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Vincent Brooks, lith

1. Sparrow Hawk. 2. Merlin. 3. Golden Eagle.

4 Orange-legged falcon. 5. Kestrel.

BRITISH BIRDS' EGGS.

BY

RICHARD LAISHLEY.

11

WITH TWENTY PAGES OF COLOURED PLATES,
CONTAINING 106 FIGURES.

LONDON :
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PREFACE.

IN the following pages an endeavour has been made to furnish as complete, accurate, and popular a Handbook of British Oology as our sources of information and other circumstances would permit. The names of some species of birds are introduced of whose habits little with certainty is known, but we thought it best to present the reader with a completed outline of our plan in as perfect a list of British birds as we could prepare; with the hope that the wanting information may at a future time be supplied.

It does not fall within our province to give descriptions of the birds themselves, but these may be found, with reference to the more frequently-occurring species at least, briefly

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and accurately written by Mr. Gosse, in his 'Popular British Ornithology,' which forms one of the present series of works; and those who wish to pursue the subject more at length, would find valuable assistance in the first four volumes of the 'Naturalist's Library,' written by Sir William Jardine, or in the more costly, but very beautiful, volumes of Mr. Hewitson and Mr. Yarrell.

In preparing the illustrations, no pains have been spared: they are all taken from original drawings, made from specimens of the eggs and nests of our British birds; and the exact measurements of the eggs copied, both in length and breadth, have been preserved with only one exception, that of the Golden Eagle, which we believe to be scarcely less accurate, notwithstanding the omission; but it should be understood, that the eggs of different birds of any species will vary from each other to a greater or less degree in size, form, colour, and markings; yet not so greatly as they generally differ from those of other species, nor to such an extent but that the practised eye of a naturalist can usually determine to what species they belong.

For the loan of valuable specimens, we avail ourselves of the present opportunity to acknowledge how greatly we are indebted to our esteemed friend, Mr. Robert Jennings, of Southampton; to T. Beaven Rake, Esq., of Fordingbridge; and to Mr. Gardner, of 426, Oxford-street, London, whose generous kindness has enabled us to figure some characteristic specimens selected from his extensive collection of British eggs; and we shall be glad if this mention of his courteous accommodation should induce any of our readers to seek their rarer specimens from his hands.

Itchen, January, 1858.

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POPULAR HISTORY
OF
BRITISH BIRDS' EGGS.

INTRODUCTION.

AFTER the shortening days of autumn and the bitter winds of winter, what a thrill of pleasurable emotion do the simplest harbingers of Spring excite,—the budding hedges, the first pale primrose or scented violet, springing in copse-wood, amid the amber shoots of richest velvet moss!

“Nor rural sights alone, but rural sounds,
Exhilarate the spirit;”

the warble of the Hedge Sparrow, or the Thrush's song in the early morning, as, with spotted breast turned to the sun, he pours from some tree-top his noble melody. Such pleasures welcome us, unsought, amid the changing seasons, and the varied beauties of creation; yet may they be in-

creased in number and degree, by habits of diligent and careful observation.

To excite and cherish, then, in minds to whom the study of creation is yet unfamiliar (and especially in youthful minds), desires for an acquaintance with the works of God, and kindly dispositions towards the animated parts of His creation, are among the objects of the present publication ; though pains have not been spared to win the approbation of the ardent and successful student of natural science.

Our chosen theme is one of which the study is important to the naturalist, as aiding him in the correct and systematic arrangement of the feathered tribes : for if a knowledge of the eggs of birds will not alone supply a basis upon which to establish a complete and correct classification of their several species, it at least affords a most important auxiliary in the undertaking. In this connection Mr. Hewitson remarks : " It is very gratifying to find, in thus regarding them, that, with the exception of a few instances, were we to take the eggs of our British birds as our only guide, we should arrive at the best and most approved arrangement of the different genera."

The subject has moreover its own peculiar charms, associated as it is with all the freshness of the vernal year, with

scenes of natural beauty, and to some extent with those of travel and adventure (for many of our British birds breed in far distant lands); and should the subject be pursued in connection with the study of the forms and general habits of the birds themselves, it will open to the view a most pleasing portion of the vast domain of nature, and a department, we may hope, adapted to excite within the mind ambition to explore the whole.

Habits of careful and continued observation among the walks of nature, we have already remarked, bring a rich reward of pleasure, and, we may add, of improvement likewise. The pleasure arises, in part at least, from the gratification of innate taste; from the satisfaction afforded to an inquiring mind by each valuable addition to its stores of knowledge; and from that association of ideas which marshals, as it were, around a thought or object, its wide relationships, and gives it an importance before but little apprehended.

This pleasure also is an ever-present joy,—in fields and woods, by streams, and lakes, and seas, and even in the pathless wilderness: and he whose eye and ear are open to instruction, and whose spirit is in unison with the Great Author of his being, can truly say:—

“Should fate command me to the furthest verge
Of the green earth, to distant barbarous climes,
Rivers unknown to song, where first the sun
Gilds Indian mountains, or his setting beam
Flames on the Atlantic isles, 't is naught to me,
Since God is ever present, ever felt,
In the void waste as in the city full,
And where He vital breathes there must be joy.”

Increased resources, and that mental vigour produced by the exercise of the faculties of the mind, constitute but a part of the improvement which attends the study of creation; to a rightly directed and well regulated mind, it is a source of moral culture likewise. All creation has a voice of mingled majesty and sweetness to speak of Him who is its Author: “All Thy works shall praise Thee, O Lord!” and we should deplore that state of mind which failed to recognize a glorious presence, although invisible, throughout the works of the Almighty, or to which the consciousness of the Creator's nearness did not become a means of moral improvement. “I pass out among our sylvan scenes,” says a manly writer of the present day, “and here, on the spray of the tasselled broom, there sits and sings a little bird; it fills the glen with melody; and from his throat and throbbing breast he rings out the sweetest music, as with

keen bright eye he now looks up to God, and now down to the bush where his mate sits with wings extended over their unfeathered nestlings; with songs he cheers her maternal cares, and is then away on busy wing to cater for mother and her young. Next I turn my steps to the open moor; and soon as the intruder appears on her lonely domain, the Lapwing comes down upon the wind; brave and venturesome she sweeps us with her wing, and shrieks out her distress as she wheels round and round our head; her brood are cowering on that naked waste; nor does she rest until our foot is off the ground, and even then, when the coast is clear, we hear her long wild screams, like the beating of a mother's heart when her child is saved; like the mournful dash of waves upon the shore long after the wind is down. . . . Such are God's creatures. The work is unmarred; the workmanship what it came from the Maker's hand. . . . Stretched on a flowery bank, with the hum of bees, the song of birds, and the chirp of the merry grasshopper in our ear, heaven serene above us, and beneath us the placid lake, where every flower and bush and birch-tree of the rock looks down into the mirror of its own beauty, the murmur of the waterfall sounds to us like an echo from the crags, of the Creator's voice, 'All is very good.'"

An acquaintance, especially an early acquaintance, with the habits, feelings, and instincts of the animal creation is, we believe, an important aid in awakening right sympathies toward the various members of which it is composed. Many an unkind act to the inferior creatures is the result rather of ignorance and thoughtlessness than of malevolence ; and an endeavour to direct attention to those strong affections, so forcibly portrayed in the preceding extract, which exist among the lower creatures, to that confidence which they repose in man when kindly treated by him, to their importance to his welfare in the economy of Providence, and to the intelligence or instinct with which they are endowed by the Greatest of all Beings, such an attempt will rarely be made without some valuable result. For the feathered tenants of our woods and fields we would present an especial plea, regarding them, as we do, among the natural ornaments of our land, and it is painful to witness the annual and heartless destruction of them during the winter months.

As a class, Birds are proverbial for the skill which they display in the construction of their nests ; but those temporary habitations are not all equally beautiful ; indeed, they vary so greatly in their forms, materials, and methods

of construction, that a writer upon the subject has divided their clever artificers into the different groups of mining, mason, carpenter, basket-making, weaver, felt-making, tailor, and dome-building birds, etc.

The nests of many of the rapacious birds are of the most simple form and rude construction : a platform of sticks, with a lining of softer materials, placed on the crag of some stupendous precipice, or on the summit of a lofty tree, constitutes the first home of their stern and daring progeny, in which they are cradled and reared amidst the tempests of the opening year. The nests of some of the stronger birds of other Orders are also destitute of beauty, while many birds find a peaceful abode in which to rear their young in the recesses of decayed trees and ancient buildings ; and others incubate without a nest, or with the very slightest preparation, on the shingle of the sea-shore, or on the ground. It is among the birds which constitute the Insesorial Order, the Perching Birds, that those exquisitely beautiful and ingenious specimens of architecture are chiefly found which win our admiration and excite our surprise. In our own country the nests of the Chaffinch, Goldfinch, Gold-crest, Wren, and Long-tailed Tit, are of this character, and afford specimens which are not exceeded in beauty,

probably, by any which can be produced from foreign lands.

A nest however is never so beautiful as when seen in its original and natural position;—the Robin's imbedded in the deep-green overhanging moss of some sheltered bank, the Chaffinch's or Goldfinch's silvered over and almost sparkling with fragments of lichen, which assimilate it in appearance to the grey branches of the aged tree in which it may be lodged; even the frail and simple nest of the White-throat, built in the straggling thicket, and shaded and hidden by the plants which form its leafy bower, is a pretty object: and all deserve more gentle treatment than they sometimes meet with at the hands of inconsiderate youth.

In referring to the eggs of birds we cannot claim for them, in virtue of their forms and colours, so high a position in the scale of beauty as would be awarded to the flowers of the earth, or even to many of the shells of the sea; yet they are not devoid of external beauty, being exceedingly varied and harmonious in their colours; while the anatomy of the egg has extensively engaged the attention of philosophical naturalists. All birds are oviparous, that is, they produce eggs which are hatched by incubation,

and from which the young emerge in different degrees of development, those of the Gallinaceous and Duck tribes being the most matured, and capable of running about and picking food in the course of a few hours. The forms of eggs vary : in most instances the egg is not exactly oval, but has one of the ends smaller and more pointed than the other, which allows a larger number of them to be conveniently arranged in the nest for incubation. Where birds lay fewer eggs, it has been remarked these more nearly approach a strictly oval form ; but in the instance of the Guillemot, which lays but one egg, and that often greatly exposed upon the jutting ledges of the seaside cliffs, we may observe that the great length of the egg, and tapering pointed form of the smaller end, seem designed to preserve it from readily rolling off the narrow platform on which it lies undefended by any nest whatever. If this egg is set in motion on a table, it will be perceived, instead of rolling far, its tendency is to revolve around its apex as a centre.

We shall not delay to trace minutely the changes which take place within the egg during the process of incubation.

The embryo, with some appearances of the principal blood-vessels, may be discovered by the aid of a microscope within forty hours after incubation ; on the fourth, fifth, and sixth

days the pupil of the eye, indications of the lungs, and the spinal marrow may be observed; on the ninth and tenth days the bones begin to form, and the muscles of the wings, with the germs of feathers, appear; and thus the growth proceeds till some three weeks or more may have elapsed, when the bird, sufficiently matured, escapes from the shell and enters upon the more active functions of its life. Contrary to an opinion perhaps extensively prevailing, the young are not aided by the parent bird in escaping from the shell, but are supplied with a hard projection on the upper mandible, near the tip, with which, it is believed, they are enabled to break the shell, and thus escape; and it is remarkable that shortly after the young are hatched, this horny point separates from the bill and falls off.

A gentleman to whose kindness, as already acknowledged, we are indebted for many of the subjects which illustrate this volume, and whose habits of accurate observation give value to his remarks, thus writes to us:—"I have examined many hundreds" of eggs. "The operation of leaving the shell is a very beautiful one, and exhibits very markedly the wisdom and contrivance of the Creator. The beak is furnished with a horny point, which afterwards drops off: this is protruded through the shell: by means of its feet as

levers the animal then turns itself a little, till by degrees the whole top of the large end is cut very cleanly off, and a passage is opened for the imprisoned chick to go free."

We reserve a few pages upon the systematic arrangement of the animal creation, and of birds in particular, to a separate section.

CLASSIFICATION.

THROUGHOUT the entire series of animal forms there is evidently a gradual and graceful transition from the higher to the lower, until we find the lowest existing upon the confines of the vegetable kingdom.

To trace the steps of this transition, and thus to institute a natural arrangement in which each species shall maintain its true position in the scale of being, is the aim of the scientific naturalist. To accomplish this, however, demands familiarity with the entire circle of animated nature, and extensive acquaintance with the structure and habits of its several parts. Our yet imperfect knowledge of these subjects may account for the diversity observable in the systems of various writers upon Natural History; a diversity which it may be expected will diminish with advancing information.

Some system is yet essential to progress in the study of

every department of created existence, for the purpose of assisting the memory to retain the names, forms, and habits of the subjects investigated ; to recur to them readily ; and in speaking or writing of them to employ incidental references, without needless circumlocution.

In Zoology, or that branch of Natural History which relates to the Animal Kingdom, the process by which systematic arrangement is arrived at, commences with an examination of the almost innumerable species of which it is composed. A number of these species, having slight differences, but a strong general resemblance, form a Genus ; the Genera most nearly allied are united into a Family ; several families into an Order ; several Orders into a Class ; and these classes again are arranged under four principal divisions, called Sub-kingdoms.

The following is an outline of the arrangement adopted in the succeeding pages.

The entire Animal Kingdom, it has been already observed, is divided into four Sub-kingdoms ; and these comprehend, respectively, the Vertebrated, Articulated, Molluscous, and Radiated animals.

The Vertebrated sub-kingdom, containing those animals which possess a jointed spinal column (and with which alone

our subject has to do), is again subdivided into five classes, namely Mammalia, or animals which suckle their young, Birds, Reptiles, Amphibia, and Fishes. In the second of these classes, Birds, we are solely, at present, interested; and these it may be sufficient to trace through their several orders, groups, and families; omitting particular reference to their genera and species. The Orders as arranged in the present volume are:

1st. The *Raptores*, or Birds of Prey; including the three very distinct families of Vultures, Falcons, and Owls.

2nd. The *Insessores*, or Perching Birds; which contains four groups; each group including several families. The first group is that of the *Dentirostres*, or Tooth-billed Birds; in which the Shrikes, Thrushes, Warblers, Chatterers, and Fly-catchers are included as families. The second group, of *Conirostres*, or Cone-beaked Birds, includes the Crows, Starlings, Finches, Hornbills, and Crossbills. The third group, of *Fissirostres*, or Cleft-beaked Birds, comprises the Swallows, Goat-suckers, Bee-eaters, Kingfishers, and Todies. The fourth group, of *Tenuirostres*, or Slender-billed Birds, contains the Humming-birds, the Sun-birds, the Hoopoes, the Birds of Paradise, the Honey-suckers, and the Creepers.

3rd. The next Order is that of the *Scansores*, or Climbing

Birds ; including the Woodpeckers, Cuckoos, Toucans, and Parrots.

4th. The fourth Order, of *Rasores*, or Gallinaceous Birds, comprehends the Pigeons, Partridges, Pheasants, Curassow-birds, and Bustards.

5th. The fifth Order, the *Cursores*, or Running Birds, includes the Ostriches, the Apteryx, and the Dodo, now, it is feared, extinct.

6th. Our next Order is that of the *Grallatores*, or Stilt or Wading Birds ; in which the several families of the Herons, Snipes, Plovers, and Rails, are included.

7th. The *Natatores*, or Swimming Birds, constitute the last Order, in which are included the Ducks, Divers, Auks, Pelicans, and Gulls.

Of the families thus enumerated several are foreign and have no representatives in the list of British birds.

ORDER I. RAPTORES. BIRDS OF PREY.

The Raptorial birds usually take precedence of the other Orders in the arrangements of naturalists. The members of this Order are distinguished by great boldness and strength, and although injurious to the young of game and of the flocks, they are a great ornament to the sequestered and rural portions of our land. The females exceed the males in size, but their plumage is not of equal beauty. Our Raptorial birds are comprised under the three families of Vultures, Falcons, and Owls; the two former constituting the diurnal Raptores, or those which hunt by day, and the latter the nocturnal, or nightly-hunting birds of prey.

The eggs of this Order of birds are usually more rounded in their form than those of most other birds; and those of the Falcons are often richly coloured and boldly marked. We now advance to notice the families of this Order.

VULTURIDÆ. VULTURES.

The Vultures chiefly inhabit hot climates, where they perform important services, by removing decomposing carcasses, which would otherwise be a source of offensive and noxious

exhalations. In the British Islands they have appeared only as stragglers; yet the representatives of two species have been identified on our shores, namely the Griffon and the Egyptian Vultures.

THE GRIFFON VULTURE. *Vultur fulvus*.—The claim of this bird to rank as British rests upon a single instance of its capture, recorded by Mr. Yarrell, and which occurred in 1843, in Ireland. Lord Shannon's keeper purchased the the bird alive from the youth who captured it, for half-a-crown. The bird afterwards dying, was carefully preserved and stuffed, and added to the collection in Trinity College, Dublin. To mention all the localities in Europe and Africa in which this bird has been found would be tedious and extend our notice of it too greatly. The Griffon Vulture lays two eggs, almost white, and if marked at all, only in the most inconsiderable degree, with faint blotches of brown.

THE EGYPTIAN VULTURE. *Neophron percnopterus*.—In October 1825, a bird of this species was shot on the English shores, and came into the possession of the Rev. A. Mathew, of Kelve in Somersetshire. "When first discovered, it was feeding on the carcase of a dead sheep, and had so gorged itself with the carrion as to be unable or unwilling to fly to any great distance at a time; it was

therefore approached without much difficulty, and shot. Another bird, apparently of this species, was seen at the same time upon the wing at no great distance, but could never be approached within gunshot." (Naturalists' Library, vol. i.) This Vulture is abundant in Africa, and not uncommon in Southern Europe, but France and Britain are considered the utmost northern limits of its appearance.

This species is reported to build its nest in the most desert and inaccessible parts of the countries which it inhabits. Nidification commences about the end of March, and the eggs, which do not, according to Mr. Bruce, exceed two in number, are tinged or marked with various tints and shades of brown. Some are described as approaching in richness of appearance the eggs of the Peregrine Falcon.

FALCONIDÆ. FALCONS.

We next arrive at the Falcons, of which many species occasionally visit, or constantly remain in, Britain. They do not usually devour carrion, like the Vultures, but their prey is almost always seized by their own energies, either on the wing, or pounced on by surprise in cover, or on the ground; it consists of quadrupeds, birds, reptiles, fishes,

6.

7.

8.

9.

Vincent Brooks, lith.

6. Common Buzzard.

7. Honey Buzzard.

8. Peregrine Falcon.

9. Spotted Eagle.

TO WHOM IT MAY COME
BY THE ORDER OF THE BOARD OF
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and the larger species of insects. In confinement however they will not generally refuse food newly killed; but if tainted, or strongly scented, some will reject it.

THE GYR-FALCON. *Falco Islandicus*.—This bold and beautiful bird is only known, we believe, in the British islands as an occasional and rare visitor, usually remaining in the more northern districts of Europe and America, and in no instance of which we are aware has it been known to breed upon our shores.

The Gyr-Falcon delights to have its eyrie on some precipitous cliff overhanging the sea; doubtless that it may prey upon the numerous sea-fowl which frequent such localities. The nest is composed of sticks, seaweeds, and mosses, and the eggs, which are two or three in number, are not generally remarkable for their beauty, having in some instances a yellowish-white ground-colour, clouded and varied with dull reddish-brown, and seldom, we believe, possessing that rich colouring or those bold markings which characterize the eggs of some other species of this Order.

THE PEREGRINE FALCON. *Falco peregrinus*.—This Falcon, called also the Blue or Cliff Hawk, inhabits the cliffs of our shores or the precipitous parts of our inland districts. It was formerly valued for its services in the sport of hawk-

ing. Its nest, generally placed on the face of some precipitous cliff, resting on a shelf of the rock, on a tuft of vegetation, or in a horizontal cleft, is composed of sticks, coarse stems of grasses, or fern; but the eggs have been discovered laid in a slight hollow, on the surface of the rock, among the refuse roots of vegetation. The eggs are of a fine reddish or orange-brown colour, varied with deeper markings, and usually from two to four in number.

THE HOBBY. *Falco subbuteo*.—This is a rare bird in our country, arriving in April and leaving in October. It is supposed to retire to the Asiatic continent, being only migratory in the countries of Europe. It is described as breeding late, and rarely building a nest for itself, but taking possession of that of a Crow or Magpie. It lays sometimes only two, but generally three eggs, freckled or spotted with reddish-brown, but seldom if ever marked with any large blotches of colour: some of its eggs might be mistaken for those of the Kestrel, but the former have rather a pinker hue.

THE MERLIN. *Falco æsalon*.—The Merlin is called also the Stone Falcon, from its habit of sitting on a bare stone or rock, amidst the mountain scenes which it frequents. It nestles in wild, mountainous districts, and, in such situa-

tions at least, seldom or never builds in trees; the nest, of sticks or stalks of heather, loosely and coarsely laid together, without any lining, contains from three to five eggs of a reddish-brown colour, spotted with a deeper tint.

THE RED, OR ORANGE-LEGGED FALCON. *Falco rufipes*.—This is another of those birds which is seldom seen in Britain; but it is better known in the Tyrol and Switzerland, and is common in Russia. Like some other Falcons, it takes possession of the nest of the Crow, Rook, or Magpie, in preference to building a nest for itself, and here it deposits four or five eggs, most nearly resembling those of the Kestrel, but being for the most part considerably less; occasionally however the eggs of the Red-legged Falcon much resemble eggs of the Red Grouse.

THE KESTREL. *Falco tinnunculus*.—The Kestrel is sometimes named the Windhover, from its habit of poising itself in the air while, with quivering wings and expanded tail, it surveys the ground beneath, in search of prey. It is the most common of all our Raptorial birds, and, according to Mr. Yarrell, is extensively distributed over the continents of Europe, Asia, and Africa. The Kestrel breeds in spires and towers of churches, also in woods, forests, and plantations, selecting the nest of a Crow or Magpie for the purpose of

incubation. The eggs are four, five, and occasionally six in number, sometimes mottled all over with rich reddish-brown colour, at others blotched and more partially covered with the same.

THE SPARROW-HAWK. *Accipiter fringillarius*.—The present species inhabits the woodland and more cultivated parts of our island chiefly, and is not so frequently to be seen as the Kestrel. Except in peculiar districts, the Sparrow-hawk breeds in woods, and places the nest, a somewhat loose and careless structure, about middle height in the trees. The eggs are from three to five in number, of a very pale bluish-green colour, irregularly, but sometimes very richly marked with brown.

THE GOSHAWK. *Astur palumbarius*.—This is a species believed to be confined to Europe, but seldom met with in a wild state in Britain. The nest is built on trees, and composed of sticks loosely put together. The eggs, from two to five in number, are either spotless or indistinctly marked with brown.

THE GOLDEN EAGLE. *Aquila chrysaetos*.—This species is gradually decreasing in its numbers in the British Islands, and is, perhaps, nowhere frequent except in the wilder portions of the Highlands of Scotland. Its depredations

among the flocks during the lambing time lead to the employment of every device for its destruction. The Golden Eagle begins to breed in March, or early in April, and its eyrie, to which it will return for many successive years, is placed on the face of some stupendous cliff. The nest is built on a projecting shelf, or on some stumped tree that grows from the rock, generally in a situation perfectly inaccessible without some artificial means, and often out of the reach of shot either from above or below; it is large, and composed of dead branches and roots of heather, except in situations where these are not to be obtained, as in the Shetland Islands, where Mr. Hewitson relates that rope-like pieces of seaweed are employed instead; to these are sometimes added, by way of lining, softer materials, as straw, dry grass, and wool. The eggs are generally two in number, with pale-brown or purplish blotches, most numerous and largest at the thicker end, but some varieties are white.

The Golden Eagle may be tamed to a certain extent, and when taken young has been known to manifest strong attachment to its owner. Mr. Thompson mentions one which would not only permit itself to be handled, but would remain quiet on its master's arm for any length of time, and

which, when at large (which it was sometimes permitted to be), would take up its station on the tops of trees in order to keep its owner in view as he walked through his demesne, and would return to him from any distance when his arm was extended towards it. The same writer gives the following description of the manner of hunting sometimes pursued by the Eagle:—"An Eagle was seen by Mr. Adams, lately gamekeeper at Glencairn, in pursuit of a hare. The poor animal took refuge under every bush that presented itself, which as often as she did, the Eagle approached the bush so near as apparently to beat the top of it with his wings, and thereby forced the hare to leave her place of refuge. In this way she was eventually driven to open ground, which did not long avail, as the Eagle soon came up with and bore her off."

THE SPOTTED EAGLE. *Aquila nœvia*.—This Eagle, much resembling the Golden Eagle, but almost one-third smaller in size, is introduced into the list of British birds from the circumstance that two specimens of the species were shot in Ireland in the early part of 1845. Its range is extensive in Europe and Asia. It builds on high trees, laying two eggs of a light colour marked with brown.

THE WHITE-TAILED EAGLE. *Aquila albicilla*.—The

Sea Eagle, which is another and equally descriptive name of the present species, nestles amid the precipices which rise seaward at the northern extremity of our island. Its nest is a coarse platform structure, composed externally of sticks, roots, or seaweed, and lined with wool, moss, or other substances suited to the purpose. The eggs are two in number, of a rounded form, and either pure white or marked with very pale indistinct blotches. It breeds occasionally inland also, on the margin of lakes, where the locality is suitable.

THE OSPREY. *Pandion haliaetus*.—The present species is a bird very extensively distributed, and is common in North America, where it is called, from its habits and the character of its prey, the Fish Hawk. It is found with us in the northern parts of Scotland, where it builds its nest (an unwieldy structure) generally on the highest pinnacles of the deserted ruins or the lofty rocks which occur in the numerous islands which stud the lochs of that country. In other countries, trees are frequently chosen as the sites for building. The eggs, which are two or three in number, are of a light colour, more or less richly blotched, in general with reddish-brown, and somewhat more elongated in their form than is usual among those of the Raptorial birds.

THE SWALLOW-TAILED NAUCLERUS. *Nauclerus furcatus*.—One of these birds took refuge in a thicket, during a storm, from the persecution of a flock of rooks, in 1805, in Yorkshire, and was seized before it could extricate itself. Another specimen was killed in Argyleshire. On these two specimens its claim rests to be numbered with British birds; and while the facts cannot be challenged, it is truly marvellous how a bird a native of the southern parts of North America ever succeeded in reaching our shores. Its nest and eggs are at present only known by report and description in this country. The nest, it is said, resembles that of a Crow, being composed of dried sticks lined with grass and a few feathers. The eggs are of a greenish-white colour, with a few irregular blotches of dark-brown at the larger end.

THE ROUGH-LEGGED BUZZARD. *Buteo lagopus*.—This bird is said to appear pretty frequently in the south of England, and most regularly on the Suffolk and Norfolk downs, where, in the country adjacent to the coast, it is accused of committing much depredation in the rabbit warrens. It is sparingly distributed over the northern parts of Europe, and has been found breeding in the fur countries of North America. The nest, placed in lofty trees, is formed of sticks, with a slight lining; and the eggs, which

are from three to five in number, are sometimes nearly white, at others more varied with markings of brown.

THE COMMON BUZZARD. *Buteo vulgaris*.—This species is more numerous in Scotland than in England, in which latter country it is chiefly to be found in the more extensive woods. The nest is built in trees, or on rocks, according to the character of the country which the bird inhabits, and is composed of sticks, lined with wool, fur, or other soft materials. The eggs are three or four in number, of a rounded form, and varying in appearance, some being of a spotless white, while others are enriched with markings of pale purple-grey and brown.

THE HONEY BUZZARD. *Pernis apivorus*.—This is considered one of the rarest of the British Falcons, and is little known in Ireland or the north of Scotland. It feeds much on bees, wasps, and their larvæ. This species builds in trees, and commences its nest in May; the eggs, which are two or three in number, are most richly coloured, being of a reddish-brown, deepened over much of the surface to the intensest degree. The nest is of sticks or twigs, lined with leaves, wool, etc., and to our knowledge has been discovered more than once during the last two years in Hampshire.

THE KITE. *Milvus regalis*.—This very graceful bird is

now rare in England, but occurs more frequently in Scotland. Its nest is often placed about halfway up the tree, close to the stem: it is of sticks, lined with grass, wool, or other soft materials. The eggs, two or three in number, have a whitish ground, varied with brown markings, and do not very greatly differ from those of the Common Buzzard.

THE CRESTED SPIZAETUS. *Spizaetus cristatellus*.—In 1828 Mr. Wingate, animal preserver, of Newcastle-upon-Tyne, received the skin of this bird in a fresh state from Aberdeen, with a statement that it had been killed upon the coast by the captain of a vessel about to enter that port. It is a native of Asia and Ceylon; but with its nest and eggs we are unacquainted.

THE COMMON HARRIER. *Circus cyaneus*.—The Harriers appear to be nearly allied to the Owls, and their eggs are either white, or nearly colourless, having a bluish tinge; in some instances they are slightly spotted with brown. In those districts in which Sir W. Jardine had an opportunity of observing the present species, he described the nest as frequently made in a heath bush, by the edge of some ravine, and composed of sticks, with a very slender lining. Sometimes it was formed in one of those places called scars, or where there had been a rush on the side of a steep hill after

a mountain thunder-shower; here little or no nest was made, and the eggs, from three to five in number, were merely laid on the bare earth, which had been scraped hollow. In marshy districts, as the fens of Cambridgeshire, the nest, composed of flags, sedge, and reeds, is raised considerably above the surface of the ground, in order to protect the eggs and young ones from the water by which the low grounds are often flooded. The eggs, frequently of a spotless bluish-white, at other times are slightly marked with yellowish-brown.

THE ASH-COLOURED HARRIER. *Circus cineraceus*.—This bird is also called Montagu's Harrier, from the circumstance that Colonel Montagu first distinguished this species and added it to the British Fauna. It is much rarer than the preceding species, and we believe is not known to inhabit Ireland or Scotland. The nest is rather slighter than those of the other Harriers, but is composed, like them, of flags, sedge, and rushes, and the eggs are seldom if ever spotted.

THE MARSH HARRIER. *Circus rufus*.—This bird delights in low and marshy grounds, preying upon aquatic animals and birds. It generally builds on the ground, but raises its nest, composed of flags, reeds, and sedges, to a considerable height, to avoid inundation. The eggs, from

three to five in number, are white with a bluish tinge, and sometimes spotted. Nidification commences towards the end of March.

STRIGIDÆ. OWLS.

The nocturnal birds of prey constitute the third family of the Rapacious Order, and their eggs are always nearly pure white, occasionally having a slight bluish or greenish tinge of colour, as among the Harriers. This family is characterized by the large proportion of the head to the body, by the size of the eyes, which are surrounded by a fringe of feathers, and by their soft, downy plumage, so different from the firm and sharply-cut feathers of the diurnal Raptores. The hearing of the Owl is believed to be exceedingly delicate, and the size of the eyes has an evident relation to the small amount of light in which they are usually to be employed; while the fringe of feathers which surrounds them probably has for its object to prevent the interference of light from the sides, above, or below, and to enable them to concentrate their whole power of sight upon the object directly before them. As the Owl secures its prey by stealing upon it unawares, the soft and yielding character of the

plumage renders the movement of the wings as noiseless as possible. The food of Owls consists of mice, frogs, and other small terrestrial vertebrata, small birds, fish in some instances, and insects. The number of small mammalia which Owls destroy, and which, unchecked in their increase, would prove a serious injury to the cultivators of the soil, renders these birds valuable to man.

THE WHITE, OR BARN OWL. *Strix flammea*.—The present is the most common species in the British Islands, and the only one which frequents ruined and deserted buildings, the spires of churches, the pigeon cot, or the watch tower; in these, with barns, chimneys, and other suitable situations, it constructs its nest of slender sticks, lined with grasses or straws, wool or hair being seldom used. The eggs are rather of a rounded form, pure white, and usually two or three in number, although in some instances the female is known to lay a second time before the young are able to leave the nest. The Barn, or Screech Owl usually breeds early, but Mr. Waterton mentions having met with two broods of young, the one in September, and the other as late as December.

The number of mice which this Owl destroys is very great. When it has young, it will bring a mouse to the nest about

every twelve or fifteen minutes. Occasionally it is said to carry off rats, and has been known to catch fish. "When farmers complain that the Barn Owl destroys the eggs of their pigeons," remarks Mr. Waterton, "they lay the saddle on the wrong horse. They ought to put it on the rat. Formerly I could get very few young pigeons, till the rats were excluded effectually from the dovecot. Since that took place, it has produced a great abundance every year, though the Barn Owls frequent it and are encouraged all around it. The Barn Owl merely resorts to it for repose and concealment. If it were really an enemy to the dovecot, we should see the pigeons in commotion as soon as it begins its evening flight; but the pigeons heed it not; whereas, if the Sparrow-hawk or Hobby should make its appearance, the whole community would be up at once: proof sufficient that the Barn Owl is not looked upon as a bad, or even a suspicious, character by the inhabitants of the dovecot."

THE AMERICAN MOTTLED OWL. *Strix asio*.—In Mr. Yarrell's second supplement to his 'History of British Birds,' he records the appearance of a pair of these birds in 1852, at a few miles from Leeds. One of the two birds was shot and preserved, but the other was subsequently

sought for in vain. "The bird inhabits the Oregon and the Columbia River districts, and is met with abundantly in the British provinces of New Brunswick, Nova Scotia, Newfoundland, and Labrador." Of its breeding habits we are not prepared to give an account.

THE TAWNY OWL. *Ulula stridula*.—We incline to consider the present species the most numerous in the southern part of England, next the Barn Owl; but in the north of England and south of Scotland, to which his observations have extended, Sir W. Jardine estimates the Long-eared Owl to be the second most numerous species. The Tawny Owl delights in dark or gloomy woods of pine or evergreen, and finds its breeding-place in some hollow tree (often, probably, in that which has sheltered it during the winter season), or in the deserted nest of the Carrion Crow or Magpie; sometimes however its breeding-place is sought in holes of rocks, and Montagu says, sometimes also in barns.

Nidification commences in March; the nest is of the slightest character, and the eggs, from three to five in number, are nearly round, large, and of pure and glossy whiteness. The first egg is sat upon as soon as laid, and hence there is often a considerable difference in the size of the young, even in the same nest. The young are fed with

inice, rats, small birds, and even fish, and, at least the older birds, feed extensively upon different sorts of beetles.

TENGMALM'S NIGHT OWL. *Noctua Tengmalmi*.—This little species is a rare bird in Britain, and can only be viewed as an occasional visitant. In some parts of the Continent it is pretty common, living in the extensive pine-forests, and breeding in the holes of decayed trees. The nest, if any, is described as being very slight, and the eggs, which are white, are two in number.

THE NAKED-FOOTED NIGHT OWL. *Scotophilus nudipes*.—This bird, known also as the Little Night Owl, occurs but occasionally in this country, and is reported to build early in the spring, placing its nest where suitable situations present themselves, either in buildings or trees. The eggs are white, and from two to five in number.

THE LONG-EARED OWL. *Otus vulgaris*.—The present species is pretty generally distributed over Britain where abundance of wood occurs. It breeds on trees, perhaps generally making use of the deserted nests of other birds, which it appears to alter or repair to suit its purpose. Three or four glossy-white eggs are laid as early as the middle of March.

THE SHORT-EARED OWL. *Otus brachyotos*.—In Britain,

10.

11.

12.

13.

Vincent Brooks, lith.

10. Osprey, or Fish Hawk.

11. Marsh Harrier.

12. Kite. 13. Egyptian Vulture.

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to the south of Durham, this is a winter visitant, but in the more northerly parts it breeds. The nest of this species is formed upon the ground among heath, fern, etc., sometimes composed of moss, hay, or grass, and at other times formed by a mere hollow in the earth. The eggs, of a rotund form, and white, are from three to five in number. The young are barely able to fly by the middle of August, and appear to leave the nest some time before they are able to rise from the ground.

THE EAGLE OWL. *Bubo maximus*.—Northern Europe appears to be the stronghold of this species, and its rank as British rests on a few instances of its capture and one or two records of its appearance. Temminck gives ruined buildings as occasionally selected for its breeding-places, and also the clefts of rocks. Mr. Hewitson says, "The Eagle Owl breeds in the north of Europe, making its nest upon the bleak and unsheltered summit of some lofty mountain. In such situations Linnæus found their nests and young ones, whilst making his tour of Lapland, in the months of May and June." The eggs, of a rounded form and considerable size, are pure white and from two to four in number, but rarely the latter.

THE SCOPS-EARED OWL. *Scops Aldrovandi*.—This is a

very rare visitant in Britain, being migratory even in the southern districts of Europe, and in France arriving and departing with the Swallow. It lays its eggs, four or five in number, in the holes of trees.

THE SNOWY OWL. *Surnia nyctea*.—This imposing species visits occasionally the northern British Islands, and more rarely the mainland of our country. In Europe, it occurs in Norway, Sweden, and Lapland, and is found in North America. It delights in solitary, stony, and elevated districts, and on the approach of twilight may be seen perching on the exposed eminences. When first observed to quit its retreat, it is frequently assailed by Crows and other birds, but it receives their attacks rather as an amusement than an annoyance. Its nest is built on the ledges of precipices or on the ground, and contains three or four white eggs.

THE HAWK OWL. *Surnia funerea*.—Though not uncommon in northern Europe, this is a species seldom seen on our shores. It is an inhabitant of North America, especially the fur countries. It is said to build in trees with sticks, grass, and feathers, and to lay two eggs, which are white.

ORDER II. INSESSORES. PERCHING BIRDS.

The present Order is one with certain members of which our readers are all more or less familiar. Few have seen the Eagle, or the Vulture, or the larger Owls, in their native haunts, or in their unreclaimed state, but all have often seen the Blackbird or the Skylark, the Redbreast or the Magpie; and those who live beyond our towns, and are observers of nature, may have been astonished, as we have been, to remark how numerous the species of this Order which come beneath their observation within their gardens or in their daily walks; so that the present department of our subject, if it engages our attention and affords us pleasure, will do so not so much perhaps by bringing rare and unnoticed species before us, as by adding to our knowledge of the habits of those with the forms of which we are already acquainted.

The Insectorial Order is the most numerous and varied of the entire class, and is exceedingly important, whether viewed in a scientific light or in relation to its economy in the great plan of nature. In extent it nearly equals the aggregate number of all the other Orders, while for powers

of song, for the varied splendours of their plumage, and for their skill in the construction of their nests, many of its species are unsurpassed.

In general the females are smaller and less brilliant in their plumage than the males. Although, to a considerable degree, the birds which compose this Order depend partially for subsistence upon our grain and fruit, and injure the buds of our orchards, yet these evils are more than compensated by the number of insects and their larvæ which they destroy during the season of incubation. "There is not a vegetable production which we cultivate," remarks Sir Wm. Jardine, "from the strongest forest-tree to the most tender garden-flower, that is not liable to the attacks of multitudes of insects, and though tiny in their form and weapons, and insidious in their mode of attack, the consequences are not less severe and fatal. The depredations which they have been known to commit are many thousand times greater and more extended than the worst attacks of the feathered creation, and we cannot look upon this large group of birds, all of them wholly or partially insectivorous, otherwise than as the natural check interposed by Divine Providence upon a race of creatures which, in their own places, also lend efficient aid against other classes of depredators."

For a synopsis of the groups and families which compose this Order, we must refer to the remarks on classification in a preceding part of this volume.

DENTIROSTRES. TOOTH-BILLED BIRDS.

These constitute the first group which claims our attention, and the tooth-like projection which marks the bills of the Falcons, and which aids them in tearing their prey, is continued in a greater or less degree throughout it, but exists in the subjects of our present remark only in the horny covering, and not in the bone. The families belonging to this group are the Shrikes, Thrushes, Warblers, Chatterers, and Fly-catchers; each of which is represented in our list of British birds.

LANIADÆ. SHRIKES.

The members of this family are not very common; but three species are included in the British Fauna, and these more prominently manifest the peculiarities of the group to which they belong than do any others included in its remaining families; indeed, by some, the Shrikes have been classed with the Raptorial Order, and their notched bills

and predaceous habits have given some countenance to the arrangement. They are said to possess the faculty of imitating the notes of other birds, in order to entice them within their power; and from their inability to hold their prey with their feet while tearing it to pieces, they transfix it upon a thorn, and then devour it. Mr. Selby, an eminent naturalist, says, "I had the gratification of witnessing this operation of the Shrike upon a Hedge-chanter which it had just killed, and the skin of which, still attached to the thorn, is now in my possession. In this instance, after killing the bird, it hovered with it in its bill for a short time over the hedge, apparently occupied in selecting a thorn for its purpose. Upon disturbing it, and advancing to the spot, I found the Chanter firmly fixed by the tendons of the wing at the selected twig."

THE GREAT GREY SHRIKE. *Lanius excubitor*.—This bird, which is nearly the size of a Thrush, is the largest of the three species which we have to notice in the present family. It is distributed over a great portion of the European continent, and is tolerably abundant in France and in the middle and southern districts of Europe, where its principal haunts are the well-wooded but enclosed countries, the parks, and enclosed forests. Whether it is only a win-

ter visitor to this country, or whether it occasionally breeds here, we cannot determine, although we incline to the former opinion. Its nest is described as built on trees and lower brushwood, or in thick bushes and high hedges; the outside materials various and of a coarse description, while the lining consists of wool, down, finer roots, and dried grass. The eggs, five, six, or even seven in number, are of a bluish, greyish, or yellowish white, spotted and blotched with different shades of grey and light-brown.

The Great Shrike, or Butcher-Bird, destroys mice, shrews, lizards, small snakes, small birds, as well as grasshoppers, beetles, and other large insects. Having killed its prey, it transfixes the victim on a thorn, or secures it between the fork of a twig, where it remains firmly wedged in while the bird tears it in pieces with its beak. Mr. Doubleday, of Epping, had an adult Butcher-Bird in his possession for twelve months. When a bird was given it, it invariably broke the victim's skull, and generally ate the head first. Sometimes it held the bird in its claws, and pulled it to pieces after the manner of hawks, but seemed to prefer forcing it through part of the wires of its cage, and then pulling at it. It always hung what it could not eat up on the sides of the cage. It would often eat three

small birds in a day. In spring it was very noisy, one of its cries or calls resembling that of the Kestrel. During the pairing season it is said to have a pleasant warble of its own, and it can imitate the different notes, but not the songs, of other birds.

THE RED-BACKED SHRIKE. *Lanius Collurio*.—This elegant species of Shrike is more frequently met with than the last, breeding in the southern and midland counties of England, although it does not extend in its migration to either Scotland or Ireland. In Europe it is most abundant in parts of Spain and Italy, and in the south of France. Large insects are its most common food, although it occasionally seizes and impales small birds. The nest is generally placed in a bush or hedge; it is built externally of coarse materials, such as the stalks of plants, moss, and fine grass, with a little wool, and is lined with slender roots and a few hairs. The eggs appear to vary considerably in colour; those with which we are most familiar are of a yellowish-white or deep cream-coloured ground, with a zone of grey and pale reddish-brown spots encircling the larger end; this belt of spots is quite characteristic, though sometimes found at the smaller end of the egg, and less distinctly marked in some instances than in others.

THE WOODCHAT SHRIKE. *Lanius rufus*.—Occasional specimens, obtained during the summer months, have given this species a place among British birds. It is extensively distributed on the African continent, is common in the south of Europe, and ranges generally over the more temperate parts of that continent. The nest is described as invariably placed on trees, and chiefly the oak; it is composed externally of sticks and wool, mixed with the white moss from the bodies of the trees, and is lined with fine grass and wool. The eggs are rather smaller but somewhat similar to those of the Red-backed Shrike, four or five in number, and very varied in their colour and markings.

MERULIDÆ. THRUSHES.

It is in this family that we find the birds most distinguished for the sweetness, compass, and versatility of their song; and among these the Mocking Birds of America stand unrivalled for their powers of voice. In their habits, the Thrushes are mostly gregarious in winter, and in some species, as the common Fieldfare, throughout the year. A few species of this family have aquatic habits, of which the Dipper, or Water Ousel, is an example. In the Thrushes

the lateral tooth of the bill is not so marked as in the Shrikes.

THE EUROPEAN DIPPER. *Cinclus aquaticus*.—The Water Ousel, as this bird is otherwise called, frequents secluded streams, often wild in their character, but it can accommodate itself to the advance of civilization, and seems to enjoy the change. Its song is low but melodious; heard at times throughout the year, but chiefly in the spring and breeding season. Early in April it commences its nest, which in its structure is very similar to that of the common Wren, being composed principally of the common mosses and lined with dry leaves and placed generally either against the bank of a river or the moss-grown surface of a rock. The eggs are four or five in number, and pure-white when blown, though, like very many of our white eggs, they have a beautiful tinge of pink while the yolk is yet in them. (Pl. V. fig. 20.)

THE MISSEL-THRUSH. *Merula viscivora*.—This bold and sprightly but somewhat quarrelsome species is the largest of European song-birds, and is called provincially, in this country, the Storm-cock, from its practice of singing throughout the stormier months of the year. The nest, composed of dried grass, moss, or lichen externally, and lined with dried grass alone, is built about the middle of

March, and is frequently placed in a garden or orchard, or at other times in the cleft of some forest-tree, near the trunk, or upon one of the larger branches. The eggs are sometimes four, but more generally five, and occasionally six in number; often of a pale-greenish tint, blotched with reddish-brown, though at other times the ground-colour is of a pale-reddish cast, with dark red-brown spots. Though at some periods of the year shy in its habits, the Missel-Thrush draws near to our habitations with the utmost confidence during the breeding season, and forms its nest in places the most exposed to our view. "This year," writes Mr. Waterton, "there is a Storm-cock's nest within fifteen yards of the place where the masons are at work. Our tame Magpie, which is allowed its freedom and the use of its wings, seized the female, some days ago, and brought her close to the masons. The male bird instantly came up and rescued his mate by fighting the magpie until he made it let go its hold." Cherries, raspberries, the berries of the mistletoe, yew, mountain-ash, and of the different species of the service-tree, with insects, constitute a considerable part of the food of the Missel-Thrush; and after the breeding season is over, gardens suffer sometimes extensively from its incursions. (Pl. IX. fig. 62.)

WHITE'S THRUSH. *Merula Whitei*.—This species is one of our rarities, and was named after the Rev. G. White, of Selborne, whose Natural History of that place has delighted so many readers. Of the habits of this bird we can give no information. In Japan it is said to inhabit high mountains.

THE FIELDFARE. *Merula pilaris*.—This, as our readers are aware, is a winter visitant in Britain, and breeds in more northern latitudes. To Mr. Hewitson we are indebted for the first authentic published details upon the subject. In Norway he found these birds building in societies; two hundred nests and upwards might be found within a small circuit of the forest, built at various heights above the ground, from four to thirty or forty feet, or more, and resembling most nearly those of the Ring Ousel, being composed of sticks, coarse grass, weeds gathered wet and matted together with a small quantity of clay, and lined with a thick bed of fine dry grasses. The eggs, four, five, or six in number, resemble those of the Blackbird, and even more so those of the Ring Ousel and Redwing; "Indeed," says Mr. Hewitson, "so closely do the eggs of the four species resemble each other, that a drawing of one might apply to all."

THE REDWING. *Merula iliaca*.—This is another of our migratory Thrushes, visiting us in the winter, and retiring to nearly the same latitudes with the Fieldfare to breed and spend the summer. In Norway it bears the name of Nightingale, and its melody is said to be surpassingly sweet. "The nest of the Redwing," says Mr. Hewitson, to whom we again refer, "is placed, like those of the Thrush and Blackbird, in the centre of a thorn or other thick bush. It is similar to those of the Blackbird, Fieldfare, and Ring Ousel. Outwardly it is formed of moss, roots, and dry grass; inwardly, cemented with clay, and again lined with finer grass." The eggs closely resemble those of the Blackbird, but, if there is a difference in size, are rather smaller.

THE SONG THRUSH. *Merula musica*.—From the early period of the year at which nidification commences with the present species, some evergreen is often selected as the site for building, where shelter and concealment are alike secured. The Song Thrush frequently rears a second brood in the year. The nest, a coarse structure externally, is most neatly rounded and plastered within. The eggs are of a clear bright blue-green, with black or blackish spots more or less profusely sprinked, chiefly at the larger end. These clear bright eggs are very beautiful, as, four or five in

number, they lie in the ample, neatly plastered, well-turned hollow of the nest,—a sight which makes the eager eye of the schoolboy sparkle with delight; but pity they should be destroyed, when we remember that this gentle Thrush is one of the sweetest songsters in our land. Where its nest is built near a habitation, this bird will sometimes admit of great familiarity, even to being fed from the hands of visitors, while seated within the nest. (Pl. VI. fig. 31.)

THE BLACKBIRD. *Merula vulgaris*.—This is another of our sweet songsters: early in the morning and late in the evening, its notes gladden us in the retired scenes of the country. Like the Song Thrush, the Blackbird often selects in early spring some evergreen, or some secluded and sheltered retreat in which to build its nest; which, coarse without, and containing a quantity of mud in its structure, is lined within with fine grass. The eggs, generally four or five in number, are of a bluish-green, spotted or finely marked with brown, especially at the larger end; the tints of green and brown vary a little in different specimens. Like the Thrush, the Blackbird feeds on worms, slugs, and snails; to this fare it adds currants, raspberries, and cherries, with certain wild berries, as those of the ivy, mountain-ash, and holly. (Pl. V. fig. 25.)

14.

15.

16.

17.

18.

Vincent Brooks Lith.

14. Jackdaw. 15. Rook. 16. Raven. 17. Hooded Crow. 18. Carrion Crow

THE RING OUSEL. *Merula torquata*.—In some districts, especially in the northern parts of the British Islands, this is not a rare bird, but it is by no means universal, nor perhaps general, in its distribution. It is with us a summer visitor, resorting to wild and rocky mountain moorlands, and is a bird of wild and shy habits, haunting secluded glens, and ravines of rock, and making its nest, which in form and materials much resembles that of the Blackbird, on the ground, often under the shelter of some precipitous bank near a stream, amidst moss and coarse herbage. The eggs, four or five in number, much resemble those of the Blackbird. When the nest of these birds is approached, they utter loud cries, and fly around the intruder, like the Lapwing, endeavouring by every artifice to lead him from the spot. (Pl. VI. fig. 30.)

THE GOLD-VENTED THRUSH. *Turdus aurigaster*.—In January 1838, a specimen of this rare African Thrush was shot near Waterford, and was purchased by Dr. Robert Burkitt of that place, who skinned and preserved it. Of the nidification of this species we can say nothing.

THE ROCK THRUSH. *Turdus saxatilis*.—The Rock Thrush, seldom seen in this country, inhabits the wild, rocky, and mountainous districts of Europe; it is exceedingly shy, but the male bird is reputed to be an excellent songster. The

pair make their nest in a fissure of the rock, or among the loose rough masses at the base; the nest is constructed of moss, and the eggs, four in number, are of a greenish-blue colour, without spots. (Pl. VI. fig. 29.)

THE GOLDEN ORIOLE. *Oriolus galbula*.—Although this species has been known to breed in Britain, the instances in which it has done so have been few; and indeed its visits to this country are by no means frequent. A specimen of the nest brought from the Continent, which we once saw, was a lengthened and suspended structure, and of the materials employed in its formation, wool constituted a considerable proportion. Usually the nest is composed of dry grass, roots, and wool, and is lined with similar materials, of a finer texture. The eggs, when blown, are of a clear and glossy white, relieved with black or dark purple-brown spots; one which we recently saw, had a tinge of pink at the thicker end, and the spots of a deep purple or reddish brown. The food of this species consists of insects and berries, and it is very partial to cherries. Its song is said somewhat to resemble that of the Missel-Thrush, but to be less musical. (Pl. V. fig. 19.)

SYLVIADÆ. WARBLERS.

The Warblers are small in size, delicate in form, and possessed of considerable vocal powers. Excepting the Humming-birds, some of the smallest birds in existence are to be found in this family; the little Gold-crest, the smallest of European birds, is an example. Feeding upon insects, these birds keep down those minute species which lurk within the buds, foliage, or flowers of plants, and which escape the notice of the larger insectivorous birds, or of those which hunt upon the wing. The Warblers are many of them migratory, appearing in the spring, when with the renewal of vegetation the insect world is called into life and activity, and retiring in the autumn, when their services are no longer required, and when their food diminishes or fails.

THE WHEAT-EAR. *Saxicola ænanthe*.—The Wheat-ear is universally distributed over Britain, in suitable localities, and during the season of its residence with us. It breeds in holes, in the burrows of rabbits, under and among rocks and stones, in old walls, and in quarries. The nest is made of fine dry grasses, wool, moss, hair, and feathers, and the eggs, five or six in number, are of a pale greyish-blue colour, and without markings. (Pl. VII. fig. 44.)

THE WHINCHAT. *Saxicola rubetra*.—On our commons, abounding in whin or furze, and even in some more cultivated districts, this bird is abundant. The nest, slightly formed, is often placed at the foot of a furze or thorn bush, and the eggs, six in number, are greenish-blue, sometimes finely dotted, and occasionally spotted with rust-colour.

THE STONECHAT. *Saxicola rubicola*.—Some of this species are supposed to remain with us during the entire year; but about Christmas last we searched in their favourite localities in vain for one, although the winter was favourable, and the county one of the most southern, and it was not till the end of January in the present year we saw a single individual. It is possible they may have found shelter beneath the cliffs of the southern coast of the Isle of Wight; otherwise their migration must have been to some far more distant region. This species is usually seen in pairs, flitting from bush to bush, and almost invariably settling on the topmost sprays of the furze, while at the foot of the bush its nest is most effectually hidden from the view of all but the most persevering intruders. The eggs, generally five or six in number, are of a pale-greenish colour, freckled with brown, and often enriched with a zone of the same colour round the larger end. (Pl. V. fig. 33.)

THE ROBIN, OR REDBREAST. *Erythaca rubecula*.—In our own land few members of the feathered race have been regarded with greater favour than the Redbreast. His clear, bright, glancing eye and pretty plumage, his brisk and animated manner, his sweet and pleasant song, but above all, his confiding, half-domesticated habits, have given him a most unusual hold upon our kindly feelings. It is curious to observe wherever the offshoots of our nation have extended, how our distant friends cherish his memory, by giving the name of Robin to any of the feathered beauties of the wood or waste around them which bears the least resemblance to their once familiar friend. In the United States of America, a species of Thrush with a red breast is the Robin of those lands. In Jamaica the colonists have their Redbreast also,—a lovely little bird, with the upper parts emerald-green, the belly pale-yellow, tinged with rosy, and the throat and gorget deep rich crimson plush. Of the Australian Robin a specimen is before us, and an exquisite little bird it is for beauty of colour, with the breast of the purest geranium-red, while its manners are of the same sprightly character with those of its English namesake.

Few birds are more bold in selecting the locations for their nests than the Redbreast, and few more expert in con-

cealing their habitations; though all its precautions and sagacity are often ineffectual to secure its precious treasure from the grasp of its most formidable enemy, the schoolboy. Beneath an overhanging roof of verdant moss the nest is carefully imbedded; or a nook in some ruined, ivy-covered wall, or, in some unsuspected spot, a cluster of dry leaves may screen from view a brood of young, unfledged, helpless songsters. The Redbreast builds early, and lays five or six eggs, of a pale brownish-red colour, freckled with a deeper tint, and chiefly so at the larger end. (Pl. VII. fig. 45.)

THE COMMON REDSTART. *Phœnicura ruticilla*.—This is a bird of very local distribution, although, in places, it extends even to the northern parts of Scotland. Its nest is usually placed in some hole of a wall, or in a hollow tree, and is formed of moss, dry grass, and leaves, and lined with hair and feathers. Its eggs, from four to six in number, are of a greenish-blue, without markings, smaller and of a lighter tint than those of the Hedge Sparrow. (Pl. VI. fig. 34.)

TITHYS REDSTART. *Phœnicura tithys*.—In its habits the present is said to resemble the last species, and its nest to be formed of much the same materials; but the eggs, when blown, are white, though previously of a delicate pink: they are five or six in number. (Pl. VI. fig. 26.)

THE BLUE-THROATED REDSTART. *Phænicura Suecica*.—This is a yet rarer visitant than the last species. On the Continent it is generally diffused, but not abundantly, except in a few localities. It delights to breed in the vicinity of damp situations, and places its nest on the ground. The eggs are from four to six in number, of a greenish-blue colour.

THE NIGHTINGALE. *Philomela luscinia*.—The Nightingale visits our island at the close of April or beginning of May, and retires again in August or early in September. On the European continent it is very widely spread, abounding in Italy, Spain, and Portugal, and extending northwards as far as Sweden and Russia; but in the British Islands it is very partial in its distribution, being almost unknown in Scotland and Wales, unless perhaps occasionally on the southern borders of the latter country, and never visiting Ireland. It does not reside in the Channel Islands (Guernsey, Jersey, etc.), nor does it visit Cornwall or the western part of Devonshire, but is principally found in the south-eastern section of our island, including Kent, Surrey, Sussex, Hampshire, Berkshire, Middlesex, Hertfordshire, Cambridgeshire, and Essex. In our own part of Hampshire we think it may be described as abundant. It frequents copses in

humid situations, sequestered shrubberies, embowered coverts, rich parks, and wooded lawns. The nest is usually built in some retired situation, generally on or near the ground. One now before us is composed, externally, chiefly of dried grass and oak-leaves; and the inside, which is deep and cup-shaped, is lined chiefly with soft moss, with a few hairs and fibres. The eggs, usually four or five in number, are olive-brown or green, sometimes mottled with a darker tint, and do not resemble the eggs of any other British bird. "The song of the Nightingale," says the author of 'Our Song Birds,' "is scarcely continued through three months, when it ceases, and the bird utters only a hoarse, croaking cry. At this period however (August) the young males, of the first brood particularly, may be heard recording, or warbling as it were, in imitation of their parent, whose notes they appear to have studied. At the age of five or six years, the Nightingale begins to fail in the execution of his strain, and sings by broken snatches, instead of pouring out one continuous stream of melody; this also often occurs after one or two years of captivity; it is then recommended to give the prisoner liberty in the month of May, and birds so restored to freedom have been known to regain their song in all its original force and beauty, owing no

doubt to the invigorating influence of fresh air and natural food."

The food of the Nightingale consists of various insects and their larvæ, and, towards the end of summer, of various berries, as currants, elder-berries, etc. (Pl. VI. fig. 35.)

THE THRUSH NIGHTINGALE. *Philomela turdoides*.—Of this species the Rev. O. Morris says, "The nest is built in small thickets, but most frequently in low and damp situations. The eggs are of a brownish-olive colour, stained with deep brown."

THE BLACK-CAP. *Curruca atricapilla*.—The Black-cap is a more abundant species in Britain than the Nightingale, and more equally distributed, and among the Warblers is considered only second to it in song. It builds its nest about the end of May or the commencement of June, in some bush, or in brambles, nettles, etc., and not far from the ground. The nest is slight, composed of fibrous roots, dry stalks, and grass, lined with the finer grasses and a few hairs. The eggs, four or five in number, vary considerably in colour, but may perhaps be described as generally of a reddish-brown colour, with spots of a darker tint, intermixed with others of an ashy-grey. One very beautiful variety is of a pink or rose-colour. (Pl. X. fig. 70.)

THE GARDEN WARBLER. *Curruca hortensis*.—The Greater Pettychaps, as this bird is also designated, is of very shy and retired habits, seldom appearing out of the thicket or shrubbery; the garden is with it a favourite resort. The nest is placed in bramble, blackthorn, or large plants which form the undergrowth of the wood or plantation, and is a slight fabric of fine straws, stalks of grasses, slender roots, and hairs. The eggs, four or five in number, are of a dull yellowish-grey, or pale purplish-brown, spotted and blotched with dark markings of the latter colour.

THE WHITETHROAT. *Curruca cinerea*.—The nest of this bird, which, though strongly compacted, is slight in its appearance, is usually built, not far from the ground, in a bramble or other bush, and also in tall herbs and nettles. Dried stalks of grasses and other plants, with finer portions of the same, and hair for the interior, compose the materials of the nest. The eggs, four or five in number, are greyish or greenish-white, speckled with wood-brown and grey. (Pl. VIII. fig. 53.)

THE LESSER WHITETHROAT. *Curruca garrula*.—The nest of this species is built in similar situations to that of the last, and is a slight and apparently careless fabric. The eggs, four or five in number, are of a greenish-white ground,

with spots and patches of brown and light-grey. The Lesser Whitethroat is unknown in Scotland or Ireland.

THE SEDGE WARBLER. *Salicaria phragmites*.—Like the Whitethroats, this is a summer visitor, but frequents marshy lands and the banks of lakes or rivers, wherever reed or osier beds afford it shelter. The nest, attached to the stems of reeds or twigs of osier, is formed of dry grasses and a little moss, lined with hair and finer grass. The eggs, of a pale-brown colour, thickly freckled with a darker shade of the same, are four or five, and at times it is said even six or seven, in number. (Pl. IX. fig. 56.)

THE REED WARBLER. *Salicaria arundinacea*.—The Reed Wren, as this bird is also called, is another of our summer warblers, and closely resembles the last species in its habits and disposition; it is however a larger bird, and not so extensively distributed as the last, though frequently found in the reed-beds of our southern and eastern counties. Its nest is suspended between the stalks of reeds or aquatic plants, and generally formed of long grass with some portions of reed, and lined with fine grass and hair. In its form the nest is particularly deep, being so constructed doubtless to prevent the eggs or young from being thrown out when the wind forces the nest, as it often must do,

nearly to the surface of the water. The eggs, four or five in number, are more deeply coloured and more distinctly spotted than those of the Sedge Warbler.

THE GREAT SEDGE WARBLER. *Salicaria turdoides*.—The Great Sedge Warbler of Holland and other parts of the Continent, builds a nest similar in form to that of the Reed Warbler, among the stalks of reeds. The nest is composed almost entirely of the blossoms and tops of reeds and other grasses, bound together with their stalks and leaves. The eggs, four or five in number, are greenish-white, spotted and speckled with ash-grey and reddish-brown.

THE RUFOUS SEDGE WARBLER. *Salicaria galactotes*.—This bird, little known in Britain, was shot on the South Downs, near Brighton, by a person who took it for a cream-coloured Nightingale. The bird is found in Spain, particularly in the valleys of Andalusia, nesting among the shrubs of oleander. The plumage is described as resembling in colour that of our well-known Bearded Tit. Its food is said to be grasshoppers and other insects generally; and its eggs are of a pale greenish-white, spotted and speckled over with two shades of darker greenish-brown, very similar in colour to the eggs of the Great Sedge Warbler and Reed Warbler.

SAVI'S WARBLER. *Salicaria luscinioides*.—This Warbler frequents moist and shaded situations, among reeds and bushes near water. Though a rare bird throughout the European continent, it has been known to breed, on more than one occasion, in the fens of Cambridgeshire. The nest is described by Mr. Hewitson as “beautifully symmetrical and round, and built entirely of the broad grassy top of the reed,” and “placed in a thick bunch of sedge upon the ground.” The eggs are minutely specked over their entire surface with pale-red and light-grey, and bear some distant resemblance to those of the Grasshopper Warbler.

THE GRASSHOPPER WARBLER. *Salicaria locustella*.—This little bird conceals itself in tangled thickets and among the rank herbage of retired situations, from whence it utters its strain of rapidly-repeated notes, resembling the noise of a grasshopper; it has been suggested that it does this partly with a design to attract those insects within its power. The nest, not easily discovered, is placed among the roots of low close bushes, or sometimes a little raised from the ground, and is composed of a large quantity of grass loosely put together. The eggs, generally five or six in number, are of a pale reddish-white, freckled all over with specks of darker red.

THE DARTFORD WARBLER. *Melizophilus provincialis*.—The furze commons and coverts of the southern parts of England are the chief resort of this little bird. In the north of England, as well as in Ireland and Scotland, it is not found. We have seen this species in the neighbourhood of Fordingbridge, on the border of the New Forest, but have never seen its nest in its natural position, and are informed that it is difficult to discover; it is described as placed among furze a little way from the ground, and composed of dry stalks of vegetation with the tender dead branches of furze, loosely put together, and lined with a few dry stalks of some fine species of *Carex*. The eggs, four or five in number, are greyish-green speckled over with olive-brown.

THE WOOD WARBLER, OR WOOD WREN. *Sylvia sibilatrix*.—The Wood Wren builds its nest on the ground, by the root of a tree or bush, or beneath some tuft of grass; it is nearly round in form, with a small entrance in front, like that of the Common Wren, but is a far less careful fabric, and is composed of moss, withered leaves, and dried grass, lined with hair or fine grass, not with feathers. This last circumstance will serve to distinguish it from the nests of the Chiff-chaff and Willow Warbler, both of which are of

similar form, but invariably, we believe, lined more or less with feathers. The eggs of the Wood Wren, six or seven in number, are white, with purplish-red spots.

WILLOW WARBLER, OR WILLOW WREN. *Sylvia trochilus*.—This is an abundant species, and its nest, also built on the ground, is concealed with amazing skill, and probably seldom found except by the flight of the bird to or from it. On some open furze-covered lands in the neighbourhood of our dwelling many of these nests were found, at the foot of furze or other bushes, during the last summer. The nest is domed, like that of the preceding species, but differs from it, as already stated, in being lined with feathers. The eggs are six or seven in number, white, spotted with *pale-red*, by which they may be distinguished from those of the Chiff-chaff, which are spotted with dark-purple. (Pl. IX. fig. 58.)

THE CHIFF-CHAFF WARBLER. *Sylvia rufa*.—We often hear this little bird with its characteristic and cheerful, but somewhat monotonous, note, yet its nest and eggs appear to be seldom found, certainly not nearly so frequently in this locality as those of the Willow Wren. The nest is not placed invariably on the ground, but occasionally a little above it, and is globular and lined with feathers, having a small aperture for the entrance: the eggs, usually seven in number, are white, with purple-red spots. (Pl. IX. fig. 57.)

THE MELODIOUS WILLOW WARBLER. *Sylvia hippolais*.—Latham's Pettychaps, as this bird is likewise termed, is but an occasional visitant to this country: a specimen was shot near Dover in June 1848. It builds at a considerable elevation, sometimes near the top in tall bushes or young trees. "The nest," says Mr. Yarrell, "is open at the top, cup-shaped, the bottom and sides made up of long grass bents and long hairs, interlaid and wound round together, the inside lined with fine roots, hairs, and bits of wool." The same authority describes the eggs as "pale pinkish-white, speckled with dark or purplish red."

THE ORPHEAN WARBLER. *Sylvia Orphea*.—This species is found as a summer visitor in several parts of Italy, it also visits Switzerland, and is found in the forests and dry districts of Lorraine and Provence. In July 1848, a bird of this species was shot in Yorkshire, but it is only known in Britain as an occasional visitor. The nest, which is placed among bushes, blocks of stone, or in other favourable situations, is large; the materials consist of twigs and strong bents of grass, with which are interwoven, both outside and inside, many long horse-hairs.

The eggs, which are four or five in number, are white, tinged with pale-green, spotted and speckled with reddish-yellow and light-brown.

19.

20.

21.

22.

23.

24.

25.

Vincent Brooks Lith.

19. Golden Oriole 20. European Dipper. 21. Red-winged Starling.
22. Chough. 23. Rose coloured Pastor. 24. Common Starling.
25. Blackbird.

1911
1912

THE COMMON GOLD-CREST. *Regulus auricapillus*.—

This smallest of European birds may often be seen during the winter season threading the leafless hedges in search of food. It is very extensively distributed, not only in Britain, but in many foreign lands. It breeds early, and forms a beautiful nest of green mosses, softly lined within. The nest is oftenest suspended beneath the sheltering branch of a yew, or spruce-fir; although we have known it, on more than one occasion, built upon branches of trees among ivy, and, in such circumstances, resembling a minute specimen of the Chaffinch's nest. The eggs, from seven to twelve in number, are generally of a pale reddish-brown colour before they are blown, but afterwards of a pale greyish-brown; but we received a nest during the last summer in which the eggs were pure white, with minute reddish-brown specks, disposed chiefly in a zone around the larger end. The song of this little creature, heard in summer among the branches, is most delicately melodious. (Pl. VIII. fig. 47, 48.)

THE FIRE-CREST. *Regulus ignicapillus*.—This species is much rarer than the preceding; but perhaps its great resemblance to the last may have caused it to be passed unnoticed as a distinct species on many occasions. In its nidification it is considered closely to resemble the Gold-

crest, and the eggs need to be carefully authenticated before they are received as those of a distinct species.

THE DALMATIAN GOLD-CREST. *Regulus modestus*.—The manners of this species closely resemble those of the Common Gold-crest, as far as they have been observed; and probably in its nidification the resemblance would still continue; but we have no authentic information to render upon the subject.

THE BLUE TITMOUSE. *Parus cæruleus*.—Three or four species of Titmice are frequently met with, but none more so than the present, which is not only numerous probably in most localities, but generally distributed in Great Britain and Ireland, where suitably wooded districts occur. The Titmice feed chiefly on insects, with their eggs and larvæ, and Mr. Hewitson well remarks, that though we may follow the present species in his search after insects, and “see the buds of promise from our trees strewed behind him, he has been destroying them to get at the lurking enemy within, which, had it been permitted to live till the following spring, would have wrought us tenfold evil.” This little bird is most surprisingly attached to its nest and eggs; and indeed its local attachment is very strong, for it reluctantly quits the spot from whence its nest has been taken. Holes in trees and

old walls are its usual resort for building ; and grass, moss, hair, and feathers, its materials. The eggs, from eight to fourteen or sixteen, are, previously to blowing, pinkish-white, afterwards white, with many red spots. (Pl. X. fig. 66.)

THE GREATER TITMOUSE. *Parus major*.—This is to our view a really handsome bird, and one which we always see with pleasure, notwithstanding its amorous ditty, which has been most truthfully likened to the noise produced by the sharpening of a saw. Some suitable hollow in an aged or decayed tree is selected for the nest, which consists of moss, hair, and feathers. The eggs, from seven or eight to ten or twelve, are pinkish-white spotted, or slightly blotched with red. (Pl. X. fig. 69.)

THE COLE TITMOUSE. *Parus ater*.—Like the two preceding species, this is also generally distributed in suitable localities over the British Islands. Its manners closely resemble those of the Blue Tit, but it builds at a less elevation from the ground. About a fortnight since, in a walk, we observed a Cole Tit with a feather in its mouth, and saw it immediately descend to a hole in a decayed stump of ash. After a few days we visited the spot, and found the nest about a foot from the ground, in the hollow stump, almost inaccessible, but thickly lined with the warmest substances,

and containing eggs. The eggs are reddish-white, spotted with red chiefly at the larger end; when blown, as is the case with very many other eggs, the reddish tinge disappears, or nearly so. They usually number from six to eight or ten:

THE MARSH TITMOUSE. *Parus palustris*.—Far less frequently met with than any of the foregoing species of Titmice, the present also differs from them in its habits, preferring low marshy districts, and seeking its food near the ground. A cavity which it makes or finds in a decayed willow, is a favourite situation for the nest, the exterior of which is composed of moss and grass, and the interior lined with the down of the willow-catkins. The eggs, seven or eight in number, considerably resemble those of the Blue Titmouse, but are more boldly spotted, and the form is rounder.

THE CRESTED TITMOUSE. *Parus cristatus*.—The Crested Tit is reported to have been found in the pine-forests of Scotland, but we have reason to believe that it is not confined to Scotland. When inquiring at Yarmouth, Isle of Wight, for the eggs of the birds breeding in the island, we were directed to a bird-preserver in that town who kept a small inn. This person had not fewer than a hundred and

fifty specimens of stuffed birds, including many species, and some of the rarest, as the Bee-eater, Golden Oriole, etc., all, as we understood, obtained in the island,—and among them the Crested Tit, shot by himself; and he mentioned that he had seen others of the same species which he did not obtain. The size and manners of this Tit resemble closely those of the Blue Tit; it breeds in holes of trees and rocks, builds with the same materials, and lays from seven to ten eggs, which are white, spotted with red or brown.

THE LONG-TAILED TITMOUSE. *Parus caudatus*.—The nest of this species is certainly unrivalled in beauty by that of any other; built in very varied situations, in a holly, thorn, or furze bush, or on the branches of the oak; it is somewhat oval or lengthened in its form, with a tiny aperture near the top for the admission of the bird; it is often closely coated with silvery lichens, and thickly lined with feathers or soft down. The eggs are very small, and of a delicate pink-white before they are blown; occasionally spotless, but generally speckled with pale-red, and vary from seven or eight to twice that number. (Pl. X. fig. 67, 68.)

THE BEARDED TITMOUSE. *Calamophilus biarmicus*.—The reed-beds on the banks of the Thames, and the marshy districts of Norfolk, Suffolk, Huntingdonshire, Cambridge-

shire, and Lincolnshire, are spoken of as the chief retreats of this bird. In Scotland it is unknown; and only one specimen is recorded from Ireland. The nest, generally placed in a tuft of coarse grass or rushes near the ground, is composed externally of the dead leaves of the reed, and sedge, with grass, and with the top of the reed for lining; or at other times of dried bents, the finer ones forming the lining. The eggs, usually from four to six in number, are white or pale-pink, sparingly marked with pale-red lines or scratches, and rather smaller than those of the Great Titmouse.

THE ALPINE ACCENTOR. *Accentor Alpinus*.—It is only as a wanderer that this bird occasionally visits Britain. The Alps of Middle Europe are its natural and most frequented station. It breeds in the clefts of the rocks, at great elevations; the nest is made of moss and fine grass, lined with wool and hair. The eggs, four or five in number, are of a greenish-blue colour, without markings; more intense in their colour and larger than those of the Hedge Accentor.

THE HEDGE ACCENTOR. *Accentor modularis*.—This is no other than our unobtrusive, gentle, and familiar Hedge Sparrow, which remains with us all the year through, close to our habitations, and from some spray warbles its short

and simple song. Its nest, generally built in some hedge, has for its foundation a few sticks, and is composed externally of moss and wool chiefly, and lined with hair. The eggs, usually four or five in number, are of a clear greenish-blue colour, entirely devoid of markings. (Pl. IX. fig. 61.)

THE GREY WAGTAIL. *Motacilla boarula*.—This bird is not nearly so common in this country as the Pied species, but is said by Mr. Hewitson to be very abundant in Madeira. It is considered to breed only in the northern parts of our island. The nest, in its position and construction much resembling that of the Pied Wagtail, is built of roots and the stems of plants, with the addition occasionally of a little wool or moss, and is lined with hair and fine grasses. The eggs, four or five in number, are very slightly coloured; yellowish-white, mottled with light brown and grey.

THE PIED WAGTAIL. *Motacilla Yarrellii*.—This lively bird is always an ornament to the country; and simple as are its colours, their striking contrasts render it a marked and pretty creature. Its nest, which is built in holes of walls, in a woodstack, hayrick, or peat-pile, and but seldom on the ground, is formed externally of roots or small sticks, and lined with hair and fine grasses. The eggs, four or

five in number, are of a pale-bluish ground-colour, finely speckled with brown and grey. (Pl. VII. fig. 43.)

THE WHITE WAGTAIL. *Motacilla alba*.—Mr. Gould was, we believe, the first to discover that the Pied Wagtail of England is a distinct species from the Pied or White Wagtail common in France and other parts of the Continent. In winter the two species are considerably alike, and hence perhaps the confusion; but in summer the Pied Wagtail of England has the whole of the head, chest, and back, of a deep black, while in the White Wagtail, at the same season, the throat and head alone are of this colour, the upper surface being light ash-grey. Norway and Sweden were the only parts of Europe from which Mr. Gould was able to procure specimens identical with our British bird. The habits of the White Wagtail resemble those of the Pied species.

It is said to build in holes of trees or banks, under the eaves of a thatched house, and in many and various situations beside. The eggs are described as bluish-white, speckled with grey, and spotted with larger spots of brown, chiefly at the thicker end, and occasionally in the form of an irregular belt.

THE YELLOW WAGTAIL. *Budytes flava*.—This, which is

also called Ray's Wagtail, is a migratory species, appearing with us early in March, and delighting in low meadows and valleys watered by streams. Its nest, built upon the ground, is composed of roots and withered grasses, lined with fine grass, roots, and hair. The eggs are pale wood-brown, spotted with a darker shade, and closely resembling those of the Sedge Warbler.

THE GREY-HEADED WAGTAIL. *Budytes neglecta*.—This is a foreign species, known only with us as a straggler. It inhabits moist and marshy places, placing its nest in such situations on the ground. The eggs considerably resemble those of the Yellow Wagtail.

THE MEADOW PIPIT. *Anthus pratensis*.—The Pipits, sometimes termed Titlarks, form a small but well-defined group, having the plumage and long hind claws of the true Larks, but the slender bills of the Wagtails. The Meadow Pipit frequents hilly districts, open commons, meadows, and even marsh-lands; building its nest, which is composed of grass, lined with finer portions of the same, and hairs, and often carefully concealed at the foot of some hillock, tuft, or small bush, in meadows, pastures, or the margins of heathy moors. The eggs are sometimes of a reddish or purplish brown, thickly marked with darker irregular spots, and

sometimes of a greyer colour, freckled and marked throughout; indeed they vary considerably, though not so much as those of the next species.

THE TREE PIPIT. *Anthus arboreus*.—While the preceding species remains in greater or fewer numbers with us all the year, the present is a migratory bird, arriving in this country towards the end of April, and taking up its abode in copses and well-wooded enclosures. It is a rather larger bird than the Meadow Pipit, but may be more readily distinguished from it by a comparison of the hinder claws, which in the last species are lengthened and but slightly curved, being formed for walking, while in the present they assume the arboreal structure, and are short and crooked. The nest of the Tree Pipit is generally built on the ground, and formed of dry grass, moss, and fibres, lined with finer grasses, and sometimes with a few hairs. The eggs, four or five in number, differ exceedingly in colour; some are of a reddish or purplish brown closely marked throughout with a darker shade of the same, others are dull bluish or greyish white spotted with purple-brown, while in others the reddish tinge is wanting. (Pl. IX. fig. 65.)

THE ROCK PIPIT. *Anthus aquaticus*.—The favourite haunts of the Rock Pipit are the bold, rocky, and solitary

seacoasts, where it remains throughout the year. The nest is placed upon the ground, upon ledges of the rock, or in some sheltering spot near the sea; it is composed chiefly of dried grasses, and the eggs, from four to six in number, are larger than those of the other Pipits, and not so variable in colour as those of the last-named species, greyish-brown being the prevailing tint.

RICHARD'S PIPIT. *Anthus Ricardi*.—The claim of the present species to be numbered among British birds, rests upon a few specimens taken from time to time in England. Like the rest of the genus to which it belongs, this bird builds its nest on a tuft of grass on the ground. It is of dry grass, moss, and a few hairs. The eggs, which have a pale ground, with grey and rich brown markings, are four or five in number.

THE RED-THROATED PIPIT. *Anthus montanus*.—This is an occasional visitor to Britain. It inhabits usually the southern and eastern parts of Europe, and is also found on the Asiatic and American continents. It breeds in mountainous districts, preferring the vicinity of water. The eggs, four or five in number, are described as of a dull grey colour, covered with faint brown spots.

AMPELIDÆ. CHATTERERS.

This family of the Dentirostral group, to which we now advance, is one of which but a single species, the Bohemian Waxwing, can be considered British, and this is but an occasional visitor to our shores. Some of the forms composing the family are very splendid and curious; they live chiefly on soft berries and small fruits. The most characteristic or typical species inhabit the deepest and most secluded forests of Tropical America.

THE BOHEMIAN WAXWING. *Bombycilla garrula*.—This bird derives its name from the peculiar formation of the secondary feathers of the wing, which have the shafts prolonged, and furnished with a horny appendage like a small flattened oval bead of red sealing-wax, whence its name of the Waxwing.

The eggs of this bird, which formed one of the greatest desiderata in the collections of naturalists, have been made known to the public in this country during the present month (May 1857), we believe for the first time, by John Wolley, Jun., Esq., who forwarded them from Lapland. Skins of both sexes, in the plumage of the breeding

season, together with a nestling bird, and the nest itself, are to be placed in the Norwich Museum.

MUSCICAPIDÆ. FLYCATCHERS.

These constitute the last family in the present group ; and it is a family almost as numerous as that of the Warblers, though represented in this country only by two species. The members of this family, which are distributed through the temperate and tropical regions of the Old World, and the temperate parts of the New, are birds of a small size.

THE SPOTTED FLYCATCHER. *Muscicapa grisola*.—This is one of our summer visitors, arriving in May, and departing in September or October ; it is much more common than the Pied Flycatcher. The nest, composed of slender roots and small twigs for its basement, and moss for its walls, and lined with hair and other soft materials, is often placed between the stem of some tree and a neighbouring wall, in the hole of a wall screened by foliage, on the end of a beam in an outhouse, or among the roots of some tree overhanging water, with other and sometimes singular situations ; and the eggs, four or five in number, are of

a pale greyish or greenish ground, with reddish-brown spots. (Pl. VIII. fig. 55.)

THE PIED FLYCATCHER. *Muscicapa luctuosa*.—Reported to be unknown in Ireland or Scotland; this species is also local, and uncommon in England. Its manners resemble those of the Spotted Flycatcher. The nest, built in old and pollard trees, in walls and bridges, and generally formed of dried grass and straws, lined with finer grass and hairs, contains from four to six or eight eggs, of a pale verdigris-green colour. (Pl. VIII. fig. 54.)

CONIROSTRES. CONE-BEAKED BIRDS.

We now arrive at the second great division or group of perching birds. They are omnivorous, and their feet are so formed that they can walk upon the ground with almost as much ease as they perch upon the branches of trees. The families comprised in it are the Crows, Starlings, Finches, Hornbills, and Crossbills, each of which, with the exception of the Hornbills, is represented in our British list.

CORVIDÆ. CROWS.

The Crows constitute a family limited in numbers, but

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26. Tithys Redstart. 27. Chimney Swallow. 28. Nuthatch.
29. Rock Thrush. 30. Ring Ousel. 31. Song Thrush.
32. European Goatsucker. 33. Stone Chat. 34. Common Redstart.
35. Nightingale.

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extensively distributed, and consisting of birds of considerable size, and generally of dark and unobtrusive colours; they are bold, courageous, and wary, and some of them live in societies. When domesticated, they approach the Parrot in their power of imitating the human voice.

THE RAVEN. *Corvus corax*.—The largest of European perching birds and the most powerful species of the present group, the Raven is really an imposing bird in its appearance. It is distributed in wild and sequestered stations throughout Britain. It feeds little on grain; but the eggs of birds and the young of animals are sought after and devoured by it. The Raven is destructive to the newly-dropped lambs and to weakly sheep, and hence the persecution which arises to it from shepherds. Steep cliffs and lofty trees are its breeding-places, in the most wild and inaccessible districts; and in such situations the nest, formed of an immense mass of sticks cemented with mud, and lined with roots, wool, and the fur of animals, is placed. The Raven is one of our earliest breeders, commencing, in a mild season, in February. The eggs, four or five in number, are of a pale-greenish colour, varied with brown markings. (Pl. IV. fig. 16.)

THE CARRION CROW. *Corvus corone*.—The British species of the present family next in size and strength to the

Raven, is the Carrion Crow, inhabiting chiefly wooded districts, and preferring as its food animal matter either newly killed or in a state of carrion; yet it feeds on other substances. It is persecuted for its attacks on game, poultry, weak lambs, and fallen sheep; "from the latter," says Sir Wm. Jardine, "we have at times seen the eyes torn out before the animal was dead, and before it could be relieved." The nest, built of sticks cemented with clay, and lined first with roots and then with softer materials, is generally placed in a tree, far above the ground, and the eggs, four or five in number, greatly resemble in colour those of the Raven, Hooded Crow, and Rook, all being green varied with brown blotches and markings; in size however they are much smaller than those of the Raven. In varieties of all these eggs the tints of green and the depth of the brown markings differ considerably. (Pl. IV. fig. 18.)

THE HOODED OR ROYSTON CROW. *Corvus cornix*.—This Crow, like the last, is predatory in its habits, but its prey consists chiefly of the eggs and young of birds, and of such marine animal productions as are cast upon the shore; occasionally it is said to attack young lambs. It seldom breeds inland, but prefers the cliffs of the seacoast, where its nest is placed on a ledge of rock, or on some stunted

tree which presents a favourable site for its construction. Other trees which grow near the shore are likewise occasionally selected. It seldom breeds in England, though not uncommon with us in winter; but in the north of Scotland it is a permanent resident throughout the year. The eggs, four or five in number, greatly resemble those of the Carrion Crow and Rook, being green, varied with markings of greenish-brown. (Pl. IV. fig. 17.)

THE ROOK. *Corvus frugilegus*.—The Rook prefers cultivated districts, and decreases in numbers towards the north of Great Britain. It is gregarious in its habits, and its breeding-stations are generally in the vicinity of some mansion or human habitation, where it compensates for any consumption of grain or roots on its part by the extensive destruction of slugs and grubs; indeed it is asserted that wherever its extirpation has been effected, the most serious injury to the corn and other crops has invariably followed. Mr. Hewitson says, "I remember once having pointed out to me by a farmer who lives near Alnwick, one of his fields which was then black with Rooks; and, to prove to me the mischief they were doing him, he led me to the spot. It was a grassfield, and sure enough the place bore evidence of destruction; its lovely green was gone, and scarcely a

blade of grass remained standing. The Rooks had pulled up the entire surface of the already dead turf, and were regaling themselves upon the myriads of grubs which now lay beneath it, which had done all the mischief by eating the roots of the grass asunder; and, but for the timely interference of these useful birds, another summer's increase of their ranks would have enabled them to carry devastation far and wide." The food of the Rook consists in general of grains, fruit, roots, worms, slugs, insects, and their larvæ. Rookeries are too well known in their leading features to need description, but we may remark that where a breeding-station is established in trees which are deciduous, it is abandoned during the winter, and some pine-wood is sought as a roosting-place at night during that inclement season; but where the nests are built in pines, these trees become the resort of the birds throughout the year. The nests, usually placed, as our readers are aware, upon the topmost branches of the trees, are composed of sticks, cemented with clay, mixed with tufts of grass, and are lined with roots. The eggs, which are green marked with greenish-brown, are four or five in number, and less than those of the Carrion or Hooded Crows. (Pl. IV. fig. 15.)

THE JACKDAW. *Corvus monedula*.—The Jackdaw is

known over the greatest part of the British Islands, and gives animation to many a deserted ruin and scene of natural and solitary grandeur. It breeds in abbeys, castles, towers, and spires, in cliffs, ancient and hollow trees, and even rabbit-burrows; but "perhaps there is no instance," Mr. Waterton remarks, "in the annals of ornithology, which tells of the Jackdaw ever building its nest in the open air."

The nest is composed of sticks (a very careless structure generally), and lined with wool or any soft materials which can be procured; and the eggs, usually four or five in number, but occasionally six, are of a very pale green spotted with grey and greenish-brown.

The industry of these birds is often very remarkable, though not always wisely directed, for they will sometimes drop sticks down a wide chimney, where perhaps not one will remain, until cartloads have accumulated beneath. Mr. Jesse however mentions a nest in the bell-tower of Eton College, the construction of which, while it displayed great perseverance and industry, showed no small amount of skill and contrivance likewise. The nest to which we have referred occupied the top of a stack-like pillar of sticks ten feet high, which cost the ingenious and persevering architects seventeen days of greater or less exertion to erect. "One circumstance struck me as very curious," says Mr.

Jesse: "the entrance of the aperture in the walls was very narrow, the difficulty of conveying some of the larger sticks through it must have been consequently great. On examining the sticks, I found that each of them had been broken, or rather cracked, exactly in the centre, so that they could be doubled up. They were thus adapted for the construction of the stack in a compact form." (Pl. IV. fig. 14.)

THE MAGPIE. *Pica melanoleuca*.—The Magpie loves well-wooded and yet cultivated districts, and we always feel that its presence is an ornament to rural scenery. It finds no great indulgence however in this country; but in Norway, where it appears to be abundant, it is in some parts a half-domesticated bird, picking near the doors, and even entering the houses, comparatively devoid of fear. Its geographical distribution is very extensive, being found in China and again in North America. Its food resembles that of the Crows, and, like the Jackdaw, it is given to plunder the nests of less powerful birds. Its nest, built of sticks cemented with clay, and lined with fine grasses, is also arched over with a protecting roof of sticks; it is found in woods and plantations, sometimes on the summit of an oak, at others placed in a bush of holly or thorn. The eggs, six or seven in number, are pale-green closely freckled with greenish-brown. (Pl. VII. fig. 42.)

THE COMMON NUTCRACKER. *Nucifraga caryocatactes*.—It is only as a rare visitor that this bird is known in Britain, and our acquaintance with its habits is very limited. It is gregarious, frequenting wooded alpine regions, and reported as common in the mountain-forests of Norway and Sweden and parts of Germany, and is also found abundantly in Russia and Northern Asia. In some of its habits it resembles the Jay, and in others it approximates to the Woodpeckers. It feeds on seeds of the pine, on berries and nuts, also on insects and their larvæ, and sometimes devours the eggs and young of birds. Holes of decayed trees are selected for nidification, and the eggs, five or six in number, are of a yellowish-grey colour with a few spots of bright grey-brown.

THE EUROPEAN JAY. *Garrulus glandarius*.—This beautiful bird, whose discordant notes may be heard resounding through the woods, builds on trees, but not near their summits as do the Crow and Magpie. Its nest is constructed externally of sticks, and lined internally with roots. The eggs, from four to six in number, are as unobtrusive in their appearance as any with which we are acquainted, being of a pale-green colour, thickly speckled with pale-brown.

The partiality of the Jay for peas and ripe cherries often

proves the cause of its destruction; but it feeds also on acorns, beech-mast, and insects. (Pl. VIII. fig. 52.)

THE CHOUGH, OR RED-LEGGED CROW. *Fregilus graculus*.
—This species is not particularly rare in certain parts of the British Islands, and is said to abound in the Isle of Man. On the European continent it frequents alpine districts, but on our shores prefers the seacoast, where it forms its nest, much after the manner of the true Crows, in rents of rocks and in the entrances of caves. The eggs are four, five, or even more in number, and resemble considerably certain varieties of the Magpie's, but are of larger size and possess a yellowish tint in some of the spots. (Pl. V. fig. 22.)

STURNIDÆ. STARLINGS.

A great number of species in different parts of the world are referred to this family, although but three can be claimed as British. Many species associate in flocks, and some build pendent nests after the manner of the Weaver Birds.

THE COMMON STARLING. *Sturnus vulgaris*.—This beautiful bird, which is very extensively distributed over various regions of the globe, is abundant in many parts of Britain. The rocky seacoast, old and ruined buildings, hollow trees,

and the inside of roofs, may be considered their favourite breeding-places, though others may be also chosen. The Starling breeds early, and forms its nest of grass, straws, roots, etc., with softer substances for lining. The eggs are four or five, of a pale greenish or greyish blue, usually without the slightest markings. After the breeding season, Starlings congregate in immense flocks, which, as evening approaches, seek some coppice, plantation, willow or reed bed, where they settle for rest, but where they long keep up a noisy chattering concert. The Starling may be taught to imitate the human voice. (Pl. V. fig. 24.)

THE RED-WINGED STARLING. *Sturnus prædatorius*.—Various specimens of this species have been procured in this country, although its home is in America. The range of country in the western hemisphere which it frequents and over which it migrates, extends from Mexico in the south to a great distance up the Missouri westward and northward, and to Labrador and Newfoundland on the east. Some of the habits of this bird, resembling those of our well-known Starling, have obtained for it the name of the Red-winged Starling, in illustration of which Mr. Audubon, as quoted by Mr. Yarrell, remarks: "Towards evening they alight in the marshes by millions, in compact bodies, settle

on the reeds and rushes close above the water, and remain during the night, unless disturbed by the gunners. When this happens, they rise all of a sudden and perform various evolutions in the air, now gliding low over the rushes, and again wheeling high above them, preserving silence for awhile, but finally diving suddenly to the spot formerly chosen, and commencing a general chuckling noise, after which they remain quiet during the rest of the night." The same author, writing of this bird under another of its names, adds: "The Marsh Blackbird is so well known as a bird of the most nefarious propensities, that in the United States one can hardly mention its name without hearing such an account of its pilferings as might induce the young student of nature to conceive that it had been created for the purpose of annoying the farmer. That it destroys an astonishing quantity of corn, rice, and other sorts of grain, cannot be denied; but that before it commences its ravages it has proved highly serviceable to the crops, is equally certain." It breeds in marshy places, and the eggs are of a pale bluish-white with a circle of spots and streaks of dark liver-brown round the thick end, one or two scattered spots, and some faint blotches of purplish-grey. (Pl. V. fig. 21.)

THE ROSE-COLOURED PASTOR. *Pastor roseus*.—This

species has been occasionally met with in the British Islands; in some instances associated with Starlings, to the habits of which birds its own are believed considerably to correspond. In the south of Europe it is frequently met with, and it is also known to frequent India and Africa. Its eggs so closely resemble paler specimens of the Common Starlings, that it is difficult to distinguish between them. They are of the palest greenish or greyish blue, and without markings. (Pl. V. fig. 23.)

FRINGILLIDÆ. FINCHES.

The Finches are the smallest birds of the present group, and are distinguished by the shortness and strength of their conical bills. They subsist generally on grain. The number of species in the present family is very great, and some among them are everywhere diffused. Many of them possess considerable powers of song. Few of the British Fringillidæ are migratory; but from northern latitudes, and especially in severe winters, our flocks receive a great increase of numbers.

THE HAWFINCH. *Coccothraustes vulgaris*.—The Hawfinch was not known to breed in this country until H.

Doubleday, Esq., established the fact. The breeding stations at present named are, Epping, Windsor, the vicinities of Wolverhampton and of Penshurst in Kent; but probably other localities may be added to these, now that attention has been drawn to the fact, and encouragement given for careful observation. The nest, which has been found in May and June, and which is of the rudest construction, and composed of twigs, lined with fine roots and a little hair, is sometimes placed in a thorn-bush, at a few feet from the ground, and in an exposed situation; but at other times near the top of firs, at an elevation of twenty or thirty feet from the ground. The eggs, from four to six in number, are of a greenish-white or grey ground, streaked, marbled, and boldly spotted with grey and greenish-brown.

This bird is noticed as plentiful in some parts of France; not uncommon in Italy; common in Germany, Sweden, and part of Russia. (Pl. VIII. fig. 49.)

THE GREENFINCH. *Coccothraustes chloris*.—In the neighbourhood in which we write, few nests, excepting perhaps the Chaffinch's, are more abundant than those of the Greenfinch. Possessing little of the elegance which characterizes the nests of the Chaffinch and Goldfinch, that of our present species is a somewhat careless structure,

composed externally of roots and moss, but more carefully constructed as it advances towards completion, of finer roots, succeeded by a substantial, warm, and compact lining of hair. The eggs, four or five in number, are of a pale-bluish or greenish white, spotted, chiefly at the larger end, with purple or reddish-brown. The Greenfinch is not in request as a cage bird; yet some of its notes in a wild state are very sweet, and the male is a bird of much beauty. It is a species accounted common in our own island and throughout the European continent. (Pl. X. fig. 74.)

THE GOLDFINCH. *Carduelis elegans*.—This sweet little bird extends over the greater portion of Europe, but becomes rarer towards the north. It is a docile and gentle little creature, and builds one of the most beautiful nests with which we are acquainted. Orchards, gardens, shrubberies, and pleasure-grounds are more frequently the spots chosen by it for nidification, we think, than uncultivated parts. Externally, moss, wool, and lichens compose much of the nest, which internally is lined with soft materials, as hair and down; the nest is usually more rounded in its form, and more closely felted together, than that of the Chaffinch. The eggs, four or five in number, closely resemble the Linnet's, except that they are less. They are

of a bluish or greenish white, spotted, chiefly at the larger end, with reddish or purple-brown.

THE SISKIN. *Carduelis spinus*.—Although this little bird has in several instances been known to breed in Britain, yet the regions usually inhabited by it are Norway, Sweden, and the north of Germany, from whence in severe winters it migrates southwards, occasionally visiting our islands in immense flocks. The nest, composed of materials resembling those employed by the Chaffinch in building, is placed sometimes high in pine-trees, but at other times not far above the ground. The eggs are pale bluish or greenish white, speckled at the thicker end with purplish-red and brown.

COMMON BROWN LINNET. *Linaria canabina*.—The nests of this bird are very frequently placed in furze-bushes, but not always. They are rather carelessly constructed of slender twigs, moss, and wool, lined with hair or feathers. The eggs, from four to five or six in number, are bluish or greenish white, spotted or marked with different tints of reddish or purplish brown, chiefly at the thicker end. The colour of the plumage in the male bird during the breeding season is very beautiful, but its brighter colours disappear when in a captive state. (Pl. VIII. fig. 51.)

THE MOUNTAIN LINNET, OR TWITE. *Linaria montana*.—The northern parts of Britain are the breeding-places of this species in our country, and the situations chosen for the nest are bushes of furze or heath. The nest and eggs resemble those of the last-named species. On the Continent it is most abundant in the northern countries, but extends its migrations southward as far as Italy. (Pl. VIII. fig. 50.)

THE LESSER REDPOLE. *Linaria minor*.—The nest of the Lesser Redpole, which is found in the northern and midland counties of Britain, is said to be an elegant little structure, composed of moss and the down of the willow-catkins, which generally furnishes the lining of the nest. The eggs, from four to six in number, are pale bluish-green, spotted at the thicker end with orange-brown, and occasionally streaked with a darker colour. This little bird is remarkably confiding and docile, and indeed is so tame that it will eat immediately after capture. The male and female are also strongly attached to each other, caressing each other with their bills, and manifesting by various blandishments their mutual affection.

NORTHERN REDPOLE. *Linaria borealis*.—This bird is regarded as a straggling visitor to our islands, and in manners is believed to resemble the Lesser Redpole; but of its breeding habits we are ignorant, although from description

we should suppose the eggs to bear a considerable resemblance to those of the last species.

THE HOUSE SPARROW. *Pyrgita domestica*.—This well-known bird is very extensively distributed out of Britain, extending generally over Europe, though perhaps less frequent in the south, reaching to the northern part of Africa, and reported to be found in India, both on the plains and Himalaya range. The House Sparrow is not by any means devoid of beauty, but the injury which it is reputed to do to the farmer and gardener (against which charge however we have seen a defence entered on the ground of its greater usefulness), renders it otherwise than a general favourite. It builds beneath roofs, in trees near houses, and in ivy, and indeed can make itself at home near the habitations of man, under very various circumstances. Its nest is usually built of straw and lined with feathers, and when built in trees, is arched or roofed over. The eggs, four, five, or six in number, have usually a pale or whitish ground, more or less varied with spots, blotches, or dashes of grey or brownish-grey, but they may be sometimes found almost white, and occasionally freely spotted or blotched with clear deep-brown; indeed, while the general character remains distinguishable by size, shape, and style of marking, the individual varieties are almost endless. (Pl. X. fig. 71.)

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Vincent Brooks Lith.

36. Mountain Finch 37. Tree Sparrow. 38. Chaffinch. 39. Corn Bunting.
40. Yellow Bunting. 41. Reed Bunting. 42. Magpie. 43. Pied Wagtail.
44. Wheat-ear. 45. Redbreast.

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THE TREE OR MOUNTAIN SPARROW. *Pyrgita montana*.
—The Tree Sparrow greatly resembles the last species in habits and appearance, but prefers as the places for its nidification, holes in trees situated not immediately in the vicinity of human habitations. The eggs, four or five in number, are less than those of the House Sparrow, and more closely mottled or marked with shades of brown. In Britain this bird is believed to be peculiar to England, and is not considered to be so equally distributed as the last upon the continent of Europe. (Pl. VII. fig. 37.)

THE MOUNTAIN FINCH. *Fringilla montifringilla*.—This pretty bird is a winter visitor to our island, frequenting at other times chiefly the more northern parts of Europe. It does not breed in a wild state in Britain, but its eggs, obtained from aviaries and in other ways, closely resemble those of the Chaffinch. The nest, built on fir and other trees, is described as formed externally of moss, and lined with wool and feathers. The eggs are four or five in number. Where the beech is most plentiful in Thuringia, Bechstein says that these birds assemble during autumn in immense numbers, exceeding 100,000 individuals. They come from the north. (Pl. VII. fig. 36.)

THE CHAFFINCH. *Fringilla cœlebs*.—There are few of

our British birds to which we are more partial than the Chaffinch; so beautiful in its plumage, so lively in its manners, so cheerful in its note, so skilful and tasteful in the construction of its nest; and abundant as are the specimens of its skill in architecture, we can seldom meet with them without admiring their tasteful forms and highly ornamented appearance. Built close to the trunk of some gnarled oak or lofty elm, in an ivy-covered thorn, or in the branches of an evergreen shrub, as also in many other situations, it is composed externally of moss enriched with silvery lichens, and is lined within with hair and a few feathers, or other warm and soft substances. The eggs, four or five in number, have a ground-colour of a greenish hue, clouded with pink, and spotted with purple or reddish-brown. The Chaffinch is esteemed in Germany, we are told, for its powers of song. The author of a pleasing little work entitled 'Our Song Birds,' says, "A commentator on Bechstein informs us that, in Ruhl, a manufacturing town of Thuringia, the inhabitants, mostly cutlers, have such a passion for Chaffinches, that some have gone ninety miles from home to take with birdlime one of these birds, distinguished for its song, and have given one of their cows for a fine songster; from which has arisen their common expression, 'such

a Chaffinch is worth a cow.' A common workman will give a louis-d'or (sixteen shillings) for a Chaffinch he admires, and willingly live on bread and water to gain the money. An amateur cannot hear one that sings in a superior style the double trill of the Hartz, without being in an ecstasy." (Pl. VII. fig. 38.)

THE COMMON, OR CORN BUNTING. *Emberiza miliaria*.—This species is very common at least in many parts of Britain, and known to a great extent over the European continent. Its nest, built on or near the ground, usually in fields of grass or corn or other herbage, is rather coarsely constructed externally, of sticks, roots, dried grasses, and moss, lined with finer grasses and a few hairs. The eggs may be distinguished from those of any other Bunting by their superior size, and are often of a dull or dusky ground-colour (though sometimes it is said the ground is nearly white), streaked and spotted with grey and purple-brown. They are four or five in number.

THE YELLOW BUNTING. *Emberiza citrinella*.—This bird is better known provincially by the name of Yellow Hammer, and in its spring plumage is often a remarkably handsome bird. In some districts it is exceedingly abundant, but is said to decrease in number towards the northern

parts of Britain. In our own neighbourhood its eggs are as plentiful as those of the Chaffinch or Hedge Sparrow. Its nest is well described as "generally placed on some bank amidst herbage or brush, by the roots of a hedge, or other cover." It is composed externally of grasses, mingled perhaps with roots and moss, though, we think, with little of the latter, and chiefly lined with hair. The eggs, with all their marked peculiarity and apparent sameness, seem ever new and beautiful; they are usually pale in the ground-colour, but clouded, streaked, and scribbled over with delicate and playful lines, and here and there a bolder dash and spot of purple-brown. Excepting that of the Cirl Bunting, which is far less common, there is no other egg, as Mr. Hewitson remarks, which can be mistaken for that of the Yellow Hammer. The eggs are from three to five in number, rarely six. (Pl. VII. fig. 40.)

THE CIRL BUNTING. *Emberiza cirrus*.—This bird, not so brilliant in its plumage as the last species, and immediately distinguishable from it by the dark blackish-green colour of the throat, is not nearly so frequent in its occurrence as the Yellow Hammer. In some localities however it is much more abundant than in others, but is little known in Scotland or in Ireland. Its nest, composed of very similar

materials to that of the Yellow Bunting, is commonly placed in a furze-bush. The eggs are four or five in number, and considerably resemble those of the last species.

THE ORTOLAN BUNTING. *Emberiza hortulana*.—This is a bird of rare occurrence in Britain, but ranges over the European continent, and is there abundant in some parts. Northern Africa is said to be its winter residence, and in its migrations it visits Gibraltar every spring and autumn. Its manners are described as resembling those of the Yellow Hammer, and its nest, built on the ground in cornfields, or in the covert of hedges or bushes, is constructed of dry grass and roots, lined with fine roots and hair. The eggs, with which we are not at present familiar, are four or five in number, and differ greatly in the individual specimens, sometimes, as Mr. Hewitson states, resembling those of the Reed Bunting, and at others those of the Yellow Hammer.

THE REED BUNTING. *Emberiza schœniculus*.—The Reed or Black-headed Bunting frequents marshy places, among willow-beds, reeds, and aquatic herbage. It is common throughout the British Islands, and generally distributed on the European continent. Its nest is not, like that of the Reed Warbler, suspended between the stems of reeds, but is built in a low bush, on a tuft of grass, or among the

taller herbaceous plants; it consists of straw, dried grass, moss, and roots, lined with fine grass or hair. The eggs are four or five, of a pinkish-grey or brown tint, boldly streaked and spotted with dark purple-brown. (Pl. VII. fig. 41.)

THE SNOW BUNTING. *Plectrophanes nivalis*.—Generally speaking, this species must be regarded as a winter visitor to the British Islands, at which season even few of them reach the southern coasts of England. A few scattered pairs of them may breed, Sir W. Jardine supposes, upon the higher mountain-ranges of Scotland, but we have not met with any recorded instance in which the eggs have been obtained from such situations. They usually retire further to the north to breed, and their eggs have been obtained or their nests discovered in Iceland and many other northern regions. The nests are described as placed among stones or in crevices of rocks, and consisting of dry grass lined with hair or feathers. Mr. Hewitson says, "The eggs are from four to six in number, and are subject to great variety; some are like those of the tribe of birds to which it belongs, whilst others are exactly like those of the Green Linnet. Mr. Hancock, of Newcastle, has a variety thickly marked all over with spots of a reddish and purple hue, and much resembling eggs of the Spotted Flycatcher."

THE LAPLAND LARK-BUNTING. *Plectrophanes Lapponica*.
 —Northern Europe, Arctic America, with the islands of the Northern Ocean, seem to be the strongholds of the present species, occasional specimens only having been taken in this country. They have been described as breeding in “moist meadows on the shores of the Arctic Sea, the nest placed on a small hillock, among moss and stones.” The nest is formed externally of dried grasses, and lined with hair or feathers. The eggs are usually six or seven in number, varying in size and shape, and, if we take the descriptions of individual specimens as a criterion, in colour also; so that, not being acquainted with the eggs themselves, we are not able to give any general and characteristic description of them.

THE SKYLARK. *Alauda arvensis*.—As if its rapturous heart would burst without free utterance, the Skylark seeks some scene where silence reigns unbroken, and from the lofty sunlit heaven pours down its song of joy, ceaseless and glorious, in the ear of earth. The theme of the poet and the joy of the peasant, surely the pleasure we derive from the song of this sweet bird during the summer season is ungratefully returned by its continual destruction during the bitter months of winter. The Skylark is extensively

distributed over Europe, several parts of Asia, and the north of Africa, and is well known throughout the British Islands. It builds and breeds in April, May, and June. Its nest is placed upon the ground, amidst corn or other herbage, and is composed of vegetable stalks, dried grasses, roots, and fibres, the finer materials being used as lining; the eggs, from three to five in number, are yellowish or greenish brown closely freckled throughout, and often with a darker zone of the same colour at the thicker end. (Pl. X. fig. 73.)

THE CRESTED LARK. *Alauda cristata*.—The only information we can give upon the nidification of this species we take from the volumes of the Rev. F. O. Morris upon the nests and eggs of British birds. "The nest," this writer informs us, "placed on the ground, is made of grasses. The eggs are four or five in number, of a light-grey colour spotted with light and dark brown." They are however, from the subsequent descriptions of the same author, subject evidently to great variety.

THE WOODLARK. *Alauda arborea*.—This is a species sought for its powers of song. The song is usually uttered while on the wing, but occasionally from the branch of a tree. The nest is placed upon the ground, and composed of dried stalks and grass, lined with fibres and hair. The

eggs, four or five in number, are pale wood-brown, marked with blotches of grey and dark-brown.

THE SHORT-TOED LARK. *Alauda brachydactyla*.—In October 1841, an example of this species was caught in a net, near Shrewsbury, as recorded by Mr. Yarrell. "This species," observes that gentleman, "having some resemblance to our Woodlark, is yet immediately to be distinguished from it by its stouter beak, its nearly plain unspotted breast, and its very short hind toes and claws, from which latter peculiarities it has received its name. I am not aware that any other example of this species has been obtained in this country. . . . It makes its nest on the ground, and lays four or five eggs of dull-yellow or pale coffee-colour without any spots."

THE SHORE LARK. *Alauda alpestris*.—This, which is reputed to be a sweet song-bird, is only an occasional visitor to this country. Mr. Audubon found these birds breeding on the coasts and islands of Labrador. The nest is placed on the moss-covered ground, and this writer says, "is disposed with so much care, while the moss so much resembles the bird in hue, that unless you almost tread upon her as she sits, she seems to feel secure, and remains unmoved. It is imbedded in the moss to its edges, which are composed

of fine grasses, circularly disposed, and forming a bed about two inches thick, with a lining of grouse feathers and those of other birds. The eggs are four or five in number, large, greyish, and spotted with numerous pale-blue and brown spots."

THE COMMON BULLFINCH. *Pyrrhula vulgaris*.—This beautiful bird is generally distributed over our islands, but is nowhere very abundant. It is often destroyed on account of the injury which it does in gardens. Few, if any, birds are capable of stronger attachments than the Bullfinch. We well remember two which were kept for some time in the home of our boyhood. One accidentally escaped, but it had already become so tame that it was retaken from a hedge with the hand. The plaintive and continued cry raised by these birds whenever their kind owners left the apartment, led to their enfranchisement; but to the astonishment of us all, they both voluntarily returned in a little time to the scene of their captivity. One of these would sit upon the shoulder of its mistress and utter its soft and pleasant song with perfect confidence and delight. (Pl. IX. fig. 60.)

The Bullfinch builds its nest in dense thickets, on the flat branches of the spruce-pine or silver-fir, or on the lower branches of some evergreen tree. Small sticks and roots

constitute the materials of which it is built, the latter forming the lining. The eggs are four or five in number, of a light-bluish or greenish hue, marked with reddish or purplish spots. The Bullfinch is capable of being taught to sing in a very soft and flute-like tone, and a well-accomplished bird in this respect is worth several pounds.

THE PINE BULLFINCH. *Corythus enucleator*.—The present species, though rarely met with in Britain, is more frequent in its occurrence in the northern parts of Europe and America. The nest is described as placed not far from the ground, and composed of small sticks, lined with feathers: the eggs are reported to be white. It is said to be a beautiful songster, and is occasionally kept in confinement on this account, becoming soon very tame and familiar.

BUCERIDÆ. HORN BILLS.

The Hornbills have no representative among British birds, and hence we proceed to the next family.

LOXIADÆ. CROSSBILLS.

This family derives its name from the peculiar structure

of the bill, in which the mandibles are bent in contrary directions, so that their points cross each other; by this arrangement the birds are enabled to open with facility the pine-cones, while with their tongues they extract the seeds, which form a considerable proportion of their food. But besides the seeds of the fir, hemp-seed and the seeds of apples are eagerly devoured, and they are said to divide an apple in halves with ease, in order to obtain the kernels.

THE COMMON CROSSBILL. *Loxia curvirostra*.—On the European continent the Crossbill is extensively distributed, but chiefly towards the north; in our own country flocks are occasionally met with, and in some instances the birds have been known to breed with us. In 1839, “Mr. Charlesworth exhibited the nest, eggs, and young of the Crossbill before one of the scientific meetings of the Zoological Society: they were obtained in the neighbourhood of Farnham in Surrey.”

The Crossbill builds its nest of twigs, upon which is a layer of coarse moss, the lining being composed of the finer and softer portions of the same material. It would require an experienced eye to discriminate between the egg of the Crossbill and some of those of the Greenfinch, if they were mingled together. Those of the former species are from three to five in number. Few birds, we may add, are more

tame and unsuspicious than the Crossbill, and when feeding it may be closely approached, and, it is said, may be even captured by means of a fishing-rod with birdlime at the end.

THE PARROT CROSSBILL. *Loxia pittyopsittacus*.—Several instances of the capture of this bird in Britain are recorded, but it resides and breeds in Northern Europe. We are inclined to believe that the eggs and nest considerably resemble those of the preceding species.

THE EUROPEAN WHITE-WINGED CROSSBILL. *Loxia bifasciata*.—This species has occurred in considerable numbers in some parts of Europe, and specimens have several times been obtained in the British Islands. Its manners resemble those of the other Crossbills, but it has a different call-note and a different song. In size it a little exceeds a sparrow; but with its breeding habits we are unacquainted.

THE AMERICAN WHITE-WINGED CROSSBILL. *Loxia leucoptera*.—This is a rather less bird than the last species, and there are other points of difference between the two which it is needless to specify here. At least one specimen of the present species has been obtained in this country, as recorded by Mr. Yarrell. In the remote and northern regions of the American continent this bird resides, enliven-

ing with its agreeable notes the deep and silent forests of those frozen tracts. In winter it descends into Canada and the northern and middle States of the Union. "In the countries where they pass the summer, they build their nest on the limb of a pine, towards the centre; it is composed of grasses and earth, and lined internally with feathers. The female lays five eggs, which are white spotted with yellowish. The young leave the nest in June, and are soon able to join the parent birds in their autumnal migration. In the northern countries, where these birds are very numerous, when a deep snow has covered the ground, they appear to lose all sense of danger, and by spreading some favourite food, may be knocked down with sticks, or even caught by hand, while busily engaged in feeding. Their manners are also in other respects very similar to those of the Common Crossbill."—Prince Charles Bonaparte, quoted by Mr. Yarrell.

FISSIROSTRES. CLEFT-BEAKED BIRDS.

The third group in the Insectorial Order contains the Fissirostres, or Cleft-beaked birds, which are divided into the following families: the Swallows, the Goatsuckers, the

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Vincent Brooks Lith.

46. Common Wren. 47. Common Gold Crest. 48. Variety of the same.
49. Hawfinch. 50. Mountain Linnet. 51. Brown Linnet. 52. Jay.
53. Greater Whitethroat. 54. Pied Flycatcher. 55. Spotted Flycatcher.

Bee-eaters, the Kingfishers, and the Todies. These, as far as they are included in our plan, we shall consider in detail.

HIRUNDINIDÆ. SWALLOWS.

Marvellous rapidity of flight is a leading characteristic of the present family, in the power of sustaining which, the Swifts, which belong to it, surpass all other birds. Members of this family are found in all parts of the world, and are everywhere migratory.

THE CHIMNEY SWALLOW. *Hirundo rustica*.—This well-known bird is abundant in central and southern Europe, but decreases in numbers northward. In April it visits our own land, and is always welcomed as the harbinger of brighter seasons. Its nest is built of mud or clay, strengthened with straw or slender roots, open at the top, and lined with feathers. It is frequently placed in outhouses, sheds, or barns, upon the cross-beams, or against those which support the roof; other situations for building are, the insides of chimneys (whence its name), the eaves of houses, and the forsaken shafts of mines and coal-pits. The eggs are four or five in number, white spotted with grey and dull-red or reddish-brown.

Mr. Hewitson relates a pleasant circumstance in connection with these social birds. "It is well known," he says, "that the Swallows will return to the same place, and rear their young ones in the same nest, for many years in succession. A pair had for several years built their nest in the wash-house adjoining a cottage near York, finding their way in through a broken pane, passing in and out undaunted even on the washing-day. The rigour of a severe winter had made it necessary to glaze the broken window in the wash-house; and on the following summer, when the swallows came as usual, and found their ingress prevented, they seated themselves upon the clothes-lines, and in repeated chattering expressed their disappointment. The pane was, however, speedily removed; for the old lady to whom the place belongs is a great lover of their company, and likes well to hear their cheerful twittering."

These birds leave us in the autumn, some lingering in the south of Spain during the winter, but the main body proceeding to the continent of Africa. (Pl. VI. fig. 27.)

THE MARTIN. *Hirundo urbica*.—The Martin arrives in this country a little later than the Chimney Swallow, and builds its nest under the eaves of houses and at the corners of windows (whence its frequent designation of the Window

Swallow). The nest, as our readers are aware, is externally composed of mud, rendered more adhesive by the admixture of small pieces of straw; the shell thus formed is lined successively with dry grasses and feathers. The nests are usually seen grouped together, sometimes in considerable numbers. Along the coasts of our island, in certain localities, numbers of these nests appear in suitable situations, attached to the surface of the cliffs; and such positions may probably be considered the natural breeding stations of these birds. The eggs are four or five in number, and pure white. (Pl. IX. fig. 64.)

THE SAND MARTIN. *Hirundo riparia*.—This is one of our earliest spring visitors, reaching our shores often in March. As the name indicates, sandbanks, or the banks of rivers, if easily pierced, are selected by the birds for breeding in; where, having penetrated by dint of labour, sometimes to the depth of eighteen inches, or even more, they construct a nest of dry grass, lined with feathers, upon which the eggs, four or five in number, and spotless white, are deposited. (Pl. IX. fig. 63.)

THE PURPLE MARTIN. *Hirundo purpurea*.—Three specimens of this bird are mentioned by Mr. Yarrell as having been obtained in the British Islands. In the States of

America it is a well-known bird. The nest is described as composed of dry sticks, willow-twigs, grasses, leaves, green and dry, feathers, and whatever rags the bird meets with. The eggs, which are pure white, are from four to six in number. Two broods are reared in a season.

SPINY-TAILED MARTIN. *Hirundo caudacuta*.—We find this species mentioned in lists of British birds, but at present can give no account of its breeding habits or of its eggs.

THE COMMON SWIFT. *Cypselus apus*.—The Common Swift arrives in this country among the latest of the migratory birds, and departs early. Its powers of flight must have astonished and amused any who have watched it sweeping with a shriek of gladness through the cloudless fields of air on a calm summer's evening, and performing the most rapid, graceful, and varied evolutions around the lofty spire or the turrets of some ancient building. It is ever on the wing, except while sleeping or incubating. It breeds in holes in cliffs, towers, steeples, old buildings, and some other situations. The nest consists of dried grasses or straws, lined with feathers, and the eggs, from two to four in number, are pure white. (Pl. IX. fig. 59.)

THE ALPINE SWIFT. *Cypselus Alpinus*.—This is a larger

species than the last, and gifted with even superior powers of wing. It breeds in high rocks, ruins, and church-steeple, and lays from three to five eggs, of a pure white. The nest closely resembles in its construction that of the Common Swift.

CAPRIMULGIDÆ. GOATSUCKERS.

The Goatsuckers are nocturnal birds, and, except in this respect, closely resemble the Swifts in their habits. Their plumage, though unobtrusive in colour, is pencilled in the most beautiful manner; their eyes are large, and the gape of the mouth extremely wide, enabling these birds, while on the wing, to seize and engulf the largest insects. With one exception they seek their food by night, coming forth late in the evening and retiring before morning. In Britain, one species belonging to this family is an annual visitor.

THE COMMON OR EUROPEAN GOATSUCKER. *Caprimulgus Europæus*.—This beautiful bird is also known as the Night Hawk, Night Jar, etc., and visits this country in May, leaving it again in September. Its prey consists of moths, chaffers, and other large insects, which it seizes upon the wing; and in the darkening summer evenings it may be

seen gliding and darting in pursuit of its food, and at times performing the most surprising evolutions. Its length is about nine or ten inches. It provides no nest beyond selecting or forming some cavity in the ground, among fern or heath, or beneath the protection of shrubs. The eggs, two in number, are very beautiful, spotted or marbled with delicate shades of grey and brown upon a glossy white ground. (Pl. VI. fig. 32.)

The name of "Goatsucker," applied to this species, is derived from a strange fancy which prevailed in ancient, as it does in modern times, that it sucked the teats of goats. In our own country, however, it is not the udder of the goat, but that of the cow, which it is supposed to drain; while the Rev. G. White of Selborne relates that the country-people have a notion that it is very injurious to weaning calves, by inflicting, as it strikes at them, a fatal distemper. These superstitions probably all originated from its coursing around these animals during the night season, in search of the insects near them.

MEROPIDÆ. BEE-EATERS.

This family inhabits the warmer regions of the Old

World, those members of it which are accounted British, being known in this country only as accidental stragglers.

THE COMMON BEE-EATER. *Merops apiaster*.—This bird has been in some instances seen and killed in the British Islands. In Europe it is said to be common in Spain, Sicily, Greece, and Turkey. In Southern Africa it is also frequent. Excepting during the breeding season, it is said to assemble in troops; but this may be, as remarked by Sir William Jardine, preparatory to migration. On one occasion no fewer than twenty appeared in Norfolk. Their flight somewhat resembles that of the Swallow, but is more direct and less rapid. The colours of the plumage are very splendid. They breed in deep holes excavated in the banks of rivers, at the extremity of which, in a nest of moss and soft materials, are deposited from five to seven eggs, of pure white.

THE EUROPEAN ROLLER. *Coracias garrula*.—This is another of our accidental visitors, but it has been several times killed in this country. On the European continent it is very extensively distributed. It is described as being wild, shy, restless, and fierce, and frequenting by preference deep forests of oak and birch. It is brilliant in colouring, and its length is about thirteen inches. It forms its nest

in holes of trees or banks, and in Malta, where trees are scarce, is reported to have built on the ground. The eggs, from four to seven in number, are of a lustrous white.

HALCYONIDÆ. KINGFISHERS.

The Kingfishers are distributed over many parts of the globe, and some, which inhabit desert regions, prey upon snakes and other reptiles; others again feed on insects, and some of the largest species on crustacea. Our common British species lives partly on small fish, which it seizes by a sudden plunge, afterwards killing its prey by repeatedly beating it against a bough. The members of this family are not all so splendid in their plumage as our native species. The largest form in it is an Australian species, known by the colonists by the strange and inelegant *sobriquet* of the "Laughing Jackass," which name it has received from its singular and startling laugh, which somewhat resembles the syllables yah-yah-yah, commenced in a low but gradually ascending to a high and loud tone. Snakes are its favourite food, and on this account it must be valuable to man, notwithstanding the occasional depredations among

poultry of which it is accused. It is about eighteen inches in length, and not remarkable for the beauty of its colours.

THE COMMON KINGFISHER. *Alcedo ispida*.—None of our native birds exceed the Kingfisher in brilliancy of colour; and its beauty is enhanced by the continually changing tints of its plumage, which vary with every change of light and of position. It is not common, though occasionally occurring throughout the British Islands in suitable situations; that is to say, by streams and rivers in secluded spots. On the European continent it is also generally, but not abundantly, diffused. The Kingfisher usually captures its prey by watching on some branch or stump overhanging the stream, and then, at some favourable moment, by a sudden plunge, seizing the fish which comes within its reach. The place chosen for incubation is a burrow, probably made by the bird itself, in the steep or overhanging bank of a stream or river, where, at the end of a gallery two or three feet in extent and always somewhat ascending in its progress, it lays six or seven eggs, of pearly whiteness.

THE GREAT BELTED KINGFISHER. *Alcedo Alcyon*.—This is a native of America, from Hudson's Bay to Mexico. Its flight is rapid, and its voice, harsh and loud, has been likened to the sound of a watchman's rattle; but its plu-

mage is brilliant, and its size greatly exceeds that of our native species. Its nest, of sticks and feathers, is placed in a cavity at the end of a gallery, sometimes four or five feet in extent, dug by the bird itself in the clayey or sandy and perpendicular bank of a stream. Its eggs are five in number, and white.

TODIDÆ. TODIES.

These are small American birds, resembling the Kingfishers in their general form, but they have no representative in our British list.

TENUIROSTRES. SLENDER-BILLED BIRDS.

The fourth and last group in the Insectorial Order consists of the *Tenuirostres*, or Slender-billed Birds, and in it are contained some of the most exquisite forms and glowing colours to be found throughout the feathered race; these however are peculiar to foreign regions and warmer climes. The representative of this group which we possess, although a handsome bird, is not to be compared with those gorgeous species which inhabit other lands. The families comprised

in this group are the Humming-birds, the Sun-birds, the the Hoopoes, Birds of Paradise, and the Honey-suckers: none of these families however are represented among British birds, except the Hoopoes.

THE HOOPOE. *Upupa epops*.—In summer this bird migrates as far north as Denmark, Sweden, and Russia, and is an occasional visitor to our island, where it is reported in some instances to have bred. The Hoopoe delights, it is said, in low, moist situations, in the neighbourhood of woods and thickets, and in general selects for its nest the hollow of some tree, perhaps more frequently of the willow, from the circumstance that this tree grows in marshy situations such as the Hoopoe delights to frequent. The nest is formed of a few dried grass-stalks and feathers; and the eggs, from four to seven, are of a pale-bluish or lavender-grey, faintly speckled with brown, and of a coarse and peculiar grain.

CERTHIADÆ. CREEPERS.

Intermediate between the Tenuirostral group of the Insectorial birds and the Scansorial Order, there occurs a family, the *Certhiada*, including only three forms which are British, namely, the Common Creeper, the Nuthatch, and

the Common Wren. These we shall proceed to notice. They form as it were the connecting link between the Insectorial and Scansorial Orders.

THE COMMON CREEPER. *Certhia familiaris*.—This beautiful bird is one of our smallest species, and is by no means uncommon in woods, or parks with aged timber, where it may be seen, by glimpses, spirally ascending the trunks of trees, and generally contriving to be on that side which is opposite to the observer. When it has examined one tree it descends to the root of another, on which it again commences its course upward: its search is for those insects which lurk in the crevices of the bark or of the decayed wood, and upon which it feeds. It is general in its occurrence throughout Europe, and by some distinguished ornithologists the American species is believed to be identical with it. It breeds early in the spring, in holes of decayed trees, and forms its nest of dried grass, moss, etc., lined with feathers. The eggs, from six to nine, are white, spotted with red, and closely resemble in their appearance those of the Willow Wren and of the Blue Titmouse.

THE NUTHATCH. *Sitta Europæa*.—If our readers have gardens with a few filbert-trees in them, and have not yet noticed the visits of the Nuthatch, we should like to in-

roduce him to their attention. His bold and somewhat startling note, "Twit, twit, twit," uttered with quick repetition may first indicate his proximity; and the delicate plum-coloured blue tint of the upper part of his body, and pale-orange of the under, with the lengthened and pointed form of his bill, and his facility of running either up or down the trunks and branches of the trees, are features by which he may be readily identified. This little bird (about the size of a Robin) has the habit of fixing a nut or filbert in some crevice of the rough bark of a tree, and then, with his sharply pointed and lengthened bill, endeavouring to penetrate its shell and obtain the kernel. Often have we noticed the Nuthatches thus employed in our garden; and their handsome appearance, sprightly manners, and industrious habits have rendered them ever welcome visitors. The Nuthatch breeds in holes of time-worn trees, and where the entrance to its nesting-place is too large, it plasters it up with clay to the required dimensions. The nest consists of a few dry leaves, with perhaps a little grass; and the eggs, from five to seven in number, are white, spotted or blotched with red. They differ from those of the Great Tit a little in form, and also in generally being more boldly marked with colour. (Pl. VI. fig. 28.)

THE COMMON WREN. *Sylvia troglodytes*.—This little hardy bird is found even to the Arctic circle, while it is distributed over every part of Britain. Bold and venturesome as it is at some seasons, in its approach to our habitations, no bird perhaps excels the present in careful contrivance to secure its eggs and young from discovery ; and while we have heard its song in the early morning in many directions among the ruins of a neighbouring abbey, and were assured the nests were there likewise, we failed to discover them. In the ivy-covered hole of a wall, or among the fallen masses, the nests of the Redbreasts might be found, but for the nest of the Wren we looked in vain. Its ingenuity consists not only in selecting a retired or unsuspected spot for its nest, but in most skilfully adapting the materials of which it is composed to the appearance of those substances among which it may be placed : thus in the green ivy, dark mosses will elude observance, or the russet hues of faded foliage or vegetation are imitated with substances of a kindred nature ; and often, perhaps, the only circumstance which directs the eye of the passer-by to the nest, is the neat arrangement of the materials immediately around the entrance. The nest is rounded, or oval, in form, with a small opening in front, just capable of admitting the

bird, and the interior is sometimes lined with feathers, but not always. The eggs, usually seven or eight in number, are white, more or less spotted with red. (Pl. VIII. fig. 46.)

ORDER III. SCANSORES. CLIMBING BIRDS.

This Order is not numerously represented in our British list. The families comprised in it are the Woodpeckers, Cuckoos, Toucans, and Parrots; but we possess only a few species belonging to the two former. The peculiar arrangement of the toes in the birds of this Order, two being placed behind, and all four arising nearly on the same level, while it impedes their progress on the ground, greatly assists them in ascending and traversing the trunks and branches of trees. Some of the birds in this Order incubate in hollow trees, and one family is remarkable for depositing its eggs in the already occupied nests of other birds. Insects and fruit constitute the food of the Order before us.

PICIDÆ. WOODPECKERS.

The bill of the Woodpecker is admirably adapted, by its

length and wedge-like form, for perforating the bark of trees, and its tongue, which is of great length and barbed at the point, can be protruded beneath the bark or into the crevices of decayed trees, where, if it does not transfix the insects which shelter there, it secures them by means of a viscid glue with which it is covered. The rigid and pointed character of the tail-feathers renders them an important aid to the bird when ascending the trunks of trees. The following ingenious and reasonable defence of the Woodpecker from an apparently unjust charge, is from the pen of Mr. Waterton. "The proprietors of woods in Europe," remarks this writer, "have long accused him of injuring their timber, by boring holes in it and letting in the water, which soon rots it. The colonists in America have the same complaint against him. Had he the power of speech which Ovid's birds possessed in days of yore, he could soon make a defence. 'Mighty lord of the woods,' he would say to man, 'why do you wrongfully accuse me? why do you hunt me up and down to death for an imaginary offence? I have never spoiled a leaf of your property, much less your wood. Your merciless shot strikes me at the very time I am doing you a service; but your short-sightedness will not let you see it, or your pride is above examining closely the actions

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56. Sedge Warbler. 57 Chiff-Chaff Warbler 58. Willow Warbler
59. Common Swift 60. Common Bullfinch 61 Hedge Accentor.
62. Missel Thrush 63. Sand Martin. 64 House Martin. 65. Tree Pipit.

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of so insignificant a little bird as I am. If there be that spark of feeling in your breast which they say man possesses, or ought to possess, above all other animals, do a poor, injured creature a little kindness, and watch me in your woods only for one day. I never wound your healthy trees. I should perish for want in the attempt. The sound bark would easily resist the force of my bill; and were I even to pierce through it, there would be nothing inside that I could fancy or my stomach digest. I often visit them, it is true, but a knock or two convinces me that I must go elsewhere for support; and were you to listen attentively to the sound which my bill causes, you would know whether I am upon a healthy or an unhealthy tree. Wood and bark are not my food. I live entirely upon the insects which have already formed a lodgment in the dis-tempered tree. When the sound informs me that my prey is there, I labour for hours together till I get at it; and by consuming it for my own support I prevent its further depredations in that part. Thus I discover for you your hidden and unsuspected foe, which has been devouring your wood in such secrecy that you had not the least suspicion it was there. The hole which I make in order to get at the pernicious vermin will be seen by you as you pass under

the tree. I leave it as a signal to tell you that your tree has already stood too long. It is past its prime. Millions of insects, engendered by disease, are preying upon its vitals. Ere long it will fall a log in useless ruins. Warned by this loss, cut down the rest in time, and spare, oh spare the unoffending Woodpecker! ”

GREAT BLACK WOODPECKER. *Dryotomus Martius*.—On the continent of Europe this bird is chiefly met with in the northern and central parts, but it is of extremely rare occurrence in Britain. It nestles in the hollow trunks of trees, and the eggs, of a pure and glossy white, are three in number.

GREAT SPOTTED WOODPECKER. *Dendrocopus major*.—This is the only species of Woodpecker which extends to the northern parts of our island, and is neither frequent in its occurrence there nor in Ireland; it is more frequent however in the southern parts of England. In the hollow of a tree it lays five white and glossy eggs upon the decayed wood. The nidification of this bird commences about the end of March or the beginning of April.

LESSER SPOTTED WOODPECKER. *Dendrocopus minor*.—This Woodpecker is unknown in Scotland or Ireland, but occurs in the southern and western counties of England.

Like the preceding species, it nestles in the holes of trees, laying its eggs, which are white, and five in number, upon the decayed wood, and sometimes at a considerable distance from the entrance of its temporary habitation.

THE GREEN WOODPECKER. *Brachylophus viridis*.—This species is more frequently met with in the south of England than the preceding, but in Ireland and Scotland it appears to be unknown, though said to be generally distributed over Europe. It is one of our most beautiful birds. The nest is the hollow of a tree, and the eggs vary from four or five to six, and even occasionally eight. In their unblown state they are among the most beautiful of natural objects, having an exquisite and pearl-like tint, and a surface polished as glass; when blown, the surface remains but the hue is gone, and they are of the purest white. (Pl. X. fig. 72.)

THE HAIRY WOODPECKER. *Picus villosus*.—This is a North American species, and is common in orchards during the autumn and winter, where it bores the bark of trees and the decayed wood of palings in search of insects and their larvæ. In May it seeks the forest, and either appropriates to itself the hollow of a tree, or makes one for itself in which to deposit its eggs, which are white, and about five in number. It can only be regarded as a straggler in this country.

THE THREE-TOED WOODPECKER. *Apterus tridactylus*.—The forests of the northern and eastern portions of Europe, as well as those of Asia, are the abodes of the present species. It is very abundant in Norway, Russia, and Siberia, and is common in the Swiss Alps. A hole in a pine-tree is a favourite receptacle for its eggs, which are white, and four or five in number.

THE WRYNECK. *Yunx torquilla*.—This bird, nearly allied to the Woodpecker, is easily distinguished by its peculiar note, which is powerful for so small a bird, and greatly resembles the scream of the Kestrel. Through two or three summers we have had a pair of these birds settled in the hollow of an old apple-tree, in our garden; where, with no other preparation than that which the mouldering wood within the cavity supplied, they have deposited their eggs, of the purest white when blown, but previously of the most delicate pink hue, having almost a pearly appearance. Last year several of these eggs were laid; the first about the 23rd of May; this year (1857) the first egg was laid about the 24th of May. (Pl. X. fig. 75.)

CUCULIDÆ. CUCKOOS.

This family, containing many species, inhabits warm and temperate regions. Most of the family are migratory, and few build nests for themselves: they subsist upon insects and fruits. Three species are claimed as British, although in the instances of two, this claim can only rest upon very occasional visits.

GREAT SPOTTED CUCKOO. *Cuculus glandarius*.—About Christmas 1843, a specimen of this species was taken near Clifden, in the county of Galway. It was pursued by Hawks, and sought refuge in a hole in a stone fence, from whence it was taken alive, and lived four days. It was presented to Trinity College, Dublin, “and is now,” says Mr. Yarrell, “in the Museum.” This bird inhabits Senegal and North Africa. It is stated that a male and female were found near Pisa, in Italy, where they made their nest, laying four eggs, which they sat on, and hatched. Of the character of its nest, or the colour of its eggs, we can at present give no account.

THE COMMON CUCKOO. *Cuculus canorus*.—The Cuckoo arrives in Britain in April; the old birds leaving again by the beginning of July, and the young departing in August.

During the earlier summer season the air seems haunted with the Cuckoo's voice, and wherever we may be, whether in green or shady lanes, or on the wild and open heath, the shouting Cuckoo's tones, softened by distance, or startling by their nearness, fall on the ear; sounds most grateful when first heard, as the herald of genial seasons, and, to ourselves, never becoming unwelcome by continuance.

Why the Cuckoo wanders from place to place, seeking some stolen home for its future progeny, and why it resigns the care of its young to strangers rather than rear them and provide for them itself, are problems not perhaps perfectly solved; though, without doubt, a reason exists, which, discovered, would vindicate the wisdom and benevolence of the Creator in this arrangement. The most probable suggestion which we have met with on the subject, is that of Dr. Jenner, who supposed that the short residence of the Cuckoo in this country incapacitated it for rearing its young. Arriving about the middle of April, its egg is seldom ready for incubation, he remarks, before the middle of May; a fortnight passes before the egg can be hatched; three weeks more elapse before the young birds can fly; and during five weeks more the foster-parents continue to feed it; so that if a Cuckoo should be ready with an egg much sooner than

the period named, yet not a single nestling, even of the earliest, would be fit to provide for itself before the parent would be directed instinctively to seek a new residence, and would thus be compelled to abandon its young. If these considerations account for the peculiar habits of the Cuckoo, how remarkable the provisions upon which the successful issue of those habits depends ! That the egg of so large a bird should be so otherwise disproportionately small, scarcely exceeding in size those of the birds in whose nest it is deposited, and thus escaping detection, is a most marked arrangement of an Allwise Creator ; for while the Cuckoo is nearly as large as the male Sparrow-hawk, its egg scarcely, if at all, exceeds in size that of the Skylark ; while, again, the wisdom is no less manifest which directs it to select, for the purpose of depositing its eggs, the nests of insect-feeding birds, resembling in this respect the nature of its young. The nests in which its eggs are most frequently deposited are those of the Hedge Sparrow, Wagtail, and Titlark ; but many others are occasionally chosen. The egg is, as just observed, small, being about the size of the Skylark's, and not very dissimilar in colour, but of a rounder form, though some of the light varieties, Mr. Hewitson says, much resemble those of the Pied Wagtail. The young Cuckoo ejects, as early as it

can, all other occupants from the nest, and thus enjoys the undivided attention of its foster-parents. We are not aware that the exact number of eggs laid by the Cuckoo during the season has been ascertained, but, perhaps, from analogy between our British species and foreign members of the same family, we might suppose four or five. It sometimes, though very rarely, happens that two eggs are laid in the same nest, when, upon their being hatched, the stronger bird ejects its companion, and remains sole tenant of the dwelling.

Attempts have been made, from time to time, to keep Cuckoos alive in captivity, but almost always without success, as they have died in the winter; but Mr. Thompson has mentioned two exceptions; and in one of the instances noticed by him, the bird lived more than a year, and was at last killed by accident. This bird, while in a captive state, was never known to drink, though when presented with a drop of water at the end of a finger or straw, it would sip it, and it seemed to delight, when seated on its mistress's or other person's hand, to put its bill into their mouths and sip saliva. It delighted greatly in warmth, and would sit upon the fender, turning itself in various directions, and spreading its wings and feathers to receive the heat, of which it could

bear a temperature equal to 100 degrees, for a considerable time, with seeming satisfaction.

THE AMERICAN CUCKOO. *Coccyzus Americanus*.—This species, called also the Yellow-billed Cuckoo, is in the United States denominated the Cow-bird, from its peculiar notes, in which the syllable cow is frequently repeated. It feeds on insects and berries, having especial partiality for the mulberry, and eating many grapes in autumn. It is not abundant anywhere. Unlike our Cuckoo, it forms its own nest, of a few dry sticks and grass, much like that of the common Dove, often within reach of man, who seldom disturbs it. The eggs are four or five in number, of a rather elongated oval form, and bright green colour.

ORDER IV. RASORES. GALLINACEOUS BIRDS.

The Rasorial or Gallinaceous birds are of exceeding importance to man, since they furnish him with food of a delicate and nutritious character, and, from the facility with which many of them become acclimated when transferred from their native haunts to other regions, as well as from

their rapid increase, become peculiarly available for domestication. Thus the Turkey has been introduced into this country from America, our domestic poultry, with the Pheasant and Pea-fowl, from Asia, and the Guinea-fowl from Africa, and none of these appear to have suffered much by their change of country or of climate.

In general the birds of this Order deposit and hatch their eggs in a rude nest upon the ground, but some which reside in forests, build in trees. The young are generally numerous, and able to run about and provide for themselves the moment they quit the shell.

Central Asia, North America, and the northern part of South America, may be considered the strongholds of the typical *Rasores*; but our British species are not numerous.

We have included under this Order the following families:—the Pigeons, Partridges, or Grouse, Pheasants, Curassow-birds, and Bustards.

COLUMBIDÆ. PIGEONS.

This family includes the well-known tribe of Pigeons and Doves, and contains a large number of elegant and beautiful forms; but in some very important respects it differs from the other families of the present Order, and has been con-

sidered by some writers to constitute of itself a distinct Order. We have, however, in the present volume, followed several distinguished naturalists in placing the Pigeons among the Rasorial birds.

Doves, or Pigeons, have from very ancient times been domesticated, and in eastern countries have been kept in vast numbers. A very beautiful figure employed by the prophet Isaiah (lx. 8) finds elucidation in this fact: "Who are these that fly as a cloud, and as the doves to their windows?" Flocks of these birds may be seen issuing from the pigeon-towers provided for them in the East, or returning to them, or wheeling around their pinnacles. "Their numbers," says Mr. Morier, "and the compactness of their mass, literally looked like a cloud, at a distance, and obscured the sun in their passage."

There is scarcely a doubt that our own domesticated Pigeon has been derived from the Rock Dove, which breeds naturally in the seaside precipices or caves. The size of the Wood Pigeon, its refusal when in captivity to breed with the tame Pigeon, and the failure of almost every attempt to reduce it to a state of domestication, setting aside colouring, are sufficient proofs of specific distinctness. "Still more remote from the common Pigeon is the Turtle Dove, a bird of

passage, and one of the spring visitors to our shores." The Rock Dove, from whence, as already intimated, our domestic Pigeons have been derived, is distinguished from a yet remaining native species, the Stock Dove, not only by the possession of a more slender form, but by the white colour of the lower part of the back, and by two distinct bands of leaden-black across the wings; and it has been remarked that these distinctive features are found in our ordinary dovecot Pigeons; and when in the fancy kinds they become by the breeder's art imperceptible, they are ever ready to return. All the varieties of the domestic Pigeon breed with each other, and with the wild Rock Dove: and without due care all soon degenerate, as it is termed, and acquire the original form and colouring. Some of the varieties of the domestic bird we may notice when we come to write of the original stock from whence it sprang.

THE WOOD PIGEON, OR RING DOVE. *Columba palumbus*.
—This is the most common, and most generally distributed, as well as the largest of our native wild Pigeons, and is to be met with in the wooded districts of our island, as well as of the greater portion of Europe. In our own country it is, however, more sparingly distributed in the north, where the low character of the woods is unfriendly to its presence. During

the winter great numbers of Wood Pigeons arrive from the northern parts of Europe; but our native birds are not considered migratory. This species feeds on all kinds of grain, as also on peas, beech-mast, acorns, and berries, and in the winter season on turnips; while in spring it visits gardens, eating the young cabbage-plants, and other greens, and cropping the peas, even when five or six inches above the ground. Except during the breeding season, Wood Pigeons are gregarious, and shy in their habits, but during that season, which commences in April, much of this timidity and shyness disappears, and young plantations, shrubberies, and even gardens possessing large evergreens, are resorted to for the purpose of incubation. The nest consists of a few sticks placed across each other, and is a platform of the slightest construction; and the eggs, almost invariably two in number, are of a glossy white when blown, but previously of a delicate pinkish-white. There are two or three broods in a year. The shy and timid nature of these birds renders them very difficult to domesticate, and little success has hitherto attended endeavours made to accomplish this object.

THE STOCK DOVE. *Columba oenas*.—This species seldom if ever occurs in Scotland or Ireland, and appears from the statements of authors to be very partial in its distribution

in England, frequenting chiefly the midland and southern counties, and preferring well-wooded districts, although occasionally found in more open situations. In the counties of Suffolk and Norfolk it frequently makes its nest in the holes in the ground, generally selecting a rabbit's burrow for the purpose. Its nest is of twigs, usually placed in the hole of a decayed and time-worn tree, or in the cavity on the top of a pollard, but never, like that of the Wood Pigeon or Turtle Dove, on the fork or spreading branches of a tree. The eggs are white, and two in number. They are less in size than those of the Wood Pigeon.

THE ROCK DOVE. *Columba livia*.—Rocks and caves are the natural resorts and breeding-places of this species, and it rarely ventures very far from the shore. In the winter the Rock Pigeons assemble in flocks, and feed on the various grains or seeds which their vicinity may supply, and certain of our land mollusca are at times devoured. In a wild state they seldom or never perch on trees. As the last species frequents the southern parts of our island, so the present species is most numerous towards the north. Not only on the southern shores of Scotland, but on all the rocky shores of its northern coast, and in the islands of Orkney and Shetland, Rock Pigeons are common birds, breeding

Vincent Brooks, lith.

66. Blue Titmouse. 67. Long tailed Titmouse. 68. Titmouse (*blown*)
 69. Great Titmouse. 70. Blackcap 71 House Sparrow. 72. Green
 Woodpecker. 73. Skylark. 74. Greenfinch. 75. Wryneck.

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and roosting in the numerous caverns with which the precipices are pierced. The eggs are white, and two in number. We have previously remarked that this species is believed to be the stock from whence our domestic Pigeons have been obtained, "but it may be," Sir W. Jardine says, "that the more remarkable varieties have some additional cross."

The Carrier Pigeon, one of the fancy breeds of dovescot birds, now become numerous, exceeds in rapidity of wing and power of endurance all our domestic Pigeons; its ordinary flight is about a mile a minute, but it has been known to fly nearly one hundred and fifty miles in an hour. It is to its home, from which it has been purposely taken, and to which it is strongly attached, that the Pigeon makes its way; and it is the desire and longing for home which impels it, carried to a distant spot and turned loose, to attempt to regain the favourite spot; and regain it the bird does, at least in general; but when we consider the distances which it will sometimes traverse, and usually with certainty, to regain its accustomed habitation and associates, the skill by which it directs its course is most remarkable, and the method inexplicable.

The "Tumblers," "Fantails," and "Broad-tailed Shakers,"

présent remarkable deviations from the original type, while in the "Jacobin" the feathers are reversed, and turn over as a cowl on the back of the head and neck.

THE TURTLE DOVE. *Turtur migratorius*.—"The Turtle Dove," writes Sir W. Jardine, "may be considered as a species entirely southern; the instances of its capture in the northern counties of England, or in one or two instances in Scotland or Ireland, being only those of stray birds, which, from some cause or other, have exceeded the limit of their migration." It arrives in those parts of Britain which it frequents, about the end of April or beginning of May, and leaves again in August or September. The food of this species consists of green wheat, with peas, rape, mustard-seed, hemp-seed, etc.

The nest is a slight platform of twigs, placed occasionally but a little distance above the ground (one which we saw during the present year being not more than five or six feet above it); and the eggs, which are very much smaller than those of either of the previously named species of the present family, are white, and two in number. In summer the Turtle Dove is spread over southern and temperate Europe and various parts of Asia, but it is believed to winter in Africa.

THE PASSENGER PIGEON. *Ectopistes migratoria*.—This bird, which is a native of North America and ranges over nearly the whole of that vast continent, has been taken in Britain, but can only be considered a straggler here. In America it is termed the Wild Pigeon, and is celebrated (as well it may be) for inundating, in flocks of thousands, various districts to which, at uncertain periods, it resorts for food. The accounts given by Audubon, Wilson, and others, of the multitudes of these birds which congregate together in North America would almost exceed belief, were they not placed beyond the power of doubt by the character of the writers and their agreement in the statement of the facts.

Mr. Audubon says, "In passing over the Barrens, a few miles beyond Hardensburgh, I observed the pigeons flying from north-east to south-west, in greater numbers than I thought I had ever seen them before; and feeling an inclination to count the flocks that might pass within the reach of my eye in one hour, I dismounted, seated myself on an eminence, and began to mark with my pencil, making a dot for every flock that passed. In a short time, finding the task I had undertaken impracticable, as the birds poured on in countless multitudes, I rose, and counting the dots then put down, found that one hundred and sixty-three had

been made in twenty-one minutes. I travelled on, and still met more the further I proceeded. The air was literally filled with pigeons; the light of noonday was obscured as by an eclipse, and the continued buzz of wings had a tendency to lull me to repose.

“Before sunset I reached Louisville, distant from Har-densburgh fifty-five miles; the pigeons were still passing in undiminished numbers, and continued to do so for three days in succession. The people were all in arms. The banks of the Ohio were crowded with men and boys incessantly shooting at the pilgrims, which there flew lower as they passed the river. Multitudes were destroyed. For a week or more the population fed on no other flesh than that of pigeons, and talked of nothing but pigeons.”

The account given of the roosting-places of these birds by the same writer is not less remarkable. He writes:—“One of these curious roosting-places, on the banks of the Green River, in Kentucky, I repeatedly visited. It was, as is always the case, a portion of the forest where the trees are of great magnitude, and where there was little under-wood. I rode through it upwards of forty miles, and found its average breadth to be rather more than three miles. My first view of it was about a fortnight subsequent to the

period when they had made choice of it, and I arrived there nearly two hours before sunset. Few pigeons were then to be seen; but a great number of persons, with horses and waggons, guns and ammunition, had already established encampments on the borders. Two farmers from the vicinity of Russelville, distant more than a hundred miles, had driven upwards of three hundred hogs to be fattened on the pigeons that were to be slaughtered. . . . The sun was lost to our view, yet not a pigeon had arrived. . . . Suddenly there burst forth a general cry of 'Here they come!' The noise which they made, though yet distant, reminded me of a hard gale at sea passing through the rigging of a close-reefed vessel. . . . The pigeons, arriving by thousands, alighted everywhere, one above another, until solid masses as large as hogsheads were formed on the branches all round. Here and there the perches gave way with a crash, and, falling on the ground, destroyed hundreds of the birds beneath, forcing down the dense groups with which every stick was loaded. . . . The pigeons were constantly coming, and it was past midnight before I perceived a decrease in the number of those that arrived. Towards the approach of day, the noise in some measure subsided; long before objects were distinguishable, the pigeons began to move off in

a direction quite different from that in which they had arrived the evening before, and at sunrise all that were able to fly had disappeared." Wilson tells us that when the Pigeons have frequented an extent of forest for some time, all the tender grass and underwood is destroyed; the surface strewn with large limbs of trees, broken down by the weight of the birds; and the trees themselves, for thousands of acres, are killed as completely as if destroyed with an axe. The breeding-places of these Pigeons are even more extensive than their temporary roosting-places, and present, in the season of the young birds, scenes not less impressive than that recently described. Not far from Shelby Villa, in Kentucky, Wilson informs us, one of these pigeonries extended through the woods forty miles in length and several in breadth. As soon as the young were grown, and before they left their nests, numerous parties came to this spot, "a-pigeoning," as they called it. They came with waggons, axes, beds, cooking utensils, and encamped for several days. The noise of the Pigeons in the woods was so great as to terrify the horses; and it was difficult for one person to hear another without bawling. The ground was strewn over with eggs and young Pigeons, on which herds of hogs were fattening. Hawks, Buzzards, and Eagles,

were sailing about in great numbers, devouring the young ones as they chose; while from twenty feet upwards to the tops of the trees, the view through the woods presented a perpetual tumult of crowding and fluttering multitudes of Pigeons, their wings roaring like thunder, mingled with the frequent crash of falling timber; for the axemen were at work, cutting down those trees which seemed to be most crowded with nests; they continued to fell them in such a manner that they might bring down several others, by which means the falling of one large tree sometimes produced two hundred young ones of a good size. On some single trees there were upwards of a hundred nests.

In this country the Passenger Pigeons have been introduced into aviaries, or kept in confinement, and have seemed to thrive well, and in some instances have incubated and hatched their young. Their nests are composed of a few dry twigs supported on the forks of the branches. Each nest is said to contain but one egg, which is white.

TETRAONIDÆ. GROUSE.

In this family are included the Grouse, Ptarmigans, Partridges, Quails, etc.

THE WOOD GROUSE, OR CAPERCAILZIE. *Tetrao urogallus*.—The Capercaillie was for many years extinct in Britain, but by the importation of birds from Northern Europe we hope it may be considered as reinstated in its ancient domain. In size the male bird equals the Turkey; a fine male specimen will sit two feet above the branch on which he is perched, and will measure in total length from two feet ten inches to three feet, but the female is considerably smaller. "The Capercaillie is abundant in Norway, Sweden, Russia towards Siberia, the north of Asia, and some parts of Germany and Hungary, wherever pine-forests of sufficient extent afford it a home." It feeds on the leaves of the Scotch fir, juniper-berries, cranberries, blueberries, and occasionally, in winter, on the buds of the birch. The breeding season commences early in the spring, before the snow is off the ground. The female makes her nest upon the ground, and lays from six to twelve eggs, of a pale orange-colour, speckled with orange-brown. (Pl. XI. fig. 76.)

THE BLACK GROUSE, OR BLACKCOCK. *Tetrao tetrix*.—This species is distributed in Great Britain, in suitable localities, from the New Forest to the Highlands of Scotland, but is far more abundant in the north than in the south. The Blackcock is polygamous, and upon the females

devolve the whole duties of rearing and protecting the young. The female breeds in May, making a rude nest under the shelter of intertangled herbage or brushwood, and laying from six to ten eggs, of a pale yellowish colour spotted with yellowish-brown. The young, when hatched, are conveyed to the low, rushy hollows where there is abundance of food supplied by the tender seeds of the rushes and alpine grasses, and they are also described as feeding abundantly on insects and their larvæ: the adult birds feed on various berries, buds of the birch and alder, shoots of heath and fir, and grain of various kinds. The Black Grouse is pretty generally spread over Europe.

THE RED GROUSE, OR RED PTARMIGAN. *Lagopus Scoticus*.—"The Red Grouse, or Moorfowl," writes Sir W. Jardine, "has peculiar claims on the naturalists and sportsmen of Britain, as being an insulated species hitherto undiscovered except in moorland districts of Great Britain and Ireland. Those birds which, in other parts of Northern Europe, resemble it in the colouring of the plumage of summer, differ from it in several particulars, of sufficient importance to constitute distinct species." (Pl. XI. fig. 78.)

In Great Britain it is most abundant in the remote districts, and especially in the wildest parts of the Highlands

of Scotland. Birds of the present species pair, and continue with their broods until a return of the warm season. As early as the end of March the female commences laying, and the eggs, from eight to twelve in number, "are deposited in a shallow hollow at the foot of some tuft of heath, which affords a partial covering and shelter, and only a few straws or grasses serve to separate them from the ground." The eggs are of a pale yellow, or sometimes of a redder hue, and most richly and profusely marked with brown, almost approaching to black, and are among the most beautiful of our British series.

THE COMMON OR WHITE PTARMIGAN. *Lagopus mutus*. —Upon the mountain-ranges which occur from the middle to the north of Scotland, and in spots "where nothing is to be seen but an interminable series of rugged rocks distributed in boulder-masses, varying in size from huge lumps to pieces of a few inches in diameter," the Ptarmigan delights to haunt, increasing in abundance as the same kind of wild country reaches to the north, and extending beyond the mainland to the Hebrides. In Ireland it is not indigenous, and it is doubtful whether it is to be found at all, at present, in England. In these barren and sequestered situations the nest, of the very slightest character, is placed

under the rocks or stones, where it is very difficult of discovery, and the eggs, from seven or eight to twelve in number, are deposited, very closely resembling in appearance those of the Red Grouse. (Pl. XI. fig. 77.)

THE COMMON PARTRIDGE. *Perdix cinerea*.—The Partridge frequents cultivated districts and rich corn-lands, and is extensively distributed over the continent of Europe. In Britain, while many of this species are to be found in Scotland, it is most abundant in the more southern parts of the island. Partridges pair early, indeed some time before preparations for incubation commence. The nest or hollow where the eggs are deposited is almost invariably on the ground, among grass or corn, under the shelter of furze, at the bottom of a thorn-hedge, and often in situations greatly exposed to discovery. The eggs, from twelve to twenty in number, are of a greenish-grey and without markings of any kind. While Partridges will defend their young against certain aggressors, they seek to evade the apprehended designs of their more powerful foes by stratagem. "The scream of the parents, apparently tumbling and escaping away with broken legs and wings, is well acted, and often succeeds in withdrawing the dog and his young attendant beyond the possibility of discovering the hiding-places of

the brood : when this is attained, their wonted strength is soon recovered, a flight to a considerable distance is taken, but by the time the aggressor has reached the marked spot the bird has again circuitously come up with her charge, and is ready again to act her part if discovered."

THE RED-LEGGED OR FRENCH PARTRIDGE. *Perdix rufa*.—In England this bird has been naturalized to some extent, but is not so much esteemed for the table as the Common Partridge. It is an abundant species in France and Italy, and is a native also of Guernsey and Jersey. It is a beautiful bird, and forms a more considerable nest than the common species, constructing it of dry grass mixed with a few feathers, and raising it a little above the level of the ground. The eggs, usually ten or twelve in number, but sometimes from fifteen to eighteen, are of a pale yellowish colour, spotted and speckled with yellowish-brown.

THE BARBARY PARTRIDGE. *Perdix petrosa*.—Two specimens of this bird are recorded by Mr. Yarrell as having been met with in this country. This species is found in Africa, as far south as Senegal; is said to be abundant in Spain, inhabits Provence and France, and has been found in Germany, Italy, Greece, and eastward as far as the country of Mount Caucasus. The female chooses barren

places and desert mountains, where, among low bushes, she deposits her eggs, to the number of fifteen, of a yellowish colour, thickly dotted with greenish-olive spots.

THE VIRGINIAN ORTYX. *Ortyx Virginiana*.—It would be difficult, perhaps, to furnish a more condensed and excellent account of the present species than the following, which we extract from the ‘Pictorial Museum of Animated Nature.’ “According to Wilson,” says the writer of that work, “the Virginian or Maryland Quail is a general inhabitant of North America, from the northern parts of Canada to the extremity of Florida, and is numerous in Kentucky and Ohio. It frequents the vicinity of cultivated lands where grain is in plenty; and though the coveys sometimes take shelter in woods or among bushes, they are most usually found in the open fields or along fences of briars. Where not much persecuted by sportsmen, they become almost half-domesticated, and in winter approach the farmyard, mixing with the poultry, and there gleaning their subsistence. It would appear indeed that with little trouble this species might be domesticated. The Virginian Quail begins to build early in May, making a thick nest of leaves and dried grass, under a tuft of grass that shelters and conceals it; it is domed, and has a lateral entrance. The eggs are from

ten to eighteen, and of a pure white ; the male at times assists in hatching them. The young run about as soon as liberated, and follow their parents until spring. These birds roost at night in the middle of a field, on the grass, the covey forming a circle, with their heads outwards, an arrangement which enables them both to prevent surprise, and to take wing and scatter asunder when alarmed."

THE COMMON QUAIL. *Coturnix dactylisonans*.—The Quail is known over the greater part of the Old World, but is perhaps more numerous in the south of Europe than elsewhere. It is a somewhat rare summer visitant to our island, but is more frequent in Ireland, and even said permanently to reside there. In winter vast numbers quit Europe for the African continent, returning again in the spring ; and during their periodical passages the shores and islands of the Mediterranean are replete with them. On the coasts of Italy and Sicily, and all the Greek islands, they arrive at certain seasons in immense numbers. A hundred thousand are said to have been taken in one day. In France the Quail is very abundant ; and besides those supplied to the markets of that country, thousands are imported alive by the London poulterers, and fattened for sale. The eggs of this species are laid almost on the bare ground, and are from six to ten

or fourteen in number. They are often pale yellow, richly blotched with brown; and though of a different form, scarcely if at all exceed in size those of the Blackbird or Thrush.

THE ANDALUSIAN QUAIL. *Hemipodius tachydromus*.— This species differs from the true Quails in having no hind toe, in the greater length and more slender form of its bill, and in the very probable circumstance of its laying only four eggs, which are of a yellowish colour, richly marked with brown. Two of these birds are recorded by Mr. Yarrell to have been shot in this country.

PHASIANIDÆ. PHEASANTS.

Europe presents no natural example of this family, although some very beautiful species belonging to it have been introduced from time to time; and in America the only native species which represent it are the Turkeys. It is in the hotter parts of Asia that the most brilliantly-coloured birds of this family occur in the greatest numbers. In the forests of India, for example, the Peacock abounds, and is more brilliant in the plumage in a wild than in a domesticated state; while the Golden Pheasant of China is a bird of surpassing beauty; and the Impeyan, a native of

the north of India, is resplendent with metallic hues, resembling the plumage of the Humming-birds, but upon a larger scale. Of the domesticated birds of this family we shall not write, but confine our remarks to one species which lives with us in a half-domesticated state, and which is typical of the group in its general character.

THE COMMON PHEASANT. *Phasianus Colchicus*.—Both in this country and upon the European continent the Pheasant has long been naturalized. It breeds in May and June, forming a rude nest upon the ground, under the shelter of fern, underwood, or the cut branches of trees, generally in woods and plantations, but also at times in hedgerows and open fields. The eggs, from ten to fourteen, resemble in colour those of the Common Partridge, being of a uniform yellowish or greenish grey. There is a variety, if not a distinct species, of Pheasant in our country, called the Ring-necked Pheasant, so named from a white ring surrounding the neck: it mingles and breeds with the common sort.

CRACIDÆ. CURASSOW-BIRDS.

This is a tribe of poultry restricted to America, and several of the species included in it approach the Turkey in

76.

78.

77.

79.

Vincent Brooks Lith.

76. Capercaillie. 77. Ptarmigan. 78. Red Grouse.

79. Great Bustard.

size. The family comprises the Curassows, Guans, and the Hoazin, but none of its members are included among British birds; though why they have not been introduced for domestication we are not aware, since, at least on one occasion, they have been thoroughly acclimated in Holland, and proved as prolific in their domesticated state as our common poultry.

OTIDÆ. BUSTARDS.

The Bustards are peculiar to the Old World, and frequent wide plains, extensive downs, and open lands. Their food consists of tender herbage, grain, and insects. They run with great rapidity, and, unless closely pursued, seldom take wing; they are shy and watchful, and difficult to approach. In their habits they are polygamous, and the females incubate alone. The male birds surpass the female in size and beauty of colouring. Our British list comprehends three species, of which we proceed to write.

THE GREAT BUSTARD. *Otis tarda*.—This noble bird was to be found formerly in the wild and open districts of our land, but the gun and the progress of cultivation have rendered it a rare object, if indeed it is not extinct. Upon Salisbury Plain, once frequented by this species, the plough

now passes near Stonehenge, that grand and ancient fane of a bygone superstition ! Mr. Hewitson says that he has seen the eggs of this species, which were taken from the wolds of Yorkshire. Occasionally a stray specimen is met with, but seldom escapes speedy destruction. In Spain, and the plains of Greece, in some parts of Russia, and on the wilds of Tartary, it is said still to be common, and is occasionally seen in France. The female is very much smaller than the male bird, which weighs from twenty-five to thirty pounds ; and we should judge, from the specimens in the British Museum, must stand three feet or more in height from the ground. The female of this species makes no nest, but lays two eggs in a slight hollow upon the bare ground. The eggs are of an olive-green tint, softly but extensively marked with delicate grey and greenish-brown. They exceed those of the Turkey in size. (Pl. XI. fig. 79.)

THE LITTLE BUSTARD. *Otis minor*.—This is a rare visitant of our island, but specimens have from time to time occurred in different parts of England ; and, although but seldom, in Scotland and Ireland likewise. On the European continent it is by no means frequently met with, but is found in northern Africa, and is believed to extend to Asia also. The eggs of this species are deposited in a slight de-

pression upon the bare ground, and are said to be from three to five in number. They are of a more decided green colour than those of the last species, and are varied with tints of grey and brown.

MACQUEEN'S BUSTARD. *Otis Macqueeni*.—A bird of this species, called also the Ruffed Bustard, was shot in Lincolnshire, in October 1847. It is an Indian species, described as common throughout the year on the stony plains of Afghanistan, where it is sometimes seen in companies of five or six. It is further said to frequent dry, sandy plains, where there is little grass, and to be found in grain and wheat fields. "The specimen killed in Lincolnshire had its craw filled with caterpillars of the common yellow underwing moth, small shelled snails, beetles, etc." These particulars we have derived from the second supplement to Mr. Yarrell's 'History of British Birds;' but of the breeding habits of this species we can give no account.

ORDER V. CURSORES. RUNNING BIRDS.

Unless the Bustards, which we have included in the last Order, should be considered members of the present, we

have no representative of it in the British list. The birds included in it by some naturalists, whose arrangement in this respect we are disposed to adopt, are the Ostrich of the Old World, the Rhea, or Naudon, of the New, the Casowary, the Emu, the Apteryx, and the Dodo (now extinct); and while these species differ greatly from one another, they all agree in the non-development of the wings, and the enormous size and power of their legs; the wings not capacitating them for flight, but in some instances aiding in their rapid progress over the ground. We pass these by however with this general notice, to resume our remarks upon the British birds.

ORDER VI. GRALLATOIRES. WADING
OR STILT BIRDS.

This is an extensive Order, named from their habits and formation. They frequent the banks of rivers, lakes, and marshes, and the shores of estuaries, feeding upon small fishes, aquatic mollusca, worms, small reptiles, and water-insects; while a few feed partially on grains and herbage,

and these live at a distance from water, frequenting open plains, downs, and extensive commons. "They mostly construct or choose their nests upon the ground; and the young are enabled to run about as soon as hatched, except in those species which live in pairs."

The Order includes the Herons, Snipes, Plovers, and Rails.

ARDEIDÆ. HERONS.

This family contains some of the most graceful and beautiful species of the Order; not so much from the colours of their plumage as from the elegant crests and prolonged feathers which ornament them, especially during the breeding season. The greater proportion of the birds comprised in the family are of large size. They build in societies, usually in trees, and in the neighbourhood of rivers; but, except during the breeding season, live and feed solitarily. They subsist chiefly on fish, for which they watch in suitable situations, transfixing them, as they pass, with their long and sharp bills. Not only the true Herons, but also the Egrets, Night Herons, Bitterns, Storks, Boatbills, Spoonbills, Cranes, and Ibises are included in the family, most of which are represented in our British list.

THE COMMON HERON. *Ardea cinerea*.—This beautiful bird is generally distributed over the British Islands, and throughout Europe, but not abundantly. It was formerly a chosen object of pursuit when the sport of hawking was in repute. The Heron frequents the banks of streams, rivers, and lakes; it resorts also to fens and to the sea-shore in search of food. In the daytime it seldom exhibits any very extraordinary activity, but as soon as the shades of night set in it appears anxious and impatient. "It walks up and down the bank, or moves from branch to branch, with extraordinary activity, every now and then stretching out its wings, and giving us to understand, by various gesticulations, that it is about to commence its nocturnal peregrinations in quest of food. One loud and harsh cry, often repeated, now informs you that the Heron is on wing, wending its way to some distant river, swamp, or creek." During the breeding-season Herons resort to lofty trees, where they build in company, though the cliffs of the seacoast are sometimes chosen for their nesting-places, and some nests have been found placed upon the ground. A heronry is however most frequently to be found situated on the tops of trees. The nests, in close proximity, are large, and composed of a quantity of sticks lined with dry grass, wool, and

other soft materials. The eggs, four or five in number, are of a pale green colour, without gloss or markings. The Heron appears to be regarded with suspicion in some quarters, on account of its predilection for fish; but the same authority just quoted says: "I know, and freely avow, that the Herons will catch fish, especially eels, whenever those fish frequent the shallow water; still these birds make ample amends for their little depredations, by preventing the increase of rats and frogs." (Pl. XIV. fig. 88.)

THE PURPLE HERON. *Ardea purpurea*.—This is a foreign species, occasionally met with in the British Islands, and all we know of its breeding habits we gather from Mr. Hewitson's work upon British eggs. The information was communicated to that gentleman by Mr. Hoy, who was an eyewitness of the habits of this species. "The Purple Heron does not begin to breed so early as the Common Heron, the end of May being the time of incubation. . . . They breed in society, like the Common Heron, very frequently in low trees, in plantations of alder and willow in the vicinity of rivers and large inland waters, the nest being only a few feet above the ground, upon which they are likewise sometimes placed, in swamps overgrown with tall rushes, and in extensive tracts of reeds; they are large and flat, and are either

composed entirely of sticks, finer towards the inside, or lined with species of dry sedge and rushes. The eggs are commonly four, rarely five in number, and differ considerably in size and shape, as well as in colour." We may add, however, that the colour is pale-green in general, like that of the Common Heron. (Pl. XIV. fig. 91.)

THE GREAT WHITE EGRET, OR GREAT WHITE HERON. *Ardea alba*.—"The Egrets," says Sir W. Jardine, "are distinguished by a more slender form in every part, by the plumes on the back being very long and disunited, and in the plumage being generally pure white, and always pale at one period, either in the complete or incomplete plumage. The present species is of rare occurrence in this country, and is described as being nowhere abundant in northern or central Europe, but as becoming more frequent in the Grecian Archipelago, in Turkey, and on the Asiatic boundary. The American Large White Heron is pronounced by the author recently quoted, to be distinct from the British bird, but referred to as representing it in the New World. The eggs of the American bird, if not the same with those of the species we treat of, yet, doubtless, closely resemble them; they are of the pale green common among the Herons, and are never more than three in number. If the birds are

different, we are unable to furnish a description of the eggs and nest of the European species.

THE LITTLE EGRET. *Egretta garzetta*.—This is another occasional visitant of our country. "Its best acknowledged range is southern Europe, Greece, and northern Africa." The plumage both of this and of the last species is pure white. Of the eggs and nest of this bird we cannot write with certainty.

THE BUFF-BACKED EGRET. *Egretta russata*.—This bird, which is also called the Buff-backed Heron by some authors, is of rare occurrence in Britain; and we are not in possession of any satisfactory statement with regard to its nidification.

THE SQUACCO HERON. *Egretta ralloides*.—Several examples of this Egret have been taken in this country. The native locality of the species appears to be along the southwestern parts of Asia, in Egypt, and Nubia. It has however been found in various parts of Europe, but not of its more northern regions. It inhabits the banks of stagnant waters, morasses, the sides of rivers, and low lands near the sea-shore. The Squacco Heron feeds on small fishes, mollusca, and insects, and is said to build on trees, but the eggs are unknown. We have derived these particulars from the second

edition of Mr. Yarrell's admirable work upon British Birds, vol. ii. pp. 530, 531.

THE LITTLE BITTERN. *Ardea minuta*.—This bird has been frequently met with in our island, and there appears to be little doubt that it has also occasionally bred here. Little has been recorded of its habits in a wild state, but it is said, and we doubt not correctly so, to frequent marshes by the sides of rivers, and is described as making its nest of reeds, grass, and other herbage, upon masses of broken reeds, or upon some slight eminence or elevation above the water. The eggs, which are from four to six in number, are of a pale bluish or greenish white, and not larger than a Wood Pigeon's egg, though somewhat different in form.

THE COMMON BITTERN. *Butor stellaris*.—This is a bird which, although of a comparatively frequent occurrence in Britain formerly, is passing away before the progress of cultivation and the habit of shooting which so extensively prevails. Its extra-British distribution is extensive. In our own country it has also bred, occasionally at least, and selects the heart of fens and almost inaccessible marshes for that purpose, placing the nest above the reach of water, upon the ground, or upon fallen reeds and rushes. The nest, which is of reeds, grass, rushes, etc., is slightly hol-

lowed for the reception of the eggs, which are from three to five in number, and of a uniform pale-brown colour. In its habits the Bittern, like the Herons, is comparatively inactive during the day, coming forth to feed in the evening and twilight. Its food is probably seized after patiently watching for it, and struck at and swallowed at once. In the days of falconry, the Bittern was considered one of the noblest objects of sport, and protected by severe penalties.

THE AMERICAN BITTERN. *Butor lentiginosus*.—Some specimens of this bird have been obtained from time to time in this country; but of its nidification we are not prepared to write.

THE NIGHT HERON. *Nycticorax Gardenii*.—This species, which is said to be very widely spread over Asia, Africa, and southern Europe, is but occasionally and rarely met with in Britain. In America it is said to be represented by the Qua-bird, but whether the two are identical or distinct species, we cannot say. Its habits closely assimilate in many respects to those of the Common Heron. It breeds, like that bird, in societies, upon the topmost branches of trees, and roosts during the day in the recesses of woods adjacent to swamps and rivers, which it visits on the approach of twilight in the quest of prey.

The descriptions which we have seen of the nests and eggs attributed to this species have been taken from those of the American bird, and proceed apparently upon the supposition that the European species is identical with that. According to these descriptions, the nests are built in bushes or trees, at various heights above the ground, from three to nearly one hundred feet, and are formed of sticks, and lined with reeds, rushes, grass, and leaves. The eggs, four or five in number, are of a pale green colour, greatly resembling those of the Common Heron, but less.

THE WHITE STORK. *Ciconia alba*.—Though a very unusual visitor in this country, the Stork is common upon the European continent during the breeding season, but retires to warmer regions during the winter. In France, Holland, Belgium, and the German States, it is well known, and in some parts of these countries its society is courted by the inhabitants. It incubates on the spires and other elevated structures of the towns, and artificial contrivances are even prepared in some instances for its accommodation. Unmolested, it will return to the same spot and the same nest for years. Its range is very extensive; and it breeds in Turkey, Syria, Greece, Egypt, etc. So numerous are they described to be among the ruins of Persepolis, that the

summit of almost every pillar of these magnificent monuments of antiquity contains a Stork's nest. "Where convenient buildings are not to be found, the Stork will construct its nest on trees. The nest is made of sticks and twigs, and is a solid, compact mass, lasting for many years; it is lined with reeds, grasses, and moss. The eggs are three or four in number, rarely, if ever, five; and at first, before they are soiled, are of a creamy-white colour, and in size approaching to, or equalling, those of the goose."

THE BLACK STORK. *Ciconia nigra*.—Though it has been sometimes met with in our island, this is a foreign species, to be found thinly distributed through most of the European countries. It differs in its breeding habits from the White Stork, in selecting retired situations, far from the haunts of men, for that purpose, and in forests intersected by streams, or interspersed with marshy districts, and upon the tops of lofty trees, especially the pine; it forms its nest of sticks and sods of earth, lined with finer sticks and various softer materials. The eggs are from two to four or five in number, and closely resemble those of the last species, except that they are less.

THE WHITE OR EUROPEAN SPOONBILL. *Platalea leucorodia*.—As a group, the Spoonbills are described to be

shy and retiring in their habits, and living in society in wild, wooded marshes, and about the borders of lakes and rivers, but not often visiting the sea. The present species is reported formerly to have bred in this country, but we fear it is only as an occasional visitor that it is known now among us. It is widely spread over Europe and the regions of Asia and Africa; in the former continent extending probably to India; and in the latter, reaching as far southward as the Cape of Good Hope. In Holland, where it is not uncommon, it migrates with the Storks; and during the warmer seasons it is to be found in France, retiring to warmer latitudes as winter approaches. It appears to breed both upon lofty trees and among reeds, near the ground. The nest is a large and strongly-compacted structure, and the eggs, generally three in number, are white, with blotches or markings of pale-brown. The animal food of this species is usually such as occurs in pools of water, to which it adds the roots of certain weeds and grasses, for which it explores the muddy water with its broad bill.

THE COMMON CRANE. *Grus cinerea*.—The Common Crane is distributed over a great part of Europe, Asia, and Africa. It visits the northern parts of the European continent in spring, retiring southward again in autumn. This

80.

81.

82.

83.

Vincent Brooks Lith.

80. Oyster Catcher.

81. Ringed Dotterel.

82. Dunlin.

83. Common Curlew.

bird is mentioned as having regularly visited Britain formerly, and as having bred here, but the progress of draining and cultivation is supposed to have dislodged it from some of its favourite resorts. The fens of Lincolnshire and Cambridgeshire are especially named as districts once frequented by it in considerable numbers. At present it is a rare visitor. Its nest is placed far from the usual track of human feet, in the midst of the wild morass, among rushes, reeds, and the rank herbage of swampy places, or sometimes it is said among ruins. The eggs, two in number, are large, and of a greenish hue, with brown markings. The Cranes do not derive their sole subsistence from lakes and marshes, but live in a great measure upon vegetable food, frequenting, at times, plains, newly-sown lands, and cultivated districts. The flight of the Crane is taken at a great elevation, so that the cries of the flock may be heard while the birds which compose it are scarcely visible to the eye.

THE GLOSSY IBIS. *Ibis falcinellus*.—The habits of the Ibises are reported by one authority closely to resemble those of the Stork; and by another, those of the present species at least, are described as being in some particulars very like those of the Heron. The Glossy Ibis is the only species of the genus which has been known to visit Britain,

but in England it has not unfrequently occurred. Its plumage is described to be brilliant and changing, of greenish-black, purple, and red; upon the head, neck, back, and general upper parts, possessing a metallic lustre, but upon the under parts, which are of a deep reddish-brown, having little play of colour. The present bird is considered common through the greater part of Asia and Africa; annually visiting the borders of the Danube, Poland, and Hungary, and occasionally other countries still more to the west; southward, it has been known in the vicinity of the Cape of Good Hope, and has even been found so far north as Iceland. In America there is a species extensively distributed which, if not identical with this, closely resembles it. It is conjectured to have been one of the sacred birds of Egypt, and to have been thus venerated on account of its services in the destruction of snakes. It lives and breeds in societies, and migrates in flocks, frequenting the banks of rivers and lakes and recently-inundated lands, and feeding on reptiles, worms, insects, and aquatic plants. The nest appears to be placed sometimes in trees, and at others on or near the ground, and the eggs, two or three in number, are of a beautiful, clear pea-green colour, and without markings.

SCOLOPACIDÆ. SNIPES.

Under this term we include a great variety of forms, agreeing in some of their habits, and typically represented by the Snipes and Woodcocks. They chiefly frequent marshes, or the shores and banks of coasts and rivers, retiring inland to the moors, fens, and other suitable situations to breed. None of them possess gay plumage; but, although chaste, the colouring is often very beautiful. The flesh of many of them is much esteemed. They incubate on the ground, with little or no nest, and usually lay four eggs: the young run immediately on being hatched. Several of the genera feed, and perform their migrations, by night, and have the eye large and suited to these habits. The bill is frequently furnished with nerves, which render it exquisitely sensitive, and, even while it is buried in the earth, enable the bird to discover the food with which it thus comes into contact. The locomotive powers of the family are great, and its distribution is extensive, indeed we may say, world-wide.

THE WOODCOCK. *Scolopax rusticola*.—It is during the winter season that the Woodcock is most abundant in this country, arriving in considerable numbers in autumn, and

departing again in spring, yet many remain to breed, and during the present year we have known two nests, containing eggs, discovered in the New Forest; while at different periods the nests of this species have been found in very many parts of England and Scotland. The Woodcock rests by day, but when the twilight arrives its activity commences, and it is busily employed in the search for food. Worms it will devour in great quantities, also slugs and insects are sought after as food, and it has been remarked, that with the food great quantities of sand are received into the stomach. The Woodcock migrates in the night. Its distribution is very extensive, not only through the British Islands, but it has been found from India to Madeira, and from the African coast to regions beyond the Arctic Circle. Its plumage we always admire, as being, though chaste, of surpassing richness and beauty. The nest is placed on the ground, and is loosely formed of grass and leaves, while the eggs are four in number, of a pale brown, but handsomely spotted and marked with deeper tints of brown and grey; they vary occasionally very considerably in form, even when taken from the same nest, and much of the first beauty of the egg, as in the case of some others, soon fades and disappears. We have sometimes seen eggs of the Woodcock

and of the Nightingale represented much paler than we have yet seen them when they have been first found, and have accounted for it by supposing the representations to have been taken from specimens which had been retained in cabinets for some time.

SABINE'S SNIPE. *Scolopax Sabinii*.—We find credible mention made of the occasional capture of this bird, both in England and Ireland; but with its breeding habits we are unacquainted.

THE GREAT SNIPE. *Scolopax major*.—This is a bird also occasionally seen in Britain, generally in the autumn, and in the southern parts of our country; in some seasons occurring pretty frequently. It is believed to be most common in Norway and Sweden, breeding near the swamps or on the borders of rills which irrigate grass lands. It is also considered to breed among the fens and morasses of Holland. Its nest, placed on some slight elevation or tuft of grass, resembles that of the Common Snipe, and the eggs, four in number, except that they are considerably larger, much resemble, we believe, those of the common species.

THE COMMON SNIPE. *Scolopax gallinago*.—We have in the present a comparatively common species, occurring in suitable localities throughout Great Britain and Ireland, but

becoming more numerous in the former country as we proceed northward. In winter our native birds receive vast accessions from the more northern parts of Europe; these move in search of food from one suitable locality to another, even entering gardens in very severe weather, in search, it has been conjectured, of the moisture retained between the leaves of the plants. The food of this species, worms, insects, etc., is sought for by thrusting the bill into the soft ground or mud, and is discovered by the exquisite sensibility of that organ. Out of the British Islands, the Common Snipe extends over Europe and the adjacent parts of Asia. The nest of this species is very slight, being formed of a few dry vegetable substances placed in a depression on some tuft or hillock near swampy spots or marshes, though Mr. Hewitson mentions, as a curious circumstance, that in Foula, the most westerly of the Shetland Islands, he found several of the nests of this bird among heather and far up the side of a mountain. Generally however the situations which we first described are those selected by the bird for its nest. The eggs, four in number, vary in colour, but are usually of a warm greenish hue spotted with brown at the larger end, or sometimes richly dashed with longitudinal markings of brown, which soften off into a paler neutral

tint. The eggs are very large in proportion to the size of the bird. During the season of incubation the male bird ascends occasionally to a great height in the air, and in its descent makes, it is believed by the motion of its wings, a humming noise. (Pl. XIV. fig. 90.)

THE JACK SNIPE. *Scolopax gallinula*.—This, which is the smallest species of the genus to which it belongs, is perhaps the most beautiful also. Though much less numerous than the common species, it is always to be met with during the winter over the British Islands, and sometimes in considerable numbers. During its stay in this country it does not congregate in small companies like the Common Snipe, but appears to be nearly solitary in its habits; nor does it range from place to place much, but, having fixed upon one locality as its haunt, it seldom quits it for another, even though harassed by the sportsman. It is conjectured that it may breed in some parts of Great Britain, but no well-authenticated instance of its doing so has, we believe, been made known. It retires in spring to other regions to incubate, and is said to breed plentifully near St. Petersburg. The eggs are reported to be four in number; the position of the nest appears to be pretty much the same with that last described, and, judging from delineations, the

eggs themselves, though smaller than those of the common bird, possess much of their general appearance.

THE BROWN LONGBEAK. *Macrorhamphus griseus*.—This is sometimes called the Brown Snipe. It is properly a native of North America, and reaches as far north as the fur countries, and even to the Arctic Sea, during the season of incubation. With us it is a rare visitant, but has been killed on a few occasions in the southern parts of Britain. In northern Europe also it is only known as a straggler. With regard to its nest, eggs, and habits during the breeding season, we are unable to afford information.

THE BLACK-TAILED GODWIT. *Limosa melanura*.—This species breeds occasionally in the fenny districts of England (Mr. Hewitson specifies the fens of Cambridgeshire and the marshy districts of Norfolk); and during the winter it is partially distributed along the oozy shores of the English coast and those of the south of Scotland, yet it is by no means an abundant species. In summer it ranges in its extra-British distribution as far north as Lapland, and breeds in high northern latitudes; and in its winter dress it has been received from the north of Africa. The nest is placed near water, in swamps and low meadows, and is composed of dry grass and other herbage. The eggs are four in num-

ber, of a deep-green or light olive-brown colour, faintly blotted or dashed with spots of a darker tint. These birds commence to lay their eggs in May. (Pl. XV. fig. 95.)

THE COMMON OR RED GODWIT. *Limosa rufa*.—Though accounted more abundant than the last species, and said to be more generally distributed, the present is not common in Britain. It appears in autumn, and remains with us during the winter, frequenting shores where the beach is soft and intersected with rivers or streams, and here it bores into the soft sand or mire with its long bill for its food. It resembles the last species in its habits and manners, but may not have so extensive an extra-British range. It is not known to breed in this country, its summer haunts being Iceland, Lapland, Sweden, and other northern countries. We regret that we are not able to furnish particulars respecting the nidification of this species.

THE DUSKY TOTANUS. *Totanus fuscus*.—This bird, which is also called the Spotted Redshank, is rare in Britain, comparatively few instances of its occurrence having been recorded. Of its nidification we are not prepared to write, but its eggs are known, and are to be found in the cabinets of collectors. In January 1855, several specimens, collected by J. Wolley, Jun., Esq., in Lapland, were brought

before the public in London; and the Rev. F. O. Morris, in his 'Natural History of the Nests and Eggs of British Birds,' gives a representation of the egg of this Totanus, which was taken in Finland in 1854. In this representation the egg exceeds that of the Common Redshank in size, is proportionally large at the greater end, and tapers much towards the smaller; the ground is of a greenish colour, and the spotting, which is rich, consists of brown and grey markings.

THE COMMON REDSHANK. *Totanus calidris*.—"This species is one of the most common of the larger British *Totani*; and, although breeding in marshes, is perhaps more decidedly a maritime species than the others." It is also generally distributed over the greater part of Europe, and in Asia it is believed to have been found in India and Japan. Like the Snipe, it breeds in marshy wastes, and in this country is most common, Mr. Hewitson says, in the fenny districts of the counties of Cambridge and Lincoln, although occasionally breeding in other parts of England and Scotland. The nest is nothing more than a few dry grasses placed in a depression on the ground, or in a tuft of herbage in the vicinity of water. The Redshank lays four eggs, much resembling those of the Pewit in size and general ap-

pearance, but of a paler and yellower ground-colour. Sir Wm. Jardine writes: "In a few localities, on the Scottish coasts, it is stationary during the whole year; these are where some suitable marsh is near for a breeding-place; in this the nest is formed on, or sheltered by, some tuft or bush of rank aquatic herbage, and the birds, on the approach of any stranger, are very clamorous, flying about with a slow, quivering flight, uttering their shrill whistle, to which is now imparted an additional degree of wildness, and having their bright orange legs stretched out and sometimes dangling behind them. We have several times procured them in the breeding season, and with the young, in a marsh such as we have noticed, on the banks of the Solway at Southernness, where a few pairs annually breed. It has also been found breeding in stations in Sutherlandshire, near Lairg, and at the head of Lochnaver." "During winter they are almost always to be met with on our coasts; but we have never seen them, even as stragglers, upon our lochs and rivers, as the Greenshank and some other maritime *Totani* frequently are." (Pl. XV. fig. 94.)

THE GREENSHANK. *Totanus glottis*.—In Britain the Greenshank is occasionally met with breeding in the north, but in the south it is only seen during the autumn and

winter; in Ireland also it is occasionally met with, but has not been known to breed there. It has a most extensive European and extra-European distribution. It breeds in marshy places, making a slight nest in some hollow or depression, and laying four eggs, which are described as being of a very pale yellowish-green colour, sprinkled throughout their entire surface with irregular spots of dark-brown and blots of light purple-grey: the markings chiefly at the larger end. Sir William Jardine, an author from whom we have frequently and largely quoted, has some interesting remarks upon the nidification of the Greenshank in this country. He says, "A few years since, authentic accounts of its nidification in Britain were wanting; when, in the summer of 1834, several pairs were met with breeding, by myself and Mr. Selby and some others, during an excursion to Sutherlandshire; the season however being advanced, the young only were procured, which did not differ from similar states of the Sandpipers, except in the down being of a grey or hair-brown colour, instead of the more umber and ochreous tints which characterize the same state in the Redshank. The nest was not seen, but the places selected, and where we found the young, were in low marshy hollows, in one instance surrounded with brushwood."

THE GREEN TOTANUS. *Totanus ochropus*.—This is the Green Sandpiper of some authors, and, like the last species, is occasionally met with in our island, most frequently during spring and autumn, and especially it is said during the latter season. In the north it is not known to breed, but with much reason it is supposed to do so in the south, since the old birds have been met with during the summer, and young specimens in the first plumage (but quite able to migrate) have been killed very early in the autumn. On the European continent it is pretty equally distributed, but nowhere abundantly. Its extra-European range may include some parts of Asia (India and Japan have been named), and possibly North America. We have met with very little information respecting its breeding habits. The egg, as represented in the Rev. F. O. Morris's work, is between the sizes of those of the Common Snipe and Dunlin, and is of a pale yellowish-green colour, blotched with light-grey and marked with brown, chiefly at the thicker end of the egg.

THE WOOD TOTANUS. *Totanus glareola*.—This bird, otherwise called the Wood Sandpiper, is a rarer visitant in Britain than the last species, but has at various times been taken in England, and is also known to visit Ireland. Be-

yond the British Islands its range is very considerable, extending from India to Chili, and from Norway to Southern Africa, and perhaps including the islands of the Pacific. The nest is described as "generally placed at a short distance from the water, among stunted heath or scrubby plants of the bog myrtle, or among coarse grass and rushes. It is placed in a hollow, and is of dry grass and other plants." The eggs are four in number, of a yellowish or pale-greenish colour, blotched or marked, chiefly at the thicker end, with purple or reddish-brown; they are somewhat pear-shaped, tapering greatly towards the point at the smaller end.

THE COMMON TOTANUS. *Totanus hypoleucus*.—The Common Sandpiper, as this species is likewise termed, is very extensively distributed in foreign countries, and is abundant in Great Britain and Ireland, being a regular summer visitor, and frequenting the banks of streams and rivers and the margins of lakes. Its nest is placed at a short distance from the water, sometimes a slight depression in the gravel serving its purpose, and at others some suitable spot among the neighbouring herbage being selected; a slight nest is formed, and four eggs, very large for the size of the bird, are laid, of a reddish or yellowish white, with spots and

markings of grey and brown. When the nest is approached, the female leaves it as quietly as possible, and at times will run before rising, evidently to prevent the discovery of the eggs; but if there are young, the parent birds become clamorous at the approach of the intruder.

THE SPOTTED TOTANUS. *Totanus macularius*.—This bird, also known as the Spotted Sandpiper, is only accounted an accidental visitor in Europe, its true home being the continent of America; yet it has been taken in England, and thus obtained a place in our list of British birds. In America its habits correspond to a great extent with those of our last-named native species. It frequents the shores of rivers, creeks, and streams, builds its nest in the adjoining cornfields, where these occur, and lays four eggs, which differ in form, Mr. Hewitson observes, from those of the other Sandpipers, wanting the pear-shaped character of the eggs of the other waders.

BARTRAM'S SANDPIPER. *Totanus Bartramii*.—A specimen of this bird was captured in Cambridgeshire in January 1855, as recorded by Mr. Yarrell, this being the second instance of its known occurrence in this country. It occasionally occurs in Europe, and has even been found in Australia, but its true habitat is America, from Canada,

throughout the United States, to Mexico, in all which countries it is common. From Mr. Yarrell's second Supplement we add the following particulars:—"Wilson, who is considered to be the discoverer and first describer of this species, which he dedicated by name to his venerable friend Bartram, near whose botanic gardens, on the banks of the river Schuylkill, he first found it, says of it, 'Unlike most of their tribe, these birds appeared to prefer running about among the grass, feeding on beetles and other winged insects. Never having met with them on the sea-shore, I am persuaded that their principal residence is in the interior, in meadows and such-like places. They run with great rapidity, sometimes spreading their tail and dropping their wings, as birds do who wish to decoy you from their nest; when they alight, they remain fixed, stand very erect, and give two or three sharp whistling notes as they mount to fly.'

"Audubon did not observe this species in Newfoundland or Labrador, but records it as found as far south as Mexico, in the western prairies on either side of the Missouri, in different parts of Pennsylvania, and as far eastward as the confines of Maine. It appeared to be partial to frequenting newly-ploughed lands, and its food, varied with the district, consisted of grasshoppers, beetles, seeds, and wild straw-

84.

86.

85.

87.

Vincennes, Ind.

84. Common Thick-knee.
86. Corn-Crake.

85. Common Gallinule.
87. Whimbrel

9

11

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

berries. Nests were found in hollows scooped out in the earth, sometimes lined with loosely-arranged grasses, and the eggs are described as measuring one inch and six-eighths in length, by one inch and a quarter in breadth, of a dull greyish-yellow ground-colour, with numerous spots of light-purple and reddish-brown."

THE YELLOW-SHANKED SANDPIPER. *Totanus flavipes*.—This is another American species, of which Mr. Yarrell records the capture of a single specimen in this country. It is a well-known bird in America, and is mentioned by Wilson, Audubon, Sir John Richardson, and Pennant. Of its breeding habits we can give no description beyond the single observation which we find in Mr. Yarrell's Supplement, that "the nests are described as placed among the grass on the edges of the rivers and large ponds of the interior."

THE RUFF. *Machetes pugnax*.—The female of this species is called the Reeve. In summer these birds resort to the fenny districts of England, chiefly to those of Cambridge-shire and Lincolnshire, to breed, and in other parts of our island are more frequently to be met with in spring and autumn, an occasional straggler remaining with us through the winter. As a species, it is generally distributed over Europe and the adjacent parts of Asia. The male bird, in

the spring plumage, has the feathers of the neck greatly elongated and the ear tufts large and full, and these form a ruff which, when the bird is excited or angry, is very conspicuous, and gives it a remarkable appearance. The species is polygamous, and during the breeding-season combats between rivals among the males are of perpetual occurrence. "The males now begin to hill, as it is termed; that is, they seek some spot a little elevated above the surrounding marsh, to which, as to a common centre, numbers are gradually drawn. Each individual selects its own station or little territory, for the possession of which it strenuously contends; the attempt of a rival to encroach upon the circle is immediately followed by a hard-fought battle, the territory being ceded by the vanquished to the victor. These battles and contests are almost incessant, at least during the day, for at night they all return to the marsh in order to feed (in this respect their habits being nocturnal), but in the morning each resumes its station, and the contests are again carried on. Here, full of animosity against each other, and jealous of each other's rights, they await the arrival of the females. The arrival on the hill of one of the other sex, is the signal for a general contest. The scene is now one of perpetual warfare, female after female arriving at the hill, so that 'the theatre of

these battles,' as Selby observes, 'soon becomes bare of grass, from the constant traversing of the combatants.' Not only have the neck and ear plumes now attained their perfection, but the face of the male becomes covered with small yellowish papillæ or fleshy excrescences, instead of the short feathers with which it is ordinarily clothed. During the whole of May and the early part of June this scene of warfare continues with unabated energy. . . . Towards the latter part of June this combativeness abates, the papillæ on the face disappear, and shortly afterwards the fine plumes are moulted off, their place being supplied by ordinary feathers."

Early in May the eggs of this species, which are four in number, and which in many instances closely resemble those of the Great Snipe, are laid in a rude nest of grass, placed among coarse grass, rushes, or other herbage, on a hillock or gentle elevation, and in some marshy situation.

THE PURRE, OR DUNLIN. *Tringa variabilis*.—The Dunlin is the most common of all the *Tringæ*, and is generally and abundantly distributed along the shores of our country throughout their extent. In Europe its range is wide, and its appearance very general, while in America it is known from Mexico northwards. It feeds upon marine insects,

worms, crustacea, and minute shell-fish, which it obtains upon the sea-shore after the tide has receded. In spring the flocks of these birds which at other times are met with, disperse, and generally seek some inland district for the purpose of nidification: the marshy moors and wastes of the north of England and Scotland and the adjacent islands, furnish them with many suitable localities, and in such situations the nest is placed under or by the side of some tuft or bush of grass or herbage. It is frequently ingeniously concealed, but constructed with the smallest amount of labour, often consisting merely of the moss or grass upon which the eggs are laid rounded into form, though occasionally a few pieces of heath or grass are added, but not often. The eggs, four in number, and tapering greatly at the smaller end, are of a pale greyish-green ground-colour, spotted or dashed, chiefly at the thicker end, with rich brown and brownish-grey. (Pl. XII. fig. 82.)

THE KNOT. *Tringa canutus*.—The present is a rare bird in the south of Europe, breeding in high northern latitudes, but visiting our shores in autumn in considerable numbers, and remaining during the winter. It frequents the shores of the sea, bays, inlets, and the mouths of rivers, feeding upon the minute bivalve shell-fish which it finds there. It

is reported to lay four eggs, on a tuft of grass or herbage, without forming any nest, their colour light yellowish-brown, spotted at the larger end with grey and reddish.

THE BUFF-BREASTED SANDPIPER. *Tringa rufescens*.—In a few instances this bird has been met with in this country, but its home is in America, where it extends from the Brazils northward, and is conjectured to breed near the Arctic Circle.

THE PURPLE OR ROCK SANDPIPER. *Tringa maritima*.—Although breeding in northern latitudes, this species is to be found during the winter and spring along our coasts, and a few birds may even incubate in this country; but if so, Britain would probably be the extreme limit of their range southward during the season of nidification. Its nest is composed of a little moss or other herbage, placed in some hollow on the earth, and the eggs, which are four in number, and about the size of those of the Dunlin, are of a yellowish-grey colour, spotted with pale-brown chiefly at the thicker end.

THE CURLEW SANDPIPER. *Tringa subarquata*.—Spring, autumn, and winter are the seasons during which the present species is met with in this country, though occasionally it is believed to breed with us. It inhabits northern Europe and

America; the Indian Islands, and Tangiers in Africa, are also given as parts in which it has been found. The Rev. F. O. Morris says, "The eggs of this bird are described as being of a yellowish colour, spotted with brown."

THE MINUTE SANDPIPER. *Tringa minuta*.—The Little Sandpiper is, with the exception of Temminck's, the smallest of the genus to which it belongs. It visits our shores in autumn, and frequents mud-banks and salt marshes. Its range includes parts of the European, Asiatic, African, and American continents. With its breeding haunts and habits we are unacquainted.

TEMMINCK'S SANDPIPER. *Tringa Temminckii*.—This species has occurred at times in England, and also, we believe, in Ireland. It is, as already intimated, less than the last-mentioned species; but of the character of its nest and eggs we are ignorant, beyond the information to be gathered from the representation which occurs in the Rev. F. O. Morris's work, recently referred to, in which the figure given for the egg of this bird is of a pale yellowish-green colour, marked with brown of a medium tint, interspersed with darker markings of the same.

THE PECTORAL SANDPIPER. *Tringa pectoralis*.—This is another of those birds which we insert as belonging to our

British species, but of which we have little to write. It is an American species, but has in a few instances been met with in this country. "The regions where it incubates," Sir William Jardine writes, "seem yet to be undiscovered."

THE BROAD-BILLED SANDPIPER. *Tringa platyrhyncha*.—This is, again, a rare bird in Britain, but its breeding habits have been satisfactorily traced, and the account of them presented to the public. It appears to me by no means an uncommon species in Sweden and Norway, in which latter country M. Dann found it breeding at an elevation of three thousand feet above the sea. The nest was placed on a tuft of grass. Four eggs were taken from a nest, two of which, figured by Mr. Hewitson, differ greatly; one of them having some resemblance to the egg of the Dunlin, while the other is apparently thickly freckled over with minute markings of a reddish-brown tint, and sprinkled with a few decided spots of a darker colour.

SCHINTZ'S SANDPIPER. *Tringa Schintzii*.—America is believed to be the stronghold of this species, where it appears not to be very uncommon. It is said to frequent marshy shores, and the borders of lakes and brackish waters, and in such situations it is described as placing its nest upon some knoll or gentle elevation. The eggs are four in

number, yellowish-grey or pale-olive green, marked with shades of olive or of chestnut-brown.

THE BLACK-WINGED STILT. *Himantopus melanopterus*.—Although this species is distributed over the continents of Europe, Asia, and Africa, its true home is supposed to be the eastern part of Europe. Morasses and the low flat shores of lakes, rivers, and seas, are its favourite resorts. It swims with ease, and flies with great rapidity. It has from time to time occurred in Great Britain, generally, but not invariably, in the spring or winter, sometimes singly, but at other times in small flocks. Its nest, situate in marshy places, is formed in a hollow or depression on some slightly elevated spot: the eggs are four, but variously described by different writers. The Rev. F. O. Morris, following Professor Thieneman, states them to be of a pale-blue colour, blotted and streaked with greyish-green, or olive-green and dark-brown; while the author of the 'Pictorial Museum of Animated Nature' describes them, upon the authority of M. Temminck, as of a tarnished-green colour, marked with numerous ashy spots, and with moderate and very small reddish-brown spots. Both these descriptions, however, differ entirely from the representation of the egg given by Mr. Hewitson, in the edition of his 'Coloured Illustrations

of the Eggs of British Birds,' now before us; in which the egg of this species is of a yellowish ground-colour, with bold markings of grey and deep-brown, approaching to black. From the caution usually exercised by this gentleman in authenticating the eggs which he introduces, or in introducing only such examples as are probably authentic, we have much confidence in his representations; and in the present instance the added authority of Mr. Wolley (a name of considerable weight in connection with subjects of this nature), increases our confidence. In a paragraph appended to the introduction to his volumes, Mr. Hewitson says: "Mr. Wolley has sent me several eggs of the Long-legged Plover" (a synonym for the present species), "purchased by him at Tangier, which agree with my figure, except that they are more pointed at the smaller end, and more like eggs of the other Scolopacidæ." To which we may subjoin that the figure given in the Rev. F. O. Morris's work agrees very nearly with that given by Mr. Hewitson.

THE AVOSET. *Recurvirostra avosetta*.—The Avoset is a handsome bird, and differs remarkably from every other British species in the singular form of the bill, which is lengthened, and bends upwards at the tip. It was formerly of much more frequent occurrence than it has been of late,

and is reported to have bred in the marshy districts of our land. It occurs in various parts of the European continent, but is not generally abundant, except in the north of Holland, where it has been said to be common. It has also been found on the continents of Asia and Africa. The Avoset frequents the banks of rivers and estuaries, and feeds on aquatic life in various forms. We have already adverted to the form of the bill as being peculiar; and with this slender, recurved, elastic organ, it obtains from the slimy ooze the minute insects or worms on which it feeds. The mode in which it obtains its prey appears to be by scooping with the concave part of the bill from side to side in a zigzag manner in the sand, and also in the water. This species is said to lay two, and but rarely three eggs, in a slight depression of the ground, with perhaps a small quantity of dry grass for a nest. The eggs, which are larger than those of the Pewit, and not so tapering at the smaller end, are of a yellower colour, blotched with grey and different shades of brown. "When disturbed during incubation, or while guarding their down-covered young, they fly round the intruder in circles, uttering without intermission their peculiar cry, twit-twit, twit-twit, and, like the Stilt-Plover, will feign lameness, and crouch on trem-

bling limbs, in order to decoy the object of their fear to a distance."

THE TURNSTONE. *Strepsilas interpres*.—This bird does not breed in this country, but leaving our shores in spring for the more northern latitudes in which it incubates, it returns with its brood at the close of summer. Mr. Hewitson discovered the nests of this species upon the coast of Norway; and, among the many beautiful representations of British eggs which his work contains, few appear to us to be more beautiful than that of the egg of the Turnstone; it is of a yellowish-green tint, softly but richly dashed with grey, brown, and pinkish colour. The nests, generally disposed so as to be sheltered from the winds, are of slight construction, and contain, as their full number, four eggs each. "They all," says Mr. Hewitson, "contained four eggs, . . . some much like eggs of the common Snipe, but all having a beautiful tint of purple or crimson seen in few other eggs." The Turnstone frequents the sea-shore, especially those parts of it which are rocky, and receives its name from its habit of turning over with its bill the small stones and other bodies, in search of its prey. It is a bird of great beauty in its spring plumage, and is rapid of flight. Its extra-European range is very extensive.

THE GREY PHALAROPE. *Phalaropus lobatus*.—Northern regions are chosen as the breeding and summer haunts of this species, from whence, in autumn, it migrates southward, visiting temperate Europe, the British Islands, and other parts. "It not only frequents the shore, and the bays, creeks, and inlets of our island during the winter, but also mill-dams, large pools, and even farm-yard ponds, readily allowing itself to be approached, unsuspicious of danger." Its food consists of aquatic insects, especially those which live on the surface of the water, which it catches with great address, being an expert swimmer; indeed, several of these birds have been met with at a vast distance from land, swimming about among the icebergs of the north. With its breeding habits we are not fully acquainted, but its nest is slight, and placed upon elevated ground in the midst of marsh. The eggs, which are of a pear-shaped form, do not greatly exceed in size those of the Missel Thrush, and are of a pale yellowish-green colour boldly and thickly spotted with grey and black.

RED-NECKED PHALAROPE. *Phalaropus hyperboreus*.—This species possesses most of the habits of the last. We are not aware of any other part of the British Islands in which it has been observed to breed except the Orkneys,

near the fresh-water lakes of which islands it makes its nest. In his 'Ornithologist's Guide to the Islands of Orkney and Shetland,' Mr. Dunn records having found the nests of these birds in Orkney; he says: "I have never seen this bird in Shetland. I got several in Orkney, but it is not plentiful. It arrives in the month of July, and departs on the approach of winter. It breeds in August, and builds its nest in swampy situations, close to the edge of the water; sometimes on small green islands in the middle of the lakes. The places where I procured their eggs and found the birds most numerous, are in a small sheet of water three or four miles from the lighthouse of Sanda, a lake near Nunse Castle in Westra, and at Sandwick, near Stromness." It lays four eggs, in size and colour not very unlike those of the last species, of a pale yellowish-green thickly marked with grey and brown approaching to black.

THE COMMON CURLEW. *Numenius arquata*.—The Curlews are distributed over the world, though most abundant in temperate regions; they are chiefly maritime, except during the season of incubation, when they retire inland; and amidst the tracts which they inhabit, their notes are often the only interruption to the stillness of those barren wastes. The present species is not uncommon along our shores,

where it seeks its food when the tide has retired, and during the season of incubation is met with in the wilder inland districts of our land. Its nest is placed in some dry part of the moor or tuft in the moss, also at times in a furrow of fallow or newly-sown land, and is simply a hollow smoothed by the bird, having in some instances a few grasses or other leaves lining the bottom. The eggs, which are large, are much pointed at the smaller end; they are four in number, of an ash-green colour spotted with grey and olive-brown.

THE ESQUIMAUX CURLEW. *Numenius borealis*.—But one instance of the occurrence of this bird in Britain is recorded, as far as we are aware; and this specimen was obtained in Scotland, in September 1855, not far from Aberdeen.

In summer this species frequents the barren wastes within the Arctic Circle, where it incubates, laying three or four eggs of a pyriform shape, and of a greenish colour marked with a few large irregular spots of bright umber-brown. As the colder season advances, it retires southward, returning to its breeding stations in the spring.

THE WHIMBREL. *Numenius pheopus*.—The Whimbrel, though pretty generally diffused, is not nearly so common as the Curlew, and breeds with us only in the more northern

88.

89.

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88. Common Heron.
90. Common Snipe.

89. Common Lapwing.
91. Purple Heron.

parts of our country, and in the adjacent isles. Its habits and manners greatly resemble those of the common Curlew; and in similar situations, and in as slight a nest, it deposits its eggs, which are less than those of the Curlew, and of a richer green.

CHARADRIADÆ. PLOVERS.

This family is less aquatic than most others of the Order. The members of it live on sandy and unsheltered shores, or on exposed commons and moors. They congregate in flocks, run swiftly, and feed much on worms, to obtain which, some of them resort to the device of patting the ground with their feet, which causes the worms to rise. Some species feed likewise on grain, herbage, etc. The family includes several species residing in our own and other countries.

THE COMMON LAPWING. *Vanellus cristatus*.—There are few more beautiful British birds, or which add so peculiar a charm to the lonely waste or shore, as the Lapwing. The note of grief and remonstrance with which it meets the invader of its wilderness home, is one of the most expressive, while its bold and venturesome defence of its young, as it wheels round and round, and dashes by the intruder as if

to scare him from its territory, have often won our admiration. It is an abundant species throughout the British Islands, during the autumn and winter frequenting our shores in search of food, but with the spring, generally retiring inland to moors, commons, downs, and meadows to breed. The nest, often placed upon some gentle eminence, is very slight, consisting at most of a small quantity of dry grass, rushes, stalks of heath, or other plants, placed in a hollow scratched for that purpose; and the eggs, four in number, are generally of an umber-tinted ground, blotched with grey and brown, and of a pear-shaped form. Great quantities of these eggs are collected for the table, and are discovered by dogs trained to seek the nests, which they hunt by scent, making a point as if at game, until the "egg-man" comes up.

THE GREY PLOVER. *Squatarola cinerea*.—During the winter this bird is found in all the temperate countries of Europe and Asia, retiring in summer to the regions of the Arctic Circle, to breed. In our own country it is met with, chiefly along the shores, in spring, autumn, and winter, but especially, perhaps, during the former seasons while passing to and fro on its more extended migrations. We are not aware of any authentic record of its breeding with us; and

indeed of its breeding habits we are not prepared to give any positive information; although we should suppose, from description, that the eggs much resembled those of the common Lapwing. "The plumage of this species undergoes a similar change to that of the Golden Plover; and indeed so much do the two birds resemble each other, that were it not for the presence of a minute hind-toe in the Grey Plover, and for the long black feathers which are found underneath the wings, near the body, one might be easily mistaken for the other."

THE GOLDEN PLOVER. *Squatarola pluvialis*.—This is an abundant species in Great Britain and Ireland, frequenting our shores in winter, and retiring in spring to the moorlands and wastes on which they breed; and from thence again gradually returning to the shores with the broods of the year. The nest is scarcely more than a scratched hollow, very few grasses or lining materials being employed. The eggs are four in number, thicker in their form at the larger end than those of the common Lapwing, as well as clearer and brighter in their ground-colour, and more distinctly marked with brown, otherwise bearing a general resemblance to them.

THE DOTTEREL. *Charadrius morinellus*.—Upon some of

the mountain ranges of England and Scotland this species is known to incubate. In 1835 Mr. Heysham first discovered these birds breeding in England; he says: "In the neighbourhood of Carlisle, Dotterels seldom make their appearance before the middle of May, about which time they are seen in different localities, in flocks which vary in number from five to fifteen, and almost invariably resort to heaths, barren pastures, fallow grounds, etc., in open and exposed situations, where they continue, if unmolested, from ten days to a fortnight, and then retire to the mountains in the vicinity of the lakes to breed. The most favourite breeding-places of these birds are always near to or on the summits of the highest mountains, particularly those that are densely covered with the woolly fringe-moss (*Trichostomum lanuginosum*), which indeed grows more or less profusely on nearly all the most elevated parts of this Alpine district. In these lonely places they constantly reside the whole of the breeding-season, a considerable part of the time enveloped in clouds, and almost daily drenched with rain or wetting mists, so extremely prevalent in these dreary regions; and there can be little doubt that it is owing to this peculiar feature in their economy that they have remained so long in obscurity during the season of incubation."

“These birds do not make any nest, but deposit their eggs, which seldom exceed three in number, in a small cavity on dry ground covered with vegetation, and generally near a moderate-sized stone or fragment of rock.” In size, the egg is considerably less than the Pewit’s or Golden Plover’s, but otherwise, in its general character and colour, there is a resemblance to the eggs of these birds; it is of a pale olive-brown ground-colour, boldly marked with deep brown. The chief breeding-places of the Dotterel are reported to be the high latitudes of Russia, Lapland, and Northern Asia; while it also breeds on the mountains of Norway, and in Bohemia and Silesia, at great elevations. In the autumn and spring flocks of the Dotterel visit our island from other parts; in the former season, while seeking warmer regions for their winter retreat, and in spring while returning to their northern breeding stations.

THE RINGED DOTTEREL. *Charadrius hiaticula*.—This is a constant resident with us on all our coasts which are bounded by a sandy or gravelly beach. In winter some visit us from higher latitudes, where they are only summer visitants. This species breeds among the shingle of the sea-shore, just out of water-mark, where a slight depression serves them for a nest. The eggs are four in number, py-

riform, of a pale buff or cream ground-colour spotted with grey and black, or blackish-brown.

THE KENTISH DOTTEREL. *Charadrius Cantianus*.—This species, far less common than the last, frequents those parts of the coast which are flat and sandy or shingly, depositing its eggs, four in number, and of a light-yellowish colour with spots and pencillings of deep-brown or black, in a hollow in the sand or shingle.

THE LITTLE RINGED DOTTEREL. *Charadrius minor*.—This is one of our rare British species, but few specimens having been obtained. It differs in its habits from the two last in frequenting the banks of rivers in preference to the coast. It lays its eggs on the sand. These are less than those of the Ringed Dotterel, but otherwise closely resemble them, being of a pale buff colour spotted with brown and a lighter tint of pinkish-grey.

THE SANDERLING. *Arenaria calidris*.—This is a species pretty frequent on our shores during spring, autumn, and winter; but is not known to breed with us. It is widely distributed in other regions, and breeds far north, and within the Arctic Circle. The nest is said to be of rude construction, and placed in marshy situations, and the eggs to be four in number, of a dusky colour spotted with black.

THE COMMON THICK-KNEE. *Edicnemus crepitans*.—This bird is also known by the names of the Norfolk Plover and Stone Curlew. It usually arrives in this country in April or May, and, after rearing its young, takes its departure in October for more congenial climes. In Norfolk and Suffolk it is considered to be more numerous than in other parts of England, and has derived one of its names from its comparative abundance in the former county; it is also found in Hampshire, Sussex, and other parts of our country as far north as Yorkshire. It is unknown in Scotland, and very rare in Ireland. This species frequents downs, commons, uplands, and sheep-walks, and breeds on open wastes and upon those extensive sandy flats which chiefly border upon the sea-coast. It lays its eggs without other nest than a cavity scratched in the ground; these are two in number, more oval in form than those of the Plovers, Dotterels, and their allies, which we have recently described, and of a light-brown or warm stone-colour, streaked and blotched with dark brown and other greyer tints. As the dusk of evening approaches, this bird rouses up itself in search of its food, which consists of worms, insects, and young frogs.

CREAM-COLOURED SWIFTFOOT. *Cursorius Europæus*.—The birds composing the genus *Cursorius* inhabit, as their fa-

avourite resorts, inland tracts at a great distance from the sea, and run with astonishing rapidity, as well as fly with great power. Their strongholds appear to be Africa and India, and the present species is reported to be numerous in Abyssinia. It has occurred occasionally in Great Britain, and in a few instances upon the European continent, but little is known of its habits or nidification; indeed, of the latter we can at present furnish no account.

COLLARED PRATINCOLE. *Glareola torquata*.—This bird has only been met with occasionally in Britain, but in the eastern provinces of Europe, and in parts of Asia, it occurs in abundance. Sandy places near water, and low meadows, are spoken of as its favourite resorts, while its nest is variously, yet perhaps accurately, described as being placed in any accidental depression in the dry soil, or again, as found among reeds, osiers, and the tall herbage of morasses. The eggs are four in number, of a rather rounded form, with little or none of the pear-shape peculiar to many which we have recently noticed. The colour is a yellowish-white, thickly streaked and blotched with grey, black, and brown. The evolutions of these birds in the air are graceful and quick; they fly with rapidity, and run swiftly. They are insectivorous, and their food is sometimes taken on the

wing, after the manner of swallows, and sometimes caught in the air by a sudden spring from the ground.

THE EUROPEAN OYSTER-CATCHER. *Hæmatopus ostralegus*.—The Oyster-Catcher is not only common upon our own shores, but throughout Europe, where the coasts are fitted to its habits; but although its chief haunts are upon the sea-shore, it is occasionally seen inland by the course of rivers. It feeds at low water, resting during the height of the tides, and equally so if the change is during the night. It breeds on many parts of our shores, especially on our northern coasts and the adjacent isles. Mr. Hewitson's account of the breeding habits of this species is minute and very interesting, he says:—"The Oyster-Catcher is very particular in the selection of a situation for its eggs, always making choice of a piece of gravel or stony ground, if to be met with near, more especially should it be mixed with broken shells, to which it shows a curious partiality, carefully collecting them together, and arranging them in a slight hole in the ground; and when these are not to be found, selecting in their stead small flat pieces of stone. Simple and hard though the materials be which compose its nest, it is as particular in the arrangement of them as many of our smaller birds are in the softer and more luxurious

composition of their neat and beautiful abodes. Whether the position of the egg is chosen upon the pebbly beach or upon the harder surface of the rock, it is always carefully strewed with these small flat pieces of shell or gravel; the whiter they are, the better they seem to please the taste of the architect, which seems however to experience some difficulty in placing them to its liking, and prepares numerous nests before it makes use of one; this I have always noticed with some wonder, and in some instances have seen as many as a dozen, all apparently as well finished as the one which contained the eggs." The eggs, which are about the size of those of the domestic fowl, but more pointed at the smaller end, are of a pale-brown or stone-colour blotched with grey and brown. They are usually three, but occasionally four in number. Mr. Dunn says: "It lays three or four eggs; I have taken many nests, and more frequently found three than four."—'Ornithologist's Guide to Orkney and Shetland,' p. 90.

RALLIDÆ. RAILS.

In this, the last family of the Wading Birds, we find the members which constitute it more aquatic in their habits

than other species of the Order which have preceded, and therefore more suited immediately to conduct us to the final Order of Swimming Birds, to which we are advancing. The birds comprised under the present family are very retired in their habits, seeking concealment in the rank herbage which meadows, marshes, and the borders of lakes, ponds, and rivers afford. Many of them run swiftly, or dive and swim with facility, while the feet of those which are not natatorial are so constructed as to enable them to walk upon the soft mud, or even over the large leaves of water-plants. The form of the body in some species is thin and narrow, and admirably adapted for rapid progress in the tangled recesses of rank and aquatic vegetation which they delight to haunt. As a family, their powers of flight are not remarkable. The females are mostly larger than the males, and exceed them also in brightness of colouring.

THE WATER RAIL. *Rallus aquaticus*.—The Water Rail is found in the fenny counties of England, and in other parts of Great Britain where marshes or fens occur. It conceals both itself and its nest with caution and success. The nest corresponds closely in its position and structure to that of the Water-hen, being composed of coarse flags, and placed either above or near the water. The eggs, which are

from seven to ten in number, are rather less than those of the Corn Crake or Land Rail, and also of a lighter and more delicate ground-colour, being of a pale cream-colour, with perhaps a slight admixture of greyish-pink; the spots, which are grey and dull-red, are fewer and finer than in the eggs of the Land Rail. Altogether, while there is a very considerable general resemblance between the eggs of the two species, there is sufficient difference to render them readily distinguishable.

THE MEADOW OR CORN CRAKE. *Crex pratensis*.—Among the meadows and other enclosures and lands of sheltered valleys through which rivers wind, the Corn Crake or Land Rail delights to range; and here, in the dewy evening and early morning, its peculiar call or crake is heard. Both this and the last species possess a power of modulating their voices, so that they often deceive the ear, seeming now close at hand, and shortly at a great distance from the listener. The Corn Crake is migratory, coming in April or May to breed, and again retiring to the European continent after the young are reared. Like the Water Rail, it is a bird which cautiously shuns observation, threading its way through the close herbage, and seldom rising for flight unless absolutely compelled to do so. It forms its nest of

dry grass, in meadows, on the ground, and lays from seven to ten eggs of a pale-brownish tint, blotched or spotted with reddish or rusty brown, slightly varied with additional markings of purple-grey.

THE SPOTTED CRAKE. *Crex porzana*.—The Spotted Crake, like the last species, arrives in this country in the spring, departing again in the autumn; it is, however, more aquatic in its habits than the Corn Crake, frequenting marshes and the borders of lakes and rivers; and as it is very retired in its habits, and does not betray its presence by its call or cry, it is perhaps accounted rarer than it in reality is. It is diffused in suitable localities over England, is frequent in Scotland, and accounted an occasional summer visitant in Ireland. Its nest is formed amidst its accustomed haunts, near to water, and in similar situations to that of the Water Rail. It is constructed of portions of the reed, lined with grass; and the eggs, which are from seven to ten, while they possess a general resemblance to those of the Corn Crake, yet are easily distinguished from them by the colours both of the ground and markings, which have less of the clear reddish-tinge than those of the allied species.

BAILLON'S CRAKE. *Crex Baillonii*.—"This little Crake is almost a miniature representation of the last," and its nest is said to be constructed similarly to that of the Spotted

Crake. It is however a much rarer bird, and has not been known to breed with us, but is not uncommon in certain parts of the European continent. The eggs are from seven or eight to ten in number, and of the oval form with which we are so familiar in the eggs of the Turtle Dove; they are of a yellowish or ochrey ground-colour, varied with fine markings of yellowish-brown and subdued spots of grey.

THE LITTLE CRAKE. *Crex pusilla*.—This species is of equally rare occurrence in England with the last, and we are not aware that it has been yet ascertained to visit either Scotland or Ireland. Its habits, difficult to observe, are believed to correspond with those of the two last species. The eggs, from seven to ten in number, are of a pale-brown colour spotted with olive-brown and grey. In southern and eastern Europe this species is considered plentiful.

THE COMMON GALLINULE. *Gallinula chloropus*.—We expect this species would in general be more readily identified under the title either of the Moor-hen or Water-hen. It is no rare bird, being distributed throughout the British Islands, and frequenting sheets of water and still rivers, where island retreats occur, or where the margins are fringed with willow, brushwood, or any rank vegetation, and in such resorts it finds its breeding-places. "When pursued upon the land, it will run or half fly to the nearest

water, and will creep into holes or dive amidst the vegetation, the bill merely kept above water. In this position it requires a very strict search to find it, allowing the stems of grasses and brushwood to be put aside without moving; and, when discovered, is seen squatted under water, immovable, and permitting itself to be lifted, making no struggle for escape until secured." The nest is usually placed amongst reeds or roots of brush by the water's edge, being supported by these; but one which we saw and sketched was at the extreme end of a depending branch of a tree growing by the side of a pond: the branch touched the water, and the foundation of the nest was immersed in it; green leaves were laid over the top of the nest, and partially covered it,—doubtless, as it was in a somewhat exposed situation, to conceal both it and the eggs from observation. The nest is large, and rude in form, composed of reeds, rushes, and other water plants; and the eggs, from five to ten in number, are of a pale-brown colour, blotched, speckled, and spotted with dingy-red. The Moor-hen begins to lay at the latter end of April, or in May, and three broods are reared in the year. (Pl. XIII. fig. 85.)

THE COMMON COOT. *Fulica atra*.—The Coot is spread over temperate Europe, and is especially abundant in Hol-

land. It is common in our island, frequenting lakes, ponds, and rivers bordered by reeds and aquatic plants. It swims and dives with the greatest facility, feeding probably under water, but also finding a portion of its food upon land, in meadows adjacent to the water, to which it resorts in the early morning. In winter, when the fresh-water ponds and lakes are frozen over, numbers of these birds may be found in saline marshes, and by the arms and inlets of the sea. The nest is a somewhat rude structure, composed of grass, flags, and other herbage, and placed among reeds by the water-side, or even rising from out the water to such a height as to preserve it, under ordinary circumstances, dry, and secure from inundation. Occasionally however, when thus situated, it is borne from its moorings, and it is recorded that upon one occasion the bird continued to sit upon her eggs in one of these drifting nests until they were hatched, and afterwards succeeded in rearing her brood. The eggs number from seven to ten, and are scarcely less than those of the domestic fowl; they are of a stone ground-colour, thickly sprinkled over their entire surface with minute specks and larger spots of purple-brown approaching to black.

92.

93.

94.

95.

92. Common Coot.
94. Common Redshank.

93. Golden Plover

95. Black-tailed Godwit.

Winning Brooks Lith

ORDER VII. NATATORES. SWIMMING BIRDS.

The species of birds which are accounted British, number about three hundred and fifty, and of these not fewer probably than one hundred belong to the present Order. This large proportion is readily accounted for from our insular position, and the lofty and precipitous character of many portions of our coast.

Of the many forms which are included in this Order, some are of extreme beauty and gifted with amazing powers of flight, while others, to whom this power has been denied, possess a remarkable adaptation in their structure for rapid progress in the water or for exploring its depths in search of food. While reposing on the downs at the Needles end of the Isle of Wight, we have watched with mingled surprise and delight the Gulls as they have risen to view from the lower precipices, and soared, upon almost motionless wings, high into the deep blue heaven, and performed, without a perceptible effort, the most graceful evolutions, or swept with arrow-like rapidity away upon their tireless wings. Indeed the sea-fowl add an indescribable charm to our coasts, where, at all seasons, millions of them enliven

the romantic and otherwise solitary shores. In an economical relation, this Order is of considerable importance. To it we owe all our domestic breeds of geese and ducks, etc., and upon it multitudes in our own and other countries partially or entirely depend for their subsistence. In the birds of this Order the feet are webbed, which enables them to swim with rapidity and ease, and in many forms, to give greater effect to their motions in the water, the limbs are placed very far back; but the adaptation of their forms to an aquatic life often renders them conspicuously awkward in their movements on the land, which indeed certain species frequent very little, except during the breeding season. The plumage of the water-birds is very dense, consisting of a warm undergrowth of down, overlaid by large and sometimes silky feathers, which throw off the water as if their surface was oiled. The families of this Order include the Duck tribe, the Divers, the Auks, the Pelicans, and the Gulls, all of which find representatives in our British list.

ANATIDÆ. DUCKS.

This family includes the Ducks, Geese, and Swans, and its members, while they are extensively diffused over the earth's surface, are of great importance to man, furnishing

not only a nutritious food, but the greater part of the down which contributes so greatly to his comfort and luxury.

THE BEAN GOOSE. *Anser segetum*.—The Bean Goose visits the southern parts of our island in autumn, but does not breed there, frequenting for that purpose more northern latitudes. It does however incubate in the Hebrides, we believe, and upon the lochs of Sutherlandshire. On Loch Laighal from thirty to forty pairs have been reported to breed annually, and here the nests are described as placed near each other on the small islands, often near the shore, and among heather at least three feet in length. The eggs, which are white, are from five to seven in number.

THE GREY LAG GOOSE. *Anser ferus*.—This is a rarer species than the last in the British Islands, and does not breed with us. It is distinguishable from the last bird by its larger size, the different colour of the feet (which in the former are orange-yellow, but here a livid greyish-pink), by the white nail of the bill, contrasted with the black of the former, and other minor differences. In his visit to the North, Mr. Hewitson met with a nest of this bird, built upon one of the numerous small islands of the Norwegian sea: it was constructed of coarse, dry grass, and thickly lined with feathers. The eggs, which closely resemble those

of the Bean Goose in size, shape, and colour, are reported to be four or five in number. Our domestic Geese are supposed to have been derived from the present species.

THE PINK-FOOTED GOOSE. *Anser brachyrhynchus*.—There is again a considerable resemblance between the Bean Goose and the present, but the smaller size of the Pink-footed, the comparative shortness of its beak, and the colour of its legs and feet, serve to distinguish between them. The present bird breeds in great numbers in the small islands of the Sound of Harris, as well as those of the interior of North Uist, parts of the western islands of Scotland. The eggs, which are white, are less than those of the two preceding species; as many as eight eggs have been known to be laid by this bird, but the average number we do not know.

THE WHITE-FRONTED GOOSE. *Anser albifrons*.—This is a winter visitant only to this country, but does not breed here. It is common in Sweden and Lapland, and breeds in both countries. The egg is white.

THE BERNICLE GOOSE. *Anser leucopsis*.—This Goose is also a winter visitant along our shores, appearing in large flocks on the western coasts, but being sparingly distributed on the eastern. The Bernicle is said to breed in Iceland, Spitzbergen, Greenland, Lapland, the north of Russia and

of Asia, and the neighbourhood of Hudson's Bay. This species was, as lately as 1636, and in a published account, declared to have its origin from those singular shell-covered cirrhipedous creatures called Bernacles, which are often attached in thousands to floating timber by means of long, flexible, worm-like stalks or peduncles; and the memory of this absurd invention, it will be perceived, is still preserved in the name which it bears. The eggs are white. Were the breeding habits of the different species of Geese accurately observed and described, they would probably be found very nearly to coincide in the leading particulars, but the character of the remote wilds to which they resort for the purpose of incubation, renders it difficult to obtain much satisfactory information respecting those habits.

THE BRENT GOOSE. *Anser brenta*.—This is also a winter visitor in Britain; but, as the Bernicle Goose is distributed along the western coasts of our island, and is little known along the eastern, except as a straggler, so, on the contrary, the Brent Goose frequents in equal if not greater numbers the eastern and southern coasts, and is little known upon the western. In its habits the present species is to a great extent maritime, indeed Mr. Audubon considers it exclusively a maritime goose, but easily tamed, feeding upon

grain. Sir William Jardine says, "On the north-eastern shores of England, where we have had opportunity of seeing them, they might be considered entirely maritime, not being known to leave the water-mark or ever to feed on the pastures or young grain. During ebb-tide they feed on the banks of *Zostera marina* then uncovered; and Mr. Selby mentions the *Ulva latissima* as very frequently found in their stomachs; at other times they rest on the sandbanks, which are quite open, and afford no shelter for approach, or they ride, as it were, just off the land, buoyant upon the wave, and occasionally pluck the sea-grass or weeds which are yet borne up within their reach." This species breeds in northern latitudes, and some of the eggs were brought to this country by the officers of one of the Arctic expeditions. The eggs differ from those of the other geese (which are originally pure white or cream-coloured), in having a slight tinge of brownish colouring.

THE RED-BREASTED GOOSE. *Anser ruficollis*.—This is one of the rarest European birds, and has occurred more frequently in Britain than elsewhere, but in no recorded instance north of Berwick-on-Tweed. Scarcely anything is known of its habits. It is said to breed on the shores of the Frozen Ocean.

THE CANADA GOOSE. *Anser Canadensis*.—This species is a native of the Arctic regions of North America, whence in the autumn vast flocks wing their way southwards, spreading over Canada and the United States, and returning in diminished numbers in the spring to breed. “The English residents at Hudson’s Bay depend greatly on the supply of Canada Geese for their winter provision; and it is stated that in favourable years as many as three or four thousand have been killed and barrelled up; a single native, from the ambush of his bough hut, will sometimes kill two hundred in a day.” Different parts of the North American continent are mentioned by Mr. Audubon as situations in which they breed; “and in Labrador,” he adds, “these birds breed in every suitable marshy plain.” The nest is placed in some retired spot near the water, and generally among the rankest grass; it is large and flat, formed carefully of dry plants of various kinds, and raised to the height of several inches. The eggs are from six to nine in number, the former being the more usual number. Occasionally these birds are said to breed in trees, in the deserted nests of Ravens or Fishing Eagles.

THE EGYPTIAN GOOSE. *Chenalopex Egyptiaca*.—This species is reported to abound along the banks of the Nile,

and is distributed in greater or less numbers over the African continent. It visits the southern shores of Europe, and, in a semi-domesticated state, is kept both in this country and on the European continent in the vicinity of artificial waters. The nest, formed of reeds, leaves, and the stems of water-plants, lined with feathers, etc., is placed near the water; and the eggs, which are white, are from six to eight in number.

THE GAMBO GOOSE. *Plectropterus Gambensis*.—This is also called the Spur-winged Goose, from the tubercles or spurs with which the wings are armed at the carpal joints. It is only known to have occurred in one instance in this country, when in 1821 it was killed near a small fishing-place in Cornwall, where it had associated with the common geese. The species is a native of northern and western Africa, but its habits are unknown.

THE MUTE OR TAME SWAN. *Cygnus olor*.—There are four species of Swans which are accounted British, and in all the plumage nearly corresponds; by careful observation of the bill and head of each, however, the difference which exists between them will immediately appear. The present species is only known in this country in its semi-domesticated state, as an ornament to our rivers or artificial waters.

Its natural residence seems to be Eastern Europe. It is migratory in its habits, and, among other places to which it resorts, is stated to visit Smyrna Bay in winter. "In a natural state, the female swan, sedulously attended by her mate, forms her nest, which is a thick mass of sticks, reeds, flags, and rushes, in the midst of reeds or osiers near the water. The eggs are six or eight in number," and of a greenish-white. The Cygnets, or young Swans, are covered with a greyish-brown plumage, which is not entirely lost till the beginning of the third year. "The attention bestowed by the old birds upon the young is incessant; and when fatigued by the strength of the stream, or requiring to be removed to a far distance, too great for their young capacity, the hen bird takes the young ones on her back, which she accomplishes by lowering herself a little in the water, and occasionally assisting them to ascend with her foot, and in this manner they are carried in safety to some more desirable spot." The Swan feeds on aquatic weeds and coarse grass growing by the sides of rivers and in morasses. It is long-lived, attaining to the age of more than thirty years.

THE HOOPER OR WILD SWAN. *Cygnus ferus*.—The Wild Swan descends from the higher northern latitudes in winter, when it visits the coasts, lakes, and rivers of Britain. We

do not think that any of these birds remain to breed in the British Isles, but at the commencement of spring, return to the northern countries of Europe for that purpose. In their migrations they fly, arranged in the form of a wedge, with great rapidity, and at a great elevation. They are tamed without much difficulty, and breed in captivity. A nest is described by Mr. Hewitson as composed of water-plants, lined with the same, and raised a few inches above the ground, but the nest is also said at other times to be lined with down, and the eggs to be covered with the same. The eggs are of a delicate yellowish or parchment white, and in this respect very distinguishable from those of the Tame Swan, as well as by their smaller size. The bird itself may be distinguished from the Mute Swan by its smaller proportions and its less graceful appearance, as well as by the form and colouring of the bill. In the Mute Swan the base of the bill is black, with a protuberance of the same colour; but in the Wild Swan there is no protuberance, and the base of the bill is of an orange-yellow, the apical portion of the bill being black over a considerable extent of surface. The expanse of the wings in the wild species is about eight feet.

BEWICK'S SWAN. *Cygnus Bewickii*.—The memory of

Bewick is cherished with ardour by many, as that of a man of great amiability of disposition and natural talent; and it is pleasant to perceive an opportunity taken of perpetuating the remembrance of his attachment to ornithological pursuits, by associating his name with that of the present species, one of our British birds, which was first distinguished and made known as such by Mr. R. R. Wingate, whose attention was drawn to the subject by Mr. John Hancock. It is a smaller species than the last, and much rarer; and although the bill is, like that of the Hooper, black towards the apex, it is so over a much greater extent of surface, the yellow portion forming a large and nearly oval spot above and in front of the eye; there are also other external distinctions traceable upon comparison between them. The bird is a native of northern regions, and has been, with probability, stated to breed in Iceland, and within the Arctic Circle. Little is known of its breeding habits. The nest has been differently but doubtless truthfully described; and from these descriptions we gather that it is large, and constructed of very various materials. The eggs, less than those of the Wild Swan, are of a cream-white colour.

THE POLISH SWAN. *Cygnus immutabilis*.—In 1838, Mr. Yarrell first introduced this species to the notice of

naturalists as a British bird, and during the winter of that year several specimens were obtained upon our coasts. It is a native of high northern regions and of the Baltic, and is easily reconciled to captivity, breeding, it is said, as freely as the common Tame Swan. It is a large species, measuring fifty-seven inches in length; the young birds are white, a point in which it differs from every other species of White Swan; and at all ages the plumage continues changeless white, while the form and colour of the bill differ from those of the preceding species. We have no doubt that a general agreement exists between the breeding habits of this swan and of those which precede, but we have no certain particulars of information upon the subject with which to supply the reader.

THE COMMON SHIELDRAKE. *Tadorna Belonii*.—This beautiful bird is seldom seen far inland, or frequenting fresh waters, except during the season of incubation. It is a native of Northern Europe, and may also be seen at all seasons upon various parts of our coast. In breeding, this species selects, where opportunity occurs, the deserted burrows of rabbit-warrens, placing its nest some feet from the entrance, but where such accommodations do not present themselves, it builds in the fissures of rocks and banks. The nest

is composed of dry grass lined with down, and the eggs, from ten to twelve in number, are generally nearly pure white. The old birds show great address in decoying the intruder from the nest, feigning lameness, and fluttering along the ground before him ; from which artifice it is called by the natives of the Orkneys the Sly Goose.

THE RUDDY SHIELDRAKE. *Tadorna rutila*.—The habits and eggs of this rare British species correspond very nearly with those of the preceding.

THE COMMON WILD DUCK. *Boschas fera*.—The Common Wild Duck, or Mallard, is supposed to have been the stock from whence our domestic Ducks have been derived ; they breed together, flock together, and are alike subject to a double annual moulting. The Wild Duck is abundantly distributed over all our islands, and although many quit our shores in the spring to seek their breeding stations in more northern parts, yet others remain and incubate in marshy situations, placing the nest generally upon the ground, sometimes near the water, but on other occasions at a considerable distance from it. The nest is formed externally of dry grass, and is thickly lined with soft white down. The eggs, usually from ten to twelve in number, are of a greenish-white colour. “Wild Ducks were formerly much more

abundant in our island than at present, in consequence of the drainage of our marshes. Pennant records that during one season, in the neighbourhood of Wainfleet, of Ducks, Widgeons, and Teals, 31,200 were taken in only ten decoys, of which more than two-thirds were of the present species; and that at a single driving of the Fens in Lincolnshire, before the young had taken wing, and while the old birds were in moult, one hundred and fifty dozens have been captured. The same district at the present time scarcely produces a dozen broods in the year."

THE COMMON TEAL. *Boschas crecca*.—This, though a small species, is one of our most beautiful ducks. In some parts of our island it is chiefly a winter visitant, but in others, as in many parts of the south of Scotland, it is, to a far greater extent, a constant resident, breeding in the vicinity of its haunts, and quitting them only in very dry or severe weather. Marshy moorland wastes, with small ponds, are generally chosen for breeding in, and in such wild spots its nest is usually placed among the heath or long grass, and is externally composed of these materials, though thickly lined with soft down. The full number of the eggs is eleven, which are of a buff-white colour.

THE GARGANY DUCK. *Boschas circia*.—This beautiful

species is a summer visitant to this country, and is by some writers called the Summer Teal. In Scotland and Ireland it is little known, but a few pairs are said to breed in England. The nest is described as composed of rushes and dried grass, with down; and as being placed on the ground in swampy situations, and among the rushes and coarse herbage in marshes and on the borders of inland waters and rivers. The eggs, from eight to ten in number, are of a cream-colour or buff-white.

THE BIMACULATED DUCK. *Boschas gloeitans*.—On a few occasions this bird has been taken in Britain, but we have little information respecting its habits.

THE COMMON PINTAIL. *Dafla caudacuta*.—It is chiefly during the winter that this beautiful duck occurs in this country. It is a species also generally distributed in Europe, extends to Asia, and is noticed by Wilson and Audubon as American. It breeds in high northern latitudes, advancing southward in the winter, and returning to its breeding stations in the spring. Like most other Ducks it makes its nest among the thick herbage near the margin, or within a short distance of fresh water. The nest is composed of grass and reeds, lined with a small quantity of down, and contains from six to eight eggs of a dull greenish-white colour.

THE GADWALL. *Chauliodus strepera*.—The Gadwall is a native of the high northern latitudes of Europe, Asia, and America, and in the latter country it was observed by Dr. Richardson breeding, together with the Mallard, in the woody districts up to their most northern limits, in latitude 68°. From the North it descends southward in the winter, returning in the spring; and during its vernal migration it is occasionally seen in this country. Lakes, rivers, and marshes are the resort of this species, the sea-coast being seldom visited. Its breeding habits closely resemble those of some of the species already noticed. Its nest is placed upon the ground, among rank aquatic herbage, sedge, and rushes, in retired and marshy districts; and in its construction closely resembles that of the Wild Duck. The eggs, from eight to twelve in number, are of a greenish-white colour.

THE COMMON SHOVELLER. *Anas clypeata*.—This beautiful Duck is comparatively rare in Britain, and is chiefly known as a winter visitant, but is also known occasionally to breed with us. In its habits it is an inland bird, being seldom seen at sea. Its range in foreign parts is more extensive than that of almost any other British species. The nest, usually composed of grass and down, is placed amidst

96.

97.

98.

99.

Vincent Brooks Lith.

96. Herring Gull.

97. Black Guillemot.

98. Black Headed Gull.

99. Common Guillemot.

reeds and the tall herbage of marshes and the borders of lakes; and the eggs, from eight to ten or twelve in number, are of a buff-white with a slight tinge of green.

THE COMMON WIDGEON. *Mareca penelope*.—Although this bird breeds inland, it frequents the coast more than the preceding species. It comes to us in the autumn, and is present in large numbers during the winter, on the coasts and estuaries or more extensive fens. In the spring it migrates northwards, to its breeding stations, which appear to be principally in Norway and Sweden. A few however breed annually in the vicinity of the lochs of Scotland, or upon the islands which stud their surface, but this appears to be the limit southward of their nidification. The nest is placed among rushes, grass, flags, and reeds in the neighbourhood of lakes and rivers. It is composed of decayed grasses and rushes, lined with down, and the eggs, which are of a cream-colour, are from five to eight in number. Aquatic plants, seaweeds, and ordinary grass form the chief support of this species.

THE AMERICAN WIDGEON. *Mareca Americana*.—This species, which breeds in the high northern latitudes of America, is common in winter in the United States, and particularly so in Carolina, where it frequents the planta-

tions of rice. A gentleman with whom we corresponded respecting it, writes, "I have received the eggs from Hudson's Bay, on the shores of which the bird is common." It is of very rare occurrence in the British Islands.

THE SCAUP POCHARD OR SCAUP DUCK. *Fuligula Gesneri*.—The Scaup is a regular winter visitant to Britain, frequenting coasts of a soft or muddy character, and feeding on the smaller bivalves, which are generally found there in abundance. It breeds in Iceland and other northern parts, and may perhaps occasionally breed in the northern parts of the British Islands. In Iceland it is a common bird, making its nest among the thick herbage or upon the bare stones by the edge of the fresh-water lochs. The nest is externally of slight construction, being formed of stems of grass, but is thickly lined with down. The eggs, from five to eight in number, are of a dull yellowish-white.

THE AMERICAN SCAUP. *Fuligula mariloides*.—A single example of this species occurred some years since in Leadenhall market, upon the appearance of which, we believe, its claim to be accounted a British species depends. We are not at present able to furnish the information we could desire upon its nidification.

THE TUFTED POCHARD OR TUFTED DUCK. *Fuligula cris-*

tata.—This is a less bird than the Scaup Pochard, and rather more gracefully formed. It is a winter visitor in Britain, retreating, in common with the greatest number of those which visit temperate climes, to more northern regions to incubate. A few pairs breed among the inland waters of Holland, and it has been known to breed in a state of captivity in our own country. The eggs, from eight to ten in number, are less than those of the Scaup, but nearly resemble them in colour.

THE FERRUGINOUS DUCK, OR WHITE-EYED POCHARD. *Fuligula ferruginea*.—The White-eyed Duck, as this species is also called, like some of the preceding birds, is also a winter visitor, appearing chiefly in the southern division of our island. Its chief breeding-stations do not appear to have been discovered, but probably they are far north, or in the north-eastern portions of the Asiatic continent. The eggs of this bird have been received from Holland, and Temminck says that the species breeds amongst the reeds on the borders of large rivers and marshy districts, and that it lays nine or ten eggs, which, we may add, are of a cream-colour sometimes tinged with green.

THE RED-HEADED POCHARD. *Fuligula ferina*.—This is again chiefly a winter visitor to our island, yet it has been

occasionally discovered breeding in suitable localities in this country, as also in Holland, but these are probably quite the southern boundaries of its range during the season of incubation. Dr. Richardson states that this species breeds in all parts of the fur countries of America, from the fiftieth parallel to their most northern limits. The nest is built among rushes or other coarse herbage in marshy places, and is lined with feathers. The eggs, from eight to ten or even more in number, are of a pale-buff or greenish-white tint, the colour perhaps somewhat varying in different specimens. In Mr. Hewitson's figure the colour is very decidedly of a pale-greenish cast.

THE RED-CRESTED POCHARD. *Fuligula rufigula*.—This is also called the Red-crested Duck, or Red-crested Whistling Duck. It is not a common species, and we have little information at hand respecting its nest or eggs. "The nest of this bird," the Rev. F. O. Morris says, "may be termed a bed of rushes." The figure given in the work of that writer upon British Eggs is of a yellowish-white colour with perhaps the slightest tinge of green.

THE GOLDEN-EYE GARROT. *Clangula vulgaris*.—"In Great Britain and Ireland the Golden-eye is a winter visitant, appearing rather early upon the rivers, and being very

generally distributed over the country." Over Europe also it seems to be pretty equally distributed in winter in suitable localities, but it retires northward to breed, and is frequent during the season of incubation in Scandinavia, Norway, Sweden, and Lapland. In these countries it breeds naturally in hollow trees, but also takes possession of boxes or artificial holes made by the country people for the sake of the eggs. In January 1855, many of the eggs of this as well as of several other species of British birds, were brought before the public by John Wolley, Jun., Esq., collected by him in Lapland. The hole of the tree in which the Golden-eye incubates is lined with the soft down of the bird. In selecting a situation for its nest, it prefers rivers to lakes, and particularly the neighbourhood of falls and rapids. The eggs, which are from ten to fourteen in number, are of a green colour.

THE BUFFEL-HEADED GARROT. *Clangula albeola*.—The true home of this Duck is North America, where it is found abundantly in the lakes and rivers, and on the coasts, breeding in the northern latitudes. It has occasionally, but very rarely, visited Britain. With particulars respecting its nest and eggs we are not acquainted.

THE HARLEQUIN GARROT. *Clangula histrionica*.—Ame-

rica is the principal home of this species, where it is well known to naturalists, but it also frequents, in limited numbers, the continent of Europe, and occasionally the British Islands. It is found in Iceland, frequenting cascades and rapidly-running streams, and building its nest of dry leaves, grass, and reeds, lined with down, among low bushes and water-growing plants. The eggs, from six to eight or perhaps more in number, are of a cream-colour or yellowish-white with a tinge of green.

THE LONG-TAILED OR NORTHERN HARELD. *Harelda glacialis*.—The Long-tailed Duck, as this species is likewise termed, is only a winter visitor to our shores, and more rarely met with in the south than on the northern coasts. Its breeding-stations in Europe are around the lakes of Norway, Denmark, Sweden, Iceland, etc. It is also an American bird, and was found by Audubon breeding by the fresh-water lakes of Labrador. The nest, formed of the stems of grass and reeds, lined with down, is placed by the edge of the fresh water among aquatic plants and brushwood. The eggs, from six to ten or even twelve in number, are of a yellowish-white or cream-colour tinged with green, closely resembling in respect of colour those of the last preceding species.

THE SURF SCOTER. *Edemia perspicillata*.—The Surf Scoter or Surf Duck is rare both in Britain and in Europe, its true home being America, and its visits to the seas and coasts of Europe only accidental. In North America it is abundant, frequenting in summer estuaries, bays, and bars of the sea, and diving with great facility and vigour amidst the heavy surf. In winter it migrates to the more southern parts of the same continent, as far as Florida, numbers resorting to the shores and open bays of the United States. From these migrations it returns early in May to the far North to breed, where, in marshy places or in the vicinity of lakes or inland seas, its nest is found, formed of weeds in a withered and rotten state, and lined with down. The eggs are of a cream-colour, and at least five in number.

THE VELVET SCOTER. *Edemia fusca*.—This species of Duck is much rarer on the southern than the northern shores of Britain; on the latter, especially the most northern, it is not uncommon in winter, but it returns northward to breed. It is also an American species, migrating southward in winter and returning to the north for the purposes of incubation. In Europe it is common during the summer months in the interior of the whole of Scandinavia, north of lat. 60°. It frequents and breeds on the large

lakes in the mountainous districts, especially those of which the shores are flat and boggy and covered with vegetation. In Lapland it is common everywhere. Mr. Audubon describes the nests of this species in Labrador as "placed within a few feet of the borders of small lakes, a mile or two distant from the sea, and usually under the low boughs of the bushes, of the twigs of which, with mosses and various plants matted together, they are formed; they are large and almost flat, several inches thick, with some feathers of the female, but no down under the eggs, which are usually six in number." We may add that the egg is large, and of a yellowish-white strongly tinged with olive-colour.

THE COMMON OR BLACK SCOTER. *Edemia nigra*.—This is a smaller species than the last, but somewhat resembling it in form; and in Scandinavia, of which Mr. Dann writes, he states that it "frequents the same places and is very similar in its habits to the Velvet Duck, both being generally found in the same localities." The nest, formed of grass and aquatic plants, is lined with down, and the eggs, from five to seven, and perhaps even ten in number, are yellowish-white with a tinge of green.

THE COMMON EIDER. *Somateria mollissima*.—The Eider Duck, though a common British bird, is chiefly met with

in the northern parts of our country, and does not breed more than about twenty miles south of the Fern Islands in Firth of Forth. On the northern shores of Europe it is found in profusion, and is also distributed around the shores of North America, but does not range further south than the vicinity of New York. Islands are generally preferred for breeding on, but sometimes sandbanks along the seashore and hollows in rocks on the mainland are also resorted to for this purpose. The nest, formed at first of seaweed and grass, is subsequently lined with soft elastic down from the breast of the bird, but this is not added till the whole or the greater portion of the eggs have been laid. When the bird quits its nest, the eggs are covered over, before the down has been introduced into the nest, with grass and leaves, afterwards with down. A single bird does not lay more than five eggs, which are of a very pale greenish colour, but occasionally two birds deposit their eggs in the same nest and sit amicably together. In Iceland, where these birds breed in great numbers, the down with which their nests are lined is made an article of commerce, and for the purpose of gathering it the nests are visited two or three times in a season. The Eider Duck, during the breeding season, will permit great nearness of

approach and familiarity of treatment, even, in some instances, suffering itself to be handled upon the nest without apparent alarm.

THE KING EIDER. *Somateria spectabilis*.—The stronghold of this species, which is rare in Britain, is near to the Arctic Circle, where it breeds on the sea-shore, as well as in the neighbourhood of fresh-water ponds. On some of the rocky islands off the coast of Spitzbergen this species has been found breeding in great numbers. “The sailors could scarcely walk without treading on their nests, and sacks might have been filled with the eider-down.” The nest of this bird, like that of the Common Eider, is lined with the soft down of the female, and contains five eggs, resembling in colour those of the last species, but in size they are rather smaller.

STELLER'S WESTERN DUCK. *Somateria Stellerii*.—This very beautiful bird is one of the rarest species both in Europe and America; but we were fortunate enough to see a very carefully preserved specimen in the spring of the present year, at the house of Mr. Gardner, 426, Oxford-street, London. It will not surprise our readers when we add that we are without any reliable particulars relative to its breeding habits. “It is said to breed like the Eiders.”

THE SMEW, OR WHITE NUN. *Mergus albellus*.—This is one of our rare winter visitors, more frequently met with in the south than in the north of Britain, in which last part of our island it is seen only as an occasional straggler. In Central and Northern Europe it occurs, and in North America; on the last continent, however, but rarely, since Audubon was obliged to have recourse to a British specimen for his drawing of the male bird. With regard to its nidification, the nest of the Smew is reported to be made of dry grass and lined with the down of the bird itself. It is placed on the ground, upon the banks of lakes and rivers, not far from the water, or in a hollow in a tree. The eggs are said to be of a yellowish-white colour.

THE GOOSANDER. *Mergus merganser*.—On the mainland of Great Britain at least, this bird can only be considered a winter visitor, and much less numerously so towards the South. In the Orkney and Shetland Islands we do not at all think that it remains to breed, although it may do so in the Western Islands of Scotland; but, generally speaking, more northern regions are its summer resort, and in Norway Mr. Hewitson saw the birds during the breeding season; while in Iceland, Mr. Proctor, of Durham, procured the eggs. The nests of this species have been found in fresh-

water lakes near the sea, and it has been noticed that they are built upon small islands, as Mr. Audubon conjectures, for the purpose of allowing the sitting bird to get soon to the water in case of danger. The nest, raised upon a mass of dead weeds, collected perhaps for the purpose, is composed of dry grass or fibrous roots, lined with down and feathers; and the eggs, from four or five to seven or eight in number, are of a pale buff-colour, bearing considerable resemblance to those of the Red-breasted Merganser, but larger, and usually of a lighter colour.

THE RED-BREASTED MERGANSER. *Mergus serrator*.—In England and the south of Scotland, it is only during the winter that this bird is met with, but upon the islands and along the margins of the more retired Highland lochs, it is known to incubate, as also in the Hebrides, and Orkney and Shetland Islands. In Northern Europe it breeds, and is abundant. The nest is often placed among long grass, heath, or brushwood, on the margin of lakes, or on the banks of small rivulets, and is formed of grass and moss, lined with down and feathers. The eggs, from six to eight or ten in number, are rather larger than those of a Duck, and of a uniform soft and delicate buff-colour.

THE HOODED MERGANSER. *Mergus cucullatus*.—This is

best known as an American species, being only an occasional visitant on the European continent and in Great Britain. "In winter it ranges through the United States, and breeds in the vicinity of Louisville, placing the nest in hollow trees, but farther north, where these are wanting, the ground is resorted to." We are not acquainted with the eggs of this bird, nor have we met with a description of them.

COLYMBIDÆ. DIVERS.

We now arrive at the second division or family of *Natorial Birds*, namely the *Divers*. In the true *Divers* the wings are small, sharp-pointed, and stiff, and admirably adapted for progress under water, and the feet, which are placed considerably behind the point of equilibrium in the body, so as almost to preclude the possibility of walking, are yet calculated to give their whole propelling force to the body of the bird on the water. The importance of such a structure is apparent when we remember that these birds live almost entirely on the water, except during the season of incubation, and that they subsist exclusively upon fish, which they procure by diving. The species composing the family

are not numerous, and are confined chiefly to northern and temperate regions.

THE RED-THROATED DIVER. *Colymbus septentrionalis*.—During the winter the Red-throated Diver is tolerably numerous around our coasts, occasionally ascending rivers, and venturing inland to the fresh waters which are yet unfrozen. On the northern British mainland a few pairs may frequent some of the lochs to incubate, but the chief breeding stations with us are in the Orkney and Shetland Islands, where this species is plentifully found. In his 'Ornithologist's Guide' to these islands, Mr. Dunn gives the following account of the habits of the bird he says: "On the banks of the latter" (the lakes) "they lay their eggs close to the water's edge, so close indeed that the bird can touch the water with its bill while sitting on its eggs; they are remarkably shy, particularly during the breeding-season, and if any one approaches the lake, instantly leave their nests and take to the water. The female lays two eggs, which in general are deposited amongst a few loose stones. Perhaps these birds have the power of removing their eggs from their proximity to the water; for were it to be swollen only two or three inches in height, the eggs would be destroyed. I have taken several of their eggs, and invariably found them not more

100.

101.

102.

103.

Vincent Brooks Lit.

100. Common Gull.

101. Puffin.

102. Kittiwake Gull.

103. Razor-bill Auk.

than two or three inches from the water's edge." In Central and Temperate Europe this species frequents the shores during winter; in Northern Europe it is extremely abundant, breeding as with us. It is also a North American species; and Mr. Audubon has recorded that he found the nests in Labrador in June, placed on the banks of the fresh-water lakes, and composed of a few blades of grass loosely put together. The eggs, as before stated, are two in number; they are of an olive-colour spotted with grey and blackish-brown.

THE BLACK-THROATED DIVER. *Colymbus arcticus*.—This species is rarer than the last, but is found breeding on some of the lochs of the northern part of Scotland. It breeds upon the small islands, or upon the banks of these waters, placing its scanty nest a few yards from the edge of the water, in a hollow formed by the bird; the nest consists only of a few straws of herbage gathered around. Sir William Jardine remarks: "We discovered one nest on a small bare islet on Loch Shin, and landing on the opposite side, approached, and could perceive the bird lying as it were on the eggs, but with the head raised, having heard our approach. On perceiving us she scuffled along her short trodden path to the water, diving immediately, and

rising out of gun-shot, diving again almost instantaneously, and joining the male, which was apparently surveying the scene at a few hundred yards' distance." This writer adds, "When unaccompanied with the young, we have never been able to overtake this bird on the water; it could invariably beat a couple of good rowers, even though kept almost constantly under water by firing at it, and if approached within a moderate distance, its next rise might probably be many hundred yards astern, having closed and doubled on the way of the boat. On these occasions the bird never attempted to fly." In the north of Europe, Norway, Sweden, Lapland, and Scandinavia, this species breeds among the retired lakes; it is also an American species. The eggs are usually two in number, of a browner colour than those of the last species, with grey and blackish-brown spots.

THE GREAT NORTHERN DIVER. *Colymbus glacialis*.—In the winter this handsome bird visits our coasts from the North, but we are not aware that it has ever been known to breed either on the British mainland, or on any of the adjacent islands. In Iceland it breeds, and upon the American continent, in many parts of the United States, and in Labrador. Dr. Richardson remarks, that though it "is

generally described as an inhabitant of the ocean, we seldom observed it either in the Arctic sea or Hudson's Bay; but it abounds in all the interior lakes, where it destroys vast quantities of fish. It is rarely seen on land, its limbs being ill-fitted for walking, though admirably adapted to its aquatic habits. It can swim with great swiftness, and to a very considerable distance, under the water; and when it comes to the surface, it seldom exposes more than the neck. It takes wing with difficulty, flies heavily, though swiftly, and frequently in a circle round those who intrude on its haunts. Its loud and very melancholy cry, like the howling of the wolf, and at times like the distant scream of a man in distress, is said to portend rain. Its flesh is dark, tough, and unpalatable. We caught several of these birds in the fishing-nets, in which they had entangled themselves in the pursuit of fish." Sir William Jardine says: "We have never been able to come up with this bird on the water, and all the exertions of our rowers could not gain one yard upon it; but it is sometimes taken in nets, and at set lines." It incubates by the fresh-water lakes, near the water, and lays probably two eggs, or perhaps at times three, which are large, and of a brownish-green colour with grey and dark-brown spots.

THE CRESTED GREBE. *Podiceps cristatus*.—The Grebes present us with another form of the Colymbidæ. In these the toes are unconnected but widely lobed; the plumage is very close and of a silken appearance; they are more frequent on fresh waters than on the sea, and fly with reluctance. Their eggs are quite peculiar in their form, being thickest in the middle, and tapering pretty equally towards the ends; originally they are of a chalky-white, with perhaps a slight tinge of blue, but they soon become soiled by contact with the materials of the nest. The present is perhaps the largest species of the genus, and in the plumage of incubation has an imposing appearance, from the rich colouring and ample adornments of the head and neck. It is a native of our country, breeding early, and placing its nest, formed of decayed plants, among the reeds. The nest, partially immersed in the water, is raised some inches above it; and in a cavity on the top, the eggs, originally white, but often greatly stained, and from three to five in number, are deposited. The nest, when left by the bird, is often covered with fragments of reeds for the purpose of concealment, and the bird, if disturbed on the nest, stealthily dives beneath the water, rising again at a great distance from the spot at which the danger appeared.

THE RED-NECKED GREBE. *Podiceps rubricollis*.—This Grebe does not breed in Britain, or at least is not known to do so, but is a winter visitor. It has been found breeding in the shallow reedy lakes at the head of the Bothnian Gulf, making its nest, like the rest of the species, amongst reeds and rushes, and laying four or five eggs, which at first are white, slightly tinted at times with blue; but which afterwards become discoloured by contact with the nest. It is also an American species, and recorded as such by the indefatigable naturalist Audubon.

THE HORNED OR SCLAVONIAN GREBE. *Podiceps cornutus*.—Whether this species breeds in Britain we cannot say, but in Iceland it is reported to be rather common, forming its nest of reeds and other water-plants upon the surface of the water, so that it may rise or fall with any change in the level of the loch. The eggs, which are at first white with a slight tinge of blue, are four or five in number. In its winter plumage this bird is not uncommon in England, and in Scotland is said to be, in this state, the most abundant species next to the Little Grebe, and to range from the Tweed to Shetland.

THE EARED GREBE. *Podiceps auritus*.—This is perhaps the rarest of the British species. Its habits resemble those

of the species with which we are more familiar ; like them it breeds on the margins of ponds, and lays four or five eggs.

THE LITTLE GREBE. *Podiceps minor*.—The Dabchick, as this species is familiarly termed, is, we presume, by far the most common of all the British Grebes, and, like the foregoing species, constructs its nest of reeds, flags, rushes, etc., by the sides of lakes, ponds, and rivers. The number of its eggs is generally four, though at times more may be laid. It is an admirable diver, and can remain long beneath the water, and when disturbed very rarely seeks safety by flight, but plunging beneath the surface of the lake or stream, it hastens to the nearest cover, and disappears from view.

ALCADÆ. AUKS.

The members of this family are also expert divers, but strictly oceanic, never resorting to fresh waters ; though some of them fly well, yet in others the wings cease to be organs of flight, and serve only to assist in aquatic progression. The legs are short but powerful, and placed posteriorly, so that in resting on the rocks the birds assume an

upright attitude, the whole of the tarsus as well as the toes being applied to the surface. They usually burrow, or select precipitous rocks for breeding.

THE COMMON GUILLEMOT. *Uria troile*.—This is the only Guillemot which is common or abundant upon our shores, the others being comparatively rare. In suitable situations, where the coast is precipitous and high, these birds are often exceedingly numerous, and the eggs, taken at times with considerable risk from the rocky ledges of the cliffs, are sought after with constant attention. Each bird lays but one egg, unless it is taken, when its place is supplied by a second or even a third, and so attached is it to this treasure that it is said to have received the name of the “Foolish Guillemot” from suffering itself to be taken rather than part with the egg over which it brooded. We know of no account of the breeding habits of this species more amusing or informing than that supplied by Mr. Watterton, from which we shall introduce some extracts. He says: “The immense range of perpendicular rocks, lashed by old ocean’s briny surge, offers a choice and favourable retreat to myriads of wildfowl, from far-famed Flamborough Head to Bempton, and thence to Buckton and Speaton, and onwards to the Bay of Filey. . . . On the bare ledges of

these stupendous cliffs the Guillemot lays its egg, which is exposed to the face of heaven, without any nest whatever but the Razorbills and Puffins lay theirs in crannies, deep and difficult of access." Mr. Waterton himself visited the breeding-places of these birds, and was lowered down the face of the cliffs for that purpose : he graphically remarks upon the scene and objects which met his view as follows : — "As I was lowered down, the grandeur and sublimity of the scene beggared all description, and amply repaid any little unpleasant sensations which arose on the score of danger. The sea was roaring at the base of this stupendous wall of rocks ; thousands and tens of thousands of wildfowl were in an instant on the wing : the Kittiwakes and Jackdaws rose in circling flight, while most of the Guillemots, Razorbills, and Puffins, left the ledges of the rocks in a straight and downward line, with a peculiarly quick motion of the pinions, till they plunged into the ocean. . . . On the bare and level ledge of the rocks, often not more than six inches wide, lay the eggs of the Guillemots ; some were placed parallel with the range of the shelf, others nearly so, and others with their blunt and sharp ends indiscriminately pointing to the sea. By no glutinous matter, nor any foreign body whatever, were they affixed to the rock ; bare

they lay and unattached, as on the palm of your outstretched hand. You might see nine or ten, or sometimes twelve, old Guillemots in a line, so near to each other that their wings seemed to touch those of their neighbours, and when they flew off at your approach you would see as many eggs as you had counted birds sitting on the ledge.

“The eggs vary in size and shape and colour beyond all belief. Some are large, others small, some exceedingly sharp at one end, and others nearly rotund. Where one is green, streaked and blotched with black, another has a milk-white ground, blotched and streaked with light-brown. Others again present a very pale green-colour without any markings at all; while others are of a somewhat darker green, with streaks and blotches of a remarkably faded brown. In a word, Nature seems to have introduced such an endless intermixture of white, brown, green, yellow, and black into the shells of the eggs of the Guillemots, that it absolutely requires the aid of the well-set palette of a painter to give an adequate idea of their beautifully-blended variety of colouring.”*

Abundant as these birds are upon certain portions of our coast, they appear to be equally so upon some parts of that

* Waterton's Essays upon Natural History, pp. 153-158.

of North America likewise. Audubon writes that countless numbers breed on the islands on the Labrador coast, and that his boat returned from one excursion with two thousand eggs, of which he says, "they afford excellent food, being highly nutritious and palatable, whether boiled, roasted, poached, or in omelets." (Pl. XVI. fig. 99.)

BRUNNICH'S GUILLEMOT. *Uria Brunnichii*.—This appears to be a far less abundant species than the last, and its claim to be regarded as British rests upon a few specimens which have been obtained at different times upon our shores. It is reported to breed in Greenland in great numbers, and its eggs are brought from Iceland; some of them are of a very beautiful yellowish-green colour, exceedingly different from the blue-green frequent among the eggs both of this and the commoner species; some also, as described by Mr. Hewitson, are shorter in proportion to their breadth, and more rounded towards the smaller end, than is usual with the eggs of the common species; but we have seen others which, whether by their outward form or colour, could not be distinguished from the commoner eggs, and we were informed by Mr. Gardner that almost the only means by which the species to which they belonged could be determined, was by holding the eggs up to the light, so that the colour of the

interior could be discerned, when the internal colour of the eggs of the Brunnich's Guillemot would be found to be a blue-green, while that of the commoner species would be of a yellowish-white; and this opinion was certainly borne out to a considerable extent by a comparison of several specimens belonging to the present and the commoner species on the occasion. The Brunnich's Guillemot lays one egg only, upon the bare rock.

THE BRIDLED GUILLEMOT. *Uria lacrymans*.—In Iceland this species is found in considerable numbers; it is also reported to breed on the coast of Wales. The Rev. F. O. Morris states, upon the authority of Mr. Wollaston, that this species breeds regularly at Bridlington, and that its eggs are invariably white. We have not had an opportunity of comparing a number of these eggs, but the only specimen which we possess, taken in one of the Orkney Islands, is of a yellowish-white colour, with numerous and somewhat small markings of grey, brown, and deep neutral tint approaching to black; the size and form nearly like that of the eggs of the Common Guillemot.

THE BLACK GUILLEMOT. *Uria grylle*.—This is a more northern bird than the last, the coast of the south of Scotland being near to its usual southern range in Britain. It

is common in the Orkney and Shetland Islands, although its stronghold may be still more to the North. The bird deposits its eggs, two in number, in clefts or crevices of the rocks, at a distance of two or three feet, or even more, from their entrance, or among fragments of rock or large stones on the beach. There is nothing in the form or appearance of the eggs which at all assimilates to those of the three last species. The eggs of the present bird approach considerably to an oval form, and are certainly not more than two-thirds the size of the Common Guillemot's; they are usually white or bluish-white, blotched with grey and brown of different tints and depths. (Pl. XVI. fig. 97.)

THE LITTLE AUK. *Mergulus alle*.—In the far North this bird is abundant, but only at times seen upon our own shores. The bird forms no nest, but deposits its single egg upon the ground amongst the fragments which have fallen from the neighbouring cliffs. The egg is of a bluish-white slightly spotted with brownish colour.

THE GREAT AUK. *Alca impennis*.—This is a species nearly if not quite extinct, and if found, must be sought for, we apprehend, in regions of the extreme North. Mr. Dunn, in a work already referred to, says that, "during his stay in Orkney, and while on a visit at Pappa Westra, he was

informed by Mr. Trail, whom he had the pleasure of seeing two or three times, that a pair of these birds were constantly seen there for several years, and were named by the people the King and Queen of the Auks. "Mr. Bullock," he continues, "on his tour through these islands, made several attempts to obtain one, but was unsuccessful; about a fortnight after his departure one was shot and sent to him, and the other then forsook the place." Mr. Bullock's tour was undertaken, we believe, in 1813, and the specimen referred to was deposited in the British Museum. In 1822, it is recorded that another of these birds was taken alive at St. Kilda, and in 1834 one was taken off the coast of Waterford, in Ireland. There have been a few other instances of its capture, with the circumstances of which we are not familiar. The egg of this bird (for it is believed to lay but one) is of a yellowish-white, and exceedingly resembles that of the Guillemot in its form, though as large as a swan's egg; it is blotched or streaked with different tints of brown, and also with black, and is laid upon the bare rock. There are a few specimens of the eggs in the cabinets of this country, but from their extreme rarity they sell for about twenty or thirty pounds each. In this species the wings are so reduced as to be incapable of serving the purpose of flight,

but they are most efficient aids to the bird in its progress beneath the water. The length of the bird is nearly three feet.

THE RAZOR-BILL AUK. *Alca torda*.—The Razor-bill may be included among the species which are numerous in all suitable localities along our coasts, from one extremity of Britain to the other; and out of Britain it is very extensively distributed. Like the Common Guillemot, it breeds in the lofty and rocky cliffs of our sea-coast, and lays its single egg either upon the bare ledge of the precipice or within some hole or fissure of the cliff. The eggs are not equal in size to those of the Common Guillemot, nor are they of the same lengthened and pear-shaped form, but are shorter, and rounder at the smaller end; usually they are of a yellowish-white spotted and blotched with grey and with reddish and blackish brown. Some of the eggs of this species are very beautiful, but they vary in the richness of their marking. (Pl. XVII. fig. 103.)

THE PUFFIN. *Fratercula Arctica*.—The Puffin is found along our coasts, where suitable breeding-places occur, from the Isle of Wight to the Orkney and Shetland Islands; but it is only a summer visitant. It sometimes breeds in fissures of rocks, but more frequently in holes or burrows

Painted by
Miss M. J. Brooks, 1844.

Nest of the Common Gold-Crest, suspended beneath the branch
of a Yew-Tree.

formed by itself, or supplied by rabbits, if they happen to be inhabitants of the same locality. Audubon found them breeding in such abundance in Labrador that some of the islands were completely undermined by them. Where any nest is formed, a small quantity of grass is placed in the hole occupied for the purpose of incubation, and at a depth of two or three feet from the entrance. The bird lays but one egg, which, if its home is invaded, it stoutly defends with its powerful beak. The egg, about the size of a domestic fowl's, is white, delicately, and in some instances indistinctly, spotted with greyish tints. (Pl. XVII. fig. 101.)

PELECANIDÆ. PELICANS.

Of the different genera comprised in this family two only are British, and those represented but by three species. The birds of the Pelican tribe are characterized by having the hind toe united to the rest by a continuous membrane, which renders their feet perfect oars, yet they are almost the only *Natatores* which perch upon trees. They fly well, are voracious, and chiefly frequent the sea, except during the season of incubation.

THE COMMON CORMORANT. *Phalacrocorax carbo*.—The

Cormorant extends around the coasts of our mainland and islands, breeding in suitable localities, and in winter entering the bays and estuaries, following up river-courses, and frequenting inland waters where these are not distant from the sea. While passing over the land, it flies high, and during its inland visits is known to roost at night upon trees which overhang the river near its fishing stations. It is voracious in the extreme, and is an unwearied and active fisher pursuing its prey beneath the water, occasionally rising to take breath, and then renewing the chase. But ravenous as it is, it is easily tamed, and becomes very attached and familiar, and formerly, both in our own country and in Holland, was trained to fish, and it appears that in this country there was such an office as that of "Master of the Cormorants." In China, at the present day, an allied species, *Ph. Sinensis*, is bred and trained to fishing. Sir George Staunton, who observed the birds of this latter species on the waters of that country, says: "On a large lake close to this part of the canal, and to the eastward of it, are thousands of small boats and rafts, built entirely for this species of fishery. On each boat or raft are ten or a dozen birds, which at a signal from the owner plunge into the water; and it is astonishing to see the enormous size of the

fish with which they return grasped between their bills." In some instances, a thong or string is tied round the lower part of the neck of the bird, to prevent it from swallowing the fish which it may catch. The Common Cormorant breeds on the tops of rocks, on small rocky islands, or on the ledges of cliffs, and forms a large nest of sticks and seaweed, lined with finer weeds and dry grass, and lays four or five eggs, which are naturally white, but often become greatly discoloured by contact with the materials of the nest; beneath the white chalky covering of the egg, the shell is of a green colour. The form of the egg is very lengthened and narrow, and its size small for that of the bird, though different specimens of the eggs vary considerably in size. Mr. Waterton visited the rocks at Buckton, in Yorkshire, in the middle of July, 1834, in order to find the nests and observe the habits of this species, and on the face of the Raincliff he found the birds breeding. He says: "The Cormorants stayed not to witness my unwelcome descent into their ancient and almost inaccessible settlement. They all took wing as soon as we reached the edge of the cliff, and went far away to sea. It was a difficult matter to procure their eggs, for the nests were built in places where the rocks overhung them; and it was only by giving the

rope a swinging motion, and then taking advantage of it, as it brought me to the face of the cliff, that I was enabled to get a footing on the ledges which contained them. These nests were composed of thick sticks, plants from the rocks, grass, ketlocks which had gone to seed, and a little wool. There were four young birds in one, three eggs in another, two in a third, and one newly laid in a fourth."

THE GREEN-CRESTED CORMORANT. *Phalacrocorax cristatus*.—The Shag, Green Cormorant, or Green-crested Cormorant, chooses the tops of rocks surrounded by water, the ledges of sea-side precipices, and also caves, as its resorts for nidification. Both the nest and eggs closely resemble those of the Common Cormorant, but the eggs of the present are smaller than those of the last bird. The egg of the Shag is chalky-white (except as stained by the nest), long and narrow in form, and green inside. This species is generally distributed around our shores, but not so numerously as the last.

THE SOLAN GOOSE. *Sula bassana*.—The present species, known also as the Gannet, visits our shores in spring, the birds belonging to it remaining to incubate, and breeding by thousands in some localities around our coasts. The principal stations in which they occur around our islands

are, Ailsa Craig, an isolated mass to the west of Scotland, fifteen miles off the coast of Ayr, about two miles in circumference, and rising to a height of one thousand feet; Souliskerry, near the Orkneys; the Bass Rock, in the Firth of Forth, to which we shall presently more particularly refer; St. Kilda, where, with other sea-fowl, they form the chief sustenance of the poor, who capture them by means of a noose of hair fastened to the end of a long stick, which they slip over the heads of the birds while seated on their eggs. It is said that many thousands of birds, besides an immense quantity of eggs, are annually consumed in St. Kilda alone. The young are cured and dried by the inhabitants for winter consumption. Mr. Hewitson, who visited the island, says: "Everything around us proclaimed the destruction of our favourites; mud-houses, the public store-rooms of the village, were filled with dried birds for winter store; large packages of feathers (the coin with which they pay their rent) were in every house; and loose feathers, birds' wings, and bones were everywhere strewed thick and deep; the lamps, too, which they were burning, were fed with oil from the Fulmar Petrel." Continuing our list, other stations are the Skelig Isles on the Irish coast, and Lundy Island, on the coast of Devonshire. Out of Britain,

they are found on the shores of Norway, in Iceland, and in the Ferroe Islands, on the coast of Newfoundland, and on the north-west coast of America. The Bass Rock, to which reference has been made, is one of the principal stations upon our shores frequented by these birds. This is an island at the entrance of the Firth of Forth, a singular basaltic mass, rising perpendicularly from the sea to the height of four hundred feet, and bearing a scanty herbage which pastures a few sheep. This island is reported to be rented from the proprietor for some sixty or seventy pounds a year, the proceeds depending chiefly upon the produce of the Gannets. On this island the great proportion of the birds build on the ledges of the precipitous face of the rock, but a considerable number also place their nests on the summit near the edge, where they can be walked among. During incubation, in consequence of being unmolested, they become very tame, and where they are perhaps most accustomed to visitors, will suffer themselves, we are told, to be stroked with the hand, uttering only a singular and guttural note of remonstrance. The rent of the breeding-stations of this bird is paid chiefly by the feathers; but the young birds are also sold, both in a fresh and salted state, the Bass furnishing yearly, it is believed, from fifteen hundred to two thou-

sand. The nest is formed of a considerable quantity of seaweed and dried grass, and the egg (for only one is laid) is originally white, though it soon becomes soiled.

LARIDÆ. GULLS.

We have now arrived at the last family of the Natatorial Birds,—comprising the Gulls, abundant around our coasts; the Skuas, nearly allied to these, but more powerful and courageous; the Terns, or Sea-swallows, which skim with great rapidity along the water, skilfully raising from its surface the small fishes and mollusks on which they feed, and to obtain which they often plunge; the Petrels, which have derived their name (a diminutive of Peter), from their peculiar motion on the surface of the water, which gives them the appearance of walking on it, and in this the action of the wings upon the water assists them. To this family also belongs the Albatross, the largest of aquatic birds. It is nearly allied to the Petrel, which it resembles also in its manner of treading the waves; it does not, however, visit the northern parts of the Atlantic. We shall commence our descriptive notices of the family with the Petrels, of which the British species are classed under three genera.

THE FULMAR. *Procellaria glacialis*.—In its form and plumage, the Fulmar, or Fulmar Petrel, greatly resembles the Gulls. It is a native of Arctic regions, and abounds in Davis's Straits and Baffin's Bay. The birds of this species are believed by the whale-fishers to guide them to those places where whales are most numerous, and they collect in multitudes upon the floating carcasses of these giants of the deep, tearing up the skin with their hooked beaks, and gorging on the blubber. Off Newfoundland, the Fulmar attends the fishing-vessels, in order to obtain the livers and offal of the cod-fish. In the British Islands it selects a few spots for breeding; these are St. Kilda, Borrera, Soa, and the south isles of Barra, in the Outer Hebrides. The nest, if any, is very slight, and placed upon the grassy ledges of the rock, and a single large white egg is laid by the bird in the beginning of June.

THE CAPPED PETREL. *Procellaria hœsitata*.—From Mr. Yarrell's "Second Supplement" to his 'History of British Birds,' we learn that in the spring of 1850 a boy captured a bird of the above species on a heath at Southacre, near Swaffham, in Norfolk; it was flapping in an exhausted state from one furze-bush to another, until at length it got into one of the bushes, and was secured. The gentleman into

whose possession it came (Mr. Newcome, of Hockwold Hall, near Brandon), allowed the specimen to be sent up to London; and, after some search, a figure of the bird was found in Forster's unpublished drawings of birds in the British Museum, the name of *hæsitata* being written on the drawing. Specimens of this species have at different times been procured from the Indian Ocean, the South Seas, the Australian Seas, and from the West Indies; and Mr. Gould mentions having seen birds belonging to it off the Western Isles.

We are not at present in possession of the materials necessary to furnish an account of its nidification.

THE CINEREOUS SHEARWATER. *Puffinus cinereus*.—The Shearwater Petrels are more slender in their form than the Fulmar, and the legs are placed further back. The present species is considered to have a wide foreign distribution, and is described as appearing in great numbers at times in Mount's Bay, in Cornwall, although it has not often been captured, we believe, on our shores. With the occasional exception of the Storm Petrel, the egg of which is sometimes finely spotted, all the Petrels with whose habits we are acquainted lay but one egg each, of a pure white colour; so that, in the absence of direct information, we have little doubt but the habits of the present bird, did we know them,

would be found to correspond in this respect with those of other members of the group to which it belongs. A probable opinion, however, is all we can offer to our readers upon the subject.

THE MANX SHEARWATER. *Puffinus Anglorum*.—The name of this bird was derived from the circumstance of its formerly breeding in great numbers upon a small island called the "Calf," separated from the mainland of the Isle of Man only by a narrow channel; but subsequently the erection of a lighthouse upon the little island to which we have referred, and the disturbance which the birds experienced as it became more frequented, caused them in a great measure to depart, and seek elsewhere a home for their young. At present they resort to the Western Islands, the Orkney and Shetland Islands, and to Annet, an island of the Scilly group, off the coast of Cornwall. In the first-named places they select for breeding, wild and inaccessible rocks, where, in holes screened from observation by tufts of grass, they construct a slight nest of dry plants, at different depths from the entrance, and lay a single egg of pure white. On the Island of Annet they lay their eggs upon pieces of fern, in burrows in the soft sandy soil. During the day these birds remain quiet in their recesses, but emerge from

them when the twilight of evening approaches, and procure at sea food for themselves and their young. "They feed upon all kinds of marine animal substances in a state of decomposition, and of an oleaginous quality, and nourish their young by disgorging oil into their throat. When captured, they annoy their assailant by ejecting quantities of oil from their tubular nostrils."

THE DUSKY PETREL. *Puffinus obscurus*.—In Mr. Yarrell's Supplement, so recently adverted to, we find a record of the capture of a single bird of this species, which flew on board a small sloop off the island of Valencia, on the south-west coast of Ireland, late in the evening of the 11th of May, 1853; and in the course of his remarks, Mr. Yarrell introduces a quotation from a published sketch of Madeira, by Edward Vernon Harcourt, Esq., to the following effect:—"The Dusky Petrel is a very tame bird, and will live upon almost anything; my bird would climb up my trousers by its beak and claws, to obtain small portions of food; it runs along the ground on its belly, and uses its curious-shaped bill in climbing up the rocks. Those I had in my possession alive, were some of them caught with fish-hooks baited with meat, by the Portuguese, and some taken by the hand in the daytime from underneath stones, where they hide

from the light." Mr. Yarrell adds, "The egg (and they lay but one) measures one inch and seven-eighths in length by one inch and three-eighths in breadth, rather smaller at one end than at the other, and pure white." The species is reported to belong to the southern and tropical regions of the globe, though individuals have sometimes been found far north.

BULWER'S STORM PETREL. *Thalassidroma Bulwerii*.—All the known species of the genus *Thalassidroma* are small, maritime in habits, and possess an extraordinary development of wing. With the particulars relating to the nidification of this very rare British species, we are unacquainted.

THE STORM PETREL. *Thalassidroma pelagica*.—Birds of this species breed in the Hebrides, and in the Shetland and Orkney Islands, though in very dissimilar situations, sometimes making the nests in holes in the cliff a great height above the sea, at other times under loose stones of the beach, and occasionally in rabbit-holes. The following lengthened extract from Mr. Dunn's 'Ornithologist's Guide' to Orkney and Shetland, brings us very clearly acquainted with some of the breeding habits of the species. He writes:—"I had now procured specimens of almost all the birds to be found in Shetland, excepting the Stormy

Petrel, and not wishing to leave the country without obtaining some of them also, I proceeded on the 26th (July) to Scallaway, the second town, in point of importance, in Shetland; it is situated on the west side of the mainland, and is five miles from Lerwick. I took with me two men to carry the luggage, and arrived there at night. Having in the early part of the summer seen several of the Stormy Petrels flying about in the neighbourhood of some islands lying a few miles off Scallaway, I determined upon visiting them, as I considered that would be the most likely means of obtaining some specimens, more especially as it was now their breeding season. In the morning I landed on the islands, which we diligently searched for a length of time without success. I was about leaving the fourth island, on which, near the beach, many loose stones were collected, when I was arrested by a cry coming from among the stones, and knowing it to proceed from some bird the note of which I was a stranger to, I summoned our force, and proceeded to remove them in such a manner as to leave no place of retreat. We continued our labours for two hours, when I at length found the little creature whose cry had struck me, and to my gratification it proved to be a Stormy Petrel; it was sitting on its nest, which was composed of a few loose

pieces of seaweed, and contained one small white egg, very minutely spotted at the broader end with brown. It did not make the least effort to escape. I took it in my hand, and when there, it squirted an oily matter from its nostrils at me two or three times in quick succession. . . . I was fortunate enough to find another of the breeding-places of the Stormy Petrel, and procured several of the birds and their eggs from among the remains of an old Pictish building situate close to the shore, and a part of which we were obliged to remove before we could get to the nests." The Stormy Petrels are the smallest of the web-footed birds; and those of the present species are known among the Shetland fishermen by the name of Swallows, to which name their notes and appearance, together with the swiftness of their flight, may have given rise. To a great degree they are nocturnal in their habits, flying little in the daytime in fine weather, but coming forth from their retreats in the evening, and spreading themselves over the waters. The egg is sometimes white without markings, and in size rather less than a Turtle Dove's.

WILSON'S STORM PETREL. *Thalassidroma Wilsonii*.—We are not aware that many specimens of this bird have been captured on our shores, although we have seen it stated

Vincent Brooks Lith.

Greenfinch's Nest and Eggs

that it is abundant off the coast of Cornwall. It is reported to be common along the whole of America to Cape Horn, and particularly so on the coasts of Chili, Brazil, and the United States. "According to Nuttall," this species "breeds in great numbers on the rocky shores of the Bahama and the Bermuda Islands, and along some parts of the coast of East Florida and Cuba; and, on the authority of Audubon, on the mud and sand islands off Cape Sable in Nova Scotia, burrowing downwards from the surface to the depth of a foot or more. In other places they make the holes and fissures of rocks their retreat." Like the Storm Petrel last noticed, it lays but one egg, which is white.

THE FORK-TAILED STORM PETREL. *Thalassidroma Leachii*.—St. Kilda is, we believe, the only recorded breeding-station of this species in any of the British Islands. It is described as burrowing in the sand, or taking possession of a hole or hollow in a rock for its nest. It lays but one egg, which is white.

THE COMMON SKUA. *Lestris skua*.—The Skuas generally are birds of a bold and daring character, pursuing other sea birds, and compelling them to resign their prey, while those of the present species fearlessly and successfully defend their nests against the Eagle, and strike at and pursue even men,

when their nests or young are endangered by their approach. The only breeding-places of this species around Great Britain are in the Shetland Islands, and there they are but few,—Foula, Rona's Hill, and the Isle of Unst. Rona's Hill is the highest hill in Shetland, and is computed to approach four thousand feet in height, while the ascent requires two hours of arduous exertion ; but from the summit, in clear weather, the whole of the Shetland Islands are visible, washed by the Atlantic and German Oceans. This hill is a favourite resort of the present species, or the Skua Gulls, as they are sometimes termed, and here they breed, not on the rocks which face the ocean, however, like the true Gulls, but among the heath or moss upon the low ground at the base of the mountain. The nest is large, and consists of moss, grasses, etc.; and the eggs, usually but two in number, are sometimes of a greenish-colour, but at others of a greyish-brown, and blotched with shades of grey and brown. Even in the Shetland Islands these birds are by no means numerous, and are regarded with great favour by the inhabitants, from a belief that they protect their flocks against the Eagles. They frequently attend the fishermen in their labours, and in return receive from them the refuse of the fish which are caught.

THE POMARINE SKUA. *Lestris pomarinus*.—This is a winter visitor to the British Islands, and is not known to breed within their range. The eggs are described as “two or three in number, and of a yellowish-grey colour spotted with blackish-brown.”

RICHARDSON'S SKUA. *Lestris Richardsonii*.—We have in the present species the most common of the British Skuas, breeding numerous in the Orkney and Shetland Islands, as also in the Hebrides. In the former islands it is protected from the same motive as is the Common Skua. In the Orkneys they are most numerous at a place called the Holm of Eddy, in the island of Hoy, and in the Shetlands, on the island of Noss, near Lerwick; but these are not the only breeding-stations in these groups. What is rather remarkable, as noticed by Mr. Hewitson, is, that while in these islands they breed in societies, sometimes amounting to fifty or sixty together, on the coast of Norway, they seldom breed more than one or two pairs upon each island. The nest is placed on some slight eminence, in low, wet, mossy heaths, and in exposed situations; and the eggs, two in number, are of a fine rich olive-green beautifully marked with brown. Mr. Hewitson says of the birds:—“They are merciless persecutors of the other species of sea-birds in

their neighbourhood, sucking their eggs whenever they are left uncovered by their owners, and with unavoidable speed of wing pursuing them over the surrounding sea, in order to compel them to disgorge those fish which they have just captured for themselves and their young ones." The Richardson's Skua begins to breed early in June.

THE ARCTIC SKUA. *Lestris parasiticus*.—This species was for some time confounded with the last, but was separated from it by Mr. Swainson, who named the last after Dr. Richardson, the Arctic traveller. The present is by far the rarer species. The eggs are two in number, of a pale olive-green blotched with reddish-brown. Another name for this bird is "Buffon's Skua."

THE CASPIAN TERN. *Sterna Caspia*.—The Terns, of which there are several species, are birds of elegant form, and their powerful and graceful flight, together with their long and pointed wings, and deeply-forked tails, have procured for them the name of Sea Swallows. They feed on fish, and breed in company, making their nests either upon shingly beaches or on the ledges of rocks. The Caspian Tern is a species occasional only in its visits to the English coasts, and partial in its distribution. It is reported to lay its eggs, two or three in number, in a depression upon the

sea-beach, or upon the bare rock. The eggs, in size equal to those of a domestic fowl, and of a yellowish-white marked with grey, brown, and yellowish spots, have been brought from the island of Sylt, on the coast of Denmark, but we have seen no other locality named as a breeding-station.

THE SANDWICH TERN. *Sterna Cantiaica*.—This species is represented as being widely distributed out of Britain. In the British Islands, it is reported to breed on Romney Marsh, in the mouth of the Blackwater, in Essex, on the Isle of May, and some lesser rocks off North Berwick, and on the Coquet and Fern Islands off the coast of Northumberland: on the latter abundantly. In these latter islands, so close are the nests together, in some instances, as to render it difficult to pass among them without breaking the eggs or injuring the young. The eggs are seldom laid before June, and are then deposited either upon the grass as it grows, or upon a small quantity gathered for the purpose: they are generally two, and never more than three in number, and are very beautiful and varied in their appearance, the ground-colour being whitish or yellowish, pencilled, spotted, and broadly shaded with various tints of grey, brown, and blackish-brown.

THE ROSEATE TERN. *Sterna Dougallii*.—This graceful

species breeds on the Fern and Coquet Islands, and on Foulney Island, on the coast of Lancashire. Sir William Jardine mentions that when the nests of this species were intruded on, the birds showed such great anxiety, and ventured so near, as in one or two instances to be struck down with a fishing-rod. The Roseate Tern also breeds on the Isle of May in considerable numbers. The eggs so nearly resemble those of the Common and Arctic Terns, that where they are laid among these latter, they can only be distinguished from them with certainty by watching the birds as they settle on the nests. They seem however to be more constantly of a lighter colour than the eggs of the other Terns, and are usually longer in proportion to their breadth. They are two or three in number, and deposited upon the bare ground, or upon a small quantity of dry grass.

THE COMMON TERN. *Sterna hirundo*.—A few of these birds breed on the Fern Islands, and a few also on the Isle of May, but they incubate in greater numbers on Foulney Island, on the coast of Lancashire. The eggs are three in number, about the size, though not of the form, of those of the Partridge, and of a yellowish or raw-umber ground-tint, spotted with grey and different shades of brown. They are laid upon the bare grass or sand.

THE ARCTIC TERN. *Sterna Arctica*.—With reference to its occurrence, around the British shores at least, this Tern might more appropriately have been termed Common than the last. It breeds on the Fern and Coquet Islands, and in the Isle of May, and is plentiful in the Orkney and Shetland Islands, where Mr. Dunn mentions it in his published account as the only species of Tern he has met with. Although it prefers to deposit its eggs upon sand or gravel, where these do not occur, and the station is otherwise to its taste, it will deposit them upon the grass, scratching a hole, and lining it with fine dry grass. In the Orkneys and Shetlands, it makes its nest on the gravelly beach and low rocks, and sometimes amongst the short dry grass on the tops of low cliffs, and always in exposed situations. The eggs, two or three in number, are usually laid at the beginning of June, and are very like those of the last species. "The eggs of both are subject to the same endless varieties, from a ground-colour of white, light-blue, or pale-yellow, to green and brown."

THE WHISKERED TERN. *Sterna leucopareia*.—On the European continent, as in Great Britain, this appears to be a rare species. The eggs considerably resemble those of the Common and Arctic Terns in size, form, and colour.

THE LESSER TERN. *Sterna minuta*.—This Tern occurs in places upon the English coast and that of the south of Scotland, and is a summer visitant to Ireland. It breeds upon the shingly beach, laying, in some slight depression, two or three eggs, which in their appearance closely resemble the gravel around them, and hence are with difficulty discovered. They are of a pale yellowish-white, tinted and spotted with grey and blackish-brown, and are laid early in June.

THE GULL-BILLED TERN. *Sterna Anglica*.—This Tern must be numbered among our rarer British birds, and may be considered of accidental occurrence even in temperate Europe. Out of Europe it is described as being extensively distributed, and is said to frequent lakes and rivers rather than the open sea. It breeds in marshy places near the sea, or upon the sea-beach, laying its eggs, two or three in number, upon the turf, or upon sand and gravel. The egg is of a pale yellowish stone-colour, spotted with grey, purple-grey, and different tints of brown. The marshes of Sylt, on the coast of Denmark, have been mentioned as a breeding-station of this species.

THE BLACK TERN. *Sterna nigra*.—During the season of incubation the habits of this bird greatly differ from those

of the other Terns to which we have referred ; for while they prefer the neighbourhood of the sea for depositing their eggs, this selects inland districts ; and while they lay usually but three eggs, this more frequently lays four, approaching in this respect nearer to the habits of the Grallatorial birds. The nests of the Black Terns (for they build in society) are to be found in marshy places, and sometimes in very wet situations, and barely raised above the surface of the water. They are composed of flags and coarse grass ; and the eggs, three or four in number in each nest, are greatly varied in their colour and markings, being at times of a pale-green ground-colour, or, again, of a pale clear-brown sprinkled, spotted, or blotted with grey and brown of different tints, often approaching to black. Formerly there were many breeding-stations of this species in England, but they are now few. The extra-British range of the bird is however extensive, including parts of Europe, Asia, and America.

THE WHITE-WINGED BLACK TERN. *Sterna leucoptera*.—A specimen of this beautiful Tern was shot on the Shannon in 1841. It inhabits the bays and inlets of the shores of the Mediterranean, and is common about Gibraltar ; it visits also the lakes, rivers, and marshes of the countries in the vicinity of the Alps ; is common about the lakes of Lucarno,

Lugano, Como, etc., and is occasionally seen on the Lake of Geneva, and is found also in other parts. Its food consists principally of dragon-flies, and other winged aquatic insects. We have not the particulars of information which we could have desired to furnish with regard to its nidification, beyond the statement that the eggs are three or four in number, and of a yellowish ground-colour, with grey and brown markings.

THE SOOTY TERN. *Sterna fuliginosa*.—Our knowledge of the occurrence of this species in Britain is derived from Mr. Yarrell's "Second Supplement," frequently referred to in the earlier pages of this little work. He there mentions the capture of a single specimen of this species near Burton-on-Trent, in October 1852, the only British specimen recorded, as far as we are aware; while upon the European continent a solitary specimen has also been obtained. In the South Seas, however, the bird is common, and is also known along the American coasts. In writing of this bird, Mr. Yarrell thus introduces some quotations from the naturalist Audubon:—"Mr. Audubon, in his 'Birds of America,' says: 'On landing at Bird Key, one of the Tortugas, I felt for a moment as if the birds would raise me from the ground, so thick were they all round, and so quick the motion of their

wings. Their cries were indeed deafening, yet not more than half of them took wing on our arrival. We ran across the naked beach, and as we entered the thick cover before us, and spread in different directions, we might at every step have caught a sitting bird, or one scrambling through the bushes to escape from us.

“ ‘The Sooty Tern never forms a nest of any sort, but deposits its three eggs in a slight cavity which it scoops in the sand under the trees. Several individuals which had not commenced laying their eggs, I saw scratch the sand with their feet, in the manner of the common fowl while searching for food. In the course of this operation, they frequently seated themselves in the shallow basin, to try how it fitted their form, or find out what was still wanted to ensure their comfort. The eggs measure two inches in length, by one inch and a half in breadth, have a smooth shell, the ground-colour a pale cream, sparingly marked with various tints of lightish umber and lighter marks of purple. Now and then a male bird would come and settle close by the nest, immediately disgorging a small fish within the reach of the female. After some reciprocal nods of their heads, which were doubtless intended as marks of affection, the caterer would fly off. However numerous, not the least

semblance of a quarrel did I observe between any two of these interesting creatures ; indeed they all appeared like happy members of a single family.' ”

THE NODDY TERN. *Sterna stolidus*.—The Noddy Tern is only a straggling visitor to any part of the European coast ; but two specimens were shot off Wexford, in Ireland, in 1830. It is found however in the Gulf of Mexico, on the coasts of Florida, in the Bahamas, the Tortugas, and the neighbourhood of St. Helena. “It is familiar to all mariners who navigate in the Equatorial regions, and is often seen in flocks hundreds of leagues from land, assiduously pursuing its finny prey, and uttering loud and discordant cries. Occasionally it alights on vessels, and suffers itself to be captured, probably being exhausted by fatigue from wandering so far away from a resting-place.” Birds of this species build in company, thousands of them, it is said, incubating together, and, singularly enough, the nests are placed on bushes or low trees ; they are constructed of twigs and dry grass, and, from annual additions made to the old nests, they become in some instances considerable heaps. The eggs are three in number, of a reddish-yellow blotched with dull red and purple.

SABINE'S GULL. *Larus Sabini*.—The Gulls are the typical

forms of the present family, and are among the most graceful of birds, while the chaste and harmonious colours of their plumage are always pleasing to the eye. The expanse of wing by which they are characterized gives a buoyancy and ease to their motions which are always beautiful, and their numbers give animation to the lonely shore, or even furnish pleasing accessories to the inland landscape. In the fishing village in which we reside, at certain seasons and on some occasions, sprats are brought to land in such abundance as to be disposed of to agriculturists at the low price of sixpence per bushel, in order to spread upon the fields; and over these lands, thus provisioned, the Gulls may be seen gathered at a considerable distance from the sea, or, nearer to the shore, they may be observed in numbers following with the Rooks the progress of the plough, and searching among the up-turned furrows for their food; but wherever present, whether upon the land, or floating on the tranquil waters, or soaring in mid-heaven, or dipping momentarily into the glittering waves, these gentle creatures add life and gladness to the scene. Some of the species are widely distributed, and almost entirely maritime in habits, breeding principally upon precipitous coasts, and feeding on almost any animal matter in addition to the living produce of the seas.

A few specimens of Sabine's Gull have from time to time been obtained in this country, and also a very limited number on the Continent, but its true home is in the vicinity of the Arctic Circle. The first specimens were procured by Captain Sabine, during the northern expedition in 1818, and birds of the same species were subsequently recognized by other Arctic voyagers. They have been met with in Spitzbergen and Behring Straits, and the first birds were killed on a group of islands on the west coast of Greenland, where they were breeding in company with the Arctic Terns, laying their eggs on the bare ground. The eggs are two or three in number, of an olive-brown ground-colour, spotted with darker brown.

THE LITTLE GULL. *Larus minutus*.—This beautiful little species is also rare in Britain, though various specimens have been obtained in England, Scotland, and Ireland. Neither its breeding-stations, nor its true winter localities, according to Sir William Jardine, are yet correctly traced, though, adds the same writer, it is stated by Professor Nilsson that it breeds in the marshes in the vicinity of the Baltic, and in Gothland. Of its eggs and nest we can make no report.

THE BLACK-HEADED GULL. *Larus ridibundus*.—During the winter season this species is generally distributed around

the sea-coasts of Britain and Ireland ; but in the spring it resorts to inland marshes, lakes, or ponds, to breed. Multitudes congregate together in selected spots during the season of incubation, and in one locality mentioned by Mr. Hewitson, as many as a thousand eggs in a day have been taken from the nests of these birds. In some parts their breeding-stations are secured from intrusion, or the benefit of collecting the eggs, which are agreeable for eating, is let. A gullery, it is stated, has been known to produce a revenue to the proprietor of from fifty to eighty pounds a year. This Gull differs in its time as well as habits of breeding from other species of the same genus, its usual time of incubation being May, although eggs have been found even in April. The nest, which is composed of grass or reeds and sedge, is flat, and sometimes placed in a tuft of rushes or other herbage ; and the eggs, three or four in number, while differing very greatly from one another, may perhaps be described as generally of a yellowish-brown, olive, or greenish colour, spotted and blotched with grey and brown.

In the northern islands, the Orkneys and Shetlands, these birds are not numerous, but they breed in limited numbers on some of the small islands contiguous to the sea, generally selecting those which are in the neighbourhood of deep

bogs. In Orkney, their nests have been met with in a lake near Nunse Castle, and in another in the Isle of Sanda, and in Shetland they are most numerous in a lake at the back of Rona's Hill. The species is represented as common on the coasts of temperate Europe during the winter, retiring, as with us, to lakes and marshes in the spring. In winter the head of the bird is white, the black head, by which it is distinguished during the breeding-season, being assumed in the course of a week. (Pl. XVI. fig. 98.)

THE MASKED GULL. *Larus capistratus*.—This appears to be everywhere a rare species, but examples of it have occasionally occurred in the British Islands. "The first specimens were those in the collection of Mr. Bullock, sold to Dr. Leach at the dispersion of his collection, and said to be taken with the young and eggs in Orkney; and a third specimen has since that time been procured from Shetland. It has occurred in Wales, and to Mr. Thompson in Ireland. On the Continent a few instances are also recorded, but we have no information of its breeding-places. It may probably be a northern species: Temminck states that it is found in Baffin's Bay and Davis's Straits" ('Naturalists' Library,' vol. iv. p. 296). Some eggs are figured in a work by the Rev. F. O. Morris as those of this species; they are

of a pale bluish or greenish ground-colour, small in size, and spotted with grey, brown, and black; but no information is furnished with regard to the original locality from whence they were obtained.

THE LAUGHING GULL. *Larus atricilla*.—In Great Britain this is even a rarer visitant than the last species. It is properly a North-American species, and Mr. Audubon found it breeding on the Tortuga Keys, New Jersey; at Galveston, in Texas; and at Great-egg Harbour: at the latter place on the borders of a salt-marsh near the sea-shore. Marshy places near the sea-shore appear to be the usual breeding-places of the species, and in such situations the nest is constructed of dry grass and seaweeds; in some instances, however, the sand alone is hollowed out to form a nest. The eggs, which do not exceed three in number, are of a brownish olive-colour, spotted and blotted with dull reddish-brown.

BONAPARTIAN GULL. *Larus Bonapartii*.—This Gull is common in all parts of the fur countries, where it associates with the Terns, and is distinguished by its peculiar shrill and plaintive cry: it has also been received from Greenland. The first specimen of this beautiful species which was known to have visited Europe, was killed near Belfast,

in February 1848; other examples have occurred since in the British Islands. On the American coast it is well known. Mr. Audubon writes, that "after the 1st of April, thousands of Bonapartian Gulls are seen gambolling over the waters of Chesapeake Bay, and proceeding eastward, keeping pace with the shoals of the fishes." We have not met with any published description either of the nests, eggs, or breeding habits of this species.

THE GREAT BLACK-BACKED GULL. *Larus marinus*.—This very fine species is the largest of our British Gulls. We possess a specimen in immature plumage which measured across the wings, before it was preserved and set up, five feet four inches. It is by no means an uncommon species around the shores of Britain, and extends in its distribution to Europe and North America, but is rare in high latitudes. Among its breeding-stations in the British Islands have been named "the Steepholmes, and Sandy Islands, in the Bristol Channel; Souleskerry, in the Orkneys; the Bass Islands, in the Firth of Forth; and the marshes at the mouth of the Thames." It selects, for building, small islands, marshy places, stacks, and the most inaccessible parts of the rocks. It is related as a fact, though whether narrated as the result of personal observation or from the

Chaffinch's Nest and Eggs.

report of others is not stated, that this Gull manifests a strong attachment to the seal, and renders it essential service in the following ways:—It is the custom of the seals to lie upon the rocks for hours in succession; and so well acquainted are the natives of those parts which they frequent with their haunts, that they raise small bulwarks to conceal their approach. “This Gull, however, frequently frustrates all these precautions by sounding the note of alarm, thereby informing the seal that danger is close at hand; and if the latter is not disposed to avail himself of this friendly intimation, they will frequently strike him on the head with their feet. When the seal retires into the water, all further care on their part ceases, as they consider him then in a situation to protect himself; but should he appear again within gunshot of the place he has left, the Gull will dart down at him, and frequently splash the water in his face, as if to threaten him for his temerity” (Dunn’s ‘Ornithologist’s Guide,’ etc.). The nest of the present species, which is large, is composed of dry grass, seaweed, etc., and the eggs, three, and occasionally, but rarely, four in number, are of a greenish-brown colour spotted with grey and brown.

THE LESSER BLACK-BACKED GULL. *Larus fuscus*.—As

the name indicates, this is a smaller species than the last, but there is a great similarity between the plumage of the two birds; in its habits, however, the present is considered less maritime than its congener. The Lesser Black-backed Gull is very generally distributed around the British Islands, and very extensively so beyond them. It builds on islands both of the seacoast and of inland lakes; and precipitous cliffs, as well as marshy moors, are frequented for the purpose of incubation. It has been remarked that while in the south of Britain the Great Black-backed Gull is decidedly a marsh-breeder, and in the more northern part often nestles among inaccessible rocks and cliffs, the Lesser Black-backed Gull, which in the south prefers rocks and cliffs, as it advances northward generally builds in lower situations, upon islands or in low-lying marshy places. Sir William Jardine was informed by the boatmen upon Loch Awe that this bird occasionally built in trees, a circumstance which he did not verify, but which nevertheless may not be incredible. The nest of this species is almost entirely composed of grass, deposited in some slight depression or hollow, and loosely put together; and the eggs, two or three, and perhaps even occasionally four in number, are of different shades of greenish or brownish colour blotched with grey and brown. They

may be described as considerably resembling the eggs of the Herring Gull, though frequently less in size. During the time of incubation, this species is bold in the defence of its eggs and young. Mr. Hewitson says, "Mr. Darling, under whose hospitable roof at the lighthouse I have enjoyed many pleasant hours during my various visits to these" (the Fern) "islands, informs me that the bonnet of an old woman, who was in the habit of gathering the eggs of the seagulls, was riddled through and through, and almost torn to pieces by their bills."

THE HERRING GULL. *Larus argentatus*.—The Herring Gull is very generally met with in suitable situations around the coasts of the British Islands, and usually builds among the lofty and precipitous rocks, which, with their innumerable tenants, add such beauty to our shores; seldom, if ever, like the last species, selecting inland marshes or fresh-water islands for the purpose of nidification; though Mr. Dunn mentions that he has found the nests of this bird among the long, dry grass of some of the small islands of Shetland and Orkney. Usually, however, the nest, formed of grass and seaweed, is placed upon some ledge of the seaward and precipitous rocks, where these birds build in considerable numbers. The eggs are two or three in number, and of a brownish-

green, blotched with grey and brown. "Audubon found the Herring Gull distributed in America, from the Gulf of Mexico to Labrador, and describes the manners of a colony which he found on Whitehead Island, in the Bay of Fundy. The Gulls here were breeding on the pine-trees, some forty feet from the ground; others with the nest only seven or eight, and placed close to the bole of the tree; others, again (what he considered to be the younger birds), made the nest on the ground. Mr. Frankland recollected when the birds commenced to select the trees, for they all previously built on the ground; and considered that it was an instinctive care that had induced them to breed out of reach, from the nests on the ground being constantly robbed" ('Naturalists' Library,' vol. iv. p. 305).

GLAUCOUS GULL. *Larus glaucus*.—This is a northern species visiting our shores in winter. It breeds in high northern latitudes, and is a common species in Greenland, Baffin's Bay, and the Polar Seas. It breeds either upon the projecting ledges of rocks, or upon the shingle of the beach above high-water mark. The egg of this species both in size and colour nearly resembles that of the Great Black-backed Gull. This Gull is extremely voracious, and one specimen which was shot disgorged a Little Auk,

a second being found in the stomach of the same bird on dissection.

THE ICELAND GULL. *Larus Islandicus*.—This is a less bird than the last, but otherwise greatly resembles it. It is found in northern regions breeding in company with the Glaucous Gull, upon the same precipice, but at a less height and in greater numbers. It is also found in Iceland. The species is described as tame, following the boats of the fishermen on shore, to feed on the refuse thrown from them. The eggs are of an olive-green colour, spotted with grey and brown.

THE COMMON GULL. *Larus canus*.—In autumn, winter, and spring, this birds roams far inland, feeding on the fallows and pastures, and retiring to the coast at night. Although not a rare species, we do not think the present by any means so numerous around our shores as some others. Beyond Britain it has an extensive distribution, and in Norway is so common that Mr. Hewitson mentions two thousand of the eggs gathered by the inhabitants from one island only. It sometimes breeds in cliffs, at other times on small islands, forming its nest of grass, but occasionally in combination with other materials. The eggs are three in number, differing greatly in the ground-colour, which yet may be de-

scribed as most frequently being of a greenish or olive-green tint, blotched with grey and brown.

ROSS'S ROSEATE GULL. *Larus Rossii*.—This species has received its name from Commander James Clark Ross, in memory of his unwearied exertions in the promotion of Natural History during the Arctic voyages in which he bore a part. It is quite a northern species. "Commander Ross, in his Zoological Appendix to Sir Edward Parry's narrative of his most adventurous boat-voyage towards the Pole, relates that several were seen during the journey over the ice north of Spitzbergen, and Lieutenant Forster also found the species in Waygait Straits, which is probably one of its breeding-places" (Mr. Yarrell's Second Supplement, p. 60). A specimen of this Gull was shot in Yorkshire, in the parish of Kirby, in February 1847. Of the peculiar habits or nidification of this species we can say nothing.

THE IVORY GULL. *Larus eburneus*.—This is, both in Britain and on the European continent, a rare species, becoming more frequent in its occurrence as we advance northward, and finding its true home in high northern latitudes. In these situations it has been met with both by the whaling-vessels and by nearly all the northern expeditions. "Dr. Richardson observed it breeding on the cliffs of Cape Parry,

in latitude 70° ." The nest is said to be formed of seaweed, and the eggs, two or three in number, to be of a creamy-white spotted with grey, brown, and brownish-black.

THE KITTIWAKE GULL. *Larus rissa*.—This Gull is named from its peculiar and clearly-articulated cry of "Kittiwake." It is found in many parts of the British Islands, occurring in vast numbers in some situations, but chiefly in summer, by far the greater proportion quitting our shores before the winter arrives. Out of Britain it is very extensively distributed, from Italy to the highest northern latitudes yet explored, and from Europe to North America. It builds its nest in the most inaccessible situations upon the jutting ledges of precipitous rocks, and forms it of grass and seaweed mingled with clay, and were it not for the weight and adhesive qualities of the clay, Mr. Hewitson remarks that, from the position of the nest, the eggs or young would certainly be destroyed. The eggs, three in number, differ in their ground-colour and markings, sometimes being beautifully zoned with blotches of dark colour; perhaps they may be characterized as being of a pale-brown, or of a stone colour tinged with olive, and freely spotted with grey and brown. The Kittiwakes sometimes congregate in vast numbers to breed; they usually resort to the same

spot annually, and, as far as possible, they reserve to themselves the situation selected for this purpose; and the air resounds with their peculiar cry when their territory is approached, or their homes are endangered by the presence of man.

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THE LITERARY GAZETTE.

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