, thus laboriously constructed, were found so hard that only a mallet and chisel could make any impression on them, and they measured exactly 16 inches in length, 3½ inches in width, and 2½ inches in depth. A specimen, perfectly white, was killed at Lyng, near Reepham, in December, 1846, a very unusual and beautiful variety. сискоо. 303

# CUCULUS CANORUS, Linnæus.

#### CUCKOO.

Of all our migratory songsters, there is none so universally known by its note as the Cuckoo, and yet how few people, comparatively speaking, know the bird by sight. The same remark applies also to the nightingale, but in that case the nocturnal habits of the bird make it less likely to be often recognised, yet all day long that "curious voice" sounds in the distance, and but for the cry of "cuckoo" on the wing, none would associate that "mysterious sound" with the grey hawk-like bird, so slowly flitting past. With us it is always an abundant species, arriving in April\* and leaving again about the end of July, though the young birds are not unfrequently met with long after their parents have left for the south, as I have seen them myself, at different times, throughout the months of August and September. In the district of the broads. they are more particularly numerous, the nests of the various small birds placed amongst the sedges and luxuriant herbage on the marshes, being particularly accessible as lying-in hospitals to these most improvident and reckless of mothers. In such localities during May and June, I have seen as many as five or six cuckoos at one time, beating over the marshes, occasionally pursued by a clamorous throng of titlarks and warblers, resenting, as it were, a too close scrutiny of

<sup>\*</sup> From a table of "Observations on the indications of spring," made by a gentleman in the neighbourhood of Stratton Strawless for ten years, commencing 1845 (See Norfolk Chronicle May 31, 1856), I find the earliest and latest records of the Cuckoo's song to be—April 17th, 1848—April 28th, 1850.

their household treasures, and judging, probably, from external appearances, with shrewd suspicions as to the raptorial affinities of their unwelcome guests. The unvarying but grateful song of this bird is never heard to more advantage than in these marshy districts, whether softened by distance, it still blends with the rustling reed-stems and the sedge-birds' melodies, or, startling by its sudden presence, the bird flits past, uttering its long drawn notes upon the wing. Still, far or near, the life long summer's day appears too short to tell "the vagrant cuckoo's tale," commenced with the earliest dawn of day, unfinished often when the sun has set and other birds have ceased their mingling notes. I have heard it also, on bright moonlight nights, whilst listening for the merry medley of the reed and sedge-birds, utter its song at lengthened intervals, thus sounding more rich and mellow in its tone, when breaking the stillness of the midnight air.

I am sorry I can say nothing from personal observation on that much debated question, how does the cuckoo deposit her eggs? Whether or not she follows the custom of certain foreign species, who are said to lay their eggs on the ground and afterwards transfer them with their beaks into suitable nests; undoubtedly our cuckoo's egg is found, at times, in nests so situated that its introduction by any other means appears impossible. An occurrence, strongly confirmatory of this view, is thus recorded in the "Zoologist" for 1851 (p. 3145), by Mr. J. O. Harper, curator of the Hospital Museum in this city:—"On the morning of the 14th of April, I was out shooting with a friend for the purpose of obtaining specimens in ornithology, and having arrived at a point of the river called the Alder-carr, situated midway between Norwich and Thorpe, I heard from an adjoining tree the well-known note of a cuckoo, which I observed perched at a

distance of twenty yards. I was about to fire when. over my head sailed another with something between its mandibles. My curiosity was excited, and, leaving the other to speed on its way, I followed in the boat the flying cuckoo which I saw alight in an adjoining meadow. I reached the bird within twenty yards, and observed it in the act of progressing in a similar way to the crawling of a parrot, by the side of a drain, with the substance still in its beak; after traversing some distance it stopped short, and at the same time I fired. Upon nearing it, I found the substance, beforementioned, to be its egg, I am sorry to say, broken, but still it was quite satisfactory to me that such was the case. Upon dissection I found the cloaca contained another egg of nearly the same size, but without the calcareous envelope. I think, in all probability, this bird was searching for a nest, perhaps that of the meadow pipit, for the depositing of its egg." The curious habit of the young cuckoo of clearing the nest of all rival inmates, thus gaining for itself the sole attention of its fond but deluded foster parents, has been too often described from the careful observations of Jenner, Montagu, Yarrell, Stanley, and many others, to need repetition here; but Mr. Gould (Birds of Great Britain) has propounded a theory of his own on this subject, opposed altogether to Dr. Jenner's experience and the opinions of naturalists generally. Doubting the power of the young cuckoo to clear the nest of its other occupants by the end of the third day, he says-"May we not more readily imagine that it has been done by the foster parents, who, having bestowed all their attention on the parasite, thus cause the death of their own young, which are then cleared out of the nest in the same way as broken egg-shells, fæces, and other extraneous matters?" The same author also refers to some highly interesting remarks

in "Naumannia," 1853 (p. 307), by Dr. Baldamus, in which that accomplished naturalist endeavours to prove "that the egg of the cuckoo is always found to present a very recognizable resemblance to the normal appearance of the egg of the species in whose nest it is deposited;" giving also in the same journal for 1854 (p. 415), a list of references to a plate representing sixteen cuckoos' eggs, in proof of his assertion. "The similarity (says Mr. Gould) in many instances is very obvious, and the subject of the article, which does not seem to be generally known to British ornithologists, deservedly merits further attention." Mr. G. D. Rowley, in a very interesting paper in the "Ibis" (1865, p. 178), "On certain facts in the economy of the cuckoo," also refers to Dr. Baldamus's article, and though not at present convinced by the arguments of the writer, which are opposed in many respects to his own experience; yet, in expressing his admiration at the learned doctor's researches, he adds, "The theory is as beautiful as it is new, and I only wish that fresh evidence may be brought forward of a nature so strong as to make it an acknowledged fact." Mr. Rowley has, for some years, devoted a considerable amount of time and labour to the study of the habits of this remarkable species, and his paper should be perused by every one desirous of knowing the latest views of ornithologists on this difficult subject. The period of laying, he believes, from personal observation, to extend from the beginning of May to the middle of July, having taken eggs of the cuckoo as late as the 29th of that month. He also gives on the authority of continental as well as British authors, with some few additions supplied by the editor of the "Ibis," the subjoined list\* of no less

<sup>\*</sup> Sylvia hortensis, cinerea, atricapilla ? curruca, tithys, phœnicurus, rubecula, arundinacea, palustris, cariceti, locustella, nisoria,

than fifty-two European species, in whose nests the egg of the cuckoo has been found more or less frequently, and yet, even this, is probably not an "exhaustive" series. In this country the eggs of the cuckoo are most commonly found in the nests of the hedge-warbler, pied wagtail, skylark, meadow pipit, and reed-warbler (Salicaria strepera); but it is somewhat singular that the latter, although, perhaps, the most frequently used of all, should be almost invariably omitted from our published lists. In my notes on that species (p. 117), I have recorded several instances of both eggs and young cuckoos being found in the pretty pendant nests of this marsh warbler, and whether placed amongst reeds or in garden bushes, I know none, from their construction, so difficult of access, unless the egg, as above stated, be conveyed in the beak. Messrs. Sheppard and Whitear observed a young cuckoo fed by a pair of red-backed shrikes, and state that one had been also observed to enter the nest of a magpie, though at that time supposed to have done so more for the sake of sucking than laying eggs. The occurrence also of two eggs in one nest has been occasionally noticed; in which case it is generally supposed that two cuckoos have accidentally selected the same nursery; and I question if even the amiable

trochilus, Accentor modularis, Troglodytes vulgaris, Saxicola rubetra, Motacilla alba, M. flava, Anthus campestris, A. pratensis, A. arboreus, A. obscurus, A. cervinus P Alauda arvensis, A. cristata, A. arborea, Emberiza citrinella, E. scheeniclus, Loxia chloris, Linota cannabina, Saxicola stapazina, Lanius collurio, Luscinia luscinia, Hypolais vulgaris, Phyllopneuste rufa, Calamoherpe turdina, C. phragmitis, Regulus flavicapillus, Fringilla cœlebs, F. montifringilla, Passer domesticus, Cyanecula suecica, Turdus merula, T. musicus, Locustella nævia, Parus major, Acanthis linaria, Pyrrhula rubicilla, Garrulus glandarius, besides a Pica, a Turtur, and a Palumbus.

Dr. Watts would have ventured to remark that, "birds in their little nests agree" could he have witnessed the fight between two young cuckoos, thus hatched together, so spiritedly described in Dr. Jenner's paper. Happily, however, for the wretched little birds whose home was the scene of this deadly struggle, the weakest at length shared the fate of the nestling hedge-sparrow, and the old pair were spared the herculean task of supplying two such young cormorants with sufficient food. I was myself a witness on one occasion to a pied-wagtail feeding its ungainly nestling exactly as depicted in Mr. Gould's beautiful illustration (Birds of Great Britain); the little wagtail, perching on the cuckoo's back, as the easiest means of reaching its capacious mouth.

Frequently as the attempt has been made to rear young cuckoos in confinement, but few cases are known in which they have been preserved through the winter months; the absence of some necessary ingredient in their diet, added to a strong migratory impulse, causing them almost invariably to pine and die after a few weeks. Mr. Dew, a hairdresser and bird fancier, in Norwich, by great care and judgment in feeding, succeeded in keeping one in perfect health, from June, 1863, till some time in October, 1864; by far the longest period on record to my knowledge. I last saw it alive on the 11th of August, 1864, when but slight traces of grey appeared in its russet plumage, and the bird eventually died in consequence of imperfect moulting. It was fed entirely on fresh raw meat, and enjoyed a supply of fresh water every day. When regularly supplied with food, it would remain perfectly quiet on its usual perch, but when hungry always fluttered violently about the cage, and, apparently having no idea of distance, would thus hurt itself, and even draw blood at times. A very interesting history of one taken on the 26th

of June, 1858, which was only accidentally killed about the 28th of July, 1859, is given by Mr. Gould (Birds of Great Britain) from the pen of Mr. T. A. Briggs, of Plymouth; and two instances are recorded in the "Field" (July 5th, 1862), in which one bird was kept alive over twelve months, and another from July to the following May. This species seems, at times, particularly attracted towards kitchen-gardens, to feed upon the caterpillars that infest the gooseberry bushes.\* In a large garden at Bramerton, where these bushes cover a considerable extent of ground. I have known a number of cuckoos to be flushed at one time, as if collected from all parts to an unusual feast. Mr. T. E. Gunn, of this city, recently showed me a piece of cord, about three inches long, which he had found in the stomach of a cuckoo, with the remains of caterpillars; accidentally swallowed, no doubt, though a particularly unsatisfying and indigestible morsel. Messrs. Gurney and Fisher have recorded the occurrence of a cuckoo, in its first year's plumage, on the 5th of May, at Letton, answering to the description of Temminck's Coucou-roux the Cuculus hepaticus of authors; and more recently a second example has come under Mr. Gurney's notice, but in this state of plumage the cuckoo is rarely met with in this country, in spring, though in parts of Germany it is said to be very common. Adult grey birds (probably females) on their first arrival not unfrequently exhibit one or more brown feathers in the tail and wings. A curiously pied specimen, an immature female, having both the under and upper parts mottled with white, was shot at Beeston, near Cromer, in August, 1862.

<sup>\*</sup> These are mostly the caterpillars of the large white cabbage butterfly; they are also particularly partial to the hairy species. The late Bishop Stanley, in his "Familiar History of Birds,"

## CORACIAS GARRULA, Linnæus.

#### ROLLER.

This beautiful species, though an extremely rare visitant, has occurred in several well authenticated instances in this county, as will be seen from the following records, which I have collected from every available source; but, except in two or three cases, I have been wholly unable to trace the specimens or ascertain their existence in collections at the present The late Mr. Hunt, in a communication to Messrs. Sheppard and Whitear (Catalogue of Norfolk and Suffolk Birds), respecting a Suffolk specimen, killed at Bungay in September, 1817, remarks:-"I am also credibly informed that another specimen of the same bird was killed in the neighbourhood of Yarmouth about the same time \* \* \* and late in the spring of 1818 another was killed in the neighbourhood of Cromer." Strangely enough, in Messrs. Paget's 'Sketch,' there is no mention of the Roller as having appeared near Yarmouth, and only a Suffolk specimen, killed at Blundestone in May, 1831, is noticed in Sir W. J. Hooker's MS. notes of the same district. I have recently ascertained, however, through Mr. Rising, of Horsey, that a male in the possession of Mr. R. F. Whaites, of Ingham, was shot in February, 1824, at Waxham, near Yarmouth, by a man named Tuck, the

states, that in the stomach of a young cuckoo, dissected by himself, were about twenty full-grown caterpillars of the peacock butterfly (Papilio Io) undigested. The hairy coating observable in the stomachs of these birds is apparently a specific peculiarity, and not attributable, as supposed by some, to their preference for hairy caterpillars.

son of a farmer then living there, and, in the very same year, I find a record in the late Mr. Lombe's notes of birds not in his collection, of one obtained near Blofield. An adult female in my own possession, formerly in the collection of the late Rev. C. Penrice, of Plumstead, was, I have no doubt, procured in this county, and it is by no means improbable that it may be the Blofield bird above referred to; but, unfortunately, although Mr. Penrice's birds were known to have been collected chiefly in this county, no memoranda as to dates or localities were attached to the numerous cases.\* In the Norwich Museum (No. 155.a) is an adult male, said to have been killed near North Walsham, and in Mr. Gurney's collection, at Catton, is another Yarmouth specimen, formerly belonging to the late Mr. Stephen Miller, besides which Mr. Lubbock mentions three-"one killed at Holkham, another at Antingham, and one, in immature plumage, at Acle, in 1832," and adds, "the wing of a bird of this species was shown me, which was picked up dead upon the beach at Brancaster many years back."

<sup>\*</sup> The chief portion of this large collection came into my possession in 1857, when Mr. Chas. Morse succeeded the late Mr. Penrice, at Plumstead Hall; but at that time some of the rarer local specimens had been given away, including a female of the great bustard, now, I believe, preserved at Elmham Hall. Amongst those purchased by myself were specimens of the osprey, goshawk (adult), hen harrier (adult male), marsh harrier, buzzards,—common, rough-legged, and honey (all immature); golden oriole (female), roller, eared grebe (summer plumage), long-tailed ducks (immature), smew (adult male), white-eyed pochard, &c., &c., with most of the common species of British birds; but beyond some half-dozen of the best and rarest, I found it useless to attempt preserving them, having been badly stuffed in the first instance, and sadly injured by neglect.

<sup>†</sup> No doubt the same bird recorded in Mr. Dowell's MS. notes, as shot "at Holkham, on the lake, hawking for flies, some years ago."

Of more recent instances I am indebted to Mr. Alfred Newton, for the knowledge of one killed at Bircham, Norfolk, in September, 1847, now in the collection of Mr. W. Borrer, of Cowfold, Sussex, and to Mr. Spalding, of Westleton, for the account of another, shot at Earsham, near Bungay, by a farmer named Rackham, about fifteen years ago. In August, 1864, Mr. Rising informed me that a strange bird, which, from the description given of it, he believed to have been a roller, was observed on a fence in his garden at Horsey. It was described as being "very noisy," but was neither seen nor heard of afterwards; but on the 25th of May of the following year, a very beautiful male specimen was brought into Yarmouth by some sailors, having alighted on the rigging of their vessel, just off the harbour; yet though taken alive it soon died. This bird was sent in the flesh to Mr. Sayer, bird-stuffer, at Norwich, on the following day, and was in perfect plumage, but extremely poor in condition, the stomach containing only a minute fragment of a beetle's leg. Allowing, therefore, for the possibility of one or two of these specimens having been recorded twice over, there is little doubt that this beautiful bird has occurred in at least ten or twelve different instances on our Norfolk coast, as well as several times in the adjoining county. Probably the last observed in Suffolk was an adult female, shot near Somerleyton, on the 28th of May, 1855. The earliest record, however, of the roller in Norfolk is contained in the following remarkable note, by Sir Thomas Browne, just two hundred years ago:-"On the 14th of May, 1664, a very rare bird was sent me, killed at Crostwick, which seemed to be some kind of jay. The bill was black, strong, and bigger than a jay's; somewhat yellow claws, tipped black; three before and one claw behind. The whole bird not so big as a jay. The head, neck, and throat of a violet

colour; the back and upper parts of the wing of a russet yellow. The fore part of the wing azure; succeeded downward by a greenish blue, then on the flying feathers bright blue; the lower parts of the wing outwardly of a brown; inwardly of a merry blue; the belly a light faint blue; the back toward the tail of a purple blue; the tail, eleven feathers of a greenish colour; the extremities of the outward feathers thereof white with an eye of green.—Garrulus argentoratensis."

## MEROPS APIASTER, Linnæus.

#### BEE-EATER.

This species, equally brilliant in plumage, is like the last, a very rare and accidental visitant, although several authenticated examples have been obtained in this county. Yarrell remarks that "no specimen of the common Bee-eater, of Africa, appears to be recorded to have been killed in England till the summer of 1794, when a communication was made to the Linnean Society, and a specimen of this beautiful bird was exhibited by the president, Sir James Edward Smith, which had been shot out of a flock of about twenty, near Mattishall, in Norfolk, in the month of June, by the Rev. George Smith; and a portion probably of this same flight, much diminished in numbers, was observed passing over the same spot in the month of October following." The next recorded instance is probably the one mentioned by Messrs. Sheppard and Whitear, as shot near Yarmouth, which came into the possession of Mr. Seaman, of Ipswich; and in the Museum collection (No. 156) is an immature bird killed many years back at Gisleham; and in his "Fauna of Norfolk," published in 1845, Mr. Lubbock

speaks of another as killed "lately" at Yarmouth. From that time, however, it does not appear to have been noticed again in this county until the 3rd of June, 1854, when a pair were shot at the same time on the Norwich river, near Coldham-hall. These beautiful birds, now in my possession, were shown to me in the flesh, and for brilliancy of plumage I never saw finer specimens. Both were in good condition; and on dissecting the stomach of the female I found the remains of no less than five large insects of the Hymenopterous order, apparently a species of wild or humble bee; the stomach of the male also contained similar débris, but less distinguishable. The ovaries in the female appeared, on examination, not to contain any eggs in a perceptibly advanced stage, which might probably indicate that the bird had already deposited her quota of eggs for the season, whilst the thinness of feathers on the breast seemed suggestive of her having been sitting. They were both killed by a wherryman, who shot them from his craft as they were playing over the river, but although I devoted a whole day to the examination of the river's banks for a mile or two above and below the point where they were killed, I could find no trace of any probable nest-hole, nor were the banks in that neighbourhood at all suited to their purpose.

# ALCEDO ISPIDA, Linnæus.

#### KINGFISHER.

Next after the Roller and the Bee-eater, in the arrangement of most of our British authors, comes our native Kingfisher, whose brilliant plumage suffers no depreciation in comparison even with those lovely wanderers from the far south. Though associating only in pairs, it is very generally distributed throughout

the county, frequenting alike the rivers and broads, the lakes and other fancy waters upon the large estates, and the little drains and streamlets in the meadows, where the winding brook meanders through the rushes, or murmurs over the pebbles in our shady lanes. How exquisitely beautiful is that bright streak of metallic blue that seems to flash past us whilst fishing in some quiet nook; when, the next instant, a shrill piping cry, which I am wholly unable to convey in words, assures us we are not far from the "Kingfisher's haunt." Presently, perhaps, if we remain quiet, the same beautiful creature returns again, and this time arresting its rapid flight, perches on some low branch projecting over the stream. What a glorious object, as the sun glitters on its glossy plumes, and shows the rich tints of its bill and feet. Suddenly it detects some passing minnow, and dropping almost like a stone into the water, re-appears in an instant, and flies back with its victim to the same perch. A sharp tap or two on the wood soon ends its struggles, and a dextrous twist of the bird's beak brings the fish head downwards into its capacious throat, whence facilis descensus averni. Sometimes also the kingfisher, pausing in its flight, hovers like a kestrel or a fishing tern before making its plunge, and having seized its prey, flies off to some convenient station to kill and swallow it. Surely it must be a mind of no ordinary insensibility that could contemplate with indifference the wholesale destruction of these living gems. Yet that which a savage might feel remorse at, is being effected in many places through the votaries of fashion. It probably never occurs to the fair owners of those wicked little hats, which mark the present age as one of the most fascinating epochs in the history of female costume, that the adoption of one particular feather, by some reigning beauty, may be the death warrant of a species !-- the system of imitation

in the world of fashion, as surely producing the destruction of a race, as the colonization of the white man in Australia and New Zealand is effecting the extinction of the native tribes. The rage for grebe-skin muffs and boas has all but exterminated (except on the most strictly preserved waters), the great crested species (Podiceps cristatus) on the broads of Norfolk, and some Indian birds, famed for the beauty of their feathers, are said to have suffered in the same degree. Now, again, the fiat has gone forth against the beautiful kingfishers,\* both here and elsewhere, and if fickle fashion does not quickly change, or the ladies of England lend a merciful ear to the remonstrances of naturalists, this once common and most beautiful of our British birds will become the greatest rarity. It is somewhat singular how comparatively few individuals, even amongst professed naturalists, have had the chance of personally examining the nest of the kingfisher; it was, therefore, with no little pleasure that I found myself, in the spring

<sup>\*</sup> Mr. F. Buckland writes in the "Field" (March 26th, 1864, p. 216), "On Saturday last I met a man in a punt on the Thames, whose special mission on that day was to destroy kingfishers. He had one (a beauty), and had two shots at others. They were going, he told me, to London to be made into ornaments for ladies' hats. It seems a very great pity to destroy these little birds, who are just now building their nests; but ladies fashions rule the day. They have already, by making them fashionable, nearly utterly destroyed the black monkey on the west coast of Africa. The skins of the Himalayan pheasants are getting very dear. Sea otters have retired to the Arctic circle, and now the kingfisher's turn has come; and if this continues, the kingfisher will become shortly a rare British bird. Ladies, if you wish to do service to your husbands and brothers, make the white swan of the Thames fashionable; for they are useless and spawn-eating brutes. If I knew who the individual was who sets the fashions, I would certainly do my best to cause this really modern demi-god to make swans' plumes fashionable. It would be a bad job for the swans, possibly, and a a piece of good luck for the fish."

of 1863, enabled to gratify my curiosity in this respect, and compare my own observations with the many and contradictory statements I had previously read. pretty stream at Keswick, near Norwich, has always been a favourite resort of this species, and having mentioned my desire to procure a nest to my friend Mr. Thomas Edwards, he kindly sent me word on the 20th of April, that one had been discovered that morning in the bank of a drain at the back of Mrs. Birkbeck's residence. I was soon there, and found that some men employed in cleaning out the meadow drains (the water being very low at the time) had watched a pair of kingfishers passing in and out of a hole in a bank, and were sure from their actions that it contained a nest. The drain or 'dyke,' as it is called in Norfolk, was rather wide, and the hole, which I should certainly have taken for a rat's, was about a foot below the top of the bank, and the same distance from the water. We first took the precaution to introduce some paper into this aperture spreading it over the eggs, to prevent the soil from crumbling into the nest, and then dug carefully down upon the paper, extracting a large circular piece of turf, but, in spite of all our precautions, the earth, owing to a long continued drought, was too friable to be kept from partially falling in. Carefully brushing this away, and removing the paper, we discovered the nest, for such with its raised sides it might fairly be called, occupying a round chamber at the upper end of the passage which sloped gradually upward from the point of entrance. From the mouth of the hole to the circular bed was about two feet, and the chamber containing the nest itself was about six or eight inches in diameter, and completely filled with the remains of fish in every stage of decomposition. The eggs, seven in number, exhibiting the usual pinky hue of the volk showing through their

glossy shells, were laid exactly in the centre, and reposed on a strata of fragmentary fish bones pure white and by no means offensive; but a slightly raised wall of similar substances, of a dirty yellow tint, crumbling to the touch and alive with maggets was far from pleasant, and I doubt not consisted of the recent deposits of the old bird or birds whilst sitting, the bleached looking bones beneath the eggs being evidently of older date, and dried no doubt by the warmth of their bodies. On inserting a spade beneath the entire mass, in order to carry away as much as possible, we found apparent evidence of this hole having been tenanted for more than one season, since below the white bones, forming the actual nest, was at least an inch in depth of former dejecta. This under layer was also very dark in colour, and very lively, whilst that portion nearest the walls of the chamber was quite dry and caked into the surrounding soil. Amongst the half-digested portions of bone I particularly noticed the remains of beetle-cases, and one large fragment of a water-beetle (Notonecta). with the claws complete; but all these substances were confined exclusively to the nesting-chamber, and were not scattered about the passage leading thereto, nor was there a single atom of grass, straw, or such like material to be seen anywhere. Wishing to preserve not only the eggs, but the strange bed on which they were placed, the whole mass, on our reaching home, was turned into a muslin bag, and by placing that in a cullender and allowing water to run freely through it for some time, all the earthy particles were soon washed out, and the maggots were as effectively destroyed, by a single immersion in boiling water. The bones, thus thoroughly cleansed and sifted, were next turned out upon a sheet of blotting paper and then laid on a wire sieve to strain and dry till in a few hours the entire heap looked as white, and free from all impurities, as the

portion on which the eggs had been first seen. On weighing these bones, thus freed from all foreign particles, I found they amounted to exactly 1,080 grains or two ounces and a-quarter and thirty grains. Mr. Gould (Birds of Great Britain), in describing a kingfisher's nest, taken by himself from a bank on the Thames, (April 18th, 1859,) speaks of the deposit of bones then found "as weighing 700 grains, which had been cast up and deposited by the bird and its mate in the short space of twenty-one days," as he had previously abstracted four eggs, placed on a very slight layer of the same material. How long in my case the nest had been forming I cannot say, but the eggs were hard set upon when I took them, and though I believe nearly all the older portions of the structure either crumbled to bits, or were washed away under the cleansing process, there still remained, in all probability, more then one year's deposit. The quantity of small fry whose tiny skeletons alone would weigh 1080 grains, might form a problem for the ingenious, and undoubtedly would amount to something enormous; yet anyone who has watched the voracity of the young, when kept in confinement, will scarcely be surprised at the mass of pellets thus ejected by adult birds in their breeding places.

I have recently met with a description of three nests, by a true naturalist, in that most interesting work, entitled "Life in Normandy;"\* one found at Eton, one in Northamptonshire, and one in Italy.† The first

<sup>\* &</sup>quot;Life in Normandy, sketches of French fishing, farming, cooking, natural history, and politics, drawn from nature," 2 vols., 8vo., 1853.

<sup>†</sup> All three nests varied somewhat in character, that at Eton much resembled the one at Keswick, being described as "nearly circular, having only one side open; the top, bottom, and sides all composed of the same substance; the inside covered with some of the light sandy soil which surrounded it, and which adhered to

contained three young ones in the month of May, the second five eggs in July, and the latter four young ones full fledged in summer. With these various dates then, of eggs and young, the question naturally arises, whether this species has two broods in the year? That they breed early is evident from my own and Mr. Gould's nest, and in that taken at Eton the young were hatched in May; yet in the Northamptonshire nest the eggs were found in July, and it is not, I think, improbable, that if robbed of their first offspring they will lay again, though perhaps not accustomed as a rule to rear two broods in the season. The appearance of the nest which I examined at Keswick, and the situation of the hole, was strongly in favour of its having been made by a rat, and enlarged by the bird for its own purposes, but there seems little doubt from the situations in which some nests have been found, that these birds are also accustomed to excavate for themselves. A young friend extremely fond of ornithology, and a good observer, assured me not long since that, on one occasion, he observed a kingfisher in the act of boring into a bank, and although he could never subsequently catch the bird at work, the hole became deeper day by day, till probably through his too frequent visits the chosen spot was deserted. The above instances, I think, also clearly indicate

the bottom; the outside beautifully white, and looking like carved ivory or lace." In the Northamptonshire nest, the eggs "were deposited at the end of a hole four feet deep, and were lying on sand mixed with a few small bones;" and the third, in Italy "was of a dirty yellow colour instead of white, built round like the nest of a hedge-sparrow, except at the back, where it rose with an irregular edge, about two inches higher than the front. The bottom, front, and sides were quite hard, but the part that rose behind was soft, and broke easily under the fingers when lifted from the ground, but by the next morning had become quite hard and dry."

that wherever the nest is newly tenanted, the eggs are laid on the sand, and the nest of fish bones, such as it is, is gradually formed by the sitting birds. In Suffolk, according to Messrs. Sheppard and Whitear, their nests "have been found in holes in gravel pits at the distance of a mile from any large pond or river." In such localities the previous borings of the sandmartin are most probably made use of, but I cannot agree with Mr. Newman\* that the kingfisher invariably adapts the deserted holes of the sand-martin to its own purposes. May not the statements of some authors that kingfishers' nests have been found with grasses, straws, and such like materials, mixed with fish bones, be accounted for by presuming that some former occupant of the hole, such as either land or water rat, had previously introduced these foreign substances? I cannot conclude this account of the kingfishers' nest without quoting Sir Thomas Browne's description as given in his "answer to queries about fishes, birds, and insects" (Wilkin's ed., vol. iv., p. 184), as usual exhibiting the accuracy of observation of that most remarkable man. "Halcyon is rendered a a kingfisher, a bird commonly known among us, and by zoographers and naturals the same is named ispida, a well coloured bird, frequenting streams and rivers, building in holes of pits, like some martins, about the end of the spring, in whose nests we have found little else than innumerable small fish bones, and white round eggs of a smooth and polished surface." The young birds, though rather difficult to rear, are extremely amusing when brought up from the nest. Mr. Sayer, a birdstuffer, in this city, had four alive in the summer of 1862, which were kept in a small aviary where they

<sup>\* &</sup>quot;Private Life of the Kingfisher," by Ed. Newman, F.L.S., F.Z.S.—"Field," 1865, p. 108.

had ample space to display their natural habits. If a deep basin of water, filled with live minnows, was placed on the floor, they would dart down from their perches one after the other, and with almost unerring aim, secure a victim, which was generally held near to the tail until killed by sundry smart blows against the woodwork; then tossed up with a little jerk and swallowed head downwards. Their voracity was something extraordinary, devouring meat as well as fish, and occasionally one, having bolted his own minnow, would seize hold of that in the beak of his neighbour, when the struggle for mastery was highly amusing, "pull devil, pull baker," they alternately dragged one another along the narrow perch, and usually ended in halving the fish in their violent efforts to gain sole possession.

There is no doubt that our native birds receive in some seasons, if not every autumn, additions to their numbers from more northern localities. Messrs. Sheppard and Whitear describe this species as apparently "subject to a partial migration, as it comes up the river Gipping, in Suffolk, every autumn. In the autumn of 1818, kingfishers abounded along the shores and creeks of the Stour, though not one was to be seen in the summer. At the latter end of the last year none were to be found in the same place." Mr. W. R. Fisher, also, writing from Yarmouth in 1844 (Zoologist, p. 766), says,—"I have for some time suspected, from the number of kingfishers which are annually killed here towards the end of August and beginning of September; that a migration of these birds takes place about this time. The fact of a kingfisher having lately dashed against a floating light placed about twenty miles at sea, off Winterton (the Lemon), seems to confirm this supposition. It seems probable that they come from the more northern parts of Europe, where the waters are frozen in winter, but I have not hitherto observed any indication of their return in spring. The greater number of those which occur are young birds." In the severe winter of 1859-60, a very unusual number of kingfishers appeared in this neighbourhood, and during the intense frost at that time, between the 12th and 24th of December, when the rivers, drains, and watercourses of every kind were thickly frozen, more than twenty of these beautiful little creatures, from one locality only, were brought into Norwich to be stuffed. Most of them had been shot by the side of a mill pool, where the open water, caused by the action of the flushes, afforded the only chance of obtaining their finny prey; and several were picked up dead upon the ice, frozen hard and stiff, and apparently starved to death. In one instance a kingfisher was seen to pitch down close to the bank of the river, and rising again, fly off to a rail close by. The person watching this bird saw it attempt to swallow something, when it suddenly fell backwards and was picked up dead. On being examined afterwards it was found to have bolted a little shrew mouse, which unusual morsel had evidently caused its untimely end, and showed how hard pressed these poor birds must have been for their natural food. These were, no doubt, for the most part homebred birds. as their scarcity during the following spring and summer was particularly noticeable, and in the winter of 1860-1, though very severe, the kingfisher was scarcely seen. From that time they did not again appear to be particularly numerous until the beginning of 1864, when, during the hard frost that prevailed at the beginning of January, between thirty and forty specimens at least were shot in the immediate vicinity of Norwich, and others were picked up entirely starved out. To a record of this fact communicated to the "Zoologist" by Mr. T. E. Gunn (p. 8954), Mr. Newman has also appended the following note:-"A still larger number were killed or

picked up dead in the Woolwich marshes and the fens of Lincolnshire, but much earlier in the winter season, and before any starvation could have taken place from freezing of streams; indeed, October and November were the months when these birds were most abundant."

## HIRUNDO RUSTICA, Linnæus.

#### SWALLOW.

Emblem of all that is bright and sunny, the Swallow is associated with our pleasantest recollections of idle hours, by "flood and field." Lazily sitting by the river's side, supposed to be fishing, though, in reality, more intent upon the scene before us than the uncertain movements of a painted float, the soft warblings of the passing swallow delight the ear, and the eye as delightedly follows its rapid flight. Skimming low over the water, it passes again and again, snatching at the insects in its zigzag flight, now stopping abruptly as, with upraised wings, it hovers for an instant over some floating object, now laving its glossy plumage in the water as, rising and falling in graceful curves, it seeks, high and low, its not less active prey. Tired of our sport, or may be the want of it, let us now gather our tackle together and, as we slowly saunter homewards, observe attentively the varied actions of this busy useful bird. How the sun glistens on its glossy back as it courses over the buttercups in the rich meadows, or, following others in quick succession, threads the "mazy dance" beneath the spreading trees. In and out amongst the legs of the cattle, revelling in the insects that swarm around them, we lose it for an instant in its sudden turns as we cross the stile into the dusty road; yet scarcely

have we resumed our walk than it re-appears; this time, perhaps, coming straight at us in its headlong flight; till, with one stroke of its nimble wing, it is over the fence and far away on the other side, or, rising almost perpendicularly, passes high over head; then descending again and almost sweeping the ground, hurries on its way as we turn to watch it. In our towns and villages, where the swallows nest in the chimneys of old fashioned houses or more humble cottages, they are seen continually flying backwards and forwards close under the eaves, or occasionally attempting a lower level when a brief cessation of traffic in the streets leaves an open course. Suddenly, stopping in his swift career, the male revisits his sitting mate in some long frequented chimney, and cheers her labours with his soft guttural notes either perched on the brick-work, or hovering like a kestrel over the entrance to the nest. If we change the scene and seek the cool refreshing breeze upon the sea-shore, the swallow joins us in our summer ramble, feasting on the sand-flies as it skims along the beach, its graceful form reflected on the moist sands; or, in short flights out to sea, just tops the crests of the little billows and the weed-covered rocks exposed by the tide. Again, in a summer cruise upon the broads and rivers, though not so generally dispersed, and far less numerous than either the house or sand-martins, the swallow still comes to meet us as we approach the "Ferry," or some lone farm-house, or marsh-man's cottage near to the waterside. Occasionally, also, even further from the habitations of man. we find a pair or two frequenting some large wooden marsh-mill, passing in and out through the door and windows to their nests amongst the rafters in the upper story. As a rule, however, I have invariably noticed that the swallow, whether in its search for food or merely sportive flights, does not wander so far from its nesting

haunts as either of our British martins. In this county, this ever welcome visitant usually makes its appearance about the 15th of April,\* and leaves us again towards the end of October, although I have occasionally observed stragglers up to the 12th and 14th of November. The situations selected for nesting purposes are by no means confined to our chimney shafts, as they build quite as frequently under the eaves of out-houses, or on the crossbeams inside the roofs of barns and cattle sheds, and other similar localities, provided access can be obtained by door or window, or any chance aperture. For many years I have known their nests to be placed against the rafters in two covered sheds, erected on either side of the Norfolk and Norwich Hospital, as a shelter for gigs and carriages; and whilst staying at Lowestoft in the summer of 1864, I found two pairs breeding in a similar manner within the boarded house of the Corton life-boat. This building has a window on either side, protected with iron bars, and closed when necessary with wooden shutters, but one or other is invariably open during the summer months to admit the air, and thus these pretty creatures had availed themselves of this snug retreat; but unless they crept out beneath the door way, I could find no other means of escape should both the windows be closed at once. In collecting materials for its nest, the swallow, like the house-martin, will settle on the moist road or the brink of ponds and ditches, and daintily elevating its wings and tail above the soil, gather the soft mud with its beak. Yet, although these clayer structures are always intermixed with straw, and lined with grass and feathers, it

<sup>\*</sup> The table of "observations on indications of spring," made during ten years, commencing 1845, at Stratton Strawless, as published in the *Norfolk Chronicle*, May 31st, 1856, gives the earliest and latest arrival of the swallow as follows:—April 10th, 1852; April 28th, 1847.

is rarely that one detects a bird in the act of conveying any of those lighter articles; but I once saw a pair playfully contending on the wing for the possession of a large white feather, which was dropt again and again, and as often seized by one or other of the birds ere it floated to the ground, and was at length safely deposited within the chimney shaft.

Of the two broods which they rear in their brief sojourn amongst us, the first, if the parents have been undisturbed, are flyers by the middle of June, the latter-hatch about the middle of August. pretty it is then to watch the untiring labours of the old birds. Sometimes ranged in a row on the parapet of a house, four or five little fluttering creatures sit side by side, already slight traces of the chesnut gorget leaving no doubt as to the species. How did they get there? Did they tumble down or, stronger in faith than in quill feathers, believe the "all right" of their fond parents, and pluckily launch themselves from the summit of that stack of chimnies? Anyhow, there they are, and now both trembling wings and open beaks dispel all doubts as to these feathered babies being perfectly capable of "taking notice." Pausing for an instant in its upward flight, an old bird hovers, with expanded tail before the favoured nestling, and with soft loving notes fills the little outstretched throat with food, then off for more, and each in turn, by either parent, is thus fed incessantly. When further fledged, a favourite resting place for the young swallows is on the dead branches of some lofty tree, whose summit has, perhaps, been scorched by lightning, and here both old and young at intervals will sun themselves for hours, the latter now darting off to meet their parents, and receive in mid air the expected feast. The popular belief, however, in some parts of the country, that swallows only settle on dead wood is not founded

on fact, as I have seen them often on green branches, but the leafless bough affords an open perch, from which they can more readily launch themselves with their long tapering wings, and hence no doubt their modern predilection for the telegraph wires. Young and old, still congregating together, are seen in little flocks about our meadows and pastures, till instinct warns them of the coming winter, when suddenly they are gone, and, in the absence of their graceful forms around our dwellings or about our paths, in every outdoor occupation, we realize in the very void created, the pleasure they impart in summer.

## HIRUNDO URBICA, Linnæus.

#### HOUSE-MARTIN.

The fullest and most accurate account of the habits of this familiar species, as indeed of most of our migrants and residents, is that given by Macgillivray in his "British Birds"—a work far too little known to the naturalists of this country, the minute observations of its talented author being equalled only by his descriptive powers. For my own purpose, a brief sketch of the "ways and means" of the House-Martin, as observed in this county, will suffice in the present volume, though a small book might be written, without exhausting the subject, on the varied actions, customs, and peculiarities of this universal favourite.

The winter has passed and gone, though still the chilling blast of the north-east winds makes one sympathise with Hood\* in his version of "The Seasons."

<sup>\* &</sup>quot;Come gentle spring! ethereal mildness come! Oh! Thomson, void of rhyme as well as reason, How could'st thou thus poor human nature hum? There's no such season."

Yet, in spite of all such atmospherical drawbacks, the elms and beech trees are budding into leaf, and the horse-chestnut and sycamore are fully clothed; the hedgerows, changing from brown to green, are hiding with their foliage the early nests of the robin and the hedge-sparrow, and the merry song of the chaffinch is heard again with the chiffchaff and the willow wren; when the brief sight of a glancing form, twisting and turning in the bright sunlight, gives a thrill of pleasure to the true naturalist, who doffs his cap to the "first swallow" or the foremost flight of the coming martins. Varying a little with the mildness or backwardness of the season, the housemartin arrives generally rather later than the swallow, and is seen in our country walks, though not in our streets, by about the second week in April. The 20th of that month is, I think, an average date, and from that time their numbers rapidly increase, and, for a time at least, they seem to give themselves up wholly to the pleasures of existence, spending their entire days upon our rivers and streams, feasting and flitting with untiring energy, and delaying for a while their parental cares. Should the weather at this time become unusually severe, they are gone again for a brief space, having sought, no doubt, with their swift wings, the warmer climate of our southern counties, but a genial change soon brings them back, and by the first week in May they are around our dwellings carefully inspecting their old nests and selecting sites for new. Now is the time to watch their pretty actions as again and again they hover up to the eaves, or drift away upon outspread wings, the white patch on the tail coverts contrasting forcibly with their dark blue backs. Not easily dislodged from any favourite spot, they are equally hard to please in the choice of a new one, often coming and going for days together,

apparently quite unable to decide. At other times, from some cause or other, the place fixed upon proves wholly unsuitable, the materials for the nest refusing to adhere. This was the case in a house not far from my own a year or two back, where several pairs seemed anxious to build under the projecting eaves, but though from one side of the house to the other the wall was dotted with little patches of clay, no safe foundation could be made, and at length the attempt had to be given up; yet some persevered for a fortnight and thus, to no purpose, lost much valuable time. There is no doubt that the old nests, which remain firm, are inhabited year after year, very probably by the same birds or some of their brood, but in too many cases these are occupied by sparrows in winter, who re-line them with straws and other articles for their own convenience, and in spring dispute the right of the martins to their former tenements. The cunning bullying sparrow is the housemartin's worst enemy. It sits quietly watching the labours of the little architects from the gutter of the roof or the top of the chimney, never interfering whilst the work is in progress; but, no sooner is the whole completed, than it takes possession, in the absence of the builders, and impudently pecks at them from the entrance when they return to their home. Macgillivray, on the authority of Mr. Durham Weir, gives no less than three "well authenticated facts," as he terms them, of martins collecting together to build up a refractory sparrow in its ill-gotten nest, the names of the individuals who witnessed the proceedings being given in each case; and many similar instances are also on record, though generally looked upon as mere fabulous statements. Most heartily do I wish that the martins frequenting my house would thus summarily punish a few of their tormentors; as it is, I am obliged to come to the rescue, and with a small bulletted saloon

pistol, that makes little noise, pick off these feathered house-breakers whenever opportunity offers. people rather than drive away these amusing birds have little wooden ledges placed under the nests to preserve the cleanliness of their windows and door steps; but that this is not always an effectual remedy will be seen by the following anecdote, related to me by Mr. Ringer, of West Harling. A gentleman of his acquaintance residing in that neighbourhood, who, though particularly partial to house-martins, objected to the nuisance which their building entailed, had a long board, the whole width of his house, fixed at a convenient distance below their nests. Many pairs, as usual, built under the eaves, and the old gentleman was congratulating himself on this happy idea when, to his great vexation, a good many more persisted in building below the board, and thus effectually frustrated his good intentions. The same individual, also, being much annoyed at the sparrows taking forcible possession of the nests of his favourites, employed a man to shoot at the sparrows as they flew out, and the martins, far from being frightened by the report of the gun, would repossess themselves instantly of their proper domiciles. The application, however, of soft soap or cart-grease when required, to the wall, the under side of the eaves or protecting board is generally sufficient to hinder the birds from attaching their nests to any place where these would be found a nuisance.

As soon as building has commenced in earnest, we see these little creatures collecting mud from the sides of ponds and water courses, or settling on the roads in busy groups to avail themselves of the temporary moisture afforded by the water-carts in dry seasons. How daintily they lift their wings and tails, raising themselves up on their little white feet to avoid contact with the dirty soil, then launching themselves

upon the wing, with perfect ease, fly off to their homes with many a graceful curve. Early in the season the business proceeds but slowly, the birds working only for short periods and at uncertain intervals, guided, no doubt, by the necessities of nature to hasten or delay the appointed task. If, however, their nests are destroyed by accident or otherwise, the next are completed with far more expedition. A pair, which no doubt had been disturbed elsewhere, commenced building at the side of my house on the 8th of June (1864), and by the 13th the nest was completed, and the old birds were seen going in and out. I watched their proceedings with much interest, and as soon as the site was once chosen and the foundation laid with a few lumps of clay, both birds were actively engaged collecting materials. At first, clinging to the brickwork with their claws and supporting themselves on their outspread tails, each one in turn added its mite, and hurried off for a fresh supply. An affectionate little twitter was invariably uttered on each arrival, but if both remained at the same time, one only continued building; the other either looked on, or with endearing notes caressed its mate. Occasionally the absent bird would return too soon, and receiving a hint to that effect as it hovered up to its partner, would skim away over the tops of the trees, and thus in little flights await its turn. Presently the structure assumed a cup-like form, projecting sufficiently for each little architect to get inside, as with busy bills they raised the outer wall, and now both birds, which before had left the house at night, roosted together on their new structure. They generally worked, if the weather was fine, from early morning till nearly noon, and then either desisted altogether or returned only at long intervals until about five p.m., when both worked steadily for an hour or two, and then joined their

neighbours in their aerial evolutions as long as daylight lasted. As a rule, I think, the middle of the day is devoted to feasting and pleasure-flights, the moist atmosphere, both morning and evening, being most favourable to the prosecution of their work, which hardens with the sun in the middle of the day. Under the projecting roofs of sheds and other buildings and the corners of windows are the sites usually selected for their nests, but I have known them built under the arches of a bridge, and in one instance also, at Hunstanton, on the face of the chalk-cliff fronting the sea; a strange situation in these days, for this species, but one which it occasionally selects in other parts of England, and which no doubt was natural to it before men began to erect houses. I have also known them to build for years under the thatch of a cottage, one story high, where a boy could reach every nest with a short stick, yet probably from the people encouraging and protecting them they seem quite unsuspicious of danger.

The unceasing exertions of the old birds to supply the wants of their nestlings when once hatched, is one of the most interesting sights in nature, as each in turn arrives with food, then, squeezing its way out again through the little aperture, launches forth once Thus, hour after hour, the "labour of love" goes on till darkness only stays their busy wings, and old and young nestle together in their little home. Macgillivray gives the result of one whole day's observations upon the number of times that the house-martin really feeds its offspring; and by this statement it is shown that in the middle of July, between four a.m. and eight p.m., a pair of these birds returned with food to their nest no less than three hundred and seven times, making at certain parts of the day from twenty to twenty-eight visits per hour. As

the young approach the time for their first flight, we see their little white faces at the opening of the nest, watching the return of the old birds, who now feed them from the outside, and, as they hover up and cling for an instant with outspread tails, low murmuring notes announce a mutual pleasure; and, even when not actually seeking food, the parents will pause again and again in their rapid circlings, and on quivering wings twitter for an instant to the tiny occupants of their little nursery. As a rule the house-martins are so amiable a race, aiding one another against their common foes, and taking evidently a friendly interest in their neighbours affairs, that the following instance of a downright quarrel amongst them is worth recording. On the 12th of June, 1865, my attention was attracted to the martins that build against the side of my house by their agitated flight and cries, and the fact of several of them visiting one particular nest. watching their movements, I found the real proprietors were fighting for their home, and two others evidently as much bent upon ejecting them. First one would fly into the nest, then another, then a third would work its way through the entrance and a regular struggle succeeded inside; portions of clay rattling down, whilst wings and tails alternately projected from the little aperture. In a second or two, one would come out, then two, fighting with their claws apparently interlaced, till they thus fell occasionally to within a yard of the ground before quitting hold. Then a chase ensued, and all four, wheeling round, returned again to the attack and defence. Sometimes one pair seemingly gained possession first, sometimes the other, but each "round" invariably ended with two, probably the males, clinging to each other, as they tumbled from the nest, with now and then two others also "binding" to them, till the whole struggling feathered mass would come nearly

within arms' reach, the combatants being far too excited to heed my presence. Parts of the nest were pulled down, and feathers from the lining flew out as well, and thus the fight went on for at least twenty minutes. At length, after a prolonged struggle and chasing flight, one pair returned alone, and the others were evidently beaten. The owners now began to repair damages, though neither quitted the nest, but sat preening their feathers on the edge, twittering all the while in an excited manner and evidently unwilling to leave for fear the intruders should return. I can only imagine, as the cause of this strange quarrel, that one pair commenced the building and deserted it for some reason, returning only when a fresh pair had appropriated the site and finished the nest.

As invariable as the circlings of the rooks over the elms, or the twistings and turnings of the starlings over the reed-beds, before retiring to roost, is the evening flight of the swallow the martin, and the swift. The sitting bird leaves her nest for awhile to stretch her weary limbs and join with her mate the twittering throng. Now, mingling in full chorus, they swarm over our heads; now, separating in all directions, they skim over the trees and housetops, rising and falling under the eaves of our dwellings; and, again collecting, repeat their varied movements, till, almost imperceptibly, when the sun has set and the deepening shadows are stealing over the scene, they drop off by degrees to their respective homes, and the stillness of the summer night succeeds in strange contrast to their busy actions. The house-martins have at least two broads in the year, some of the first hatch being known to roost with their parents and the second family in the same nest; whilst old and young consort together in their flights over the meadows, fields, and rivers, till the time comes to return southwards. In dull cloudy days, with occasional showers, they frequent for the most part the vicinity of trees, flying low under the spreading branches, or circling round, at a somewhat higher level, their white tail-coverts contrast sharply with the dark foliage. In windy weather they will also seek the same localities; but it is curious to watch them at such times, daring the wind, as it were, in their playful flight, hovering up in the very teeth of the gale till, fairly mastered, they are borne swiftly away on outspread wings only to return again and again to the charge. The sportsman finds them in the early autumn playing over the turnip fields with the skimming swallow, crossing his path at every turn, or chasing each other in little groups over the sheltered corners where, some small plantation casts a little shade, or a chance pit-hole adds the attractions of water to a shady nook rich in coarse herbage and teeming with insect life. How strange it is that the migratory impulse should be stronger even than parental love, causing even these gentle and peculiarly affectionate beings to desert their later nestlings and leave them to the sad lingering fate of death by starvation. Yet many are the instances in which this has come to the knowledge of careful observers, and the bodies of these callow young are thrown out by the old ones on their return in spring. I have frequently seen martins still feeding their offspring in the nest up to the end of September, and it is these late hatched ones which are observed occasionally about our dwellings long after the main body have left us in October, being then too young and feeble to attempt so long a journey. A young pair were shot at Carrow, near Norwich, in 1862, as late as the 13th of November. As before remarked, though for the most part peculiarly gentle and inoffensive amongst themselves, these little creatures will pursue any feathered intruder with the utmost vigour and

determination; sometimes, in a body, pursuing a hawk for a long distance, "mobbing" him in every possible way, and fairly bewildering him with their endless evolutions, as they swarm around with their twittering On one occasion also, I saw a common pigeon treated in the same manner by a large flight of martins, merely, as far as I could see, because he passed through their ranks; but so severely did they resent this intrusion that, after a long bewildering chase, they fairly drove him to his pigeon-locker, glad enough to escape from such a nest of hornets. At times, too, I have noticed a strange antipathy between the pied-wagtail and the house-martin, which it is difficult to attribute to anything but jealousy in a kindred pursuit of insect food. In every instance the attack has been made by the wagtail, when the two birds have accidentally crossed each other's path, in which case I have watched the pursuer and pursued as far as the eye could reach, twisting and turning with such wondrous rapidity that the two birds have seemed like one in the closeness of their movements. On one occasion I had been watching some thirty or forty martins sitting in rows upon the telegraph wires, when a pair of pied-wagtails came and perched amongst them; this seemed the signal for most of the martins to fly off, and the wagtails, each singling out an object for the chase, started in swift pursuit. Whether. or not our British Hirundines believe that the telegraph wires were erected for their special accommodation, undoubtedly one of the strangest points in their modern history is the manner in which they avail themselves of these novel resting places. Indeed, when beholding, as I have often done in autumn, each wire lined with their little bodies, more especially in the vicinity of our rivers and broads, one wonders, almost, how they managed without them, since no other perch seems half so suitable for their tiny feet, or affords so great facility for launching

themselves upon the wing. On one occasion I remember, when sailing up the river from Lowestoft, about the middle of August, the wires in the vicinity of St. Olave's Bridge were literally black with house and sand-martins, in nearly equal numbers, and a few swallows here and there. It was too early in the season to suppose they had collected preparatory to leaving altogether, and yet their numbers, which might fairly be reckoned by thousands (extending as they did in unbroken lines for at least a hundred yards), was a sight which even the least observant individual could scarcely pass unnoticed, and their ranks no doubt included nearly all the birds reared for miles around, thus met to desport themselves over the waters of the Waveney. Mr. Newton attributes the unquestionable decrease, of late years, in the numbers of the genus Hirundo, and especially in H. urbica, so frequently remarked upon in zoological journals, to the diminution of their food by the drainage of fens and the There is no doubt, I think, that this may be considered the main cause of their scarcity in many places: but as yet, owing to the wide extent of marsh land and the broad districts, the diminution is less perceptible in Norfolk than in many other counties.

# HIRUNDO RIPARIA, Linnæus.

### SAND-MARTIN.

Pleasant as are the home associations connected with the house-martin and the swallow, the above-named species is not the less endeared to us, through the recollection of summer days spent amidst their cheerful haunts. To my mind, the very name is suggestive of holiday recreations and pleasant hours upon the rivers and broads, where the verdant marshes and the winding stream resound on all sides with their ceaseless twit-

terings. What angler has not watched their endless flight, passing and repassing on the rippling water, and felt how much enjoyment would be wanting to the scene were there no birds to charm the eye and ear, no gentle breeze to stir the rustling reed-stems. tremely numerous in summer, the Sand-Martins arrive rather earlier than the previous species and leave us again towards the end of October, but a few may be seen occasionally as late as the middle of November; most probably young birds of the second brood, reared late in the season. On their first arrival, before their parental duties have commenced, they spend the entire day upon the water, flitting and feasting from the first dawn of morning till after sunset, and at night, clinging by hundreds to the reed-stems, roost in the great reed-beds upon the various broads, or in ozier-cars and damp rush-bottomed plantations by the river side. In such localities, also, the young of the first broods retire to rest, no doubt a far more agreeable manner of passing the dark hours than in their confined nest-holes swarming with fleas. These, however, bear but little comparison to the numbers which, later in the season, collect from all parts towards sunset; feasting as long as daylight remains upon the innumerable insects that swarm upon the surface of the water, and settling by degrees, like the starlings, amongst the reeds; whilst stragglers are still arriving till past nine o'clock at night. Late as they may be, however, in retiring to rest, they may be seen again by three o'clock the next morning, snatching a hasty meal amongst the swarming midges, and dispersing themselves once more over the marshes to spend, on ceaseless pinions, their busy useful day.\*

<sup>\*</sup> Who but Macgillivray could describe their ever changing course, or give, in such "winged words," the idea of swiftness; yet thus he renders it:—"There comes a bank martin, skimming

Their breeding habits are too well known to every ordinary observer to need much description, but wherever the side of a railway cutting, or the declivity of a chalk, gravel, or sand pit, presents a favourable surface to be operated upon by their little bills, these busy miners excavate for themselves a home, living sociably enough in numerous colonies, and the apertures of their nest-holes, in some cases, so close together as almost to run one into the other. As a rule, the sites selected for nesting purposes are in close vicinity to a river or smaller stream, but I have occasionally found them breeding at a considerable distance from water of any kind. Unless the position itself has peculiar attractions, they do not, like their kindred species, seek the neighbourhood of man, but prefer the open country away from all habitations, and they also nest by hundreds in the face of our lofty sand cliffs, facing the sea. In the vicinity of Cromer, on either side of the town, their nest-holes are placed about two feet from the summit of the cliff, and for the most part exactly on the same level, that strata being no doubt most easily worked. and they also breed in the carstone formation, adjoining the chalk, in the less extensive but most remarkable range of cliffs at Hunstanton, near Lynn. In such positions, from the abruptness of the precipice and the distance below the surface at which their borings are made, the nests are rarely disturbed except by the sparrows, who will occasionally take unlawful posses-

along the surface of the brook, gliding from side to side, deviating by starts, now sweeping over the bank, wheeling across the road, making an excursion over the cornfield, then rising perpendicularly, slanting away down the wind, fluttering among the spikes of the long grass, and shooting off into the midst of a multitude of its fellows." Almost as one reads this graphic passage, low hurried twitterings seem to fall upon the ear, and he who in his mind's eye cannot see that martin is no true lover of nature.

sion, and keep it too, against all the efforts of the poor ill-treated martins and their friends, to expel the intruders. In chalk and gravel-pits, however, they are subject to many dangers from the fall of the soil. whether slipped by accident or intentionally broken down; and although the upper margin of the pit from its softer material is usually most densely populated, yet many pairs, in seeking for similar facilities, build so low down that the holes are easily accessible to boys, or the pickaxes of the men at work in the The noted chalk-pits at Horstead, near Norwich, are the resort of immense numbers of these birds, and it is extremely interesting to observe how instinctively they avoid the harder and more stony layers, whilst the smallest portions of the softer strata are selected wherever they may chance to crop out. The nest holes are by no means of the same size or shape, but vary according to the difficulties met with in excavating, and many may be seen left unfinished where a large stone, or other substance too hard for their bills, has obliged them to desist. The depth to which many of these little burrows extend is very remarkable, as I have frequently been unable to reach the nest even at arm's length, whilst others extend from two to three feet into the soil and are by no means always in a straight line, but curved so as to avoid any obstruction in the passage. They have generally two broods in the year, the first flying in June, and the second towards the end of July, as I have found the young still in the down by the second week in July, and eggs hard set upon at the same time. The nests are formed of short bits of straw and grass loosely put together, and lined with feathers-white ones, whether by choice or accident, always largely predominating. In autumn both old and young congregate together in their pleasure-flights, skimming over the rivers

and adjacent meadows in company with the housemartin and still scarcer swallow, or rest by hundreds on the telegraph wires, wherever commercial enterprise may have brought those convenient perches near enough to their usual haunts.

A high gravelly bank at the back of the Brundall station, on the Yarmouth line, has been for years a very favourite resort, and the chief home of those large flights met with, throughout the summer, on Surlingham and Rockland Broads; but, in all my visits to that district, I never remember to have seen them in such prodigious quantities as in the month of July, 1864. I was returning from Lowestoft, by train, on the 23rd, and, waiting for the Norwich train to pass, was detained several minutes at the Brundall station. As we came to a stand still close to their nesting place, I observed the sand-martins clustering like bees on the wires, many hundreds together sitting closely in rows, and these, when disturbed by the noise of the engine, rose in one dense mass, and flew round and round, apparently joined by as many more, and all at length settled in one thick cloud in a ploughed field close to the line. Most of them from their actions appeared to be feeding, some hovering up now and then and alighting again, but on the least alarm all rose together on the wing, and, drifting over the train in immense swarms, produced an effect as singular as it was beautiful, and one which I certainly never witnessed before upon so large a scale. A gun fired into their midst as they sprang from the ground, must inevitably have killed hundreds at one discharge, whilst their numbers, without the least exaggeration, could be only computed by thousands. Perfectly white and other varieties have been killed at times in this county; a light cream-coloured specimen was shot at Eaton, near Norwich, in July, 1861,

and another at Weasenham in the following September; and one of a light silvery grey, in the Norwich museum (No. 162.a), was killed at Dereham, in 1864.

### CYPSELUS APUS (Linnæus).

#### COMMON SWIFT.

If "one swallow does not make a summer," the first Swift is a pretty sure indication that that season has commenced in earnest. The last of its race to visit us in spring, and the first to leave us in the early autumn, we know it only in connection with bright sunny skies, long days, and sultry heat. Here, as we lay at length upon the warm shingle, listening to the murmur of the little waves as they ebb and flow amongst the pebbles at our feet, with a soft breeze tempering the scorching heat of the noon-day sun, under whose influence a deceptive mirage dances and flickers above the sandhills; suddenly the sharp screech of the passing swifts is heard as they swoop past us in their mad career, and still rings upon our startled ears long after their marvellous powers of flight have borne them beyond the range of vision. Soon they return again, rising and falling in amorous chase, or wheel in devious circles high up in the blue vault of heaven; revelling apparently in the intensity of the heat and the cessation for a time from parental duties. I have often noticed this habit in the swifts, of leaving the church towers and other nesting places about the noon-hour, as if to stretch their cramped limbs, and seek their food at a time when their eggs would least suffer from temporary exposure. There is another period, too, when the swift almost invariably appears abroad, though previously, perhaps, unseen for hours. The air is hot and stifling,

and a sudden gloom creeps as it were over the earth and sky. An almost painful stillness is broken only by the chirping of the sparrows under the tiles, already conscious of a coming storm. Dark angry clouds are drifting across the heavens, and one broad mass, perceptibly increasing and assuming each moment a deeper shade, bespeaks the lowering tempest. Now, as we stand watching that strange yellow light, which spreads itself for awhile over surrounding objects; as one by one the heavy drops foretell the drenching shower; strange dark forms are seen sweeping through the air in the very "eye of the storm," and the sooty plumage of the swifts contrasts even with the blackest portions of the surrounding atmosphere. No wonder, then, that their appearance at such times, issuing from their fastnesses as the very "demons of the storm," coupled with their "uncanny" looks and thrilling cries, should have won for them in a superstitious age the local name of Devilins.\* I have pictured these birds by the sea-side, not that they are more common in the vicinity of the coast than in any of our inland towns or villages, but so essentially is this a summer bird, that it recalls involuntarily the thought of leisure and of healthy idle hours. There is, too, one other association connected with the swift, which need not take us further from our homes, in town or country, than the parish church. Who is there, with an ear for nature's sounds, that cannot recall some quiet Sunday evening when, through the open doors and windows, scarce a breath of air is felt within the sacred buildingwhen human frailty, too much for even the best intentions. is yielding by degrees to an irresistible drowsiness, and the worthy minister is soothing rather than rousing those

<sup>\* &</sup>quot;Devilin. s., the species of swallow commonly called the swift; hirundo apus, Lin. Named from its imp-like ugliness and screaming. Jen. (Jennings Glossary) Sheer-devil."—Forby's Vocabulary of East Anglia.

slumbering tendencies? Suddenly, with a screech that makes one jump again, the swifts come dashing past the upper windows, no sooner heard than gone, and circling round the steeple in their evening flight, repeat with every passing swoop their strange alarm.

This species appears, generally, about the first week in May, and leaves us again, for the most part, by the end of August, though stragglers are occasionally seen up to the 20th and 25th September. The Rev. E. W. Dowell has, however, recorded in his MS. notes, a single swift as seen by himself at Blakeney, with several Hirundines, in October, 1858, a very unusually late appearance of this species. Throughout their brief sojourn with us, they are very generally distributed, frequenting alike the steeples of our city and country churches, the eaves of houses, or the ruined edifices of bygone days. They also breed regularly in the dark crevices of the chalk-cliffs at Hunstanton, facing the sea, where their nests are free from all chance of molestation; but the old birds are, I am sorry to say, frequently shot at from the beach as they take their evening flight over the sands, or chase one another along the face of the cliffs, whose hollows reverberate with their harsh screams. A curious instance of the effect of cold, during a very backward spring, upon our British Hirundines, as observed at the residence of the Rev. Mr. Fonnereau, of Christchurch, Ipswich, is quoted by Messrs Sheppard and Whitear from the Suffolk Chronicle (June 15th, 1816):—"On the mornings of the 5th and 6th of June, 1816, the gardeners could have taken up hundreds of these birds (swallows) in their hands. They were collected in knots, and sat on the grass in parcels of thirty and forty. This, there is reason to believe, was owing both to cold and hunger." They further add, "The same summer many house-martins were found dead on the ground in Norfolk, and others

were so weak that the cats sprang on and caught them as they flew near the ground. A pair of these birds, which had completed a nest under the eaves of our house, were both found dead in it before any eggs were laid. From the above circumstances birds of this kind were unusually scarce throughout the summer." The Cypselidæ are, in like manner, much affected by sudden changes of temperature. On the 20th of May, 1859, after a succession of cold N.E. winds for some days, I was shown a pair of swifts that had just been taken in a semi-torpid state from under the eaves of a church in this city, but on being introduced into a warm room they gradually revived, and were soon anxious enough to regain their liberty.

## CYPSELUS ALPINUS (Scopoli.)

#### ALPINE SWIFT.

But one specimen of the White-bellied Swift is known to have occurred in Norfolk, of which I am enabled to give the following particulars through the kindness of the Rev. Thomas Fulcher, of Old Buckenham, who has recently presented this most interesting bird to the Norwich Museum:—"There is a slight inaccuracy (he writes) in Yarrell's notice of it. was shot in Old Buckenham, in the field between the old castle and New Buckenham parsonage, in the latter part of September (not 13th of October), 1831. The gentleman who shot it left it, whilst still warm and bleeding, with a bird-stuffer in New Buckenham, but neither of them knew the value of it. After a few weeks it was offered to me, and I had it preserved. A friend of mine sent an account of it to "Loudon's Magazine" the same year. In February, 1833, I made a pen and ink sketch of the bird, natural

size, and sent it with a full description to Professor James Rennie, who inserted a reduced copy of the figure with my description in the "Field Naturalist" (vol. i., No. iv., p. 172). The following are the dimensions of this specimen as given in the above journal, although, as Mr. Fulcher remarks, "in measuring it some allowance must be made for the shrivelled state of the skin:"-"The length, from the tip of the bill to the end of the tail, is rather more than eight inches: breadth across the wings twenty inches; it is much more bulky than the common swift (Cypselus murarius Temminck), and must have weighed, at least, as much again. Bill nearly two-fifths of an inch long, measured from the base of the upper mandible, curved and black; the colour of the irides unknown, but I believe it was dusky. The head, back of the neck, back, wings, and tail grey brown, and the edges of the feathers of a paler colour. Round the breast is a collar of grey brown. The throat, lower part of the breast, and the body to the commencement of the under tail-coverts white; the sides dusky, with a mixture of dull white; under surface of the wings and tail, and the under tail-coverts dusky. The guill-feathers are darker than the back, and remarkably strong and pointed; the quills dusky white. The back, wings, and tail have copper-coloured and green reflections when viewed in particular lights. The tail is more than three inches long, forked, and consists of exactly ten feathers. Legs short and strong, flesh coloured, and feathered to the toes, which are all placed forward, as in the common swift; the claws strong and brownish black." Yarrell has recorded four or five specimens of this swift as procured in the British Islands, including the above, and a notice of a recent example taken in St. Mary's Church, Hulme, Manchester, on the 18th of October, 1863, will be found in the "Zoologist" for 1864, p. 8955.

## CAPRIMULGUS EUROPÆUS, Linnæus.

#### NIGHTJAR.

This singular species, both in habits and appearance, is a regular summer visitant and breeds in Norfolk, arriving in May, and leaving towards the end of August or beginning of September. A few young birds are, however, sometimes met with as late as the first week in October. Although the enclosure of late years of commons and waste lands has banished them from many of their former haunts, they are still common enough on the wild heathery districts in the western and south-western parts of the county, as well as in the vicinity of the coast, at Beeston and Hempstead, and on the Sandringham and other adjoining estates, in the neighbourhood of Lynn. In the vicinity of Norwich they may be seen as well as heard during the light summer nights on Mousehold Heath, also in the fern-growing lanes about Cossey, Bowthorpe, and Earlham, and I once observed one as near the city as the Asylum-lane, on St. Giles'-road. In such localities as I have just alluded to, they are particularly partial to the vicinity of woods and plantations, where, like other nocturnal feeders, they rest during the day if undisturbed; although, occasionally, as noticed by Messrs. Sheppard and Whitear, a single example has been seen hawking for food on the wing in the middle of a bright sunny day. On one occasion, whilst shooting, some years back, on Narboro' Heath, in the early part of September, I flushed several of these birds, which in more than one instance fluttered away as if wounded, to decoy me probably from the vicinity of their young. The following curious instance of the length of time during which,

if undisturbed by day, the Nightjar will remain quiescent, was recently communicated to me by the Rev. Thomas Fulcher:—Whilst walking round his garden on the morning of the 9th of August, 1865, about half-past eight, a nightjar rose from the ground under a spruce fir-tree. On following up the bird he found it perched, as is their custom, lengthwise, on a wooden hurdle, and from thence it flew into an ash tree across an adjoining meadow, but escorted by a noisy group of chaffinches and robins, "mobbing" the supposed raptor. Two hours later, and again in the afternoon, it was seen by Mr. Fulcher, "crouched flat on the same horizontal branch lengthwise," and by no means disturbed by his visits; and on once more going to look for it between seven and eight o'clock in the evening, it was still there, only quitting the branch when startled by a sharp tap on the stem of the tree. This bird, therefore (as Mr. Fulcher observes), "must have remained on the same spot in the ash tree eleven hours, from half-past eight in the morning till half-past seven in the evening." The following is a description of some singular varieties of the nightjar, which occurred during two or three seasons in this county, and are the more remarkable from the rarity of any variation in the sombre though beautifully pencilled plumage of this species. On the 27th July, 1856, a young pair were shot near Holt, whose peculiar appearance may be thus described. The throat, level with the eyes on either side, breast, belly, wings above and below, and the two central tail feathers pure white; under tail coverts partly brown and white; legs and claws flesh colour; top of the head, back, and remaining feathers of the tail as usual. The two birds were alike, with the exception, that the two white tail feathers were wanting in the female. During the first week of September, 1858, an adult bird, exactly resembling the above, was shot in the same neighbour-

hood, and again on the 29th of September, 1859, a young female was also killed near Holt, strongly resembling the previous examples, having the wings, throat, and upper part of the breast, with the vent and under tail coverts pure white. Whether any similar examples were observed in the same district during 1857, I could not ascertain; certainly none were obtained; but when we consider the undoubted migratory habits of the nightjar, it is a fact as remarkable as it is interesting to find specimens appearing in the very same locality, during three different seasons, exhibiting the same striking deviations from their normal colouring. There can be, I think, but little doubt that the birds of 1858 and 1859 were connected with the first brood in 1856, thus proving, as in the case of swallows and martins, the annual return of certain individuals to the same favourite locality. Mr. F. Norgate, of Sparham, a young naturalist who takes considerable interest in the habits and formation of birds, assures me, that a female nightjar shot by himself on the 5th of August, 1865, at Beeston Regis, when in company with some eight or ten others, proved, on dissection, to have no less than twentyfour small white worms in its eyes and brain in a state of active existence, when extracted from this recently killed specimen. This species is alluded to by Sir Thomas Browne as "A dorhawk or kind of Accipiter muscarius, conceived to have its name from feeding upon flies and beetles; of a woodcock colour, and paned like a hawk; a very little pointed bill; large throat; breedeth with us; and lays a marvellous handsome spotted egg. Though I have opened many, I could never find anything considerable in their maws.—Caprimulgus."

## COLUMBA PALUMBUS, Linnæus.

#### RINGDOVE.

The enormous increase in the numbers of this species of late years throughout the county is attributable in a great degree to the extension of our fir-plantations, added to their immunity at the present time from the attacks of their natural enemies, crows, magpies, and hawks, now almost exterminated as residents amongst us, through the strict preservation of game. Here, again, we perceive the effect of destroying for any special object, that true balance in the animal kingdom, by which an all-wise Providence decrees that the necessities of one class of created beings shall form a check upon the too prolific tendencies of other races. In the absence of those species, whose instincts teach them to prey upon the eggs and young of others, or to satisfy their carnivorous tastes by attacking birds of a far gentler nature, the now favoured tribes threaten in their turn to become injurious to man, by their undue preponderance in the scale of feathered life. As in the case of the smaller finches before alluded to, whose increase, unchecked by natural means, and exceeding therefore its natural proportions, becomes a real grievance to the agriculturist—the immense flocks of wood-pigeons that now traverse the country in search of food during the autumn and winter months, have become an equal source of complaint in the same quarter.\*

<sup>\*</sup> In the *Times* of December 16th, 1864, in a notice of the annual meeting of the United East Lothian Agricultural Society, it appeared that subscriptions were raised amongst its members for the destruction of wood-pigeons after the manner of sparrow clubs in our English counties.

unquestionably do much damage to the young layers by picking them off so close as to weaken and, in some cases, destroy the plant, and their extreme partiality for the succulent tops of the peas, as they come up, necessitates a careful watching of such produce in the pigeon districts, to prevent severe loss to the farmer. On the large flock farms also about Thetford, where turnip tops are really an object for lamb feeding, their visitations are by no means welcomed; but they do not attack the corn crops till the grain is ripe, when they settle on the "laid" portions. In making these remarks, however, I must not be understood to encourage the wholesale slaughter of these handsome There are many and effectual means, by net and gun, of thinning their numbers to a reasonable extent, and whatever mischief can be fairly laid to their charge, must be considered in connection with the benefits they confer during a great portion of the year, by feeding on many seeds and plants injurious to agriculture.\* Besides grain and the succulent

<sup>\*</sup> The late Mr. St. John, who paid much attention to the habits of this species in Scotland, does full justice to them in the following remarks:-"During the month of January the woodpigeons commence feeding greedily on the turnips. They do not, in my opinion, dig into the roots with their bills unless rabbits or rooks have been before them to break the skin of the turnip. In fact the wood-pigeons bill is not at all adapted for cutting into a frozen and unbroken turnip. The crops of those which I kill at this season are full of the leaf of the turnip; and they appear not to attack the centre or heart of the leaf, but to eat only the thin part of it. The wood-pigeon feeds more particularly on the leaf of the Swedish turnip, which is more succulent. \* \* \* The wood-pigeon feeds also on acorns, beech-nuts, the seed of wild mustard and, where it can be obtained, devours great quantities of . Potentilla anserina, breaking it off in pieces of about an inch in length. Though without doubt a consumer of great quantities of grain at some seasons, the wood-pigeon must feed for many months wholly on seeds of weeds, which if left to grow would

leaf of the turnip, they also devour large quantities of berries, such as those of the ivy and mountain ash. A very remarkable instance of the manner in which birds are attracted from all quarters, by some mysterious instinct, to any local abundance of their favourite food. occurred in the autumn of 1843, when this county was visited by one of the most fearful hailstorms ever known in the Eastern Counties. This storm, which took a direct route from Attleborough to Postwick, in a line of from two to three miles in width, committed frightful havoc amongst the cereal crops, levelling them with the ground, and scattering the grain, then ripe in the ear, in some places nearly three inches deep in the fields; and it was this very circumstance that caused immense flocks of wood-pigeons, as though summoned by invitation to one common feast, to arrive all at once in that particular Mr. Edwards, of Keswick, to whom I am indebted for much valuable information, respecting the habits of many of our resident species, was at that time residing near the line of devastation, at Wattlefield, and assures me that they came in such numbers that it seemed as if all the wood-pigeons in the county had suddenly collected together into that one locality. Amongst the wood-pigeons were also hundreds of stock-doves, a species only abundant in the warren parts of Norfolk, many miles from the scene of this terrible visitation. By shooting at them as they fed

injure the farmers crops to a very serious extent. Amongst other seeds which it eats are those of the rag weed. The wood-pigeon not being able to scratch up seed can only feed on those which lie exposed. \* \* \* Although there is a great extent of new sown wheat (Nov. 23,) in every direction, I shoot wood-pigeons with their crops full of the seed of the dock and without a single grain of corn. They also have in their crops a great deal of the rag weed, and small potatoes as large as marbles."—[Nat. Hist. and Sport in Moray.]

in masses upon the stubbles of the corn fields that had been destroyed by the storm, as many as thirty and forty were killed at a time with a shoulder duck gun, and often from thirteen to fourteen with an ordinary fowling piece, without apparently diminishing their numbers. The large flocks that regularly visit this part of the county in winter, come, no doubt, from the great firplantations in the western and south-western districts, where extensive tracts of heath land afford little sustenance, and these in roving parties visit our more sheltered and enclosed turnip fields and new layers, to feast on the juicy leaves which at that season form their chief sustenance. These roost by night in the adjacent fir-woods, and large numbers may be killed at such times by "laying up" for them of an evening and waiting till the birds fly over, which they will keep doing until dark. I have known as many as sixty obtained by this means in about two hours, guns being stationed in different plantations so that the birds fly from one to the other as they are shot at. In winter they are extremely troublesome in the large game preserves, from their devouring the pheasant's food in considerable quantities, and on some estates, in order to secure as many of these marauders as possible without disturbing the game, huts, either erected for the purpose or for feeding the pheasants in, are fitted with a net so constructed as to fall over the open front. The pigeons having been allured by grain for some days freely enter the trap, and when a sufficient number are collected together the net is suddenly dropped, and the whole flock secured at once. Upwards of seventy couple have been thus netted in the Hempstead woods near Holt, at one time. Both this species and the stock-dove are occasionally found nesting very late in the season; and Mr. Gurney, in the "Zoologist" for 1858, has recorded an instance of a ringdove's

nest, with two eggs, being found in his grounds at Catton, on the 7th of September. Varieties of this bird are but rarely met with, but one killed at Hoveton, in 1861, was of a light cream-colour, blotched on the upper parts with a pale slate grey; and a very beautitul specimen, pure white with the exception of two or three feathers in one wing, was procured near Swaffham a year or two back. This is the same bird recorded in the "Field" of March 12th, 1864, as a great curiosity, and is now, I believe, in the possession of Mr. Anthony Hamond, jun.

## COLUMBA ÆNAS, Linnæus.

#### STOCK-DOVE.

Although far less numerous, and more locally distributed than the last species, the Stock-dove is plentiful enough at certain times of the year and in certain parts of the county, particularly the north-eastern and southwestern districts. In the latter, with the exception of about four months from the middle of September to the middle of January, or even later if the winter be much prolonged, it is found, if not in great abundance when compared with other species, yet in sufficient numbers to be one of the most characteristic birds of that open country. During the latter part of the autumn and beginning of winter, though not perhaps absolutely wanting, yet it only occasionally appears, and then generally flocked in company with ring-doves. The late Mr. Salmon, with some show of justice, included it in his list of migratory birds in the neighbourhood of Thetford (Loudon's Mag. Nat. Hist. ix., p. 520), though from what I learn from other observers in that district he seems to have made an assertion rather too sweeping

when he states that all individuals of the species leave the neighbourhood towards the end of October, "none remaining during the winter." This same accurate naturalist states that the stock-dove, which in all "works upon natural history is stated to be only an inhabitant of woods, abounds in this neighbourhood during the spring and summer months, upon our rabbit warrens and heaths, to which it annually resorts for the purpose of nidification; and it is in general the first that arrives in this district for that purpose. situation which it selects for its nest differs materially from that chosen by its congeners, the ring and turtle doves (C. palumbus, C. turtur), the nests of which are always placed either upon trees or bushes: this species, on the contrary, occupies the deserted rabbit burrows upon warrens; it places its pair of eggs about a yard from the entrance, generally upon the bare sand, sometimes using a small quantity of dried roots, &c., barely sufficient to keep the eggs from the ground. Besides such situations, on the heaths it nestles under the thick furze bushes (Ulex europæa), which are impervious to rain, in consequence of the sheep and rabbits eating off the young and tender shoots as they grow, always preferring those bushes that have a small opening made by the rabbits near the ground. A few pairs occasionally breed in the holes of decayed trees: this is of rare occurrence in this district. It generally commences breeding by the end of March, or the beginning of April; the young ones, which are very much esteemed, being ready for the table by the commencement of June." Mr. Alfred Newton tells me that the young stock-doves, being a perquisite of the warreners, are a source of not inconsiderable profit to them, as they sell them for from eighteen pence to two shillings a couple, and that in consequence almost every warrener keeps a "dowe-dawg," i. e. a dog regularly trained to discover the burrows in which the doves breed. Mr. Scales, of Beechamwell, adds that "when the warreners find them in a burrow, they fix sticks at the mouth of the hole in such a manner as to prevent the escape of the young, but to allow the old birds to feed them." Mr. Newton, however, informs me that this precaution is thought to be unnecessary for the more experienced warreners, from long practice, know to a day (by once seeing the nestlings) when they will be fit to take. Along the extensive range of sandhills in the neighbourhood of Hunstanton,\* also, the stock-doves may be found breeding in considerable numbers, and likewise on Holt heath and other similar localities; indeed, I have no doubt that with careful observation a few pairs might be found in summer in many rough furze-covered spots where rabbits are preserved, but this peculiarity in the habits of the stock-dove is by no means generally known. In 1863, a friend of mine, whilst ferreting on Mr. George's farm, at Eaton, near Norwich, was not a little surprised at seeing a pigeon flutter out of a rabbit's hole (half hidden by thick gorse, in the steep side of a sandpit), into which he had just previously turned his ferret; the bird was caught by a terrier before it could take flight and proved to be an old stock-dove, but on a subsequent examination of the burrow no eggs or young were found. I may add that in that neighbourhood the bird is by no means common. This species, however, in certain districts, also breeds in our woods and plantations with the common ringdove, but in such situations it nests either in the holes of old trees,

<sup>\*</sup> These birds occur twice in the "Privy Purse Accounts" of the Lestranges, of Hunstanton, as follows:—Itm in rewarde the xvij. daye of Novembre to Osbert Reds sone, for bryngyng of stockdowes. "Itm ij stockdowes of gyste."

using only a few sticks by way of lining, in the stocks of old oak pollards, (from which circumstance, according to Yarrell, it has acquired the name of stock-dove), or, as my friend Mr. Edwards informs me, in any faggot stacks left in the plantations for the summer, the nest being generally placed at the bottom should sufficient space remain for the purpose. Mr. Newton has also recorded ("Zoologist," 1849, p. 2525, note) a single instance in which he found a pair of eggs of this bird at Elveden, near Thetford, "laid on a very thick bushy bough of a Scotch fir tree, about twelve feet from the ground, without any nest." Mr. Samuel Bligh, who has studied the habits of this species during the breeding season at Framingham Earl, says that their actions are occasionally anything but dove-like, as they fight most desperately till one or both fall to the ground. He has shot them in the very act.

The Rock Dove (Columba livia), from which there is no doubt our "blue rocks" and other fancy varieties have really sprung, is not found on our Norfolk coast, but it is worthy of remark, as confirmatory rather of the above statement, that the steeples of many of our churches in both town and country are frequented by pigeons in a half-wild state, which nest regularly year after year, like the jackdaws, in any chance apertures in the old towers; and generally in such situations as to be safe from all molestation. The still unfinished steeple of St. Peter's Mancroft, in this city, affords an unusual number of openings for such purposes, and I have often watched these truant pigeons, at all times of the year, passing in and out of their adopted homes. Yarrell (Brit. Birds, 2nd ed., p. 292), referring to the great powers of vision and the speed and duration of flight of our dove-house pigeons, gives the following remarkable statement, on the authority of Dr. Jenner:- "My ingenious friend and neighbour, the

late Rev. Nathaniel Thornbury, who had occasionally visited Holland, informed me that the pigeons about the Hague make daily marauding excursions at certain seasons to the opposite shore of Norfolk, to feed on vetches, a distance of forty leagues."

### COLUMBA TURTUR, Linnæus.

#### TURTLE DOVE.

The increase of late years in the number of these summer visitants is also attributable in a great degree, as stated by Mr. Lubbock, to the extension of our fir plantations, as, in most localities where such shelter is afforded them, they now breed very numerously in company with the wood-pigeon, though, as remarked by the same author, "the turtle breeds lower in the tree than the ringdove, and chooses a smaller tree." For several successive seasons until the place was disturbed for building purposes about six or seven years ago, a pair or two of Turtle Doves bred regularly in "the wilderness" on Bracondale, most probably the same haunt alluded to by Yarrell, on Mr. Lubbock's authority, as "within half a mile of the city of Norwich;" and they now nest regularly at Keswick and other wooded districts in our immediate neighhood. In the western parts of the county, about Feltwell and Brandon, they are now extremely plentiful, and in the vicinity of the coast abound in the extensive fir coverts about Cromer and Sheringham; yet, in 1846, the Rev. E. W. Dowell, in his MS. notes, records one shot at Roydon, and another at North Pickenham, as rarities in that part of Norfolk, and states that a specimen "shot at Brinton puzzled all who saw it for some years, as it had never been seen there before."

These birds arrive about the beginning of May, and remain with us generally till the middle of September, both young and old being frequently shot at the commencement of the partridge season, and the great partiality of this species for salt, whether in a wild state or in confinement, accounts, probably, in some degree, for their abundance in the vicinity of the In two or three instances to my knowledge, this species has bred in confinement, in this county, with the ring-necked domestic dove (Columba risoria). Mr. Lovick, of Thorpe, near Norwich, in the spring of 1858, succeeded in rearing some young birds of this hybrid race, which, as will be seen by the following description of a stuffed specimen in the possession of Mr. Longe, of Spixworth Park, presented many of the characteristics of both parents:—Head, neck (all round), breast, and under parts, as far as the legs, deep rosy pink; vent, and under tail coverts, white. On either side of the neck a patch of deep black; each row of feathers broadly edged with white. Back, scapulars, and greater wing coverts, rich buff colour, without any markings, but becoming slightly greyish in the centre of each feather. Primaries, blackish brown: secondaries, bluish grey. The lower half of the two outer tail feathers, with the external web, pure white, the remaining portion black; two centre feathers buffy-grey, and the remainder black, more or less broadly edged with white. The same pair again hatched, and brought off one young one in the following year. These cross-bred birds, however, are not very uncommon; two or three other examples I have seen resemble, in general appearance, Mr. Longe's specimen, though varying slightly in plumage.

# PHASIANUS COLCHICUS, Linneus.

#### PHEASANT.

I know of no records relating to the Pheasant in England which afford any clue to the period when that noble species was first brought to this country, and though probably its acclimatization does not date further back than the Norman Conquest, yet it is still possible that our Roman invaders may have imported it at a much earlier period with other Imperial luxuries. Yarrell (Brit. Bds., ii., 2nd ed., p. 420, note) quotes from Dugdale's "Monasticon Anglicanum" an extract, showing that in the first year of Henry I., who began to reign in 1100, the Abbot of Amesbury obtained a license to kill pheasants; and according to Echard's History of England, as quoted in Daniell's "Rural Sports,"\* the price of a pheasant Anno Dom. 1299 (being the 27th of Edward the First) was fourpence, a couple of woodcocks at the same period three halfpence, a mallard three halfpence, and a plover one penny. If we take then the above dates, only, into consideration, a residence in this country of over seven hundred years would surely entitle the pheasant to rank amongst our "British Birds," more particularly when the propensity of the hens to "lay away," and of the cocks to "foot it," on their own account, in search of food, shews a natural independence of character, opposed to the domesticated habits of our poultry, and impatient of the supervision and protection of man. The earliest notice of this bird in Norfolk occurs in the

<sup>\*</sup> Pheasants are also stated by this author to have been "brought into Europe by the Argonauts 1250 years before the Christian era.

"Household Book"\* of the L'Estrange's, of Hunstanton, from which I have previously given extracts on the subject of falconry, and here the pheasant is specially mentioned both as a "quarry" for the hawks and an occasional article of luxury for the table. Thus in the 11th year of the reign of King Henry the Eighth† (1519) appears amongst other "rewardes for bryngyng of p'sents." "Itm to Mr. Asheley synt for bryngyng of a fesaunt cocke and iiii woodcocks ye xviijth daye of Octobre in reward iiijd;" also "Itm a fesand of gyste" (articles received in lieu of rent); and twice in the same year we find the following record:--"Itm a fesant kylled wt ye goshawke." Singularly enough for the next thirteen years no further reference is made to this species, although other game birds appear frequently, and peacocks are brought in as articles of "store," with a reward given to "ye vicar of Thornhm svnt for bryngyng of a pehenne and iij young pehennys and vj plov's." 1532, however, it again reappears in the following entry: "Itm in reward the vij day of Jun to Fulm'ston svante for bryngynge iij fesands." These were, I presume, for breeding purposes or to turn off amongst others on the estate, as we can scarcely imagine that even in those days roast pheasant was usual in the month of June

<sup>\*</sup> In a similar publication, entitled "The regulations of the Household of the Fifth Earl of Northumberland," begun in 1512, the following are the comparative prices of fowl and other birds supplied for the table:—Cranes, 16<sup>d.</sup>; herons, 12<sup>d.</sup>; woodcocks, 1<sup>d.</sup> or 1½<sup>d.</sup>; sea gulls, 1<sup>d.</sup> or 1½<sup>d.</sup>; quails, 2<sup>d.</sup>; snipes, 3<sup>d.</sup> a dozen; partridges, 2<sup>d.</sup>; bitterns, 12<sup>d.</sup>; pheasants, 12<sup>d.</sup>; mallard, 2<sup>d.</sup>; teal, 1<sup>d.</sup>; stints, 6<sup>d.</sup> a dozen; lapwings, 1<sup>d.</sup>; redshanks, 1<sup>d.</sup>; curlews, 12<sup>d.</sup> At the present day it seems strange to find curlews, bitterns, and pheasants all estimated at the same value for edible purposes.

<sup>†</sup> Thompson, in his "Birds of Ireland," says of the Pheasant, "The period of its introduction is unknown to me; but in the year 1589, it was remarked to be common."

with strawberries for desert, that delicious fruit being kindly presented in the next "Itm" by a "Doktere Dosyns," whose servant receives the accustomed douceur. It was, moreover, too well thought of as an object of sport, even then, to be killed out of season, as in 1533 we again find "ij fesands and ij ptrychyes kylled wt the hauk;" and amongst certain amounts "allowed in bylls," "Itm pd the xij day of June to Towars for money that he leid out at div's tymes when he went to take fesaunts." At this period, no doubt, though partially under the protection of man, the pheasant was a denizen of the woods, finding its own sustenance to a great extent, and in weight would probably have contrasted strangely with our present highly fed specimens, which not unfrequently, when killed high up in the air, burst open on the ground from the force of their fall. Although the requirements of the "battue," on highly preserved manors, necessitate a thoroughly artificial state of hatching and rearing, yet there are also many portions of the county where the pheasant exists in a perfectly wild state, and thrives well under the protection of the game laws, both soil and climate being alike favourable. It is in such districts, almost exclusively, that one still meets with the pure Phasianus colchicus, free from any trace of the ring-necked or Chinese cross in its plumage, but offering at the same time a poor contrast to those hybrid birds both in size and weight. Besides, the thick undergrowth in woods and plantations, pheasants are particularly partial to low damp situations, such as alder and osier carrs, by the river side. In this county, also, stragglers from some neighbouring coverts are not unfrequently found on the snipe marshes surrounding the broads, where the sportman, following up his dog at a "running point," is suddenly startled by the whirr of a noble "long-tail," when never dreaming of any larger game than rails or water-hens.

Regarded, however, simply in a sporting sense, the numbers reared each year throughout this great game preserving county must be something enormous, and statistics drawn from the game-books of some only of the principal estates, would show figures not more startling as to the number of "head" than as considered in connection with the cost of preserving on a really grand scale.\* As before stated, the impossibility of rearing a very large "head" in any one locality, except by the adoption of artificial means, has brought pheasant-hatching of late years to a thoroughly organised system. Hen pheasants, as is well known, do not brood readily in confinement, and are liable to drop their eggs at random, the produce, therefore, of such birds as have been reserved for "stock" are placed under domestic hens (being the closest sitters), and all outlying birds are also carefully watched, and their eggs taken lest rooks, crows, or other depredators should find and destroy them. Incubation then takes place in well planned wooden lockers, fitted up in buildings erected for the purpose, and so admirable are the arrangements, for this particular purpose, on many of our large estates, that the inspection of the pheasantries and a description of the "process" from an intelligent head keeper, whilst the young are "coming off," cannot fail to be interesting to the visitor. In this manner a very large proportion of the birds, in our principal preserves, are reared every

<sup>\*</sup> Dr. Wynter, in a paper on "the London Commissariat" (Curiosities of civilization, p. 223) says, "Pheasants and partridges mainly come from Norfolk and Suffolk," and gives some 70,000 as an approximate estimate of the number of the former, 125,000 of the latter, annually sent to the London markets. To these must also be added the large quantity sold by our local poulterers, and those disposed of as presents; the latter, however, by modern custom, need not be set down at too high a figure.

year, and the young when hatched are placed, with their foster parents, under chicken coops, in some convenient locality near the keeper's cottage, and a glance at the number of these wooden nurseries is a pretty fair criterion of the sport intended should the season prove favourable. Now, however, is an anxious time for the gamekeeper, if the weather becomes either too wet or too dry for any lengthened period; and, frequently, in spite of every care, the dreaded "gapes" decimates the young broods and renders the prospect of a "big day" at Christmas time extremely improbable. I have even known a hydro-incubator employed with success to facilitate these abnormal hatchings, requiring, of course, the greatest watchfulness on the keeper's part, who, "in loco parentis," should be instantly aware of each nestling's birth; it being obviously impossible for its own mother to be, under the circumstances, acquainted with the fact.

In its semi-domesticated state, like our pigeons and poultry, the common pheasant crosses readily with its kindred species, and to so great an extent has this been carried in Norfolk that except, as before stated, in the wholly unpreserved districts, it is difficult at the present time to find a perfect specimen of the old English type (P. colchicus), without some traces, however slight, of the ring-neck and other marked features of the Chinese pheasant (P. torquatus), and in many localities of the Japanese (P. versicolor) to be hereafter noticed.\* In looking over a large number of pheasants from different coverts, as I

<sup>\*</sup> Yarrell has figured the pure English pheasant, but Bewick's exquisite woodcut is evidently taken from one of the ring-necked cross, though described by him as merely a variety "met with in the neighbourhood of Alnwick, whither they were brought by his Grace the Duke of Northumberland."

have frequently done of late years in our fishmarket, I have noticed every shade of difference from the nearly pure-bred ring-neck, with its buff-coloured flanks and rich tints of lavender, and green on the wing and tail-coverts, to the common pheasant, in its brilliant but less varied plumage with but one feather in its glossy neck just tipped with a speck of The chief points of difference in the plumage of the common and ring-necked pheasant will be best seen by an examination of the museum specimens, which present a very fair series of both true and cross-bred birds, as well as white and pied varieties, No. 172 being a fair type of the pure P. colchicus, and No. 172.h a nearly perfect specimen of P. torquatus. Some birds of the first cross are scarcely distinguishable from the true P. torquatus, and are most gorgeous objects when flushed in the sun light on open ground; but as the "strain" gradually dies out, the green and lavender tints on the back begin to fade, and the rich orange flanks are toned down by degrees; though still, the most marked feature of all, the white ring on the neck, descends from one generation to another, and the hybrid origin of the bird is thus apparent long after every other trace of its mixed parentage has entirely passed away. I am informed that no little difficulty is sometimes experienced by gamekeepers, from the fact of the eggs of the ring-necked pheasant hatching more quickly than those of our common pheasant, and hence should a mixed "clutch" of eggs be placed under a hen, which is very likely to happen when supplies are purchased from different places, she comes off with her first hatched young, leaving perhaps a majority of good eggs still unincubated in the nest.

Another very beautiful cross, between the green Japan pheasant (P. versicolor) and P. colchicus, was introduced into this county some few years back by

Mr. J. H. Gurney, who has kindly supplied me with the following particulars:—Several years ago a pair of pure Japan pheasants reached Amsterdam, where they were purchased at a very large sum for the late Earl of Derby. On their passage to Liverpool the hen bird unfortunately died, but the cock reached Knowsley in A cross was soon effected between the old Japan male and the common hen pheasant, and in two or three seasons those birds which had been kept closest to the pure blood of the male, assumed as nearly as possible the appearance of pure Japanese specimens. At the sale of the Knowsley collection in 1851, the old Japan cock was purchased at a high price by a foreigner, and at the same time Mr. J. H. Gurney procured some of the young birds. These bred most successfully, at Easton and Northrepps, with the common pheasants (though chiefly, I believe, with the ring-necked cross), and produced magnificent specimens; the eggs also being greatly sought after by other game preservers in this district, the race soon spread throughout the county. From personal observation and enquiry, however, during the last two or three years, it appears that evidences of this cross, even in the coverts where these hybrids were most plentiful, are now scarcely perceptible; the strong characteristics of the Chinese bird apparently absorbing all the less marked, though darker tints of the Japanese. One of these birds killed in 1853, weighed upwards of four and a half pounds, and many examples, which were stuffed for the beauty of their plumage, will be found in the collections of our county gentlemen. The Norwich museum does not possess a specimen of the true P. versicolor, but No. 172.g, a good example of the cross with P. colchicus, is strongly suffused with green over the neck and breast. The so-called Bohemian pheasant, but in reality only a pale buff-coloured variety and not a species, is also

occasionally met with in Norfolk, and like certain light varieties of the common partridge seems confined pretty nearly to particular localities; but whether affected or not by any peculiarity in the soil, or the nature of their food, I am unable to say. They have been found in different seasons in some coverts at Cranmer; and in the autumn of 1861, I saw three fine examples killed, I believe, in Mr. Hardcastle's preserves, at Hanworth, near Cromer, one of which, even in its abnormal plumage, showed a decided relationship to the ring-necked cross, by the white mark on each side of the neck. A specimen of this curious variety will be found in the museum collection (No. 172.i). Pure white and pied birds are by no means uncommon.

In November, 1848, a hybrid between the pheasant and black grouse was killed at Snettisham, in West Norfolk, supposed to have been bred between a cock pheasant and a grey hen; and the three following instances of hybridism between pheasants and domestic fowls have come under my own observation during the last ten or twelve years:—In December, 1854, a very singular looking bird, apparently a cross between a pheasant and Cochin China fowl, was shot in a wild state in the woods at Wolterton; and on the 31st of January, 1863, an equally remarkable specimen was brought to a bird preserver in this city (Mr. John Sayer) to be stuffed for a gamekeeper, from whom I afterwards learnt the subjoined particulars. It had been bred wild in a plantation, at Methwold, as was supposed between a cock pheasant and a domestic hen, the fowl being a cross also between the game and Dorking breeds. This strange bird, which proved to be a male, had been repeatedly seen amongst the pheasants in the wood when the beaters were driving the game towards the guns, but as it ran with great swiftness, and never attempted to rise on the wing, it always managed to escape, and was at last

netted to ascertain what it was. It measured thirtytwo inches from the tip of its beak to the extremity of the tail, stood nineteen inches from the sole of the foot to the crown of the head, and weighed seven and three-quarter pounds. In its general appearance it had a strange admixture of both pheasant and fowl, and was not unlike a capercally cock about the head and neck. The legs were clean and strong without spurs, and decidedly gallinaceous in character; the beak large and powerful, and the tail long and rounded, with the middle feathers somewhat the longest. The plumage may be described as of a rich glossy green about the head, neck all round, and the upper part of the breast; back and wings mottled with rich dark chesnut, glossed here and there with green and each feather tipped with a metallic shade of green. The lower parts of the back and upper tail-coverts more green than black; under parts brown, dashed with buffy-white in places. Tail feathers black, slightly marked on some of the webs, longitudinally, with dull white, or slightly freckled. In November of the same year, Mr. Sayer had also, from Lord Rendlesham's preserves, another strange hybrid, apparently a cross between a pheasant and a black bantam fowl. Its plumage was black all over, with dark green reflections, the tail being shaped like a pheasant's, but the legs and feet resembling those of a common fowl. Hen pheasants assuming the cock's plumage, commonly called "mules," are not unfrequently met with. This abnormal condition being observable in immature as well as adult females is not, as was formerly supposed, the result of extreme age, but is attributable no doubt, as stated by Yarrell, to a diseased condition of the generative organs. J. H. Gurney, in the "Zoologist" (p. 4252), has recorded an instance in which a red-breasted merganser, with much black about the head, and externally presenting

the appearance of a young male in change of plumage, proved on dissection to be a female; yet this bird exhibited no "signs of disease or exhaustion of the ovarium."\* May not this, and similarly exceptional cases, be accounted for by the supposition that such "mules" have not had time to moult their abnormal plumage, since their organs of generation have acquired a healthy condition. That this view is not an improbable one is shown, I think, by the following interesting fact (recorded by Mr. Gurney in the same note), with reference to a "mule" pheasant taken alive in his preserves in 1852:-"The bird was placed in a large cage in my garden, and in the course of last autumn (1853) quite lost the male plumage it had previously attained, and resumed its ordinary female dress." A bird of this kind, which was brought to one of our bird-stuffers in December, 1864, to be preserved for Lord Rendlesham, besides the usual dark head and neck of its borrowed plumes, showed a most unmistakeable white ring, plainly denoting its own descent from the ring-necked as well as from the common type.

Few subjects, of a like nature, have excited warmer discussions, or tended to the exhibition of more violent prejudices than the "battue," and, as usual in such controversies, supporters and opponents, in their bitter hostility, have been so given to exaggeration and the use of hard words, that the true merits of the case must be looked for apart from the arguments of either faction. Undoubtedly, as far as pheasant+ shooting is concerned,

<sup>\*</sup> Mr. Thomas Dix informs me that he recently examined a female of the common redstart, in the possession of Mr. Doubleday, of Epping, which had a mottled black throat like young males in autumn, and, in this case also, the ovaries were quite perfect and full of eggs.

<sup>†</sup> I have no intention by these remarks to uphold the excessive rearing of running game, an only too just cause of complaint, in many instances, on the part of our tenant-farmers.

if a large number of birds are reared for sport—and why should not landed proprietors provide such amusement for their friends at a time when partridge shooting is well nigh over?—there is no means so effectual for obtaining an equal amount of shooting for several guns, as the "battue;" whilst the most inveterate opponent of the "slaughter" system (if a sportsman at all) will not venture to deny that pheasants, as well as running game, in large quantities, can be shot down by no other means. There is every reason, however, to believe that the majority of those writers who are loudest in their denunciations against the "battue," and can find no milder epithets than "blood-thirsty and unsportsmanlike," to mark their abhorrence of it, are either practically unacquainted with the working of the system, or are deficient themselves in that necessary coolness and skill, without which even pheasants, big as they are, will escape from a perfect volley of double barrels. Such individuals seem wholly unable to associate the enjoyment of a "heavy" day's covert shooting with skill in the use of firearms and physical endurance; quite overlooking the fact that, amongst the sportmen accustomed to congregate towards Christmas-time at the country seats of noblemen and wealthy squires, for the purpose of joining in these great "battues," are some of the very best shots in the world; men for whom no day, on the open moors or in the treacherous snipe marsh, is too long; no sport, in any quarter of the globe, too hazardous, though pursued by them merely for pleasure and excitement. If such men as these, and there are many, can enjoy, for a change, a "big-day" in some well-stocked coverts (when hunting probably is stopped by the frost), one would scarcely term it an "unsportsman-like" diversion, even though carried to excess in the number of head killed in a single day. There is not certainly much bodily

fatigue, yet the necessity for being always on the alert, always ready for a chance shot in the "thick" or the "open" during many consecutive hours, to say nothing of incessant firing from the shoulder for a like period, is somewhat trying to the head and nerves; and if any one is inclined to despise the amusement on the ground that pheasants are so easy to kill, let him try his hand, late in the season, at a few old cocks, flushed some two hundred yards from the post of the shooter, so that the bird is in full flight when he passes over: the pace is then tremendous! In short, the truth is that the "battue" affords every opportunity for the display of good as well as bad shooting, and he is no ordinary shot who can account satisfactorily in "feathers" and "felt" for one in every three of his empty cartridges, provided always he shoots fair and does not pick his shots. Again, if "battue" pheasant shooting is only the "wholesale slaughter of tame pheasants, driven up by the beaters like barn-door fowls," how comes it that, on many of the more highly preserved manors, the best shots only are invited? Is it no honour to be named for the "outer ring" at Holkham, to stop those "rocketers" which only crack shots can hit? and even the "bouquet" at a "hot corner" requires, for a successful personal result, a certain amount of cool self-possession which might prove invaluable under more trying circumstances. Thus much, then, in defence of a system, to my mind objectionable only when carried to excess; but that it is so, both in this and other counties, is evident enough from the records of game killed to a limited number of guns.

Without attempting here to discuss this vexed question as affecting the interests of landlord and tenant, it would seem as though, of late years, the enjoyment of sport had become subsidiary, on

the part of our larger game preservers, to the desire to outvie one another in the amount killed on their respective estates.\* The rivalry of the masters extends to the keepers, till, in many cases, the impression on the minds of the latter appears to be that game preserving is the end and aim of existence, and that corn crops are sown in the first instance for game, the surplus, only, to go towards the necessities of man. Eggs must be procured at any price, losses made good at any cost, and the young pheasants, when fairly turned off, watched night and day till near the end of the season, to afford, probably, after all the trouble and expense, only two "big days," though the game killed would be sufficient for at least double the number, with more real enjoyment and better shooting. Inasmuch, also, as the coverts will not again be disturbed, and the cock pheasants must of necessity be killed down close, none but the best shots can be entrusted with that important duty, the credit of the estate, as a gigantic game-preserve, resting on their skill. Such is the "battue" on a large scale at the present time. That fashion, with all its changes, will ere long, even in this case, induce moderation, and a "hecatomb" of slain be regarded in "high" quarters as no longer "the thing" is more than probable; but if not, I believe the same desirable end will be shortly attained by very different means. Game birds, like poultry, in an artificial state of existence are liable to several very troublesome maladies, and in the rearing of pheasants in such immense

<sup>\*</sup> Here, after all, the main grievance consists in the ravages of hares and rabbits when extensively preserved, the pheasants doing comparatively but little harm; whilst they destroy, in large quantities, many noxious weeds and insects. Amongst other grubs, to say nothing of caterpillars, the pheasant is particularly partial to the wireworm, one of the farmers' greatest enemies.

numbers, the difficulty must arise of finding fresh breeding grounds for the young birds, free from all "taint," so fruitful a source of disease, and affording the necessary amount of insect food. The latter, I suspect, in many of our over-stocked coverts must be already scarce, if not wanting altogether in some localities.

### TETRAO TETRIX, Linnæus.

#### BLACK-GROUSE.

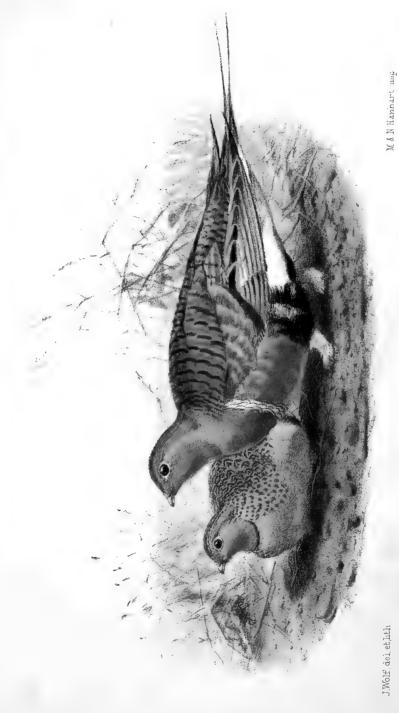
The Black-Grouse is a resident in Norfolk, though entirely confined to one district in the neighbourhood of Lynn, where alone the various attempts to naturalise this species have proved successful, the birds either dying in a natural way, or being killed off, beyond the scope of their preserved boundaries, owing to the want of a sufficiently extended range of wide open country. In that neighbourhood, however, it seems probable that this species has existed for a very long period, fluctuating in numbers, but never wholly extinct; and, of late years, they appear to have increased considerably about Snettisham and Dersingham, on the L'Estrange estate, and on property of Mr. Hamond at Bawsey, and Leziate, in the same neighbourhood, where an ample extent of wood and heath, wild in the extreme, and but slightly preserved for other game, has afforded the three most essential conditions of space, food, and quiet. In this locality several couple are annually killed during the shooting season, and they are also found in the autumn at Sandringham, on the estate of His Royal Highness the Prince of Wales, though I am not sure that they also breed there. Through some notes on rare Norfolk birds,

kindly supplied me by Mr. George Master, of London, I learn that a hybrid between a cock pheasant and a grey hen was shot at Snettisham about the year 1850, by Luffman, Captain Campbell's gamekeeper, which is still preserved at the hall. From the occurrence of this bird, Mr. Master procured a blackcock from Norway, which was turned off on Captain Campbell's estate, and some few years later, he says "that part of the country was full of black game, and I have seen as many as twenty blackcocks in a flight at Sandringham myself, when shooting with the former owner." I have looked in vain for any mention of this species in the "Household Book" of the L'Estranges, but it is somewhat remarkable that Sir Thomas Browne, though stating that "the heath poult (black-grouse), common in the north, is unknown here, as also the grouse," still adds, "though I have heard some have been seen about Lynn." The late Sir Fowell Buxton, as I am informed by his old gamekeeper, Lawrance Banwell, better known as "Old Larry," to those Cromer visitors who "picnic" on the Beeston Hills, had a few pairs turned off in that neighbourhood; but, although the soil was well suited to them, and the heathery hills, bordered by fir plantations, a very promising locality, yet the range of these hills was far too circumscribed, and they soon died off or were shot on adjacent manors. In mentioning the name of "Old Larry" I cannot help alluding to the great event of his life, and one of which he is justly proud, in having been entrusted by the late Sir Fowell Buxton, in the year 1838, with the arduous and responsible task of bringing over from Sweden a splendid collection of capercally or wood-grouse to Scotland; a present from Sir Fowell to Lord Breadalbane. These fine birds had been collected with much trouble and expense by Mr. L. Lloyd, as stated by Yarrell (Brit. Bds., vol. ii., 2nd ed., p. 331), and thus commenced the re-introduction of that noble species to the Highlands, where, by strict preservation and care in breeding, they have since become more and more plentiful. Having, occasionally, heard rumours that red-grouse were also turned off, some years ago, at Sherringham, near Cromer, I am happy to be able, on Mr. Upcher's authority, to state positively that such is not the case; the error has most probably arisen from the fact that blackcocks were turned out on the Sherringham Hills at the same time, I believe, as those on Sir Fowell's property. These birds, as Mr. Upcher informs me, "lived for several years, but gradually became extinct, some being accidentally shot, mistaken for other game (only a glimpse of them being caught as they flew behind trees), or, straying away, were killed, as strange birds, on adjoining properties." Mr. Upcher has also communicated the following interesting note with respect to the wood-grouse:-"A cock and hen capercally bred in confinement, but unfortunately, from some cause or other, the hen and little ones died. The cock was turned out in my woods, where he lived for about six months, and then was found dead with a fir-cone stuck in his throat. He had a collar with his direction round his throat, which probably was the cause of his choking."

# SYRRHAPTES PARADOXUS, (Pallas).

## PALLAS'S SAND-GROUSE.

No ornithological event, whether in our own or in earlier times, of which we have any record, appears to have excited such universal interest as the irruption of this Tartar species into Europe, during the summer of 1863. The extraordinary numbers observed in various





localities, the strange beauty of their form and plumage, added to the extreme rarity of specimens up to that time, in either public or private collections, rendered them objects of peculiar attraction to naturalists; whilst the frequent notices of their occurrence by the press, in all parts of the kingdom, made the public generally familiar with their abnormal migration. But few, however, of those who, in 1863, took so warm an interest in the appearance of these birds on our eastern coast were probably aware that the Lynn museum contained a fine male specimen, killed in that neighbourhood in July, 1859,\* one of the first if not actually the first example obtained in the United Kingdom. The occurrence of this extreme rarity was at once made known to the scientific world in a letter to the "Ibis" (1859, p. 472) by the Rev. F. L. Currie, twho was at that time residing in the neighbourhood of Lynn, and took a lively interest in its museum collections. From this communication it appears that the above specimen, in very perfect plumage, was shot early in the month of July, in the parish of Walpole St. Peter's, about two miles from the Wash, and, as Mr. Currie remarks, "we must congratulate ourselves upon our good fortune in securing the bird at all, considering it was shot by a labouring

<sup>\*</sup> On the 9th of the same month, as has been stated by Mr. T. J. Moore and Mr. Alfred Newton in the "Ibis" (1860 and 1864), a second was killed near Tremadoc, in North Wales; on the 23rd, a third, near Hobro, in Jutland; and at the beginning of October a fourth, being "one of a pair which had haunted the sand-hills near Zandvoort, in Holland, since July, was shot at that place." A fifth example was also killed at New Romney, in Kent, in November; and a pair are recorded, on good authority, to have been procured in May of that year (1859) "in the government of Wilna, on the western frontier of the Russian empire."

<sup>†</sup> Mr. Currie also inserted a shorter notice in the "Zoologist" (p. 6764), in which journal the Welsh specimen had been previously recorded by Mr. T. J. Moore (p. 6728).

youth wholly unacquainted with its value, and who was quite as likely to have plucked and eaten, or thrown the prize away (the fate of many a valuable specimen), as to have placed it in the hands of the Rev. R. Hankinson, to whom the Lynn museum is indebted for this most interesting specimen, beautifully mounted by Mr. Leadbeater." It had been previously skinned, however, by a local bird-stuffer, and the carcase unfortunately was not preserved. It was solitary when shot, but at least one other, apparently of the same species, was observed in the neighbourhood about the same time, though not procured. Mr. Currie's letter respecting this remarkable addition to the avi-fauna of Norfolk, was followed by a most elaborate and interesting paper\* in the same journal ("Ibis," 1860, p. 105), by Mr. T. J. Moore, keeper of the free public and Derby museum, Liverpool, accompanied with a description and coloured plate of the Tremadoc bird. From the above source, and the comprehensive and most admirable history of the "Irruption of Pallas's Sand-Grouse in 1863," published by Mr. Alfred Newton in the "Ibis" for 1864† (p. 185), I am enabled to give the following brief particulars of the true habitat of this Asiatic

<sup>\*</sup> This had been previously read before section D of the British Association at Aberdeen.

<sup>†</sup> This paper is accompanied by a "sketch map" of Europe, on which is marked the name of each locality where this species had been observed, the date being affixed in some cases, and the probable direction of flight indicated by faint dotted lines. The large mass of names (almost too densely crowded to be properly legible), thus fringing, as it were, the entire eastern coast of Great Britain, the "confusion worse confounded," in the counties of Norfolk and Suffolk, is very remarkable; and considering the extent and value of the statistics contained in this paper, collected and arranged in a geographical series with no small amount of labour, it is much to be regretted that it has not since been re-published in a form more accessible to the general reader.

species and the earliest records of its appearance in Europe. "This species (says Mr. Newton) was first brought to the notice of Pallas by Nicolas Rytschof as a dweller on the Kirgish Steppes, which may be taken as extending eastward from the northern half of the Caspian sea to the regions round Lake Balkach. 1809, Professor Fischer, of Moscow, received through the then Governor of Irkoutsk, Von Treskine, two well preserved examples of this species from a much more eastern locality—the great steppes of Gobi (Mém. Mosc. iii., p. 271). It was from a drawing and description of one of these birds, sent him by Fischer, that Temminck (Hist. Pig. et Gallinac. iii., pp. 282-287) took his account. In 1825, naturalists learned from M. Drapiez (Dict. Class. d'Hist. Nat. viii., p. 182) that M. Delanoue had met with this species on the Chinese frontier of the Russian empire." In 1853, Syrrhaptes paradoxus is mentioned as a rarity by Herr Möschler (Naumannia iii., p. 305) in a list of birds met with at Sarepta on the Lower Wolga, which seems, according to Mr. Newton's statement, "to be the earliest authentic record of its actual occurrence in Europe," although its name was included by Prince C. L. Bonaparte in his "Geographical and Comparative List of the Birds of Europe and North America," as far back as 1838. The same author, however, in 1850, again omits it from another list, "Conspectus Avium Europæarum," published as an appendix to to his "Revue Critique de l'Ornithologie Européenne de M. Degland."

To the several specimens next in order of date, which occurred in Western Europe in 1859, I have already referred, and I may here add, on the authority of my friend Mr. Swinhoe, and other consular and military officers engaged in the North China campaign, that in the winter of 1860 this species occurred in great abundance on the plains between Peking and Tientsin,

and on the banks of the river Peiho downwards, where they were taken alive in clap-nets, and afforded an abundant delicacy for the Anglo-French forces. In his "Notes on ornithology between Takoo and Peking, North China" ("Ibis," 1861, p. 341), Mr. Swinhoe writes, "The market at Tientsin was literally glutted with them, and you could purchase them for a mere nothing. The natives called them "Sha-chee" or sand-fowl, and told me they were mostly caught in clap-nets. After a fall of snow their capture was greatest; for, where the net was laid, the ground was cleared and strewed with small green beans. The cleared patch was almost sure to catch the eyes of the passing flocks, who would descend and crowd into the snare. It only remained then for the fowler, hidden at a distance, to jerk the strings, and in his haul he would not unfrequently take the whole flock." The natives also described them as abundant in summer "on the great plains of Tartary beyond the great wall, where they breed in the sand." Several gentlemen attached to the above-mentioned expedition brought over live specimens of these sandgrouse to England, and amongst others Mr. James Stuart-Wortley presented no less than thirty-four to the Zoological Society out of seventy-three which he had originally started with. One of these birds, as stated by Mr. Newton, laid several eggs in confinement. Mr. Moore thus clearly points out the differences which exist between the genus Syrrhaptes and other forms of sand-grouse, though having a general similarity in shape, length of wing, and shortness of foot. "The legs, instead of being feathered only in front, are entirely covered down to the extremity of the toes with short dense feathers; the hind toe is wanting; the toes in front are much expanded, being united together throughout their length, and forming a broad flat foot,

the sole of which is thickly covered with strong horny papillæ; they are terminated by equally strong, broad, and flattened nails." Another and very marked feature also consists in the first primary of each wing terminating in a long filament like the two central tail-feathers of other sand-grouse. The present appears also, on the same authority, to have formed the only known species of the genus Syrrhaptes "until, in 1850, Mr. Gould figured and described a second, obtained by Lord Gifford on the banks of the Tsumureri Lake, in the country of Ladakh, under the name of Syrrhaptes tibetanus."

Thus much, then, as to the general history of this remarkable species, whilst the subjoined list contains all the particulars I have been able to collect, with reference to its occurrence in 1863, in the counties of Norfolk and Suffolk. Many of my readers will probably remember that a large proportion of these local statistics were published at the time in the "Zoologist,"\* (pp. 8708-8718, 8849-8852, and 8957), when, through the kind assistance of various ornithological friends, I obtained such an amount of information as it would have been impossible to procure, even a few months later, after the novelty of the occurrence had somewhat abated. Of the completeness of the facts thus supplied me in the first instance, I have the best possible evidence in the very few specimens that have since come under my notice, as omitted from the original list; and though Norfolk and Suffolk are unenviably notorious for the wholesale destruction of these beautiful wanderers, yet a glance at the localities on Mr. Newton's "Sketch Map" will at least show that in no other portion of the United Kingdom, were the records respecting them so fully preserved. I have no doubt that the birds which

<sup>\*</sup> They were also subsequently embodied by Mr. Newton in his geographical series, "Ibis," 1864.

appeared so simultaneously along the whole extent of our eastern coast were members of one large flock, and, as these evidently crossed and re-crossed the boundaries of the two counties, when scattered into small parties by constant alarms, it is better, I think, to adhere to my original plan, and arrange my notes, of the various individuals killed, according to the dates of their capture, without reference to locality.

May 23rd.—One female found dead on Yarmouth beach. "The first intimation (writes Captain Longe) of the Syrrhaptes paradoxus in this county was, as is often the case, totally unheeded. On the 23rd of May. Mr. Youell, the well-known nursery gardener, was walking by the sea near the north battery, when he saw a small bird washed up and down in the foam; its beautiful markings attracted his attention and he brought it home, but being very much knocked about and slightly decomposed, he did not think it worth keeping. One of his men, however, by name Hunt, skinned it and preserved the skin, and it proved to be a female. There were no signs of shot marks about it, and I do not doubt it dropped in the sea from exhaustion, and was washed ashore by the tide." It is particularly worthy of note, that this bird was first seen the day following the capture of the pair, recorded in the "Times" by Mr. E. J. Schollick, which were killed in the Isle of Walney, on the 22nd of May; the earliest record on this occasion, of the appearance of these birds in England. This one example, so accidentally observed, marks in all probability the date of arrival on the Norfolk coast of the large numbers subsequently met with, and which no doubt remained unnoticed and therefore undisturbed, till the first week in June.

May 28th.—A female, at Thorpe, near Aldboro'. A notice of this, the first specimen procured in Suffolk, was inserted by Mr. Hele in the "Field" of June 13th.

June 4th.—One male and three females killed at Waxham, Norfolk. Just twelve days from the appearance of the first specimen, no others apparently having been seen in the meantime, a small flock of eight or nine birds were found by the Rev. Mr. Wheeler and Mr. Gibbs, of Waxham, feeding in a grass field near that village, which is situated on the coast, about fourteen miles from Yarmouth. Four birds were shot, of which two females were presented to the Norwich museum (No. 176\*) by Mr. Wheeler. These birds, singularly enough, were the only females out of all that I examined which exhibited any indication of a band across the breast as in the males. In one it was very distinct; in the other, visible on each side close to the wings, and indistinctly traceable across the chest. This may probably denote the fully adult plumage of the female, as the ovaries in each case were largely developed, some eggs being about the size of a common hemp seed.

June 5th and 6th.—Two males and one female killed at Walberswick, near Southwold, Suffolk. The first of these birds (female), as I learned from Mr. Spalding, of Westleton, was shot from a small flock by a labouring man on the shingle close by the sea. A male, winged at the same time, was afterwards caught; and a third was secured by the gamekeeper to Sir J. Blois. Mr. Spalding also adds, "I took my gun and had a walk over the extensive heath of Walberswick, when I saw a covey of about eighteen birds. They flew exactly like golden plover, but I had no chance of a shot at them; another parcel contained seven, and another three birds."

June 6th.—A male taken alive at Elveden, near Thetford, Suffolk. Of the capture of this bird, Mr. Alfred Newton has sent me the following notes. It is one of the few instances in which these birds appeared so far inland, in either Norfolk or Suffolk, Elveden being

situated near the border of the former, and about forty miles from the sea. "It was brought to me (says Mr. Newton) by a stable lad, who found it as he was exercising a horse in the morning. He thought it had been drenched by the previous night's rain, and so rendered incapable of flight. But on inquiry I found that a strange bird had been shot at and hit, two days before, by a man in the employ of our clergyman, and this was doubtless the cause of its being unable to get away from the lad. From another source I learn that several sand-grouse, or at least unknown birds, were seen, and some of them killed about the same time on Wangford warren, between Brandon and Lakenheath. The tenant sent them at once to London, saving nothing about them to any one. These last were probably some of those that found their way to the shop-boards of Mr. Bailey and the other London poulterers." This bird, being only slightly injured, was sent by Mr. Newton to the Zoological Gardens in London, to be placed with others of its species, obtained some time previously from China.

June 6th.—One male shot on the beach at Yarmouth. This bird, a fine old male, now in the possession of Mr. J. H. Gurney, was killed by a man named Nudd, who was walking on the north beach at Yarmouth, and observed nine birds together, which he mistook for plover.

June 8th.—A female on Breydon wall, near Yarmouth. "Two sergeants of the militia artillery (writes Captain Longe) were shooting on Breydon, when they marked down about nine grey plovers (Squatarola cinerea), which alighted on the stone wall of the embankment. It was nearly nine o'clock in the evening, and Sergeant Crowther got on to the bank and managed to get a shot into them; he noticed one bird larger than the rest, and, singularly enough,

this bird was the only one that fell to the gun. He brought it to me, and it proved to be a female sand-grouse, in very good condition. It did not, however, possess the long tail feathers which all the other specimens I have seen have done."

June 10th and 11th.—Eighteen birds, male and female, shot on Horsey beach, near Yarmouth. Of this, the largest flock observed in our eastern counties, Mr. Rising has kindly supplied me with the following particulars:-"On the 9th, while out walking on the beach here, I saw a large flock of birds, more than forty, which I mistook for golden plover. They rose within fifty yards and flew seawards, returning back over my head at about twenty yards high, quietly calling out 'click, click,' and returned to the spot whence they rose. I felt strongly impressed from their cry that they were a kind I had never seen before, although I had not noticed then their peculiar tail feathers. On my way home, the birds again rose, took a quiet circuit round, making the same easy cry, and returned to the same spot." On the following morning Mr. Rising went over to Yarmouth, where he heard of the sand-grouse just killed there, and felt sure that the Horsey birds were of the same kind. Later in the day, his son, Captain Rising, went down to the beach, where he found the covey in the same locality, and succeeded in bagging ten; of which six fell to his second barrel, and two other winged birds were afterwards found. On the same evening three more were secured, and three on the following morning (11th), making in all eighteen specimens, males and females, in nearly equal numbers. Of this fine series, all but four or five passed into the hands of a game dealer at Yarmouth, by whom they were sold to various collectors, both here and at a distance, which accounts for the different notices of these Horsey birds which appeared in the "Times" and "Field;" and the

female, noticed in the latter journal (June 13th) by Mr. Ward, as "killed on a sand-hill, a few miles from Yarmouth," was in all probability one of them.

June 10th and 13th.—Six brace, males and females, all shot at Holme, near Hunstanton, Norfolk. The first pair of these birds were noticed by Mr. M. Dodman, in the "Field" (June 13th), as killed at Titchwell; but they were actually shot on the sand-hills at Holme, an adjoining village. In a subsequent letter to Mr. Southwell, of Fakenham, Mr. Dodman says, "Two brace more have since come into my possession, one of which I gave to a friend (sent to Norwich on the 12th for preservation), the other pair were too much shot for stuffing. There have been as many as six brace or six brace and a half shot at the same time, and at the same spot. A pair are gone to the Wisbech museum, and the others have passed into private hands. A pair were also seen on the sand-hills at Brancaster, on Sunday last (June 7th)." In the "Field" of June 27th, Mr. Dodman states, "A covey of sixteen were seen here (Titchwell) on Sunday," the 21st inst.; and those referred to by Mr. F. Tearle (Hunstanton), in the "Field," of July 4th, are evidently some of the birds above noticed.

June 11th and 13th.—Four females and one male killed at Thorpe, near Alborough, Suffolk. Mr. Hele, of Alborough, recorded these as well as the first Suffolk bird, in the "Field" (June 13th and 20th); and Mr. Dix, of Ipswich, also sent me further particulars, a pair of them having come into his possession. As many as fifteen or sixteen appear to have been seen in this locality up to the 13th of June.

June 17th.—One male killed at Winterton, Norfolk. This bird was no doubt one of the Horsey covey, which, as I had previously heard, had been seen since the 10th on Winterton warren, situated close to the sea between Horsey and Yarmouth.

June 20th.—One female from Yarmouth, in the possession of Mr. Newcome, of Feltwell.

June 22nd?—One male shot at Morston, near Blakeney. Of this bird, Mr. Woods, of Morston, kindly sent me the following particulars:—"I shot a sand-grouse in one of my ploughed fields, about three weeks since. There were nine when I first saw them. I thought from their habits and appearance they were golden plover in their summer plumage. When I saw the description in the papers of the sand-grouse, I took my gun to look for these strange birds, but found the covey had dwindled to three, out of which I was lucky enough to shoot one, which is now being stuffed at Mr. Alcock's, of Blakeney."

June 24th.—One male killed at Waxham, where four of the earlier specimens were obtained. Mr. Harvey, of Waxham, who shot it himself, says:—"This bird was killed in a turnip field near the sea banks; another was seen the same day about the same place, supposed to be a hen. On Friday (26th), about ten a.m., a flock of from twelve to fifteen flew over the sea banks in a south-east direction. They fly in the same order as wildfowl, and frequently utter a peculiar clicking noise."

June 24th.—One female at Kessingland, Suffolk. This bird was sent up to Norwich to be stuffed for Mr. Crowfoot, of Kessingland, who, in answer to my enquiries, informed me that it was killed on that part of the coast by a labouring man, out of a flock of twelve or fourteen, which had frequented Mr. Bean's farm, near the cliff, for a fortnight previously. Towards the end of July, a flock of fifty or sixty strange birds, were also seen flying to the southward in one flock, by some men ploughing, near the marshes adjacent to the sea.

June 25th.—A male killed somewhere in Suffolk, on the authority of Mr. Spalding, of Westleton.

June 26th.—Four females killed near the pit at 3 p 2

Blakeney, out of a flock of about thirty, by Mr. H. M. Upcher, and Messrs. T. W. and J. E. Cremer, of Beeston. These birds were sent up to Norwich to be stuffed on the 27th, and on examination I found the ovaries, in all but one, more developed than in any previous specimens—some eggs as large as small hemp-seeds; and several of the quill feathers in the wings had been recently moulted.

June?—In the "Field" of June 27th, Mr. Ward, Taxidermist, of Vere Street, London, recorded a female from Norfolk as recently sent to him, but this, I have every reason to believe, was in reality a male, the distinctive peculiarities of plumage not being sufficiently known at the time.

July 1st.—One female at Holme, near Hunstanton. This bird, which also came into the possession of Mr. Dodman, of Titchwell, was, as Mr. Southwell informs me, found dead on the beach at Holme. "Its death was caused by a shot wound. The contents of crop and gizzard were precisely the same as in others from the same locality; and judging from its full and healthy appearance, its food must have agreed well with it." Mr. Southwell gives the weight of the first pair killed in this locality as nine and three-quarter ounces each, male and female. I have no doubt whatever that whilst staying myself at Hunstanton, in the beginning of June, I saw more than once a small flight of these birds on the beach at Holme. On one occasion I tried to get near about four or five birds, which at a distance I took for grey plover. They rose wild, however, and came over my head out of shot, and their flight and cry-the latter quite new to me-made me wonder at the time, if they could be anything I had never met with before.

July 7th.—Mr. Thomas Dix, of West Harling, informed me that a male bird was killed at Sizewell, in Suffolk, on the above date.

July 8th.—Male and female from Yarmouth. These birds, which are in the possession of Mr. Owles, of Yarmouth, are supposed to have been killed near Caister. They were sent up to Norwich on the 9th for preservation, when I examined them in the flesh. They were neither of them in such good condition as most of the earlier specimens; the keel of the breast-bone being sharper to the touch; nor were they so fat internally, though perfectly healthy. The colours of the plumage in both male and female looked dull, and exhibited no signs of moulting. In the former, the tail feathers were half an inch shorter than usual; but both the tail and wings in the latter were an average length. The gizzards presented the same class of small seeds as in others, with white flinty particles; but these both smaller and less numerous than in many I had dissected. The female, probably a young bird, contained a large cluster of very small eggs; none larger than a common rape-seed. The male was evidently an adult specimen.

July 9th.—Male and female. This pair, like several previous examples, were killed on the sand-hills between Holme and Hunstanton, and were purchased in a fresh state at Lynn. Neither the crops nor gizzards presented any variation from former specimens.

July 10th.—Of a male killed at Croxton, near Thetford, Mr. Cole, for whom the bird was preserved, has supplied me with the following particulars:—"It was killed on my farm by one of the boys, about the 10th of July last. There were four of them together at the time, feeding on turnip seed; the three remaining ones were seen often afterwards, but could not be shot. Once or twice, when riding, I got within shot, but never when walking. Their flight is peculiar—very sharp and quick, with a humming sound."

September.—Mr. Newton, in his paper in the "Ibis" (p. 204), records one specimen as killed at Methwold

sometime in the above month, shot out of a flock in the fen-lands, and others were supposed to have been seen earlier about Feltwell, and Hockwold. Mr. Newton saw this bird at Leadbeater's, in London, but the sex is not stated. Mr. Dix also states, in a recent letter to myself, "A flock were seen about the end of August or beginning of September near Woodbridge, on some open heathland near the river towards Offord. There were eight or ten in the flock, and were said to have been seen there all the summer. These birds were in Lord Rendlesham's neighbourhood, and I believe on his property." To which I may add that two males, probably obtained in that neighbourhood, were sent late in the season to Mr. John Sayer, of Norwich, to be re-stuffed and cased up for Lord Rendlesham. Mr. Dix has also furnished me with the following particulars of three birds killed at Santon-Downham, some time in June or July:—"They were shot (he writes) by one of the keepers, and his son, who was under keeper, told me of them. Though they were thrown away, and no one saw them who knew what they were, there can be no doubt about them, as, without my describing the birds, he said- They had short hairy legs with little feet like rats; long feathers in the tail, and very sharp wings, and were light brown, spotted with black."

From this last date until the beginning of October, I could not ascertain that any more birds were killed in either county, although small detached parties, too wild to allow their persecutors a chance, still frequented their old haunts. During the last week in July, a flock of about thirty were said to have appeared at Blakeney, where others had been shot, but these disappeared the following day; and, about the end of July or beginning of August, my friend Mr. Waters, of Arminghall, near Norwich, saw some birds dusting themselves in a

road-way, crossing one of his fields, which I have no doubt, from his description, were sand-grouse. They were very tame, and allowed a near approach before they flew up, so that he was well able to determine, being accustomed to all kinds of game, that these were a species unknown to him. This is the only instance, I know, of their visiting the vicinity of Norwich, and one of the few cases in which they appear to have penetrated so far inland. In the Yarmouth district my latest accounts were to the 3rd of August, on which day (writes Captain Longe) "a small flock of twelve or thirteen were seen near Winterton, on the beach; and in the "Field" of Sept. 26th, Mr. Fenwicke Hele states that a single sand-grouse "was seen and shot at on the 18th instant," at Alderton, near Alborough, Suffolk.

October 3rd.—Three males killed at Holme-point, near Lynn, Norfolk. These birds came into the hands of Mr. Howard, of Hingham, who informed me that only four were seen together at the time; the fourth bird being also wounded, and lost. After that date no others were noticed, and he believes that they then guitted entirely that part of the county. I had certainly given up all idea of examining any more sand-grouse during that year, when summoned by the bird-stuffer to inspect the last three; and though sharing with other naturalists and sportsmen a regret that so many of these interesting birds should have been slaughtered during the nesting season, I was glad enough of the opportunity afforded me of observing the autumn plumage of the species, and of comparing the tints of their freshly moulted feathers with those of the earlier specimens. This vivid colouring was particularly observable in the rich abdominal band, the deep orange on the side of the head, the dark markings on the back, and the sharpness of the pencilled lines across the lower part of the breast. In

all of them the bar across the secondaries had a bright chesnut hue, and the wing-coverts-brighter and clearer than in any previous examples—showed a dark buff edging to each feather, looking like some delicate water mark. The wing primaries and middle tail feathers were light grevish blue, with some appearance of the "bloom" observable on the feathers of herons and some other birds. The first primary shaft, though beginning to elongate, had not yet projected beyond the second feather in any one of these birds, and the tail feathers, of unequal lengths, had not attained their perfect growth; varying from three inches to five inches, six inches, and six and a-half inches. They were all in high condition, indeed, more plump than any I had previously handled; one bird weighing ten and a-half ounces, and two, together, exactly twenty-one ounces. Their crops were filled with seeds, similar in character to those before identified; and the gizzards, as usual, contained the debris of such food, mixed with numerous small white particles of flint. I could have wished that one at least out of these three autumn specimens had been a female, as the appearance of the ovaries so late in the season might have shown some indication of the birds having laid their usual number of eggs during the summer months. The appearance of the testes in these adult males certainly favoured the impression that although no nests had been discovered in this district, yet that such might have existed on the extensive sand-hills bordering our sea coast, and the warrens of the interior; more particularly since these wanderers were known to have bred, during that year, at certain places in Denmark and Holland,\*

<sup>\*</sup> Professor Reinhardt supplied Mr. Newton with information respecting some nests of this species, found at Ringkjobing and Nymindegal, on the west coast of Denmark. Early in June the Professor received several living birds, which had been snared "on their nests" in the above-named districts, together with four of their

Mr. Southwell, of Fakenham, informed me at the time that "a vague rumour" was current in his neighbourhood early in September, that a nest had been found somewhere near Lynn; but adds, "I cannot discover the slightest foundation for the report," and my own enquiries failed to elicit anything satisfactory on this point.

November?—There is little doubt, I think, that these birds were not seen in either Norfolk or Suffolk after the middle of November, the following being the latest notices of their appearance, in either county, that I could authenticate either at the time or subsequently. Mr. Dodman, of Titchwell, near Lynn, informed Mr. Southwell that one was procured about the last week or end of November, and in a subsequent letter says, "From what I could learn it was a male bird. It was

eggs, one of the latter having been laid in the box which conveyed the birds. "On two of the nests both the birds (in each case the hens first and then the cocks) were caught on the 6th of June. These nests were near one another; and one, containing three eggs, consisted of a slight depression in the sand, lined with a little dry marram. The other had only two eggs, was placed among some ling, and furnished in a like manner. The third nest was similar to the first, and was half-way up a sand-hill." More nests were found at that time, but were unfortunately not preserved; but, on the 27th of July, the same person who had taken the first eggs, discovered at Bierregaard, in the same locality, "a nest among some stones in the sand, and containing three eggs." Snares were set, and both old birds taken; and in this interval. one of the eggs was found to have been hatched. The other two eggs being placed in wool near a fire a second chick was hatched, but the third egg proved rotten. The young lived but one day, and were not preserved. Another nest was also found the same day (July 28th), and the two old birds obtained. From these facts, it appears that Syrrhaptes is not polygamous, both sexes sharing the duties of incubation, and that the normal number of eggs is three. Whether these birds are "double brooded" seems somewhat doubtful.

shot on a salt marsh, a different locality to that where all the other birds were obtained in this district, which were found on the marram or sand-hills; but this may be attributable to the birds having been disturbed from the latter during the morning previous to being found in the marshes." This specimen was killed at Holme, near Hunstanton, where so many had been obtained in the summer; indeed, a certain number remained about those preserved sand-hills from their first arrival, and there, if any females did nest in this county, it is quite possible they might have done so, without being observed. The only other record of their appearance so late in the year was contained in a communication to the "Field" of November 28th, 1863, by Mr. Hele, of Aldborough, in which that gentleman says, "a pair were seen by Colonel Thellusson at Thorpe (Suffolk) one day last week."

The total number of specimens, therefore, known to have been obtained in the counties of Norfolk and Suffolk, in 1863, amounts to just seventy-five birds, the numbers of each sex, as far as ascertainable, being very nearly equal. In the case, however, of the four examples from Methwold and Santon-Downham, the sex not having been recorded, I have reckoned them in the subjoined table as two males and two females:—

${\bf Norfolk}$	60	$\cdots = \begin{cases} \text{Males} & \cdots & \\ \text{Females} & \cdots & \end{cases}$	30 30
Suffolk	15	$\cdots\cdots \begin{cases} \text{Males} \\ \text{Females} \\ \end{cases}$	8 7
			_
	<b>75</b>		<b>75</b>

Excepting only in one or two instances, these birds were found, in the above counties, either close to the sea on the sand-hills and shingle, or in the immediate vicinity, feeding in grass fields, or on open waste lands.

In all cases they appeared in good condition, the internal parts exhibiting signs of perfect health, and the crops in most cases were filled with green food; some few, however, had empty crops, but their gizzards (extremely muscular) were filled with the debris of seeds and small fragments of flint. No trace of animal or insect food was, I believe, found in any of them, either in our eastern counties or in other parts of England. Of the first female picked up on Yarmouth beach, Captain Longe says:-"The gizzard contained an enormous quantity of small stones and sand, some of the stones were nearly twice the size of mustard seeds, and weighed three-quarters of a dram." This I found the case in most of them myself, but in some much more sand than flints. The contents of the crops (in one case filling two table spoons) were various, consisting, in the opinion of several local botanists, chiefly of small yellow grass seeds, mixed with the seeds and cases of black medick or nonsuch (Medicago lupulina), sedge (Carex), dock (Rumex), chickweed (Stellaria and Cerastium), and in instances, small sprigs of the biting stonecrop (Sedum acre), so abundant on the sand-hills of our eastern coast. Those taken from one of the Yarmouth birds, being of four different kinds, were sown in pots under the care of Mr. Youell, at his nursery grounds, and were proved by this experiment to belong to Medicago minima, Chenopodium album, Polygonum convolvolus, and Poa annua. The plants were submitted to the editor of the "Gardeners' Chronicle," who concurred as to their identity. Three of the birds shot at Horsey, on the 10th of June, by Captain Rising, contained no other seed in their crops than the Sagina procumbens (pearlwort). The seed of the Polygonum convolvolus was probably mistaken for Rumex in the first instance. Southwell, of Fakenham, who most kindly placed his own notes on this species at my disposal, took considerable pains to ascertain accurately the plants on which such birds as came under his personal observation had been feeding, and the following statement was received by him from no less an authority than Professor C. C. Babington, of Cambridge, after an examination of the different seeds from the crop of one of the Holme specimens:—" Most are the fruit and seeds of Arenaria, or rather Lepigonum rubrum, numbered 1 on the paper; 2, is a seed of *Polygonum*; 3, the tip of a moss; 4, seeds of another kind of *Polygonum* (they must have been some time in the bird's crop, for they have commenced growing); 5, appear to be fruiting flowers of Poa; 6, I fancy belong to Sagina or Arenaria, but I have not succeeded in naming them to my own satisfaction. All these names are, of course, open to alteration, but I quite think that they are correct." Besides the above, Mr. Southwell also distinguished the seeds of Lepigonum marinum, of which there appears to have been none in the crop submitted to Professor Babington; and, in a letter to myself, he adds, "I think we may consider that their food in this country consisted entirely of the seeds of plants proper to the sandy coast upon which they were found. The fact of the seeds being all those of British plants, probably shows that they had been on the coast some days." Mr. Alfred Newton, to whom the carcases of two of the Holme specimens were sent by Mr. Southwell for the purpose of dissection, proposed a careful examination of the small flinty substances found so abundantly in the gizzards, suggesting that some mineralogist might recognise in them "fragments washed down into the Kirghish Steppes from the Altai mountains; or that the birds might have renewed their stock of grindstones as they crossed the Ural." Acting upon this hint, Mr. Southwell submitted some of them to a geological friend, who writes as follows:-"As to the stones found in the gizzard, I do not think they

were obtained on the Norfolk coast. I doubt whether the sand there would afford such large grains. They may have been picked up on their native steppes, and probably the same stones may remain in the gizzard for an indefinite length of time. The stones, so far as one can see, seem to be fragments of quartz and felspar, and are therefore probably granitic. I have shown them to one of our best geologists, an F.G.S., who concurs with me, and thinks that nothing decisive can be predicted from them. They could all be easily matched in England." I may here add that the later specimens dissected by myself, had fewer flinty particles in their gizzards, and those much smaller in size and more mixed with sand. In the early examples, the size, and peculiarly angular appearance of these white fragments. would attract the notice of any one accustomed to examine the internal economy of granivorous birds; and as it is generally understood, that such stones are retained in the gizzard so long as their triturating powers remain unimpaired by the action of the stomach, it is most likely that on their first arrival our Tartar visitants contained their native grindstones.

From an examination of just thirty specimens, consisting of fourteen males and sixteen females, I was particularly struck with the general similarity of the specimens according to sex. The less matured males differed only from those more adult (judging from the largely developed state of the testes) in having the ground colour of the plumage somewhat duller, and their darker markings less clearly defined; but the extremely dark tints of some old males, especially in the deep grey of the breast, and more clouded appearance of the wing coverts, were, I imagine, attributable to old and somewhat soiled feathers, which in a few weeks would have been replaced by others. In one or two fine old males, very recently killed (for the brighter

portions of the plumage soon faded in the stuffed specimens), the reddish orange of the head and neck, the delicate pencil markings across the breast, the rich buffy colouring of the wing coverts, bordered by a reddish bar above the secondary quills, and the broad abdominal band of blackish brown, mingled with buff, were all extremely vivid; as also the bars and spots on the back and wings. But I did not find that such specimens had in all cases the longest tail or wing feathers, which are, doubtless, much subject to accident. Amongst the females, the same degree of difference exists, the young birds having a more mottled appearance on the upper parts, the kestrel-like bars on the back and wings being less clear. In old females the black ring round the throat and the yellow tints of the neck were extremely bright. In two only, as before observed, was there the slightest trace of the pencilled lines across the breast, so marked a feature in all males. These, probably, were very old hens, though not more brilliant in plumage than others; and the one with the pectoral band most distinct, had the gular ring very faint, the yellow tints less vivid, and the first quill feather of the wings scarcely elongated at all. In some examples the quill feathers had been recently moulted, as in the four females from Blakeney (June 26th), and Mr. Dix informs me that in two he received from Horsey, he found the secondaries and tail feathers full of blood and about three parts developed, and some of the back feathers were brighter and evidently new. The following are the variations in length, of the tail and wing feathers in both sexes, as far as I was able to take them; but the difference in length of the first primary quill is owing more to the size of the bird (the wing itself being larger or smaller), than to the elongation of the filaments. Thus, in one female, the wing from the carpal joint measured nine inches, yet the

primary shaft projected but very little. The females have the same bright reddish hue above the secondary quills as in the males, and the abdominal band is in some even deeper in colour and less mixed with buff. All but one female I examined had elongated tail feathers, and in this case they had evidently been shot away:—Tail feathers in males:  $6\frac{1}{2}$  inches, 7 inches, to  $7\frac{1}{2}$  inches. First primary of wing, measured from the carpal joint:  $8\frac{1}{2}$  inches, 9 inches,  $9\frac{1}{8}$  inches,  $9\frac{1}{2}$  inches, to 10 inches. Tail feathers in females:  $3\frac{1}{2}$  inches, 4 inches,  $4\frac{3}{4}$  inches, 5 inches,  $5\frac{1}{2}$  inches, to 6 inches. Wings measured as above: 8 inches,  $8\frac{5}{8}$  inches, to 9 inches.

Tastes seemed to vary much respecting the edible qualities of these strange birds, which, as far as my own experience went, were in this respect, as much entitled to their specific name of paradoxus, as for any of their external peculiarities. Served up as "a delicious salmi" at a dinner of the Acclimatisation Society, they were said to have been pronounced "admirable," but here at least they were tried under the most favourable circumstances, being cooked to perfection by a master of the culinary art. Without all these advantages, and with the great drawback of wanting their natural skins, the first brace I tried were undoubtedly dry eating and somewhat taseless, but presented from the great depth of the sternum, a fine "breast" in quantity if not in quality. On the next occasion I had them baked, with the addition of a beef-steak to assist in preserving their natural juices, and found them much more tender and palatable; the flesh suggesting the flavour of many things, though scarcely one in particular. I should say, however, that they resemble the French partridge as much as any other game bird, as they want the pungency of the quail, to which they have been likened by some who have eaten them. Their only resemblance

to grouse consists in the two colours of the flesh; the outer portion being very dark, and that nearest to the bone white.

To revert once more to the general history of this strange invasion, as given in Mr. Newton's European summary, the course of the invading host is there traced "through more than thirty-three degrees of longitude, from Brody in Gallicia, to Naran on the west coast of Donegal; and it will be seen that towards the western limits of Europe it extended over some five and twenty degrees of latitude, from Biscarolle, in Gascony, to Thorshavn, in the Færoes.\* \* \* "I rather doubt (says Mr. Newton) if the main body ever reached England. Nearly one hundred is the largest flock recorded as having been observed in this island at one

<sup>\*</sup> With regard to the date of their appearance, the same author writes, "Unfortunately I am at present ignorant of the exact times of its first appearance in the most eastern localities. The earliest date given with precision is the 6th of May, at Sokolnitz, in Moravia. A week later the right flank of the advancing army had reached Tuchel, in West Prussia; on the 17th its centre was observed at Polkwitz, in Silesia. On the 20th of May birds occurred at Wöhlau, in Anhalt, and on the Danish Island of Laaland. The following day (the 21st) they had not only over-run the British dependency of Heligoland, but had established themselves on the shores of England, at Thropton, in Northumberland. The next day they had penetrated to Eccleshall, in Staffordshire, and crossed the country to Walney, on the coast of Lancashire. By the end of the month they had arrived at the Færoes." With the exception, therefore, of the lapse of observations between the 6th and 14th of May, "the Tartar horde seems to have swept uninterruptedly onwards in an almost uniformly north-western direction, small bands detaching themselves from the main body at intervals, and these again often separating into pairs throughout the entire transit. Once arrived at the borders of the ocean, if one may judge from the evidence before us, many were driven back. Then they seem to have spread themselves over the surrounding countries, seeking out, as was natural, districts most agreeable to their habits."

place, namely, Oswestry. The bulk of the invaders seem to have been checked in their onward course by the North Sea, and to have passed the summer on the flat and sandy coast extending from Holland to Jutland, both of which countries witnessed, as I have related, attempts on the part of the colonizers to increase and multiply. In Holland we have flocks of a couple of hundred spoken of as frequenting the sand-hills in June. (J. f. O., 1864, p. 69). At the beginning of July, Professor Reinhardt informs me there were large flocks in Jutland and Slesvig. About the middle of August Dr. Altum tells us that bands of from ninety to a hundred were still seen on the Frisian island of Borkum. A month later, in September, a great flock was observed at Pinneberg, in Holstein, and some time in autumn a large flight on Norderney; while the latest notice I can find of a numerous company being seen together is on the 3rd of October, when a flock of from one hundred and fifty to two hundred were seen at Wittow, in Rügen, flying high in air from northwest to south-east, and making probably for the land of their birth." This last date, it will be observed, corresponds exactly with the latest record of the appearance of these birds in Norfolk. With regard to the numbers which actually visited the European continent, and those which are known to have met with an untimely end, Mr. Newton is inclined to estimate the former, from all sources of information, at not less than seven hundred, the latter at about three hundred and fortyfive, adding "another hundred and fifty-five for birds which, falling into the hands of ignorant persons, have been altogether lost sight of." No wonder that so extensive, and in every respect remarkable, an immigration of a strictly Asiatic species into western Europe, should have led to a strange diversity of opinion amongst naturalists as to the actual cause; some

attributing it to atmospherical influences, such as "the continuance of a week's violent north-east wind;" others, "to the colonization of the valley of the Amoor by the Russians, and the probably increased amount of land sown with seed along the roads leading from thence to European Russia;" others, again, to the effects of a supposed drought in the countries where this species mostly abounds. After reading, however, Mr. Newton's very plausible reasons for not attributing the "exodus" to any of the above causes, or at least for not receiving any one of them as the primary cause, I think that most people will concur in his own expressed opinion, that this "wonderful movement" is attributable "to the natural overflow of the population of Syrrhaptes, resulting from its ordinary increase." In support of these views he refers to the habits of this species as observed in the basin of the Tarei-nor, a lake situated in Dauria, about fifty degrees north and one hundred and sixteen degrees east (from Greenwich), under most favourable circumstances, by Herr Radde in the spring of 1856. There it arrives as one of the earliest migrants by the 10th (22nd) of March, and two immense flocks discovered in the island of the Tarei, consisting each of at least a thousand birds, after frequent disturbance, suddenly left the district altogether to appear no more during that season, showing, as Mr. Newton remarks, "that Syrrhaptes is subject to sudden movements on a very large scale, and of a kind which, at first sight, appear almost capricious." Its wondrous powers of flight must protect all but the weaker members from the attacks of falcons, while it is also known, from Herr Radde's observations, that the time of incubation and the growth of the young is "short in comparison with what it is in most ground-breeding birds," all points indicative of a considerable and rapid increase of the race, and the necessity from time to time of extending

the limits of their range, and "seeking pastures new." This was by no means also the first occasion in which examples of this species had been known to penetrate so far to the westward of their normal range, for on this point Mr. Newton writes as follows:-"It got its foot in Europe as long ago as 1853, it may be longer; we must allow for the imperfection of our record. In 1859 it comes again, the stress being now, with time, severer: possibly more birds start, and the birds that start reach a greater distance. In 1863, from the same increasing pressure from within, still more come, and come still further. If this notion be correct, unless some physical change occurs in the Tartar steppes, which may have the effect of relieving the pressure, another outpouring may be safely predicted, and probably the already thrice-found channel will be again used by the emigrating population." It is not, however, Mr. Newton's impression that the immense flock which in 1863 visited Europe, or the smaller flights which had preceded it, started from Dauria, or the frontiers of China. "On the contrary," he says, "a little reflexion will show that it is of course far more probable that the birth-place of the European invaders was the western extremity of their ordinary range—the country immediately on the other side of the Caspian Sea, whence, as I have said, the species was first obtained and described. But this is quite far enough off to make such a Scythian exodus in these days sufficiently remarkable. Some 4,000 geographical miles is a pretty long journey, even for a bird blessed with such powerful organs of aerial locomotion, as Syrrhaptes paradoxus." Whether or not any portion of these large flocks would have located themselves permanently on our shores, if encouraged thereto by a protective rather than a destructive policy, remains an open question. It is I know a favourite belief with many that they would have done so, and

there are not wanting localities both on our coast line and in the interior of the county highly favourable to their ascertained habits. In the "Ibis," however, for 1865 (p. 340), the editor remarks—"There can be no doubt that those ill-used voyagers entirely failed to establish themselves in Europe. The last recorded occurrence of a Pallas's sand-grouse that we can find is by Dr. Opel, who, writing on the 20th of July, 1864, states (J. f. O., 1864, p. 312), that a live example, which had flown against the telegraph wires, near Plauen, in Saxony, was sent to the Zoological Garden, at Dresden, about a month previously."

I have selected this species for illustration in the present work, as one of the rarest and most beautiful additions of late years to our local fauna; and those who have had the opportunity of studying the actions of these birds, either in a wild state or in confinement, will at once recognise the master hand of the artist in his perfect delineation of form, colour, and attitude. The male is represented by the figure in the foreground, the female by that crouching.

## PERDIX RUFA (Linnæus.)

## RED-LEGGED PARTRIDGE.

Sir Thomas Browne, writing on the "Birds of Norfolk" some two hundred years ago, remarks—"Though there be here very great store of partridges, yet the French Red-legged Partridge is not to be met with." How sincerely would a portion, at least, of our local sportsmen wish that the same could be said at the present day; but as "ill weeds grow apace," so the French partridge, once fairly introduced into this country, is not easily got rid of, now that its qualities

as a game bird are not found to answer the expectations of its importers in the exact way they anticipated. Its introduction into the Eastern Counties dates only from the close of the last century, when, about the year 1770, the Marquis of Hertford and Lord Rendlesham are recorded\* to have had large quantities of eggs imported from the continent, and the young birds, hatched under domestic fowls, were turned off at Sudbourn and Rendlesham, in Suffolk, on the respective estates of the above noblemen. From thence they soon spread to other portions of the county, and the adjoining parts of Norfolk; and in Daniel's "Rural Sports" we find the author speaking of a covey of fourteen, discovered by himself in 1777 within two miles of Colchester, which, in a very thick piece of turnips, "baffled for half an hour the exertions of a brace of good pointers to make them take wing, and the first which did so immediately perched on the hedge, and was shot in that situation without its being known what bird it was." Others are also described by the same writer as having been killed in 1799, at Sudbourn,+ where they were originally turned off. During the

<sup>\*</sup> See an article by Dr. W. B. Clarke, of Ipswich, in Charlesworth's "Magazine of Natural History" for 1839 (p. 142). In this paper, which contains a most accurate description of the habits of the red-legged species, the date of its introduction by the Marquis of Hertford is given as about the year 1790, but, judging from other records, it most probably occurred from fifteen to twenty years before.

<sup>†</sup> I am not aware that any specimens of the Barbary partridge (Perdix petrosa) have ever been met with in this county, but Yarrell, who includes it amongst his "British Birds," states that "two or three years ago, a bird of this species was shot by a nobleman when sporting on the estate of the Marquis of Hertford, at Sudbourn, in Suffolk, where it was considered that a few of the eggs of the Barbary partridge had been introduced with a much larger quantity of those of the more common red-legged bird."

next twenty years, they would seem to have increased rapidly as, in 1826, they are thus referred to by Messrs. Sheppard and Whitear—"These birds are now very plentiful in some parts of Suffolk. We have seen at least one hundred and fifty brace in a morning upon Dunmingworth heath; and they are found in greater or less numbers from Alborough to Woodbridge; a few are also sometimes seen in Norfolk."\* It appears, however, that other game preservers, in both Norfolk and Suffolk, following the example of the Marquis of Hertford, procured eggs from the continent, and were equally successful in extending the breed. Mr. Alfred Newton has furnished me with the following additional particulars, as communicated to him by his late father:-"The year after Lord Cornwallis died (1823) Lords Alvanley and De Ros hired Culford; they had a large number of red-legged partridges' eggs sent over from France, which they distributed about the neighbourhood, keeping, however, some at Culford. Duke of Norfolk had a good many at Fornham, so also had Mr. Waddington at Cavenham. The eggs were set under hens, and nearly all of them hatched. This was the first introduction of the red-legged partridge into West Suffolk. They had been plentiful in the eastern division of the county several years before, where Lord Hertford had introduced them." Mr. Newton refused to have any eggs, but in a few years the birds spread to Elveden, and thence, of course, very readily into the adjacent parts of Norfolk.

At the present time, however, so altered are the feelings of many game preservers with regard to this species, that the destruction of their nests is in some places as rigorously carried out as of crows or magpies;

<sup>\*</sup> The late Mr. Utting, of Ashwelthorpe, was, I believe, the first to introduce them into East Norfolk.

and the destruction of the old birds, any how or at any season, is regarded, at least by such individuals, as anything but an unsportsman-like act. Much of this antipathy originates in a very general belief that the red-legs during the breeding season drive the English birds from their nests, and appropriate them to their own use: but, although the French birds are undoubtedly pugnacious, and both species have been observed fighting and scuffling together in the spring of the year, I am not aware that the charge of appropriation has been fully proved. The red-legs commence laying earlier than the grey partridge, and, as Mr. Newton informs me, "are accustomed to drop their eggs in a desultory way like guinea fowls;" yet, whilst the eggs of both French and English birds (as occasionally, also, of pheasants and partridges), are found in one nest, it is seldom, I think, that the French bird is, in such cases, the usurper.\* On one occasion John Gally, of Northrepps, gamekeeper to Mr. J. H. Gurney, saw a French partridge stand and peck at the head of an English bird when sitting, and at last drive her from the nest, but even in this instance there is no evidence that the red-leg afterwards took possession of it. In like manner Mr. Edwards, of Keswick, was once witness to a strange contest between a French partridge and a common hen, apparently for the possession of a nest placed on the side of a straw stack, but, although the Frenchman

<sup>\*</sup> The French partridge is the earliest to lay (though, from her irregular habits, she is the latest to hatch her brood), and grey partridges or pheasants will very often "lay to her eggs," as the keepers express it.

<sup>†</sup> Mr. A. Newton has recorded in the "Zoologist" (p. 4073) the discovery of a nest of the French partridge at Elveden, placed on the thatch of a barley stack. The old bird was found sitting on thirteen eggs, and would probably have hatched her young, had it not been necessary to remove the stack before that time. In

here proved the victor, it is doubtful which was the rightful owner. If, however, to this grave charge, we return the Scotch verdict of "not proven," the shy, restless nature of this species, continually "footing it" before the guns, and taking wing only when closely pressed, or far out of reach of any ordinary fowling piece, renders it particularly obnoxious to sportsmen in the more closely cultivated and enclosed portions of the county. In such districts, many are the vollies of something more than small shot, called forth by the provoking habits of these birds in the early part of the season. No sooner do the guns enter the turnips at one end of the field, than the wary Frenchmen are seen topping the opposite fences one after another, alighting again on the adjoining stubbles, and, with heads erect, making off at a most incredible pace. Scattering themselves in all directions, they unsettle the English birds that would otherwise lie well in good cover, and, of course, from their running before the dogs, were still more objectionable under the old style of partridge shooting with pointers or setters. Thus trying his patience in every possible way, it is no great wonder if the sportsman, under such circumstances, delights to bag every red-leg he can, and considers no distance too far, to "let fly" at his feathered tormentors. Nor is he repaid, after all his trouble and many disappointments, by securing a delicacy for the table, the chief attraction of this species consisting far more in its handsome plumage than its edible qualities. Undoubtedly a fine old

the "Field," of June 20th, 1865, there is also a note by the Rev. James Shirley, of Frettenham, describing the nest of a French partridge placed about twelve feet from the ground on the top of a haystack. Although the stack was being constantly disturbed, fifteen young birds were hatched, and were seen in the act of tumbling down the stack, when they were safely led off by the old birds.

male, with its vermillion-coloured beak and legs, its dark gorget, and lovely feathers on the flanks and thighs, is a very striking object, and contrasts well with the more sombre and uniform tints of the common partridge, when the day's "bag" is laid out for inspection. Unsuited, however, as is the usual style of shooting to the habits of French partridges, they afford fine sport in November and December, when most of the beet and turnips are off the lands, as they then congregate on the ploughed fields, and can be driven over the gunners, placed under cover at convenient distances. In fact, the "driving" system, now so generally adopted on the large estates, is unquestionably the proper method of shooting red-legs, and one which tries well the mettle of the sportsmen, as they mount up higher than the English birds, and fly, when well on the wing, at an almost incredible pace. Yet, at the same time, it must be remembered that such sport can be enjoyed only with impunity on extensive manors, well stocked with birds, since, if attempted too often within a limited area, the partridges may be thus driven off the land altogether, as surely as by the too frequent use of the "kite" towards the latter part of the season. A very effectual time also for reducing their numbers is immediately after a good fall of snow,\* before a night's frost has hardened the surface. No longer able to run, and still unwilling to fly till obliged to take wing, they seem deprived for the time of their usual sagacity, and seeking shelter in the thickest hedgerows, if in the enclosed parts of the county, or in the gorse and broom coverts of the light land districts, afford excellent sport for a couple of guns,

<sup>\*</sup> Dr. Clarke, in the paper before referred to, remarks—"Instances have been known of these birds alighting in the middle of a field deeply covered with snow, into the depths of which they sunk, and were afterwards taken out alive by hand."

"doubling" the fences with a steady dog to flush the birds. Advantage is likewise taken by some persons of the altered character of the red-legs when the snow is on the ground, for by flushing them again and again, and following them up directly, the birds become sufficiently exhausted to be run down, one after the other: a method not unfrequently adopted by poachers in districts not strictly preserved. Under similar circumstances our English birds, if they seek cover at all, betake themselves to the thickest plantations, frequenting the hedgerows even less than at other times, but they prefer, for the most part, the open fields, where their dark forms are plainly visible on the white ground, and where they are more difficult than ever to approach within shot. There is no reason, however, to suppose from this habit, that the red-leg is more susceptible of cold than the grey partridge, as, with the same opportunities of procuring food, I have never found their condition affected by the sharpest weather; indeed, they come to us from a country where the winters are uniformly more severe than our own.

They frequent both heavy and light lands; and I have frequently found them plentiful on heavy-land farms, where the English birds have been comparatively scarce, thus filling a void; for as French birds thrive well where, before their introduction, the grey partridge was not found, it is unfair to suppose that the absence of the latter is now owing to the pugnacity of the red-legs. In such localities, by pursuing them in wet weather, when the sticky soil prevented their running, I have been pretty successful in making a bag; and they may be readily killed during a drenching shower, if the gun-caps or cartridges will but go off when required. Strong on the wing, and not often affording a close shot, they require very hard hitting, and will frequently carry off the best part of a charge to die

of their wounds after a prolonged flight; whilst many a bird, when finally brought to bag, shows evidences of former injuries from the long shots, so frequently, though somewhat cruelly, made at them at almost impossible distances. There is one other particular in which the French partridge differs entirely from our common species—namely, in its habit of occasionally perching in trees, flying up into the thick foliage like a pheasant or wood-pigeon;\* an action which at first not a little astonished our local sportsmen, many of whom most probably entertained the same opinion as an old veteran partridge-shot, who assured me that the first time he met with a covey of red-legs, and some of them took to the trees, "he fully believed the birds had gone mad." On one occasion, whilst shooting on a farm where they were very numerous, I observed this course adopted by single birds in three instances on the same day, and more recently I have known a good-sized covey flushed from the top of an oak timber, and single birds, when chased from place to place in snowy weather, fly up to and settle in the tops of oak pollards. They may also be seen sitting occasionally in a long row on the top of a wall, the ridge of a barn roof, or on an ordinary park fencing. It is not an unusual custom in this county, when nests of the grey partridge have been mown out, or discovered in too exposed situations, to transfer the eggs thus taken to a French partridge's nest, and in several instances I have known them successfully hatched, and the young birds treated in every respect as her own by the foster

<sup>\*</sup> M. Temminck was evidently unaware of this peculiarity, when, in his "Manuel D'Ornithologie," he included the redlegged partridge in his second section of "Perdrix proprement dites," giving the following as the chief characteristics of that group:—"Ils vivent dans les champs et ne se perchent point sur les arbres."

parent. It is said, however, that the running habits of the French birds\* are generally fatal to the English nestlings, which, to use a thoroughly Norfolk expression, are "drabbled" to death in attempting to keep up with such untiring pedestrians. I mention this, only as a common belief amongst game-keepers, being unable to vouch for its accuracy; but I have more than once observed, in the shooting season, a pair of old French birds rise from the turnips at the head of a covey of English, though, of course, it is quite possible that in such cases the red-legs had "run up" the grey partridges, and thus all had risen together.

French partridges, both on the wing and in the field, are easily recognized at a distance by their larger size and darker tints of plumage, to say nothing of the difference in the noise of their wings in flying. When alarmed they carry their heads erect, turning them in all directions to catch the sound of any approaching danger, and continue this even when running at their greatest speed. If undisturbed, however, and feeding leisurely, their appearance (as seen through a glass) is very different, and with feathers puffed out and rounded backs, whilst slowly searching the ground for grain and insects, they look almost as large as pheasants. They are partial to the shelter of thick hedge-rows and plantations, but unless driven into such cover, are seldom

<sup>\*</sup> M. Julian Deby, in his "Notes on the birds of Belgium," published in the "Zoologist" for 1845-6, makes the following statement respecting the red-legged partridge:—"The habits of this species differ materially from those of the common partridge, the males leaving the females and assembling in coveys, while the latter are sitting and rearing their young." I know of no English author that has noticed this peculiarity, but red-legs at that particular season are frequently seen consorting together on the lands, whether all males or not I cannot say, and are then more easily ridden down than at any other time.

found far from the outer fence, through which they can run on the slightest alarm; and in walking quietly up a wood side, where these birds are plentiful, it is very usual to see one or more red-legs issuing from the hedge bottom, and hurrying along under the bank. They are fond also of basking in thick rushy carrs; and in low meadows will hide in the sedgy margins of the watercourses, where I have shot them late in the season when looking for snipe.

Both Mr. Lubbock and Messrs. Gurney and Fisher have alluded to the supposed migratory habits of the red-legged partridge, and my own enquiries amongst naturalists and others residing in the vicinity of the sea certainly confirm their statements as to small coveys of these birds, generally in an exhausted condition, being regularly met with in the spring of the year on various parts of the coast. My friend Captain Longe, of Yarmouth, who has for several years paid particular attention to the ornithology of that neighbourhood, informs me, that in many successive springs, about March or April, he has found French partridges early in the morning, running about on the beach close to the water; and, on one occasion, when the sands were perfectly covered with their footmarks, he flushed a covey of from twenty to thirty, which flew round once or twice and then out to sea, still keeping on in a direct course until he lost sight of them, although using a good glass. Every year, about the same time, many of these birds are captured under the boats or fishbaskets lying on the beach, and others are run down by lads in the gardens near the Denes, and sometimes even within the town itself. In the spring of 1865, I was told by Mr. Horace Marshall, also a resident at Yarmouth, who has on more than one occasion drawn my attention to this subject, that about the first week in April (the usual time, he says, for their

appearance) he assisted in running down a fine male bird close to the Britannia Pier, and one or two others were captured on the same day. They have been observed in like manner on the Suffolk coast, near Lowestoft, so exhausted as to allow themselves to be picked up by hand. Mr. William Barclay, of Leyton, who has taken much interest of late years in this enquiry, also sends me similar information from Cromer and adjoining villages on that part of the coast. In a recent letter he says-"I have shot a good deal in the neighbourhood of Cromer the last few years, and we always find the 'Frenchmen' very abundant near the cliff, more particularly between Overstrand and Trimingham, on shooting belonging to the Hoares and Buxtons, where they breed extensively." A keeper, in the employ of Mr. H. Birkbeck, who looks after the game upon the Lighthouse Hills and adjoining lands, informed Mr. Barclay that in 1865 they were particularly numerous, and accounted for the fact by saying "that more had come over than usual." At Cromer, also, the beachmen seem to be fully aware of the annual appearance of these birds on the coast about the end of March, and the boys run them down on the sands, and sell them in the town for sixpence each. On this point both Mr. Barclay and myself have received reliable testimony from one of the most experienced and intelligent fishermen at that favourite watering place. In a recent letter, in answer to my own questions, William Mayes writes, "All the information I can give you about French partridges is, that they come over about the middle of March or beginning of April, some ten or twelve in a flock; the wind mostly south-east and south. I have seen them when I have been out to sea four and five miles from land. There are none come over in the autumn." That all these concurrent testimonies are indicative of some migratory movement on the part

of the red-legged partridge there can be no doubt, but whilst it is by no means easy to decide from what portion of the continent we might look for an influx of this species—and there is really no place abroad that these birds could have come from to alight on the Cromer beach, the above statements are by no means incompatible with the idea that emigration and not immigration is the true explanation of this somewhat difficult subject. In this view, I know, Mr. Alfred Newton, who has paid much attention to the habits of these birds, entirely concurs with me, and the very fact that the French partridge was unknown in this county till artificially introduced is one of the strongest arguments against its vernal immigration at the present time. On the other hand, after the success which has attended the importation of this species and its rapid increase throughout the Eastern Counties, it is far from improbable that a certain portion should annually seek to extend their area, and finding themselves stopped by the German Ocean attempt to cross it. These birds, or a portion of them at least (some, probably, falling short and being drowned at sea), misjudging the distance and their own powers of flight, would return again to our shores in an exhausted state, and when picked up under such circumstances, would very naturally be regarded as foreigners just arrived on the coast. Both Mr. Longe's account of the large covey which, when disturbed by him in the early morning on the sands, flew straight out to sea until lost to sight, as well as the statement of William Mayes, that he has seen these birds when four or five miles from land, are quite in accordance with this supposition; and though it is by no means an unusual circumstance during the shooting season for partridges, when shot at in the vicinity of the coast, to continue their flight out to sea, returning in an extremely fatigued condition to the beach, there seems nothing to account for such marine excursions in the spring of the year but some such voluntary impulse as I have here suggested. Again, these returned voyagers, failing in their attempt to emigrate from their island home, would locate themselves, in all probability, in the vicinity of the coast, and thus account for the large proportion of the red-legs which, as Mr. Barclay remarks, are known to breed by the sea at Cromer and adjoining villages; whilst a more than usual movement from the interior, in any particular spring, would in like manner account for the remark of Mr. Birkbeck's keeper "that more had come over than usual."

It is not unusual to find the feet of these partridges much clogged with dirt after continued wet on the heavy land farms, but the most extraordinary instance of this I ever met with, came under my notice on the 3rd of December, 1860, and consisted of a French partridge's\* foot and leg, perfectly embedded in a lump of earth. The poor bird had been observed limping about in a very strange manner, and was, without much difficulty, run down and secured, when it was found that the lower half of one leg, with the foot, was embedded in a mass of earth, which raised it considerably from the ground, and necessarily kept the limb in a bent position. This lump, measuring seven and a-half inches in circumference, and weighing six ounces and threequarters, had become as hard as stone, and certainly in that state accounted for the sufferer not having been able to free itself from its incumbrance. toes only were visible on one side, of which one

<sup>\*</sup> This curious specimen was brought to Mr. Sayer, bird-stuffer, St. Giles', in this city, by a gentleman who resides on a heavy land Suffolk farm, where the bird had been taken, and when shown to me the leg, from the fresh state of the sinews, had evidently been but recently severed from the body.

had the nail torn off level with the edge of the mass itself. From the upper part protruded a short bit of bent or straw, and this being entangled round the foot had probably collected the soil by degrees, which had hardened at night with the frost. I can only imagine that the unfortunate bird, which was half starved when taken, had been wounded in the leg, and was thus unable to endure the pain of removing the earth when



it first began to attach itself. On subsequently showing the limb, and its accumulations, to my friend Mr. Newton, it struck him, at once, as a singular confirmation of Mr. Darwin's theory of the transportation of the seeds of plants by adhesion to the beaks and feet of birds, and, as such, he exhibited and described it at a meeting of the Zoological Society, on the 21st day of April, 1863, a notice of which, with a very accurate

illustration was published in the "Proceedings" for that year. Through the kindness of Mr. P. L. Sclater, the indefatigable secretary of the society, I am now enabled to transfer to these pages the original woodcut, and I am the more obliged for the opportunity of doing so, since the specimen itself is no longer in existence.

The posthumous honours, however, to be paid to this remnant of a "Frenchman" were not to end here. Mr. Newton further requested permission to forward the curiosity to Mr. Darwin, that eminent naturalist, in his "Origin of Species" (pp. 362, 363), having cited an instance in which he had "removed twenty-two grains of dry argillaceous earth from one foot of a partridge," in which earth "there was a pebble quite as large as the seed of a vetch;" whilst the above mass of clay, as remarked by Mr. Newton before the Zoological Society. was "enormously greater than the quantity of earth mentioned by Mr. Darwin, and sufficient to hold the germs of a very extensive flora." How fully this supposition was borne out by subsequent investigation will be seen by the following extract from Mr. Darwin's letter to Mr. Newton (March 29th, 1864), detailing the results of his investigation:-"I have examined (he says) the partridge's leg; the toes and tarsus were frightfully diseased, enlarged, and indurated. There were no concentric layers in the ball of earth, but I cannot doubt that it had become slowly aggregated, probably the result of some viscid exudations from the wounded foot. It is remarkable, considering that the ball is three years old, that eighty-two plants have come up from it, twelve being Monocotyledons and seventy Dicotyledons, consisting of at least five different plants, perhaps many more. The bird limping about during the autumn would easily collect many seeds on the viscid surface. I am extremely obliged to you for sending me this interesting specimen."

I never remember to have seen more than one partridge that exhibited the slightest indication of a cross between the French and English, and in this case, unfortunately, the bird had been kept too long for preservation. This specimen was killed at Holverstone, in October, 1850, by a relative of mine, an old sportsman, who quite concurred in my opinion, and I find the following entry respecting it in my note book at the time:—"Feathers on the flanks and wing coverts, the legs and part of the head decidedly French, the breast, back, tail, and upper part of the head English." M. Temminck refers to one instance of a hybrid between these two species, and it is perhaps somewhat singular that such should not occur more frequently.\* Mr. Lubbock has recorded a singular hybrid killed at Mr.

<sup>\*</sup> In the "Ibis" for 1864 (p. 225) will be found a letter from M. Léon Olph-Galliard with reference to a peculiar race of partridges, not improbably of hybrid origin, termed Starna palustris by Demeezemaker, a celebrated ornithologist, who has examined, during the last fifteen years, some thirty examples, old as well as young, killed in the neighbourhood of Bergues and Dunkirk on the northern frontiers of France and Belgium. Two other specimens have been also obtained in the market at Lyons by M. Galliard, who thus describes the immature plumage:-"Même disposition de couleurs que dans la Starna cinerea (grey partridge). Les taches longitudinales du bas du corps sont mieux marquées et plus apparantes, attendu qu'elles sont d'un blanc assez pur, et rehaussées de chaque côté par une teinte noire assez foncée. Les teintes générales sont un gris-cendré, un peu bleuâtre. Gorge d'un blanc-terne. Rectrices au nombre de 16, et tirant au café au lait sombre." The old birds which are described as exactly resembling one another, as do also the young "ont le jaune de la tête et de la gorge comme la Perdrix ordinaire, ainsi que le fer á cheval de la poitrine; mais les couleurs en sont très-pâles." They are known to the sportsmen of the country as the marsh partridge (Perdrix de marais), but though found singly and in small coveys, "il semblait qu'elles ne recherchaient pas les Perdrix ordinaires, ou qu'elles en étaient rebutés."

Gurdon's, at Letton, in 1845, which was believed to be bred between a red-legged partridge and a pheasant. Varieties are also occasionally met with, though by no no means common. A male shot at Saxlingham, in September, 1863, had part of the breast white. The rest of the plumage as usual; and Mr. Newcome, of Feltwell, has one nearly white killed in that neighbourhood in 1865.

## PERDIX CINEREA, Latham.

## COMMON PARTRIDGE.

If Norfolk owes its celebrity as an agricultural county rather to an improved system of farming operations than to the kindliness of its soil, it is unquestionably indebted for unrivalled partridge shooting to its native "sands and gravels" even more than to the extended cultivation of land. As before stated, Sir Thomas Browne, writing on the "Birds of Norfolk," remarks, "There be here great store of partridges," and such, no doubt, had been the case from time immemorial; for, though the range of this species is co-extensive with the inroads of the plough, it is doubtful if the race is even now so abundant as when the "staple products of the county were rye and rabbits."\* Though generally dispersed on both heavy and light lands, it is on the "blowing sands" of the

<sup>\*</sup> Mr. C. S. Read, M.P., in a recent paper on "Norfolk Agriculture," in "White's Gazetteer" (3rd ed.), speaking of the triumphs effected by modern farming operations, says, "Less than a hundred years ago Norfolk did not produce enough wheat to maintain its scanty population. It appears that its staple products were rye and rabbits; the cultivation of wheat being entirely confined to fertile lands to the east of the county, and the heavy soils to the south and interior of the county."

western and south-western districts that the greypartridge is found in such enormous quantities. There, if not kept within due bounds by the sportsmen, this prolific race would overrun everything, nor is it possible to estimate the numbers reared in any favourable season in localities so suited to their natural habits.\* Dry summers, as a rule, are most favourable to the young broods, but a long continued drought, such as has been experienced more or less during the last three years, proves fatal to great numbers when otherwise strong and healthy; and in the wide open districts, where the nests are most exposed to their depredations, the rooks, unable to procure their natural food, will hunt out and destroy the eggs of partridges and pheasants, as well as those of peewits, Norfolk plover. and the smaller ground-breeding birds. In the eastern and more enclosed portions of the county, however, where the "birds" are more affected by wet seasons, and are easier of access at all times to the sportsman, it is scarcely to be wondered at if a greatly increased number of gunners, combined with the modern style of shooting and the improvements in fire-arms, should have told to some extent on their numbers of late years. In this neighbourhood, at the present time, from twenty to twenty-five brace in a day is considered a good bag for two guns, + and yet I

<sup>\*</sup> Mr. Alfred Newton, writing from Elveden, near Thetford, "On the possibility of taking an ornithological census" ("Ibis," 1861, p. 190), observes—"After some reflection, I have come to the conclusion that the grey-partridge in this particular district is the most abundant species we have;" and, startling as this assertion appears at first sight, I feel quite inclined to concur with him, the wildness of the district being unfavourable to the claims of the sparrow, whilst protection is in every way afforded to the partridge.

<sup>†</sup> We have had no very remarkable partridge seasons since the autumns of 1858 and 1859, when the amount reared throughout the

am credibly informed that in the same localities, some thirty years ago, from forty to fifty brace a day were not unfrequently killed.

The testimony of all practical ornithologists is unquestionably in favour of the useful qualities of the partridge;\* indeed, as Mr. St. John remarks, "most if not all granivorous birds amply repay the farmer for their food by the quantity of weeds they destroy during a great part of the year. An examination of the crops and gizzards of many examples, and at different seasons, has proved their chief sustenance to be grasses and their seeds, the leaves of various noxious weeds, insects, and even mosses, but although most plentiful in cultivated districts and extending their range with an increased breadth of corn land, the cereal crops in summer and early autumn are sought rather as a shelter for themselves and nestlings than for the attractions of the soft grain. As soon,

county was almost unprecedented in modern times. In the former year, within four miles of Norwich, two good shots killed forty-six brace of birds, in one day, out of two fields of turnips of not more than forty acres in extent and the adjoining stubbles.

<sup>\*</sup> Thompson, in his "Birds of Ireland," quotes the following passage from J. Burn Murdock's "Observations on the game and game laws" with reference to this species:—"I do not believe they even pull a single ear of corn from the stalk; it is only after the stubbles are cleared of the crop that they even feed upon grain at all. In summer, insects and seeds of grasses, and in winter the leaves of weeds and coarse grasses from below the hedges, constitute their food; in the latter season they become upon such nutriment exceedingly fat. During the continuance of a severe frost, and when the ground has been covered to a considerable depth by snow, I have repeatedly examined the crops both of partridges and pheasants, and found them filled with the leaves of grasses which grow by the edges of springs and water-rills that have not been frozen; and the birds on such occasions were in fact fatter than at any other season of the year."

however, as the harvest is over, the partridge becomes a gleaner in the stubbles; and in hard weather, and more particularly when the ground is covered with snow, frequents the vicinity of the farmer's corn stacks, or readily avails itself of any grain purposely scattered for its use. Yet, even at such times, as shown by Mr. Murdock's statement, it is by no means dependent only on grain for support, but still seeks its favourite green food by the side of springs and open watercourses, and even in the longest and most severe winters appears to suffer less privation than almost any other species, and is then more than ever wary and difficult of approach by the sportsman.

It is the custom, I know, with certain writers to run down both the style of shooting adopted and the large bags obtained in Norfolk and Suffolk, but whilst in the first instance no allowance is made for those agricultural changes which have compelled the sportsman to alter his tactics, in the latter case a superabundance of game admits of a very large amount of sport, without subjecting local partridge shots to the charge of excess.\*

<sup>\*</sup> In these remarks I do not, of course, include exceptional cases on some of our large estates where, for any special purpose such as the decision of a wager, an almost incredible number of birds have been killed to a single gun. Of such days the Sporting Journals supply many records, all tending to show the marvellously prolific nature of the partridge in Norfolk. On the 7th of October, 1797, the late Earl of Leicester, within an area of one mile on his manor at Warham, bagged forty brace in eight hours, at ninetythree shots, each bird killed singly; and on the same ground the day previously he killed twenty-two brace and a-half in three hours. Mr. William Coke in his celebrated match with Lord Kennedy, the former shooting in Norfolk and the latter in Scotland, on the same days in September and October, and in the same season, bagged in the first day eighty and a-half brace on the Wighton and Egmere manors, and on the second day eighty-seven and a-half brace; his opponent killing fifty and eighty-two brace, at Montreath, on the same days respectively. [Yarrell, Brit. Bds.,

I had the good fortune to make my debut as a sportsman in one of the midland counties, where, at that time, the improvements in modern husbandry were unknown. Well do I remember the tall reaped stubbles, where the birds laid closer than in turnips now-adays; how beautifully the dogs worked, and how easy it seemed to an old hand to kill double shots to a steady point. Many a weary and fruitless round was saved by the "quarterings" of the staunch old pointer; and when at length, arrested by the "tainted gale," his stiffening limbs bespoke "attention," his attitude as plainly showed the exact position of the game. In the turnips, also, the "broadcast" system rendered flight more easy to the birds than running, and with no red-legs to teach them vagrant habits, the coveys laid well to a steady "point." Then, to crown all as a paradise to sportsmen of the old school, there were plenty of little "spinnies" at the corners of the fields and thick double hedgerows so prodigal of space that, but for the almost impenetrable undergrowth, a donkey and cart might have been driven easily between the fences. Woe to the unlucky covey marked down in such strongholds, with a cool shot on either side and a dog well up to his work.

That those who were accustomed in the "good old days" to kill partridges after this fashion, more

vol. ii., 2nd ed., p. 376.] Of more recent and similar exploits, I may also mention, on good authority, that the present Earl of Leicester in a match with his brother, the Hon. E. Coke, killed one hundred and thirty-seven brace, in one day, at Warham, and the latter one hundred and one, on an adjoining farm. His lordship has also killed in a short day at Egmere, one hundred and three brace to his own gun. In September, 1858, ten or twelve guns divided into two parties on portions of the Holkham estate, also shot the extraordinary number of four hundred and fourteen brace in two days.

especially since the chief enjoyment at that time consisted in watching and profiting by the sagacity of the dogs, should regard the present system with but little favour is natural enough; but why sneer at the taste of younger men who have adopted from necessity, and not from choice, the shooting en battue of the last twenty years? What sport, I would ask, with even the best trained dogs, would be afforded now on our closely mown stubbles; or beyond a few "points" here and there in a large field of turnips, what chance of a bag when the birds, once alarmed, commence running in all directions along the open drills? There is but little harbour in our highly cultivated lands, and the trimmed fences, in many places, afford scarcely shelter enough for a wounded bird. The "four-course" system also, though a fine institution for farming purposes, often puts the sportman to much difficulty, his success depending greatly on the position of the crops; a very common answer to enquiries on any partridge farm, at the commencement of the season, being "we have plenty of birds but the turnips lie so awkward this year." Under these circumstances, then, the gunners have but little chance of sport except by walking in line with the beaters, and unquestionably there is no comparison between the difficulty of such shooting and that under the old system, as the birds rise unexpectedly and at uncertain distances. By this method, now universally adopted both in the enclosed and more exposed portions of the county, very fine shooting is obtained on the wide open heath-lands in the western and south-western districts, when the birds, bred on the adjacent corn lands, are either found basking on the outskirts, or are driven on from the neighbouring stubbles. The guns and beaters, advancing in line, drive the game forward into the nearest coverts, and here and there, though often at long intervals, thick belts of gorse and broom

offer a fatal shelter to the birds, and a hot fusillade and a rapid addition to the bag repay the toil of the sportsman. Later in the season, however, when the birds become "packed," as it is termed (large coveys consorting together for mutual safety), the "driving" system, before referred to, is now commonly adopted for both English and French birds. This is certainly the perfection of sport for those possessed of the necessary quickness and skill; but to the uninitiated, at least, it is nervous work, standing under shelter of a fence or a lift of hurdles drawn with gorse, and peering anxiously through the prickly screen to watch the motions of the driving party. Coveys and single birds are marked down at different points, and presently the beaters, spreading out in line, are coming on. Now is the time! never mind that noisy heart of yours, that will thump, thump, like an eight-day clock. Keep your eyes open, grip your gun-stock tight. Whish! Here they come. Bang! bang! And the birds, killed high in the air, fall dead some thirty yards behind the gunners. An old hand, perhaps, bags his brace, though coming at heaven knows what an hour; for the pace of a partridge thus flushed at a distance is something extraordinary. Ask the novice, for instance, after such a flight, if he got a shot that time? "Shot! What at? I heard you fire, and something came with a whish! past my head, but it was gone before I turned round." Yet this style of shooting, which to sportsmen of the old school would have appeared an impossibility, is now accomplished with such certainty by the crack shots of the day, that at Beechamwell, near Swaffham, towards the close of the past season, a party of guns killed four hundred partridges, in one day, by "driving" only.

It is by no means an unusual circumstance for partridges when flushed in the vicinity of the telegraph

wires to fly against them in their head-long course. At Larling, where the International Telegraph crosses an extensive heath, preserved for sporting purposes, I have known as many as six or eight birds thus killed in one day when driven forward by the beaters;\* and Mr. Alfred Newton informs me that when shooting at Elden, near Thetford, he has seen five birds killed out of a covey in the same way. They are also occasionally found dead under the wires on foggy mornings, but this more particularly in places where the wires have but recently been introduced.

Having referred to the supposed migratory habits of the French partridge I may here state that, in the "Zoologist" for 1848 (p. 1965), Messrs. Gurney and Fisher have noticed the occurrence, in two instances, during the autumn of that year, of small coveys of English birds amongst the boats on Yarmouth beach, and even in the town; from which they infer an occasional migration of the grey-partridge as well, quoting Yarrell's remarks in favour of this opinion to the effect that "though stationary all the year in central Europe, this bird is said to be migratory in the countries that are at the limits of its geographical range, thus M. Malhérbe, in his Fauna of Sicily, says it visits that island every spring and autumn, when on its passage from North Africa to Italy and back." Whether or not small flights of these birds ever reach our coast from more northern localities† I have no present means

<sup>\*</sup> In the "Zoologist" for 1865 (p. 9467), a very curious instance is recorded of a covey of six or seven partridges striking the roof of a house when covered with snow, by which four were killed, and the rest more or less injured.

<sup>†</sup> The grey-partridge, found only in the southern parts of Norway until the last few years, and even in 1851 unknown further north than the latitude of Christiania ("Zoologist," 1851, p. 3044), is now, as Mr. Newton informs me, rapidly extending its area under the influence of increased cultivation.

of deciding, but I cannot consider the above instances as any proof of a migratory movement, since, occurring, as recorded, during September or October, the appearance of partridges on the beach under such circumstances is, as I have before stated, easily accounted for. At that season, if shot at in the vicinity of the coast, they will occasionally, as is well known, fly direct out to sea, and consequently return again to the shore in an exhausted condition.

Some of my readers will probably remember amongst the attractions at the Sydenham Crystal Palace in 1866, a covey of thirteen grey-partridges, which enjoyed the run of a commodious and well-constructed aviary in the centre of the building. These birds (together with a tame snipe in an adjoining cage) were of Norfolk origin, having been presented by Mr. J. S. C. Stevens, of the Manor House, Old Buckenham, and certainly in both plumage and condition did credit to their native county. Being liberally supplied with sand for the purpose, these birds might be seen "busking" at all times of the day, and exhibiting other traits which but rarely come under the notice of even the naturalist or sportman. Occasionally, also, the shrill call-note of the species seemed to transport one far away from that busy scene, as some member of the covey, with outstretched neck, gave forth its well known cry.

Pied varieties are not unfrequently met with, and some few years ago, during three or four successive seasons, several beautiful specimens were shot on Colonel Petre's estate, at Westwick, most exquisitely pencilled with light-grey and delicate buff-coloured tints.

## COTURNIX VULGARIS, Fleming.

# COMMON QUAIL.

Sir Thomas Browne alludes to there being "no small number of Quails" in Norfolk in his time, but although still reckoned amongst our regular summer visitants, all local authors, since the commencement of the present century, agree as to the marked diminution in the numbers of this species of late years. This change in its habits, however, to whatever cause attributable, is by no means peculiar to our own county, having been noticed by Montagu, Selby, Jardine, Yarrell, and most other British ornithologists, as observable throughout its entire range in this country. Mr. A. G. More, who has lately devoted much time and labour to ascertaining the distribution, at the present day, of such species as nest in Great Britain,\* describes the quail as "thinly scattered during the breeding season from the south of England to the North of Scotland, yet there are few counties in which the quail is considered to breed annually; nor can these be grouped in any manner so as to show where the species is most numerous. It has certainly decreased of late years in several districts, and this apparently not owing to any cause that can be discovered. In the west of Ireland the same diminution has been noticed. \* \* \* If there is any difference. the range of the quail seems to incline rather to the east side of Great Britain as well as of Ireland during the breeding season."

As long since as 1826, Messrs. Sheppard and Whitear thus mention the scarcity of quails both in Norfolk and Suffolk, as compared with earlier periods of which they

<sup>\* &</sup>quot;On the distribution of Birds in Great Britain during the nesting season," by A. G. More, F.L.S. "Ibis," 1865.

had information:—"This species used formerly to be very common in the neighbourhood of Diss. It is now become scarce, but still occasionally breeds in that part of the county; and not long since two quails' nests were found by some workmen mowing clover. In one of them there were seventeen eggs; in the other twelve. We have also received its eggs from the neighbourhood of Hunstanton, in Norfolk. birds are also become scarce in those parts of Suffolk where they formerly abounded." Mr. Lubbock, in 1845, says ("Fauna of Norfolk"):- "The quail has become very scarce of late years. Formerly it was common in the immediate vicinity of this city: often found at Earlham, Thorpe, Plumstead, and other neighbouring places. \* \* \* I have not seen one in flight for many years." In the following year, also, Messrs. Gurney and Fisher, in their "Birds of Norfolk," though including it amongst our regular summer visitants, remark, that "its numbers are very limited, and it is very local in its habits, showing a decided preference to sandy soils. It was formerly a far more numerous species in Norfolk than at present; so much so, that fifty years ago it was not uncommon for a sportsman to kill on light lands, early in the month of September, three or four brace of these birds in a day." At present, although single nests are found from time to time in almost all parts of the county, the great stronghold of this species in Norfolk, during the summer months, is in the rough fens of the south-western district, in the neighbourhood of Feltwell, where, as my friend Mr. Newcome informed me in 1860, he had found them so plentiful that from ten to twelve couple might be shot in a day; but he had only recently discovered that they frequented those parts in such large numbers. The birds are of course very difficult to "get up" in such thick cover, and the nests are also

hard to find, but Mr. Newcome has eggs brought to him nearly every year from the same locality.

With regard to this local abundance of a species, elsewhere diminished very considerably in numbers, it is well worthy of note that, as I learn from Mr. Alfred Newton, the influx of quails to this particular locality occurred subsequently to the drainage of the fen-lands in that district, and thus the artificial change in the nature of the soil, which expelled so many former denizens of the swamp, would seem in its partially reclaimed condition to have had unusual attractions for this particular species. May we not find, in this one fact, some clue to the cause of their scarcity of late years both in this and other counties? In Ireland, Mr. Thompson describes them as most frequently flushed by the sportsman "when walking across stubble fields direct from one bog to another in pursuit of snipe; and Mr. Knox ("Birds of Sussex"), from personal experience in the same country, speaks of them as "partial to backward oat-stubbles on poor swampy soils, just verging on the borders of the great red bogs," from which it is evident that although partial to the vicinity of moist grounds, a far drier soil is necessary to their existence, with such shelter as would be afforded by reaped stubbles. or thick rushy spots on the borders of cultivation. Now, it is just this particular condition of things which has ceased almost entirely to exist in Norfolk. From the time, as Mr. Lubbock has well observed, that "the extravagant prices caused by continual war excited a general eagerness to enclose all available land," the rough grounds bordering upon the actual swamps have been most readily adapted to agricultural purposes, whilst clean short stubbles are the rule and not the exception under the modern system of farming operations.\*

<sup>\*</sup> Mr. Thompson (Birds of Ireland, vol. ii., p. 69) remarking (1850) on the increase of the quail in Ireland owing, as he believed,

It is thus then, I believe, that local changes, the commencement of which was contemporaneous with the earliest records of the diminution of quails in this country, may be considered as having had no little influence in rendering them so scarce as a summer resident. At the same time it is quite possible that the numbers annually visiting our shores from the continent may have also diminished considerably of late years; and that, too, from causes which European ornithologists would be better able to explain than ourselves.

Of other localities, besides the Feltwell district, in which the nests or young of this species have been found during the last twenty years, I may mention the following, as either recorded by Messrs. Gurney and Fisher in the "Zoologist," or in other ways coming under my own observation:—

1845. On the 15th of August a nest containing eleven eggs, very recently laid, was taken in a grass field near Yarmouth.

1848. On the 26th of August a female, with a young one (quite small), was captured at Drayton, near Norwich.

1851. On the 28th of August the Rev. E. W. Dowell flushed a bevy of six or eight, on a farm at Besthorpe, which had no doubt been bred in that neighbourhood. They rose so close to him that he was able to distinguish the cock bird.

1850? Mr. Knights, a bird-stuffer in Norwich, in

to extended cultivation, also expresses his surprise that under the same conditions in England for the last half century, it should have continued to decrease. This discrepancy, however, he accounts for in the following terms:—"The slovenly system of farming, unfortunately too common in Ireland, is, however, greatly in their favour, as the seed of weeds amongst the stubbles supplies these birds during winter, and at other seasons, with abundance of food."

the summer of this year, received a nest and eggs from Little Ellingham; and has had one since, but is unable to remember the exact date or locality.

1861. A nest, mown out of the hay, was taken at Northrepps, near Cromer. The eggs were subsequently hatched under hens, but the young, unfortunately, were destroyed by a weasel.

1862. A nest found in June, at Brampton, from which two eggs in the museum collection were taken.\*

Many more instances have no doubt occurred during the same period, either passing unnoticed or unrecorded, but the above will at least show in what various localities these birds are still met with, though scattered here and there in detached couples.

The frequent occurrence of this species during the winter months, although generally considered as a summer visitant only, has been noticed of late years in this county as much as in the more southern counties of England;

<sup>\*</sup> In the adjoining part of Suffolk, Mr. A. Newton tells me that he had eggs brought to him, taken in the parish of Barnham, in 1849 and 1854; and that in 1851 a nest with eleven eggs was found at Elveden on the 25th of June. Some of these last were put under a bantam hen, and the young birds hatched and reared.

<sup>†</sup> Montagu, writing from the south of England, remarks, "In October they leave us and return south, leaving some few (probably of a later brood) behind to brave the severity of our winter." Pennant, however, in his "British Zoology" has the following very remarkable note on this species, which he describes as "birds of passage, some entirely quitting our island, others shifting their quarters." He then states on the authority of a friend, that "these birds migrate out of the neighbouring inland counties into the hundreds of Essex in October, and continue there all the winter; if frost and snow drive them out of the stubble fields and marshes they retreat to the seaside, shelter themselves among the weeds, and live upon what they can pick up from the algæ, &c., between high and low water. Our friend remarks that the time of their appearance in Essex, coincides with that of their leaving the

and some few of the latter hatched ones, I believe, remain with us throughout the year. Mr. Newcome considers that a portion of those reared at Feltwell are to be met with at all seasons, and it is not improbable that others, having dispersed during the autumn months, are amongst those flushed from time to time by the sportsmen, chiefly from the turnips, in the eastern and more inclosed parts of the county. In the winter of 1847, as recorded by Messrs. Gurney and Fisher in the "Zoologist" (p. 1601), an unusual number of examples were procured in various parts of the county during the month of December; amongst others, single birds being killed at Reedham and Bawburgh, two near Norwich, and a pair, male and female, near Loddon. In looking over my own notes for the last sixteen years, I find records of their appearance in every month of the year except May and June (the height of the breeding season), but of these by far the larger proportion were killed in October, as if indicative of a migratory movement;\* whilst the few obtained in November, December, January, and February, have occurred almost invariably during severe weather, or just previous to some sudden change to frost or snow.+ These have been also, in almost all cases, either adult

inland counties; the same observation has been made in Hampshire." I know of no confirmation of this very interesting statement in any subsequent author.

<sup>\*</sup> On the 31st of October, 1862, a quail was taken alive in Colonel Black's garden at Thorpe, near Norwich, in a very exhausted state. This bird came into the hands of Mr. F. Norgate, of Sparham, who kindly communicated the fact with several valuable notes on other species.

<sup>†</sup> In Ireland, according to Thompson, the large number remaining throughout the year, both in severe and mild winters, has led to their being looked upon, for many years past, as an indigenous rather than a migratory species, in some parts being considered as common in winter as in summer.

females or young birds of the year. Mr. Alfred Newton informs me that his brother Edward, when shooting, on the 18th of February, 1853, on the borders of the fenlands, the ground at the time being thickly covered with snow, shot a couple of quails that rose quite close to him; and on examining the spot from whence they sprang was convinced, by their mutings and other indications, that they had never stirred from the place since the snow first began to fall, two or three days before. On the following day another was observed near the same place. Mr. L. H. Irby has also recorded, in the "Zoologist" for 1853, the fact of a female, which had been seen near some stacks for several days, having been shot at Threxton, near Watton, on the 1st of March, the snow being then quite deep. To the localities previously mentioned, from whence I have known these birds sent to Norwich for preservation, I may add Plumstead, Cossey, Earlham, Wymondham, Attleborough, Ketteringham, Horstead, Ranworth, Wroxham, Toft Monks, Rainham, Cromer, Salthouse, and Blakeney. At Morston, near Blakeney, as Mr. Dowell informs me, a few couple were generally killed every season, and the same gentleman has more recently killed one at Langham, in October, 1852, and another at Dunton, in November, 1858. The only bird I ever saw on the wing in this county was flushed from a turnip field at Earlham, on the 6th of December, 1852, and though scarcely the season for a "squeaker" partridge, I believe, but for its peculiar cry, I should not have fired at it; as it chanced, however, I made a long shot and bagged it. This proved an adult female, and, oddly enough, by one of those strange coincidences for which there is no accounting, I had only a few minutes before (remembering Mr. Lubbock's remark that they were formerly plentiful in that neighbourhood) enquired of an old gamekeeper in

Mr. Gurney's employ whether he had ever met with this species about Earlham and Hellesdon, and his reply, in the negative, was almost instantly followed by the appearance of the bird itself.

I never remember to have noticed any particular variation in the plumage of these birds, and was therefore more particularly struck with a specimen which was killed on the borders of Mousehold Heath, near Norwich, in January of the present year. This bird, which was at least one-third smaller than ordinary examples, presented the same peculiarities as are said to distinguish the small dark varieties of the common partridge occasionally met with in heathery districts. The whole of the ground colour of the plumage, commonly of a pale brownish yellow, was in this bird sooty grey, particularly noticeable on the chin and throat; the usual light streaks, also, pervading the feathers of the back and sides, forming two parallel lines on either side of the shafts, were in this instance dark grey, and the shafts of the feathers throughout, being pure white, had the appearance of so many light hair lines standing out in relief upon the dark back-ground.

Both Messrs. Gurney and Fisher and Mr. Lubbock have included the Virginian Colin, Ortyx virginianus (Linn.), amongst the birds of Norfolk, several pairs having been turned off early in the present century at Holkham, by the late Earl of Leicester, but these, although thriving well in the first instance, and giving some promise of becoming acclimatized, have long since died off, and I am obliged, therefore, to omit this species from the present "List." Mr. Lubbock describes them as being of erratic habits, scattering themselves about here and there, and thus straying no doubt beyond the boundaries of the Holkham estate, they were gradually killed off by persons unaware of their history. The success which at first attended the experiment is shown by the following extract

from a letter to Mr. Henry Denny,\* of the Philosophical Hall at Leeds, from the late Rev. John Burrell, Rector of Letheringsett, near Holt. After stating that two specimens, killed in his neighbourhood, had recently come into his possession, Mr. Burrell adds, "It is now (November 11th, 1825,) quite a colonized creature, and numerous are the covies, which report says that the poachers cannot destroy, its manners are so watchful and shy of man." I may here state, however, that the supposed nest of this species, "containing numerous white eggs," recorded by Yarrell and Hewitson, on the authority of Mr. Lubbock, to have been found in a marsh at Barton. and of which Mr. Salmon had specimens, did not belong to this species, but were, as Mr. Newton informs me, merely varieties of the eggs of the common partridge. They were sold at first under the name of teal's eggs. Mr. Henson, of Cambridge, is said to have possessed one of these birds, killed at Holkham, and Mr. Thornhill, of Riddlesworth, has also a pair obtained, soon after they were turned off, in the same neighbourhood. A pair or two of the Californian Quail, Lophortyx californicus (Shaw), were also turned out a few years back in the neighbourhood of Attleborough, but have since died off or been shot down. A fine adult male, with a perfect crest, was killed in a turnip field near that town, in October, 1858.

<sup>\*</sup> This letter, with a few introductory remarks, was published by Mr. Denny in the 13th vol. of the "Annals and Magazine of Nat. Hist." (1844).

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